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GENERAL INDEX

Note: Dimensions correct at time of printing.
Contact factory for any critical dimension.

PENNUNION
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GENERAL INDEX

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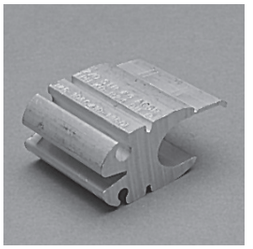
ALUMINUM "ULTIMATE RANGE," DOUBLE TAB PRESS-ONS • TYPES KO-R AND KD-R

TDY-U 4 PRESSURE SET AT

RUS ACCEPTED

For any combination of aluminum, copper† or ACSR



High Conductivity–Aluminum extrusions assure cool running high efficiency contacts.

Easy Crimping–Optimum temper for low handle load. Deep indent crimp lines for easy crimp location.

Pre-Loaded Inhibitor–Cleaned contact surfaces kept free of oxide reformation by non-dripping Penn-Union Cual-Aid in individual break-open boxes.

CU to AL–Solid barrier provides conductor separation and prevents strand cutting. Also minimizes galvanic corrosion.

Weather-Protected–Full length tab provides complete enclosure for inhibitor, providing excellent weather protection.

7 CONNECTOR PROGRAM *(MECHANICAL, NITROGEN OR HYDRAULIC TOOL)*

Catalog Number	Program Number	Side	Standard Conductor			Compact Conductor		Wire Diameter Range‡	No. of Crimps		Die Size
			ACSR & Aluminum Alloy Conductors	Aluminum or Copper					Mech. & Nitrogen Tool	Hydr. Tool	
				Stranded	Solid	ACSR	Stranded	in			
KO-R06	1	A B	6, 4, 2, 6/1 6, 4, 2, 6/1	6, 4, 3-7, 2 6, 4, 3-7, 2	6, 4, 3, 2 6, 4, 3, 2	6, 4, 3, 2 6, 4, 3, 2	6, 4, 3, 2 6, 4, 3, 2	.162-.316 .162-.316	4	2	O
KO-R08	2	A B	3, 2, 1, 1/0 6, 4, 3, 2	3-3, 2, 1/0, 2/0 6, 4, 3, 2, 1-19	1, 1/0, 2/0 6, 4, 3, 2, 1, 1/0	2, 1, 1/0 6, 4, 3, 2, 1	2, 1, 1/0, 2/0 6, 4, 3, 2, 1	.260-.419 .162-.332	5	2	O
KD-R02	3	A B	1/0, 2/0 6, 4, 3, 2	2/0, 3/0 6, 4, 3, 2, 1-19	3/0, 4/0 6, 4, 3, 2, 1, 1/0	2/0, 3/0 6, 4, 3, 2, 1	3/0 6, 4, 3, 2, 1	.398-.470 .162-.332	4	2	D
KD-R04	4	A B	1, 1/0, 2/0 1, 1/0, 2/0	1-3, 1/0, 2/0, 3/0 1-3, 1/0, 2/0	2/0, 3/0, 4/0 2/0, 3/0	1/0, 2/0, 3/0 1/0, 2/0	1/0, 2/0, 3/0 1/0, 2/0, 3/0	.332-.470 .332-.447	5	2	D
KD-R03	5	A B	3/0, 4/0 6, 4, 3, 2	4/0 6, 4, 3, 2, 1-19	250, 266, 300 6, 4, 3, 2, 1, 1/0	4/0, 26618/1 6, 4, 3, 2, 1	4/0, 250, 266 6, 4, 3, 2, 1	.475-.563 .162-.332	4	2	D
KD-R05	6	A B	3/0, 4/0 1, 1/0, 2/0	3/0, 4/0 1-3, 1/0, 2/0	 2/0, 3/0	3/0, 4/0, 26618/1 1/0, 2/0	4/0, 250, 266 1/0, 2/0, 3/0	.461-.563 .332-.447	7	3	D
KD-R28	7	A B	3/0, 4/0 3/0, 4/0	3/0, 4/0 3/0, 4/0		3/0, 4/0, 26618/1 3/0, 4/0, 26618/1	4/0, 250, 266 4/0, 250, 266	.461-.563 .461-.563	7	3	D
KO-R10	–	A B	4, 3, 2, 1, 1/0 4, 3, 2, 1, 1/0	4, 3, 2, 1, 1/0, 2/0 4, 3, 2, 1, 1/0, 2/0	2, 1, 1/0 2, 1, 1/0	4, 3, 2, 1, 1/0 4, 3, 2, 1, 1/0	4, 3, 2, 1, 1/0, 2/0 4, 3, 2, 1, 1/0, 2/0	.213-.418 .213-.418	5	2	O
KO-R33	–	A B	6, 4 6, 4	6, 4, 3-7 6, 4, 3-7	6, 4, 3, 2 6, 4, 3, 2	6, 4, 3 6, 4, 3	6, 4 6, 4	.162-.260 .162-.260	4	2	O

4 CONNECTOR PROGRAM *(HYDRAULIC TOOL ONLY)*

KO-R01	–	A B	6, 4, 3, 2, 1, 1/0 6, 4, 3, 2	6, 4, 3, 2, 1, 1/0 6, 4, 3, 2, 1-19	6, 4, 3, 2, 1, 1/0 6, 4, 3, 2, 1, 1/0	6, 4, 3, 2, 1, 1/0 6, 4, 3, 2, 1	6, 4, 3, 2, 1, 1/0 6, 4, 3, 2, 1	.162-.398 .162-.332	–	2	O
KD-R03	–	A B	1, 1/0, 2/0 3/0, 4/0 6, 4, 3, 2	1-3, 1/0, 2/0 3/0, 4/0 6, 4, 3, 2, 1-19	2/0, 3/0, 4/0 6, 4, 3, 2, 1/0	1/0, 2/0, 3/0 4/0, 26618/1 6, 4, 3, 2, 1	1/0, 2/0, 3/0 4/0, 250, 266 6, 4, 3, 2, 1	.332-.563 .162-.332	–	2	D
KD-R05	–	A B	1, 1/0, 2/0 3/0, 4/0 1, 1/0, 2/0	1-3, 1/0, 2/0 3/0, 4/0 1-3, 1/0, 2/0	2/0, 3/0, 4/0 2/0, 3/0	1/0, 2/0, 3/0 4/0, 26618/1 1/0, 2/0	1/0, 2/0, 3/0 4/0, 250, 266 1/0, 2/0, 3/0	.332-.563 .332-.477	–	3	D
KD-R28	–	A B	2/0, 3/0, 4/0 2/0, 3/0, 4/0	3/0, 4/0 3/0, 4/0		3/0, 4/0, 26618/1 3/0, 4/0, 26618/1	3/0, 4/0, 250, 266 3/0, 4/0, 250, 266	.426-.563 .426-.563	–	3	D

STREET LIGHTING KO-R21 & 22

Double Tab Design–For making connections to street lights. Packed two per box.

MULTI-TAP CONNECTION KO-R24

Single Tab Design–For making one to four taps with one Press-On, and for making service connections.

Catalog Number	Size	Conductor Range	Wire Diameter Range‡	Number of Crimps		Die Size	TDY-U Pressure Setting
			in	0-52 Hand	Hyd.		
KO-R21	A B	4 Str.-4 ACSR 12 Sol.-10 Str.	.232-.257 .080-.117	3	–	5/8"-Nose	2
KO-R22	A B	6 Sol.-4 Sol. 12 Sol.-10 Str.	.162-.204 .080-.117	3	–	5/8"-Nose	2
KO-R24*	A B C	4 ACSR-2/0 Str. 10 Str., 10 Sol., 6 Sol. 14 Sol., 10 Sol.	.257-.418 .101-.162 .064-.101	3	1	0	4

†Not Recommended for copper to copper applications. For special applications consult factory. ‡For conversion to metric range, see page 175.
**Single Tab "Press-On"*

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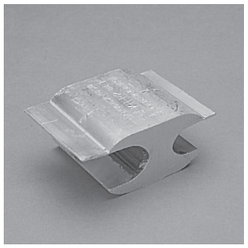
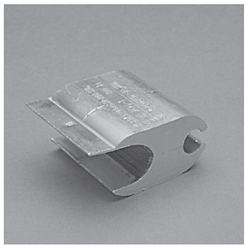
ALUMINUM EXPANDED RANGE PRESS-ONS • TYPES KN-R AND KN

RUS ACCEPTED

For any combination of aluminum, copper† or ACSR



DOUBLE TAP TYPE KN-R



SINGLE TAP TYPE KN

High Conductivity–E.C. Aluminum extrusions assure cool running high efficiency contacts.

Easy Crimping–Optimum temper for low handle load. Deep indent crimp lines for easy crimp location.

Pre-Loaded Inhibitor–Cleaned contact surfaces kept free of oxide reformation by non-dripping Penn-Union Cual-Aid in individual break-open boxes.

CU to AL–Solid barrier provides conductor separation and prevents strand cutting. Also minimizes galvanic corrosion.

Weather-Protected–Full length tab provides complete enclosure for inhibitor, providing excellent weather protection.

Catalog Number	Groove	Standard Conductor			Compressed Conductor		Wire Diameter Range‡	No. of Crimps (Hydraulic)	Die Size
		ACSR* & Aluminum Alloy Conductors	Aluminum or Copper		ACSR*	Stranded	in		
			Stranded	Solid					
KN-0	A	266.8, 300, 336.4, 397.5-18/1	250, 266.8, 300, 336.4, 350, 397.5, 400		336-18/1, 397-18/1 477-18/1	336, 350, 397.5 477	.575-.813	2	N
	B	6, 4	6, 4, 3-7	6, 4, 3, 2	6, 4, 3	6, 4	.162-.260		
KN-1	A	266.8, 300, 336.4, 397.5-18/1	250, 266.8, 300, 336.4, 350, 397.5, 400		336-18/1, 397-18/1, 477-18/1	336, 350, 397.5, 477	.575-.813	2	N
	B	2, 1, 1/0, 2/0	2, 1, 1/0, 2/0	1, 1/0, 2/0, 3/0	2, 1, 1/0, 2/0	1, 1/0, 2/0, 3/0	.289-.460		
KN-R2	A	266.8, 300, 336.4, 397.5-18/1	250, 266.8, 300, 336.4, 350, 397.5, 400		336-18/1, 397.5-18/1, 477-18/1	336, 350, 397.5, 477	.575-.813	2	N
	B	2/0, 3/0, 4/0	3/0, 4/0	4/0	3/0, 4/0, 266-18/1	3/0, 4/0, 250, 266	.428-.630		
KN-4	A	266.8, 300, 336.4, 397.5-18/1	250, 266.8, 300, 336.4, 350, 397.5, 400		336-18/1, 397.5-18/1, 477-18/1	336, 350, 397.5, 477	.575-.813	3	N
	B	336.4, 397.5-18/1	336.4, 350, 397.5, 400		397-18/1, 477-18/1	397, 477, 500	.666-.813		
KN-R5	A	300, 336.4, 397.5, 477-18/1	336.4, 350, 397.5, 400, 450, 477, 500		397-18/1, 477-18/1, 556-18/1	477, 500, 556	.666-.813	2	N
	B	6, 4	6, 4, 3-7	6, 4, 3, 2	6, 4, 3	6, 4, 2	.162-.260		
KN-R6	A	300, 336.4, 397.5, 477-18/1	336.4, 350, 397.5, 400, 450, 477, 500		397-18/1, 477-18/1, 556-18/1	477, 500, 556	.666-.813	2	N
	B	3, 2, 1, 1/0	3-3, 2, 1, 1/0, 2/0	1, 1/0, 2/0, 3/0	2, 1, 1/0, 2/0	2, 1, 1/0, 2/0, 3/0	.260-.428		
KN-R7	A	300, 336.4, 397.5, 477-18/1	336.4, 350, 397.5, 400, 450, 477, 500		397-18/1, 477-18/1 556-18/1	477, 500, 556	.666-.813	2	N
	B	2/0, 3/0, 4/0	3/0, 4/0	4/0	3/0, 4/0, 266-18/1	4/0, 250, 266	.460-.630		
KN-8	A	300, 336.4, 397.5, 477-18/1	336.4, 350, 397.5, 400, 450, 477, 500		397-18/1, 477-18/1, 556-18/1	477, 500, 556	.666-.813	3	N
	B	266.8, 300, 336.4-18/1	250, 266.8, 300, 336.4, 350		336-18/1, 397-18/1	336, 350, 397	.575-.684		

**Conductor sizes listed include all strandings except where 18/1 is shown after conductor size.*
†Not recommended for copper to copper applications. For special applications consult factory.
‡For conversion to metric range, see page 175.

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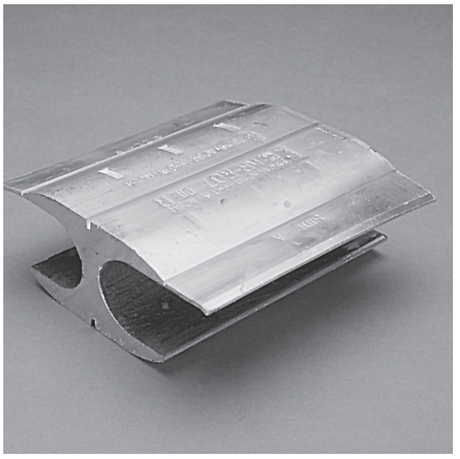
ALUMINUM "ULTIMATE RANGE," DOUBLE TAB PRESS-ONS • TYPE KR-R

For any combination of aluminum, copper† or ACSR

RUS ACCEPTED



High Conductivity – Aluminum extrusions assure cool running high efficiency contacts.

Easy Crimping – Optimum temper for low handle load. Deep indent crimp lines for easy crimp location.

Pre-Loaded Inhibitor – Cleaned contact surfaces kept free of oxide reformation by non-dripping Penn-Union Cual-Aid in individual break-open boxes.

CU to AL – Solid barrier provides conductor separation and prevents strand cutting. Also minimizes galvanic corrosion.

Weather-Protected – Full length tab provides complete enclosure for inhibitor, providing excellent weather protection.

(HYDRAULIC TOOL ONLY)

Catalog Number	Size	Standard Conductor			Compressed Conductor		Wire Diameter Range‡	No. of Crimps (Hydraulic)	Die Size
		ACSR & Aluminum Alloy Conductors	Aluminum or Copper						
			Stranded	Solid	ACSR	Stranded	in		
KR-R03	A	300, 336, 397, 477 556 18/1	336, 350, 397, 400, 450, 477, 500, 550, 556, 600		397, 477, 556, 636	477, 500, 556, 636	.666- .893	3	R
	B	1/0, 2/0, 3/0, 4/0, 266, 336 18/1	2/0, 3/0, 4/0, 250, 266, 300, 336, 350	3/0, 4/0	2/0, 3/0, 4/0, 266, 336, 397 18/1	3/0, 4/0, 250, 266, 300, 336, 350, 397	.398- .684		
KR-R04	A	300, 336, 397, 477, 556 18/1	336, 350, 397, 400, 450, 477, 500, 550, 556, 600		397, 477, 556, 636	477, 500, 556, 636	.666- .893	4	R
	B	300, 336, 397, 477, 556 18/1	336, 350, 397, 400, 450, 477, 500, 550, 556, 600		397, 477, 556, 636	477, 500, 556, 636	.666- .893		
KR-R05	A	477, 30/7, 556, 605, 636, 653, 666, 715, 795 26/7	600, 636, 700, 715, 750, 795, 800, 874, 900		795, 874, 954	795, 874, 954	.879-1.108	3	R
	B	1/0, 2/0, 3/0, 4/0, 266, 336 18/1	2/0, 3/0, 4/0, 250, 266, 300, 336, 350	3/0, 4/0	2/0, 3/0, 4/0, 266, 336, 397 18/1	3/0, 4/0, 250, 266, 300, 336, 350, 397	.398- .684		
KR-R06	A	477 30/7, 556, 605, 636, 653, 666 715, 795 26/7	600, 636, 700, 715, 750, 795, 800, 874, 900		795, 874, 954	795, 874, 954	.879-1.108	4	R
	B	300, 336, 397, 477, 556 18/1	336, 350, 397, 400, 450, 477, 500, 550, 556, 600		397, 477, 556, 636	477, 500, 556, 636	.666- .893		
KR-R07	A	477 30/7, 556, 605, 636, 653, 666, 715, 795 26/7	600, 636, 700, 715, 750, 795, 800, 874, 900		795, 874, 954	795, 874, 954	.879-1.108	4	R
	B	477 30/7, 556, 605, 636, 653, 666, 715, 795 26/7	600, 636, 700, 715, 750, 795, 800, 874, 900		795, 874, 954	795, 874, 954	.879-1.108		

†Not recommended for copper to copper applications. For special applications consult factory.
‡For conversion to metric range, see page 175.

PENNUNION
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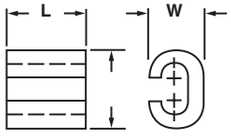
COPPER PRESS-ONS • TYPE CCT

RUS ACCEPTED

CU 486A 467 SUITABLE FOR DIRECT BURIAL

ELECTRICAL AND GROUNDING



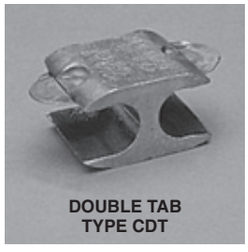
Copper "C"-Taps are range-taking compression connectors made from high conductivity copper alloy. They are used for making tap or parallel copper connections from 8 SOL to 4/0 STR conductors. C-Tap connectors provide consistent reliability with heavy wall construction that prevents relaxation of the joint after installation. Installation time is reduced because of its "C" shape.

Catalog Number	Conductor Range		Approx. Dimensions in Inches			Installation Tooling				Strip Length
						TPU-12B		TDY-U Dieless Tool		
	Run	Tap	L	H	W	Die Index	No. of Crimps	Pressure Setting	No. of Crimps	
CCT-46	6 Sol.-4 Str.	6 Sol.-6 Str.	5/8	3/4	7/16	BG	1	2	1	3/4
CCT-44	6 Sol.-4 Str.	4 Sol.-4 Str.	5/8	13/16	7/16	BG	1	2	1	3/4
CCT-24	2 Sol.-2 Str.	8 Sol.-4 Str.	3/4	1	5/8	C	1	4	1	7/8
CCT-22	2 Sol.-2 Str.	2 Sol.-2 Str.	3/4	1	5/8	C	1	4	1	7/8
CCT-2020	1/0 Str.-2/0 Str.	1/0 Str.-2/0 Str.	15/16	1 3/8	13/16	0	1	5	1	1 1/16
CCT-4020	3/0 Str.-4/0 Str.	1/0 Str.-2/0 Str.	1 1/16	1 5/8	1	D3	1	5	1	1 3/16
CCT-4040	3/0 Str.-4/0 Str.	3/0 Str.-4/0 Str.	1 1/16	1 9/16	1	D3	1	5	1	1 3/16

COPPER PRESS-ONS • TYPE CST AND CDT

RUS ACCEPTED

SINGLE TAB
TYPE CST



DOUBLE TAB
TYPE CDT

Made of high conductivity copper–metal barrier separates conductor thereby eliminating strand cutting. Generous chamfer protects cable. For compressing, use one crimp with hydraulic tools. Three crimps with mechanical tools. See Cat. Page 7 for dimensions.

SINGLE TAB PRESS-ON

Catalog Number	Side A	Wire Diameter Range‡ in	Side B	Wire Diameter Range‡ in	Die Sets for Hydraulic Tools		TDY-U Pressure Setting
					WH-1, WH-2	Y-35*	
CST-301	6 Sol., 6 Str., 4 Sol.	.162-.204	8 Sol., 8 Str., 6 Sol. 6 Str., 4 Sol.	.128-.204	B-K-T	U-BG or U-243	4
CST-302†	4 Sol., 4 Str., 2 Sol.	.204-.258	6 Sol., 6 Str., 4 Sol. 4 Str., 2 Sol.	.162-.258			

DOUBLE TAB PRESS-ON

CDT-399-8	6 Sol., 6 Str., 4 Sol.	.162-.204	8 Sol., 6 Str., 4 Sol.	.128-.204	B or B-K-T	U-BG or U-243	4
CDT-398-8†	4 Sol., 4 Str., 2 Sol.	.204-.258	4 Sol., 4 Str., 2 Sol.	.204-.258			4
CDT-304-8 CDT-303-8	2 Str., 1 Str., 1/0 Str.	.292-.375	6 Sol., 4 Sol., 4 Str., 2 Sol. 2 Str., 1 Str., 1/0 Str.	.162-.258 .292-.375	O	O	4
CDT-308-8 CDT-307-8	2/0 Str., 4/0 Str.	.419-.528	2 Str., 1 Str., 1/0 Str. 2/0 Str., 4/0 Str.	.292-.375 .419-.528	D	D_3	4

MECHANICAL COMPRESSION TOOLING

Catalog Number	"O" Type Tool Die Sets	"W" Die Type Tool	
		Tools	Die Set
CST-301 and CDT-399-8	T	TMU-0D3 MD6-8	W-BG W-BG
CST-302† and CDT-398-8†	K	TMU-0D3 MD6-8	W-KK W-KK

**Burndy Y35 and Alcoa 12A tools both accept same dies. Penn-Union's TPU-12B can also be used with these dies.*
‡For conversion to metric range, see page 175.
†CSA certified for direct burial.

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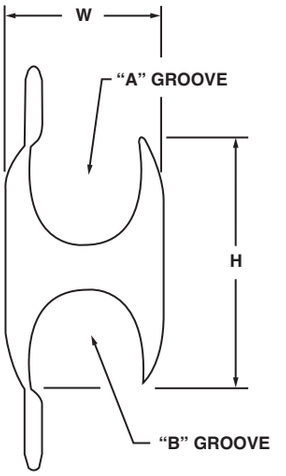
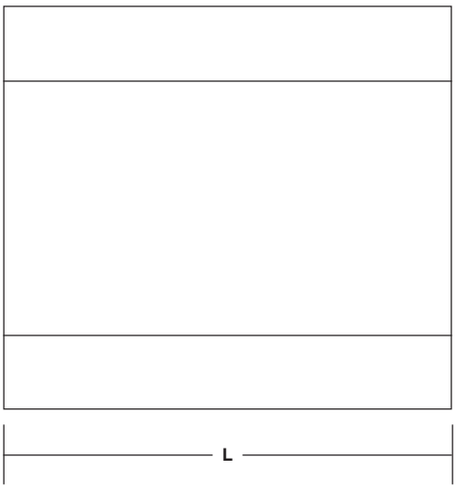
APPROXIMATE DIMENSIONS FOR ALUMINUM AND COPPER PRESS-ONS (IN INCHES)

ALUMINUM

Cat. No.	L	W	H
• Catalog Page 3			
KO-R06	1 1/2	45/64	1 1/8
KO-R08	1 1/2	45/64	1 1/8
KD-R02	1 1/2	57/64	1 15/32
KD-R04	1 7/8	57/64	1 31/64
KD-R03	1 1/2	57/64	1 15/32
KD-R05	2 1/4	57/64	1 7/16
KD-R28	2 1/4	57/64	1 7/16
KO-R10	1 1/2	45/64	1 1/8
KO-R01	1 3/4	23/32	1 5/32
KO-R21	5/8	19/32	39/64
KO-R22	13/16	29/32	19/32
KO-R24	1 1/16	23/32	1 7/64
• Catalog Page 4			
KN-0	2	1 1/4	1 31/32
KN-1	2	1 1/4	2
KN-R2	2	1 1/4	2
KN-4	3 1/2	1 1/4	2 1/32
KN-R5	2	1 1/4	2
KN-R6	2	1 1/4	2
KN-R7	2	1 1/4	1 31/32
KN-8	3 1/2	1 1/4	2
• Catalog Page 5			
KR-R03	3 1/2	1 3/4	3 5/64
KR-R04	4 5/8	1 3/4	3 1/16
KR-R05	3 1/2	1 3/4	3 5/64
KR-R06	4 5/8	1 3/4	3 3/64
KR-R07	4 5/8	1 3/4	3 1/32
COPPER			
• Catalog Page 6			
CST-301	13/16	15/32	47/64
CST-302	13/16	35/64	53/64
CDT-399-8	13/16	31/64	3/4
CDT-398-8	13/16	35/64	51/64
CDT-303-8	53/64	23/32	1 1/8
CDT-304-8	55/64	41/64	1 1/8
CDT-306-8	59/64	49/64	1 17/64
CDT-305-8	63/64	51/64	1 1/4
CDT-309-8	1 1/16	29/32	1 23/64
CDT-308-8	1 1/16	29/32	1 13/32
CDT-307-8	1 1/16	29/32	1 3/8





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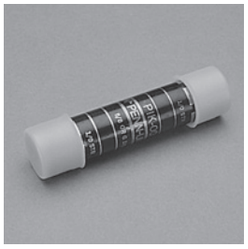
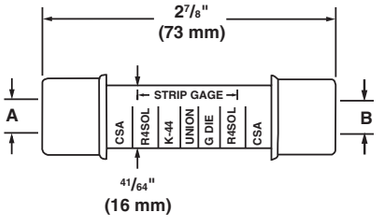
ALUMINUM PRE-INSULATED PENN-SLEEVES • TYPE PIK

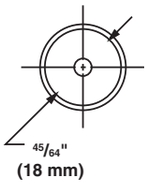
For aluminum to copper or aluminum to aluminum

TDY : U 2 PRESSURE SET AT

RUS ACCEPTED







Pre-insulated Penn-Sleeve Service Entrance Compression Connectors feature extra length for increased contact and solid center barrier.

Pre-filled with Cual-Aid inhibitor and capped to prevent dirt from accumulating in barrel and seal out moisture. Brilliant color of caps for easy identification conform to industry standards, and easy push-thru caps reduce push thru force by 25%.

Aluminum insert is anchored to jacket, assuring that insert is under die when crimping where marking indicates. Strip gage and number of crimps marked on jacket make it hard to misapply. Conforms to ANSI C 119.4 when properly installed.

Nylon jacket insulates connector electrically and protects against water and weather. Special nylon formulated for Penn-Union increases shelf life and improves crimpability even at sub zero temperatures.

Catalog Number	A Range			Wire Diameter Range‡	Cap Color	B Range			Wire Diameter Range‡	Cap Color	Die Size
	ACSR	Alum. or Copper Str.	Alum. or Copper Sol.	in		ACSR	Alum. or Copper Str.	Alum. or Copper Sol.	in		
PIK-88		10	8	.116-.128	Brown		10	8	.116-.128	Brown	
PIK-68		8	6	.145-.162	Green		10	8	.116-.128	Brown	
PIK-66		8	6	.145-.162	Green		8	6	.145-.162	Green	
PIK-48	6-6/1	5-6	4	.184-.206	Blue		10	8	.116-.128	Brown	
PIK-46	6-6/1	5-6	4	.184-.206	Blue		8	6	.145-.162	Green	
PIK-44	6-6/1	5-6	4	.184-.206	Blue	6-6/1	5-6	4	.184-.206	Blue	
PIK-28	4-6/1, 7/1	3-4	2	.232-.260	Orange		10	8	.116-.128	Brown	
PIK-26	4-6/1, 7/1	3-4	2	.232-.260	Orange		8	6	.145-.162	Green	
PIK-24	4-6/1, 7/1	3-4	2	.232-.260	Orange	6-6/1	5-6	4	.184-.206	Blue	5/8
PIK-22	4-6/1, 7/1	3-4	2	.232-.260	Orange	4-6/1, 7/1	3-4	2	.232-.260	Orange	or
PIK-18	2-6/1, 7/1	1-2		.292-.332	Red		10	8	.116-.128	Brown	BG
PIK-16	2-6/1, 7/1	1-2		.292-.332	Red		8	6	.145-.162	Green	
PIK-14	2-6/1, 7/1	1-2		.292-.332	Red	6-6/1	5-6	4	.184-.206	Blue	
PIK-12	2-6/1, 7/1	1-2		.292-.332	Red	4-6/1, 7/1	3-4	2	.232-.260	Orange	
PIK-11	2-6/1, 7/1	1-2		.292-.332	Red	2-6/1, 7/1	1-2		.292-.332	Red	
PIK-08		1/0		.373	Yellow		10	8	.116-.128	Brown	
PIK-06		1/0		.373	Yellow		8	6	.145-.162	Green	
PIK-04		1/0		.373	Yellow	6-6/1	5-6	4	.184-.206	Blue	
PIK-02		1/0		.373	Yellow	4-6/1, 7/1	3-4	2	.232-.260	Orange	
PIK-01		1/0		.373	Yellow	2-6/1, 7/1	1-2		.292-.332	Red	
PIK-00		1/0		.373	Yellow		1/0		.373	Yellow	

‡For conversion to metric range, see page 175.

PENNUNION

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

ALUMINUM PRE-INSULATED PENN-SLEEVES • TYPE PIK 840

For aluminum to copper or aluminum to aluminum

TDY : U 4 PRESSURE SET AT

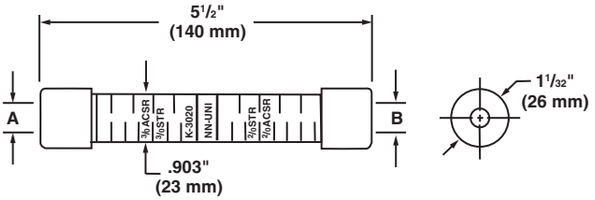
RUS ACCEPTED

Pre-insulated Penn-Sleeve Service Entrance Compression Connectors for commercial service or large residence.

Prefilled with Cual-Aid inhibitor and capped to prevent dirt from accumulating in barrel and seal out moisture. Polyethylene color coded caps conform to industry standard.

Aluminum insert is anchored to jacket, assuring that insert is under die when crimping where marking indicates. Marked for both hand and hydraulic tools.

Nylon jacket insulates connector electrically and protects against water and weather. Special nylon formulated for Penn-Union increases shelf life and improves crimpability even at sub zero temperatures.



Catalog Number	A Range ACSR	A Range Alum. Str.	Wire Diameter Range‡ in	Color Code A Range	B Range ACSR	B Range Alum. Str.	B Range Alum. Sol.	Wire Diameter Range‡ in	Color Code B Range	Die Size Hand	Die Size Hyd.
PIK-01R	1/0	1/0	.373-.398	Yellow	2	1-2	1/0	.292-.332	Red		
PIK-00R	1/0	1/0	.373-.398	Yellow	1/0	1/0		.373-.398	Yellow		
PIK-204	2/0	2/0	.419-.447	Gray	6	5-6	4	.183-.206	Blue		
PIK-202	2/0	2/0	.419-.447	Gray	4	3-4	2	.231-.258	Orange		
PIK-201	2/0	2/0	.419-.447	Gray	2	1-2	1/0	.292-.332	Red		
PIK-200	2/0	2/0	.419-.447	Gray	1/0	1/0		.373-.398	Yellow		
PIK-2020	2/0	2/0	.419-.447	Gray	2/0	2/0		.419-.447	Gray		
PIK-302	3/0	3/0	.470-.502	Black	4	3-4	2	.231-.258	Orange		B-249
PIK-301	3/0	3/0	.470-.502	Black	2	1-2	1/0	.292-.332	Red	.840	or
PIK-300	3/0	3/0	.470-.502	Black	1/0	1/0		.373-.398	Yellow		EEI
PIK-3020	3/0	3/0	.470-.502	Black	2/0	2/0		.419-.447	Gray		11A
PIK-3030	3/0	3/0	.470-.502	Black	3/0	3/0		.470-.502	Black		
PIK-402	4/0	4/0	.528-.563	Pink	4	3-4	2	.231-.258	Orange		
PIK-401	4/0	4/0	.528-.563	Pink	2	1-2	1/0	.292-.332	Red		
PIK-400	4/0	4/0	.528-.563	Pink	1/0	1/0		.373-.398	Yellow		
PIK-4020	4/0	4/0	.528-.563	Pink	2/0	2/0		.419-.447	Gray		
PIK-4030	4/0	4/0	.528-.563	Pink	3/0	3/0		.470-.502	Black		
PIK-4040	4/0	4/0	.528-.563	Pink	4/0	4/0		.528-.563	Pink		

‡For conversion to metric range, see page 175.

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
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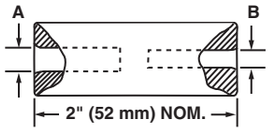
ALUMINUM PENN-SLEEVES • TYPE PSK 5/8" O.D.

For aluminum to copper or aluminum to aluminum

TDY : U 2 PRESSURE SET AT

RUS ACCEPTED



Installed by standard dies in hand or hydraulic tools. Forged from pure aluminum, with integral solid center barrier.

Large smooth entering radii give easy entrance for conductors–minimize stress concentration and chafing from vibration.

Contact surfaces are coated with Cual-Aid. Pushing the wire through the color-coded cap to bottom of the barrel, squirts the Cual-Aid around the strands of conductor.

Crimping the Penn-Sleeve wipes the Cual-Aid's particles across the contact surfaces and insures a tightly gripping, high conductivity joint. The non-flowing vehicle in Cual-Aid keeps air and moisture out of the joint.

Easy push-thru caps reduce push thru force by 25%.

On aluminum to copper, PENN-SLEEVES eliminate the effects of galvanic corrosion.

Catalog Number	A Range					Cap Color	B Range					Cap Color
	ACSR	Alum. or Copper Str.	Alum. or Copper Sol.	Compressed Cable	Wire Diameter Range‡ in		ACSR	Alum. or Copper Str.	Alum. or Copper Sol.	Compressed Cable	Wire Diameter Range‡ in	
PSK-88		10	8		.116-.128	Brown		10	8		.116-.128	Brown
PSK-68		8	6		.145-.162	Green		10	8		.116-.128	Brown
PSK-66		8	6		.145-.162	Green		8	6		.145-.162	Green
PSK-48	6-6/1	6	4	6	.179-.204	Blue		10	8		.116-.128	Brown
PSK-46	6-6/1	6	4	6	.179-.204	Blue		8	6		.145-.162	Green
PSK-44	6-6/1	6	4	6	.179-.204	Blue	6-6/1	6	4	6	.179-.204	Blue
PSK-28	4-6/1,7/1	4	2	4	.225-.258	Orange		10	8		.116-.128	Brown
PSK-26	4-6/1, 7/1	4	2	4	.225-.258	Orange		8	6		.145-.162	Green
PSK-24	4-6/1, 7/1	4	2	4	.225-.258	Orange	6-6/1	6	4	6	.179-.204	Blue
PSK-22	4-6/1, 7/1	4	2	4	.225-.258	Orange	4-6/1, 7/1	4	2	4	.225-.258	Orange
PSK-18	2-6/1, 7/1	2	1/0	2	.283-.325	Red		10	8		.116-.128	Brown
PSK-16	2-6/1, 7/1	2	1/0	2	.283-.325	Red		8	6		.145-.162	Green
PSK-14	2-6/1, 7/1	2	1/0	2	.283-.325	Red	6-6/1	6	4	6	.179-.204	Blue
PSK-12	2-6/1, 7/1	2	1/0	2	.283-.325	Red	4-6/1, 7/1	4	2	4	.225-.258	Orange
PSK-11	2-6/1, 7/1	2	1/0	2	.283-.325	Red	2-6/1, 7/1	2	1/0	2	.283-.325	Red
PSK-08	1/0-6/1	1/0		1/0	.362-.398	Yellow		10	8		.116-.128	Brown
PSK-06	1/0-6/1	1/0		1/0	.362-.398	Yellow		8	6		.145-.162	Green
PSK-04	1/0-6/1	1/0		1/0	.362-.398	Yellow	6-6/1	6	4	6	.179-.204	Blue
PSK-02	1/0-6/1	1/0		1/0	.362-.398	Yellow	4-6/1, 7/1	4	2	4	.225-.258	Orange
PSK-01	1/0-6/1	1/0		1/0	.362-.398	Yellow	2-6/1	2	1/0	2	.283-.325	Red
PSK-00	1/0-6/1	1/0		1/0	.362-.398	Yellow	1/0-6/1	1/0		1/0	.362-.398	Yellow

‡For conversion to metric range, see page 175.

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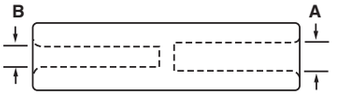
ALUMINUM NON-TENSION SPLICING SLEEVE • TYPE PS

Penn-Sleeve



The large aluminum compression sleeve with integral solid center barrier is designed for service entrance and non-tension loop splice application. Plastic caps prevent the contamination of contact aid during storage of sleeves.

Good electrical contact and ease of installation is accomplished with the use of pure aluminum.

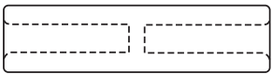
Compression barrel prefilled with Cual-Aid oxide inhibitor.

Catalog Number	A Range			A Wide Diameter Range‡	B Range			B Wire Diameter Range‡	Length (Approx.)		No of Crimps Each Groove Tool		Die Size
		Aluminum Copper				Aluminum Copper							
	ACSR	Str.	Sol.	in	ACSR	Str.	Sol.	in	in	mm	Hand	Hydraulic	
PS-00	1/0	1/0	–	.375-.398	1/0	1/0 Str.	–	.375-.398					
PS-202					4	3&4 Str.	2	.232-.260					
PS-201					2	1&2 Str.	1/0	.292-.332					
PS-200	2/0	2/0 Str.	–	.419-.447	1/0	1/0 Str.	–	.375-.398					
PS-2020					2/0	2/0 Str.	–	.419-.447					
PS-302					4	3&4 Str.	2	.232-.260					.840
PS-301					2	1&2 Str.	1/0	.292-.332	4	102	7	4	or
PS-300	3/0	3/0 Str.	–	.470-.502	1/0	1/0 Str.	–	.375-.398					B-249
PS-3020					2/0	2/0 Str.	–	.419-.447					
PS-3030					3/0	3/0 Str.	–	.470-.502					
PS-402					4	3&4 Str.	2	.232-.260					
PS-401					2	1&2 Str.	1/0	.292-.332					
PS-400					1/0	1/0 Str.	–	.375-.398					
PS-4020	4/0	4/0 Str.	–	.528-.563	2/0	2/0 Str.	–	.419-.447					
PS-4030					3/0	3/0 Str.	–	.470-.502					
PS-4040					4/0	4/0 Str.	–	.528-.563					

‡For conversion to metric range, see page 175.

ALUMINUM NEUTRAL SPLICING SLEEVE • TYPE PNK 5/8" O.D.

Penn-Sleeve



The triplex neutral splicing sleeve is made of pure aluminum and contains an integral solid barrier as assurance of equal crimping on each cable and maximum holding power.

These sleeves are crimped with the same tools and dies as used on the small service entrance sleeves.

Catalog Number	Conductor		Wire Diameter Range‡	Length (Approx.)		No. of Crimps	Crimping Groove
	ACSR	Aluminum	in	in	mm		
PNK-44	6	6 Str.–4 Sol.	.184-.204	4 1/4	108	9	BG, 5/8, Peach
PNK-22	4	4 Str.–2 Sol.	.232-.258	4 1/4	108	9	BG, 5/8, Peach
PNK-11	2	2 Str.	.292-.316	4 1/4	108	9	BG, 5/8, Peach
PNK-00	–	1/0 Str.	.368	6	152	12	BG, 5/8, Peach

‡For conversion to metric range, see page 175.

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ALUMINUM TERMINAL PLUG • TYPES TP & TPO

For terminating copper or aluminum wire

486B
LISTED
AL9CU

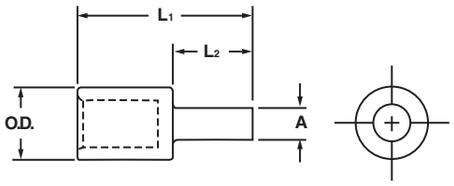
Optimum design to permit use of stranded copper or aluminum conductor in equipment boards and boxes with mechanical connectors.

Type TPO offset pin designed for use in limited spaces in equipment boards and meter boxes.

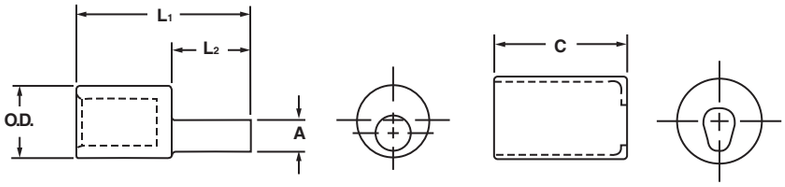
Simply crimp onto the copper or wire brushed aluminum conductor and install into the mechanical connector supplied with the equipment. No worry about cutting strands. No bulky in-line splice boxes required.

The plug is made of aluminum, tin-plated and filled with Cual-Aid® for a cool running compression connection. A cover is provided for quick insulation of the compression barrel. All required information is marked on the plug.

TP SERIES



TPO SERIES



Catalog Number	Aluminum Conductor Size	Wire Diameter Range‡	Approximate Dimensions					Crimping Tool Reference			
			A	O.D.	L_1	L_2	C	Die Color Code	Burndy Die	TPU Die	TDY-1 Pressure Setting
		in	in	in	in	in	in				
TP-6	6 Str.	.184	.23	.60	1.85	.68	1.75	Tan	B-296	T-296	2
TP-4	4 Str.	.232									
TP-2	2 Str.	.292									
TP-1	1 Str.	.332	.26		2.01	.84					
TP-1/0	1/0 Str.	.373	.29								
TP-2/0	2/0 Str.	.418	.33	.85	2.21	1.22	2.25	White	B-298	T-298	5
TP-3/0	3/0 Str.	.470	.37								
TP-4/0	4/0 Str.	.528	.42		2.59						
TP-250	250 MCM	.575	.47	1.10	2.63	1.34	2.50	Brown	B-299	T-299	
TP-300	300 MCM	.630	.53								
TP-350	350 MCM	.681	.57		2.75						
TP-400	400 MCM	.728	.63	1.31	3.08	1.60	2.87	Pink	B-300	T-300	7
TP-500	500 MCM	.813	.68								
TP-600	600 MCM	.893	.73	1.46	3.67	1.64	3.75	Yellow	B-936		9
TP-750	750 MCM	.998	.81		3.79	1.76					

OFFSET STYLE

TPO-2/0	2/0 Str.	.418	.33	.85	2.7	1.13	2.25	White	B-298	T-298	5
TPO-3/0	3/0 Str.	.470	.37		2.8	1.25					
TPO-4/0	4/0 Str.	.528	.42			1.28					
TPO-250	250 MCM	.575	.47	1.10	3.0	1.28	2.50	Brown	B-299	T-299	
TPO-300	300 MCM	.630	.53		3.1	1.47					
TPO-350	350 MCM	.681	.57								
TPO-400	400 MCM	.728	.63	1.32	3.4	1.69	2.87	Pink	B-300	T-300	7
TPO-500	500 MCM	.813	.68								
TPO-600	600 MCM	.893	.73	1.46	4.0	1.73	3.75	Yellow	B-936		9
TPO-750	750 MCM	.998	.81		4.2						

‡For conversion to metric range, see page 175.

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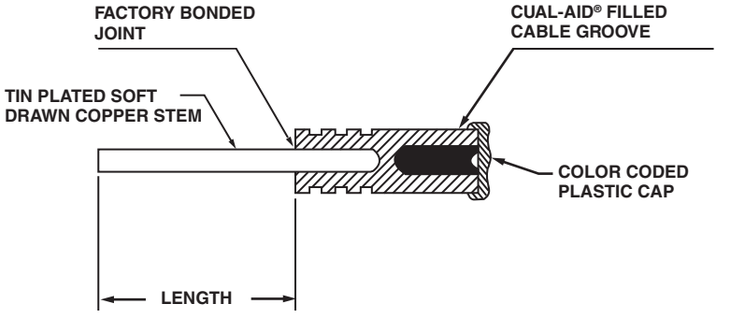
PENN-STEMS • TYPES PSKS AND PSS

For terminating aluminum and ACSR conductors

Designed to be used in places where a terminal that was intended to hold a copper wire is too small or unsuitable for an aluminum wire, such as secondaries on transformers and meter entrances.



Catalog Number	Stem					Conductor Range		Wire Dia. Range‡	Cable Range Color Code	No. of Crimps		Die Size	TDY-U Pressure Setting
	Length (Approx.)		Conductor Range	Maximum Diameter						Hand Tool	Hydraulic Tool		
	in.	mm		in.	mm	Aluminum	ACSR	in					
PSKS-44-2 1/4	2 1/2	64	4 Sol.	.204	5.15	6 Str., 4 Sol.	6-6/1	.184-.204	Blue	3	1	BG, 5/8	2
PSKS-24-2 1/4						4 Str., 2 Sol.	4-6/1, 7/1	.232-.258	Orange				
PSKS-14-2 1/4						2 Str., 1/0 Sol.	2-6/1, 7/1	.292-.325	Red				
PSKS-04-2 1/4						1/0 Str.	1/0-6/1	.373-.398	Yellow				
PSKS-22-3 1/4	3 1/4	83	2 Sol.	.258	6.50	4 Str. 2 Sol.	4-6/1, 7/1	.232-.258	Orange				
PSKS-12-3 1/4						2 Str. 1/0 Sol.	2-6/1, 7/1	.292-.325	Red				
PSKS-02-3 1/4						1/0 Str.	1/0-6/1	.373-.398	Yellow				
PSS-22-6 1/2	6 1/2	165	2 Sol.	.258	6.50	4 Str. 2 Sol.	4	.232-.258	Orange	7	4	.840 or B-249	4
PSS-12-6 1/2						2 Str. 1/0 Sol.	2	.292-.325	Red				
PSS-01-6 1/2	6 1/2	165	1/0 Sol.	.325	8.33	1/0 Str.	1/0	.373-.398	Yellow				
PSS-201-6 1/2						2/0 Str.	2/0	.418-.447	Gray				
PSS-301-6 1/2						3/0 Str.	3/0	.470-.502	Black				
PSS-401-6 1/2						4/0 Str.	4/0	.528-.563	Pink				
PSS-2630-5 1/2	5 1/2	140	4/0 Sol.	.460	11.70	250 MCM 266.8 MCM	–	.575-.594	Clear	–	4	1 1/8-2	5
PSS-3330-5 1/2						300 MCM 336.4 MCM	266.8-18/1, 26/7	.609-.669					
PSS-3930-5 1/2						350 MCM 397.5 MCM	300-26/7 336.4-18/1,26/7	.681-.721					
PSS-4730-5 1/2						477 MCM 500 MCM	397.5-26/7, 30/7 477-18/1, 24/7	.793-.846					

‡For conversion to metric range, see page 175.

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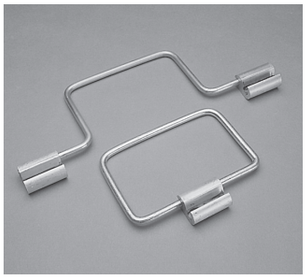
PRESS-ON STIRRUPS • TYPES KBO, KKBO, KBD, KKBD, KBN AND KKBN

Aluminum or ACSR to copper taps



Installed easily and safely with standard “O” and “D” dies in hand or hydraulic tools. Designed to protect energized conductors from arcing damage when live taps are made.

Types KBO and KBD have a single aluminum Press-On clamping element for standard duty. Types KKBO and KKBD have double Press-Ons for heavy duty. Tin plated, hard drawn, solid copper bail permits taps to be taken off at any convenient angle.

Factory filled with Cual-Aid® joint compound. Shipped in polyethylene bags to keep assembly clean until ready for use.

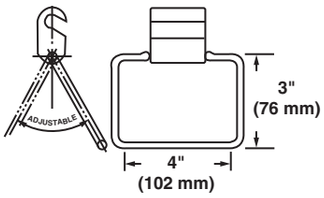


FIG. 1 – TYPES KBO, KBD AND KBN

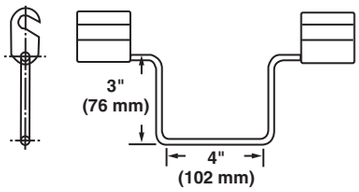


FIG. 2 – TYPES KKBO, KKBD AND KKBN

Catalog Number	Catalog Number	Conductor Range		Wire Diameter Range‡	H.D.* Copper Bail	Bail Dia.	Installation Tools & Dies			TDY-U Pressure Setting
Fig. 1	Fig. 2	ACSR	Aluminum	in		in	Kearney	Alcoa	Burndy	
KBO-W4-2	KKBO-W4-2	6	6 Sol.-6 Str.-4 Sol.	.162-.204	2 Sol.	.258	Use Either Model WH-1 Hydraulic Tool or O-1, O-2, O-52 Hand Tool with O Die	Use Model 12-A Hydraulic Tool with O Die	Use Model Y-35 Hydraulic Tool with O Die Index	4
KBO-R2-2	KKBO-R2-2	2-4	2 Sol.-2 Str.-4 Str.	.232-.316	2 Sol.	.258				
KBO-1/0-2	KKBO-1/0-2	1/0	1/0 Str.	.368-.398	2 Sol.	.258				
KBD-2/0-2	KKBD-2/0-2	1/0-2/0	1/0-2/0 Str.	.368-.447	2 Sol.	.258	Use either Model WH-1 Hydraulic Tool or O-51, O-52 Hand Tool with D Die	Use Model 12-A Hydraulic Tool with D Die	Use Model Y-35 Hydraulic Tool with D Die Index	4
KBD-4/0-2	KKBD-4/0-2	3/0-4/0	4/0 Str.	.502-.563	2 Sol.	.258	Use WH-1 Tool with D Die			
KBD-4/0-0	KKBD-4/0-0	3/0-4/0	4/0 Str.	.502-.563	1/0 Sol.	.325				
KBN-0-2	KKBN-0-2	266.8-397.5 18/1	250-400 MCM	.575-.743	2 Sol.	.258	Use Model WH-2 Hydraulic Tool with N Die	Use Model 12-A Hydraulic Tool with N Die	Use Model Y-35 Hydraulic Tool with N Die Index	7
KBN-1-0	KKBN-1-0	266.8-397.5 18/1	250-400 MCM	.575-.743	1/0 Sol.	.325				
KBN-R5-2	KKBN-R5-2	300-477 18/1	336.4-500 MCM	.666-.814	2 Sol.	.258				
KBN-R6-0	KKBN-R6-0	300-477 18/1	336.4-500 MCM	.666-.814	1/0 Sol.	.325				

‡For conversion to metric range, see page 175.
For sizes not listed consult factory.
**Bails are tin plated.*

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COPPER ALLOY SPLIT BOLT CONNECTORS • TYPES S AND SEL

2 CONDUCTORS

Catalog Number	Range of Equal Run & Tap	Min Tap with One Max Main	Max Cond Copperweld		Wire Diameter Range	UL Only Rebar w/ 6 or 8 AWG	L	W	Across Flats (In)	Torque In/Lbs
			Str	Type A						
S-10 *	16 str - 10 str	16 str	-	-	.057 - .116	N/A	.72	.50	.34	80
S-8 *	16 str - 8 str	16 str	-	-	.057 - .145	N/A	.84	.50	.38	80
S-6 *	10 sol - 6 sol	16 sol	-	-	.102 - .162	N/A	1.05	.63	.50	165
S-4 *	8 sol - 4 sol	16 sol	3 No. 12	8A	.128 - .204	N/A	1.05	.69	.56	165
S-3 *	6 sol - 2 sol	12 sol	3 No. 9	5A	.162 - .258	N/A	1.31	.81	.69	275
S-2 *	6 sol - 2 str	14 str	3 No. 7	3A	.162 - .292	N/A	1.31	.81	.69	275
S-1/0 *	4 sol - 1/0 str	14 sol	3 No. 6	2A	.204 - .375	N/A	1.64	.88	.75	385
S-2/0	2 sol - 2/0 str	14 str	3 No. 5	-	.258 - .418	#3 (3/8)	1.81	1	.81	385
S-3/0	2 sol - 3/0 str	12 sol	7 No. 7	-	.258 - .470	N/A	2	1.13	.88	500
S-4/0-250	1/0 sol - 250	10 sol	7 No. 5	-	.325 - .575	#4 (1/2)	2.08	1.31	1	650
S-350 +	4/0 str - 350	8 sol	19 No. 7	-	.528 - .682	#5 (5/8)	2.63	1.63	1.50	650
S-500 +	250 - 500	8 sol	19 No. 6	-	.575 - .815	#6 (3/4)	3	1.81	1.63	825
S-750 ++	350 - 750	8 sol	19 No. 5	-	.682 - .999	N/A	3.75	2.13	1.94	1000
S-1000 ++	500 - 1000	8 sol	-	-	.815 - 1.153	N/A	4	2.50	2.25	1100

*RUS REA accepted

\+ UL Only Grounding, Bonding, Direct Burial (350 & 500)
++ Not Approved Grounding, Bonding, Direct Burial (No Standard)

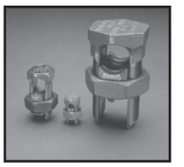
2 OR 3 CONDUCTORS

Catalog Number	Range of Equal Run & Tap	Min Tap with One Max Main	Max Cond Copperweld		Wire Diameter Range	L	W	Across Flats (In)	Torque In/Lbs
			Str	Type A					
SEL-8 *	16 str - 8 str	16 str	-	-	.057 - .145	.84	.50	.38	80
SEL-6 *	10 sol - 6 sol	16 sol	-	-	.102 - .162	1.09	.63	.50	165
SEL-4 *	8 sol - 4 sol	16 sol	3 No. 12	8A	.128 - .204	1.27	.69	.56	165
SEL-2 *	6 sol - 2 str	14 str	3 No. 7	3A	.162 - .292	1.55	.81	.69	275

*RUS REA accepted

	POWER	UL-467 GROUNDING CSA			C22.2 NO. 41 GROUNDING		
	UL 486A CSA 22.2 NO. 65 WIRE RANGE	UL GROUNDING MAX. WIRE	GROUNDING & BONDING	DIRECT BURIAL WIREBAR	CSA GROUNDING MAX. WIRE	GROUNDING & BONDING	DIRECT BURIAL
S SEL	16 Str. - 1000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

*** RUS REA ACCEPTED**



CU 90ºC | 467 Listed | 467 SUITABLE FOR DIRECT BURIAL | Power & Grounding

FEATURES AND BENEFITS

The most versatile split bolt on the market.
Manufactured in the U.S.A.
For copper and copperweld wire and rebar.
Made from high strength copper alloy. Highly resistant to corrosion and season cracking.
Under torque, this design provides high contact pressure between conductors, or conductor to rebar.

Now approved for electrical power, grounding/bonding, direct burial and rebar.

Application/Use:
* Type S is for use with 2 conductors in electrical power applications; 2 conductors or conductor to rebar in grounding/bonding and direct burial applications.

* Type SEL is for use with 2 or 3 conductors in electrical power, grounding & bonding, and direct burial applications.

* Grounding, bonding and direct burial below ground splicing, tapping and bonding.

* DB permanently marked on head for easier identification by inspectors.

Versatile Multi-Use:
* Electrical - splicing and tapping.
* Grounding and Bonding - above ground splicing, tapping and bonding.

Unique Design:
* SEL - first 2 or 3 conductor split bolt approved for grounding and bonding with full CSA Certification.
* Re-usable with proper installation practice.
* Free running threads.
* Pressure bar design features give assurance of high “pull-out” and a secure connection on all combination of conductors.
* True hex design for position grip and assured torquing.
* Wide wire range per size.
* 600V-90 degree C temperature.

Conductors:
* Wide range of solid, compact, compressed, concentric and copperweld. Rebar #3, 4, 5, and 6.

Installation:
* Torque wrench plus socket, box or open-end wrenches.
* True hex design sizing.

PENNUNION
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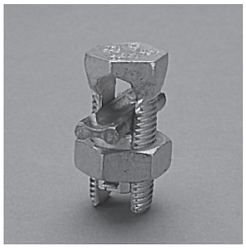
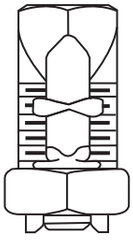
COPPER ALLOY-BODIED SPLIT BOLT CONNECTORS • TYPE SW

For copper to copper, copper to aluminum, and aluminum to aluminum

AL 9CU





Made from high strength copper alloy–highly resistant to corrosion and season cracking. The design provides, under torque, high contact pressure between conductors.

Electro-tin plated bolt, nut, spacer and pressure bar.

We recommend using Penn-Union Cual-Aid®, an oxide inhibiting compound, with this connector. When connecting aluminum or ACSR wires, wire brush the conductor with Cual-Aid #11C.

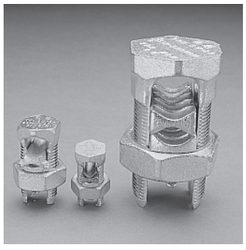
Catalog Number	Copper and Aluminum			ACSR		GUY Str.	Copperweld Max.		Wire Diameter Range‡	Recommended Torque
	Range of Equal Main and Tap		Min. Tap With One Max. Main	Range of Main or Tap						
	Min.	Max.		Min.	Max.	in.	Str.	Type A	in	(in.-lb.)
SW-3	14 Str.	8 Str.	14 Str.	–	8	5/32	–	–	.073-.146	165
SW-4	10 Str.	6 Str.	10 Sol.	–	6	7/32	3 No. 12	8A	.116-.184	165
SW-5▲	8 Sol.	4 Str.*	8 Sol.	6	4	1/4	3 No. 9	5A	.128-.258	275
SW-6▲	8 Sol.	2 Str.	8 Sol.	6	2	5/16	3 No. 7	3A	.128-.316	275

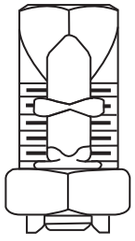
‡For conversion to metric range, see page 175.
▲RUS accepted.
**UL486A listed with 2 sol cu.*

COPPER ALLOY-BODIED SPLIT BOLT CONNECTORS • TYPE SW

For copper to copper*

CU
90°C





Made from high strength copper alloy–highly resistant to corrosion and season cracking. The design provides, under torque, high contact pressure between conductors.

Electro-tin plated bolt, nut, spacer and pressure bar.

Catalog Number	UL Listed Copper Range*			Aluminum Range Not UL Listed		Copperweld Max. Str.	Wire Diameter Range‡	Recommended Torque
	Range of Equal Main and Tap		Min. Tap With One Max. Main					
	Min.	Max.		Aluminum	ACSR		In.	(In.-Lb.)
SW-1▲	16 Str.	10 Str.	16 Str.	16 Str.-10 Str.	–	–	.057- .116	80
SW-2▲	16 Str.	8 Str.	16 Str.	16 Str.-8 Str.	–	–	.057- .145	80
SW-7▲	6 Sol.	1/0 Str.	10 Sol.	6 Sol.-1/0 Str.	6-1	3 No. 6	.162- .375	385
SW-8▲	6 Str.	2/0 Str.	10 Sol.	6 Str.-2/0 Str.	6-1/0	3 No. 5	.184- .419	385
SW-9A	4 Str.	3/0 Str.	6 Sol.	4 Str.-3/0 Str.	6-2/0	7 No. 7	.198- .470	500
SW-10	4 Str.	250 MCM	4 Str.	4 Str.-250 MCM	4-4/0	7 No. 5	.232- .575	650
SW-11	3/0 Str.	350 MCM	1 Sol.	3/0 Str.-350 MCM	2/0-336.4 18/1	19 No. 7	.447- .682	650
SW-12	3/0 Str.	500 MCM	1/0 Str.	3/0 Str.-500 MCM	2/0-477 18/1	19 No. 6	.447- .815	825
SW-13	250 MCM	750 MCM	2/0 Str.	250-750 MCM	4/0-666.6	19 No. 5	.563- .999	1000
SW-14	350 MCM	1000 MCM	4/0 Str.	350-1000 MCM	300-900	–	.682-1.162	1100

**Can be used on aluminum conductor, however they are not UL Listed for that application.*
‡For conversion to metric range, see page 175.
▲RUS accepted.

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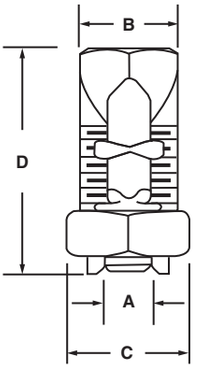
ALUMINUM SPLIT BOLT CONNECTORS • TYPE SWA

For aluminum to aluminum, copper to aluminum, and copper to copper

AL 9 CU
UL486B



Made from high strength, heat treated aluminum alloy–highly resistant to corrosion. The design provides, under torque, high contact pressure between conductors.

Electro tin-plated bolt, nut, spacer and pressure bar.

Meets and exceeds requirements of the UL486B standard.

There is no need to scratch brush or use oxide inhibiting compounds for installation of 90°C max rated conductors in NEC applications. For all other applications, the use of Penn-Union Cual-Aid® #11C, oxide inhibiting compound, is recommended.

Catalog Number	Range of Equal Main & Tap (Copper and Aluminum)	Wire Diameter Range‡ (in inches)	Approximate Dimensions (In Inches)				Recommended Torque (in.-lb.)
			A	B	C	D	
SWA-7	6 Sol. - 1/0 Str.	.162-.375	.375	.750	1.00	1.81	385
SWA-8	2 Sol. - 2/0 Str.	.257-.418	.419	.88	1.12	2.12	390
SWA-10	1/0 Str. - 250 MCM	.368-.575	.582	1.19	1.50	2.63	650
SWA-11	2/0 Str. - 350 MCM	.414-.681	.746	1.31	1.63	2.91	650
SWA-12	3/0 Str. - 500 MCM	.464-.814	.834	1.44	1.81	3.28	825

‡For conversion to metric range, see page 175.

COPPER SERVICE ENTRANCE CONNECTORS • TYPE SX

For copper wire or cable

RUS ACCEPTED

Catalog Number	Conductor Range	Wire Diameter Range‡
	Stranded	In.
SX-12	12	.092
SX-10-8	10-8	.116-.146
SX-6▲	6	.184
SX-4▲	6-4	.184-.232
SX-2	4-2	.232-.292

‡For conversion to metric range, see page 175.
▲RUS accepted.

Body is made from cold drawn copper extrusions. Slotted silicon bronze screws provides ease in installation–with screwdriver or pliers. Type SX makes a secure, low resistance joint which is easy to tape.

COPPER SERVICE ENTRANCE CONNECTORS • TYPE SAX

For copper wire or cable

Made from high strength hex bronze rod–slotted silicon bronze screws. Spacer is manufactured from high conductivity copper. Entire connector, including screw, is tin-plated to prevent galvanic corrosion.

We recommend using Penn-Union Cual-Aid, an oxide inhibiting compound. When connecting aluminum or ACSR wires, wire brush the conductor with Cual-Aid #11C.

Catalog Number	Maximum Conductor					Maximum Wire Diameter‡
	Aluminum		ACSR	Copper		
	Solid	Stranded		Solid	Stranded	in
SAX-12-8	12	8	–	12	8	.145
SAX-6	5	6	8	5	6	.184
SAX-4	2	3	4	2	3	.260
SAX-2	1	2	3	1	2	.292

‡For conversion to metric range, see Technical Data Section.

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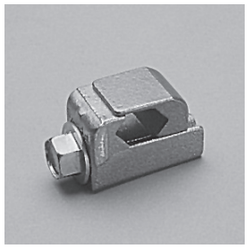
SILICON BRONZE VISE GRIPS • TYPE FF

For copper to copper wire



A stronger and more rigid connector of the vise type, with more grip on the conductors–and full compression with any conductor combination.

Easy to install. Non-swiveling–the slide cannot rotate out of the body.

Castings made from bronze.

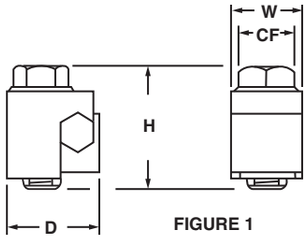


FIGURE 1

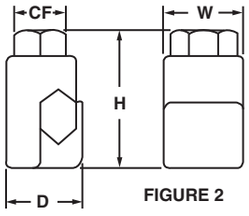


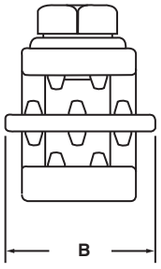
FIGURE 2

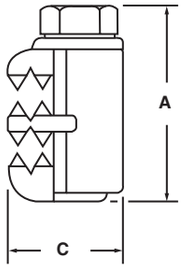
Catalog Number	Conductor Range Maximum 2 Conductors	Conductor Range Minimum 2 Conductors	Wire Diameter Range‡ in	Fig. No.	Approximate Dimensions Stud Diameter No. Threads in	Hex CF in	D in	D mm	H in	H mm	W in	W mm
FF-6*	6 Sol.	8 Sol.	.128-.162	1	1/4-28	3/8	3/4	19.0	1	25.4	5/8	15.8
FF-4	4 Str.	6 Sol.	.162-.232	1	5/16-24	9/16	13/16	20.6	1 5/32	29.4	5/8	15.8
FF-2	2 Str.	4 Sol.	.204-.292	2	5/16-24	9/16	13/16	20.6	1 3/8	34.9	13/16	20.6
FF-2/0	2/0 Str.	2 Sol.	.258-.419	2	3/8-24	9/16	1 1/8	28.5	1 7/8	47.6	31/32	24.6
FF-4/0	4/0 Str.	1/0 Sol.	.325-.528	2	3/8-24	9/16	1 3/16	30.1	2 1/8	53.9	15/16	23.8

‡For conversion to metric range, see page 175.
**Supplied with slotted hex head bolts only.*

TIN PLATED SILICON BRONZE INSULATION PIERCING VISE GRIPS • TYPE MGC

For messenger cable





The MGC-167 clamp with its piercing teeth is specifically designed for use on self supporting rural, Figure 8, or IM type telephone cable when connecting the messenger to the ground wire. When clamp is tightened, the piercing teeth puncture through the insulation of the messenger, eliminating the need for wire stripping, forming a positive ground connection. Clamping bolt is stainless steel.

Catalog Number	Conductor Range Messenger Cable Dia.	Conductor Range Tap	Approx Dimensions A in	A mm	B in	B mm	C in	C mm	Bolt Size
MGC-167	.146"-.312" dia. (3.7-7.9 mm²)	8 Str-4 Str (.146"-.232" dia.) (3.7-5.9 mm²)	1 5/8	41.3	1 1/4	31.8	1	25.4	5/16-18 1/2 Hex
MGC-167 9/16	.146"-.312" dia. (3.7-7.9 mm²)	8 Str-4 Str (.146"-.232" dia.) (3.7-5.9 mm²)	1 5/8	41.3	1 1/4	31.8	1	25.4	5/16-24 9/16 Hex

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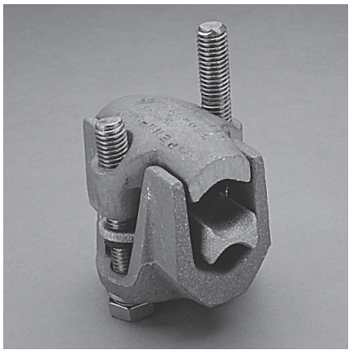
ALUMINUM PARALLEL CLAMPS • TYPE AVT

Penn-Tap heavy duty distribution



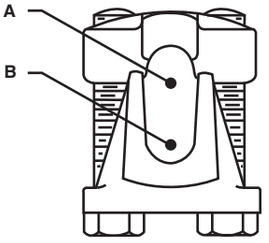
Specially designed wrap-around finger on spacer minimizes cold flow over entire conductor range.

Rounded contours for easy taping.

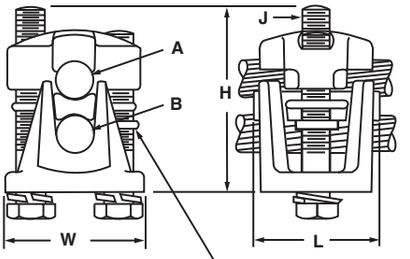
Accommodates a range of aluminum or copper conductor in either groove+. Place aluminum above copper.

Staking the longer of the two bolts makes the assembly one unit with no loose parts to drop.

Top and bottom castings are of massive proportioned high strength aluminum alloy and Type EC high conductivity aluminum alloy spacer assembled with steel or in larger sizes anodized high strength aluminum hardware.



AVT-LS



AVT

RETAINER WASHER ON SHORT BOLT

Catalog Number		Conductor Range AWG and ACSR and AR*				Approximate Dimensions						
Steel Hardware	Aluminum Hardware	A Main	Wire Diameter Range‡ in	B Tap	Wire Diameter Range‡ in	H in	H mm	L in	L mm	W in	W mm	J in
AVT-0 AVT-0LS	–	3 Sol.-1/0 Str. 4-1/0 ACSR 6 AR	.229-.440	6 Sol.-1/0 Str. 6-1/0 ACSR	.162-.398	2 7/8	73	1 9/16	40	1 5/8	41	5/16
AVT-1 AVT-1LS	–	2 Sol.-3/0 Str. 3-2/0 ACSR 6-4 AR	.258-.524	6 Sol.-3/0 Str. 8-2/0 ACSR	.128-.470	2 1/8	54	1 3/4	44	1 3/4	44	5/16
AVT-2 AVT-2LS	AVT-2A	1/0 Sol.-250 MCM 1-4/0 ACSR 6-4 AR	.325-.575	6 Sol.-250 MCM 6-4/0 ACSR	.162-.575	2 5/8	67	2	51	2	51	3/8
AVT-3	AVT-3A AVT-3ALS	3/0 Sol.-350 MCM 3/0-336.4 ACSR 6-1/0 AR	.410-.741	6 Sol.-350 MCM 6-336.4 ACSR	.162-.741	3 1/16	78	2 1/4	57	2 7/16	62	1/2
AVT-4	AVT-4A AVT-4ALS	350-500 MCM 336.4-397.5 ACSR 2/0-3/0 AR	.682-.836	4 Sol.-500 MCM 5-397.5 ACSR	.204-.815	3 9/16	90	2 3/4	70	2 1/2	64	1/2
AVT-5	AVT-5A AVT-5ALS	350-874.5 MCM 336.4-715.5 ACSR 2/0-336.4 AR	.682-1.092	3/0-874.5 MCM 3/0-715.5 ACSR	.470-1.077	4 1/16	103	3 3/8	88	2 13/16	71	1/2
AVT-6	AVT-6A AVT-6ALS	450-1000 MCM 397.5-900 ACSR 4/0-397.5 AR	.743-1.162	3/0-1000 MCM 3/0-900 ACSR	.470-1.162	4 1/4	108	3 3/4	95	3 3/16	81	5/8

+Not recommended for copper to copper applications, unless part is tin-plated.
‡For conversion to metric range, see page 175.
**AR–Aluminum cable rating with Preformed Armor Rods.*
Add suffix "-TN" to the catalog number for a tin plated aluminum connector. Example: AVT-O-TN.
Add suffix "-BF" to the catalog number for prefilling with Cual-Aid and bagging. Example: AVT-O-BF.
Suffix LS–Less spacer; same length hardware.

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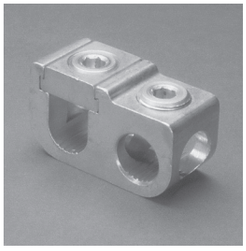
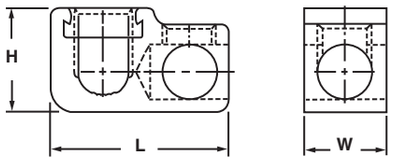
ALUMINUM MECHANICAL TAPS • TYPE GPT

UL486B
LISTED
AL9CU



GPT

Fabricated from high strength aluminum alloy extrusion. 100% reusable, using a hex wrench. Sliding retainer allows easy installation on run conductor. Finish electro-tin plated to assure minimum contact resistance and protection against corrosion when used with copper wire (for added protection, apply Penn-Union Cual-Aid® to cable, before installation).



GPT

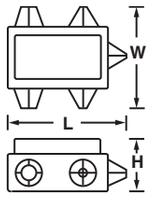
Parallel and "T" Tap

Catalog Number	Conductor Range		Approximate Dimensions		
	Main	Tap	H	W	L
Parallel Taps*			In.	In.	In.
GPT-2	12 Sol.-2 Str.	14 Sol.-4 Str. CU 12 Sol.-4 Str. AL	7/8	5/8	1 25/64
GPT-1/0	2 Str.-1/0 Str.	14 Sol. 1/0 Str. CU 12 Sol.-1/0 Str. AL	1	3/4	1 3/4
GPT-250-0	1/0 Str.-250 MCM	14 Sol.-1/0 Str. CU 12 Sol.-1/0 Str. AL	1 5/16	1 1/16	2 1/32
GPT-250	1/0 Str.-250 MCM	6 Str.-250 MCM	1 5/16	1 1/16	2 9/32
GPT-350	4/0 Str.-350 MCM	6 Str.-350 MCM	1 7/16	1 1/4	2 9/16
GPT-500	350-500 MCM	2 Str.-500 MCM	1 3/4	1 3/8	3 1/8
GPT-750	500-750 MCM	2 Str.-500 MCM	2	1 1/2	3 3/8

**For taps packaged with covers add suffix "-WC"*

COVERS • TYPE GTC

Insulating covers for GPT connectors



Manufactured from 105°C rated material, 600 volt maximum rated.

Catalog Number	Cover for Model Number	Color	Approximate Dimensions		
			H	W	L
			in.	in.	in.
GTC-2	GPT-2	Yellow	1 7/64	1 29/32	2 7/32
GTC-1/0	GPT-1/0	Gray	1 1/4	2 5/32	2 5/8
GTC-250	GPT-250	Red	1 5/8	2 7/8	3 7/16
GTC-250	GPT-250-0	Red	1 5/8	2 7/8	3 7/16
GTC-350	GPT-350	Yellow	1 3/4	3 3/16	3 3/4
GTC-500	GPT-500	Blue	2 3/32	3 5/16	4 3/8
GTC-750	GPT-750	Orange	2 11/32	3 7/16	4 5/8

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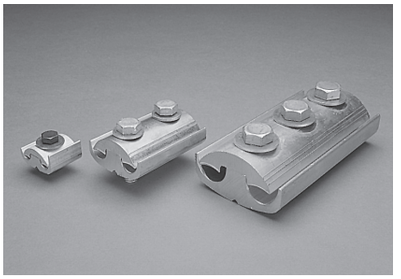
ALUMINUM PARALLEL CLAMP (EXTRUDED) • TYPE PCAA

RUS ACCEPTED

One center bolt and multiple center bolt
Heavy duty service entrance:
Light and heavy duty distribution armor rod clamps



High strength aluminum extruded alloy fittings assembled with steel or anodized high strength aluminum bolts, and high strength aluminum flat washers.

Serrated grooves provide increased contact and cleaning action.

Aluminum hardware provided. For steel hardware, suffix catalog number with "-SSTL." Example: PCAA-10-SSTL.

FIG. 1

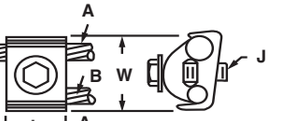


FIG. 2

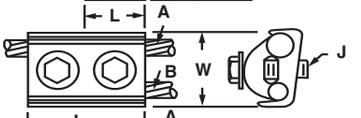
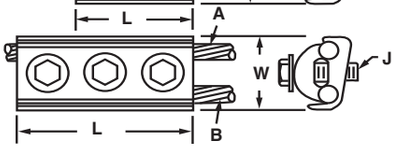


FIG. 3



Catalog Number	Fig. No.	Conductor Range AWG and ACSR and AR*				Approximate Dimensions				
		A Main	Wire Diameter Range‡ in	B Tap	Wire Diameter Range‡ in	L in	L mm	W in	W mm	J in
PCAA-10▲	1	6 Sol.-1/0 Str. 6-1/0 ACSR	.162- .398	6 Sol.-1/0 Str. 6-1/0 ACSR	.162- .398	1 5/16	33	1 7/16	37	3/8
PCAA-15▲	1	6 Sol.-2/0 Str. 6-2/0 ACSR 6 Str. AR	.162- .447	6 Sol.-2/0 Str. 6-2/0 ACSR 6 Str. AR	.162- .447	1 3/8	35	1 11/16	43	3/8
PCAA-17	1	2 Sol.-4/0 Str. 4-4/0 ACSR 6-4 Str. AR	.250- .563	2 Sol.-4/0 Str. 4-4/0 ACSR 6-4 Str. AR	.250- .563	1 1/2	38	1 15/16	49	3/8
PCAA-18	2	2 Sol.-4/0 Str. 4-4/0 ACSR 6-4 Str. AR	.250- .563	2 Sol.-4/0 Str. 4-4/0 ACSR 6-4 Str. AR	.250- .563	3	76	1 15/16	49	3/8
PCAA-20▲	1	3/0 Str.-400 MCM 3/0-397.5 18/1 ACSR 4 Str.-2/0 Str. AR	.470- .781	6 Sol. 2/0 Str. 6-2/0 ACSR 6 Str. AR	.162- .447	1 3/4	44	2 3/16	56	1/2
PCAA-23	2	3/0 Str.-400 MCM 3/0-397.5 18/1 ACSR 4 Str.-2/0 Str. AR	.470- .781	3/0 Str.-400 MCM 3/0-397.5 18/1 ACSR 4 Str. 2/0 Str. AR	.470- .781	3 3/8	88	2 15/32	63	1/2
PCAA-25	3	3/0 Str.-400 MCM 3/0-397.5 18/1 ACSR 4 Str.-2/0 Str. AR	.470- .781	3/0 Str.-400 MCM 3/0-397.5 18/1 ACSR 4 Str.-2/0 Str. AR	.470- .781	5 1/4	133	2 15/32	63	1/2
PCAA-27	1	400-1000 MCM 397.5 18/1-795 ACSR 3/0 Str.-397.5 AR	.728-1.153	6 Sol.-2/0 Str. 6-2/0 ACSR 6 Str. AR	.162- .447	2 1/4	57	2 13/16	71	5/8
PCAA-30	2	400-1000 MCM 397.5 18/1-795 ACSR 3/0 Str.-397.5 AR	.728-1.153	3/0 Str.-400 MCM 3/0-397.5 18/1 ACSR 4 Str.-2/0 Str. AR	.470- .781	4 1/2	137	3 1/8	79	5/8
PCAA-35	3	400-1000 MCM 397.5 18/1-795 ACSR 3/0 Str.-397.5 AR	.728-1.153	400-1000 MCM 397.5 18/1-795 ACSR 3/0 Str.-397.5 AR	.728-1.153	6 3/4	171	3 1/2	89	5/8

**All aluminum cable rating with Preformed Armor Rods.*
‡For conversion to metric range, see page 175.
Add suffix "-BF" to the catalog number for prefilling with Cual-Aid and bagging. Example: PCAA-10-BF.
▲RUS accepted with suffix BF.

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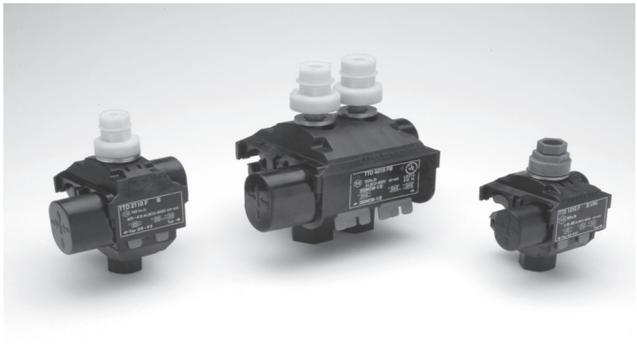
INSULATION PIERCING CONNECTORS • TYPE IPC



UL486B LISTED

MEETS ANSI C119.4 REQUIREMENTS
600 VOLT RATED

Dual rated for insulated copper and aluminum wire

For outdoor or indoor installation on energized conductor (tap must not be under load)

Exclusive RED “Turbo Spacer” keeps tap side open while main conductor is being tightened

Captive hardware allows for single wrench installation

Easy to install - no special tools required

Suitable for solid and/or stranded conductors

Double shear-head bolts ensure proper torquing every time

Connections are sealed by an integral rubber grommet

Installations are watertight and corrosion free

Totally insulated connectors eliminate need for tape or covers

No contact at any point during installation with a live part

IPC connectors can be used as a tap or a splice

CATALOG NUMBER	CONDUCTOR RANGE		CURRENT RATING		DIMENSIONS (IN)			TORQUE - IN INCH LBS.	BOLT HEAD SIZE (IN)	NUMBER OF BOLTS
	MAIN	TAP	COPPER (AMPS)	ALUMINUM (AMPS)	H	W	L			
IPC-2/0-10*	2/0-4	10-14	55	40	3.6	1.7	2.7	80	1/2	1
IPC-750-10*	750-3/0	10-14	55	40	4.3	2.4	2.8	80	1/2	1
IPC-1/0-2	1/0-8	2-10	190	150	3.7	2.0	3.0	80	1/2	1
IPC-1/0-1/0	1/0-8	1/0-8	190	150	3.7	2.0	3.0	125	1/2	1
IPC-4/0-2*	4/0-3	2-10	190	150	3.9	1.7	2.7	125	1/2	1
IPC-4/0-2/0	4/0-2	2/0-6	300	235	4.3	2.4	3.2	160	1/2	1
IPC-4/0-4/0	4/0-2	4/0-4	405	315	4.4	2.4	3.2	160	1/2	1
IPC-250-4/0	250-1	4/0-4	405	315	3.5	2.2	2.6	160	1/2	1
IPC-350-350	350-1/0	350-1/0	570	445	5.4	3.1	5.0	330	5/8	2
IPC-500-4/0	500-2/0	4/0-4	405	315	5.4	3.1	5.0	330	5/8	2
IPC-500-350	500-4/0	350-1/0	570	445	5.4	3.0	5.0	330	5/8	2
IPC-750-500	750-250	500-250	700	545	5.6	3.6	5.7	330	5/8	2

*Cannot be used as a splice
Connectors are not approved for submersible applications
Not recommended for use with extra-flexible, fine stranded cables

PENNUNION
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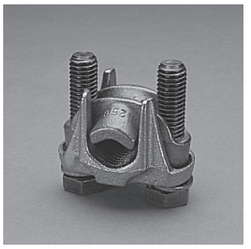
BRONZE PENN-TAPS • TYPE VT

For copper conductors

CU
90°C

RUS ACCEPTED



Designed for heavy-duty service connections. The cap swivels to permit quick and easy installation of conductors. Retaining rubber washer eliminates loose parts. Made from high strength bronze castings–assurance against stress corrosion and season cracking. Hardware–silicon bronze bolts and lockwashers. Flat back permits use as bus tap when used with longer bolts.

	Copper Conductor Range			
		Wire Diameter Range‡		Wire Diameter Range‡
Catalog Number	Main	in	Tap	in
VT-0	2 Str.-1/0 Str.	.292- .375	10 Str.-1/0 Str.	.116- .375
VT-1▲	2 Str.-2/0 Str.	.292- .419	10 Str.-2/0 Str.	.116- .419
VT-2▲	1/0 Str.-4/0 Str.	.375- .528	10 Str.-4/0 Str.	.116- .528
VT-3▲	250-350 MCM	.575- .682	10 Str.-350 MCM	.116- .682
VT-4▲	250-500 MCM	.575- .815	10 Str.-500 MCM	.116- .815
VT-5	400-800 MCM	.728-1.031	3/0 Str.-800 MCM	.470-1.031
VT-6	500-1000 MCM	.815-1.153	3/0 Str.-1000 MCM	.470-1.153

‡For conversion to metric range, see page 175.
If desired tin plated, suffix catalog number with "TN", for example: VT-1-TN.
If desired tin plated with spacer see type VTA listed below.
▲RUS accepted.

PLATED PENN-TAP • TYPE VTA

For copper conductors

CU
90°C

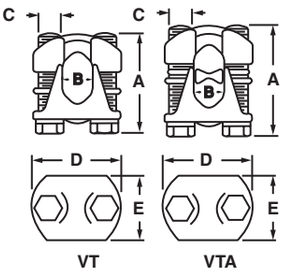
Made from high strength bronze castings with high conductivity spacer bar. All parts are tin plated.

Rubber retaining washer eliminates loose parts.

Note: VTA-1 thru VTA-6 can be used on Aluminum conductors; however, they are not UL Listed for that application.

	Copper Conductor Range						
		Wire Diameter Range‡		Copperweld	Aluminum		Wire Diameter Range‡
Catalog Number	Main	in	Tap	Solid	Awg.	Acsr.	In
VTA-0+	2 Str.-1/0 Str.	.292- .375	10 Str.-1/0 Str.	2/0	1/0 Str.	1	.116- .375
VTA-1	2 Str.-2/0 Str.	.292- .419	10 Str.-2/0 Str.	3/0	–	–	.116- .419
VTA-2	1/0 Str.-4/0 Str.	.375- .528	10 Str.-4/0 Str.	4/0	–	–	.116- .528
VTA-3	250-350 MCM	.575- .682	10 Str.-350 MCM	–	–	–	.116- .682
VTA-4	250-500 MCM	.575- .815	10 Str.-500 MCM	–	–	–	.116- .815
VTA-5	400-800 MCM	.728-1.031	3/0 Str.-800 MCM	–	–	–	.470-1.031
VTA-6	500-1000 MCM	.815-1.153	3/0 Str.-1000 MCM	–	–	–	.470-1.153

+Meets requirements for UL 486B. Balance of items UL listed copper to copper.
If no spacer bar is required, see type VT above.



	A			A		Approximate Dimensions						
	Bolt Length			Bolt Length		B		C	D		E	
Catalog Number	in	mm	Catalog Number	in	mm	in	mm	in	in	mm	in	mm
VT-0	1 1/2	38	VTA-0	1 1/4	32	13/32	10.3	5/16	1 7/16	37	15/16	24
VT-1	1 1/2	38	VTA-1	1 1/2	38	1/2	12.7	5/16	1 9/16	40	1 1/8	29
VT-2	1 3/4	44	VTA-2	1 3/4	44	19/32	15.0	3/8	1 27/32	47	1 11/32	59
VT-3	2	51	VTA-3	2	51	3/4	19.0	1/2	2 5/16	59	1 5/8	41
VT-4	2 1/4	57	VTA-4	2 1/4	57	7/8	22.2	1/2	2 7/16	62	1 11/16	43
VT-5	2 1/2	64	VTA-5	2 1/2	64	1 1/16	26.9	1/2	2 11/16	68	1 7/8	48
VT-6	2 3/4	70	VTA-6	2 3/4	70	1 1/4	31.7	5/8	3 1/16	78	2 1/4	57

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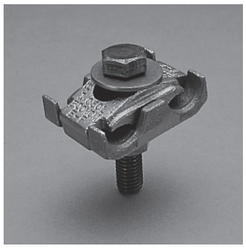
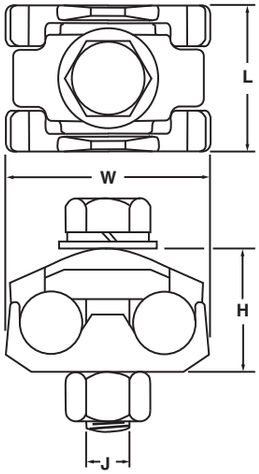
BRONZE UNIVERSAL PARALLEL GROOVE CLAMP • TYPE UCR

For cable range to cable range





Made from high strength bronze alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

These clamps will accommodate a large range of cables or wires in either groove, and are so designed that the two halves interlock insuring a positive grip on the conductors.

Catalog Number	Conductor Range (Either Groove)	Wire Diameter Range‡	Approximate Dimensions						
			L		W		H		J
		in	in	mm	in	mm	in	mm	in
UCR-013	8 Sol.-2/0 Str.	.128-.419	1 1/4	32	1 3/4	44	1 1/16	27	3/8
UCR-030	1/0 Sol.-300 MCM	.325-.634	1 3/4	44	2 5/16	59	1 3/8	35	1/2
UCR-050	250-500 MCM	.575-.815	2	51	2 3/4	70	1 5/8	41	1/2
*UCR-075	300-750 MCM	.634-.999	3 1/2	89	3 1/8	79	2 1/8	54	1/2

‡For conversion to metric range, see page 175.
**Two bolts.*

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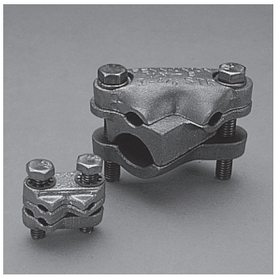
BRONZE VARIABLE GUTTER TAP • TYPE VX

For making parallel taps, tee connections, cross connections, or end to end connections.



Upper and lower clamping members are made of high strength bronze alloy. Spacer is made from high conductivity copper alloy. Furnished with high strength silicon bronze bolts and lockwashers.

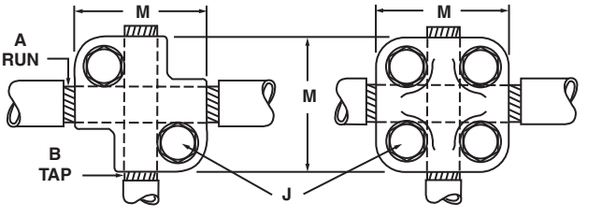


FIG. 1
2-Bolt

FIG. 2
4-Bolt

Catalog Number	Fig. No.	Conductor Range A Run	Wire Diameter Range-A Run‡ in	Conductor Range B Tap	Wire Diameter Range-B Tap‡ in	Approximate Dimensions J in	Approximate Dimensions M in	Approximate Dimensions M mm
VX-0	1	10 Sol.-10 Str.	.102- .116	10 Sol.-10 Str.	.102- .116	5/16	1 5/16	33
VX-1	1	6 Str.-2 Str.	.184- .292	6 Str.-2 Str.	.184- .292	5/16	1 5/16	33
VX-3	1	1 Str.-4/0 Str.	.332- .528	6 Str.-4/0 Str.	.184- .528	3/8	1 3/4	44
VX-4	1	250-500 MCM	.575- .815	6 Str.-2 Str.	.184- .292	3/8	2 3/16	56
VX-5S	1	250-500 MCM	.575- .815	1/0 Str.-300 MCM	.375- .634	3/8	2 3/16	56
VX-6	1	250-500 MCM	.575- .815	1 Str.-500 MCM	.332- .815	1/2	2 5/8	67
VX-7	1	500-1000 MCM	.815-1.153	6 Str.-2/0 Str.	.184- .419	3/8	2 5/8	67
VX-8	1	500-1000 MCM	.815-1.153	1 Str.-4/0 Str.	.332- .528	3/8	2 5/8	67
VX-8S	1	500-1000 MCM	.815-1.153	1/0 Str.-300 MCM	.375- .634	3/8	2 5/8	67
VX-10	2	500-1000 MCM	.815-1.153	250-1000 MCM	.575-1.153	3/8	2 9/16	65
VX-10S	2	750-1000 MCM	.999-1.153	750-1000 MCM	.999-1.153	1/2	3	76
VX-11	2	750-1500 MCM	.999-1.412	500-1000 MCM	.815-1.153	3/8	2 15/16	75
VX-12	2	750-1500 MCM	.999-1.412	750-1500 MCM	.999-1.412	1/2	3 1/4	82
VX-13	2	1000-2000 MCM	1.153-1.631	1000-2000 MCM	1.153-1.631	1/2	3 7/16	87

‡For conversion to metric range, see page 175.

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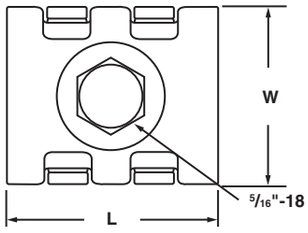
Phone 814.734.1631 • Fax 814.734.4946

COPPER JUMPER CLAMP • TYPE JC



C UL US
CU
90°C
UL467

RUS ACCEPTED

GROUNDING & BONDING

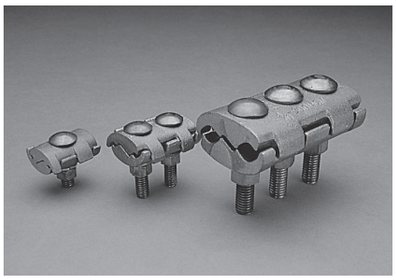
Jumper clamp cast from high copper content alloy.

Catalog Number	Finish of Grooves	Bolt	Conductor Range	Wire Diameter Range‡	Approximate Dimensions			
					L		W	
				in	in	mm	in	mm
JC-1-AC▲ †	1-Groove Tin Plated	Steel	6 Sol.-1/0 Str.	.162-.373	1 1/8	29	1 5/16	33
JC-UL-AC	1-Groove Bronze	Silicon Bronze	6 Sol.1/4,5/16 Guy	.162-.312				
JC-2-AA †	Tin Plated	Steel	6 Sol.-1/0 Str.	.162-.373	1 1/8	29	1 5/16	33
JC-UL		Silicon Bronze	6 Sol.-1/4,5/16 Guy	.162-.312				
JC-3-CC †	Bronze	Steel	6 Sol.-1/0 Str.	.162-.373	1 1/8	29	1 5/16	33
JC-UL-CC		Silicon Bronze	6 Sol.-1/4,5/16 Guy	.162-.312				

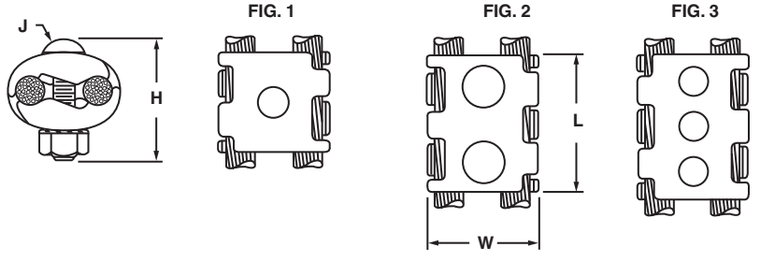
‡For conversion to metric range, see page 175.
▲RUS accepted.
† Not UL Listed.

UNIVERSAL PARALLEL CLAMP • TYPE UPC

For copper cable or wire



These clamps are designed to accommodate a large range of wires or cables in either groove. Made from high strength bronze alloy. Furnished with silicon bronze carriage bolts, nuts and lockwashers for convenience of single wrench installation.



Catalog Number	Conductor Range (Either Groove)	Wire Diameter Range‡	Fig. No.	Approximate Dimensions						
				H		J	L		W	
		in		in	mm	in	in	mm	in	mm
UPC-1	6 Sol.-1/0 Str.	.162- .375	1	1 3/4	44	3/8	1 3/4	44	1 1/2	38
UPC-2	4 Sol.-4/0 Str.	.204- .528	2	2	51	3/8	2 1/8	54	1 3/4	44
UPC-3	2 Sol.-300 MCM	.258- .634	2	2 1/4	57	3/8	2 3/8	60	2	51
UPC-4	4/0 Str.-500 MCM	.528- .815	3	3 1/4	70	1/2	4 1/4	108	2 1/2	64
UPC-5	300-800 MCM	.634-1.031	3	3 1/4	82	1/2	4 1/4	108	3	76
UPC-6	500-1000 MCM	.815-1.153	3	3 1/2	89	1/2	4 1/4	108	3 1/2	89

These clamps can also be supplied for aluminum conductors. The clamps are tin plated for aluminum. Add "TN" to catalog number for tin plating. For example: UPC-1-TN. See Type PCAA on page 21 for aluminum parallel clamps.
‡For conversion to metric range, see page 175.

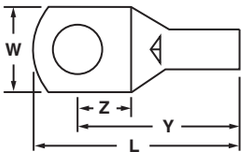
PENNUNION

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

COPPER PENN-CRIMPS® • TYPE BLY

Heavy Wall Seamless Tubing #10 AWG - 4/0 AWG

CU
90°C



Seamless, one piece, pure electrolytic copper construction with tin plating assures maximum conductivity. Generous entrance chamfer provides easy cable insertion. Inspection window insures full insertion. Features rounded tongue with full washer clearance and standardized crimp length. Can be installed with existing crimping tools. Catalog number and conductor size marked on every piece to insure positive identification.

Non-Insulated Compression Terminal

Ring Tongue - Seamless

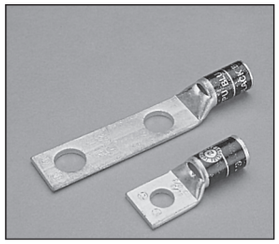
			Dimensions (in)				Installation Tooling							
							Mechanical		Hydraulic				T & B	
									PUC		Burndy		Tool 13642	
Catalog Number	Copper Cond. Range	Stud Size	W	L Max.	Y Max.	Z Min.	Burndy	PUC	TPU-12B	Die Index	Y35+ Y39	Wire Strip Length	Die Cat. No.	Die MS90485-
BLY10-T7†	10 Str.	4-6	.30	.96	.73	.20	Y8MRBI MR8G98 Y10D Y14MV					7/16"		
BLY10-L36†	12 Sol.	8-10	.30	.80	.62	.18								
BLY8C-L14		6-8	.41	1.15	.94	.28								
BLY8C-L	8	8-10	.41	1.15	.94	.28	Non-				UV8L			
BLY8C-L1	Aircraft	1/4	.46	1.22	.99	.32	Ratchet;	TDM-250XF	TPU-12B	38	Nest	1/2"	11781M	- 8
BLY8C-L2	AN 8	5/16	.57	1.30	1.01	.34	MY29-11				Y34PL			
BLY8C-L3	8 AWG	3/8	.57	1.30	1.01	.34					Indentor			
BLY8C-L4		1/2	.73	1.52	1.14	.48					(1) Crimp			
BLY6C-L1	6	8-10	.48	1.31	1.06	.29								
BLY6C-L	Aircraft	1/4	.48	1.31	1.06	.29	Non-				UV6L			
BLY6C-L4	AN 6	5/16	.60	1.43	1.13	.35	Ratchet;	TDM-250XF	TPU-12B	39	Nest	1/2"	11782M	- 6
BLY6C-L2	6 AWG	3/8	.60	1.43	1.13	.35	MY29-11				Y34PLA			
BLY6C-L10		1/2	.73	1.64	1.26	.49					Indentor (1) Crimp			
BLY4C-L3		8-10	.55	1.37	1.11	.28								
BLY4C-L	4	1/4	.55	1.37	1.11	.28	Non-				UV4L			
BLY4C-L4	Aircraft	5/16	.63	1.48	1.17	.33	Ratchet;	TDM-250XF	TPU-12B	40	Nest	1/2"	11783M	- 4
BLY4C-L2	AN 4	3/8	.63	1.48	1.17	.33	MY29-11				Y34PLA			
BLY4C-L5	4 AWG	1/2	.73	1.68	1.30	.47					Indentor (1) Crimp			
BLY2C-L3	2	8-10	.69	1.72	1.37	.35								
BLY2C-L1	Aircraft	1/4	.69	1.72	1.37	.35					UV2L			
BLY2C-L2	AN 2	5/16	.69	1.72	1.37	.35		TDM-250XF	TPU-12B	41	Nest	5/8"	11784M	- 2
BLY2C-L	2 AWG	3/8	.69	1.72	1.37	.35					Y34PLA			
BLY2C-L4		1/2	.77	1.89	1.49	.46					Indentor (1) Crimp			
BLY1C-L6	1	8-10	.76	1.67	1.32	.25								
BLY1C-L1	Aircraft	1/4	.76	1.84	1.45	.38					UV1CL Nest			
BLY1C-L2	AN 1	5/16	.76	1.84	1.45	.38		TDM-250XF	TPU-12B	42	Y34PLA	5/8"	11785M	- 1
BLY1C-L	1 AWG	3/8	.76	1.84	1.45	.38					Indentor			
BLY1C-L3		1/2	.86	1.97	1.54	.46					(1) Crimp			
BLY25-L1	1/0	1/4	.83	2.01	1.61	.43								
BLY25-L2	Aircraft	5/16	.83	2.01	1.61	.43	Non-				UV25L Nest			
BLY25-L	AN 1/0	3/8	.83	2.01	1.61	.43	Ratchet;	TDM-250XF	TPU-12B	43	Y34PA	11/16"	11786M	- 01
BLY25-L3	1/0 AWG	1/2	.88	2.09	1.64	.46	MY29-11				Indentor			
BLY25-L4		5/8	.88	2.31	1.80	.62					(1) Crimp			
BLY26-L1	2/0	1/4	.93	2.32	1.85	.48								
BLY26-L2	Aircraft	5/16	.93	2.32	1.85	.48								
BLY26-L	AN 2/0	3/8	.93	2.32	1.85	.48		TDM-250XF				13/16"	11787M	- 02
BLY26-L3	2/0 AWG	1/2	.93	2.32	1.85	.48								
BLY26-L12		5/8	.93	2.52	1.99	.62								
	3/0													
BLY27-L	Aircraft	3/8	1.03	2.45	1.93	.52		TDM-250XF				13/16"	11788M	- 03
BLY27-L1	AN 3/0	1/2	1.03	2.45	1.93	.52								
BLY27-L15	3/0 AWG	5/8	1.03	2.60	2.04	.62								
BLY28-L	4/0	3/8	1.12	2.72	2.16	.60								
BLY28-L12	Aircraft	1/2	1.12	2.72	2.16	.60		TDM-250XF				7/8"	11789M	- 04
BLY28-L13	AN 4/0	5/8	1.12	2.72	2.16	.60								
BLY28-L14	4/0 AWG	3/4	1.23	2.95	2.33	.78								

†Not UL or CSA listed

COPPER PENN-CRIMPS® • TYPE BLU

Crimp lugs with inspection window for #8 stranded AWG thru 2000 MCM

- Seamless, one piece, pure copper construction with tin plating assures maximum conductivity. Generous entrance chamfer provides easy cable insertion. Inspection window insures full insertion.
- Catalog number and conductor size marked on every piece insures positive identification.
- Can be installed with existing crimping tools. Color coding conforms to industry requirements to insure proper connector/die selection and to provide for faster installation.
- BLU LUGS ARE SUITABLE FOR USE AT VOLTAGES UP TO 35KV.
- 45° and 90° Variations are UL Listed and CSA certified. Contact factory for price and availability.
- NEW FEATURE – UL/CSA approved with Versa-Crimp® tooling and wire ranges. Versa-Crimp® is a registered trademark of Hubbell Incorporated.
- Additional wire size recommendations, see Master Catalog.

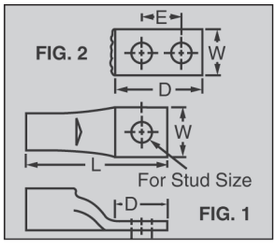


COLOR-CODED COPPER COMPRESSION CONNECTORS

CU 90º C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



Catalog Number	Copper Cond. Range†	Wire Dia. (in) ‡	Stud Size	Fig. No	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ Penn-Union PUC Dies	Penn-Union TDY-1 Pressure Setting	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BLU-8S14	8 Str.	.146	#10	1	–	13/32	1/2	1 5/32	Red	T-6*		B-6	21
BLU-8D2TC10			#10	2	5/8	13/32	1 1/8	1 25/32					
BLU-8S15			1/4	1	–	13/32	9/16	1 7/32					
BLU-8S16			5/16	1	–	9/16	21/32	1 5/16					
BLU-8S17			3/8	1	–	9/16	11/16	1 11/32					
BLU-8S18			1/2	1	–	13/16	55/64	1 33/64					
BLU-6S	6 Str.	.184	#10	1	–	13/32	17/32	1 9/16	Blue	T-7* / T-374*		B-7	24
BLU-6S1			1/4	1	–	7/16	11/16	1 23/32					
BLU-6D2TC14			1/4	2	5/8	7/16	1 3/16	2 7/32					
BLU-6S2			5/16	1	–	1/2	3/4	1 25/32					
BLU-6S8			3/8	1	–	19/32	13/16	1 27/32					
BLU-5S	5 Str.	.206	#10	1	–	7/16	9/16	1 39/64	Blue	T-7* / T-374*		B-7	24
BLU-5S1			1/4	1	–	7/16	11/16	1 47/64					
BLU-5D2TC14			1/4	2	5/8	7/16	1 3/16	2 19/64					
BLU-5S2			5/16	1	–	9/16	23/32	1 49/64					
BLU-5S3			3/8	1	–	19/32	7/8	1 59/64					
BLU-4S	4 Str.	.232	#10	1	–	1/2	9/16	1 39/64	Gray	T-8* / T-346*		B-8	29
BLU-4S1			1/4	1	–	1/2	11/16	1 47/64					
BLU-4D2TC14			1/4	2	5/8	1/2	1 3/16	2 19/64					
BLU-4S10			5/16	1	–	19/32	23/32	1 49/64					
BLU-4S2			3/8	1	–	19/32	7/8	1 49/64					
BLU-3S	3 Str.	.260	#10	1	–	17/32	9/16	1 43/64	White	T-9*		B-9	–
BLU-3S1			1/4	1	–	17/32	11/16	1 51/64					
BLU-3D2TC14**			1/4	2	5/8	17/32	1 3/16	2 19/64					
BLU-3S2			5/16	1	–	9/16	3/4	1 55/64					
BLU-3S3			3/8	1	–	19/32	7/8	1 63/64					
BLU-2S15	2 Str.	.292	#10	1	–	19/32	21/32	1 47/64	Brown	T-10	2	B-10	33
BLU-2S			1/4	1	–	19/32	11/16	1 51/64					
BLU-2D2TC14			1/4	2	5/8	19/32	17/32	2 21/64					
BLU-2S1			5/16	1	–	19/32	3/4	1 55/64					
BLU-2S2			3/8	1	–	5/8	7/8	1 63/64					
BLU-2S10			1/2	1	–	13/16	1 1/8	2 15/64					
BLU-2D2			1/2	2	1 3/4	13/16	2 7/8	3 63/64					
BLU-1S9	1 Str.	.332	1/4	1	–	43/64	9/16	1 27/64	Green	T-11/375		B-11	37
BLU-1D2TC14			1/4	2	5/8	43/64	1 3/16	2 23/64					
BLU-1S			5/16	1	–	43/64	3/4	1 55/64					
BLU-1D2TC516E6			5/16	2	7/8	43/64	1 5/8	2 51/64					
BLU-1S1			3/8	1	–	43/64	7/8	2 3/64					
BLU-1S4			1/2	1	–	3/4	1 1/8	2 19/64					
BLU-1/0S19	1/0 Str.	.375	1/4	1	–	3/4	3/4	1 15/16	Pink	T-12/348		B-12	42
BLU-1/0S			5/16	1	–	3/4	3/4	2 1/16					
BLU-1/0D2TC516E6			5/16	2	7/8	3/4	1 5/8	2 13/16					
BLU-1/0S1			3/8	1	–	3/4	7/8	2 1/16					
BLU-1/0D2TC38			3/8	2	1	3/4	1 13/16	3					
BLU-1/0S20			1/2	1	–	13/16	1 1/16	2 1/4					
BLU-1/0D2			1/2	2	1 3/4	13/16	2 7/8	4 1/16					

NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

NEW FEATURE!

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

**(Also #2 Sol)
*** CUAD-1000

* Consult factory for availability of dies not available at this time.

Continued from page Recent Additions 5

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

Catalog Number	Copper Cond. Range†	Wire Dia. (in) ‡	Stud Size	Fig. No	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ Penn-Union PUC Dies	Pressure Setting TDY-1	Pressure Setting TDY-U	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BLU-2/0S20	2/0 Str.	.419	1/4	1	–	13/16	2 1/16	Black	T-13	2			B-13	45
BLU-2/0S21			5/16	1	–		13/16	2 1/16						
BLU-2/0D2TC516E6			5/16	2	7/8		1 5/8	2 7/8						
BLU-2/0S			3/8	1	–		7/8	2 1/8						
BLU-2/0D2TC38			3/8	2	1		1 13/16	3 1/16						
BLU-2/0S4			1/2	1	–		1 1/8	2 3/8						
BLU-2/0D			1/2	2	1 3/4		2 7/8	4 1/8						
BLU-3/0S14	3/0 Str.	.470	1/4	1	–	29/32	13/16	1 15/16	Orange	T-14			B-14	50
BLU-3/0S15			5/16	1	–		13/16	1 15/16						
BLU-3/0D11			5/16	2	7/8		1 5/8	3						
BLU-3/0S			3/8	1	–		7/8	2 1/4						
BLU-3/0D2TC38			3/8	2	1		1 13/16	3 3/16						
BLU-3/0S1			1/2	1	–		1 1/8	2 1/2						
BLU-3/0D			1/2	2	1 3/4		2 7/8	4 1/4						
BLU-4/0S19	4/0 Str.	.528	1/4	1	–	1	25/32	2 7/32	Purple	T-15	5	5	B-15	54
BLU-4/0S25			5/16	1	–		25/32	2 7/32						
BLU-4/0S			3/8	1	–		7/8	2 5/16						
BLU-4/0D2TC38			3/8	2	1		1 13/16	3 1/4						
BLU-4/0S1			1/2	1	–		1 1/8	2 9/16						
BLU-4/0D			1/2	2	1 3/4		2 7/8	4 5/16						
BLU-025S4	250 MCM	.575	1/4	1	–	1 3/32	25/32	2 11/32	Yellow	T-16			B-16	62
BLU-025S5			5/16	1	–		25/32	2 11/32						
BLU-025S2			3/8	1	–		1	2 9/16						
BLU-025D2TC38			3/8	2	1		1 13/16	3 3/8						
BLU-025S			1/2	1	–		1 1/8	2 11/16						
BLU-025D			1/2	2	1 3/4		2 7/8	4 7/16						
BLU-030S6	300 MCM	.634	5/16	1	–	1 3/16	25/32	2 13/32	White	T-17*			B-17	66H or 66
BLU-030S7			3/8	1	–		1	2 5/8						
BLU-030D2TC38			3/8	2	1		1 13/16	3 7/16						
BLU-030S			1/2	1	–		1 1/8	2 3/4						
BLU-030D			1/2	2	1 3/4		2 7/8	4 1/2						
BLU-030S8			5/8	1	–		1 11/16	3 5/16						
BLU-035S1	350 MCM	.682	3/8	1	–	1 9/32	7/8	2 5/8	Red	T-18/324	7	7	B-18	71H or 71
BLU-035D2TC38			3/8	2	1		1 13/16	3 9/16						
BLU-035S			1/2	1	–		1 5/32	2 29/32						
BLU-035D			1/2	2	1 3/4		2 7/8	4 5/8						
BLU-035S3			5/8	1	–		1 13/32	3 5/32						
BLU-040D2TC38	400 MCM	.728	3/8	2	1	1 13/32	1 13/16	3 11/16	Blue	T-19* / T-470*			B-19	76H or 76
BLU-040S4			1/2	1	–		1 3/16	3 1/16						
BLU-040D			1/2	2	1 3/4		2 7/8	4 3/4						
BLU-040S			5/8	1	–		1 7/16	3 5/16						
BLU-045S1	450 MCM	.772	1/2	1	–	1 29/64	1 3/16	3 1/16	Blue	T-19* / T-470*			B-19	76H or 76
BLU-045D			1/2	2	1 3/4		2 7/8	4 3/64						
BLU-045S			5/8	1	–		1 7/16	3 5/16						
BLU-050D2TC38	500 MCM	.815	3/8	2	1	1 17/32	1 13/16	3 15/16	Brown	T-20/299			B-20	87
BLU-050S2			1/2	1	–		1 1/8	3 1/32						
BLU-050D			1/2	2	1 3/4		2 7/8	5						
BLU-050S			5/8	1	–		1 7/16	3 9/16						
BLU-060D	600 MCM	.893	1/2	2	1 3/4	1 23/32	2 7/8	5 3/32	Green	T-22/472	9	9	B-22	94H or 94
BLU-060S			5/8	1	–		1 3/4	3 31/32						
BLU-060S1			1/2	1	–		1 3/4	3 31/32						
BLU-065D	650 MCM	.930	1/2	2	1 3/4	1 25/32	2 7/8	5 3/32	Pink	–			B-300	99
BLU-065S4			5/8	1	–		1 3/4	3 31/32						
BLU-065S5			1/2	1	–		1 3/4	3 31/32						
BLU-075D	750 MCM	.999	1/2	2	1 3/4	1 29/32	2 7/8	5 7/16	Black	T-24*/473			B-24	106H or 106
BLU-075S			5/8	1	–		1 7/16	4						
BLU-080D	800 MCM	1.031	1/2	2	1 3/4	1 31/32	2 7/8	5 17/32	Orange	–			B-25	107H or 107
BLU-080S			5/8	1	–		1 7/8	4 17/32						
BLU-100D	1000 MCM	1.153	1/2	2	1 3/4	2 3/16	2 7/8	5 7/8	White	–	9***	9***	B-27	125
BLU-100S			5/8	1	–		1 7/8	4 7/8						
BLU-100S4			3/4	1	–		1 7/8	4 7/8						
BLU-150D	1500 MCM	1.412	1/2	2	1 3/4	2 11/16	2 7/8	6 3/32	Green	–			B-31	–
BLU-150S			3/4	1	–		2 1/4	5 15/32						
BLU-200D	2000 MCM	1.632	1/2	2	1 3/4	3 1/16	2 7/8	6 3/8	Brown	–			B-34	–
BLU-200S			3/4	1	—		2 3/8	5 15/16						

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

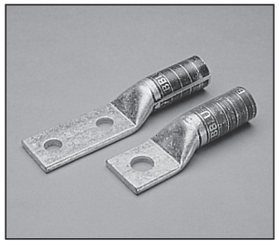
**(Also #2 Sol)
*** CUAD-1000

* Consult factory for availability of dies not available at this time.

COPPER PENN-CRIMPS® • TYPE BBLU

Long barrel lugs for #6 stranded AWG thru 2000 MCM

- Longer length barrel permits extra crimps for additional assurance on heavy duty loads. Seamless, one piece, pure copper construction with tin plating assures maximum conductivity. Generous entrance chamfer provides easy cable insertion. End of cable is protected from environmental hazards by completely closed transition.
- Catalog number and conductor sizes marked on every piece insures positive identification.
- Can be installed with existing crimping tools. Die color coding conforms to industry standards to insure proper connector/die selection and to provide for faster installation.
- BBLU LUGS ARE SUITABLE FOR USE AT VOLTAGES UP TO 35KV.
- 45° and 90° Variations are UL Listed and CSA certified. Contact factory for price and availability.
- NEW FEATURE – UL/CSA approved with Versa-Crimp® tooling and wire ranges. Versa-Crimp® is a registered trademark of Hubbell Incorporated.
- Additional wire size recommendations, see Master Catalog.

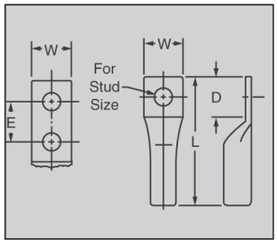


COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU 90° C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



1 HOLE LUGS

Catalog Number	Copper Cond. Range†	Wire Dia. (in) ‡	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ Penn-Union PUC Dies	Penn-Union Pressure Setting TDY-1	Penn-Union Pressure Setting TDY-U	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BBLU-6S	6 Str	.184	1/4	–	13/32	11/16	2 1/16	Blue	T-7*/374*			B-7	24
BBLU-6S1			1/2	–	13/16	1 1/4	2 19/32						
BBLU-4S	4 Str.	.232	1/4	–	1/2	11/16	2 1/16	Gray	T-8*/346*			B-8	29
BBLU-4S1			3/8	–	13/16	1 1/4	2 39/64						
BBLU-4S2			1/2	–	13/16	1 1/4	2 39/64						
BBLU-3S3	3 Str.	.260	1/4	–	17/32	3/4	2 5/32		T-9*			B-9	–
BBLU-3S1			5/16	–	17/32	3/4	2 5/32	White					
BBLU-2S	2 Str.	.292	5/16	–	19/32	3/4	2 1/4	Brown	T-10	2		B-10	33
BBLU-1S	1 Str.	.332	5/16	–	11/16	3/4	2 3/8	Green	T-11/375			B-11	37
BBLU-1/0S	1/0 Str.	.375	5/16	–	3/4	3/4	2 7/16	Pink	T-12/348			B-12	42
BBLU-1/0S2			3/8	–	3/4	13/16	2 3/8						
BBLU-2/0S	2/0 Str.	.419	3/8	–	13/16	7/8	2 11/16	Black	T-13			B-13	45
BBLU-2/0S1			1/2	–	13/16	1 1/4	3 1/16						
BBLU-3/0S2	3/0 Str.	.470	3/8	–	29/32	1 1/4	3 1/8	Orange	T-14			B-14	50
BBLU-3/0S			1/2	–	29/32	1 1/4	3 1/8						
BBLU-4/0S	4/0 Str.	.528	1/2	–	1	1 1/4	3 5/16	Purple	T-15	5	5	B-15	54
BBLU-025S	250 MCM	.575	1/2	–	1 1/8	1 1/4	3 3/8	Yellow	T-16			B-16	62
BBLU-030S	300 MCM	.634	1/2	–	1 3/16	1 1/4	3 13/16	White	T-17*			B-17	66H/66
BBLU-035S	350 MCM	.682	1/2	–	1 9/32	1 1/4	3 27/32	Red	T-18/T-324			B-18	71H/71
BBLU-040S	400 MCM	.728	5/8	–	1 13/32	1 1/2	4 5/16	Blue	T-19*/470*	7	7	B-19	76H/76
BBLU-040S1			1/2	–	1 13/32	1 1/4	4 1/16						
BBLU-050S	500 MCM	.815	5/8	–	1 17/32	1 15/32	4 1/2	Brown	T-20/T-299	9	9	B-20	87
BBLU-050S2			1/2	–	1 17/32	1 1/4	4 1/4						
BBLU-060S	600 MCM	.893	5/8	–	1 23/32	1 1/2	5 1/8	Green	T-22/472			B-22	94H/94
BBLU-065S	650 MCM	.930	1/2	–	1 25/32	1 3/4	5 13/32	Pink	–	9	9	B-300	99
BBLU-065S1			5/8	–	1 25/32	1 3/4	5 13/32		–				
BBLU-075S	750 MCM	.999	5/8	–	1 29/32	1 1/2	5 5/16	Black	T-24*/473			B-24	106H/106
BBLU-080S	800 MCM	1.031	5/8	–	1 31/32	1 1/2	5 1/2	Orange	–			B-25	107H/107
BBLU-100S	1000 MCM	1.153	5/8	–	2 3/16	1 1/2	5 5/8	White	–	9***	9***	B-27	125
BBLU-150S	1500 MCM	1.412	3/4	–	2 11/16	2 1/8	6 9/16	Green	–			B-31	–
BBLU-200S	2000 MCM	1.632	3/4	–	3 1/16	2 1/8	6 7/8	Brown	–			B-34	–

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

* Consult factory for availability of dies not available at this time.

*** CUAD-1000

Continued from page Recent Additions 7

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

2 HOLE NEMA SPACING

Catalog Number	Copper Cond. Range†	Wire Dia. (in) ‡	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ Penn-Union PUC Dies	Pressure Setting TDY-1	Pressure Setting TDY-U	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BBLU-6DN	6 Str.	.184	1/2	1 3/4	13/16	3	4 11/32	Blue	T-7*/374*			B-7	24
BBLU-4D1	4 Str.	.232	1/2	1 3/4	15/16	2 7/8	4 15/64	Gray	T-8*/346*			B-8	29
BBLU-2D6	2 Str.	.292	1/2	1 3/4	13/16	3	4 33/64	Brown	T-10			B-10	33
BBLU-1D2	1 Str.	.332	1/2	1 3/4	25/32	3	4 5/8	Green	T-11/375	2		B-11	37
BBLU-1/0D-2NTC38	1/0 Str.	.375	3/8	1 3/4	3/4	2 5/8	4 5/16	Pink	T-12/348			B-12	42
BBLU-1/0D3			1/2	1 3/4	13/16	2 7/8	4 9/16						
BBLU-2/0D	2/0 Str.	.419	1/2	1 3/4	13/16	3	4 13/16	Black	T-13			B-13	45
BBLU-3/0D	3/0 Str.	.470	1/2	1 3/4	29/32	3	4 7/8	Orange	T-14			B-14	50
BBLU-4/0D	4/0 Str.	.528	1/2	1 3/4	1	3	5 1/16	Purple	T-15	5	5	B-15	54
BBLU-025D	250 MCM	.575	1/2	1 3/4	1 1/8	3	5 1/8	Yellow	T-16			B-16	62
BBLU-030D	300 MCM	.634	1/2	1 3/4	3/16	3	5 9/16	White	T-17*			B-17	66H/66
BBLU-035D	350 MCM	.682	1/2	1 3/4	5/16	3	5 5/8	Red	T-18/ T-324	7	7	B-18	71H/71
BBLU-040D	400 MCM	.728	1/2	1 3/4	1 13/32	3	5 13/16	Blue	T-19*/470*			B-19	76H/76
BBLU-050D	500 MCM	.815	1/2	1 3/4	1 17/32	3	6	Brown	T-20/T-299			B-20	87
BBLU-060D	600 MCM	.893	1/2	1 3/4	1 23/32	3	6 9/16	Green	T-22/472	9	9	B-22	94H/94
BBLU-065D	650 MCM	.930	1/2	1 3/4	1 25/32	3	6 11/16	Pink	–			B-300	99
BBLU-075D	750 MCM	.999	1/2	1 3/4	1 29/32	3	6 13/16	Black	T-24*/473			B-24	106H/106
BBLU-080D	800 MCM	1.031	1/2	1 3/4	1 31/32	3	7	Orange	–			B-25	107H/107
BBLU-100D1	1000 MCM	1.153	1/2	1 3/4	2 3/16	3	7 1/8	White	–	9***	9***	B-27	125
BBLU-150D1	1500 MCM	1.412	1/2	1 3/4	2 11/16	3	7 7/16	Green	–			B-31	–
BBLU-200D1	2000 MCM	1.632	1/2	1 3/4	3 5/64	3	7 3/4	Brown	–			B-34	–

2 HOLE ASSORTED LUGS

BBLU-6D-2TC14	6 Str.	.184	1/4	5/8	13/32	1 9/32	2 21/32	Blue	T-7*/374*			B-7	24
BBLU-4D-2TC14	4 Str	.232	1/4	5/8	1/2	1 9/32	2 11/16	Gray	T-8*/346*			B-8	29
BBLU-3D	3 Str.	.260	5/16	7/8	17/32	1 5/8	3 1/32	White	T-9*			B-9	–
BBLU-2D	2 Str.	.292	5/16	3/4	5/8	1 15/32	3 7/32	Brown	T-10	2		B-10	33
BBLU-1D	1 Str	.332	5/16	7/8	11/16	1 5/8	3 3/8	Green	T-11/375			B-11	37
BBLU-1/0D	1/0 Str.	.375	5/16	7/8	3/4	1 19/32	3 5/16	Pink	T-12/348			B-12	42
BBLU-100D	1000 MCM	1.153	1/2	1 1/4	2 3/16	2 3/8	6 1/2	White	–	9***	9***	B-27	125
BBLU-150D	1500 MCM	1.412	1/2	1 3/8	2 11/16	2 1/2	6 15/16	Green	–			B-31	–
BBLU-200D	2000 MCM	1.632	1/2	1 1/2	3 5/64	3	7 3/8	Brown	–			B-34	–

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

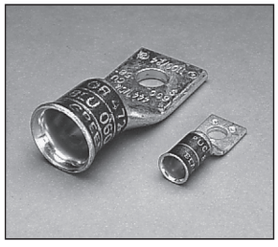
* Consult factory for availability of dies not available at this time.

*** CUAD-1000

FLARED COPPER PENN-CRIMPS® • TYPE BLU-FL

Crimp lugs with inspection window for #4 (105/24) thru 1111 MCM (275/24) diesel locomotive cable and class G, H, I, & K flexible cables

- Seamless, one piece, pure copper construction with tin plating assures maximum conductivity. Generous entrance chamfer and wide flare provide easy cable insertion even for fine stranded extra flexible cable. Inspection window insures full insertion. See Master Catalog for flexible cable recommendations and listing.
- Catalog number and conductor size marked on every piece insures positive identification.
- Can be installed with existing crimping tools. Die color-coding conforms to industry standards to insure proper connector/die selection and to provide for faster installation.
- BLU LUGS ARE SUITABLE FOR USE AT VOLTAGES UP TO 35 KV.

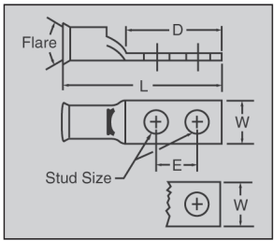


COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU 90º C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



Catalog Number	Diesel Locomotive Cable Range	Stranding	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Flex Wire Crimping Tool Reference PENN UNION TDM 250	TDY 1	TDY U	Alt. Tooling Burndy Index	Alt. Tooling T & B Die
BLU-3D-FL BLU-3S2-FL	4 AWG	105/24	1/4 5/16	5/8 –	17/32 9/16	1 3/16 3/4	2 19/64 1 55/64	White	XF	2	–	B-9	–
BLU-1D4-FL BLU-1S-FL	2 AWG	150/24	5/16 5/16	7/8 –	43/64 43/64	1 5/8 3/4	2 51/64 1 55/64	Green	XF	2	–	B-11	37
BLU-1/0D-FL BLU-1/0S-FL	1 AWG	225/24	5/16 5/16	7/8 –	3/4 3/4	1 5/8 3/4	2 13/16 1 15/16	Pink	XF	2	–	B-12	42
BLU-2/0D4-FL BLU-2/0S-FL	1/0 AWG	275/24	3/8 3/8	1 –	13/16 13/16	1 13/16 7/8	3 1/16 2 1/8	Black	XF	2	–	B-13	45
BLU-3/0D-FL BLU-3/0S1-FL	2/0 AWG	325/24	1/2 1/2	1 3/4 –	29/32 29/32	2 7/8 1 1/8	4 1/4 2 1/2	Orange	XF	5	5	B-14	50
BLU-4/0D-FL BLU-4/0S1-FL	3/0 AWG	450/24	1/2 1/2	1 3/4 –	1 1	2 7/8 1 1/8	4 5/16 2 9/16	Purple	XF	5	5	B-15	54
BLU-030D-FL BLU-030S-FL	4/0 AWG	550/24	1/2 1/2	1 3/4 –	1 3/16 1 3/16	2 7/8 1 1/8	4 1/2 2 3/4	White	–	7	7	B-17	66H/66
BLU-035D-FL BLU-035S-FL	262 MCM	650/24	1/2 1/2	1 3/4 –	1 9/32 1 9/32	2 7/8 1 5/32	4 5/8 2 29/32	Red	–	7	7	B-18	71H/71
BLU-040D-FL BLU-040S-FL	313 MCM	775/24	1/2 5/8	1 3/4 –	1 13/32 1 13/32	2 7/8 1 7/16	4 3/4 3 5/16	Blue	–	7	7	B-19	76H/76
BLU-050D-FL BLU-050S-FL	373 MCM	925/24	1/2 5/8	1 3/4 –	1 17/32 1 17/32	2 7/8 1 7/16	5 3 9/16	Brown	–	9	9	B-20	87
BLU-060D-FL BLU-060S-FL	444 MCM	1100/24	1/2 5/8	1 3/4 –	1 23/32 1 23/32	2 7/8 1 3/4	5 3/32 2 31/32	Green	–	9	9	B-22	94H/94
BLU-065D-FL BLU-065S4-FL	535 MCM	1325/24	1/2 5/8	1 3/4 –	1 25/32 1 25/32	2 7/8 1 3/4	5 3/32 3 31/32	Pink	–	9	9	B-300	99
BLU-075D-FL BLU-075S-FL	646 MCM	1600/24	1/2 5/8	1 3/4 –	1 29/32 1 29/32	2 7/8 1 7/16	5 7/16 4	Black	–	9	9	B-24	106H/106
BLU-100D-FL BLU-100S-FL	777 MCM	1925/24	1/2 5/8	1 3/4 –	2 3/16 2 3/16	2 7/8 1 7/8	5 7/8 4 7/8	White	–	9*	9*	B-27	125
BLU-150D-FL BLU-150S-FL	1111 MCM	2750/24	1/2 3/4	1 3/4 –	2 11/16 2 11/16	2 7/8 2 1/4	6 3/32 5 15/32	Green	_	–	–	B-31	–

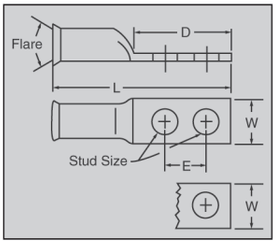
NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

* with Flex wire only

FLARED COPPER PENN-CRIMPS® • TYPE BBLU-FL

Crimp lugs with inspection window for #4 (105/24) thru 1111 MCM (275/24) diesel locomotive cable and class G, H, I, & K flexible cables

- Longer length barrel permits extra crimps for additional assurance on heavy duty loads. Seamless, one piece, pure copper construction with tin plating assures maximum conductivity. Generous entrance chamfer and wide flare provide easy cable insertion even for fine stranded extra flexible cable. End of cable is protected from environmental hazards by completely closed transition. See Master Catalog for flexible cable recommendation and listing.
- Catalog number and conductor size marked on every piece insures positive identification.
- Can be installed with existing crimping tools. Die color-coding conforms to industry standards to insure proper connector/die selection and to provide for faster installation.
- BBLU LUGS ARE SUITABLE FOR USE AT VOLTAGES UP TO 35 KV.

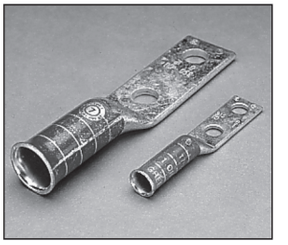


COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU 90º C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

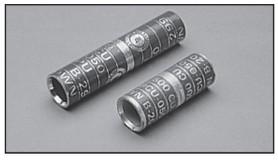
Catalog Number	Diesel Locomotive Cable Range	Stranding	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Flex Wire Crimping Tool Reference PENN UNION TDM 250	TDY 1	TDY U	Alt. Tooling Burndy Index	Alt. Tooling T & B Die
BBLU-3D-FL BBLU-3S1-FL	4 AWG	105/24	5/16 5/16	7/8 –	17/32 17/32	1 5/8 3/4	3 1/32 2 5/32	White	XF	2	–	B-9	–
BBLU-1D-FL BBLU-1S-FL	2 AWG	150/24	5/16 5/16	7/8 –	11/16 11/16	1 5/8 3/4	3 3/8 2 3/8	Green	XF	2	–	B-11	37
BBLU-1/0D-FL BBLU-1/0S-FL	1 AWG	225/24	5/16 5/16	7/8 –	3/4 3/4	1 19/32 3/4	3 5/16 2 7/16	Pink	XF	2	–	B-12	42
BBLU-2/0D-FL BBLU-2/0S-FL	1/0 AWG	275/24	1/2 3/8	1 3/4 –	13/16 13/16	3 7/8	4 13/16 2 11/16	Black	XF	2	–	B-13	45
BBLU-3/0D-FL BBLU-3/0S-FL	2/0 AWG	325/24	1/2 1/2	1 3/4 –	29/32 29/32	3 1 1/4	4 7/8 3 1/8	Orange	XF	5	5	B-14	50
BBLU-4/0D-FL BBLU-4/0S-FL	3/0 AWG	450/24	1/2 1/2	1 3/4 –	1 1	3 1 1/4	5 1/16 3 5/16	Purple	XF	5	5	B-15	54
BBLU-030D-FL BBLU-030S-FL	4/0 AWG	550/24	1/2 1/2	1 3/4 –	1 3/16 1 3/16	3 1 1/4	5 9/16 3 13/16	White	–	7	7	B-17	66H/66
BBLU-035D-FL BBLU-035S-FL	262 MCM	650/24	1/2 1/2	1 3/4 –	1 5/16 1 9/32	3 1 1/4	5 5/8 3 27/32	Red	–	7	7	B-18	71H/71
BBLU-040D-FL BBLU-040S-FL	313 MCM	775/24	1/2 5/8	1 3/4 –	1 13/32 1 13/32	3 1 1/2	5 13/16 4 5/16	Blue	–	7	7	B-19	76H/76
BBLU-050D-FL BBLU-050S-FL	373 MCM	925/24	1/2 5/8	1 3/4 –	1 17/32 1 17/32	3 1 15/32	6 4 1/2	Brown	–	9	9	B-20	87
BBLU-060D-FL BBLU-060S-FL	444 MCM	1100/24	1/2 5/8	1 3/4 –	1 23/32 1 23/32	3 1 1/2	6 9/16 5 1/8	Green	–	9	9	B-22	94H/94
BBLU-065D-FL BBLU-065S1-FL	535 MCM	1325/24	1/2 5/8	1 3/4 –	1 25/32 1 25/32	3 1 3/4	6 9/16 5 13/32	Pink	–	9	9	B-300	99
BBLU-075D-FL BBLU-075S-FL	646 MCM	1600/24	1/2 5/8	1 3/4 –	1 29/32 1 29/32	3 1 1/2	6 13/16 5 5/16	Black	–	9	9	B-24	106H/106
BBLU-100D1-FL BBLU-100S-FL	777 MCM	1925/24	1/2 5/8	1 3/4 –	2 3/16 2 3/16	3 1 1/2	7 1/8 5 5/8	White	–	9*	9*	B-27	125
BBLU-150D1-FL BBLU-150S-FL	1111 MCM	2750/24	1/2 3/4	1 3/4 –	2 11/16 2 11/16	3 2 1/8	7 7/16 6 9/16	Green	–	–	–	B-31	–

* with Flex wire only

COPPER PENN-CRIMPS® • TYPE BCU & BBCU

Crimp splices for #8 stranded thru 2000 MCM

- Seamless, one piece, pure copper construction with tin plating assures maximum conductivity. Generous entrance chamfer provides easy cable insertion. Type BBCU has longer length barrel which permits extra crimps for additional assurance on heavy duty loads.
- Catalog number and conductor sizes marked on every piece insures positive identification.
- Positive cable stops insure proper insertion of conductors to full depth.
- Can be installed with existing crimping tools. Die color coding conforms to industry standards to insure proper connector/die selection and to provide for faster installation.
- BCU & BBCU Splices are suitable for use at voltages up to 35KV provided connector is taped in accordance with accepted practices, 5 KV is maximum voltage level in all bare splice applications.
- NEW FEATURE – UL/CSA approved with Versa-Crimp® tooling and wire ranges. Versa-Crimp® is a registered trademark of Hubbell Incorporated.
- Additional wire recommendations, see Master Catalog.

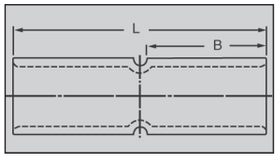


COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU
90º C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



Catalog Number	Copper Cond. Range†	Wire Diam. (in) ‡	Approx. Dimensions (in inches) B	Approx. Dimensions (in inches) L	Die Color Code	Crimping Tool Reference+++ Penn-Union PUC Dies	Penn-Union Pressure Setting TDY-1	Penn-Union Pressure Setting TDY-U	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BCU-8	8 Str.	.146	15/32	1 1/16	Red	T-6*			B-6	21
BCU-6	6 Str.	.184	13/16	1 3/4	Blue	T-7*/T-374*			B-7	24
BCU-5	5 Str	.206	13/16	1 3/4	Blue	T-7*/T-374*			B-7	–
BCU-4	4 Str.	.232	13/16	1 3/4	Gray	T-8*/T-346*			B-8	29
BCU-3	3 Str.	.260	13/16	1 3/4	White	T-9*			B-9	–
BCU-2	2 Str.	.292	7/8	1 7/8	Brown	T-10			B-10	33
BCU-1	1 Str.	.332	7/8	1 7/8	Green	T-11/375	2		B-11	37
BCU-1/0	1/0 Str.	.375	7/8	1 7/8	Pink	T-12/348			B-12	42
BCU-2/0	2/0 Str.	.419	15/16	2	Black	T-13			B-13	45
BCU-3/0	3/0 Str.	.470	1	2 1/8	Orange	T-14			B-14	50
BCU-4/0	4/0 Str.	.528	1	2 1/8	Purple	T-15	5	5	B-15	54
BCU-025	250 MCM	.575	1 1/16	2 1/4	Yellow	T-16			B-16	62
BCU-030	300 MCM	.634	1 1/16	2 1/4	White	T-17*			B-17	66H/66
BCU-035	350 MCM	.682	1 1/8	2 3/8	Red	T-18/324	7	7	B-18	71H/71
BCU-040	400 MCM	.728	1 3/16	2 1/2	Blue	T-19*/470*			B-19	76H/76
BCU-045	450 MCM	.772	1 3/8	2 7/8	Blue	T-19*/470*			B-19	76H/76
BCU-050	500 MCM	.815	1 3/8	2 7/8	Brown	T-20/299			B-20	87
BCU-060	600 MCM	.893	1 3/8	2 7/8	Green	T-22/472			B-22	94H/94
BCU-065	650 MCM	.930	1 3/8	2 7/8	Black	–	9	9	B-300	99
BCU-075	750 MCM	.999	1 5/8	3 3/8	Black	T-24*/473			B-24	106H/106
BCU-080	800 MCM	1.031	1 5/8	3 3/8	Orange	–			B-25	107H/107
BCU-100	1000 MCM	1.153	1 7/8	3 7/8	White	–	9***	9***	B-27	125
BCU-150	1500 MCM	1.412	2	4 1/8	Green	–			B-31	–
BCU-200	2000 MCM	1.632	2 1/4	4 5/8	Brown	–			B-34	–

LONG BARREL SPLICES

BBCU-8	8 Str.	.146	15/16	2	Red	T-6*			B-6	21
BBCU-6	6 Str.	.184	1 1/8	2 3/8	Blue	T-7*/T-374*			B-7	24
BBCU-4	4 Str	.232	1 1/8	2 3/8	Gray	T-8*/T-346*			B-8	29
BBCU-3	3 Str.	.260	1 1/8	2 3/8	White	T-9*			B-9	–
BBCU-2	2 Str.	.292	1 1/4	2 5/8	Brown	T-10	2		B-10	33
BBCU-1	1 Str.	.332	1 3/8	2 7/8	Green	T-11/375			B-11	37
BBCU-1/0	1/0 Str.	.375	1 3/8	2 7/8	Pink	T-12/348			B-12	42
BBCU-2/0	2/0 Str.	.419	1 1/2	3 1/8	Black	T-13			B-13	45
BBCU-3/0	3/0 Str.	.470	1 1/2	3 1/8	Orange	T-14			B-14	50
BBCU-4/0	4/0 Str.	.528	1 5/8	3 3/8	Orange	T-15	5	5	B-15	54
BBCU-025	250 MCM	.575	1 5/8	3 3/8	Yellow	T-16			B-16	62
BBCU-030	300 MCM	.634	2	4 1/8	White	T-17*			B-17	66H/66
BBCU-035	350 MCM	.682	2	4 1/8	Red	T-18/324	7	7	B-18	71H/71
BBCU-040	400 MCM	.728	2 1/8	4 3/8	Blue	T-19*/470*			B-19	76H/76
BBCU-050	500 MCM	.815	2 1/4	4 5/8	Brown	T-20/299			B-20	87
BBCU-060	600 MCM	.893	2 11/16	5 1/2	Green	T-22/472	9	9	B-22	94H/94
BBCU-065	650 MCM	.930	2 3/4	5 5/8	Pink	–			B-300	99
BBCU-075	750 MCM	.999	2 7/8	5 7/8	Black	T-24*/473*			B-24	106H/106
BBCU-080	800 MCM	1.031	2 15/16	6	Orange	–			B-25	107H/107
BBCU-100	1000 MCM	1.153	3	6 1/8	White	–	9***	9***	B-27	125
BBCU-150	1500 MCM	1.412	3 3/16	6 1/2	Green				B-31	–
BBCU-200	2000 MCM	1.632	3 7/16	7	Brown				B-34	–

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

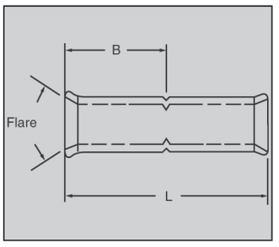
* Consult factory for availability of dies not available at this time.

*** CUAD-1000

FLARED COPPER PENN-CRIMPS® • TYPE BCU-FL, BBCU-FL

Crimp splices for #4 (105/24) thru 1111 MCM (275/24) diesel locomotive cable and class G, H, I, & K flexible cable

- Seamless, one piece, pure copper construction with tin plating assures maximum conductivity. Generous entrance chamfer and wide flare provide easy cable insertion even for fine stranded extra flexible cable. Type BBCU has longer length barrel which permits extra crimps for additional assurance on heavy duty loads. See Master Catalog for flexible cable recommendation and listing.
- Catalog number and conductor size marked on every piece insures positive identification.
- Positive cable stops insure proper insertion of conductors to full depth.
- Can be installed with existing crimping tools. Die color-coding conforms to industry standrads to insure proper connector/die selection and to provide for faster installation.
- BCU & BBCU Splices are suitable for use at voltages up to 35 KV provided connector is taped in accordance with accepted practices, 5 KV is maximum voltage level in all bare splice applications.



COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU 90º C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

Catalog Number	Diesel Locomotive Cable Range	Stranding	Approximate Dimensions (in inches)		Die Color Code	Flex Wire Crimping Tool Reference				
						PENN-UNION			Alt. Tooling	
			B	L		TDM-250	TDY-1	TDY-U	Burndy Index	T & B Die
BCU-3-FL	4 AWG	105/24	13/16	1 3/4	White	XF	2	–	B-9	–
BCU-1-FL	2 AWG	150/24	7/8	1 7/8	Green	XF	2	–	B-11	37
BCU-1/0-FL	1 AWG	225/24	7/8	1 7/8	Pink	XF	2	–	B-12	42
BCU-2/0-FL	1/0 AWG	275/24	15/16	2	Black	XF	2	–	B-13	45
BCU-3/0-FL	2/0 AWG	325/24	1	2 1/8	Orange	XF	5	5	B-14	50
BCU-4/0-FL	3/0 AWG	450/24	1	2 1/8	Purple	XF	5	5	B-15	54
BCU-030-FL	4/0 AWG	550/24	1 1/16	2 1/4	White	–	7	7	B-17	66H/66
BCU-035-FL	262 MCM	650/24	1 1/8	2 3/8	Red	–	7	7	B-18	71H/71
BCU-040-FL	313 MCM	775/24	1 3/16	2 1/2	Blue	–	7	7	B-19	76H/76
BCU-050-FL	373 MCM	925/24	1 3/8	2 7/8	Brown	–	9	9	B-20	87
BCU-060-FL	444 MCM	1100/24	1 3/8	2 7/8	Green	–	9	9	B-22	94H/94
BCU-065-FL	535 MCM	1325/24	1 3/8	2 7/8	Pink	–	9	9	B-300	99
BCU-075-FL	646 MCM	1600/24	1 5/8	3 3/8	Black	–	9	9	B-24	106H/106
BCU-100-FL	777 MCM	1925/24	1 7/8	3 7/8	White	–	9*	9*	B-27	125
BCU-150-FL	1111 MCM	2750/24	2	4 1/8	Green	–	–	–	B-31	–

LONG BARREL SPLICES

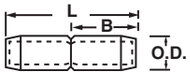
BBCU-3-FL	4 AWG	105/24	1 1/8	2 3/8	White	XF	2	–	B-9	–
BBCU-1-FL	2 AWG	150/24	1 3/8	2 7/8	Green	XF	2	–	B-11	37
BBCU-1/0-FL	1 AWG	225/24	1 3/8	2 7/8	Pink	XF	2	–	B-12	42
BBCU-2/0-FL	1/0 AWG	275/24	1 1/2	3 1/8	Black	XF	2	–	B-13	45
BBCU-3/0-FL	2/0 AWG	325/24	1 1/2	3 1/8	Orange	XF	5	5	B-14	50
BBCU-4/0-FL	3/0 AWG	450/24	1 5/8	3 3/8	Purple	XF	5	5	B-15	54
BBCU-030-FL	4/0 AWG	550/24	2	4 1/8	White	–	7	7	B-17	66H/66
BBCU-035-FL	262 MCM	650/24	2	4 1/8	Red	–	7	7	B-18	71H/71
BBCU-040-FL	313 MCM	775/24	2 1/8	4 3/8	Blue	–	7	7	B-19	76H/76
BBCU-050-FL	373 MCM	925/24	2 1/4	4 5/8	Brown	–	9	9	B-20	87
BBCU-060-FL	444 MCM	1100/24	2 11/16	5 1/2	Green	–	9	9	B-22	94H/94
BBCU-065-FL	535 MCM	1325/24	2 23/32	5 5/8	Pink	–	9	9	B-300	99
BBCU-075-FL	646 MCM	1600/24	2 7/8	5 7/8	Black	–	9	9	B-24	106H/106
BBCU-100-FL	777 MCM	1925/24	3	6 1/8	White	–	9*	9*	B-27	125
BBCU-150-FL	1111 MCM	2750/24	3 3/16	6 1/2	Green	–	–	–	B-31	–

* with Flex wire only

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

COPPER SPLICES • TYPE BCU-T

Tapered splices for #6 stranded thru 1000 MCM



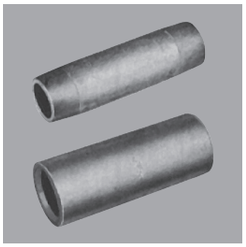
Tapered Splices. Seamless, pure copper construction, tin plated. Other features same as type BCU.

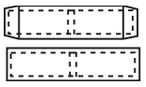
Catalog Number	Copper Cond. Range†	Wire Diameter Range‡	Approximate Dimensions				No. of Crimps Per End	Crimping Tool Reference	
			B		L			Burndy Die Index No.	T & B Die No.
		in	in	mm	in	mm			
BCU-6-T	6 Str.	.184	7/8	22	1 7/8	73	1	7	24
BCU-4-T	4 Str.	.232	7/8	22	1 7/8	73	1	8	29
BCU-2-T	2 Str.	.292	1	25	2 1/8	54	1	10	33
BCU-1-T	1 Str.	.332	1	25	2 1/8	54	1	11	37
BCU-1/0-T	1/0 Str.	.375	1	25	2 1/8	54	1	12	42
BCU-2/0-T	2/0 Str.	.419	1 1/16	27	2 1/4	57	1	13	45
BCU-3/0-T	3/0 Str.	.470	1 1/8	29	2 3/8	60	1	14	50
BCU-4/0-T	4/0 Str.	.528	1 1/8	29	2 3/8	60	1	15	54
BCU-025-T	250 MCM	.575	1 1/4	32	2 5/8	67	1	16	62
BCU-030-T	300 MCM	.634	1 1/4	32	2 5/8	67	1	17	66H or 66
BCU-035-T	350 MCM	.682	1 5/16	33	2 3/4	70	1	18	71H or 71
BCU-040-T	400 MCM	.728	1 7/16	37	3	76	1	19	76H or 76
BCU-050-T	500 MCM	.815	1 11/16	43	3 1/2	89	1	20	87
BCU-075-T	750 MCM	.999	2 1/16	52	4 1/4	108	1	24	106H or 106
BCU-100-T	1000 MCM	1.153	2 7/16	62	5	127	1	27	125

‡For conversion to metric range, see page 175. *†Concentric, compressed and compact stranding.*

COPPER SPLICES • TYPES BCU-P AND BCU-PT

Oil stop splices for #4 stranded thru 1000 MCM





Solid barrier cable stops insure proper insertion of conductors to full depth and oil tight seal. Seamless, pure copper construction, tin plated.

Other features same as type BCU.

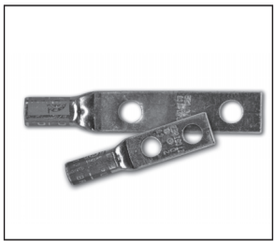
Catalog Number (Oil-Stop)	Catalog Number (Oil-Stop and Tapered)	Copper Conductor Range†	Wire Dia. Range‡	No. of Crimps Per End	Crimping Tool Reference	
					Burndy Die Index No.	T & B Die No.
			in			
BCU-4-P	BCU-4-PT	4 Str.	.232	1	8	29
BCU-2-P	BCU-2-PT	2 Str.	.292	1	10	33
BCU-1/0-P	BCU-1/0-PT	1/0 Str.	.375	1	12	42
BCU-2/0-P	BCU-2/0-PT	2/0 Str.	.419	1	13	45
BCU-4/0-P	BCU-4/0-PT	4/0 Str.	.528	1	15	54
BCU-025-P	BCU-025-PT	250 MCM	.575	1	16	62
BCU-030-P	BCU-030-PT	300 MCM	.634	1	17	66H or 66
BCU-035-P	BCU-035-PT	350 MCM	.682	1	18	71H or 71
BCU-050-P	BCU-050-PT	500 MCM	.815	1	20	87
BCU-075-P	BCU-075-PT	750 MCM	.999	1	24	106H or 106
BCU-100-P	BCU-100-PT	1000 MCM	1.153	1	27	125

‡For conversion to metric range, see page 175.
†Concentric, compressed and compact stranding.

COPPER PENN-CRIMPS® TELECOMMUNICATION LUGS • TYPE BLU-2TC

2 hole standard barrel lugs for #8 stranded thru 1000 MCM

- Seamless, one piece, copper construction with tin plating assures maximum conductivity.
- Generous entrance chamfer provides easy cable insertion.
- End of cable is visible through the inspection window to assure proper cable insertion.
- Catalog number and conductor sizes marked on every piece insures positive identification.
- 45° and 90° variations are UL listed and CSA certified. Contact factory for price and availability.
- Can be installed with existing crimping tools.
- Die color coding conforms to industry standards to insure proper connector/die selection and to provide for faster installation.
- Accepts the same wide range of additional wire sizes and types as our standard BLU, BBLU, BBLZ, BCU, and BBCU series.
- UL/CSA approved with Versa-Crimp® tooling and wire ranges. Versa-Crimp® is a registered trademark of Hubbell Incorporated.
- BLU lugs are suitable for use at voltages up to 35KV.

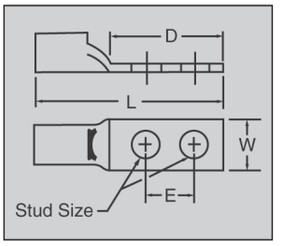


COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU
90° C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



Catalog Number	Copper Cond. Range+	Wire Dia. (in) ++	Stud Size	Approximate Dimensions (in inches) Hole Space E	Wide W	Pad Lgth D	Lgth L	Die Color Code	Crimping Tool Reference+++ PENN-UNION Dieless Mechanical	Pressure Setting TDY-1	Pressure Setting TDY-U	PUC Dies	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BLU-8D-2TC10	**#8**	.146	10	5/8	.41	1.13	1.78	Red	PUC TDM-250	-	-	T-6	B-6	21
BLU-8D-2TC14			1/4	5/8	.41	1.22	1.88							
BLU-8D-2TC14E2			1/4	3/4	.41	1.36	2.01		or					
BLU-8D-2TC14E1			1/4	1	.41	1.61	2.26		TDM-500					
BLU-8D-2TC38			3/8	1	.56	1.83	2.48							
BLU-6D-2TC10	#6	.184	10	5/8	.41	1.22	2.25	Blue	PUC TDM-250	-	-	T-7*/374*	B-7	24
BLU-6D-2TC14			1/4	5/8	.41	1.22	2.25							
BLU-6D-2TC14E2			1/4	3/4	.41	1.36	2.42							
BLU-6D-2TC14E1			1/4	1	.41	1.61	2.67		or					
BLU-6D-2TC516E2			5/16	3/4	.61	1.47	2.54		TDM-500					
BLU-6D-2TC516			5/16	1	.61	1.72	2.79							
BLU-6D-2TC38			3/8	1	.61	1.83	2.90							
BLU-6DN			1/2	1 3/4	.81	3.00	4.07							
BLU-5D-2TC14	#5	.206	1/4	5/8	.44	1.22	2.25	Blue	PUC NONE	-	-	T-7*/374*	B-7	24
BLU-4D-2TC14	#4	.232	1/4	5/8	.50	1.22	2.33	Gray	PUC TDM-250	2	-	T-8*/346*	B-8	29
BLU-4D-2TC14E2			1/4	3/4	.50	1.36	2.43		or					
BLU-4D-2TC14E1			1/4	1	.50	1.61	2.68		TDM-500					
BLU-4D-2TC516			5/16	1	.61	1.72	2.78							
BLU-4D-2TC38			3/8	1	.61	1.83	2.89							
BLU-4D1			1/2	1 3/4	.94	2.88	3.94							
BLU-3D-2TC14	** #3	.260	1/4	5/8	.65	1.22	2.32	White	PUC NONE	2	-	T-9*	B-9	-
BLU-3D-2TC51658			5/16	5/8	.65	1.34	2.47							
BLU-3D-2TC38			3/8	1	.65	1.83	2.93							
BLU-2D-2TC14	#2	.292	1/4	5/8	.59	1.22	2.32	Brown	PUC TDM-250	2	-	T-10	B-10	33
BLU-2D-2TC14E2			1/4	3/4	.59	1.36	2.49		or					
BLU-2D-2TC14E1			1/4	1	.59	1.61	2.74		TDM-500					
BLU-2D-2TC516E2			5/16	3/4	.59	1.47	2.60							
BLU-2D-2TC516			5/16	1	.59	1.72	2.85							
BLU-2D-2TC38			3/8	1	.59	1.83	2.96							
BLU-2D2			1/2	1 3/4	.81	2.88	3.98							
BLU-1D-2TC14	#1	.332	1/4	5/8	.67	1.22	2.41	Green	PUC TDM-250	2	-	T-11/375	B-11	37
BLU-1D-2TC14E2			1/4	3/4	.67	1.36	2.55		or					
BLU-1D-2TC516E6			5/16	7/8	.67	1.62	2.79		TDM-500					
BLU-1D-2TC38			3/8	1	.67	1.83	3.02							
BLU-1D5			1/2	1 3/4	.78	2.88	4.06							
BLU-1/0D-2TC14	1/0	.375	1/4	5/8	.74	1.22	2.44	Pink	PUC TDM-250	2	-	T-12/348	B-12	42
BLU-1/0D-2TC14E2			1/4	3/4	.74	1.36	2.58		or					
BLU-1/0D-2TC516E6			5/16	7/8	.74	1.62	2.81		TDM-500					
BLU-1/0D-2TC516			5/16	1	.74	1.72	2.94							
BLU-1/0D-2TC38			3/8	1	.74	1.83	3.02							
BLU-1/0D-2NTC38			3/8	1 3/4	.74	2.58	3.77							
BLU-1/0D2			1/2	1 3/4	.81	2.88	4.09							

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

**(Also #2 Sol)
*** CUAD-1000

* Consult factory for availability of dies not available at this time.

Continued from page Recent Additions 13

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

Catalog Number	Copper Cond. Range+	Wire Dia. (in) ++	Stud Size	Approximate Dimensions (in inches) Hole Space E	Wide W	Pad Lgth D	Lgth L	Die Color Code	Crimping Tool Reference+++ PENN-UNION Dieless Mechanical	Pressure Setting TDY-1	Pressure Setting TDY-U	PUC Dies	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BLU-2/0D-2TC14	2/0	.419	1/4	5/8	.82	1.22	2.50	Black	PUC TDM-250 or TDM-500	2	-	T-13	B-13	45
BLU-2/0D-2TC14E2			1/4	3/4	.82	1.36	2.64							
BLU-2/0D-2TC14E1			1/4	1	.82	1.61	2.89							
BLU-2/0D-2TC516E6			5/16	7/8	.82	1.62	2.88							
BLU-2/0D-2TC516			5/16	1	.82	1.72	3.00							
BLU-2/0D-2TC38			3/8	1	.82	1.83	3.08							
BLU-2/0D			1/2	1 3/4	.82	2.88	4.13							
BLU-3/0D-2TC14E2	3/0	.470	1/4	3/4	.89	1.36	2.77	Orange	PUC TDM-250 or TDM-500	5	5	T-14	B-14	50
BLU-3/0D-2TC516			5/16	1	.89	1.72	3.13							
BLU-3/0D-2TC38			3/8	1	.89	1.83	3.24							
BLU-3/0D			1/2	1 3/4	.89	2.88	4.25							
BLU-4/0D-2TC14E2	4/0	.528	1/4	3/4	1.00	1.36	2.83	Purple	PUC TDM-250 or TDM-500	5	5	T-15	B-15	54
BLU-4/0D-2TC14E1			1/4	1	1.00	1.61	3.08							
BLU-4/0D-2TC516			5/16	1	1.00	1.72	3.18							
BLU-4/0D-2TC38			3/8	1	1.00	1.83	3.30							
BLU-4/0D			1/2	1 3/4	1.00	2.88	4.31							
BLU-025D-2TC38	250	.575	3/8	1	1.09	1.83	3.43	Yellow	PUC TDM250 or TDM-500	5	5	T-16	B-16	62
BLU-025D			1/2	1 3/4	1.09	2.88	4.44							
BLU-030D-2TC516	300	.634	5/16	1	1.19	1.72	3.37	White	PUC TDM-500	7	7	T-17*	B-17	66H/66
BLU-030D-2TC38			3/8	1	1.19	1.83	3.50							
BLU-030D			1/2	1 3/4	1.19	2.88	4.50							
BLU-035D-2TC14E2	350	.682	1/4	3/4	1.28	1.36	3.14	Red	PUC TDM-500	7	7	T-18/324	B-18	71H/71
BLU-035D-2NTC516			5/16	1 3/4	1.28	2.88	4.63							
BLU-035D-2TC38			3/8	1	1.28	1.83	3.61							
BLU-035D-2TC12			1/2	1 1/4	1.28	2.40	4.18							
BLU-035D			1/2	1 3/4	1.28	2.88	4.63							
BLU-040D-2TC516	400	.728	5/16	1	1.39	1.72	3.63	Blue	PUC TDM-500	7	7	T-19*/470*	B-19	76H/76
BLU-040D-2TC38			3/8	1	1.39	1.83	3.74							
BLU-040D			1/2	1 3/4	1.39	2.88	4.75							
BLU-050D-2TC14E2	500	.815	1/4	3/4	1.53	1.36	3.52	Brown	PUC TDM-500	9	9	T-20/299	B-20	87
BLU-050D-2TC38			3/8	1	1.53	1.83	3.99							
BLU-050D-2TC12			1/2	1 1/4	1.53	2.40	4.56							
BLU-050D			1/2	1 3/4	1.53	2.88	5.00							
BLU-060D-2TC38	600	.893	3/8	1	1.72	1.83	4.08	Green	PUC NONE	9	9	T-22/472	B-22	94H/94
BLU-060D			1/2	1 3/4	1.72	2.88	5.09							
BLU-065D-2TC38	650	.930	3/8	1	1.78	1.83	4.08	Pink	PUC NONE	9	9	-	B-300	99
BLU-065D-2TC12			1/2	1 1/4	1.78	2.40	4.65							
BLU-065D			1/2	1 3/4	1.78	2.88	5.09							
BLU-075D-2TC38	750	.999	3/8	1	1.91	1.83	4.43	Black	PUC NONE	9	9	T-24*/473	B-24	106H/106
BLU-075D-2TC12E3			1/2	1 1/2	1.91	2.65	5.25							
BLU-075D			1/2	1 3/4	1.91	2.88	5.44							
BLU-080D-2TC38	800	1.031	3/8	1	1.97	1.83	4.49	Orange	PUC NONE	-	-	-	B-25	107H/107
BLU-080D			1/2	1 3/4	1.97	2.88	5.53							
BLU-100D-2TC38	1000	1.153	3/8	1	2.17	1.83	4.83	White	PUC NONE	9***	9***	-	B-27	125
BLU-100D-2TC12			1/2	1 1/4	2.17	2.40	5.40							
BLU-100D			1/2	1 3/4	2.17	2.88	5.87							

+ Concentric, compressed and compact stranding.
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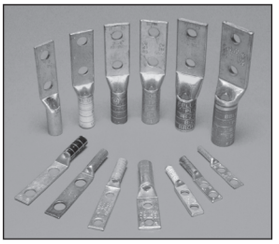
+++ For additional tool references see Master Catalog
**(Also #2 Sol)
*** CUAD-1000
* Consult factory for availability of dies not available at this time.

COPPER PENN-CRIMPS® TELECOMMUNICATION LUGS • TYPE BBLU-2TC

2 hole long barrel lugs for #8 stranded thru 2000 MCM

- Longer length barrel permits extra crimps for additional assurance on heavy duty loads.
- Seamless, one piece, pure copper construction with tin plating assures maximum conductivity.
- Generous entrance chamfer provides easy cable insertion.
- End of cable is protected from environmental hazards by completely closed transition.
- Catalog number and conductor sizes marked on every piece insures positive identification.
- 45° and 90° variations are UL listed and CSA certified. Contact factory for price and availability.
- Can be installed with existing crimping tools.
- Die color coding conforms to industry requirements to insure proper connector/die selection and to provide for faster installation.
- Accepts the same wide range of additional wire sizes and types as our standard BBLU series.
- New feature - UL/CSA approved with Versa-Crimp® tooling and wire ranges. Versa-Crimp® is a registered trademark of Hubbell Incorporated.
- BBLU lugs are suitable for use at voltages up to 35KV.

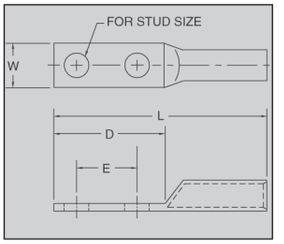


COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU 90° C

POWER		UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



Catalog Number	Copper Cond. Range+	Wire Dia. (in) ++	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ PENN-UNION Dieless Mechanical	Pressure Setting TDY-1	Pressure Setting TDY-U	PUC Dies	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BBLU-8D-2TC14	**#8**	.146	1/4	.63	.41	1.22	2.44	Red	PUC TDM-250 or TDM-500	-	-	T-6	B-6	21
BBLU-8D-2TC14E2			1/4	.75	.41	1.36	2.58							
BBLU-8D-2TC38E3			3/8	.81	.56	1.83	3.05							
BBLU-8D-2TC38			3/8	1	.56	1.83	3.05							
BBLU-6D-2TC14	#6	.184	1/4	.63	.41	1.22	2.60	Blue	PUC TDM-250 or TDM-500	-	-	T-7*/374*	B-7	24
BBLU-6D-2TC14E2			1/4	.75	.41	1.36	2.74							
BBLU-6D-2TC38E2			3/8	.75	.61	1.58	2.96							
BBLU-6D-2TC38E3			3/8	.81	.61	1.83	3.21							
BBLU-6D-2TC38			3/8	1	.61	1.83	3.21							
BBLU-6DN			1/2	1.75	.81	3.00	4.38							
BBLU-5D-2TC14	#5	.206	1/4	.63	.44	1.22	2.60	Blue	PUC NONE	-	-	T-7*/374*	B-7	24
BBLU-5D-2TC14E2			1/4	.75	.44	1.36	2.74							
BBLU-5D-2TC38E2			3/8	.75	.61	1.58	2.96							
BBLU-5D-2TC38E3			3/8	.81	.61	1.83	3.21							
BBLU-5D-2TC38			3/8	1	.61	1.83	3.21							
BBLU-4D-2TC14	#4	.232	1/4	.63	.50	1.22	2.60	Gray	PUC TDM-250 or TDM-500	2	-	T-8*/346*	B-8	29
BBLU-4D-2TC14E2			1/4	.75	.50	1.36	2.74							
BBLU-4D-2TC38E2			3/8	.75	.61	1.58	2.96							
BBLU-4D-2TC38E3			3/8	.81	.61	1.83	3.21							
BBLU-4D-2TC38			3/8	1	.61	1.83	3.21							
BBLU-4D1			1/2	1.75	.94	3.00	4.38							
BBLU-3D-2TC14	** #3	.260	1/4	.63	.65	1.22	2.60	White	PUC NONE	2	-	T-9*	B-9	-
BBLU-3D-2TC14E2			1/4	.75	.65	1.36	2.74							
BBLU-3D-2TC38E2			3/8	.75	.65	1.58	2.96							
BBLU-3D-2TC38E3			3/8	.81	.65	1.83	3.21							
BBLU-3D-2TC38			3/8	1	.65	1.83	3.21							
BBLU-2D-2TC14	#2	.292	1/4	.63	.59	1.22	2.75	Brown	PUC TDM-250 or TDM-500	2	-	T-10	B-10	33
BBLU-2D-2TC14E2			1/4	.75	.59	1.36	2.89							
BBLU-2D-2TC38E2			3/8	.75	.59	1.58	3.11							
BBLU-2D-2TC38E3			3/8	.81	.59	1.83	3.36							
BBLU-2D-2TC38			3/8	1	.59	1.83	3.36							
BBLU-2D-2NTC38			3/8	1.75	.59	2.58	4.11							
BBLU-2D6			1/2	1.75	.81	3.00	4.53							
BBLU-1D-2TC14	#1	.332	1/4	.63	.67	1.22	2.94	Green	PUC TDM-250 or TDM-500	2	-	T-11/375	B-11	37
BBLU-1D-2TC14E2			1/4	.75	.67	1.36	3.08							
BBLU-1D-2TC38E2			3/8	.75	.67	1.58	3.30							
BBLU-1D-2TC38E3			3/8	.81	.67	1.83	3.55							
BBLU-1D-2TC38			3/8	1	.67	1.83	3.55							
BBLU-1D2			1/2	1.75	.78	3.00	4.72							

NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

NEW FEATURE!

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**(Also #2 Sol)
*** CUAD-1000
* Consult factory for availability of dies not available at this time.

COPPER PENN-CRIMPS® TELECOMMUNICATION LUGS • TYPE BBLU-2TC

Continued from pageRecent Additions 15

NEW FEATURE!

NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

Catalog Number	Copper Cond. Range+	Wire Dia. (in) ++	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ PENN-UNION Dieless Mechanical	Pressure Setting TDY-1	TDY-U	PUC Dies	Alt. Tooling Burndy Index No.	T&B Die
BBLU-1/0D-2TC14	1/0	.375	1/4	.63	.74	1.22	2.94	Pink	PUC TDM-250 or TDM-500	2	-	T-12/348	B-12	42
BBLU-1/0D-2TC14E2			1/4	.75	.74	1.36	3.08							
BBLU-1/0D-2TC38E2			3/8	.75	.74	1.58	3.30							
BBLU-1/0D-2TC38E3			3/8	.81	.74	1.83	3.55							
BBLU-1/0D-2TC38			3/8	1	.74	1.83	3.55							
BBLU-1/0D-2NTC38			3/8	1.75	.74	2.58	4.30							
BBLU-1/0D3			1/2	1.75	.81	3.00	4.72							
BBLU-2/0D-2TC14	2/0	.419	1/4	.63	.82	1.22	3.06	Black	PUC TDM-250 or TDM-500	2	-	T-13	B-13	45
BBLU-2/0D-2TC14E2			1/4	.75	.82	1.36	3.20							
BBLU-2/0D-2TC38E2			3/8	.75	.82	1.58	3.42							
BBLU-2/0D-2TC38E3			3/8	.81	.82	1.83	3.67							
BBLU-2/0D-2TC38			3/8	1	.82	1.83	3.67							
BBLU-2/0D			1/2	1.75	.82	3.00	4.84							
BBLU-3/0D-2TC14	3/0	.470	1/4	.63	.89	1.22	3.13	Orange	PUC TDM-250 or TDM-500	5	5	T-14	B-14	50
BBLU-3/0D-2TC14E2			1/4	.75	.89	1.36	3.27							
BBLU-3/0D-2TC38E2			3/8	.75	.89	1.58	3.49							
BBLU-3/0D-2TC38E3			3/8	.81	.89	1.83	3.74							
BBLU-3/0D-2TC38			3/8	1	.89	1.83	3.74							
BBLU-3/0D			1/2	1.75	.89	3.00	4.91							
BBLU-4/0D-2TC14	4/0	.528	1/4	.63	1.00	1.22	3.32	Purple	PUC TDM-250 or TDM-500	5	5	T-15	B-15	54
BBLU-4/0D-2TC14E2			1/4	.75	1.00	1.36	3.46							
BBLU-4/0D-2TC38E2			3/8	.75	1.00	1.58	3.68							
BBLU-4/0D-2TC38E3			3/8	.81	1.00	1.83	3.93							
BBLU-4/0D-2TC38			3/8	1	1.00	1.83	3.93							
BBLU-4/0D-2NTC38			3/8	1.75	1.00	2.58	4.68							
BBLU-4/0D-2TC716E2			7/16	.75	1.00	1.83	3.93							
BBLU-4/0D			1/2	1.75	1.00	3.00	5.10							
BBLU-025D-2TC14E2	250	.575	1/4	.75	1.09	1.36	3.58	Yellow	PUC TDM-250 or TDM-500	5	5	T-16	B-16	62
BBLU-025D-2TC38E3			3/8	.81	1.09	1.83	4.05							
BBLU-025D-2TC38			3/8	1	1.09	1.83	4.05							
BBLU-025D			1/2	1.75	1.09	3.00	5.22							
BBLU-030D-2TC14E2	300	.634	1/4	.75	1.19	1.36	3.95	White	PUC TDM-500	7	7	T-17*	B-17	66H/66
BBLU-030D-2TC38			3/8	1	1.19	1.83	4.42							
BBLU-030D			1/2	1.75	1.19	3.00	5.59							
BBLU-035D-2TC14E2	350	.682	1/4	.75	1.28	1.36	4.02	Red	PUC TDM-500	7	7	T-18/324	B-18	71H/71
BBLU-035D-2TC38			3/8	1	1.28	1.83	4.49							
BBLU-035D			1/2	1.75	1.28	3.00	5.66							
BBLU-040D-2TC14E2	400	.728	1/4	.75	1.39	1.36	4.15	Blue	PUC TDM-500	7	7	T-19*/470*	B-19	76H/76
BBLU-040D-2TC38			3/8	1	1.39	1.83	4.62							
BBLU-040D			1/2	1.75	1.39	3.00	5.79							
BBLU-050D-2TC14E2	500	.815	1/4	.75	1.53	1.36	4.39	Brown	PUC TDM-500	9	9	T-20/299	B-20	87
BBLU-050D-2TC38			3/8	1	1.53	1.83	4.86							
BBLU-050D			1/2	1.75	1.53	3.00	6.03							
BBLU-060D-2TC38	600	.893	3/8	1	1.72	1.83	5.39	Green	PUC NONE	9	9	T-22/472	B-22	94H/94
BBLU-060D			1/2	1.75	1.72	3.00	6.56							
BBLU-065D-2TC38	650	.930	3/8	1	1.78	1.83	5.51	Pink	PUC NONE	9	9	-	B-300	99
BBLU-065D			1/2	1.75	1.78	3.00	6.68							
BBLU-075D-2TC38	750	.999	3/8	1	1.91	2.08	5.93	Black	PUC NONE	9	9	T-24*/473	B-24	106H/106
BBLU-075D			1/2	1.75	1.91	3.00	6.85							
BBLU-080D	800	1.031	1/2	1.75	1.97	3.00	7.00	Orange	PUC NONE	-	-	-	B-25	107H/107
BBLU-100D-2TC38	1000	1.153	3/8	1	2.17	2.08	6.24	White	PUC NONE	9***	9***	-	B-27	125
BBLU-100D1			1/2	1.75	2.17	3.00	7.16							
BBLU-150D1	1500	1.412	1/2	1.75	2.69	3.00	7.44	Green	PUC NONE	-	-	-	B-31	-
BBLU-200D1	2000	1.632	1/2	1.75	3.08	3.00	7.78	Brown	PUC NONE	-	-	-	B-34	-

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

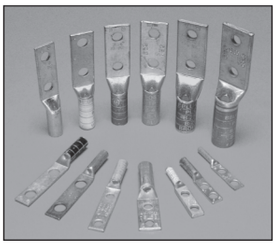
**(Also #2 Sol)
*** CUAD-1000

* Consult factory for availability of dies not available at this time.

COPPER PENN-CRIMPS® TELECOMMUNICATION LUGS • TYPE BBLZ-2TC

2 hole long barrel lugs with inspection windows for #8 stranded thru 2000 MCM

- Longer length barrel permits extra crimps for additional assurance on heavy duty loads.
- Seamless, one piece, copper construction with tin plating assures maximum conductivity.
- Generous entrance chamfer provides easy cable insertion.
- End of cable is visible through the inspection window to ensure proper cable insertion.
- Catalog number and conductor sizes marked on every piece insures positive identification.
- 45° and 90° variations are UL listed and CSA certified. Contact factory for price and availability.
- Can be installed with existing crimping tools.
- Die color coding conforms to industry requirements to insure proper connector/die selection and to provide for faster installation.
- Accepts the same wide range of additional wire sizes and types as our standard BLU, BBLU, BCU and BBCU series.
- UL/CSA approved with Versa-Crimp® tooling and wire ranges. Versa-Crimp® is a registered trademark of Hubbell Incorporated.
- BBLZ lugs are suitable for use at voltages up to 35KV.

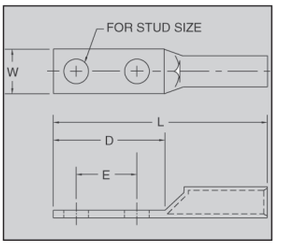


COLOR-CODED
COPPER COMPRESSION CONNECTORS

CU 90º C

	POWER	UL 467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
Connector Family	UL486A/ CSA22.2 No. 65 Wire Range	UL Grounding Max. Wire	Grounding & Bonding	Direct Burial	CSA Grounding Max. Wire	Grounding & Bonding	Direct Burial
BLU, BBLU, BBLZ, BCU, BBCU	8 Str.- 2000 MCM	500 MCM	YES	YES	250 MCM	YES	YES

POWER: UL 486A, CSA C22.2 NO. 65
GROUNDING & BONDING & DIRECT BURIAL : UL 467, CSA C22.2 NO. 41



Catalog Number	Copper Cond. Range+	Wire Dia. (in) ++	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ PENN-UNION Dieless Mechanical	Pressure Setting TDY-1	Pressure Setting TDY-U	PUC Dies	Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die
BBLZ-8D-2TC14	**#8**	.146	1/4	.63	.41	1.22	2.44	Red	PUC TDM-250 or TDM-500	-	-	T-6	B-6	21
BBLZ-8D-2TC14E2			1/4	.75	.41	1.36	2.58							
BBLZ-8D-2TC38E3			3/8	.81	.56	1.83	3.05							
BBLZ-8D-2TC38			3/8	1	.56	1.83	3.05							
BBLZ-6D-2TC14	#6	.184	1/4	.63	.41	1.22	2.60	Blue	PUC TDM-250 or TDM-500	-	-	T-7*/374*	B-7	24
BBLZ-6D-2TC14E2			1/4	.75	.41	1.36	2.74							
BBLZ-6D-2TC38E2			3/8	.75	.61	1.58	2.96							
BBLZ-6D-2TC38E3			3/8	.81	.61	1.83	3.21							
BBLZ-6D-2TC38			3/8	1	.61	1.83	3.21							
BBLZ-6DN			1/2	1.75	.81	3.00	4.38							
BBLZ-5D-2TC14	#5	.206	1/4	.63	.44	1.22	2.60	Blue	PUC NONE	-	-	T-7*/374*	B-7	24
BBLZ-5D-2TC14E2			1/4	.75	.44	1.36	2.74							
BBLZ-5D-2TC38E2			3/8	.75	.61	1.58	2.96							
BBLZ-5D-2TC38E3			3/8	.81	.61	1.83	3.21							
BBLZ-5D-2TC38			3/8	1	.61	1.83	3.21							
BBLZ-4D-2TC14	#4	.232	1/4	.63	.50	1.22	2.60	Gray	PUC TDM-250 or TDM-500	2	-	T-8*/346*	B-8	29
BBLZ-4D-2TC14E2			1/4	.75	.50	1.36	2.74							
BBLZ-4D-2TC38E2			3/8	.75	.61	1.58	2.96							
BBLZ-4D-2TC38E3			3/8	.81	.61	1.83	3.21							
BBLZ-4D-2TC38			3/8	1	.61	1.83	3.21							
BBLZ-4D1			1/2	1.75	.94	3.00	4.38							
BBLZ-3D-2TC14	** #3	.260	1/4	.63	.65	1.22	2.60	White	PUC NONE	2	-	T-9*	B-9	-
BBLZ-3D-2TC14E2			1/4	.75	.65	1.36	2.74							
BBLZ-3D-2TC38E2			3/8	.75	.65	1.58	2.96							
BBLZ-3D-2TC38E3			3/8	.81	.65	1.83	3.21							
BBLZ-3D-2TC38			3/8	1	.65	1.83	3.21							
BBLZ-2D-2TC14	#2	.292	1/4	.63	.59	1.22	2.75	Brown	PUC TDM-250 or TDM-500	2	-	T-10	B-10	33
BBLZ-2D-2TC14E2			1/4	.75	.59	1.36	2.89							
BBLZ-2D-2TC38E2			3/8	.75	.59	1.58	3.11							
BBLZ-2D-2TC38E3			3/8	.81	.59	1.83	3.36							
BBLZ-2D-2TC38			3/8	1	.59	1.83	3.36							
BBLZ-2D-2NTC38			3/8	1.75	.59	2.58	4.11							
BBLZ-2D6			1/2	1.75	.81	3.00	4.53							
BBLZ-1D-2TC14	#1	.332	1/4	.63	.67	1.22	2.94	Green	PUC TDM-250 or TDM-500	2	-	T-11/375	B-11	37
BBLZ-1D-2TC14E2			1/4	.75	.67	1.36	3.08							
BBLZ-1D-2TC38E2			3/8	.75	.67	1.58	3.30							
BBLZ-1D-2TC38E3			3/8	.81	.67	1.83	3.55							
BBLZ-1D-2TC38			3/8	1	.67	1.83	3.55							
BBLZ-1D2			1/2	1.75	.78	3.00	4.72							

NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

NEW FEATURE!

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog
**(Also #2 Sol)
*** CUAD-1000
* Consult factory for availability of dies not available at this time.

COPPER PENN-CRIMPS® TELECOMMUNICATION LUGS • TYPE BBLZ-2TC

Continued from page Recent Additions 17

NEW FEATURE!
NOW LISTED FOR GROUNDING, BONDING & DIRECT BURIAL APPLICATIONS

Catalog Number	Copper Cond. Range+	Dia. (in) ++	Stud Size	Approximate Dimensions (in inches) E	W	D	L	Die Color Code	Crimping Tool Reference+++ PENN-UNION Dieless Mechanical	Pressure Setting TDY-1	TDY-U	PUC Dies	Alt. Tooling Burndy Index No.	T&B Die
BBLZ-1/0D-2TC14	1/0	.375	1/4	.63	.74	1.22	2.94	Pink	PUC TDM-250 or TDM-500	2	-	T-12/348	B-12	42
BBLZ-1/0D-2TC14E2			1/4	.75	.74	1.36	3.08							
BBLZ-1/0D-2TC38E2			3/8	.75	.74	1.58	3.30							
BBLZ-1/0D-2TC38E3			3/8	.81	.74	1.83	3.55							
BBLZ-1/0D-2TC38			3/8	1	.74	1.83	3.55							
BBLZ-1/0D-2NTC38			3/8	1.75	.74	2.58	4.30							
BBLZ-1/0D3			1/2	1.75	.81	3.00	4.72							
BBLZ-2/0D-2TC14	2/0	.419	1/4	.63	.82	1.22	3.06	Black	PUC TDM-250 or TDM-500	2	-	T-13	B-13	45
BBLZ-2/0D-2TC14E2			1/4	.75	.82	1.36	3.20							
BBLZ-2/0D-2TC38E2			3/8	.75	.82	1.58	3.42							
BBLZ-2/0D-2TC38E3			3/8	.81	.82	1.83	3.67							
BBLZ-2/0D-2TC38			3/8	1	.82	1.83	3.67							
BBLZ-2/0D			1/2	1.75	.82	3.00	4.84							
BBLZ-3/0D-2TC14	3/0	.470	1/4	.63	.89	1.22	3.13	Orange	PUC TDM-250 or TDM-500	5	5	T-14	B-14	50
BBLZ-3/0D-2TC14E2			1/4	.75	.89	1.36	3.27							
BBLZ-3/0D-2TC38E2			3/8	.75	.89	1.58	3.49							
BBLZ-3/0D-2TC38E3			3/8	.81	.89	1.83	3.74							
BBLZ-3/0D-2TC38			3/8	1	.89	1.83	3.74							
BBLZ-3/0D			1/2	1.75	.89	3.00	4.91							
BBLZ-4/0D-2TC14	4/0	.528	1/4	.63	1.00	1.22	3.32	Purple	PUC TDM-250 or TDM-500	5	5	T-15	B-15	54
BBLZ-4/0D-2TC14E2			1/4	.75	1.00	1.36	3.46							
BBLZ-4/0D-2TC716E2			7/16	.75	1.00	1.83	3.93							
BBLZ-4/0D-2TC38E2			3/8	.75	1.00	1.58	3.68							
BBLZ-4/0D-2TC38E3			3/8	.81	1.00	1.83	3.93							
BBLZ-4/0D-2TC38			3/8	1	1.00	1.83	3.93							
BBLZ-4/0D-2NTC38			3/8	1.75	1.00	2.58	4.68							
BBLZ-4/0D			1/2	1.75	1.00	3.00	5.10							
BBLZ-025D-2TC14E2	250	.575	1/4	.75	1.09	1.36	3.58	Yellow	PUC TDM-250 or TDM-500	5	5	T-16	B-16	62
BBLZ-025D-2TC38E3			3/8	.81	1.09	1.83	4.05							
BBLZ-025D-2TC38			3/8	1	1.09	1.83	4.05							
BBLZ-025D			1/2	1.75	1.09	3.00	5.22							
BBLZ-030D-2TC14E2	300	.634	1/4	.75	1.19	1.36	3.95	White	PUC TDM-500	7	7	T-17*	B-17	66H/66
BBLZ-030D-2TC38			3/8	1	1.19	1.83	4.42							
BBLZ-030D			1/2	1.75	1.19	3.00	5.59							
BBLZ-035D-2TC14E2	350	.682	1/4	.75	1.28	1.36	4.02	Red	PUC TDM-500	7	7	T-18/324	B-18	71H/71
BBLZ-035D-2TC38			3/8	1	1.28	1.83	4.49							
BBLZ-035D			1/2	1.75	1.28	3.00	5.66							
BBLZ-040D-2TC14E2	400	.728	1/4	.75	1.39	1.36	4.15	Blue	PUC TDM-500	7	7	T-19*/470*	B-19	76H/76
BBLZ-040D-2TC38			3/8	1	1.39	1.83	4.62							
BBLZ-040D			1/2	1.75	1.39	3.00	5.79							
BBLZ-050D-2TC14E2	500	.815	1/4	.75	1.53	1.36	4.39	Brown	PUC TDM-500	9	9	T-20/299	B-20	87
BBLZ-050D-2TC38			3/8	1	1.53	1.83	4.86							
BBLZ-050D			1/2	1.75	1.53	3.00	6.03							
BBLZ-060D-2TC38	600	.893	3/8	1	1.72	1.83	5.39	Green	PUC NONE	9	9	T-22/472	B-22	94H/94
BBLZ-060D			1/2	1.75	1.72	3.00	6.56							
BBLZ-065D-2TC38	650	.930	3/8	1	1.78	1.83	5.51	Pink	PUC NONE	9	9	-	B-300	99
BBLZ-065D			1/2	1.75	1.78	3.00	6.68							
BBLZ-075D-2TC38	750	.999	3/8	1	1.91	2.08	5.93	Black	PUC NONE	9	9	T-24*/473	B-24	106H/106
BBLZ-075D			1/2	1.75	1.91	3.00	6.85							
BBLZ-080D	800	1.031	1/2	1.75	1.97	3.00	7.00	Orange	PUC NONE	-	-	-	B-25	107H/107
BBLZ-100D-2TC38	1000	1.153	3/8	1	2.17	2.08	6.24	White	PUC NONE	9***	9***	-	B-27	125
BBLZ-100D1			1/2	1.75	2.17	3.00	7.16							
BBLZ-150D1	1500	1.412	1/2	1.75	2.69	3.00	7.44	Green	PUC NONE	-	-	-	B-31	-
BBLZ-200D1	2000	1.632	1/2	1.75	3.08	3.00	7.78	Brown	PUC NONE	-	-	-	B-34	-

+ Concentric, compressed and compact stranding.
++ For conversion to metric range see Master Catalog
+++ For additional tool references see Master Catalog

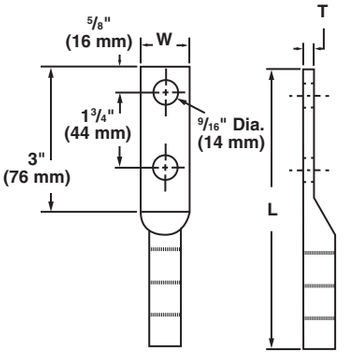
**(Also #2 Sol)
*** CUAD-1000

* Consult factory for availability of dies not available at this time.

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

COPPER COMPRESSION TERMINALS • TYPES HBBLU

Heavy duty



The heavy duty 2 hole compression lugs are made of heavy wall, seamless, one piece, pure copper tubing. Generous entrance chamfer provides easy cable insertion. End of cable is protected from environmental hazards by completely closed transitions. The heavy wall tubing gives insurance of heavy duty loads.

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions						Burndy Die Index No.
			L		W		T		
		in	in	mm	in	mm	in	mm	
HBBLU-1/0D	1/0 Str. (7, 19)	.375	5 3/8	137	7/8	22	1/8	3	165, 287
HBBLU-2/0D	2/0 Str. (7, 19, 37)	.447	5 1/4	133	15/16	24	1/4	6	166, 206
HBBLU-3/0D	3/0 Str. (7, 19)	.470	5 5/16	135	1 1/16	27	1/4	6	167, 207, 211, 256
HBBLU-4/0D	4/0 Str. (7, 12, 19)	.528	5 1/4	133	1 7/32	31	5/16	8	168, 208
HBBLU-025D	250 MCM (7, 19, 37)	.575	5 5/8	143	1 3/8	35	3/8	9	169
HBBLU-030D	300 MCM (19, 37)	.642	5 1/2	140	3	76	3/8	9	170
HBBLU-035D	350 MCM (12, 19, 37)	.682	6 1/2	165	1 5/8	41	1/2	13	267
HBBLU-040D	400 MCM (19, 37)	.728	6 3/4	171	1 3/4	44	1/2	13	209
HBBLU-050D	500 MCM (19, 37)	.815	6 1/2	165	1 7/8	48	1/2	13	210
HBBLU-060D	600 MCM (37, 61)	.893	6 3/8	162	2 1/8	54	5/8	16	576
HBBLU-075D	750 MCM (37, 61)	.999	7 1/4	184	2 1/4	57	5/8	16	627
HBBLU-100D	1000 MCM (61)	1.153	7 5/8	194	2 3/4	70	3/4	19	345

‡For conversion to metric range, see page 175.

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

ADDITIONAL WIRE SIZE RECOMMENDATIONS FOR COPPER PENN-CRIMPS®
TYPES BCU, BCU-FL, BBCU, BBCU-FL, BLU, BLU-FL, BBLU, BBLU-FL

Copper Connector Catalog Type Splices and Lugs (1 & 2 Hole)	Class B & C Building Wire Cu Cable Size & Stranding	Class I Flexible Cable (#24AWG Cu Strands) Size & Stranding	Class K Weld Cable (#30AWG Cu Strands) Size & Stranding	Diesel Locomotive Cable (#24AWG Cu Strands) Size & Stranding	Class H Cable (No. & Dia. of Wire) Size & Stranding	Class G Cable (No. & Dia. of Wire) Size & Stranding	Class M Flexible Cable (#34AWG Cu Stands) Size & Stranding	Metric Cable Wire Size Range Copper Cable Only Metric Size & Dia.	Navy Cable	Air Craft
BCU-BBCU-BLU-BBLU-8	#8 AWG 7 or 19	#8 AWG 41/24	None	None	*#8 AWG 133/.0111	*#8 AWG 49/.0184	#8 AWG 420/34	6mm² 3.21mm	#23	AN-8
BCU-BBCU-BLU-BBLU-6	#6 AWG 7 or 19	#6 AWG 63/24	None	None	*#7 AWG 133/.0125	#7 AWG 49/.0206	#7 AWG 532/34	10mm² 4.12mm	None	None
BCU-BBCU-BLU-BBLU-5	#5 AWG 7 or 19	None	None	None	*#6 AWG 133/.0140	*#6 AWG 49/.0231	#6 AWG 665/34	16mm² 5.18mm	#30	AN-6
BCU-BBCU-BLU-BBLU-4	#4 AWG 7 or 19	None	None	None	*#5 AWG 133/.0158	*#5 AWG 49/.0260	#5 AWG 836/34	*20mm² 5.72mm	#40	None
BCU-BBCU-BLU-BBLU-3	#3 AWG 7 or 19	#4 AWG 105/24	#4 AWG 420/30	#4 AWG 105/24	#4 AWG 133/.0177	#4 AWG 49/.0292	#4 AWG 1064/34	25mm² 6.60mm	#50	AN-4
BCU-BBCU-BLU-BBLU-2	#2 AWG 7 or 19	None	None	None	*#3 AWG 133/.0199	*#3 AWG 49/.0328	#3 AWG 1323/34	*30mm² 7.01mm	#60	None
BCU-BBCU-BLU-BBLU-1	#1 AWG 19 or 37	#2 AWG 161/24	#2 AWG 665/30	#2 AWG 150/24	#2 AWG 133/.0223	#2 AWG 49/.0368	#2 AWG 1666/34	*40mm² 8.20mm	#75	AN-2
BCU-BBCU-BLU-BBLU-1/0	1/0 AWG 19 or 37	None	#1 AWG 836/30	#1 AWG 225/24	#1 AWG 259/.0180	#1 AWG 133/.0251	#1 AWG 2107/34	50mm² 9.27mm	#100	AN-1
BCU-BBCU-BLU-BBLU-2/0	2/0 AWG 19 or 37	1/0 AWG 266/24	1/0 AWG 1064/30	1/0 AWG 275/24	1/0 AWG 259/.0202	1/0 AWG 133/.0282	1/0 AWG 2646/34	70mm² 10.92mm	#125	AN-1/0
BCU-BBCU-BLU-BBLU-3/0	3/0 AWG 19 or 37	2/0 AWG 342/24	2/0 AWG 1323/30	2/0 AWG 325/24	2/0 AWG 259/.0227	2/0 AWG 133/.0316	None	*85mm² 11.94mm	#150	None
BCU-BBCU-BLU-BBLU-4/0	4/0 AWG 19 or 37	None	3/0 AWG 1666/30	3/0 AWG 450/24	3/0 AWG 259/.0255	3/0 AWG 133/.0355	2/0 AWG 3325/34	95mm² 12.80mm	#200	AN-2/0 AN-3/0
BCU-BBCU-BLU-BBLU-025	250 MCM 37 or 61	None	None	None	None	None	3/0 AWG 4256/34	120mm² 14.40mm	None	None
BCU-BBCU-BLU-BBLU-030	300 MCM 37 or 61	4/0 AWG 532/24	4/0 AWG 2107/30	4/0 AWG 550/24	*4/0 AWG 259/.0286	*4/0 AWG 133/.0399	4/0 AWG 5320/34	150mm² 16.00mm	#300	AN-4/0
BCU-BBCU-BLU-BBLU-035	350 MCM 37 or 61	None	None	262 MCM 650/24	*250 MCM 427/.0242	*250 MCM 259/.0311	None	*180mm² 17.42mm	#350	None
BCU-BBCU-BLU-BBLU-040	400 MCM 37 or 61	None	None	313 MCM 775/24	300 MCM 427/.0265	300 MCM 259/.0340	250 MCM 6384/34	185mm² 17.80mm	#400	None
BCU-BBCU-BLU-BBLU-045	450 MCM 37 or 61	None	None	None	*350 MCM 427/.0286	*350 MCM 259/.0368	300 MCM 7581/34	None	None	None
BCU-BBCU-BLU-BBLU-050	500 MCM 37 or 61	350 MCM 882/24	None	373 MCM 925/24	400 MCM 427/.0306	400 MCM 259/.0393	350 MCM 8806/34	240mm² 20.30mm	None	None
BCU-BBCU-BLU-BBLU-060	600 MCM 61 or 91	None	None	444 MCM 1100/24	450 MCM 427/.0325	450 MCM 259/.0417	400 MCM 10101/34	300mm² 22.63mm	None	None
BCU-BBCU-BLU-BBLU-065	650 MCM 61 or 91	500 MCM 1225/24	None	535 MCM 1325/24	500 MCM 427/.0342	500 MCM 259/.0439	450 MCM 11396/34	None	None	None
BCU-BBCU-BLU-BBLU-075	750 MCM 61 or 91	None	None	646 MCM 1600/24	*550 MCM 703/.0280 *600 MCM 703/.0292	*550 MCM 427/.0359 *600 MCM 427/.0375	500 MCM 12691/34	None	None	None
BCU-BBCU-BLU-BBLU-080	800 MCM 61 or 91	None	None	None	*650 MCM 703/.0304	*650 MCM 427/.0390 *700 MCM 427/.0405	550 MCM 13664/34	400mm² 26.1mm	None	None
BCU-BBCU-BLU-BBLU-100	1000 MCM 61 or 91	750 MCM 1862/24	None	777 MCM 1925/24	*700 MCM 703/.0316 *750 MCM 703/.0327	*750 MCM 427/.0419 *800 MCM 427/.0433	600 MCM 14945/34 650 MCM 16226/34	500mm² 29.3mm	None	None

*Not UL Listed

PENNUNION

229 Waterford Street • Edinboro, PA 16412-2398
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ALUMINUM PENN-CRIMPS® • TYPE BLUA

Crimp lugs for #6 stranded thru 1000 MCM copper or aluminum wire or cable

AL9CU

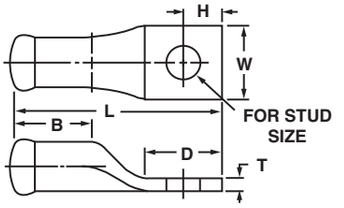

FIG. 1

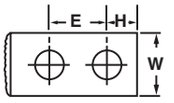

FIG. 2

Seamless, one piece, pure aluminum construction with tin plating assures maximum conductivity. Generous entrance chamfer provides easy cable insertion. The barrels are filled with Cual-Aid® and capped at factory to eliminate the need for separate application of Cual-Aid® to the conductor. Wire brushing of aluminum conductor is required. This assures a stable cool running joint. End of cable is protected from environmental hazards by completely closed transition.

Catalog number and conductor size marked on every piece to insure positive identification.

Can be installed with existing crimping tools.

Color coding conforms to industry requirements to insure proper connection/die selection and to provide for faster installation.

Catalog Number	Cond. Range†	Color Code	Wire Dia. (in) ‡	Stud Size	Fig. No.	Approximate Dimensions (in inches) L	B	D	E	H	T	W	Crimping Tool Reference: Alt. Tooling Burndy Index No.	Alt. Tooling T&B Die	Penn-Union PUC Dies	Penn-Union Pressure Setting TDY-1	Penn-Union Pressure Setting TDY-U
BLUA-8S•	8 Str.	Blue	.146	1/4	1	1 9/16	9/16	5/8	–	1/4	1/8	1/2	B-374		T-374*		
BLUA-6S	6 Str.	Gray	.184	1/4	1	1 53/64	11/16	51/64	–	3/8	1/8	1/2	B-346		T-346*		
BLUA-6S2				5/16	1				–								
BLUA-4S3	4 Str.	Green	.232	1/4	1	1 57/64	7/8	51/64	–	25/64	11/64	19/32	B-375	TBM-5	T-11/375		
BLUA-4S2				5/16	1				–								
BLUA-2S3	2 Str.	Pink	.292	1/4	1	1 29/32	7/8	23/32	–	11/32	7/32	23/32	B-348		T-12/348		
BLUA-2S4				5/16	1	1 31/32		25/32	–	3/8							
BLUA-2S				3/8	1	2 3/32		29/32	–	7/16							
BLUA-1S1	1 Str.	Gold	.332	1/4	1	2 11/64	7/8	55/64	–	25/64	15/64	25/32	B-471		T-471*	2	
BLUA-1S3				5/16	1				–								
BLUA-1S				3/8	1	2 17/32		1 25/64	–	7/16							
BLUA-1S2				1/2	1	2 33/64	29/32	1 3/8	–	11/16	11/64	25/32					
BLUA-1D1				1/2	2	4 3/64		2 29/32	1 3/4	9/16							
BLUA-1/0S2	1/0 Str.	Tan	.375	1/4	1	2 3/32	1	25/32	–	11/32	13/64	27/32	B-296	50	T-296		
BLUA-1/0S3				5/16	1	2 5/32		27/32	–	3/8							
BLUA-1/0S				3/8	1	2 7/32		29/32	–	7/16							
BLUA-1/0D1				3/8	2	3 17/32		1 7/8	1	3/8							
BLUA-1/0D2				3/8	2	3 27/32		2 3/16	1 1/16	5/8							
BLUA-1/0S1				1/2	1	2 5/8		1 1/8	–	9/16							
BLUA-1/0D3				1/2	2	4 9/16		2 29/32	1 3/4	9/16							
BLUA-2/0S4	2/0 Str.	Olive	.419	1/4	1	2 1/4	1 3/32	25/32	–	11/32	1/4	15/16	B-297	54	T-297		
BLUA-2/0S5				5/16	1	2 5/16		27/32	–	3/8							
BLUA-2/0S1				3/8	1	2 5/8		1 13/64	–	5/8							
BLUA-2/0D2				3/8	2	3 3/8		1 7/8	1	3/8							
BLUA-2/0S				1/2	1	2 5/8		1 5/32	–	9/16							
BLUA-2/0D				1/2	2	4 21/32		2 29/32	1 3/4	9/16							
BLUA-3/0S5	3/0 Str.	Ruby	.470	5/16	1	2 19/32	1 1/4	27/32	–	3/8	9/32	1 1/16	B-467	60	T-467	5	5
BLUA-3/0S2				3/8	1	2 13/16		1 1/16	–	7/16							
BLUA-3/0D1				3/8	2	3 29/32		1 7/8	1	3/8							
BLUA-3/0S				1/2	1	2 29/32		1 5/32	–	9/16							
BLUA-3/0D				1/2	2	41 5/16		2 29/32	1 3/4	9/16							
BLUA-4/0S3	4/0 Str.	White	.528	5/16	1	2 21/32	1 5/16	27/32	–	3/8	5/16	1 3/16	B-298	66	T-298		
BLUA-4/0S5				3/8	1	2 31/32		1 13/64	–	5/8							
BLUA-4/0D2				3/8	2	4 7/32		2 1/16	1	7/16							
BLUA-4/0S				1/2	1	2 31/32		1 5/32	–	9/16							
BLUA-4/0D				1/2	2	5 1/16		2 29/32	1 3/4	9/16							
BLUA-4/0S4				5/8	1	3 9/32		1 15/32	–	23/32							

*•Not UL Listed. ‡For conversion to metric range, see page 175. *Consult factory for availability of dies. Not available at this time.*
†Concentric, compressed and compact stranding.

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ALUMINUM PENN-CRIMPS® • TYPE BLUA

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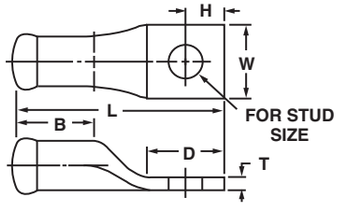

FIG. 1

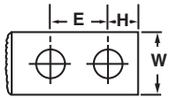

FIG. 2

BLUA LUGS ARE SUITABLE FOR USE AT VOLTAGES UP TO 35KV.

Catalog Number	Cond. Range†	Color Code	Wire Dia. (in) ‡	Stud Size	Fig. No.	Approximate Dimensions (in inches)							Crimping Tool Reference			
													Alt. Tooling		Penn-Union	
						L	B	D	E	H	T	W	Burndy Index No.	T&B Die	PUC Dies	Pressure Setting TDY-1	Pressure Setting TDY-U
BLUA-025S2				3/8	1	3		1 1/16	–	3/8							
BLUA-025D1	250			3/8	2	4		2 1/16	1	7/16							
BLUA-025S	MCM	Red	.575	1/2	1	3 7/16	1 13/16	1 1/2	–	5/8	11/32	1 9/32	B-324	71	T-18/324		
BLUA-025D				1/2	2	5 3/16		2 29/32	1 3/4	9/16							
BLUA-025S3				5/8	1	3 7/16		1 1/2	–	23/32							
BLUA-030S2				3/8	1	3 7/16		1 1/4	–	3/8							
BLUA-030D1	300			3/8	2	4 15/32		2 3/8	1	7/16						5	5
BLUA-030S1	MCM	Blue	.634	1/2	1	3 11/16	1 1/2	1 1/2	–	11/16	3/8	1 3/8	B-470	76	T-470*		
BLUA-030D				1/2	2	5 5/16		2 29/32	1 3/4	9/16							
BLUA-030S				5/8	1	3 21/32		1 15/32	–	23/32							
BLUA-035D1				3/8	2	4 7/16		2 1/16	1	7/16							
BLUA-035S1	350	Brown	.682	1/2	1	3 7/8	1 5/8	1 1/2	–	11/16	3/8	1 17/32	B-299	87	T-20/299		
BLUA-035D	MCM			1/2	2	5 9/32		2 29/32	1 3/4	9/16							
BLUA-035S				5/8	1	3 7/8		1 1/2	–	11/16							
BLUA-040D1				3/8	2	5 3/32		2 1/16	1	7/16							
BLUA-040S2	400			1/2	1	4 17/32		1 1/2	–	11/16							
BLUA-040D2	MCM	Green	.728	1/2	2	6 13/32	1 13/16	3 3/8	1 3/4	3/4	7/16	1 5/8	B-472	94	T-22/472		
BLUA-040S3				5/8	1	4 27/32		1 13/16	–	7/8							
BLUA-040D				5/8	2	6 1/4		3 7/32	1 3/4	23/32						7	7
BLUA-050D1				3/8	2	4 7/8		2 1/16	1	7/16							
BLUA-050S2	500			1/2	1	4 5/16		1 1/2	–	11/16							
BLUA-050D2	MCM	Pink	.815	1/2	2	6 3/16	1 7/8	3 3/8	1 3/4	3/4	15/32	1 13/16	B-300	106	T-300		
BLUA-050S3				5/8	1	4 5/8		1 13/16	–	7/8							
BLUA-050D				5/8	2	6 1/32		3 7/32	1 3/4	23/32							
BLUA-060D1				3/8	2	5 3/16		2 1/16	1	7/16							
BLUA-060D2	600	Black	.893	1/2	2	6 11/32	2	3 7/32	1 3/4	3/4	32/64	1 31/32	B-473	115	T-473		
BLUA-060S1	MCM			5/8	1	5 5/32		2 1/32	–	1							
BLUA-060D				5/8	2	6 11/32		3 7/32	1 3/4	23/32							
BLUA-075D1	750			1/2	2	6 13/32		3 7/32	1 3/4	3/4							
BLUA-075S1	MCM	Red	.999	5/8	1	5 3/8	2 1/4	2 3/16	–	1	9/16	2 3/16	B-301	130	–	9	9
BLUA-075D				5/8	2	6 13/32		3 7/32	1 3/4	23/32							
BLUA-080D1	800			1/2	2	7 1/8		3 7/32	1 3/4	3/4							
BLUA-080S1	MCM	Gray	1.031	5/8	1	6 13/32	2 5/16	2 1/2	–	1	19/32	2 1/4	B-474	140	–		
BLUA-080D				5/8	2	7 1/8		3 7/32	1 3/4	23/32							
BLUA-100D2	1000			1/2	2	7 7/16		3 7/32	1 3/4	3/4							
BLUA-100S1	MCM	Brown	1.153	5/8	1	6 23/32	2 9/16	2 1/2	–	1	11/16	2 1/2	B-302	150	–		
BLUA-100D				5/8	2	7 7/16		3 7/32	1 3/4	23/32							

‡For conversion to metric range, see page 175.
** Consult factory for availability of dies. Not available at this time.*
†Concentric, compressed and compact stranding.

229 Waterford Street • Edinboro, PA 16412-2398
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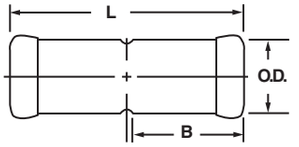
ALUMINUM PENN-CRIMPS® • TYPE BCUA

Crimp splices for #6 stranded thru 1000 MCM copper or aluminum wire or cable

AL9CU



BCUA splices are suitable for use at voltages up to 35KV provided connector is taped in accordance with accepted practices. 5KV is maximum voltage level in all bare splice applications.

Seamless, one piece, pure aluminum construction with tin plating assures maximum conductivity. Generous entrance chamfer provides easy cable insertion. The barrels are filled with Cual-Aid® and capped at factory to eliminate the need for separate application of Cual-Aid® to the conductor. Wire brushing of aluminum conductor is required.

This assures a stable, cool running joint. Positive cable stops insure proper insertion.

Catalog number and conductor size marked on every piece to insure positive identification.

Can be installed with existing crimping tools.

Color coding conforms to industry requirements to insure proper connection/die selection and to provide for faster installation.

Catalog Number	Conductor Range†	Color Code	Wire Diam (in) ‡	Approximate Dimensions (in inches)			Crimping Tool Reference			
							Alt. Tooling		Penn-Union	
				O.D.	B	L	Burndy Index No.	T&B Die	PUC Dies	Pressure Setting TDY-1	Pressure Setting TDY-U
BCUA-8•	8 Str.	Blue	.146	19/64	3/4	1 3/4	B-374		T-374*		
BCUA-6	6 Str.	Gray	.184	11/32	3/4	1 5/8	B-346		T-346*		
BCUA-4	4 Str.	Green	.232	7/16	7/8	1 7/8	B-375		T-11/355		
BCUA-2	2 Str.	Pink	.292	17/32	1 1/8	2 3/8	B-348	TBM-5	T-12/348		
BCUA-1	1 Str.	Gold	.332	17/32	29/32	1 15/16	B-471		T-471*	2	
BCUA-1/0	1/0 Str.	Tan	.375	19/32	1	2 1/8	B-296	50	T-296		2
BCUA-2/0	2/0 Str.	Olive	.419	11/16	1 3/32	2 5/16	B-297	54	T-297		
BCUA-3/0	3/0 Str.	Ruby	.470	3/4	1 1/4	2 5/8	B-467	60	T-467		
BCUA-4/0	4/0 Str.	White	.528	27/32	1 15/16	2 3/4	B-298	66	T-17*		
BCUA-025	250 MCM	Red	.575	15/16	1 13/32	2 15/16	B-324	71	T-18/324	5	5
BCUA-030	300 MCM	Blue	.634	1	1 1/2	3 1/8	B-470	76	T-470*		
BCUA-035	350 MCM	Brown	.682	1 1/8	1 5/8	3 3/8	B-299	87	T-20/299		
BCUA-040	400 MCM	Green	.728	1 3/16	1 13/16	3 3/4	B-472	94	T-22/472	7	7
BCUA-050	500 MCM	Pink	.815	1 5/16	1 7/8	3 7/8	B-300	106	T-300		
BCUA-060	600 MCM	Black	.893	1 7/16	2	4 1/8	B-473	115	T-473		
BCUA-075	750 MCM	Red	.999	1 19/32	2 1/4	4 5/8	B-301	130	–	9	9
BCUA-080	800 MCM	Gray	1.031	1 21/32	2 15/16	4 3/4	B-474	140	–		
BCUA-100	1000 MCM	Brown	1.153	1 27/32	2 9/16	5 1/4	B-302	150	–		

•Not UL Listed.
‡For conversion to metric range, see page 175.
** Consult factory for availability of dies. Not available at this time.*
†Concentric, compressed and compact stranding.

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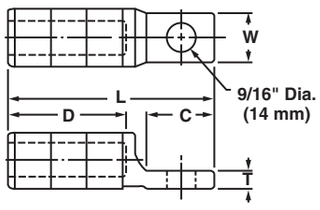
ALUMINUM COMPRESSION TERMINALS • TYPES FKLA, FSLA & FULA SIDE FORMED

For aluminum, copper or ACSR wire or cable single hole



These terminals are of EC grade high purity aluminum. Prefilled with Cual-Aid® inhibitor and capped at factory. Wire brushing of aluminum conductor is required. End of cable is protected from environment hazards by completely closed transitions. Can be installed with existing crimping tools.

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions										* Die Size	No. of Crimps	TDY-U Pressure Setting
			C		D		L		T		W				
		in	in	mm	in	mm	in	mm	in	mm	in	mm			
FKLA-W8-S	10 Str, 8 Sol	.116/.128													
FKLA-W6-S	8 Str, 6 Sol	.146/.162													
FKLA-W4-S	6 Str, 4 Sol, 4 Compact, 6 ACSR	.184/.214													
FKLA-W2-S	4 & 3 Str, 2 Sol, 2 Compact, 4 ACSR	.232/.271	1 3/32	28	1 3/8	35	3	76	1/4	6.35	7/8	22	BG, 5/8 or 243	3	2
FKLA-C2-S	2 Str, 1/0 Sol, 1 Compact, 2 ACSR	.292/.325													
FKLA-R2-S	1 Str, 2/0 Sol, 1/0 Compact, 1 ACSR	.332/.365													
FKLA-010-S	1/0 Str, 1/0 ACSR	.373/.398													
FSLA-W2-S	4 & 3 Str, 2 Sol, 2 Compact, 4 ACSR	.232/.271													
FSLA-C2-S	2 Str, 1/0 Sol, 1 Compact, 2 ACSR	.292/.325													
FSLA-R2-S	1 Str, 2/0 Sol, 1/0 Compact, 1 ACSR	.332/.365													
FSLA-010-S	1/0 Str, 3/0 Sol, 2/0 Compact, 1/0 ACSR	.373/.410													
FSLA-013-S	2/0 Str, 4/0 Sol, 3/0 Compact, 2/0 ACSR	.418/.460													
FSLA-017-S	3/0 Str, 4/0 Compact, 3/0 ACSR	.470/.502	1 9/32	33	1 3/8	35	3 1/4	83	1/4	6.35	29/32	23	840 or 249	3	4
FSLA-025-S	4/0 & 250 MCM, 250 & 300 Compact, 4/0 ACSR	.520/.575													
FSLA-030-S	300 MCM, 350 Compact, 266.8 18/1 ACSR	.609/.630													
FULA-010-S	1/0 Str, 3/0 Sol, 2/0 Compact, 1/0 ACSR	.373/.410													
FULA-013-S	2/0 Str, 4/0 Sol, 3/0 Compact, 2/0 ACSR	.418/.460													
FULA-017-S	3/0 Str, 4/0 Compact, 3/0 ACSR	.470/.502													
FULA-025-S	4/0 & 250 MCM, 250 & 300 Compact, 4/0 ACSR	.520/.575											1 1/8-2 or 316 or 705	3	5
FULA-030-S	300 MCM, 350 Compact, 266.8 18/1 ACSR	.609/.630	1 1/2	38	2 3/8	60	4 5/8	117	3/8	9.52	1 1/4	32			
FULA-035-S	350 MCM, 400 Compact, 336.4 18/1	.659/.684													
FULA-R033-S	400 MCM, 500 Compact, 336.4 26/7 ACSR	.721/.736													
FULA-045-S	450 MCM, 397.5 18/1, 26/7 ACSR	.743/.783													
FULA-050-S	500 MCM, 477 18/1 ACSR	.813/.814													

‡For conversion to metric range, see page 175.
If terminal with hole for 3/8" stud is desired, suffix catalog number with "-1." Example: FKLA-W8-S-1.

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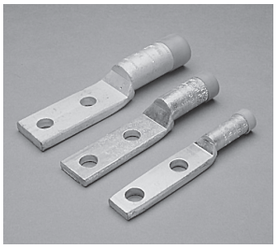
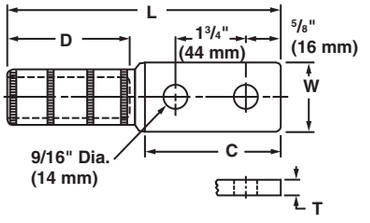
ALUMINUM COMPRESSION TERMINALS • TYPES FKLA, FSLA & FULA SIDE FORMED

For aluminum, copper or ACSR wire or cable double hole



These terminals are of EC grade high purity aluminum. Prefilled with Cual-Aid® inhibitor and capped at factory. Wire brushing of aluminum conductor is required. End of cable is protected from environmental hazards by completely closed transitions. Can be installed with existing crimping tools.



Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions										Die Size	No. of Crimps	TDY-U Pressure Setting
			C		D		L		T		W				
		in	in	mm	in	mm	in	mm	in	mm	in	mm			
FKLA-W8-D FKLA-W6-D FKLA-W4-D	10 Str, 8 Sol 8 Str, 6 Sol 6 Str, 4 Sol, 4 Compact, 6 ACSR	.116/.128 .146/.162 .184/.214	3 3/8	86	1 1/2	38	5 7/16	138	5/16	8	1	25	BG 5/8 or 243	3	2
FKLA-W2-D FKLA-C2-D FKLA-R2-D FKLA-010-D	4 & 3 Str, 2 Sol, 2 Compact, 4 ACSR 2 Str, 1/0 Sol, 1 Compact, 2 ACSR 1 Str, 2/0 Sol, 1/0 Compact, 1 ACSR 1/0 Str, 1/0 ACSR	.232/.271 .292/.325 .332/.365 .373/.398													
FSLA-W2-D FSLA-C2-D FSLA-R2-D FSLA-010-D FSLA-013-D	4 & 3 Str, 2 Sol, 2 Compact, 4 ACSR 2 Str, 1/0 Sol, 1 Compact, 2 ACSR 1 Str, 2/0 Sol, 1/0 Compact, 1/0 ACSR 1/0 Str, 3/0 Sol, 2/0 Compact, 1/0 ACSR 2/0 Str, 4/0 Sol, 3/0 Compact, 2/0 ACSR	.232/.271 .292/.325 .332/.365 .373/.410 .418/.460	3 3/8	86	1 7/8	48	5 15/16	151	1/4	6	1 1/4	32	840 or 249	3	4
FSLA-017-D	3/0 Str, 4/0 Compact, 3/0 ACSR	.470/.502													
FSLA-025-D	4/0 & 250 MCM, 250 & 300 Compact, 4/0 ACSR	.520/.575													
FSLA-030-D FSLA-035-D	300 & 350 MCM, 350 Compact, 266.8 18/1 ACSR 350 MCM, 336.4 18/1 ACSR	.609/.630 .681/.684													
FULA-R2-D FULA-010-D FULA-013-D FULA-017-D	1 Str, 2/0 Sol, 1/0 Compact, 1 ACSR 1 Str, 3/0 Sol, 2/0 Compact, 1/0 ACSR 2/0 Str, 4/0 Sol, 3/0 Compact, 2/0 ACSR 3/0 Str, 4/0 Compact, 3/0 ACSR	.332/.365 .373/.410 .418/.460 .470/.502													
FULA-025-D	4/0 & 250 MCM, 250 & 300 Compact, 4/0 ACSR	.520/.575											1 1/8-2 or 316 or 705		
FULA-030-D	300 MCM, 350 Compact, 266.8 18/1 ACSR	.609/.630	3 1/2	89	2 1/2	64	6 5/8	168	3/8	10	1 1/2	38		3	5
FULA-035-D	350 MCM, 400 Compact, 336.4 18/1 ACSR	.659/.684													
FULA-R033-D	400 MCM, 500 Compact, 336.4 26/7 ACSR	.721/.783													
FULA-045-D	450 MCM, 397.5 18/1, 26/7 ACSR	.743/.783													
FULA-050-D	500 MCM, 477 18/1 ACSR	.813/.814													

‡For conversion to metric range, see page 175.

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HUSKIE MODEL CN-258
Service Entrance Crimper

Huskie's CN-258 is used for service entrance connections up to 4/0, and its bypass cartridge assures all compressions. A two stage rapid advance pumping system and threaded collar save compression strokes and time.

The nest dies are "D3", and can be changed with other Kearney "O" type dies. If you wish to use Burndy "W" type dies, simply slip the "W" type over the "D3" nest die and snap them into the locked position. Huskie carries a wide range of market equivalent dies. Pressure can be checked with Huskie's PG-15 pressure gauge. Tool comes complete with a carrying case.

Order Data:

Model #	Description
CN-258	Hydraulic compression tool
CN-258N	Dipped compression head insulated to 1000V

Specifications:

Output	6.6 ton
Weight	8.5 lbs.
Length	21"
Jaw Opening	.950"

Connector range:

Lugs	#6-500 MCM CU/AL
Splices	#6-4/0 CU/AL
Aluminum H-taps	#14 - 4/0

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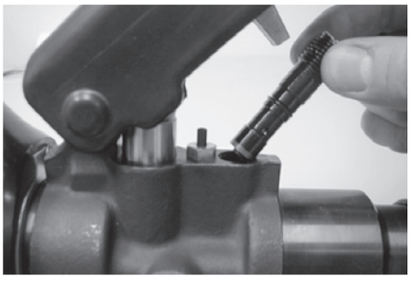
HUSKIE MODEL BPS
Replaceable Bypass Cartridge

Huskie hydraulic compression tools feature an exclusive bypass system that no other manufacturer can offer. The patented BPS replaceable bypass cartridge, allows the operator to externally calibrate the tools output tonnage.

We recommend the use of our PG-series pressure gauges when testing output tonnage, using only a hex wrench to adjust optimal pressure. The BPS cartridge is good for 10-12,000 cycles before needing replacement. It is easily replaced in a few minutes without dismantling the tool. This system was designed to save money and downtime on field repairs. The user can determine and adjust tonnage or replace the factory preset cartridge without having to send the tool back to the manufacturer, or Huskie will recalibrate/test your cartridge at no charge.

Note: Please consult factory for the specific bypass cartridge for your tool.



MODEL BPS CARTRIDGE

HUSKIE MODEL EP-410
12 ton Compression Tool - 1" Jaw Opening

The EP-410, hand operated, compression tool features a two stage rapid advance pumping system. It accepts all U-type dies currently manufactured for 12 ton tools on the market.

Consult your connector manufacturer for exact cable, connector, and die combinations. Huskie stocks a variety of dies, simply specify the manufacturer's die and connector numbers when contacting your dealer. Carrying case included for both models.

Specifications:

Output	12 ton
Weight	13 lbs. EP-410
Length	23"
Jaw opening	1"

Connector range:

Lugs	#8-750 MCM CU
	#8-750 MCM AL (yellow)
Splices	#8-400 MCM CU
	#8-400 MCM AL

Features:

*Two-stage pumping piston for rapid advance

*Replaceable, drop-out bypass cartridge for easy shop repairs

*180 degree swivel crimping head permits installations in confined areas

*Accepts all U-type dies used in 12 ton tools on today's market

*Magnetic oil reservoir plug to trap metal contaminants

*Twist handle release mechanism

Order Data:

Model #	Description
EP-410	Compression tool
EP-410N	Tool with dipped head insulated to 1000V
EP-410B	Tool with rubber boot on compression head

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HUSKIE MODEL EP-510
12 ton Compression Tool - 1.65" Jaw Opening

Huskie's EP-510 was engineered to accommodate all U-type dies currently used in existing 12 ton tools. It is one of Huskie's most versatile tools since it takes a full range of connectors and lugs to 750 MCM. The jaw opening is 1.65" to accept larger splices up to 750 MCM. larger splices up to 750 MCM. Midspan sleeve connection can be installed on these larger cables and the wire can then be removed through the jaw opening. Carrying case included.

Specifications:

Output	12 ton
Weight	16.5 lbs.
Length	25"
Jaw Opening	1.65"

Connector range:

Lugs & splices	#8 AWG 750MCM CU #8 AWG 750MCM AL (yellow)

Order Data:

Model #	Description
EP-510C	Compression tool
EP-510B	Tool with dipped head insulated to 1000V with rubber boot on compression head

Features:

*Two-stage pumping piston for rapid advance

*Replaceable, drop-out bypass cartridge for easy shop repairs

*180 degree swivel crimping head permits installations in confined areas

*Accepts all U-type dies used in 12 ton tools on today's market

*Magnetic oil reservoir plug to trap metal contaminants

*Twist handle release

HUSKIE MODEL CN-58H
Remote "C" Head

The CN-58H, remote operated "C" head, requires an external pumping source of 10,000 psi. It accepts Kearney "O" type and Burndy "W" type dies. It is a service entrance compression tool and the smallest of our compression tool line. The head is light weight for easy handling in hot stick applications.

The tool is supplied with a 3/8" male screw type coupler and carrying case.

Specifications:

Output	6.6 ton
Weight	6 lbs.
Length	12"
Jaw opening	.950"

Connector range:

Lugs & splices	500MCM CU/AL
Aluminum H-taps	#14-4/0

Order Data:

Model #	Description
CN-58H	Remote "C" head
CN-58HN	Dipped compression head insulated to 1000V

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HUSKIE MODEL EP-630
Dieless Crimping Tool

The EP-630 is commonly used by electric utilities and contractors who prefer dieless compression to circumferencial compression.

The operator simply positions a connector in the jaws and pumps until the tool bypasses at 6.2 tons of output. Three moveable nibs crimp the connector against a fourth stationary nib. Carrying case included.

Specifications:

Output	6.2 ton
Weight	11.5 lbs.
Length	22"
Jaw opening	.9"
Center opening	1.25"

Connector range:
#8 AWG-500 MCM CU/AL

Features:
*Two-stage pumping piston for rapid advance

*Replaceable, drop-out bypass cartridge for easy shop repairs

*360 degree swivel crimping head permits installations in confined areas

*Magnetic oil reservoir plug to trap metal contaminants

*Twist handle release

Order Data:

Model #	Description
EP-630	Compression tool
EP-630N	Tool with dipped head insulated to 1000V

HUSKIE MODEL EP-750
6.2 ton Flip-top Dieless Crimping Tool- 1-1/2" Jaw Opening

The EP-750 operates the same as the EP-630, but it has a larger connector/cable capacity. Larger cables can be inserted and easily removed by opening the flip-top head. Carrying case included.

Order Data:

Model #	Description
EP-750A	Flip-top dieless connecting tool

Specifications:

Output	6.2 ton
Weight	11.5 lbs.
Length	23"
Jaw opening	1-1/2"

Connector range:
#8-750 MCM CU/AL

Features:
*Two-stage pumping piston for rapid advance

*Replaceable, drop-out bypass cartridge for easy shop repairs

*360 degree swivel head

*Magnetic oil reservoir plug to trap metal contaminants

*Twist handle release

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HUSKIE MODEL EP-410H
12 ton C-Head - 1" Jaw Opening

The EP-410H is a traditional C-head with a one inch jaw opening. **It will accept all U-type dies currently used in 12 ton tools on today's market.**

A 10,000 psi external pump is required to operate the C-head. The output pressure is 12 ton when pump is set at 10,000 psi. After a compression is made on a lug or sleeve, an internal ram spring retracts the jaw when the pump pressure is relieved.

The tool is supplied with a standard 3/8" male, screw type coupler but can be fitted with an opposite female coupler if requested. Carrying case included.

Specifications:

Output	12 ton
Weight	8-1/4 lbs.
Length	10"
Jaw opening	1"

Connector range:

Lugs	#8-750 MCM CU
	#8-750 MCM AL (yellow)
Splices	#8-400 MCM CU
	#8-400 MCM AL

Order Data:

Model #	Description
EP-410H	Remote compression head
EP-410HN	Dipped head insulated to 1000V
EP-410HB	Tool with rubber boot on compression head

HUSKIE MODEL EP-410HT
12 Ton Titanium "C" Head - 1" Jaw Opening

The unique, light weight, titanium head reduces its weight to just five pounds. This is an ideal weight for Hot Stick handling since it is easy to lift and effortless to control while making connections.

Though more expensive than conventional 12 ton tools, operator preference and performance when handling this tool will save time and investment over the life of the product.

The tool is supplied with a standard 3/8" male, screw type coupler but can be fitted with an opposite female coupler if requested. Carrying case included.

Specifications:

Output	12 ton
Weight	5 lbs.
Length	10"
Jaw opening	1"

Connector range:

Lugs	#8-750 MCM CU
	#8-750 MCM AL (yellow)
Splices	#8-400 MCM CU
	#8-400 MCM AL

Order Data:

Model #	Description
EP-410HT	Titanium head
Optional Accessories	
HTADPT	Hot stick adapter

NOTE: WHEN USING ANY OF THESE HIGH PRESSURE TOOLS, ALWAYS USE 10,000 PSI RATED NON-CONDUCTIVE HOSE (NC-16 SERIES)

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HUSKIE MODEL EP-510H
12 Ton C-head - 1-1/2" Jaw Opening

The EP-510H is a remote C-head that requires an external 10,000 psi pumping source. It accepts all U-type dies used with conventional 12 ton compression tools. The larger jaw opening of 1-1/2" accepts conductors and mid-span sleeve connections up to 750 MCM. The EP-510H is supplied with a screw type, 3/8" male coupler, metal carrying case and die tray. We recommend the use of our non-conductive high pressure hose.

Specifications:

Output	12 ton
Weight	11 lbs.
Length	12-1/4"
Jaw opening	1-1/2"

Connector range:

Lugs	#8 AWG-750 MCM CU
	#8 AWG-750 MCM AL (yellow)
Splices	#8 AWG-750 MCM CU
	#8 AWG-750 MCM AL

Order Data:

Model #	Description
EP-510H	Remote compression head
EP-510HB	Head with rubber boot
EP-510HN	Dipped compression head insulated to 1000V

HUSKIE MODEL EP-610H
15 Ton C-head - 2" Jaw Opening

The EP-610H is a remote C-head that requires an external 10,000 psi pumping source. It accepts all Huskie HT61-series and Burndy "P" type dies used in the Y-46. When used with a Huskie PU-15 die adapter it will accept all "U" type dies used with any 12 ton tool.

This tool is primarily used for cables above 750 MCM or in cases where additional tonnage is required to compress the larger lugs, terminals and sleeves on tension connections. It is most always used on larger underground cables up to 1000 MCM

The EP-610H is supplied with a 3/8" male, screw type coupler and carrying case.

Specifications:

Output	15 ton
Weight	14.5 lbs.
Length	14.5"
Jaw opening	2"
w/ U die adapter	1.5"

Connector range: Lugs & splices

Aluminum	#8 AWG - 1250 MCM
Copper	#8 AWG - 1500 MCM

Order Data:

Model #	Description
EP-610H	Remote compression head
EP-610HN	Dipped compression head insulated to 1000V

Optional Accessories

PU-15	U die adapter

NOTE: WHEN USING ANY OF THESE HIGH PRESSURE TOOLS, ALWAYS USE 10,000 PSI RATED NON-CONDUCTIVE HOSE (NC-16 SERIES)

PENNUNION
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HUSKIE HT41-SERIES DIES EQUIVALENT TO BURNDY and KEARNEY "U" TYPE DIES FOR 12 TON TOOLS

HUSKIE	BURNDY
HT41G	U-BG
HT41J	U-C
HT41V	U-D
HT41X	U-D3
HT41Y	U-E
HT41Z	U-F
HT41AB	U-H
HT41AF	U-L
HT41AG	U-M
HT41AJ	U-N
HT41AK	U-O
HT41AM	U-R
HT41BX	U-161
HT41BZ	U-162
HT41CB	U-163
HT41CD	U-164
HT41CE	U-165
HT41CF	U-166
HT41CG	U-167
HT41CJ	U-168
HT41CK	U-169
HT41CL	U-170
HT41CT	U-203
HT41DE	U-236
HT41DF	U-237
HT41DG	U-238
HT41DH	U-239
HT41DL	U-242
HT41DM	U-243
HT41DP	U-245
HT41DT	U-247
HT41DV	U-248
HT41DW	U-249
HT41DY	U-251
HT41DZ	U-252
HT41EK	U-261
HT41FG	U-305
HT41FM	U-316
HT41FN	U-317
HT41FU	U-321
HT41FX	U-327
HT41GK	U-373
HT41GX	U-468
HT41HM	U-490
HT41JM	U-654
HT41JN	U-655
HT41JP	U-658
HT41JR	U-659
HT41KJ	U-705
HT41LG	U-788
HT41AE	U-K840
HT41AX	U1CRT
HT41AW	U2CRT
HT41AV	U3CRT
HT41AU	U4CRT

HUSKIE	BURNDY
HT41AT	U5CRT
HT41AY	U25RT
HT41AZ	U26RT
HT41BA	U27RT
HT41BC	U28RT
HT41BE	U29RT
HT41GF	U2CABT
HT41GM	U4CABT
HT41GE	U6CABT
HT41GL	U8CABT
HT41BF	U30RT
HT41BJ	U31RT
HT41BK	U32RT
HT41BL	U34RT
HT41BM	U36RT
HT41BP	U39RT
HT41EX	U25ART
HT41EY	U26ART
HT41GW	U27ART
HT41EZ	U28ART
HT41FW	U29ART
HT41GZ	U30ART
HT41FA	U31ART
HT41HH	U32ART
HT41FB	U34ART
HT41HG	U36ART
HT41LJ	U39ART2
HT41CUT	Cutter dies
HT41TEST	Test dies

HUSKIE	KEARNEY
HT41KA	1/4"
HT41KB	3/8"
HT41KC	5/16"
HT41KD	1/2"
HT41KE	9/16"
HT41KF	19/32"
HT41KG	5/8" - 1
HT41KH	11/16"
HT41KI	3/4"
HT41KK	29/32"
HT41KL	15/16"
HT41KM	1" - 2
HT41KN	1-1/8" - 2
HT41KO	1-1/2" - 2
HT41KP	510
HT41KQ	572
HT41KR	635
HT41KS	737
HT41KT	747
HT41KU	781
HT41KV	BKT
HT41AE	840
HT41U	U
HT41KW	1-5/16"
HT41KX	727

HUSKIE HT-58 SERIES DIES EQUIVALENT TO BURNDY "W" TYPE DIES FOR 4-6 TON TOOLS

HUSKIE	BURNDY	HUSKIE	BURNDY
HT58AE	W-K840	HT58DE	W-236
HT58BX	W-161	HT58DG	W-238
HT58BZ	W-162	HT58DH	W-239
HT58CB	W-163	HT58DK	W-241
HT58CD	W-164	HT58DM	W-243
HT58CE	W-165	HT58DP	W-245
HT58CF	W-166	HT58DT	W-247
HT58CG	W-167	HT58DV	W-248
HT58CM	W-171	HT58DW	W-249
HT58G	W-BG	HT58KA	W-687
HT58J	W-C	HT58KH	W-702
HT58AK	W-O	HT58AF	W-L
HT58CUT	CUTTER		

HUSKIE HT-61 SERIES DIES EQUIVALENT TO BURNDY "P" TYPE DIES FOR 15 TON TOOLS

HUSKIE	BURNDY	HUSKIE	BURNDY
HT61BP	P39RT	HT61FC	P39ART
HT61BR	P40RT	HT61HJ	P40ART
HT61BU	P44RT	HT61FD	P44ART
HT61BV	P46RT	HT61AC	PKR
HT61KX	P-724	HT61AJ	PN
PU-15	DIE ADAPTER		

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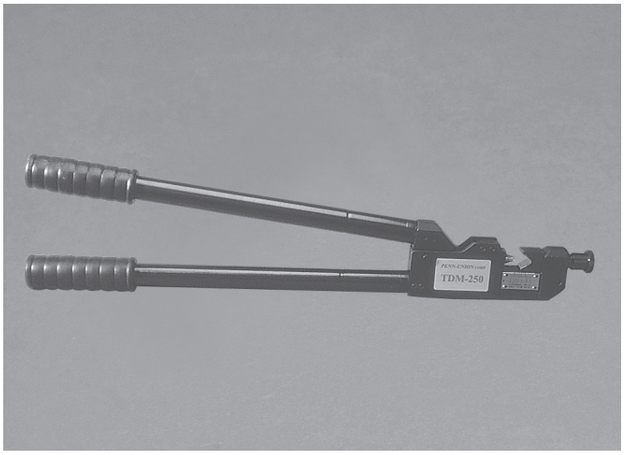
TDM-250 MECHANICAL COMPRESSION TOOL WITH BUILT-IN DIES



MORE ECONOMICAL

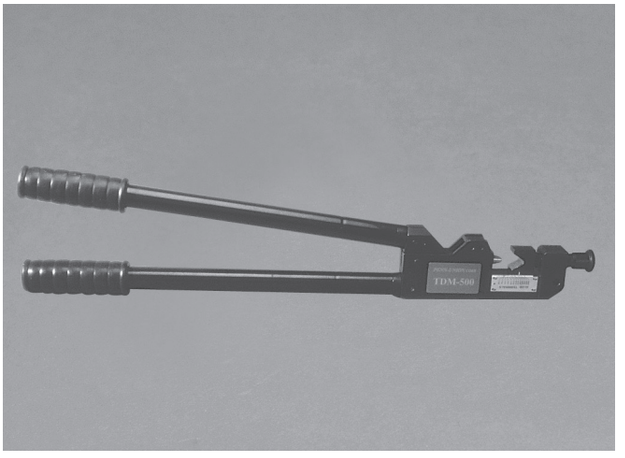
- Dieless - no dies to buy or lose
- Widest Range Available - crimps #8-250 MCM AL or CU
- Costs less than expensive hydraulic tools
- Quality Construction - all-steel, durable construction
- Five Years Manufacturer's Warranty for replacement or service

MORE CONVENIENT TO USE

- Unique handle design - provides increased leverage. At 250 MCM, the TDM-250 requires less handle load than conventional 250 MCM tools require at 250 MCM.
- No dies to change or lose
- Easy-to-read settings are provided on calibrated index plates, one for AL and one for CU, located on the side of the tool
- Small head - convenient in confined areas
- Easiest Bench Use - machined flat head surface allows you to stand tool freely in working position

Catalog Number	Wire Range
TDM-250	#8 - 250 MCM CU #8 - 250 MCM AL
TDM-250XF	#8 - 4/0 Extra Flexible CU #8 - 250 MCM CU

TDM-500 DIELESS MECHANICAL COMPRESSION TOOL



MORE ECONOMICAL

- Dieless - no dies to buy or lose
- Widest Range Available - crimps #8-500 MCM AL or CU
- Costs less than expensive hydraulic tools
- Quality Construction - all-steel, durable construction
- Five Years Manufacturer's Warranty for replacement or service

MORE CONVENIENT TO USE

- Unique handle design - provides increased leverage. At 500 MCM, the TDM-500 requires less handle load than conventional 250 MCM tools require at 250 MCM.
- No dies to change or lose
- Easy-to-read settings are provided on calibrated index plates, one for AL and one for CU, located on the side of the tool
- Small head - convenient in confined areas
- Easiest Bench Use - machined flat head surface allows you to stand tool freely in working position

Catalog Number	Wire Range
TDM-500	#8 - 500 MCM CU #8 - 500 MCM AL

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HOW TO SELECT THE PROPER PENN-CRIMP

CATALOG NO. EXAMPLE	R	4	B	6	S
	TONGUE	BARREL SIZE	WIRE RANGE	STUD SIZE	SPECIAL

TONGUE — SEE GENERAL INDEX FOR LETTER CODE

BARREL TYPE

1 - BUTTED SEAM
PURE ELECTROLYTIC COPPER, ANNEALED, ELECTRO-TIN PLATED FOR CORROSION RESISTANCE, DESIGNED WITH DEEP INTERNAL SERRATIONS FOR FIRM WIRE GRIP.

2 - BRAZED SEAM
SAME AS TYPE 1 EXCEPT WITH A BRAZED SEAM TO ASSURE MAXIMUM STRENGTH OF WIRE TERMINATIONS.

4 - VINYL INSULATION
SAME AS TYPE 1 WITH A NEMA COLOR-CODED, FUNNELED, VINYL INSULATING SLEEVE WHICH WHEN CRIMPED, GRIPS THE WIRE INSULATION TO AVOID FLEXING AT POINT OF CRIMPS, UL RATED AT 90° C, 600 V.

4N - NYLON INSULATION NO BRASS SLEEVE
SAME AS TYPE 1 WITH COLOR-CODED NYLON INSULATING SLEEVE WITHOUT BRASS SLEEVE. UL RATED AT 105° C, 600 V.

6 - NYLON INSULATION BRASS SLEEVE
SAME AS TYPE 1 WITH NEMA COLOR CODED, NYLON INSULATING SLEEVE OR OVER A TIN PLATED BRASS SLEEVE WHICH OFFERS MAXIMUM CRIMP STRENGTH WHERE EXTREME VIBRATION AND FLEXING ARE ENCOUNTERED. UL RATED AT 105° C, 600 V.

7 - SEAMLESS TUBE
PURE ELECTROLYTIC COPPER, SEAMLESS, ANNEALED AND ELECTRO-TIN PLATED FOR EXTRA STRENGTH IN A CRIMP

8 - NYLON INSULATION SEAMLESS TUBE
SAME AS TYPE 7 WITH A NYLON INSULATION FOR USE WHERE EXCESSIVE VIBRATION ENVIRONMENT ARE ENCOUNTERED.

9 - HI-TEMPERATURE
NICKEL-PLATED, COLD ROLLED STEEL, BUTTED SEAM TERMINALS FOR TEMPERATURES UP TO 900 DEGREES F.

WIRE RANGE

0 - 26-24	D - 16-12
A - 22-18	E - 8
B - 16-14	F - 6
C - 12-10	G - 4

STUD SIZE

0 - #0	56 - 5/16"
2 - #2	38 - 3/8"
4 - #4	50 - 1/2"
6 - #6	110 - .110 NEMA TAB
8 - #8	187 - .187 NEMA TAB
10 - #10	250 - .250 NEMA TAB
14 - 1/4"	

SPECIAL

___ BLANK ---STANDARD
S - SMALL/NARROW TONGUE
F - FULLY INSULATED
– HS PRE INSULATED HEAT SHRINKABLE.

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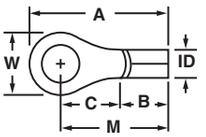
COPPER PENN-CRIMPS® • TYPE R1

Non-insulated ring terminal with butted seam

CU



One piece, annealed, pure electrolytic copper construction with electro-tin plating for corrosion resistance. Deep internal serrations promote firm wire grip for maximum tensile strength. Inspection hole permits quick examination of the crimp. Generous entrance chamfer provides easy wire insertion. The combination of these features and the fact that our products exceed UL and CSA requirements guarantee a high quality connection.

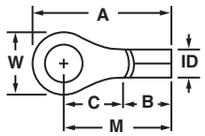
Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
R1A-6	22-18	6	.030	.69	.31	.28	.54	.250	.070
R1A-6S	22-18	6	.030	.65	.25	.28	.54	.250	.070
R1A-8	22-18	8	.030	.69	.31	.28	.54	.250	.070
R1A-8S	22-18	8	.030	.65	.25	.28	.54	.250	.070
R1A-10	22-18	10	.030	.69	.31	.28	.54	.250	.070
R1A-14	22-18	1/4	.030	.94	.53	.42	.67	.250	.070
R1A-14S	22-18	1/4	.030	.90	.46	.42	.67	.250	.070
R1A-56	22-18	5/16	.030	.94	.53	.42	.67	.250	.070
R1A-56S	22-18	5/16	.030	.90	.46	.42	.67	.250	.070
R1A-38	22-18	3/8	.030	.94	.53	.42	.67	.250	.070
R1B-6	16-14	6	.030	.69	.31	.28	.54	.250	.090
R1B-6S	16-14	6	.030	.65	.25	.28	.54	.250	.090
R1B-8	16-14	8	.030	.69	.31	.28	.54	.250	.090
R1B-8S	16-14	8	.030	.65	.25	.28	.54	.250	.090
R1B-10	16-14	10	.030	.69	.31	.28	.54	.250	.090
R1B-14	16-14	1/4	.030	.94	.53	.42	.67	.250	.090
R1B-14S	16-14	1/4	.030	.90	.46	.42	.67	.250	.090
R1B-56	16-14	5/16	.030	.94	.53	.42	.67	.250	.090
R1B-56S	16-14	5/16	.030	.90	.46	.42	.67	.250	.090
R1B-38	16-14	3/8	.030	.94	.53	.42	.67	.250	.090
R1C-6	12-10	6	.040	.72	.38	.28	.54	.250	.130
R1C-6S	12-10	6	.040	.67	.28	.28	.54	.250	.130
R1C-8	12-10	8	.040	.72	.38	.28	.54	.250	.130
R1C-8S	12-10	8	.040	.67	.28	.28	.54	.250	.130
R1C-10	12-10	10	.040	.72	.38	.28	.54	.250	.130
R1C-14	12-10	1/4	.040	.98	.61	.42	.67	.250	.130
R1C-14S	12-10	1/4	.040	.94	.53	.42	.67	.250	.130
R1C-56	12-10	5/16	.040	.98	.61	.42	.67	.250	.130
R1C-56S	12-10	5/16	.040	.94	.53	.42	.67	.250	.130
R1C-38	12-10	3/8	.040	.98	.58	.42	.67	.250	.130
R1D-6	16-12	6	.050	.68	.38	.24	.50	.250	.115
R1D-6S	16-12	6	.050	.67	.28	.24	.50	.250	.115
R1D-8	16-12	8	.050	.68	.38	.24	.50	.250	.115
R1D-8S	16-12	8	.050	.67	.28	.24	.50	.250	.115
R1D-10	16-12	10	.050	.68	.38	.24	.50	.250	.115
R1D-14	16-12	1/4	.050	.94	.61	.42	.64	.250	.115
R1D-14S	16-12	1/4	.050	.91	.53	.42	.64	.250	.115
R1D-56	16-12	5/16	.050	.94	.61	.42	.64	.250	.115
R1D-38	16-12	3/8	.050	.94	.61	.42	.64	.250	.115

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

COPPER PENN-CRIMPS • TYPE R2

Non-insulated ring terminal with brazed seam

CU



Same high quality construction as the Type R1 terminals, except the Type R2 features a brazed seam. Our unique process bonds the seam to assure the maximum strength in wire termination. This feature allows for crimping anywhere on the barrel circumference. Exeeds UL and CSA requirements, guaranteeing a high quality connection.

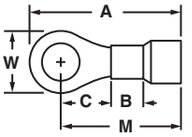
Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
R2A-6	22-18	6	.030	.69	.31	.28	.54	.250	.070
R2A-6S	22-18	6	.030	.65	.25	.28	.54	.250	.070
R2A-8	22-18	8	.030	.69	.31	.28	.54	.250	.070
R2A-8S	22-18	8	.030	.65	.25	.28	.54	.250	.070
R2A-10	22-18	10	.030	.69	.31	.28	.54	.250	.070
R2A-14	22-18	1/4	.030	.94	.53	.42	.67	.250	.070
R2A-14S	22-18	1/4	.030	.90	.46	.42	.67	.250	.070
R2A-56	22-18	5/16	.030	.94	.53	.42	.67	.250	.070
R2A-56S	22-18	5/16	.030	.90	.46	.42	.67	.250	.070
R2A-38	22-18	3/8	.030	.94	.53	.42	.67	.250	.070
R2B-6	16-14	6	.030	.69	.31	.28	.54	.242	.090
R2B-6S	16-14	6	.030	.65	.25	.28	.54	.242	.090
R2B-8	16-14	8	.030	.69	.31	.28	.54	.250	.090
R2B-8S	16-14	8	.030	.69	.31	.28	.54	.250	.090
R2B-10	16-14	10	.030	.69	.31	.28	.54	.250	.090
R2B-14	16-14	1/4	.030	.94	.53	.42	.67	.260	.090
R2B-14S	16-14	1/4	.030	.90	.46	.42	.67	.260	.090
R2B-56	16-14	5/16	.030	.94	.53	.42	.67	.250	.090
R2B-56S	16-14	5/16	.030	.90	.46	.42	.67	.250	.090
R2B-38	16-14	3/8	.030	.94	.53	.42	.67	.260	.090
R2C-6	12-10	6	.040	.72	.38	.28	.54	.250	.130
R2C-6S	12-10	6	.040	.67	.28	.28	.54	.250	.130
R2C-8	12-10	8	.040	.72	.38	.28	.54	.250	.130
R2C-8S	12-10	8	.040	.67	.28	.28	.54	.255	.130
R2C-10	12-10	10	.040	.72	.38	.28	.54	.255	.130
R2C-14	12-10	1/4	.040	.98	.61	.38	.67	.255	.130
R2C-14S	12-10	1/4	.040	.94	.53	.38	.67	.255	.130
R2C-56	12-10	5/16	.040	.98	.61	.38	.67	.255	.130
R2C-56S	12-10	5/16	.040	.94	.53	.38	.67	.255	.130
R2C-38	12-10	3/8	.040	.98	.58	.38	.67	.255	.130
R2E-8SS +	8	8	.050	.91	.38	.34	.72	.375	.165
R2E-10 +	8	10	.050	1.07	.60	.45	.78	.375	.165
R2E-10S +	8	10	.050	.96	.47	.34	.72	.375	.165
R2E-10SS +	8	10	.050	.91	.38	.34	.72	.375	.165
R2E-14 +	8	1/4	.050	1.07	.60	.45	.78	.375	.165
R2E-14S +	8	1/4	.050	.96	.47	.38	.72	.375	.165
R2E-56 +	8	5/16	.050	1.07	.60	.45	.78	.375	.165
R2E-38 +	8	3/8	.050	1.07	.60	.45	.78	.375	.165
R2E-50 *+	8	1/2	.050	1.75	.88	.99	1.30	.320	.165
R2F-10 +	6	10	.050	1.20	.63	.50	.88	.375	.224
R2F-10S +	6	10	.050	1.11	.47	.50	.88	.375	.224
R2F-14 +	6	1/4	.050	1.20	.63	.50	.88	.375	.224
R2F-14S +	6	1/4	.050	1.11	.47	.50	.88	.375	.224
R2F-56 +	6	5/16	.050	1.20	.63	.50	.88	.375	.224
R2F-38 +	6	3/8	.050	1.20	.63	.50	.88	.375	.224
R2F-50 *+	6	1/2	.050	1.85	.81	1.00	1.38	.375	.224
R2G-10 +	4	10	.075	1.34	.66	.55	.99	.450	.278
R2G-10S +	4	10	.075	1.26	.45	.50	.99	.450	.278
R2G-14 +	4	1/4	.075	1.34	.66	.55	.99	.450	.278
R2G-14S +	4	1/4	.075	1.26	.45	.45	.90	.450	.278
R2G-56 +	4	5/16	.075	1.34	.66	.55	.99	.437	.278
R2G-38 +	4	3/8	.075	1.34	.66	.55	.99	.437	.278
R2G-50 *+	4	1/2	.075	1.34	.66	.55	.99	.437	.278

**Not UL listed +Not CSA listed*

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

COPPER PENN-CRIMPS® • TYPE R4

Vinyl insulated ring terminal



High quality Type R1 construction, butted seam, pre-insulated with a polyvinyl chloride (PVC) sleeve. Insulation is color coded to NEMA standards and flared for easy insertion of both stranded and solid wire. PVC insulation forms insulation support for the crimped wire to avoid flexing at the point of crimp. The performance and reliability of the Type R4 and other terminals, which exceeds UL and CSA requirements, proves that Penn-Crimps provide the preferred connection.

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
R4A-6	22-18	6	R	.030	.15	.91	.31	.28	.77	.250	.070
R4A-6S	22-18	6	R	.030	.15	.86	.25	.28	.77	.250	.070
R4A-8	22-18	8	R	.030	.15	.91	.31	.28	.77	.250	.070
R4A-8S	22-18	8	R	.030	.15	.91	.25	.28	.77	.250	.070
R4A-10	22-18	10	R	.030	.15	.91	.31	.28	.77	.250	.070
R4A-14	22-18	1/4	R	.030	.15	1.14	.53	.42	.87	.250	.070
R4A-14S	22-18	1/4	R	.030	.15	1.14	.46	.42	.87	.250	.070
R4A-56	22-18	5/16	R	.030	.15	1.14	.53	.42	.87	.250	.070
R4A-56S	22-18	5/16	R	.030	.15	1.14	.46	.42	.87	.250	.070
R4A-38	22-18	3/8	R	.030	.15	1.14	.53	.42	.87	.250	.070
R4B-6	16-14	6	B	.030	.18	.94	.31	.28	.77	.250	.090
R4B-6S	16-14	6	B	.030	.18	.88	.25	.28	.77	.250	.090
R4B-8	16-14	8	B	.030	.18	.94	.31	.28	.77	.250	.090
R4B-8S	16-14	8	B	.030	.18	.88	.25	.28	.77	.250	.090
R4B-10	16-14	10	B	.030	.18	.94	.31	.28	.77	.250	.090
R4B-14	16-14	1/4	B	.030	.18	1.04	.46	.42	.90	.250	.090
R4B-14S	16-14	1/4	B	.030	.18	1.06	.53	.42	.90	.250	.090
R4B-56	16-14	5/16	B	.030	.18	1.04	.46	.42	.90	.250	.090
R4B-56S	16-14	5/16	B	.030	.18	1.06	.53	.42	.90	.250	.090
R4B-38	16-14	3/8	B	.030	.18	1.06	.53	.42	.90	.250	.090
R4C-6	12-10	6	Y	.040	.25	1.00	.38	.28	.80	.250	.130
R4C-6S	12-10	6	Y	.040	.25	.95	.28	.28	.80	.250	.130
R4C-8	12-10	8	Y	.040	.25	1.00	.38	.28	.80	.250	.130
R4C-8S	12-10	8	Y	.040	.25	1.00	.28	.28	.80	.250	.130
R4C-10	12-10	10	Y	.040	.25	1.00	.38	.28	.80	.250	.130
R4C-14	12-10	1/4	Y	.040	.25	1.28	.61	.44	.94	.250	.130
R4C-14S	12-10	1/4	Y	.040	.25	1.22	.53	.44	.94	.250	.130
R4C-56	12-10	5/16	Y	.040	.25	1.28	.61	.44	1.00	.250	.130
R4C-56S	12-10	5/16	Y	.040	.25	1.22	.53	.44	.94	.250	.130
R4C-38	12-10	3/8	Y	.040	.25	1.28	.61	.44	.94	.250	.130
R4D-6	16-12	6	Y	.050	.25	1.00	.38	.25	.80	.250	.115
R4D-6S	16-12	6	Y	.050	.25	.95	.28	.25	.80	.250	.115
R4D-8	16-12	8	Y	.050	.25	1.00	.38	.25	.80	.250	.115
R4D-8S	16-12	8	Y	.050	.25	.95	.28	.25	.80	.250	.115
R4D-10	16-12	10	Y	.050	.25	1.00	.38	.25	.80	.250	.115
R4D-14	16-12	1/4	Y	.050	.25	1.28	.61	.44	.94	.250	.115
R4D-14S	16-12	1/4	Y	.050	.25	1.22	.53	.44	.94	.250	.115
R4D-56	16-12	5/16	Y	.050	.25	1.28	.61	.44	.94	.250	.115
R4D-38	16-12	3/8	Y	.050	.25	1.28	.61	.44	.94	.250	.115
R4E-8SS *+	8	8	R	.050	.34	1.22	.38	.34	1.01	.375	.165
R4E-10 *+	8	10	R	.050	.34	1.40	.60	.45	1.07	.375	.170
R4E-10S *+	8	10	R	.050	.34	1.27	.47	.41	1.04	.375	.165
R4E-10SS *+	8	10	R	.050	.34	1.22	.38	.34	1.01	.375	.165
R4E-14 *+	8	1/4	R	.050	.34	1.38	.60	.45	1.07	.375	.170
R4E-14S *+	8	1/4	R	.050	.34	1.27	.47	.41	1.04	.375	.165
R4E-56 *+	8	5/16	R	.050	.34	1.38	.60	.45	1.07	.375	.165
R4E-38 *+	8	3/8	R	.050	.34	1.38	.60	.45	1.07	.375	.170
R4E-50 **	8	1/2	R	.050	.34	1.72	.81	.68	1.33	.375	.165
R4F-10 *+	6	10	B	.050	.41	1.55	.63	.50	1.25	.375	.244
R4F-10S *+	6	10	B	.050	.41	1.48	.47	.50	1.25	.375	.244
R4F-14 *+	6	1/4	B	.050	.41	1.55	.63	.50	1.25	.375	.244
R4F-14S *+	6	1/4	B	.050	.41	1.48	.47	.50	1.25	.375	.244
R4F-56 *+	6	5/16	B	.050	.41	1.55	.63	.50	1.25	.375	.244
R4F-38 *+	6	3/8	B	.050	.41	1.55	.63	.50	1.25	.375	.244
R4F-50 **	6	1/2	B	.050	.41	2.20	.88	1.01	1.18	.375	.244
R4G-10 *+	4	10	Y	.075	.51	1.75	.66	.55	1.38	.437	.278
R4G-10S *+	4	10	Y	.075	.51	1.65	.45	.55	1.38	.437	.278
R4G-14 *+	4	10	Y	.075	.51	1.75	.66	.55	1.38	.437	.278
R4G-14S *+	4	1/4	Y	.075	.51	1.65	.45	.55	1.38	.437	.278
R4G-56 *+	4	5/16	Y	.075	.51	1.75	.66	.55	1.38	.437	.278
R4G-38 *+	4	3/8	Y	.075	.51	1.75	.66	.55	1.38	.437	.278
R4G-50 **	4	1/2	Y	.075	.51	1.75	.66	.55	1.38	.437	.278

**Not CSA listed +UL component recognized **Not UL or CSA listed*

Also available in nylon insulation without brass sleeve. Add letter "N" to catalog number between "4" and "E". Example: R4NE-10.

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
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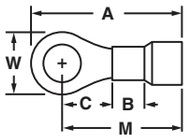
COPPER PENN-CRIMPS® • TYPE R6

Nylon insulated ring terminal



Durable, Type R1 high conductivity copper construction, butted seam, with tin-plated brass sleeve and NEMA color coded nylon insulation. Brass sleeve and nylon insulation offer maximum barrel crimp strength for the highest quality reliable terminations. Three piece construction protects against severe conditions, especially where extreme vibration and flexing occur. Exceeds UL and CSA requirements, guaranteeing a high quality connection.

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
R6A-6	22-18	6	R	.030	.15	.91	.31	.28	.75	.250	.070
R6A-6S	22-18	6	R	.030	.15	.86	.25	.28	.75	.250	.070
R6A-8	22-18	8	R	.030	.15	.91	.31	.28	.75	.250	.070
R6A-8S	22-18	8	R	.030	.15	.86	.25	.28	.75	.250	.070
R6A-10	22-18	10	R	.030	.15	.91	.31	.28	.75	.250	.070
R6A-14	22-18	1/4	R	.030	.15	1.14	.53	.42	.87	.250	.070
R6A-14S	22-18	1/4	R	.030	.15	1.14	.46	.42	.87	.250	.070
R6A-56	22-18	5/16	R	.030	.15	1.14	.53	.42	.87	.250	.070
R6A-56S	22-18	5/16	R	.030	.15	1.14	.46	.42	.87	.250	.070
R6A-38	22-18	3/8	R	.030	.15	1.14	.53	.42	.87	.250	.070
R6B-6	16-14	6	B	.030	.18	.94	.31	.28	.78	.250	.090
R6B-6S	16-14	6	B	.030	.18	.88	.25	.28	.78	.250	.090
R6B-8	16-14	8	B	.030	.18	.94	.31	.28	.78	.250	.090
R6B-8S	16-14	8	B	.030	.18	.88	.25	.28	.78	.250	.090
R6B-10	16-14	10	B	.030	.18	.94	.31	.28	.78	.250	.090
R6B-14	16-14	1/4	B	.030	.18	1.04	.53	.42	.90	.250	.090
R6B-14S	16-14	1/4	B	.030	.18	1.06	.46	.42	.90	.250	.090
R6B-56	16-14	5/16	B	.030	.18	1.04	.53	.42	.90	.250	.090
R6B-56S	16-14	5/16	B	.030	.18	1.06	.46	.42	.90	.250	.090
R6B-38	16-14	3/8	B	.030	.18	1.06	.53	.42	.90	.250	.090
R6C-6	12-10	6	Y	.040	.25	1.06	.38	.28	.83	.250	.130
R6C-6S	12-10	6	Y	.040	.25	1.00	.28	.28	.83	.250	.130
R6C-8	12-10	8	Y	.040	.25	1.06	.38	.28	.83	.250	.130
R6C-8S	12-10	8	Y	.040	.25	1.00	.28	.28	.83	.250	.130
R6C-10	12-10	10	Y	.040	.25	1.06	.38	.28	.83	.250	.130
R6C-14	12-10	1/4	Y	.040	.25	1.28	.61	.31	.95	.250	.130
R6C-14S	12-10	1/4	Y	.040	.25	1.22	.53	.44	.95	.250	.130
R6C-56	12-10	5/16	Y	.040	.25	1.28	.61	.44	.95	.250	.130
R6C-56S	12-10	5/16	Y	.040	.25	1.22	.53	.44	.95	.250	.130
R6C-38	12-10	3/8	Y	.040	.25	1.28	.58	.44	.95	.250	.130
R6D-6	16-12	6	Y	.050	.25	1.00	.38	.25	.79	.250	.115
R6D-6S	16-12	6	Y	.050	.25	.95	.28	.25	.79	.250	.115
R6D-8	16-12	8	Y	.050	.25	1.00	.38	.25	.79	.250	.115
R6D-8S	16-12	8	Y	.050	.25	.95	.28	.25	.79	.250	.115
R6D-10	16-12	10	Y	.050	.25	1.00	.38	.25	.79	.250	.115
R6D-14	16-12	1/4	Y	.050	.25	1.28	.61	.44	.93	.250	.115
R6D-14S	16-12	1/4	Y	.050	.25	1.22	.53	.44	.93	.250	.115
R6D-56	16-12	5/16	Y	.050	.25	1.28	.61	.44	.93	.250	.115
R6D-38	16-12	3/8	Y	.050	.25	1.28	.61	.44	.93	.250	.115

229 Waterford Street • Edinboro, PA 16412-2398
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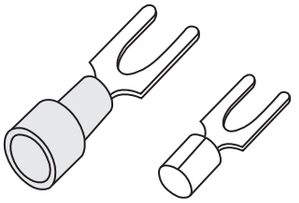
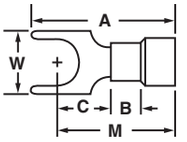
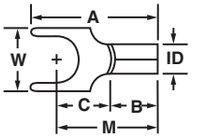
COPPER PENN-CRIMPS® • TYPE S





INSULATED



NON-INSULATED

CU

Made from pure electrolytic copper, electro-tin plated for protection. Fork design allows for easy installation because screw need not be removed. Also available with color coded nylon or vinyl insulation.

NON-INSULATED SPADE TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
S1A-6	22-18	6	.030	.69	.34	.25	.52	.250	.070
S1A-8	22-18	8	.030	.69	.34	.25	.52	.250	.070
S1A-10	22-18	10	.030	.69	.34	.25	.52	.250	.070
S1B-6	16-14	6	.030	.68	.34	.25	.51	.250	.090
S1B-8	16-14	8	.030	.68	.34	.25	.51	.250	.090
S1B-10	16-14	10	.030	.68	.34	.25	.51	.250	.090
S1C-6	12-10	6	.040	.71	.38	.28	.53	.250	.130
S1C-8	12-10	8	.040	.71	.38	.28	.53	.250	.130
S1C-10	12-10	10	.040	.71	.38	.28	.53	.250	.130

BRAZED SEAM

S2A-6	22-18	6	.030	.69	.34	.25	.52	.250	.070
S2A-8	22-18	8	.030	.69	.34	.25	.52	.250	.070
S2A-10	22-18	10	.030	.69	.34	.25	.52	.250	.070
S2B-6	16-14	6	.030	.68	.34	.25	.51	.250	.090
S2B-8	16-14	8	.030	.68	.34	.25	.51	.250	.090
S2B-10	16-14	10	.030	.68	.34	.25	.51	.250	.090
S2C-6	12-10	6	.040	.71	.38	.28	.53	.250	.130
S2C-8	12-10	8	.040	.71	.38	.28	.53	.250	.130
S2C-10	12-10	10	.040	.71	.38	.28	.53	.250	.130

INSULATED SPADE TERMINAL

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
S4A-6	22-18	6	R	.030	.15	.90	.34	.25	.75	.250	.063
S4A-8	22-18	8	R	.030	.15	.90	.34	.25	.75	.250	.063
S4A-10	22-18	10	R	.030	.15	.90	.34	.25	.75	.250	.063
S4B-6	16-14	6	B	.030	.18	.89	.34	.25	.72	.250	.090
S4B-8	16-14	8	B	.030	.18	.89	.34	.25	.72	.250	.090
S4B-10	16-14	10	B	.030	.18	.89	.34	.25	.72	.250	.090
S4C-6	12-10	6	Y	.040	.26	.99	.38	.28	.79	.250	.130
S4C-8	12-10	8	Y	.040	.26	.99	.38	.28	.79	.250	.130
S4C-10	12-10	10	Y	.040	.26	.99	.38	.28	.79	.250	.130

NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

S6A-6	22-18	6	R	.030	.15	.94	.34	.25	.73	.250	.055
S6A-8	22-18	8	R	.030	.15	.94	.34	.25	.73	.250	.065
S6A-10	22-18	10	R	.030	.15	.94	.34	.25	.73	.250	.065
S6B-6	16-14	6	B	.030	.18	.93	.34	.25	.71	.250	.090
S6B-8	16-14	8	B	.030	.18	.93	.34	.25	.71	.250	.090
S6B-10	16-14	10	B	.030	.18	.93	.34	.25	.71	.250	.090
S6C-6	12-10	6	Y	.040	.26	1.07	.38	.28	.82	.250	.130
S6C-8	12-10	8	Y	.040	.26	1.07	.38	.28	.82	.250	.130
S6C-10	12-10	10	Y	.040	.26	1.07	.38	.28	.82	.250	.130

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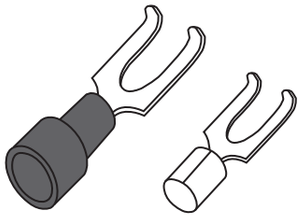
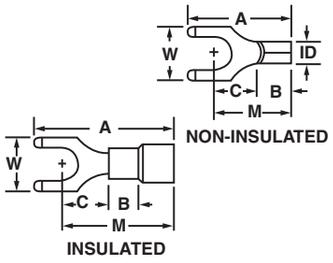
COPPER PENN-CRIMPS® • TYPE SF





CU

Turned-up, flanged tips provide extra holding protection. Made from pure electrolytic copper, tin plated for corrosion resistance. Insulated versions are also available. PVC vinyl insulation forms insulation support for the crimped wire to avoid flexing. Nylon insulation protects against extreme vibration and weather. Exceeds all UL and CSA requirements.

NON-INSULATED FLANGED SPADE TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
SF1A-6	22-18	6	.030	.69	.34	.25	.51	.250	.070
SF1A-8	22-18	8	.030	.69	.34	.25	.51	.250	.070
SF1A-10	22-18	10	.030	.69	.34	.25	.51	.250	.070
SF1B-6	16-14	6	.030	.69	.34	.25	.55	.250	.090
SF1B-8	16-14	8	.030	.69	.34	.25	.55	.250	.090
SF1B-10	16-14	10	.030	.69	.34	.25	.55	.250	.090
SF1C-6	12-10	6	.040	.75	.39	.28	.53	.250	.130
SF1C-8	12-10	8	.040	.75	.39	.28	.53	.250	.130
SF1C-10	12-10	10	.040	.75	.39	.28	.53	.250	.130

BRAZED SEAM

SF2A-6	22-18	6	.030	.69	.34	.25	.51	.250	.070
SF2A-8	22-18	8	.030	.69	.34	.25	.51	.250	.070
SF2A-10	22-18	10	.030	.69	.34	.25	.51	.250	.070
SF2B-6	16-14	6	.030	.69	.34	.25	.55	.250	.090
SF2B-8	16-14	8	.030	.69	.34	.25	.55	.250	.090
SF2B-10	16-14	10	.030	.69	.34	.25	.55	.250	.090
SF2C-6	12-10	6	.040	.75	.39	.28	.53	.250	.130
SF2C-8	12-10	8	.040	.75	.39	.28	.53	.250	.130
SF2C-10	12-10	10	.040	.75	.39	.28	.53	.250	.130

INSULATED FLANGE SPADE TERMINAL

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
SF4A-6	22-18	6	R	.030	.15	.91	.34	.25	.73	.250	.065
SF4A-8	22-18	8	R	.030	.15	.91	.34	.25	.73	.250	.065
SF4A-10	22-18	10	R	.030	.15	.91	.34	.25	.73	.250	.065
SF4B-6	16-14	6	B	.030	.18	.91	.34	.25	.73	.250	.090
SF4B-8	16-14	8	B	.030	.18	.91	.34	.25	.73	.250	.090
SF4B-10	16-14	10	B	.030	.18	.91	.34	.25	.73	.250	.090
SF4C-6	12-10	6	Y	.040	.26	1.03	.39	.28	.81	.250	.130
SF4C-8	12-10	8	Y	.040	.26	1.03	.39	.28	.81	.250	.130
SF4C-10	12-10	10	Y	.040	.26	1.03	.39	.28	.81	.250	.130

NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

SF6A-6	22-18	6	R	.030	.15	.91	.34	.25	.73	.250	.065
SF6A-8	22-18	8	R	.030	.15	.91	.34	.25	.73	.250	.065
SF6A-10	22-18	10	R	.030	.15	.91	.34	.25	.73	.250	.065
SF6B-6	16-14	6	B	.030	.18	.91	.34	.25	.73	.250	.090
SF6B-8	16-14	8	B	.030	.18	.91	.34	.25	.73	.250	.090
SF6B-10	16-14	10	B	.030	.18	.91	.34	.25	.73	.250	.090
SF6C-6	12-10	6	Y	.040	.26	1.03	.38	.28	.88	.250	.130
SF6C-8	12-10	8	Y	.040	.26	1.03	.38	.28	.88	.250	.130
SF6C-10	12-10	10	Y	.040	.26	1.03	.38	.28	.88	.250	.130

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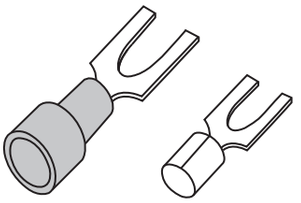
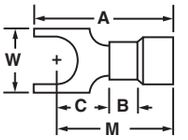
COPPER PENN-CRIMPS® • TYPE BS





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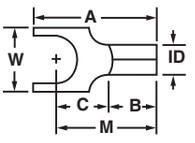

NON-INSULATED

CU

Made from pure electrolytic copper, electro-tin plated for protection. Block spade design, featuring squared-off ends, allows for easy installation because screw need not be removed. Also available with color coded nylon or vinyl insulation.

NON-INSULATED BLOCK SPADE TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
BS1A-6	22-18	6	.030	.66	.29	.25	.50	.250	.070
BS1A-6S	22-18	6	.030	.61	.25	.25	.50	.250	.070
BS1A-8	22-18	8	.030	.66	.31	.25	.50	.250	.070
BS1A-10	22-18	10	.030	.66	.31	.25	.50	.250	.070
BS1B-6	16-14	6	.030	.66	.29	.25	.50	.250	.090
BS1B-6S	16-14	6	.030	.61	.25	.25	.50	.250	.090
BS1B-8	16-14	8	.030	.66	.31	.25	.50	.250	.090
BS1B-10	16-14	10	.030	.66	.31	.25	.50	.250	.090
BS1C-6	12-10	6	.040	.71	.31	.28	.53	.250	.130
BS1C-8	12-10	8	.040	.71	.31	.28	.53	.250	.130
BS1C-10	12-10	10	.040	.71	.31	.28	.53	.250	.130

BRAZED SEAM

BS2A-6	22-18	6	.030	.66	.29	.25	.50	.245	.070
BS2A-6S	22-18	6	.030	.61	.25	.25	.50	.245	.070
BS2A-8	22-18	8	.030	.66	.31	.25	.50	.245	.070
BS2A-10	22-18	10	.030	.66	.31	.25	.50	.245	.070
BS2B-6	16-14	6	.030	.66	.29	.25	.50	.250	.090
BS2B-6S	16-14	6	.030	.61	.25	.25	.50	.250	.090
BS2B-8	16-14	8	.030	.66	.31	.25	.50	.240	.090
BS2B-10	16-14	10	.030	.66	.31	.25	.50	.250	.090
BS2C-6	12-10	6	.040	.71	.31	.28	.53	.250	.130
BS2C-8	12-10	8	.040	.71	.31	.28	.53	.250	.130
BS2C-10	12-10	10	.040	.71	.31	.28	.53	.250	.130

INSULATED BLOCK SPADE TERMINAL

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
BS4A-6	22-18	6	R	.030	.15	.88	.29	.25	.72	.250	.070
BS4A-6S	22-18	6	R	.030	.15	.84	.25	.25	.73	.250	.070
BS4A-8	22-18	8	R	.030	.15	.88	.31	.25	.72	.250	.070
BS4A-10	22-18	10	R	.030	.15	.88	.31	.25	.72	.250	.070
BS4B-6	16-14	6	B	.030	.18	.88	.29	.25	.72	.250	.090
BS4B-6S	16-14	6	B	.030	.18	.84	.25	.33	.81	.250	.090
BS4B-8	16-14	8	B	.030	.19	.88	.31	.25	.72	.250	.090
BS4B-10	16-14	10	B	.030	.19	.88	.31	.25	.72	.250	.090
BS4C-6	12-10	6	Y	.040	.26	1.01	.31	.28	.83	.250	.130
BS4C-8	12-10	8	Y	.040	.26	1.01	.31	.28	.83	.250	.130
BS4C-10	12-10	10	Y	.040	.26	1.01	.31	.28	.83	.250	.130
BS4C-14	12-10	1/4	Y	.040	.26	1.29	.49	.45	1.03	.250	.130

NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

BS6A-6	22-18	6	R	.030	.15	.88	.29	.25	.74	.250	.070
BS6A-6S	22-18	6	R	.030	.15	.84	.25	.25	.78	.250	.070
BS6A-8	22-18	8	R	.030	.15	.88	.31	.25	.74	.250	.070
BS6A-10	22-18	10	R	.030	.15	.88	.31	.25	.74	.250	.070
BS6B-6	16-14	6	B	.030	.18	.88	.29	.25	.74	.250	.090
BS6B-6S	16-14	6	B	.030	.18	.84	.25	.25	.78	.250	.090
BS6B-8	16-14	8	B	.030	.18	.88	.31	.25	.74	.250	.090
BS6B-10	16-14	10	B	.030	.18	.88	.31	.25	.74	.250	.090
BS6C-6	12-10	6	Y	.040	.26	1.01	.31	.28	.83	.250	.130
BS6C-8	12-10	8	Y	.040	.26	1.01	.31	.28	.83	.250	.130
BS6C-10	12-10	10	Y	.040	.26	1.01	.31	.28	.83	.250	.130

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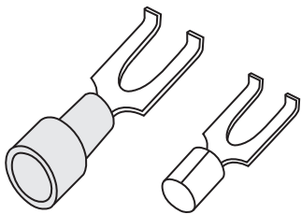
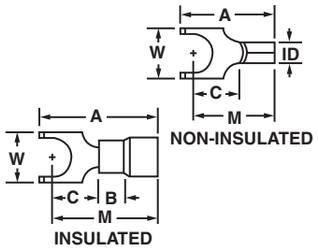
COPPER PENN-CRIMPS® • TYPE BSF





CU

Made from pure electrolytic copper, electro-tin plated for protection. Block spade design allows for easy installation because screw need not be removed. Flanged tips provide extra holding protection, especially where vibration occurs. Also available with NEMA color coded nylon or vinyl insulation. Exceeds all UL and CSA requirements.

NON-INSULATED BLOCK SPADE FLANGED TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
BSF1A-6	22-18	6	.030	.66	.29	.25	.50	.250	.070
BSF1A-8	22-18	8	.030	.66	.31	.25	.50	.250	.070
BSF1A-10	22-18	10	.030	.66	.31	.25	.50	.250	.070
BSF1B-6	16-14	6	.030	.66	.29	.25	.50	.250	.090
BSF1B-8	16-14	8	.030	.66	.31	.25	.50	.250	.090
BSF1B-10	16-14	10	.030	.66	.31	.25	.50	.250	.090
BSF1C-6	12-10	6	.040	.71	.31	.28	.53	.250	.130
BSF1C-8	12-10	8	.040	.71	.31	.28	.53	.250	.130
BSF1C-10	12-10	10	.040	.71	.31	.28	.53	.250	.130

BRAZED SEAM

BSF2A-6	22-18	6	.030	.66	.29	.25	.50	.250	.070
BSF2A-8	22-18	8	.030	.66	.31	.25	.50	.250	.070
BSF2A-10	22-18	10	.030	.66	.31	.25	.50	.250	.070
BSF2B-6	16-14	6	.030	.66	.29	.25	.50	.250	.090
BSF2B-8	16-14	8	.030	.66	.31	.25	.50	.250	.090
BSF2B-10	16-14	10	.030	.66	.31	.25	.50	.250	.090
BSF2C-6	12-10	6	.040	.71	.31	.28	.53	.250	.130
BSF2C-8	12-10	8	.040	.71	.31	.28	.53	.250	.130
BSF2C-10	12-10	10	.040	.71	.31	.28	.53	.250	.130

INSULATED BLOCK SPADE FLANGED TERMINAL

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
BSF4A-6	22-18	6	R	.030	.15	.87	.29	.25	.71	.250	.070
BSF4A-8	22-18	8	R	.030	.15	.87	.31	.25	.71	.250	.070
BSF4A-10	22-18	10	R	.030	.15	.87	.31	.25	.71	.250	.070
BSF4B-6	16-14	6	B	.030	.18	.87	.29	.25	.71	.250	.090
BSF4B-8	16-14	8	B	.030	.18	.87	.31	.25	.71	.250	.090
BSF4B-10	16-14	10	B	.030	.18	.87	.31	.25	.71	.250	.090
BSF4C-6	12-10	6	Y	.040	.26	.98	.31	.28	.80	.250	.130
BSF4C-8	12-10	8	Y	.040	.26	.98	.31	.28	.80	.250	.130
BSF4C-10	12-10	10	Y	.040	.26	.98	.31	.28	.80	.250	.130

NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

BSF6A-6	22-18	6	R	.030	.15	.87	.29	.25	.71	.250	.070
BSF6A-8	22-18	8	R	.030	.15	.87	.31	.25	.71	.250	.070
BSF6A-10	22-18	10	R	.030	.15	.87	.31	.25	.71	.250	.070
BSF6B-6	16-14	6	B	.030	.18	.90	.29	.25	.74	.250	.090
BSF6B-8	16-14	8	B	.030	.18	.90	.31	.25	.74	.250	.090
BSF6B-10	16-14	10	B	.030	.18	.90	.31	.25	.74	.250	.090
BSF6C-6	12-10	6	Y	.040	.26	1.06	.31	.28	.88	.250	.130
BSF6C-8	12-10	8	Y	.040	.26	1.06	.31	.28	.88	.250	.130
BSF6C-10	12-10	10	Y	.040	.26	1.06	.31	.28	.88	.250	.130

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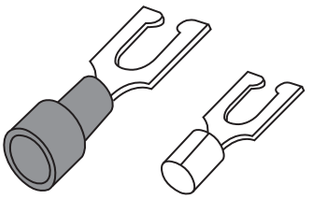
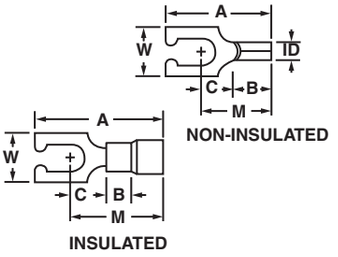
COPPER PENN-CRIMPS® • TYPE LS

CU





Made from pure electrolytic copper, electro-tin plated for protection. Fork design allows for easy installation because screw need not be removed. Locking feature combines additional security with the convenience of a spade terminal. Also available with NEMA color coded nylon or vinyl insulation. Exceeds all UL and CSA requirements.

NON-INSULATED LOCKING SPADE TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
LS1A-6	22-18	6	.030	.66	.29	.25	.50	.250	.070
LS1A-8	22-18	8	.030	.66	.31	.25	.50	.250	.070
LS1A-10	22-18	10	.030	.66	.31	.25	.50	.250	.070
LS1B-6	16-14	6	.030	.66	.29	.25	.50	.250	.090
LS1B-8	16-14	8	.030	.66	.31	.25	.50	.250	.090
LS1B-10	16-14	10	.030	.66	.31	.25	.50	.250	.090
LS1C-6	12-10	6	.040	.71	.31	.28	.54	.250	.130
LS1C-8	12-10	8	.040	.71	.31	.28	.54	.250	.130
LS1C-10	12-10	10	.040	.71	.31	.28	.54	.250	.130

INSULATED LOCKING SPADE TERMINAL

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
LS4A-6	22-18	6	R	.030	.15	.87	.29	.25	.70	.250	.070
LS4A-8	22-18	8	R	.030	.15	.87	.31	.25	.70	.250	.070
LS4A-10	22-18	10	R	.030	.15	.87	.31	.25	.70	.250	.070
LS4B-6	16-14	6	B	.030	.18	.87	.29	.25	.70	.250	.090
LS4B-8	16-14	8	B	.030	.18	.87	.31	.25	.70	.250	.090
LS4B-10	16-14	10	B	.030	.18	.87	.31	.25	.70	.250	.090
LS4C-6	12-10	6	Y	.040	.26	.96	.31	.28	.80	.250	.130
LS4C-8	12-10	8	Y	.040	.26	.96	.31	.28	.80	.250	.130
LS4C-10	12-10	10	Y	.040	.26	.96	.31	.28	.80	.250	.130

NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

LS6A-6	22-18	6	R	.030	.15	.90	.29	.25	.73	.250	.070
LS6A-8	22-18	8	R	.030	.15	.90	.31	.25	.73	.250	.070
LS6A-10	22-18	10	R	.030	.15	.90	.31	.25	.73	.250	.070
LS6B-6	16-14	6	B	.030	.18	.90	.29	.25	.73	.250	.090
LS6B-8	16-14	8	B	.030	.18	.90	.31	.25	.73	.250	.090
LS6B-10	16-14	10	B	.030	.18	.90	.31	.25	.73	.250	.090
LS6C-6	12-10	6	Y	.040	.26	1.06	.31	.28	.89	.250	.130
LS6C-8	12-10	8	Y	.040	.26	1.06	.31	.28	.89	.250	.130
LS6C-10	12-10	10	Y	.040	.26	1.06	.31	.28	.89	.250	.130

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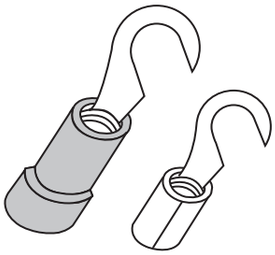
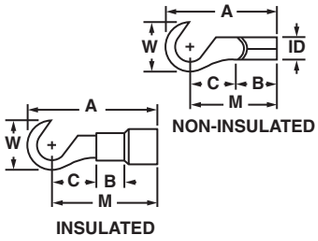
COPPER PENN-CRIMPS® • TYPE H

CU





Made with high conductivity, electrolytic copper, annealed and electro-tin plated to resist corrosion. Hook design allows for easy installation because mounting screw need not be removed. Available non-insulated or with NEMA color coded nylon or vinyl insulation. Insulation is flared for wire insulation support. The combination of these features and the fact that our products exceed UL and CSA requirements guarantee a high quality connection.

NON-INSULATED HOOK TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches					
				A	W	C	M	B	ID
H1A-6	22-18	6	.030	.69	.34	.25	.54	.250	.070
H1A-8	22-18	8	.030	.69	.34	.25	.54	.250	.070
H1A-10	22-18	10	.030	.69	.34	.25	.54	.250	.070
H1B-6	16-14	6	.030	.69	.34	.25	.54	.250	.090
H1B-8	16-14	8	.030	.69	.34	.25	.54	.250	.090
H1B-10	16-14	10	.030	.69	.34	.25	.54	.250	.090
H1C-6	12-10	6	.040	.72	.38	.28	.54	.250	.130
H1C-8	12-10	8	.040	.72	.38	.28	.54	.250	.130
H1C-10	12-10	10	.040	.72	.38	.28	.54	.250	.130

INSULATED HOOK TERMINAL

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches					
						A	W	C	M	B	ID
H4A-6	22-18	6	R	.030	.15	1.01	.34	.25	.85	.250	.070
H4A-8	22-18	8	R	.030	.15	1.01	.34	.25	.85	.250	.070
H4A-10	22-18	10	R	.030	.15	1.01	.34	.25	.85	.250	.070
H4B-6	16-14	6	B	.030	.18	.93	.34	.25	.78	.250	.090
H4B-8	16-14	8	B	.030	.18	.93	.34	.25	.78	.250	.090
H4B-10	16-14	10	B	.030	.18	.93	.34	.25	.78	.250	.090
H4C-6	12-10	6	Y	.040	.26	.99	.38	.28	.80	.250	.130
H4C-8	12-10	8	Y	.040	.26	.99	.38	.28	.80	.250	.130
H4C-10	12-10	10	Y	.040	.26	.99	.38	.28	.80	.250	.130

NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

H6A-6	22-18	6	R	.030	.15	.93	.34	.25	.78	.250	.070
H6A-8	22-18	8	R	.030	.15	.93	.34	.25	.78	.250	.070
H6A-10	22-18	10	R	.030	.15	.93	.34	.25	.78	.250	.070
H6B-6	16-14	6	B	.030	.18	.93	.34	.25	.78	.250	.090
H6B-8	16-14	8	B	.030	.18	.93	.34	.25	.78	.250	.090
H6B-10	16-14	10	B	.030	.18	.93	.34	.25	.78	.250	.090
H6C-6	12-10	6	Y	.040	.26	1.00	.38	.28	.81	.250	.130
H6C-8	12-10	8	Y	.040	.26	1.00	.38	.28	.81	.250	.130
H6C-10	12-10	10	Y	.040	.26	1.00	.38	.28	.81	.250	.130

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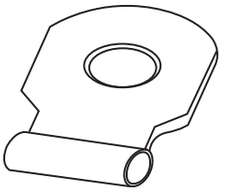
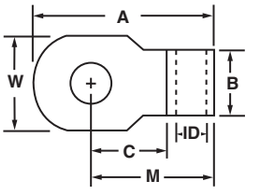
COPPER PENN-CRIMPS® • TYPE FLR





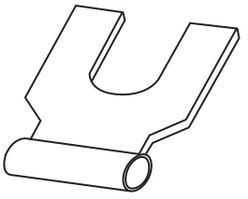
One piece, annealed, pure electrolytic copper construction, electro-tin plated for corrosion resistance. Flag base accepts wire through side opening, allowing ninety degree connections without bending the wire. Type FLR connectors are made to exceed standards for reliability and durability, guaranteeing a high quality connection.

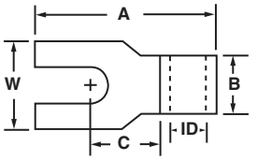
NON-INSULATED RING FLAG TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in.)	Appox. Dimen. in Inches					
				A	W	C	M	B	ID
FLR1A-6	22-18	6	.030	.66	.38	.34	.47	.250	.070
FLR1A-8	22-18	8	.030	.66	.38	.34	.47	.250	.070
FLR1A-10	22-18	10	.030	.66	.38	.34	.47	.250	.070
FLR1B-6	16-14	6	.030	.69	.38	.34	.47	.250	.090
FLR1B-8	16-14	8	.030	.69	.38	.34	.47	.250	.090
FLR1B-10	16-14	10	.030	.69	.38	.34	.47	.250	.090
FLR1C-6	12-10	6	.040	.69	.38	.28	.47	.250	.130
FLR1C-8	12-10	8	.040	.69	.38	.28	.47	.250	.130
FLR1C-10	12-10	10	.040	.69	.38	.28	.47	.250	.130

COPPER PENN-CRIMPS® • TYPE FLS





Made with the same high quality copper construction as Type FLR terminals. FLS terminals have a fork design which allows easy installation because mounting screw need not be removed. Also provides side entrance hole permitting ninety degree connections without bending the wire.

NON-INSULATED SPADE FLAG TERMINAL

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in.)	Approx. Dimen. in Inches				
				A	W	C	B	ID
FLS1A-6	22-18	6	.030	.66	.38	.34	.250	.070
FLS1A-8	22-18	8	.030	.66	.38	.34	.250	.070
FLS1A-10	22-18	10	.030	.66	.38	.34	.250	.070
FLS1B-6	16-14	6	.030	.69	.38	.34	.250	.090
FLS1B-8	16-14	8	.030	.69	.38	.34	.250	.090
FLS1B-10	16-14	10	.030	.69	.38	.34	.250	.090
FLS1C-6	12-10	6	.040	.69	.38	.34	.250	.130
FLS1C-8	12-10	8	.040	.69	.38	.34	.250	.130
FLS1C-10	12-10	10	.040	.69	.38	.34	.250	.130

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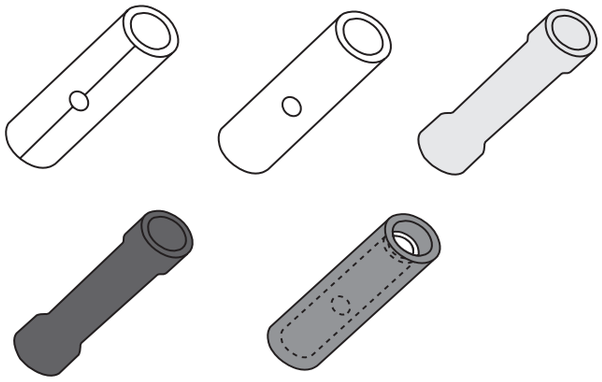
COPPER PENN-CRIMPS® • TYPE B

CU

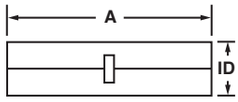


Pure electrolytic copper connectors, annealed and tin plated, with internal wire stops to assure wires reach proper insertion length before butting together. Crimping occurs at each end of the splice. Available non-insulated, nylon insulated and vinyl insulated. Type 7 seamless construction provides extra crimp strength. Type 8 is pre-insulated with high quality nylon which extends beyond the metal splice to enclose wire insulation after crimping. Especially suited to applications where excessive vibration problems occur.

NON-INSULATED BUTT CONNECTOR

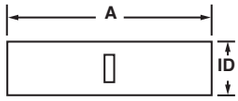
BUTTED SEAM

Catalog Number	Copper Cond. Range	Stock Size (in)	Approx. Dimen. in Inches A	ID
B1A	22-18	.030	.57	.070
B1B	16-14	.030	.57	.090
B1C	12-10	.040	.57	.130



SEAMLESS

B7A		22-18	.030	.62	.055
B7B		16-14	.030	.66	.090
B7C		12-10	.040	.62	.142
B7E	+	8	.050	.82	.172
B7F	+	6	.050	1.01	.226
B7G	+	4	.075	1.13	.300



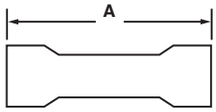
INSULATED BUTT CONNECTOR

VINYL INSULATED - SEAMLESS

Catalog Number	Copper Cond. Range	Stock Size (in)	Color Code (ins)	Max. Insul. Diam.	Approx. Dimen. in Inches A	ID
B4AB	22-18	.030	R	.160	.95	.055
B4BB	16-14	.030	B	.190	1.02	.090
B4CB	12-10	.040	Y	.255	1.01	.142

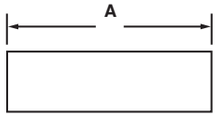
VINYL INSULATED

B4A	22-18	.030	R	.160	.95	.068
B4B	16-14	.030	B	.190	1.02	.090
B4C	12-10	.040	Y	.265	1.01	.130
B4E *+	8	.050	R	.300	1.46	.172
B4F *+	6	.050	B	.425	1.80	.226
B4G *+	4	.075	Y	.520	1.95	.300



NYLON INSULATED - SEAMLESS

B8A	22-18	.030	R	.120	1.01	.055
B8B	16-14	.030	B	.155	1.02	.055
B8C	12-10	.040	Y	.215	1.20	.142



**UL component recognized*
+Not CSA listed

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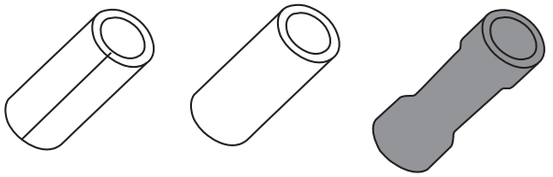
COPPER PENN-CRIMPS® • TYPE P



Made with the same high quality, one piece construction as the Butt connectors. Parallel connectors are wider and shorter, permitting wires to lay side by side inside connectors. This allows simplicity of installation because only one crimp is needed to complete the splice. Compact size is beneficial in small areas. Available non-insulated and with nylon insulation or vinyl insulation. Seamless Type 7 construction provides extra crimp strength. Exceeds UL requirements to guarantee a high quality connection.

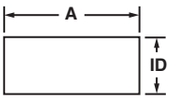
NON-INSULATED PARALLEL CONNECTOR

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stock Size (in)	Approx. Dimen. in Inches	
			A	ID
P1A +	22-18	.030	.31	.070
P1B	16-14	.030	.31	.090
P1C	12-10	.040	.31	.130

SEAMLESS

P7E *	8	.050	.44	.175
P7F *	6	.050	.48	.226
P7G *	4	.075	.53	.300

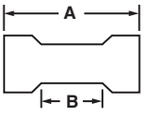


+CSA Listed
**Not UL listed*

INSULATED PARALLEL CONNECTOR

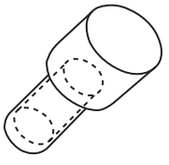
VINYL - BUTTED SEAM

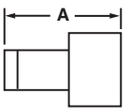
Catalog Number	Copper Cond. Range	Color Code (ins)	Stock Size (in)	Max. Insul. Diam.	Approx. Dimen. in Inches		
					A	B	ID
P4A *	22-18	R	.030	.15	.69	.313	.070
P4B	20-16	B	.030	.18	.69	.313	.090
P4C	18-12	Y	.040	.24	.78	.313	.130
P4E **	16-10	R	.050	.35	1.00	.438	.175
P4F **	14-6	B	.050	.43	1.19	.484	.226



**Not UL listed*
***UL component recognized*

COPPER PENN-CRIMPS® • TYPES NPAB AND NPBC





One piece, annealed, pure electrolytic copper with nylon preinsulation. Suited exclusively for copper to copper connections. Expanded nylon insulation provides support for wire insulation. Seamless insert provides extra crimp strength. Exceeds all UL requirements.

NYLON PIGTAILS - SEAMLESS

Catalog Number	Copper Cond. Range	Approx. Dimen. in Inches	Crimp Length
		A	
NPAB1	22-14	.63	.30
NPBC1	22-10	.69	.28

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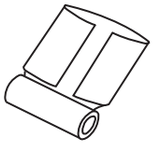
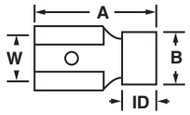
COPPER PENN-CRIMPS® • TYPE FLFR



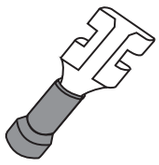


One piece, pure electrolytic copper, annealed and tin plated for corrosion resistance. Type FLFR features a side entrance chamfer to permit connections of ninety degrees without bending the wire. Provides quick, reliable snap-together interconnections without the use of tools. Made with Penn-Crimps quality to assure maximum longevity and productivity.

FEMALE FLAG DISCONNECTS - BUTTED SEAM

Catalog Number	Copper Cond. Range	Tab Size (in)	Approximate Dimensions in Inches			
			A	W	B	ID
FLFR1A-250	22-18	.020	.50	.25	.250	.070
FLFR1B-250	16-14	.020	.50	.25	.250	.090

COPPER PENN-CRIMPS® • TYPE FR

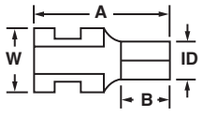


One piece, high grade copper alloy construction with electro-tin plating for corrosion resistance. Snap-together construction of mating male and female disconnects provides quick, reliable interconnections without tools. Quality crafted for long term dependability and performance.

NON-INSULATED FEMALE DISCONNECTS

BUTTED SEAM

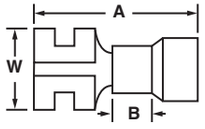
Catalog Number	Copper Cond. Range	Tab Size (in)	Approximate Dimensions in Inches			
			A	W	B	ID
FR1A110 *	22-18	.020 x .110	.54	.16	.220	.070
FR1A187 *	22-18	.020 x .187	.63	.23	.250	.070
FR1A250 *	22-18	.032 x .250	.63	.31	.234	.070
FR1B110 *	16-14	.020 x .110	.54	.16	.220	.110
FR1B187 *	16-14	.020 x .187	.63	.23	.250	.070
FR1B250 *	16-14	.032 x .250	.63	.31	.234	.090
FR1C250 *	12-10	.032 x .250	.63	.31	.234	.170



INSULATED FEMALE DISCONNECTS

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Color Code (ins)	Tab Size (in)	Max. Insul. Diam.	Approximate Dimensions in Inches			
					A	W	B	ID
FR4A110	22-18	R	.020 x .110	.14	.77	.16	.220	.050
FR4A187	22-18	R	.020 x .187	.14	.86	.23	.172	.070
FR4A250	22-18	R	.032 x .250	.14	.93	.31	.234	.070
FR4B110	16-14	B	.020 x .110	.14	.77	.16	.220	.070
FR4B187	16-14	B	.020 x .187	.14	.87	.23	.172	.070
FR4B250	16-14	B	.032 x .250	.14	.87	.31	.234	.070
FR4C250 †	12-10	Y	.032 x .250	.25	1.08	.31	.234	.136



NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

FR6A110	22-18	R	.020 x .110	.12	.77	.16	.220	.050
FR6A187	22-18	R	.020 x .187	.12	.87	.23	.250	.070
FR6A250	22-18	R	.032 x .250	.12	.87	.32	.234	.070
FR6B110	16-14	B	.020 x .110	.14	.77	.16	.220	.070
FR6B187	16-14	B	.020 x .187	.14	.87	.23	.172	.070
FR6B250	16-14	B	.032 x .250	.14	.87	.32	.234	.070
FR6C250 *	12-10	Y	.032 x .250	.25	.97	.31	.234	.136

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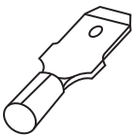
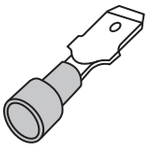
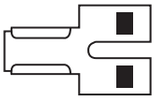
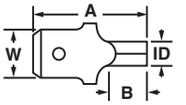
COPPER PENN-CRIMPS® • TYPE MT




MMFA
ADAPTER

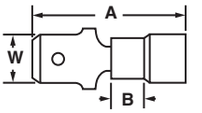
One piece, high grade copper alloy construction wiith electro-tin plating for corrosion resistance. Male tabs match female disconnects to provide strong, reliable slip-on interconnects without the use of tools. These and other features combine to guarantee a high quality connection.

NON-INSULATED MALE DISCONNECT

BUTTED SEAM



Catalog Number	Copper Cond. Range	Tab Size (in)	Approximate Dimensions in Inches			
			A	W	B	ID
MT1A250 *	22-18	.032 x .250	.72	.25	.250	.050
MT1B187 *	16-14	.020 x .187	.51	.19	.170	.090
MT1B250 *	16-14	.032 x .250	.72	.25	.250	.090
MT1C250 *	12-10	.032 x .250	.77	.25	.250	.130



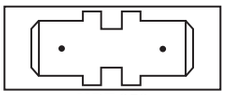
INSULATED MALE DISCONNECT

VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Tab Size (in)	Color Code (ins)	Max. Insul. Diam.	Approximate Dimensions in Inches			
					A	W	B	ID
MT4A250	22-18	.032 x .250	R	.14	.97	.25	.250	.050
MT4B187	16-14	.020 x .187	B	.17	.82	.19	.170	.090
MT4B250	16-14	.032 x .250	B	.17	.97	.25	.250	.090
MT4C250	12-10	.032 x .250	Y	.25	1.05	.25	.250	.130

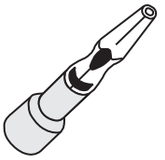
NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

MT6A250	22-18	.032 x .250	R	.14	.94	.25	.250	.050
MT6B187	16-14	.020 x .187	B	.17	.80	.19	.170	.090
MT6B250	16-14	.032 x .250	B	.17	.94	.25	.250	.090
MT6C250	12-10	.032 x .250	Y	.25	1.05	.25	.250	.130


MDT-250
COUPLER

ADAPTER AND COUPLER

Catalog Number	Tab Size (In)
MDT-250 *	.032 x .250
MMFA *	.032 x .250

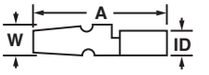



TYPES SC AND LC

One piece, annealed, pure electrolytic copper construction, electro-tin plated for protection. Provides quick, reliable snap-on interconnections without tools. Available non-insulated or with NEMA color coded nylon or vinyl insulation. Insulation is flared for wire insulation support.

NON-INSULATED MALE SNAP PLUGS

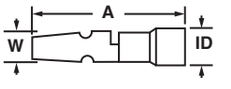
BUTTED SEAM



Catalog Number	Copper Cond. Range	Stock Size (in)	Stud Size	Approximate Dimensions in Inches		
				A	W	ID
SC1A *	22-18	.020	.156	.71	.156	.064
SC1B *	16-14	.030	.156	.60	.156	.090
LC1B *	16-14	.030	.176	.57	.176	.090

INSULATED MALE SNAP PLUG

VINYL INSULATED - BUTTED SEAM



Catalog Number	Copper Cond. Range	Stock Size (in)	Stud Size	Color Code (Ins)	Max. Insul. Diam.	Approximate Dimensions in Inches		
						A	W	ID
SC4A •	22-18	.020	.156	R	.14	.92	.156	.064
SC4B *	16-14	.030	.156	B	.17	.88	.156	.090
LC4B *	16-14	.030	.176	B	.17	.86	.176	.090

NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

SC6A *	22-18	.020	.156	R	.14	.92	.156	.064
SC6B *	16-14	.030	.156	B	.17	.90	.156	.090
LC6B *	16-14	.030	.176	B	.17	.88	.176	.090

**Not UL component recognized, nor certified for Canada.*

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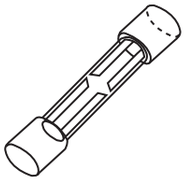
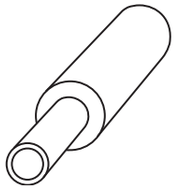
COPPER PENN-CRIMPS® • TYPES FDC AND FSC

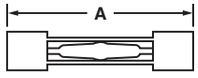


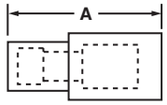
FDC



FSC

Nylon insulated, high strength spring quality connector. Locking feature provided to hold male snap plug securely in place while providing all the benefits of a two way quick disconnect. As with all Penn-Crimps the highest quality is assured.





FEMALE CONNECTOR

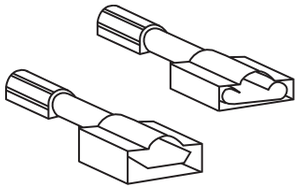
DOUBLE

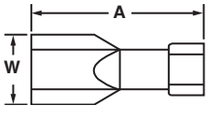
Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches A
FDC-156	16-14	.156	.020	1.38

SINGLE

FSCA-156F	22-18	.156	.020	1.025
FSC-156F	16-14	.156	.020	1.025

COPPER PENN-CRIMPS® • TYPES CFR AND CM





Same high quality construction as Types FR and M female and male disconnects. Both CFR and CM disconnects feature full length nylon insulation which extends beyond the metal terminal insert to provide a completely insulated two piece connection, which is protected against accidental shorting. Exceeds UL standards to produce a high quality connection.

FULLY INSULATED MALE AND FEMALE DISCONNECTS

FEMALE

Catalog Number	Copper Cond. Range	Tab Size (in)	Max. Insul. Diam.	Approximate Dimensions in Inches A	W	ID
CFR4NA250F	22-18	.032 x .250	.15	.98	.39	.070
CFR4NB250F	16-14	.032 x .250	.18	.98	.39	.090

MALE

CM4TNA250F	22-18	.032 x .250	.15	1.02	.47	.050
CM4TNB250F	16-14	.032 x .250	.18	1.02	.47	.090

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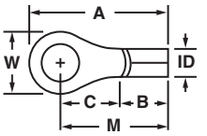
STEEL PENN-CRIMPS® • TYPE 9 HIGH TEMPERATURE TERMINALS

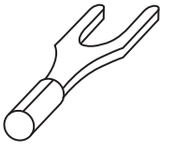


One piece, steel construction, nickel plated for protection. Capable of providing reliable circuitry in temperature ranges up to 900 degrees Fahrenheit. Structural features of all Type 9 terminals are identical to the Type 1, which proves that they will provide the highest quality connection. (For 1200°F applications contact the factory).

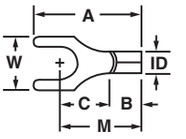
RING TERMINALS

BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approximate Dimensions in Inches					
				A	W	C	M	B	ID
R9A-6S	22-18	6	.030	.65	.25	.28	.54	.250	.070
R9A-8	22-18	8	.030	.69	.31	.28	.54	.250	.070
R9A-10	22-18	10	.030	.69	.31	.28	.54	.250	.070
R9A-14S	22-18	1/4	.030	.90	.46	.42	.67	.250	.070
R9B-6S	16-14	6	.030	.65	.25	.28	.54	.250	.090
R9B-8	16-14	8	.030	.69	.31	.28	.54	.250	.090
R9B-10	16-14	10	.030	.69	.31	.28	.54	.250	.090
R9B-14S	16-14	1/4	.030	.90	.46	.42	.67	.250	.090
R9C-6S	12-10	6	.040	.67	.28	.28	.53	.250	.130
R9C-8	12-10	8	.040	.72	.37	.28	.53	.250	.130
R9C-10	12-10	10	.040	.72	.37	.28	.53	.250	.130
R9C-14S	12-10	1/4	.040	.93	.53	.42	.67	.250	.130
R9C-56	12-10	5/16	.040	.99	.60	.42	.67	.250	.130
R9C-38	12-10	3/8	.040	.99	.60	.42	.67	.250	.130

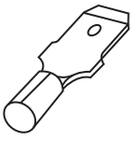


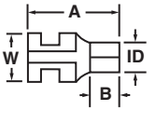
SPADE TERMINALS

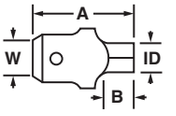


BUTTED SEAM

S9A-10	22-18	10	.030	.70	.35	.25	.52	.250	.070
S9B-10	16-14	10	.030	.69	.35	.25	.51	.250	.090
S9C-10	12-10	10	.040	.75	.38	.28	.53	.250	.130







MALE AND FEMALE DISCONNECTS

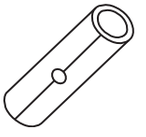
BUTTED SEAM

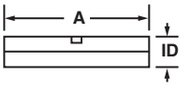
Catalog Number	Copper Cond. Range	Stock Size (in)	Approximate Dimensions in Inches			
			A	W	B	ID
FR9B250	16-14	.032 x .250	.63	.31	.234	.090
MT9B250	16-14	.032 x .250	.70	.25	.250	.050
FR9C250	12-10	.032 x .250	.63	.31	.234	.170
MT9C250	12-10	.032 x .250	.77	.25	.250	.130

BUTT CONNECTORS

BUTTED SEAM

Catalog Number	Copper Cond. Range	Approximate Dimensions in Inches	
		A	ID
B9A	22-18	.57	.070
B9B	16-14	.57	.090
B9C	12-10	.57	.130





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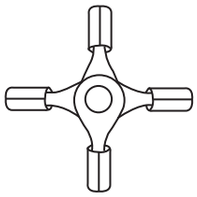
COPPER PENN-CRIMPS® • TYPES X AND Y

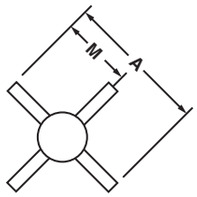
Pure electrolytic copper, multi-terminal construction allows either three or four wires to be quickly and securely connected. Generous entrance chamfers permit easier wire insertion. Available non-insulated or with NEMA color coded nylon or vinyl insulation. Quality crafted for the secure long-term dependability and performance which proves that Penn-Crimps provide the preferred connected.

NON-INSULATED 4 WAY CONNECTORS



BUTTED SEAM

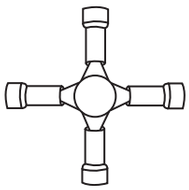
Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches	
				A	M
X1A	22-18	4 way	.030	1.07	.54
X1B	16-14	4 way	.030	1.07	.54
X1C	12-10	4 way	.040	1.07	.54



BRAZED SEAM

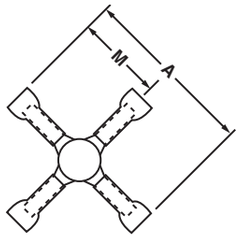
X2A	22-18	4 way	.030	1.07	.54
X2B	16-14	4 way	.030	1.07	.54
X2C	12-10	4 way	.040	1.07	.54

INSULATED 4 WAY CONNECTORS



VINYL INSULATED - BUTTED SEAM

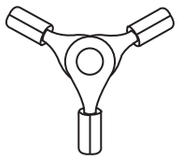
Catalog Number	Copper Cond. Range	Stud Size	Color Code (ins)	Stock Size (in)	Approx. Dimen. in Inches	
					A	M
X4A	22-18	4 way	R	.030	1.54	.77
X4B	16-14	4 way	B	.030	1.54	.77
X4C	12-10	4 way	Y	.040	1.54	.77



NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

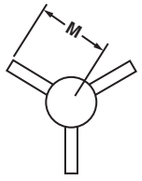
X6A	22-18	4 way	R	.030	1.50	.75
X6B	16-14	4 way	B	.030	1.56	.78
X6C	12-10	4 way	Y	.040	1.66	.83

NON-INSULATED 3 WAY CONNECTORS



BUTTED SEAM

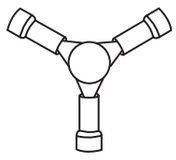
Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Approx. Dimen. in Inches
				M
Y1A	22-18	3 way	.030	.54
Y1B	16-14	3 way	.030	.54
Y1C	12-10	3 way	.040	.54



BRAZED SEAM

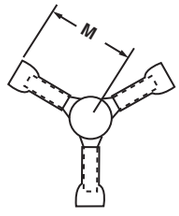
Y2A	22-18	3 way	.030	.54
Y2B	16-14	3 way	.030	.54
Y2C	12-10	3 way	.040	.54

INSULATED 3 WAY CONNECTORS



VINYL INSULATED - BUTTED SEAM

Catalog Number	Copper Cond. Range	Stud Size	Stock Size (in)	Color Code (ins)	Approx. Dimen. in Inches
					M
Y4A	22-18	3 way	.030	R	.77
Y4B	16-14	3 way	.030	B	.77
Y4C	12-10	3 way	.040	Y	.77



NYLON INSULATED - BUTTED SEAM WITH BRASS SLEEVE

Y6A	22-18	3 way	.030	R	.75
Y6B	16-14	3 way	.030	B	.78
Y6C	12-10	3 way	.040	Y	.83

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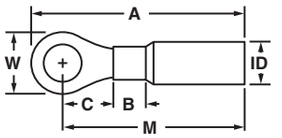
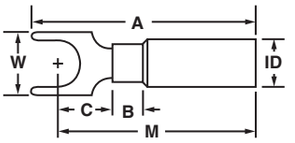
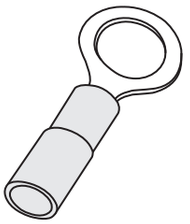
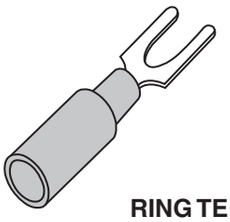
COPPER PENN-CRIMPS®

Preinsulated Heat Shrinkable Terminals and Splices









These heat shrinkable products provide a tough, environmentally sealed wire termination. These terminals and splices insulate and protect the electrical connections from wire pull-outs, abrasions and mechanical abuse. They also resist water, salt and other contaminants.

RING TERMINALS

BRAZED SEAM

Catalog Number	Wire Size	Stud Size	Color Insul.	Approx. Dimen. in Inches			
				A	W	C	M
R6A-8HS	22-18	8	Red	1.290	.310	.144	1.150
R6A-10HS	22-18	10	Red	1.214	.330	.180	1.035
R6A-14HS	22-18	1/4	Red	1.540	.474	.284	1.300
R6A-56HS	22-18	5/16	Red	1.550	.556	.310	1.280
R6A-38HS	22-18	3/8	Red	1.525	.525	.300	1.290
R6B-8HS	16-14	8	Blue	1.340	.310	.144	1.350
R6B-10HS	16-14	10	Blue	1.200	.394	.190	1.035
R6B-14HS	16-14	1/4	Blue	1.400	.474	.284	1.140
R6B-56HS	16-14	5/16	Blue	1.510	.465	.280	1.143
R6B-38HS	16-14	3/8	Blue	1.425	.540	.320	1.700
R6C-8HS	12-10	8	Yellow	1.306	.310	.144	1.175
R6C-10HS	12-10	10	Yellow	1.200	.350	.175	1.035
R6C-14HS	12-10	1/4	Yellow	1.467	.550	.340	1.200
R6C-56HS	12-10	5/16	Yellow	1.614	.556	.369	1.350
R6C-38HS	12-10	3/8	Yellow	1.470	.560	.350	1.160

SPADE TERMINALS

BRAZED SEAM

S6A-8HS	22-18	8	Red	1.340	.310	.210	1.180
S6B-8HS	16-14	8	Blue	1.330	.310	.210	1.180
S6B-10HS	16-14	10	Blue	1.340	.394	.191	1.175
S6C-8HS	12-10	8	Yellow	1.359	.318	.175	1.160
S6C-10HS	12-10	10	Yellow	1.325	.387	.243	1.160

FEMALE DISCONNECTS (FOR .250 X .032 TABS)

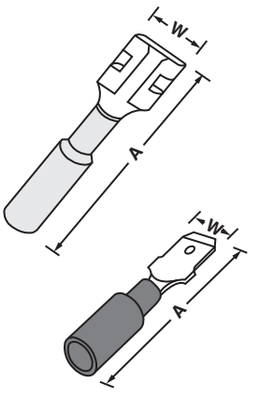
BUTTED SEAM

Catalog Number	Wire Size	Stud Size	Color Insul.	Approx. Dimen. in Inches	
				A	W
FR6A250-HS	22-18		Red	1.300	.300
FR6B250-HS	16-14		Blue	1.210	.300

MALE DISCONNECTS

BUTTED SEAM

MT6A250-HS	22-18		Red	1.188	.250
MT6B250-HS	16-14		Blue	1.227	.250



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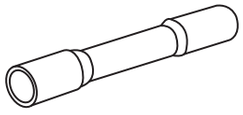
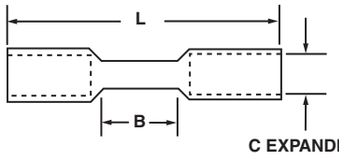
COPPER PENN-CRIMPS® PREINSULATED HEAT SHRINKABLE TERMINALS AND SPLICES

BUTT CONNECTORS





C EXPANDED
(D RECOVERED)

These heat shrinkable products provide a tough, environmentally sealed wire termination. These terminals and splices insulate and protect the electrical connections from wire pull-outs, abrasions and mechanical abuse. They also resist water, salt and other contaminants.

SEAMLESS

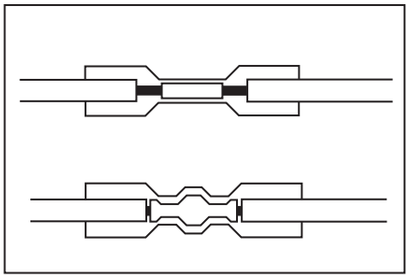
Catalog Number	Wire Size	Color Insul.	Approx. Dimen. in Inches			
			L	B	C	D
B8A-HS	22-18	Red	1.500	.625	.145	.060
B8B-HS	16-14	Blue	1.500	.665	.180	.080
B8C-HS	12-10	Yellow	1.600	.790	.250	.115

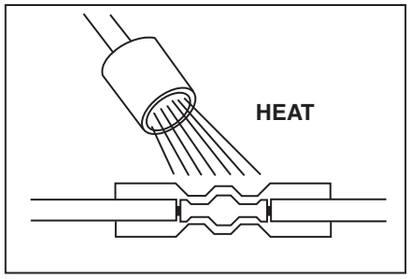
CRIMPING INSTRUCTIONS

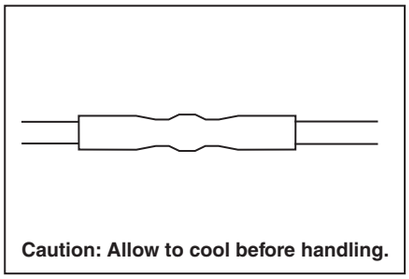
CRIMP TERMINATIONS

Strip the wire 1/4" and insert it into the barrel of the terminal. Match the color of the insulation with the color of the crimp cavity on the crimping tool.

Heat the crimped device with a heat gun until the tubing recovers and the adhesive melts and flows.







Caution: Allow to cool before handling.

BUTT TERMINATIONS

Strip the wire 3/8" and insert it into crimp barrel. Match the color of the insulation with the color of the crimp cavity on the crimping tool.

Heat the crimped device with a heat gun until the tubing recovers and the adhesive melts and flows.

TYPICAL APPLICATIONS

Telecommunications	Outdoor Lighting	Boat Trailers
Marine	Aviation	Swimming Pools
Automotive Wiring	Submersible Pumps	Underground Utilities
Mining	Refrigeration Equip.	Air Conditioner Systems
Traffic Controls	Generator Equip.	Agricultural Equip.

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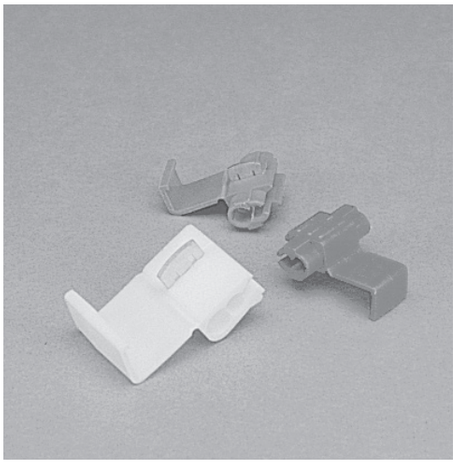
INSULATION DISPLACEMENT CONNECTORS PENN-LOKS • TYPE PL



- Pre-insulated connector
- Multiple tap and splice applications
- Easy to use
- No need to strip insulation
- Quick to install
- No twisting of wires required
- Color coded for quick identification
- Installed with common pliers
- Hinged cover locks securely

Catalog Number	Conductor Size Range	Color Code
PLA	22-18 STR. CU.	Red
PLB	18-14 STR. CU.	Blue
PLC	12-10 STR. CU.	Yellow

PENN-CRIMPS® CRIMPING TOOLS • TYPES HTS 1440 & HTC

HTS 1440

GENERAL PURPOSE MAINTENANCE

Crimps insulated and non-insulated #22-10 wire size, bolt cutter, thread chaser, wire stripper and has cushioned plastic handles.

Catalog Number	Description
HTS-1308	General Purpose Crimps

HTC

HEAVY DUTY, RATCHET TYPE, FULL CYCLE CRIMPING TOOL #22-#10

Catalog Number	Description
HTC-3000	Ratchet Double Crimp Insulated Terminals
HTC-3100	Ratchet Single Crimp Non-Insulated Terminals
HTC-3200	Ratchet Single Crimp Insulated Terminals
HTC-3500	Ratchet Double Crimp Type FR4 Disconnects

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NYLON CABLE TIES

Made from 100%, non-corrosive Nylon, for impact strength, abrasion resistance, versatility and self-extinguishing qualities. Bent-tip design allows for easier handling and installation. Carbon Black Nylon maintains the same properties as natural colored Nylon, but has a special Carbon Black additive which greatly increases the Nylon's resistance to Ultraviolet rays, making them weather resistant.

MINIATURE CROSS-SECTION - 18 lbs. MIN. LOOP TENSILE STRENGTH

Catalog Number	Max. Bundle Dia. In.	Approx. Length In.
Natural Nylon		
TY4-18	7/8	4
Carbon Black Nylon		
TY4-18-B	7/8	4

INTERMEDIATE CROSS-SECTION 30 - 40 lbs. MIN. LOOP STRENGTH

Natural Nylon		
TY5.5-30	1 1/4	5.5
TY8-40	2	8
Carbon Black Nylon		
TY5.5-30-B	1 1/4	5.5
TY8-40-B	2	8

STANDARD CROSS-SECTION - 50 lbs. MIN. LOOP STRENGTH

Natural Nylon		
TY7.5-50	1 3/4	7.5
TY11-50	3	11
TY15-50	4	15
Carbon Black Nylon		
TY7.5-50-B	1 3/4	7.5
TY11-50-B	3	11
TY15-50-B	4	15

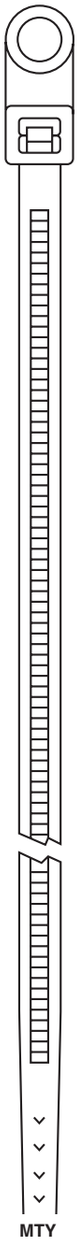
HEAVY CROSS-SECTION (AND LIGHT-HEAVY) - 120 lbs. MIN. LOOP TENSILE STRENGTH

Natural Nylon		
TY14.5-120	4	14.5
Carbon Black Nylon		
TY14.5-120-B	4	14.5

150 lbs. MIN. LOOP TENSILE STRENGTH

TY21-150	6	21
TY36-150	11	36
TY42-150	13	42

TY



MTY

NYLON MOUNTING CABLE TIES

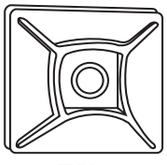
STANDARD CROSS-SECTION - 50 lbs. MIN. LOOP TENSILE STRENGTH

Catalog Number	Max. Bundle Dia. In.	Approx. Length In.	Mounting Stud
MTY7.5-50	1 3/4	7.5	#10

HEAVY DUTY CROSS-SECTION - 120 lbs. MIN. LOOP TENSILE STRENGTH

MTY14.8-120	4	14.8	1/4

NYLON CABLE TIE MOUNTS



TYM-1
1" (25 mm)

These acrylic, adhesive-backed mounts are made of Type 6 Nylon for high impact and tensile strength. Peel-off strip on back allows faster and easier separation from the backing while the four-way tie insertion provides quick assembly. Available in natural color. Exceeds standards for UL component recognition.

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PENN-CRIMPS® TERMINAL KITS • TYPES MK 40-MK 71, & PK 50NT-PK 58


MK 42


MK 70


MK 71


PK 55


PK 57

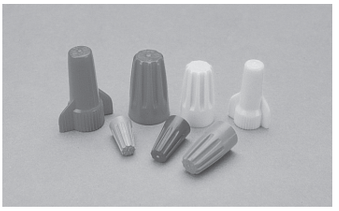

PK 58

The MK kits come with a variety of terminals and connectors for industrial, commercial, maintenance, construction and general use purposes. The kits are packaged in a rugged, heavy duty, hinged metal box.

Catalog Number	Description
MK-40	Metal Kit Box with Scoop Compartments
MK-41	Metal Kit Box with Scoop Compartments and HTS-1440 Crimping Tool
MK-42	Metal Kit Box with Scoop Compartments, HTS-1440 Crimping Tool and 500 Assorted Vinyl Insulated Terminals and Connectors
MK-43	Metal Kit Box with Scoop Compartments, HTS-1440 Tool and 1000 Assorted Non-Insulated Terminals and Connectors
MK-70	Metal Kit Box with Scoop Compartments, 100 7$^{1}/_{2}$" Cable Ties and 1155 Assorted Vinyl Insulated Terminals and Connectors
MK-71	Metal Kit Box with Scoop Compartments, HTS 1440 Tool and 1155 Assorted Vinyl Insulated Terminals and Connectors

Catalog Number	Description
PK-50NT	Kit, No Tool 18 Popular Vinyl Items
PK-55	HVAC/R Maintenance and Repair Kit 18 popular items
PK-57	Hi-Temp Terminal Kit 12 popular Items (900°F)
PK-58	10 popular Items (900°F) 2 popular Porcelain Wire Nuts 1 roll High Temp Glass cloth tape

PENN-NUTS • PN SERIES CONNECTORS, KNURLED AND WING STYLE



The range of wire combinations fills the requirements of many of the more typical connections made.

Knurled style offers the industry's standard screw-on connector. Winged style offers a high-leverage easy on live spring design.

Available in packages of either kegs (containing polybags), boxes, or clamshells.

Standard packaging in boxes of 1,000, 100, and as bulk packed kegs of poly bags of 500 (250 for PNRK). 1,000 and 100 quantity boxes are available by using a suffix of "-M" (for 1,000) or "-C" (for 100).

All of the Penn-Nuts are UL listed and have a temperature rating of 105°C (221°F).

KNURLED STYLE:

Cat. No.	Color	Application	OAL
PNGK	Grey	*#22 to #16 AWG Min: 1 #20 w/1 #22 Max: 2 #16	.58
PNBK	Blue	*#22 to #16 AWG Min: 3 #22 Max: 3 #16	.70
PNOK	Orange	**#22 to #14 AWG Min: 3 #20 Max: 4 #16 & 1 #20	.84
PNYK	Yellow	**#18 to #10 AWG Min: 1 #14 & 1 #18 Max: 4 #14	.94
PNRK	Red	**#18 to #10 AWG Min: 2 #14 Max: 2 #10 & 2 #12	1.06

WINGED STYLE:

Cat. No.	Color	Application	OAL
PNYW	Yellow	**#22 to #10 AWG Min: 2 #18 Max: 3 #12	1.03
PNRW	Red	**#18 to #10 AWG Min: 2 #14 Max: 5 #12	1.25

**Connections rated at 300 V Max.*
***Connections rated at 300 V Max. and 600 V Max. Connections rated at 600+ V Max. for Building Wiring are rated at 1000V Max. in Fixtures and Signs.*

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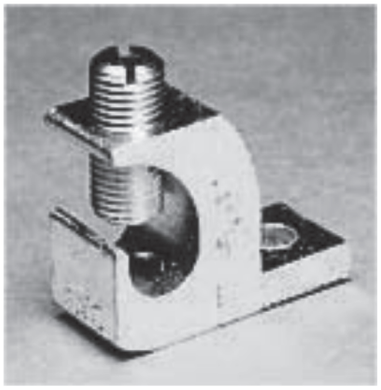
COPPER LAY-IN LUG - TYPE LI-CU-DB



LI-50S-CU-DB

One hole, side entrance

For copper continuous conductor

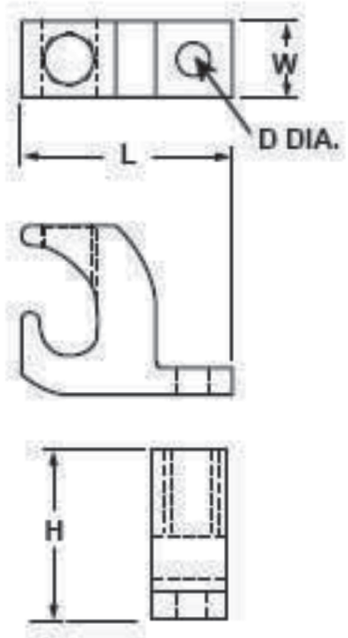
Body fabricated from high strength copper alloy

Electro-tin plated to assure minimum contact resistance and protection against corrosion

Side entrance design permits the quick installation of one continuous conductor as a jumper to multiple locations without a break in the conductor

Excellent choice for use on grounding conductors

467
LISTED
SUITABLE FOR
DIRECT BURIAL



Conductor Type	Conductor Range
Copper	14 - 4

No. of Holes in Pad	**1**
No. of Conductors	1

Additional Details	
UL LISTING:	467 Listed Suitable for Direct Burial

Approximate Dimensions	
H (in.)	.687
L (in.)	.968
W (in.)	.375
D Dia. (in.)	.218

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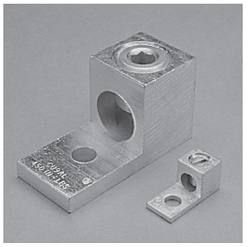
ALUMINUM SOLDERLESS LUGS • TYPE LA

One hole, front entrance copper or aluminum conductors 600 Volt Rated

486B
LISTED
AL9CU



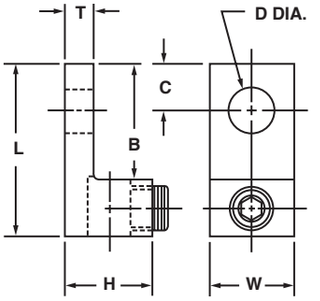


FIG. 2

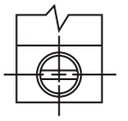


FIG. 1

Body, fabricated from high strength aluminum alloy extrusion.

Lug is 100% reusable using either screw driver or hex wrench. No special tools required.

Maximum conductivity, compact design light weight with ultimate strength.

Finish, electro-tin plated to assure minimum contact resistance and protection against corrosion when used with copper wire. (For added protection apply Penn-Union Cual-Aid® to cable before installation.)

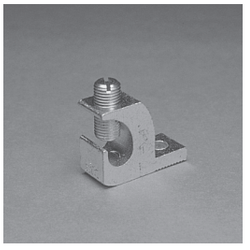
Standard stud hole sizes and locations are shown on chart.

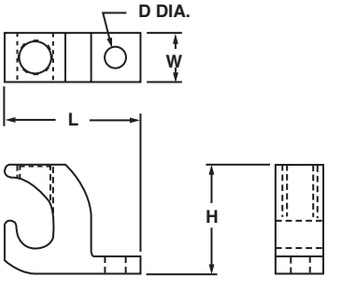
Catalog Number	Torque Value In-Lbs.	Wire Range‡	Fig. No.	Approximate Dimensions						
				L	W	H	T	B	C	D Dia.
				in	in	in	in	in	in	in
LA-6	45	14-6	1	$1^{1}/_{16}$	$^{1}/_{2}$	$^{1}/_{2}$	$^{3}/_{32}$	$^{11}/_{16}$	$^{1}/_{4}$	$^{17}/_{64}$
LA-2	50	14-2	1	$1^{5}/_{32}$	$^{1}/_{2}$	$^{35}/_{64}$	$^{7}/_{64}$	$^{11}/_{16}$	$^{5}/_{16}$	$^{17}/_{64}$
LA-0	50	14-1/0	1	$1^{15}/_{32}$	$^{5}/_{8}$	$^{25}/_{32}$	$^{3}/_{16}$	$^{27}/_{32}$	$^{27}/_{64}$	$^{17}/_{64}$
LA-2/0	120	14-2/0	2	$1^{15}/_{32}$	$^{5}/_{8}$	$^{51}/_{64}$	$^{3}/_{16}$	$^{27}/_{32}$	$^{7}/_{16}$	$^{17}/_{64}$
LA-250	275	6-250	2	2	1	$1^{1}/_{8}$	$^{1}/_{4}$	1	$^{29}/_{64}$	$^{21}/_{64}$
LA-350	275	6-350	2	$2^{1}/_{4}$	$1^{1}/_{8}$	$1^{1}/_{4}$	$^{1}/_{4}$	$1^{1}/_{8}$	$^{1}/_{2}$	$^{13}/_{32}$
LA-500	375	4-500	2	$2^{13}/_{16}$	$1^{1}/_{4}$	$1^{9}/_{16}$	$^{5}/_{16}$	$1^{9}/_{16}$	$^{7}/_{8}$	$^{13}/_{32}$
LA-600	375	2-600	2	$3^{3}/_{16}$	$1^{1}/_{2}$	$1^{9}/_{16}$	$^{7}/_{16}$	$1^{13}/_{16}$	$^{25}/_{32}$	$^{13}/_{32}$
LA-800	375	300-800	2	$3^{1}/_{2}$	$1^{3}/_{4}$	$1^{15}/_{16}$	$^{1}/_{2}$	$1^{7}/_{8}$	$^{13}/_{16}$	$^{21}/_{32}$
LA-1000	375	500-1000	2	$3^{1}/_{2}$	$1^{3}/_{4}$	$1^{15}/_{16}$	$^{1}/_{2}$	$1^{7}/_{8}$	$^{13}/_{16}$	$^{21}/_{32}$

‡For conversion to metric range, see page 175.

ALUMINUM LAY-IN LUGS • TYPE LI

One hole, side entrance copper or aluminum continuous conductors





Catalog Number	Wire Diameter Range	Approximate Dimensions			Screw Type	D. DIA
		L	W	H		
LI-50S	14-4	$1^{1}/_{16}$"	$^{3}/_{8}$"	$^{25}/_{32}$"	Slot	$^{7}/_{32}$"
LI-112S	8-1/0	$1^{1}/_{2}$"	$^{19}/_{32}$"	$1^{11}/_{64}$"	Slot	$^{17}/_{64}$"
LI-200S	6-3/0	2"	$^{51}/_{64}$"	$1^{9}/_{16}$"	Socket	$^{21}/_{64}$"
LI-252S	6-250	$2^{13}/_{64}$"	$^{51}/_{64}$"	$1^{51}/_{64}$"	Socket	$^{21}/_{64}$"

Body, fabricated from high strength aluminum alloy extrusion.

Finish, electro-tin plated to assure minimum contact resistance and protection against corrosion when used with copper wire. (For added protection apply Penn-Union Corp. Cual-Aid® to cable before installation.)

The side entrance design permits the quick installation of one continuous conductor as a jumper to multiple locations without a break in the conductor.

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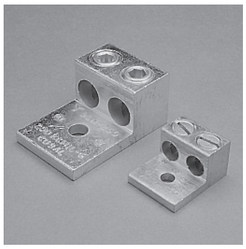
ALUMINUM SOLDERLESS LUGS • TYPE L2A

One hole front entrance copper or aluminum conductors

486B
LISTED
AL9CU



Body, fabricated from high strength aluminum alloy extrusion.

Lug is 100% reusable using either screw driver or hex wrench. No special tools required.

Maximum conductivity, compact design, light weight with ultimate strength.

Finish, electro-tin plated to assure minimum contact resistance and protection against corrosion when used with copper wire. (For added protection apply Penn-Union Cual-Aid® to cable before installation.)

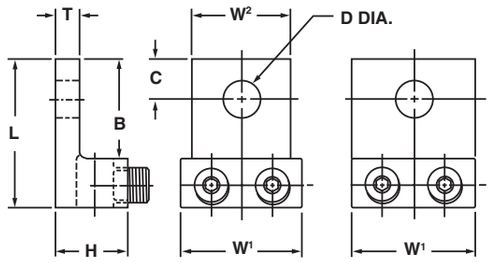


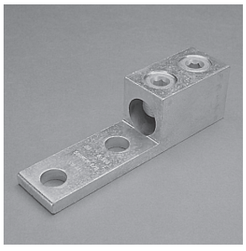
FIG. 1 FIG. 2

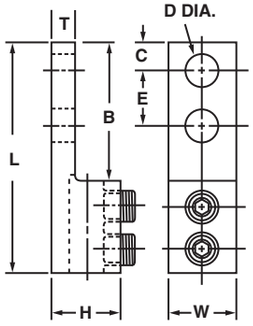
Catalog Number	Torque Value In-Lbs.	Wire Range‡	Fig. No.	Approximate Dimensions							
				L	W¹	W²	H	T	B	C	D Dia.
				in	in	in	in	in	in	in	in
L2A-0	120	14-1/0	2	$1^{15}/_{32}$	$1^{1}/_{8}$	–	$^{25}/_{32}$	$^{3}/_{16}$	$^{27}/_{32}$	$^{7}/_{16}$	$^{17}/_{64}$
L2A-2/0	120	14-2/0	2	$1^{15}/_{32}$	$1^{1}/_{4}$	–	$^{25}/_{32}$	$^{3}/_{16}$	$^{27}/_{32}$	$^{27}/_{64}$	$^{17}/_{64}$
L2A-250	275	6-250	2	$2^{9}/_{16}$	$1^{41}/_{64}$	–	$1^{3}/_{16}$	$^{1}/_{4}$	$1^{9}/_{16}$	$^{7}/_{8}$	$^{13}/_{32}$
L2A-350	275	6-350	1	$2^{7}/_{8}$	$1^{15}/_{16}$	$1^{3}/_{4}$	$1^{1}/_{4}$	$^{1}/_{4}$	$1^{3}/_{4}$	$^{9}/_{16}$	$^{17}/_{32}$
L2A-500*	500	4-500	1	$3^{1}/_{8}$	$2^{3}/_{8}$	$1^{63}/_{64}$	$1^{9}/_{16}$	$^{7}/_{16}$	$1^{3}/_{4}$	$^{5}/_{8}$	$^{17}/_{32}$
L2A-600	550	2-600	1	$3^{1}/_{8}$	$2^{3}/_{8}$	$1^{63}/_{64}$	$1^{9}/_{16}$	$^{7}/_{16}$	$1^{3}/_{4}$	$^{5}/_{8}$	$^{17}/_{32}$
L2A-800	375	350-800	2	$3^{1}/_{2}$	$3^{1}/_{2}$	–	$1^{15}/_{16}$	$^{1}/_{2}$	$1^{7}/_{8}$	$^{7}/_{8}$	$^{21}/_{32}$
L2A-1000	375	500-1000	2	$3^{1}/_{2}$	$3^{1}/_{2}$	–	$1^{15}/_{16}$	$^{1}/_{2}$	$1^{7}/_{8}$	$^{7}/_{8}$	$^{21}/_{32}$

‡For conversion to metric range, see page 175. **Not CSA Certified.*

ALUMINUM SOLDERLESS LUGS • TYPE LLA2

Two hole front entrance copper or aluminum conductors





Body, fabricated from high strength aluminum alloy extrusion.

Lug is 100% reusable using either screw driver or hex wrench. No special tools required.

Maximum conductivity, compact design, light weight with ultimate strength.

Finish, electro-tin plated to assure minimum contact resistance and protection against corrosion when used with copper wire. (For added protection apply Penn-Union Cual-Aid® to cable before installation.)

Catalog Number	Torque Value In-Lbs.	Wire Range‡	Approximate Dimensions							
			L	W	H	T	B	C	D Dia.	E
			in	in	in	in	in	in	in	in
LLA2-500-S1	275	4/0-500	$5^{1}/_{2}$	$1^{1}/_{4}$	$1^{1}/_{2}$	$^{5}/_{16}$	$3^{1}/_{4}$	$^{1}/_{2}$	$^{9}/_{16}$	$1^{3}/_{4}$
LLA2-750-S1	275	400-750	$6^{3}/_{16}$	$1^{1}/_{2}$	$1^{7}/_{8}$	$^{9}/_{16}$	$3^{7}/_{16}$	$^{5}/_{8}$	$^{9}/_{16}$	$1^{3}/_{4}$

‡For conversion to metric range, see page 175.

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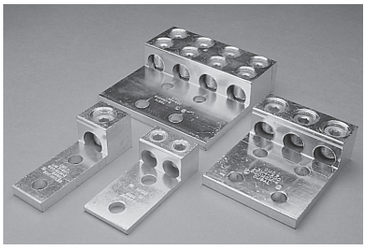
ALUMINUM SOLDERLESS LUGS • TYPES LA, L2A, L3A, LA4M4 AND LA4D4

Two and four hole, front entrance copper or aluminum conductors

486 B
LISTED
AL9 CU



Penn-Union solderless lugs are made from high strength aluminum alloy, electro-tin plated to assure minimum contact resistance and corrosion protection. Manufactured to insure both maximum strength and conductivity, they are dual rated for both copper and aluminum conductors. These re-usable connectors need only a hex wrench for assembly. All four-hole pads are NEMA drilled for 1/2" bolts on 1 3/4" centers. For added protection apply Penn-Union Cual-Aid® to cable before installation.

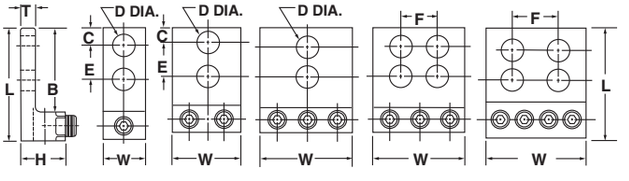


FIG. 1 FIG. 2 FIG. 3 FIG. 4 FIG. 5

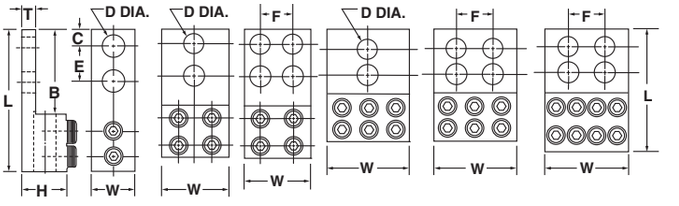


FIG. 6 FIG. 7 FIG. 8 FIG. 9 FIG. 10 FIG. 11

Catalog Number	Torque Value In-Lbs.	Wire Range	Fig. No.	Approximate Dimensions								
				L	W	H	T	B	C	D Dia.	E	F
				in	in	in	in	in	in	in	in	in
SINGLE CONDUCTOR												
LA-350-2	375	6-350	1	4 3/16	1 1/8	1 1/4	1/4	3 1/16	5/8	9/16	1 3/4	–
LA-600-2	500	2-600	1	4 11/16	1 1/2	1 9/16	7/16	3 5/16	5/8	9/16	1 3/4	–
LA-800-2	375	350-800	6	6 3/16	1 3/4	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	–
LA-1000-2	500	500-1000	6	6 3/16	1 3/4	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	–
TWO CONDUCTOR												
L2A-350-2	375	6-350	2	4 3/16	1 15/16	1 1/4	1/4	3 1/16	5/8	9/16	1 3/4	–
L2A-600-2	500	2-600	2	4 11/16	2 7/16	1 9/16	7/16	3 5/16	5/8	9/16	1 3/4	–
L2A-800-2	500	300-800	7	6 3/16	3 1/2	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	–
L2A-800-4	500	300-800	8	6 3/16	3 1/2	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	1 3/4
L2A-1000-2	500	500-1000	7	6 3/16	3 1/2	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	–
L2A-1000-4	500	500-1000	8	6 3/16	3 1/2	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	1 3/4
THREE CONDUCTOR												
L3A-250-2	275	6-250	3	4	3	1 3/16	5/16	3	5/8	9/16	1 3/4	–
L3A-250-4	275	6-250	4	4	3	1 3/16	5/16	3	5/8	9/16	1 3/4	1 3/4
• L3A-350-2*	275	6-350	3	4 3/16	3	1 1/8	1/4	3 1/16	5/8	9/16	1 3/4	–
• L3A-350-4*	275	6-350	4	4 3/16	3	1 1/8	1/4	3 1/16	5/8	9/16	1 3/4	1 3/4
L3A-500-2	375	2-500	3	4 5/8	3 3/4	1 9/16	7/16	3 3/8	5/8	9/16	1 3/4	–
L3A-500-4	375	2-500	4	4 11/16	3 3/4	1 9/16	7/16	3 5/16	5/8	9/16	1 3/4	1 3/4
• L3A-800-2*	500	300-800	9	6 3/16	4 1/4	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	–
• L3A-800-4*	500	300-800	8	6 3/16	3 1/2	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	1 3/4
FOUR CONDUCTOR												
LA4M4-250	275	6-250	5	4	4 3/64	1 3/16	5/16	3	5/8	9/16	1 3/4	1 3/4
LA4M4-350	275	6-350	5	4 1/2	4 23/32	1 3/8	5/16	3 1/4	5/8	9/16	1 3/4	1 3/4
LA4D4-600	375	2-600	11	5 1/2	5 21/32	1 1/2	3/8	3 1/4	5/8	9/16	1 3/4	1 3/4
LA4D4-800	500	350-800	11	6 3/16	7 5/32	1 7/8	9/16	3 7/16	5/8	9/16	1 3/4	1 3/4

•Not UL Listed
**Not CSA Certified*

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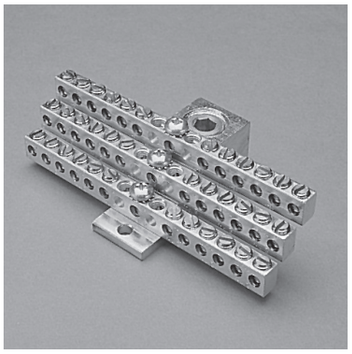
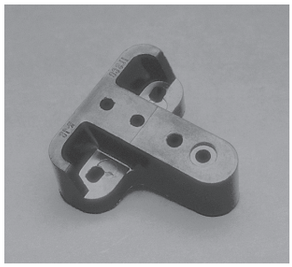
ALUMINUM STACKED NEUTRAL BARS • TYPE SNB

For aluminum or copper conductors



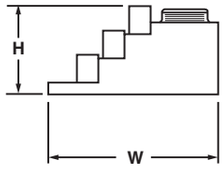
SNB

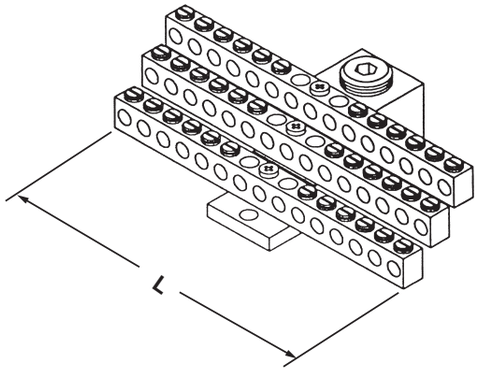


R-16

Stacking lugs and neutral bars are made from high strength aluminum alloy tin plated for bimetalic applications.

The stacking lugs are UL 486B listed AL9CU. The neutral bars are UL Component Recognized.





Catalog Number	Conductor Range				Number of Taps	Approximate Dimensions					
	Main		Tap			H		W		L	
	AWG	MM²	AWG	MM²		in	mm	in	mm	in	mm
SNB350-12	6-350 MCM	16-185	14-6	1.5-16	12	1.53	38.86	4.72	119.89	2.81	71.37
SNB350-24	6-350 MCM	16-185	14-6	1.5-16	24	1.53	38.86	4.72	119.89	2.81	71.37
SNB350-30	6-350 MCM	16-185	14-6	1.5-16	30	1.53	38.86	4.72	119.89	2.81	71.37
SNB350-36	6-350 MCM	16-185	14-6	1.5-16	36	1.53	38.86	4.72	119.89	2.81	71.37
SNB350-42	6-350 MCM	16-185	14-6	1.5-16	42	1.53	38.86	5.34	135.64	2.81	71.37
R-16	Mounting block of general purpose phenolic suitable for mounting any SNB neutral bars					1.00	25.40	2.5	63.5	2.5	63.5

COPPER NEUTRAL BARS • TYPE N70

For copper conductors only

Neutral bars are made from high strength pure electrolytic copper for maximum strength and maximum conductivity.

The copper neutral bars are UL Recognized and CSA Certified. Each bar has two mounting holes 0.20" in diameter or 5.08 mm.

N70-174 sold without screws. $^{7}/_{16}$" long zinc plated, chromate dipped steel screws, catalog number E-153 are sold separately.

Catalog Number	Conductor Range				Number of Taps	Approximate Dimensions					
	Main		Tap			H		W		L	
	AWG	MM²	AWG	MM²		in	mm	in	mm	in	mm
N70-10-1	14-4	1.5-16	14-6	1.5-16	8	.47	11.94	.34	8.64	4.37	111.00
N70-12-1	14-4	1.5-16	14-6	1.5-16	10	.47	11.94	.34	8.64	5.15	130.81
N70-14-1	14-4	1.5-16	14-6	1.5-16	12	.47	11.94	.34	8.64	5.94	150.88
N70-16-1	14-4	1.5-16	14-6	1.5-16	14	.47	11.94	.34	8.64	6.75	171.45
N70-174	14-4	1.5-16	14-6	1.5-16	174	.47	11.94	.34	8.64	69.00	1752.6

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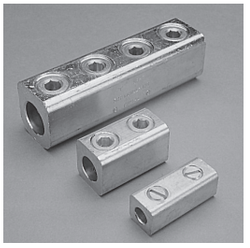
ALUMINUM SPLICER-REDUCER • TYPE SR

Copper or aluminum conductors

486 B
LISTED
AL9 CU



- Body, fabricated from high strength aluminum alloy
- Solid center barrier
- Electro tin plated
- Rounded corner for easy taping

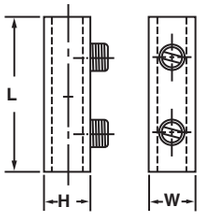


FIG. 1

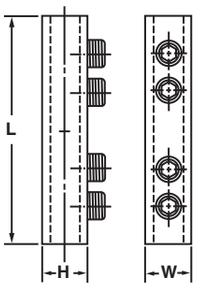


FIG. 2

Catalog Number	Torque Value In-Lbs.	Fig.	Conductor Range	Approximate Dimensions H in	W in	L in
SR-2	50	1	14-2	9/16	1/2	1 3/8
SR-0	50	1	14-1/0	3/4	3/4	1 29/32
SR-250	275	2	6-250MCM	1 1/8	1	3 15/16
SR-250-2	275	1	6-250MCM	1 1/8	1	1 15/16
SR-350	275	2	6-350MCM	1 3/16	1 1/8	4 3/16
SR-350-2	275	1	6-350MCM	1 3/16	1 1/8	2 5/8
SR-500	375	2	2-500MCM	1 1/2	1 3/8	5
SR-750	375	2	250-750MCM	1 3/4	1 5/8	6 1/4

ALUMINUM SOLDERLESS PANELBOARD LUGS • TYPE PB

For copper or aluminum conductors

486 B
LISTED
AL9 CU

Body, fabricated from high strength aluminum alloy extrusions.

Lug is 100% re-usable using hex wrench. No special tools required.

Maximum conductivity, compact design, light weight with ultimate strength.

Finish, electro-tin plated to assure minimum contact resistance and protection against corrosion when used with copper wire. (For added protection apply Penn-Union Cual-Aid® to cable before installation.)

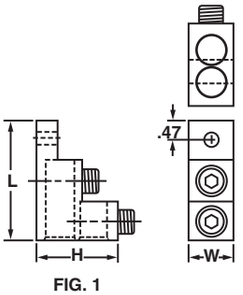


FIG. 1

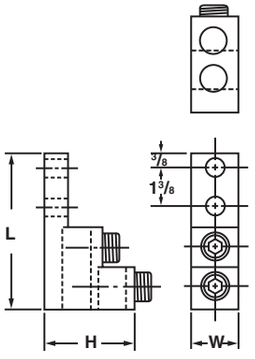


FIG. 2

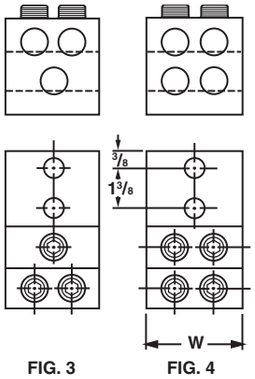


FIG. 3 FIG. 4

Catalog Number	Torque Value In-Lbs.	Fig.	No. of Conductors	Conductor Range	Stud Size	Approximate Dimensions H in	W in	L in
PB2-300	275	1	2	6-300MCM	5/16(1)	2	1	3
PB2-600	375	2	2	2-600MCM	3/8(2)	3	1 1/2	4 29/32
PB2-750	375	2	2	1/0-750MCM	3/8(2)	3	1 9/16	4 29/32
PB3-600	375	3	3	2-600MCM	3/8(2)	3	2 1/2	4 29/32
PB3-750	375	3	3	1/0-750MCM	3/8(2)	3	2 27/32	4 29/32
PB4-600	375	4	4	2-600MCM	3/8(2)	3	2 1/2	4 29/32
PB4-750	375	4	4	1/0-750MCM	3/8(2)	3	2 27/32	4 29/32

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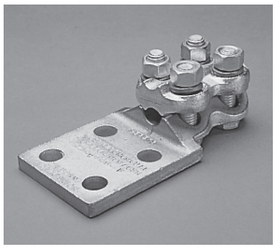
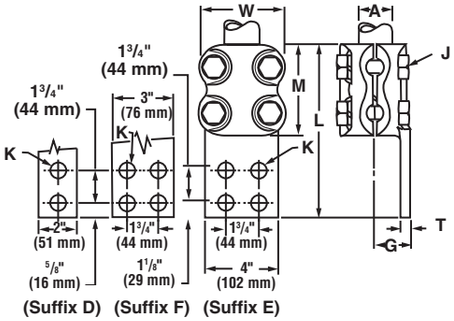
ALUMINUM TERMINALS • TYPES RAA AND RAAC

Heavy Duty Tube to Flat





High strength electrical aluminum alloy.

Massive extra thick sections. Conforming contact grooves. Generous extra long contact lengths.

Large size, high strength, anodized and lubricated 2024T4 aluminum alloy clamping hardware.

Bolt heads pocketed for single wrench installation. Rounded contours.

NEMA drilling supplied. Other drilling, or undrilled, available on request.

There may be some special operating conditions where copper flashed pad may be desired on the tongue. Add suffix "C" to the catalog designation. Example: RAAC-15-F. If tin plated terminals are preferred, add "-TN" to catalog numbers. Example: RAA-15-F-TN.

For tongue mounting hardware, suffix catalog number with "-TMH." Example: RAA-15-F-TMH. (Aluminum hardware provided for type RAA, steel hardware for type RAAC.)

Catalog Number	Approximate Dimensions													
	A Aluminum IPS	G		J Bolt Diameter	K Hole Diameter		L		M		T		W	
	in	in	mm	in	in	mm	in	mm	in	mm	in	mm	in	mm
RAA-07-D	3/4	1 3/16	30	1/2	9/16	14	6 1/2	165	3 1/4	83	7/16	11	2 5/8	67
RAA-07-F	3/4	1 3/16	30	1/2	9/16	14	6 1/2	165	3 1/4	83	7/16	11	2 5/8	67
RAA-10-D	1	1 5/16	33	1/2	9/16	14	6 3/4	171	3 1/2	89	7/16	11	3	76
RAA-10-F	1	1 5/16	33	1/2	9/16	14	6 3/4	171	3 1/2	89	7/16	11	3	76
RAA-12-D	1 1/4	1 9/16	40	5/8	9/16	14	7	178	3 3/4	95	1/2	13	3 9/16	90
RAA-12-F	1 1/4	1 9/16	40	5/8	9/16	14	7	178	3 3/4	95	1/2	13	3 9/16	90
RAA-12-E	1 1/4	1 9/16	40	5/8	9/16	14	8	203	3 3/4	95	7/16	11	3 9/16	90
RAA-15-D	1 1/2	1 7/16	37	5/8	9/16	14	7 1/4	184	4	102	1/2	13	3 7/8	98
RAA-15-F	1 1/2	1 7/16	37	1/2	9/16	14	7 1/4	184	4	102	1/2	13	3 7/8	98
RAA-15-E	1 1/2	1 7/16	37	5/8	9/16	14	8 1/4	210	4	102	7/16	11	3 7/8	98
RAA-20-D	2	1 11/16	43	5/8	9/16	14	7 5/8	194	4 3/8	111	9/16	14	4 7/16	113
RAA-20-F	2	1 11/16	43	5/8	9/16	14	7 5/8	194	4 3/8	111	9/16	14	4 7/16	113
RAA-20-E	2	1 11/16	43	5/8	9/16	14	8 5/8	219	4 3/8	111	7/16	11	4 7/16	113
RAA-25-D	2 1/2	2 3/16	56	3/4	9/16	14	8	203	4 3/4	121	5/8	16	5 1/8	130
RAA-25-F	2 1/2	2 3/16	56	3/4	9/16	14	8	203	4 3/4	121	5/8	16	5 1/8	130
RAA-25-E	2 1/2	2 3/16	56	3/4	9/16	14	9	229	4 3/4	121	1/2	13	5 1/8	130
RAA-30-D	3	2 11/16	68	3/4	9/16	14	8 3/8	213	5 1/8	130	3/4	19	5 3/4	146
RAA-30-F	3	2 11/16	68	3/4	9/16	14	8 3/8	213	5 1/8	130	3/4	19	5 3/4	146
RAA-30-E	3	2 11/16	68	3/4	9/16	14	9 3/8	238	5 1/8	130	3/4	19	5 3/4	146
RAA-35-D	3 1/2	3 3/16	81	7/8	9/16	14	8 3/4	222	5 1/2	140	1 1/16	27	6 13/16	173
RAA-35-F	3 1/2	3 3/16	81	7/8	9/16	14	8 3/4	222	5 1/2	140	1 1/16	27	6 13/16	173
RAA-35-E	3 1/2	3 3/16	81	7/8	9/16	14	9 3/4	248	5 1/2	140	1 1/16	27	6 13/16	173
RAA-40-D	4	3 7/16	87	7/8	9/16	14	9 1/8	232	5 7/8	149	1 3/16	30	7 13/16	198
RAA-40-F	4	3 7/16	87	7/8	9/16	14	9 1/8	232	5 7/8	149	1 3/16	30	7 13/16	198
RAA-40-E	4	3 7/16	87	7/8	9/16	14	10 1/8	257	5 7/8	149	1 3/16	30	7 13/16	198
RAA-50-E	5	3 3/4	95	7/8	9/16	14	10 3/4	273	6 1/2	165	1 5/16	33	8 15/16	227
RAA-60-E	6	4 1/4	108	7/8	9/16	14	11 3/4	298	7 1/2	191	1 3/4	44	10 1/16	256

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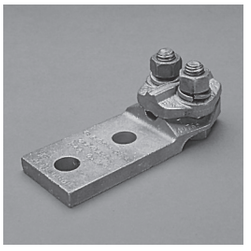
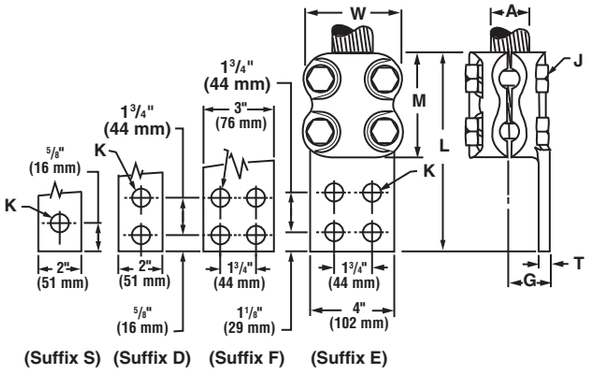
ALUMINUM WIDE RANGE TERMINALS • TYPES RAA AND RAAC

Heavy Duty Cable to Flat





High strength electrical aluminum alloy.

Massive extra thick sections. Conforming contact grooves. Generous extra long contact lengths.

Large size, high strength, anodized and lubricated 2024T4 aluminum alloy clamping hardware.

Bolt heads pocketed for single wrench installation. Rounded contours.

NEMA drilling supplied. Other drilling, or undrilled, available on request.

There may be some special operating conditions where copper flashed pad may be desired on the tongue. Add suffix "C" to the catalog designation. For example: RAAC-013-D. If tin plated terminals are preferred, add "-TN" to catalog numbers. Example: RAA-013-D-TN.

For tongue mounting hardware, suffix catalog number with "-TMH." Example: RAA-013-D-TMH. (Aluminum hardware provided for type RAA, steel hardware for type RAAC.)

Catalog Number	Conductor Range		Wire Diameter Range‡	Approximate Dimensions											
				G Max.		J Bolt Dia.	K Hole Dia.		L		M		T		W	
	Aluminum	ACSR	in	in	mm	in	in	mm	in	mm	in	mm	in	mm	in	mm
RAA-013-S	6 Str.-2/0 Str.	6-2/0	.184- .447	3/4	19	1/2*	9/16	14	3 7/8	98	2	51	3/8	10	2 1/16	52
RAA-013-D	6 Str.-2/0 Str.	6-2/0	.184- .447	3/4	19	1/2*	9/16	14	5 1/4	133	2	51	3/8	10	2 1/16	52
RAA-025-S	6 Str.-250 MCM	6-4/0	.184- .575	7/8	22	1/2	9/16	14	4 5/8	117	2 3/4	70	3/8	10	2 1/8	54
RAA-025-D	6 Str.-250 MCM	6-4/0	.184- .575	7/8	22	1/2	9/16	14	6	152	2 3/4	70	3/8	10	2 1/8	54
RAA-025-F	6 Str.-250 MCM	6-4/0	.184- .575	7/8	22	1/2	9/16	14	6	152	2 3/4	70	3/8	10	2 1/8	54
RAA-040-D	3/0 Str.-400 MCM	3/0-336.4	.470- .728	15/16	24	1/2	9/16	14	6 1/4	159	3	76	3/8	10	2 1/4	57
RAA-040-F	3/0 Str.-400 MCM	3/0-336.4	.470- .728	15/16	24	1/2	9/16	14	6 1/4	159	3	76	3/8	10	2 1/4	57
RAA-065-D	250-650 MCM	266.8-556.5	.575- .953	1	25	1/2	9/16	14	6 3/4	171	3 1/2	89	7/16	11	2 5/8	67
RAA-065-F	250-650 MCM	266.8-556.5	.575- .953	1	25	1/2	9/16	14	6 3/4	171	3 1/2	89	7/16	11	2 5/8	67
RAA-065-E	250-650 MCM	266.8-556.5	.575- .953	1	25	1/2	9/16	14	7 3/4	197	3 1/2	89	3/8	10	2 5/8	67
RAA-090-D	500-900 MCM	477-795	.814-1.140	1 1/16	27	1/2	9/16	14	7	178	3 3/4	95	7/16	11	2 3/4	70
RAA-090-F	500-900 MCM	477-795	.814-1.140	1 1/16	27	1/2	9/16	14	7	178	3 3/4	95	7/16	11	2 3/4	70
RAA-090-E	500-900 MCM	477-795	.814-1.140	1 1/16	27	1/2	9/16	14	8	203	3 3/4	95	3/8	10	2 3/4	70
RAA-125-D	600-1250 MCM	556.5-1113	.879-1.293	1 3/16	30	5/8	9/16	14	7 1/2	191	4 1/4	108	7/16	11	3 3/8	86
RAA-125-F	600-1250 MCM	556.5-1113	.879-1.293	1 3/16	30	5/8	9/16	14	7 1/2	191	4 1/4	108	7/16	11	3 3/8	86
RAA-125-E	600-1250 MCM	556.5-1113	.879-1.293	1 3/16	30	5/8	9/16	14	8 1/2	216	4 1/4	108	7/16	11	3 3/8	86
RAA-160-D	900-1600 MCM	795-1431	1.040-1.459	1 1/4	32	5/8	9/16	14	7 3/4	197	4 1/2	114	7/16	11	3 1/2	89
RAA-160-F	900-1600 MCM	795-1431	1.040-1.459	1 1/4	32	5/8	9/16	14	7 3/4	197	4 1/2	114	7/16	11	3 1/2	89
RAA-160-E	900-1600 MCM	795-1431	1.040-1.459	1 1/4	32	5/8	9/16	14	8 3/4	222	4 1/2	114	7/16	11	3 1/2	89
RAA-200-D	1250-2000 MCM	1113-1780	1.290-1.632	1 7/16	37	3/4	9/16	14	8 1/4	210	5	127	1/2	13	4	102
RAA-200-F	1250-2000 MCM	1113-1780	1.290-1.632	1 7/16	37	3/4	9/16	14	8 1/4	210	5	127	1/2	13	4	102
RAA-200-E	1250-2000 MCM	1113-1780	1.290-1.632	1 7/16	37	3/4	9/16	14	9 1/4	235	5	127	1/2	13	4	102
RAA-300-D	2000-3000 MCM	1780-2870	1.602-1.998	2 1/8	54	3/4	9/16	14	8 1/2	216	5 1/4	133	1 3/8	35	4 1/2	114
RAA-300-F	2000-3000 MCM	1780-2870	1.602-1.998	2 1/8	54	3/4	9/16	14	8 1/2	216	5 1/4	133	1	25	4 1/2	114
RAA-300-E	2000-3000 MCM	1780-2870	1.602-1.998	2 1/8	54	3/4	9/16	14	9 1/2	241	5 1/4	133	3/4	19	4 1/2	114

**Denotes 2 bolt clamping element.*
‡For conversion to metric range, see page 175.

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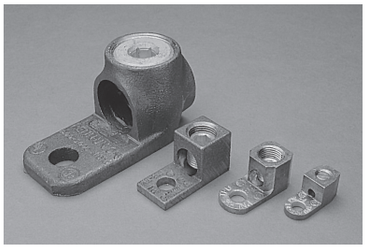
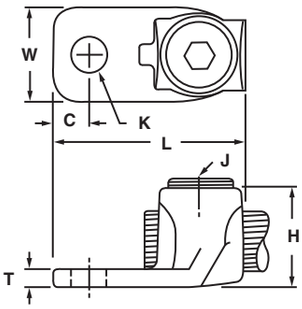
BRONZE PENN-LUG • TYPE PNL

1-Hole tongue

CU
90°C





THE ECONOMY LUG WITH QUALITY IMPROVEMENTS

Screw tightens directly on the conductor forcing the conductor into intimate contact with the body for maximum conductivity.

Flat bottom allows mounting either on tongue only or with full contact surface.

Inspection hole for proper cable insertion.

Locking boss available at an additional cost, contact factory.

Lug can be furnished electro-tinned or silver plated, as desired: For tin add "-TN" to catalog number. For silver add "-SV" to catalog number.

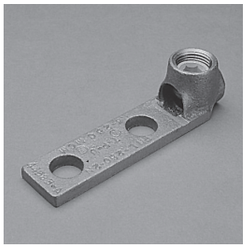
Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions													Wrench Size
			C		K		H		L		T		W		J	
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
PNL-8	14 Solid-8 Str.	.064- .146	3/16	5	13/64	5	7/16	11	7/8	22	3/32	2.38	3/8	10	#12-24	Screw Driver Slot
PNL-4	14 Solid-4 Str.	.064- .232	17/64	7	17/64	7	9/16	14	1 1/4	32	9/64	3.57	17/32	13	5/16-24	Screw Driver Slot
PNL-1/0	8 Solid-1/0 Str.	.128- .375	3/8	10	21/64	8	25/32	20	1 19/32	40	9/64	3.57	47/64	16	1/2-20	1/4
PNL-250	6 Solid-250 MCM	.162- .575	7/16	11	25/64	10	1 3/64	27	1 31/32	50	1/8	3.17	15/16	24	5/8-18	5/16
PNL-500	4 Solid-500 MCM	.204- .815	3/4	19	17/32	13	1 15/32	43	3	76	1/4	6.35	1 3/8	35	15/16-16	3/8
PNL-1000	500 MCM-1000MCM	.815-1.153	11/16	17	9/16	14	2	51	3 7/8	99	3/8	9.52	1 3/4	44	1 3/8-14	1/2

‡For conversion to metric range, see page 175.

BRONZE PENN-LUG • TYPE PNL

2 or 4 Hole Tongue

CU
90°C



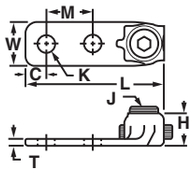


FIG. 1

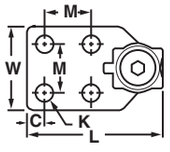


FIG. 2

Body is cast from high strength corrosion resistant copper alloy. Steel screw, cadmium plated. Lug can be furnished electro-tinned or silver plated as desired. For tin add "-TN" to catalog number. For silver add "-SV" to catalog number.

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions															Fig. No.	Wrench Size
			C		K		H		L		T		W		J	M			
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	in	mm		
PNL-1/0-2	8 Sol.-1/0 Str.	.128- .375	7/16	11.1	11/32	8.7	27/32	21	2 3/4	70	3/16	4.7	3/4	19	1/2-20	1	25	1	1/4
PNL-1/0-2N	8 Sol.-1/0 Str.	.128- .375	5/8	15.8	9/16	14.2	27/32	21	3 9/16	90	3/16	4.7	1	25	1/2-20	1 3/4	44	1	1/4
PNL-250-2	6 Sol.-250 MCM	.162- .575	7/16	11.1	7/16	11.1	1 1/32	26	2 7/8	73	7/32	5.5	15/16	24	5/8-18	1	25	1	1/4
PNL-250-2N•	6 Sol.-250 MCM	.162- .575	5/8	15.8	9/16	14.2	1 1/8	29	4 1/4	108	7/32	5.5	1	25	3/4-16	1 3/4	44	1	3/8
PNL-500-2	4 Sol.-500 MCM	.204- .815	7/16	11.1	7/16	11.1	1 15/32	36	3 3/8	86	5/16	7.9	1 3/8	35	15/16-16	1	25	1	3/8
PNL-500-2N•	4 Sol.-500 MCM	.204- .815	5/8	15.8	9/16	14.2	1 15/32	37	4 3/8	111	5/16	7.9	1 3/8	35	15/16-16	1 3/4	44	1	3/8
PNL-500-4N	4 Sol.-500 MCM	.204- .815	5/8	15.8	9/16	14.2	1 15/32	37	4 3/8	111	1/4	6.3	3	76	15/16-16	1 3/4	44	2	3/8
PNL-1000-2	500 MCM-1000 MCM	.815-1.153	9/16	14.2	9/16	14.2	2	51	4 7/8	124	3/8	9.5	1 3/4	44	1 3/8-14	1 1/2	38	1	3/8
PNL-1000-2N•	500 MCM-1000 MCM	.815-1.153	5/8	15.8	9/16	14.2	2	51	4 7/8	124	3/8	9.5	1 15/16	49	1 3/8-14	1 3/4	44	1	3/8
PNL-1000-4N	500 MCM-1000 MCM	.815-1.153	5/8	15.8	9/16	14.2	2	51	4 7/8	124	1/4	6.3	3	76	1 3/8-14	1 3/4	44	2	3/8

‡For conversion to metric range, see page 175.
•CSA Listed

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BRONZE TERMINAL LUGS • TYPE P2NL

2 or 4 hole tongue for two wires

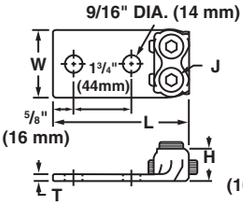


FIG. 1

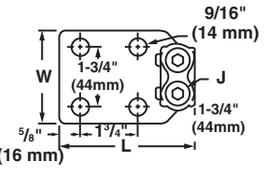


FIG. 2

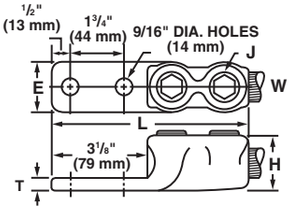
Body is cast from high strength corrosion resistant copper alloy. Steel screw, cadmium plated. Lug can be furnished electro-tinned or silver plated as desired. For tin add "-TN" to catalog number. For silver add "-SV" to catalog number.

Annular serrations for better resistance to horizontal pull–cable is snubbed behind the ridges.

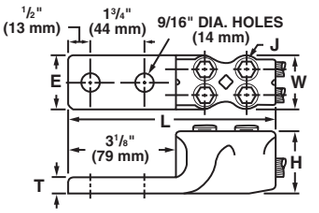
Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions									Fig. No.	Wrench Size
			H		L		T		W		J		
		in	in	mm	in	mm	in	mm	in	mm	in		
P2NL-1/0-2N	8 Sol.-1/0 Str.	.128- .375	27/32	21	3 7/8	98	5/16	8	1 1/2	38	1/2-20	1	1/4
P2NL-1/0-4N	8 Sol.-1/0 Str.	.128- .375	27/32	21	3 7/8	98	1/4	6	3	76	1/2-20	2	1/4
P2NL-250-2N	6 Sol.-250 MCM	.162- .575	1 1/8	29	4	102	5/16	8	1 3/4	44	3/4-16	1	3/8
P2NL-250-4N	6 Sol.-250 MCM	.162- .575	1 1/8	29	4	102	1/4	6	3	76	3/4-16	2	3/8
P2NL-500-2N	4 Sol.-500 MCM	.204- .815	1 15/32	37	4 1/2	114	3/8	10	2 1/2	64	15/16-16	1	3/8
P2NL-500-4N	4 Sol.-500 MCM	.204- .815	1 15/32	37	4 1/2	114	5/16	8	3	76	15/16-16	2	3/8
P2NL-1000-2N	500 MCM-1000 MCM	.815-1.153	2	51	4 7/8	124	1/2	13	3	76	1 3/8-14	1	3/8
P2NL-1000-4N	500 MCM-1000 MCM	.815-1.153	2	51	4 7/8	124	1/2	13	3	76	1 3/8-14	2	3/8

‡For conversion to metric range, see page 175.

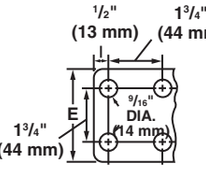
BRONZE TERMINAL LUGS • TYPE PPNL & PP2NL



PPNL



PP2NL



STANDARD 4 HOLE NEMA DRILLING

Body is cast from high strength corrosion resistant copper alloy. Steel screw, cadmium plated. Lug can be furnished electro-tinned or silver plated as desired. For tin add "-TN" to catalog number. For silver add "-SV" to catalog number.

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			E		H		J	L		T		W		
		in	in	mm	in	mm	in	in	mm	in	mm	in	mm	
PPNL-4/0-2*	4 Str.–4/0 Str.	.232- .528	1 1/8	29	1 1/32	26	5/8-18	4 7/8	124	1/4	6.35	7/8	22	
PPNL-4/0-4*	4 Str.–4/0 Str.	.232- .528	3	76	1 1/32	26	5/8-18	4 7/8	124	1/4	6.35	7/8	22	
PP2NL-4/0-2	4 Str.–4/0 Str.	.232- .528	1 3/4	44	1 1/32	26	5/8-18	4 5/32	106	5/16	7.93	1 3/4	44	
PP2NL-4/0-4	4 Str.–4/0 Str.	.232- .528	3	76	1 1/32	26	5/8-18	4 5/32	106	5/16	7.93	1 3/4	44	
PPNL-350-2	3/0 Str.–350 MCM	.470- .682	1 1/8	29	1 1/4	32	3/4-16	5 3/16	132	5/16	7.93	1 1/32	26	
PPNL-350-4	3/0 Str.–350 MCM	.470- .682	3	76	1 1/4	32	3/4-16	5 3/16	132	5/16	7.93	1 1/32	26	
PP2NL-350-2	3/0 Str.–350 MCM	.470- .682	2 1/16	52	1 1/4	32	3/4-16	4 5/16	110	3/8	9.52	2 3/32	53	
PP2NL-350-4	3/0 Str.–350 MCM	.470- .682	3	76	1 1/4	32	3/4-16	4 5/16	110	3/8	9.52	2 3/32	53	
PPNL-800-2	400-800 MCM	.728-1.031	1 5/8	41	1 13/16	46	1 1/4-14	6 7/16	164	13/32	10.31	1 5/8	41	
PPNL-800-4	400-800 MCM	.728-1.031	3	76	1 13/16	46	1 1/4-14	6 7/16	164	13/32	10.31	1 5/8	41	
PP2NL-800-2	400-800 MCM	.728-1.031	1 5/8	41	1 13/16	46	1 1/4-14	4 15/16	125	1/2	12.70	3 5/16	84	
PP2NL-800-4	400-800 MCM	.728-1.031	3	76	1 13/16	46	1 1/4-14	4 15/16	125	1/2	12.70	3 5/16	84	
PPNL-1000-2	750-1000 MCM	.999-1.529	1 3/4	44	2	51	1 3/8-14	6 3/4	171	1/2	12.70	1 3/4	44	
PPNL-1000-4	750-1000 MCM	.999-1.529	3	76	2	51	1 3/8-14	6 3/4	171	1/2	12.70	1 3/4	44	
PP2NL-1000-2	750-1000 MCM	.999-1.529	1 3/4	44	2	51	1 3/8-14	5 1/8	130	9/16	14.28	3 5/8	92	
PP2NL-1000-4	750-1000 MCM	.999-1.529	3	76	2	51	1 3/8-14	5 1/8	130	9/16	14.28	3 5/8	92	

**-2, -4, denotes 2 or 4 hole tongues.*

‡For conversion to metric range, see page 175.

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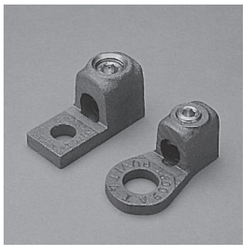
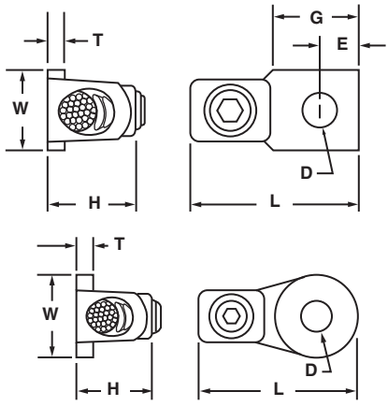
BRONZE VI-TITE TERMINAL LUGS • TYPE VL





CU
90°C

Body is cast from high strength corrosion resistant copper alloy. Bronze screw and pressure bar provides uniform clamping pressure without direct screw contact on conductor. Unique designed protuberances assure better resistance to horizontal pull. Hex head screws can be furnished on request by suffixing catalog numbers with "-HH". For tin plated–suffix catalog number "-TN".

SQUARE FLANGE–ONE HOLE

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions														Amp. Rat.
			T		W		D		E		G		H		L		
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
*VL-21680/82	14 Sol.–4 Str.	.064- .232	9/64	3.57	17/32	13.5	17/64	6.75	17/64	6.75	21/32	17	9/16	14	1 1/4	32	85
VL-21683	4 Sol.–1 Str.	.204- .332	7/32	5.55	5/8	16	9/32	7.14	3/8	9.52	7/8	22	7/8	22	1 11/16	43	100
VL-21685	2 Str.–2/0 Str.	.292- .419	1/4	6.35	13/16	21	13/32	10.31	7/16	11.11	1	25	1 1/32	26	1 7/8	48	150
VL-21687	1/0 Str.–4/0 Str.	.375- .528	1/4	6.35	1	25	13/32	10.31	1/2	12.7	1 1/4	32	1 9/32	33	2 3/8	60	200
VL-21689	3/0 Str.–300 MCM	.470- .634	5/16	7.93	1 3/16	30	17/32	13.49	3/4	19.05	1 1/2	38	1 3/8	35	2 11/16	68	300
VL-21691	300–500 MCM	.634- .815	3/8	9.52	1 1/2	38	11/16	17.46	3/4	19.05	1 5/8	41	1 13/16	46	3	76	500
VL-21692	300–500 MCM	.634- .815	3/8	9.52	1 3/8	35	17/32	13.49	7/8	22.22	1 7/8	48	1 13/16	46	3 1/8	79	500
VL-21694	500–800 MCM	.815-1.031	13/32	10.31	1 3/4	44	17/32	13.49	1	25.4	2 3/16	56	1 7/8	48	3 11/16	94	600
VL-21697	700–1000 MCM	.965-1.153	7/16	11.11	2	51	11/16	17.46	1	25.4	2 3/16	56	2 1/16	52	4	102	800
VL-21698	700–1000 MCM	.965-1.153	7/16	11.11	2	51	11/16	17.46	1 3/16	30.16	2 1/2	64	2 1/16	52	4	102	800
VL-21986	1000–1500 MCM	1.153-1.412	1/2	12.70	2 1/8	54	13/16	20.63	1 1/16	25.46	2 1/8	54	2 5/16	59	4 3/4	121	1050
VL-21987	1500-2000 MCM	1.412-1.632	9/16	14.28	2 1/2	64	13/16	20.63	1 3/16	30.16	2 3/8	60	2 11/16	68	5 1/8	130	1250

**No saddle, only available with slotted screw.* *‡For conversion to metric range, see page 175.*

ROUND FLANGE–ONE HOLE

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions										Amp. Rat.
			T		W		D		H		L		
		in	in	mm	in	mm	in	mm	in	mm	in	mm	
VL-22003	8 Sol.–6 Str.	.128- .184	5/32	3.96	1	25	13/32	10.31	5/8	16	1 1/2	30	60
VL-22004	8 Sol.–6 Str.	.128- .184	5/32	3.96	1 1/8	28	17/32	13.49	5/8	16	1 5/8	41	60
VL-22008	4 Sol.–1 Str.	.204- .332	3/16	4.76	3/4	19	11/32	8.73	7/8	22	1 9/16	40	100
VL-22009	4 Sol.–1 Str.	.204- .332	3/16	4.76	1	25	13/32	10.31	7/8	22	1 13/16	46	100
VL-22010	4 Sol.–1 Str.	.204- .332	3/16	4.76	1	25	17/32	13.49	7/8	22	1 13/16	46	100
VL-22014	2 Str.–2/0 Str.	.292- .419	1/4	6.35	1	25	13/32	10.31	1	25	1 7/8	48	150
VL-22015	2 Str.–2/0 Str.	.292- .419	1/4	6.35	1	25	17/32	13.49	1	25	1 7/8	48	150
VL-22017	2 Str.–2/0 Str.	.292- .419	1/4	6.35	1 1/2	38	25/32	19.84	1	25	2 5/8	60	150
VL-22018	2 Str.–2/0 Str.	.292- .419	1/4	6.35	2	51	29/32	23.01	1	25	2 7/8	73	150
VL-22023	1/0 Str.–4/0 Str.	.375- .528	3/16	4.76	1	25	17/32	13.49	1 1/4	32	2 1/4	57	200
VL-22025	1/0 Str.–40 Str.	.375- .528	5/16	7.93	1 1/2	38	25/32	19.84	1 1/8	32	2 5/8	67	200
VL-22026	1/0 Str.–4/0 Str.	.375- .528	5/16	7.93	2	51	29/32	23.01	1 1/4	32	3 1/8	79	200
VL-22029	3/0 Str.–300 MCM	.470- .634	11/32	8.73	1 1/2	38	17/32	13.49	1 3/8	35	2 3/4	70	300
VL-22031	3/0 Str.–300 MCM	.470- .634	11/32	8.73	1 1/2	38	25/32	19.84	1 3/8	35	2 3/4	70	300
VL-22032	3/0 Str.–300 MCM	.470- .634	11/32	8.73	2	51	29/32	23.01	1 3/8	35	3 1/4	82	300
VL-22035	300–500 MCM	.634- .815	3/8	9.52	1 1/2	38	17/32	13.49	1 13/16	46	2 7/8	73	500
VL-22038	300–500 MCM	.634- .815	3/8	9.52	2	51	29/32	23.01	1 13/16	46	3 3/8	88	500
VL-22043	500-800 MCM	.815-1.031	7/16	11.11	1 1/2	38	17/32	13.49	1 13/16	46	3	76	600
VL-22046	500–800 MCM	.815-1.031	7/16	11.11	2	51	29/32	23.01	1 13/16	46	3 1/2	89	600
VL-22049	500–800 MCM	.815-1.031	7/16	11.11	2 1/2	64	1 3/16	33.33	1 13/16	46	4	102	600
VL-22053	700–1000 MCM	.965-1.153	15/32	11.90	1 1/2	38	17/32	13.49	2 1/16	52	3 1/4	83	800

‡For conversion to metric range, see page 175.
"-TN" and "-HH" suffixed catalog numbers are not UL Listed.

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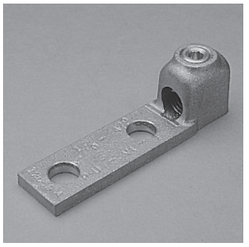
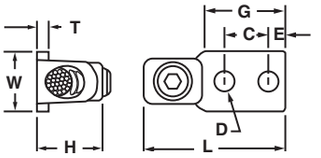
BRONZE VI-TITE TERMINAL LUGS • TYPE VL

CU
90°C

Rectangular flange–two holes



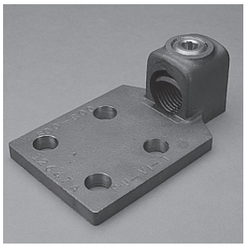


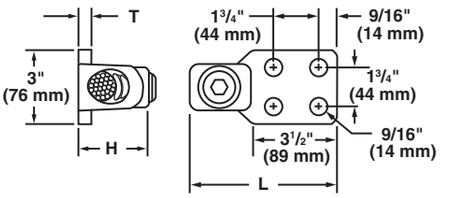
Body is cast from high strength corrosion resistant copper alloy. Bronze screw and pressure bar provides uniform clamping pressure without direct screw contact on conductor. Unique designed protuberances assure better resistance to horizontal pull. Hex head screws can be furnished on request by suffixing catalog numbers with "-HH". For tin plated–suffix catalog number with "-TN".

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions																Amp.
			T		W		C		D		E		G		H		L		
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Rat.
VL-21761	8 Sol.–6 Str.	.128- .184	1/8	3.17	1/2	13	5/8	16	9/32	7.14	1/4	6.35	1 7/16	37	5/8	16	2	51	60
VL-21763	4 Sol.–1 Str.	.204- .332	7/32	5.55	5/8	16	3/4	19	9/32	7.14	9/32	7.14	1 7/16	37	7/8	22	2 1/4	57	100
VL-21764	4 Sol.–1 Str.	.204- .332	7/32	5.55	3/4	19	1	25	7/16	11.11	7/16	11.11	2 1/8	54	7/8	22	3	76	100
VL-21765	4 Sol.–1 Str.	.204- .332	7/32	5.55	3/4	19	3/4	19	5/16	7.93	13/32	10.31	1 5/8	41	7/8	22	2 1/2	64	100
VL-21766	4 Sol.–1 Str.	.204- .332	7/32	5.55	1	25	1	25	7/16	11.11	17/32	13.49	2 1/8	54	7/8	22	3	76	100
VL-21767	2 Str.–2/0 Str.	.292- .419	1/4	6.35	13/16	21	1	25	13/32	10.31	7/16	11.11	2 1/8	54	1	25	3	76	150
VL-21768	2 Str.–2/0 Str.	.292- .419	1/4	6.35	1	25	1 3/4	44	9/16	14.28	9/16	14.28	3	76	1	25	3 7/8	98	150
VL-21769	2 Str.–2/0 Str.	.292- .419	1/4	6.35	1	25	3/4	19	5/16	7.93	13/32	10.31	1 5/8	41	1	25	2 1/2	64	150
VL-21770	2 Str.–2/0 Str.	.292- .419	1/4	6.35	1	25	1	25	7/16	11.11	17/32	13.49	2 1/8	54	1	25	3	76	150
VL-21773/76	1/0 Str.–4/0 Str.	.375- .528	7/32	5.55	1	25	1	25	7/16	11.11	7/16	11.11	2 1/8	54	1 1/4	32	3 1/4	83	200
VL-21774	1/0 Str.–4/0 Str.	.375- .528	9/32	7.14	1	25	1 3/4	44	9/16	14.28	9/16	14.28	3	76	1 1/4	32	4 1/8	105	200
VL-21775	1/0 Str.–4/0 Str.	.375- .528	3/16	4.76	1	25	3/4	19	5/16	7.93	13/32	10.31	1 5/8	41	1 1/4	32	2 3/4	70	200
VL-21779	3/0 Str.–300 MCM	.470- .634	5/16	7.93	1 3/16	30	1	25	13/32	10.31	7/16	11.11	2 1/8	54	1 3/8	35	3 3/8	86	300
VL-21780	3/0 Str.–300 MCM	.470- .634	5/16	7.93	1 3/16	30	1 3/4	44	9/16	14.28	9/16	14.28	3	76	1 3/8	35	4 1/4	106	300
VL-21781	3/0 Str.–300 MCM	.470- .634	5/16	7.93	1 1/2	38	3/4	19	7/16	11.11	13/32	10.31	1 5/8	41	1 3/8	35	2 7/8	73	300
VL-21782	3/0 Str.–300 MCM	.470- .634	5/16	7.93	1 1/2	38	1	25	7/16	11.11	17/32	13.49	2 1/8	54	1 3/8	35	3 3/8	86	300
VL-21784	300–500 MCM	.634- .815	3/8	9.52	1 3/8	35	1	25	13/32	10.31	7/16	11.11	2 1/8	54	1 13/16	46	3 1/2	89	500
VL-21785	300–500 MCM	.634- .815	3/8	9.52	1 3/8	35	1 3/4	44	9/16	14.28	9/16	14.28	3 1/2	89	1 13/16	46	4 3/4	121	500
VL-21786	300–500 MCM	.634- .815	3/8	9.52	1 1/2	38	3/4	19	7/16	11.11	13/32	10.31	1 5/8	41	1 13/16	46	3	76	500
VL-21787	300–500 MCM	.634- .815	3/8	9.52	1 1/2	38	1	25	7/16	11.11	17/32	13.49	2 1/8	54	1 13/16	46	3 1/2	89	500
VL-21789	500–800 MCM	.815-1.031	13/32	10.31	1 3/4	44	1/2	38	9/16	14.28	9/16	14.28	3	76	1 13/16	46	4 1/2	114	600
VL-21790	500–800 MCM	.815-1.031	13/32	10.31	1 3/4	44	1 3/4	44	9/16	15.28	9/16	14.28	3 1/2	89	1 13/16	46	5	128	600
VL-21791	500–800 MCM	.815-1.031	13/32	10.31	1 3/4	44	1	25	7/16	11.11	17/32	13.49	2 3/16	56	1 13/16	46	3 3/4	95	600
VL-21794	700–1000 MCM	.965-1.153	7/16	11.11	2	51	1 1/2	38	9/16	14.28	9/16	14.28	3	76	2 1/16	53	4 3/4	121	800
VL-21795	700–1000 MCM	.965-1.153	7/16	11.11	2	51	1 3/4	44	9/16	14.28	5/8	15.87	3 1/2	89	2 1/16	53	5 1/4	133	800
VL-21796	700–1000 MCM	.965-1.153	7/16	11.11	2	51	1	25	7/16	11.11	17/32	13.49	2 3/16	56	2 1/16	53	4	102	800

‡For conversion to metric range, see page 175.

Square flange–four holes





Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions						Amp.
			T		H		L		
		in	in	mm	in	mm	in	mm	Rat.
VL-21917	3/0 Str.–300 MCM	.470- .634	5/16	7.93	1 1/4	32	4 1/4	108	300
VL-21919	300–500 MCM	.634- .815	3/8	9.52	3/8	35	4 3/4	121	500
VL-21921	500-800 MCM	.815-1.031	13/32	10.31	1 1/2	38	5	127	600
VL-21925	700-1000 MCM	.965-1.153	7/16	11.11	1 3/4	44	5 1/4	133	800

‡For conversion to metric range, see page 175.
"-TN" and "-HH" suffixed catalog numbers are not UL Listed.

PENNUNION
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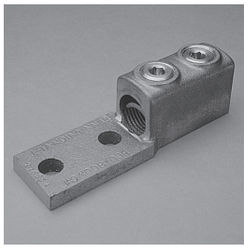
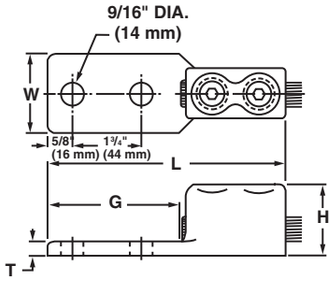
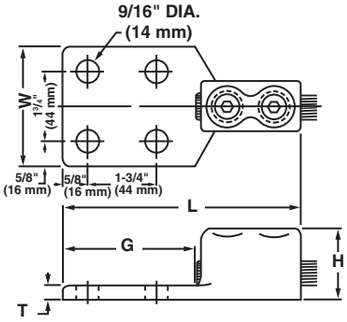
BRONZE VI-TITE TERMINAL LUGS • TYPES VVL & VL2



TANDEM HEAD
TYPE VVL

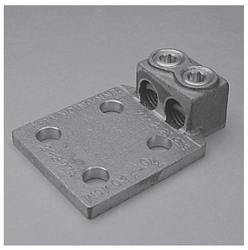




Body is cast from high strength corrosion resistant copper alloy. Bronze screw and pressure bar provides uniform clamping pressure without direct screw contact on conductor. Unique designed protuberances assure better resistance to horizontal pull. Hex head screws can be furnished on request by suffixing catalog numbers with "-HH". For tin plated–suffix catalog number with "-TN".

Catalog Number 2 Hole	Conductor Range	Wire Diameter Range‡	Approximate Dimensions 2-Hole Tongue										Catalog Number 4 Hole	Approximate Dimensions 4-Hole Tongue									
			L		W		H		G		T			L		W		H		G		T	
		in	in	mm	in	mm	in	mm	in	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
VVL-21766	4 Sol.–1 Str.	.204- .332	4 5/8	117	1 1/4	32	7/8	22	3	76	1/4	6	–	–	–	–	–	–	–	–	–	–	–
VVL-21768	2 Str.–2/0 Str.	.292- .419	4 3/4	121	1 1/4	32	1 1/32	26	3	76	1/4	6	–	–	–	–	–	–	–	–	–	–	–
VVL-21774	1/0 Str.–4/0 Str.	.375- .528	5 1/8	130	1	25	1 9/32	33	3	76	1/4	6	–	–	–	–	–	–	–	–	–	–	–
VVL-21780/82	3/0 Str.–350 MCM	.470- .682	5 3/8	137	1 3/16	30	1 3/8	35	3	76	5/16	8	VVL-21918	5 1/4	133	3	76	1 1/4	32	3	75	5/16	8
VVL-21785	300–500 MCM	.634- .815	6 1/8	156	1 3/8	35	1 13/16	46	3 1/2	89	3/8	10	VVL-21919	6 1/8	156	3	76	1 13/16	46	3 1/2	89	3/8	10
VVL-21790	500–800 MCM	.815-1.031	6 1/2	165	1 3/4	44	1 13/16	46	3 1/4	83	3/8	10	VVL-21921	6 1/2	165	3	76	1 13/16	46	3 1/4	83	3/8	10
VVL-21795	700–1000 MCM	.965-1.153	6 3/4	171	2	51	2 1/16	52	3 1/4	83	7/16	11	VVL-21925	6 1/2	165	3	76	2 1/16	52	3 1/4	83	3/8	10
VVL-21797	1000-1500 MCM	1.153-1.412	7 1/4	184	2	51	2 5/16	59	3 1/4	83	5/8	16	VVL-21926	7 1/4	184	3	76	2 5/16	59	3 1/4	83	1/2	13
VVL-21799	1500–2000 MCM	1.412-1.632	8 5/8	219	2 1/2	64	2 3/4	70	3 1/4	83	5/8	16	VVL-21928	8 5/8	219	3	76	2 3/4	70	3 1/4	83	5/8	16

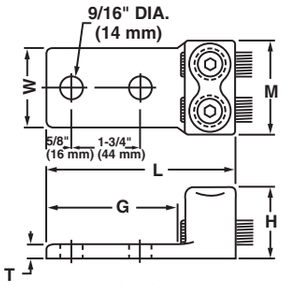
‡For conversion to metric range, see page 175.

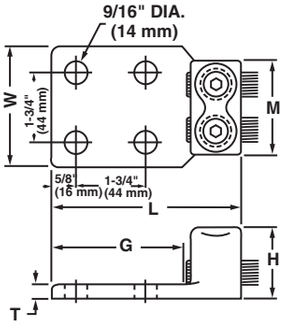


DOUBLE HEAD
TYPE VL2

Catalog Number 2-Hole Tongue	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			L		M		W		H		G		T	
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VL2-21766	4 Sol.-1 Str.	.204- .332	3 15/16	100	1 3/16	30	3/4	19	7/8	22	3 1/8	79	7/32	6
VL2-21768	2 Str.-2/0 Str.	.292- .419	4	102	1 1/2	38	1 1/2	38	1 1/32	26	3 1/8	79	7/32	6
VL2-21774	1/0 Str.-4/0 Str.	.375- .528	4 1/4	108	1 3/4	44	1 3/4	44	1 9/32	33	3 1/8	79	1/4	6
VL2-21782	3/0 Str.-350 MCM	.470- .682	4 5/16	110	1 15/16	49	1 1/2	38	1 3/8	35	3 1/8	79	5/16	8
VL2-21785	300-500 MCM	.634- .815	4 1/2	114	2 3/8	60	2	51	1 13/16	46	3 1/2	89	3/8	10
VL2-21790	500-800 MCM	.815-1.031	4 5/8	117	2 13/16	71	2 1/8	54	1 13/16	46	3 1/8	79	7/16	11
VL2-21795	700-1000 MCM	.965-1.153	5 5/16	135	3 1/8	79	2 3/8	60	2 1/16	52	3 1/8	79	1/2	13
VL2-21797	1000-1500 MCM	1.153-1.412	6	152	4	102	2 7/8	73	2 5/16	59	3 1/4	83	5/8	16
VL2-21799	1500-2000 MCM	1.412-1.632	6 1/8	156	4 3/8	111	3	76	2 11/16	68	3 1/4	83	3/4	18
4-Hole Tongue														
VL2-21918	3/0 Str.-350 MCM	.470- .682	4 5/16	110	3	76	3	76	1 3/8	35	3 1/8	79	5/16	8
VL2-21919	300-500 MCM	.634- .815	4 7/16	113	2 3/8	60	3	76	1 13/16	46	3 1/8	79	3/8	10
VL2-21921	500-800 MCM	.815-1.031	4 5/8	117	2 13/16	71	3	76	1 13/16	46	3 1/8	79	7/16	11
VL2-21925	700-1000 MCM	.965-1.153	5 5/16	135	3 1/8	79	3 1/4	83	2 1/16	52	3 1/4	83	1/2	13
VL2-21926	1000-1500 MCM	1.153-1.412	6	152	4	102	3 1/2	90	2 5/16	59	3 1/4	83	5/8	16
VL2-21928	1500-2000 MCM	1.412-1.632	6 1/8	156	4 3/8	111	4	102	2 11/16	68	3 1/4	83	5/8	16

‡For conversion to metric range, see page 175.





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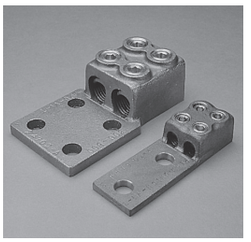
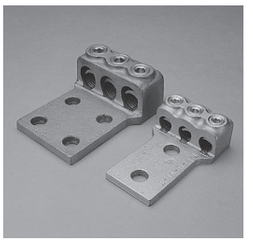
BRONZE VI-TITE TERMINAL LUGS • TYPES VVL2 & VL3



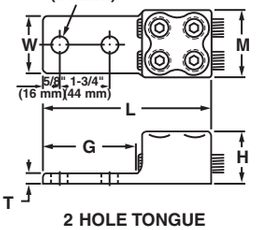
DOUBLE TANDEM HEAD
TYPE VVL2



TRIPLE HEAD
TYPE VL3

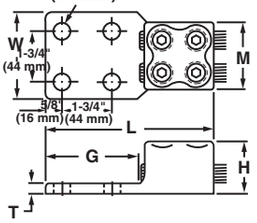
Body is cast from high strength corrosion resistant copper alloy. Bronze screw and pressure bar provides uniform clamping pressure without direct screw contact on conductor. Unique designed protuberances assure better resistance to horizontal pull. Hex head screws can be furnished on request by suffixing catalog numbers with "-HH". For tin plated–suffix catalog number with "-TN".

9/16" DIA. HOLES
(14 mm)



2 HOLE TONGUE

9/16" DIA. HOLES
(14 mm)



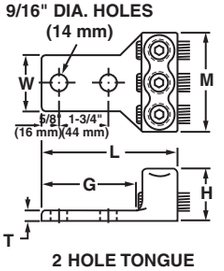
4 HOLE TONGUE

TYPE VVL2

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			L		M		W		H		G		T	
2-Hole Tongue		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VVL2-21766	4 Sol.–1 Str.	.204- .332	4 3/4	121	1 1/4	32	1 1/2	38	7/8	22	3 1/8	79	1/4	6
VVL2-21768	2 Str.–2/0 Str.	.292- .419	4 7/8	124	1 1/2	38	1 1/2	38	1 1/32	26	3 1/8	79	1/4	6
VVL2-21774	1/0 Str.–4/0 Str.	.375- .528	5 1/4	133	1 3/4	44	1 3/4	44	1 9/32	33	3 1/8	79	1/4	6
VVL2-21780/82	3/0 Str.–350 MCM	.470- .682	5 1/2	140	1 15/16	49	1 1/2	38	1 3/8	35	3 1/8	79	5/16	8
VVL2-21785	300–500 MCM	.634- .815	5 3/4	146	2 3/8	60	2 3/8	60	1 13/16	46	3 1/8	79	3/8	10
VVL2-21790	500–800 MCM	.815-1.031	6 1/8	156	2 13/16	71	1 3/4	44	1 13/16	46	3 1/8	79	1/2	13
VVL2-21795	700-1000 MCM	.965-1.153	6 5/8	168	3 1/8	79	2 1/8	54	2 1/16	52	3 1/8	79	1/2	13
VVL2-21797	1000–1500 MCM	1.153-1.412	7 3/4	197	4 1/8	105	2 3/4	70	2 5/16	59	3 1/8	79	9/16	14
VVL2-21799	1500-2000 MCM	1.412-1.632	8	203	4 3/8	111	3	76	2 11/16	68	3 1/8	79	5/8	16
4-Hole Tongue														
VVL2-21918	3/0 Str.–350 MCM	.470- .682	5 1/2	140	1 15/16	49	3	76	1 3/8	35	3 1/8	79	5/16	8
VVL2-21919	300–500 MCM	.634- .815	5 3/4	146	2 3/8	60	3	76	1 13/16	46	3 1/8	79	3/8	10
VVL2-21921	500-800 MCM	.815-1.031	6 1/8	156	2 13/16	71	3	76	1 13/16	46	3 1/8	79	7/16	11
VVL2-21925	700-1000 MCM	.965-1.153	6 5/8	168	3 1/8	79	4	102	2 1/16	52	3 1/8	79	1/2	13
VVL2-21926	1000-1500 MCM	1.153-1.412	7 3/4	197	4 1/8	105	4	102	2 5/16	59	3 1/8	79	1/2	13
VVL2-21928	1500-2000 MCM	1.412-1.632	8	203	4 3/8	111	4	102	2 11/16	68	3 1/8	79	5/8	16

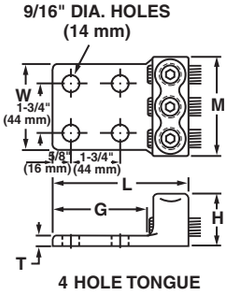
‡For conversion to metric range, see page 175.

9/16" DIA. HOLES
(14 mm)



2 HOLE TONGUE

9/16" DIA. HOLES
(14 mm)



4 HOLE TONGUE

TYPE VL3

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			L		M		W		H		G		T	
2-Hole Tongue		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VL3-21766	4 Sol.–1 Str.	.204- .332	3 15/16	100	1 7/8	48	1 1/2	38	7/8	22	3 1/8	79	1/4	6
VL3-21768	2 Str.–2/0 Str.	.292- .419	4	102	2 3/16	56	1 5/8	41	1 1/32	26	3 1/8	79	7/32	6
VL3-21774	1/0 Str.–4/0 Str.	.375- .528	4 1/4	108	2 5/8	67	1 7/8	46	1 9/32	33	3 1/8	79	1/4	6
VL3-21782	3/0 Str.–350 MCM	.470- .682	4 5/16	110	2 7/8	73	1 1/2	38	1 3/8	35	3 1/8	79	5/16	8
VL3-21785	300-500 MCM	.634- .815	4 1/2	114	3 1/2	89	2 1/2	64	1 13/16	46	3 1/8	79	3/8	10
VL3-21790	500-800 MCM	.815-1.031	4 5/8	117	4 3/16	106	2 1/2	64	1 13/16	46	3 1/8	79	7/16	11
VL3-21795	700-1000 MCM	.965-1.153	5 5/16	135	4 5/8	117	2 1/2	64	2 1/16	52	3 1/4	83	1/2	13
VL3-21797	1000-1500 MCM	1.153-1.412	6	152	6	152	2 1/2	64	2 5/16	59	3 1/8	79	5/8	16
VL3-21799	1500-2000 MCM	1.412-1.632	6 1/8	156	6 3/4	171	3	76	2 11/16	68	3 1/8	79	5/8	16
4-Hole Tongue														
VL3-21918	3/0 Str.–350 MCM	.470- .682	4 5/16	110	2 7/8	73	3	76	1 3/8	35	3 1/8	79	5/16	8
VL3-21919	300-500 MCM	.634- .815	4 7/16	113	3 1/2	89	3	76	1 13/16	46	3 1/8	79	3/8	10
VL3-21921	500-800 MCM	.815-1.031	4 5/8	117	4 3/16	106	3	76	1 13/16	46	3 1/8	79	1/2	13
VL3-21925	700-1000 MCM	.965-1.153	5 5/16	135	4 5/8	117	3	76	2 1/16	52	3 1/4	83	1/2	13
VL3-21926	1000-1500 MCM	1.153-1.412	6	152	6	152	3 1/2	89	2 5/16	59	3 1/8	79	5/8	16
VL3-21928	1500-2000 MCM	1.412-1.632	6 1/8	156	6 3/4	171	4	102	2 11/16	68	3 1/8	79	5/8	16

‡For conversion to metric range, see page 175.

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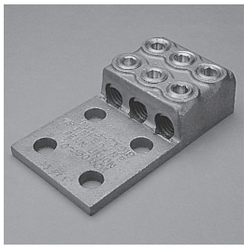
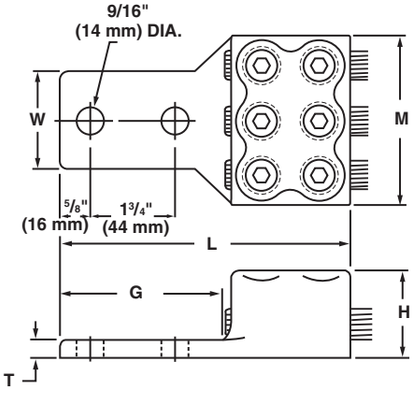
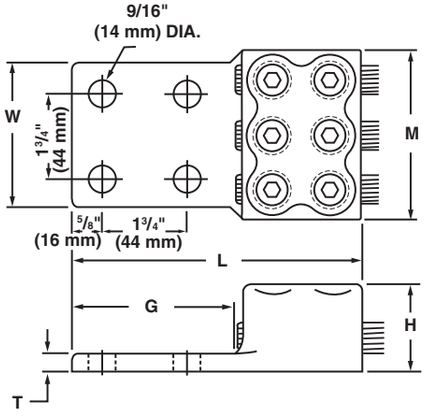
BRONZE VI-TITE TERMINAL LUGS • TYPE VVL3



THREE CABLE
TANDEM HEAD
TYPE VVL3

Body is cast from high strength corrosion resistant copper alloy. Bronze screw and pressure bar provides uniform clamping pressure without direct screw contact on conductor. Unique designed protuberances assure better resistance to horizontal pull. Hex head screws can be furnished on request by suffixing catalog numbers with "-HH". For tin plated–suffix catalog number with "-TN".





2-HOLE TONGUE

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			L		M		W		H		G		T	
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VVL3-21766	4 Sol.–1 Str.	.204- .332	4 3/4	121	1 7/8	48	1 1/2	38	7/8	22	3 1/8	79	1/4	6
VVL3-21768	2 Str.–2/0 Str.	.292- .419	4 7/8	124	2 3/16	56	1 1/2	38	1 1/32	26	3 1/8	79	1/4	6
VVL3-21774	1/0 Str.–4/0 Str.	.375- .528	5 1/4	133	2 5/8	67	1 3/4	44	1 9/32	33	3 1/8	79	1/4	6
VVL3-21782	3/0 Str.–350 MCM	.470- .682	5 1/2	140	2 7/8	73	1 1/2	38	1 3/8	35	3 1/8	79	5/16	8
VVL3-21785	300–500 MCM	.634- .815	5 3/4	146	3 1/2	89	2 3/8	60	1 13/16	46	3 1/8	79	3/8	10
VVL3-21790	500-800 MCM	.815-1.031	6 1/8	156	4 3/16	106	1 3/4	44	1 13/16	46	3 1/8	79	1/2	13
VVL3-21795	700–1000 MCM	.965-1.153	6 5/8	168	4 5/8	117	2 1/8	54	2 1/16	52	3 1/8	79	1/2	13
VVL3-21797	1000-1500 MCM	1.153-1.412	7 3/4	197	6	152	2 3/4	70	2 5/16	59	3 1/8	79	9/16	14
VVL3-21799	1500-2000 MCM	1.412-1.632	8	203	6 3/4	171	3	76	2 11/16	68	3 1/8	79	5/8	16

‡For conversion to metric range, see page 175.

4-HOLE TONGUE

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			L		M		W		H		G		T	
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VVL3-21918	3/0 Str.–350 MCM	.470- .682	5 1/2	140	2 7/8	73	3	76	1 3/8	35	3 1/8	79	5/16	8
VVL3-21919	300-500 MCM	.634- .815	5 3/4	146	3 1/2	89	3	76	1 13/16	46	3 1/8	79	3/8	10
VVL3-21921	500-800 MCM	.815-1.031	6 1/8	156	4 3/16	106	3	76	1 13/16	46	3 1/8	79	7/16	11
VVL3-21925	700-1000 MCM	.965-1.153	6 5/8	168	4 5/8	117	4	102	2 1/16	52	3 1/8	79	1/2	13
VVL3-21926	1000-1500 MCM	1.153-1.412	7 3/4	197	6	152	4	102	2 5/16	59	3 1/8	79	1/2	13
VVL3-21928	1500-2000 MCM	1.412-1.632	8	203	6 3/4	171	4	102	2 11/16	68	3 1/8	79	5/8	16

‡For conversion to metric range, see page 175.

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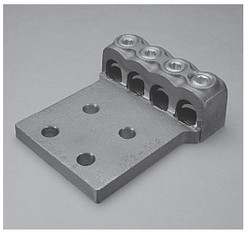
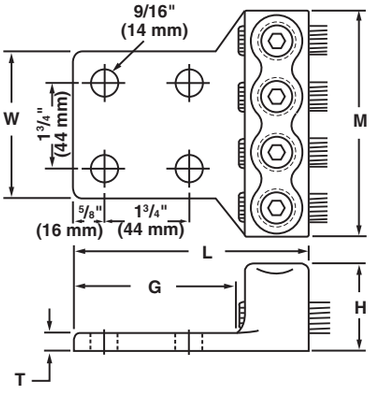
BRONZE VI-TITE TERMINAL LUGS • TYPES VL4 & VVL4



FOUR CABLE HEAD
TYPE VL4

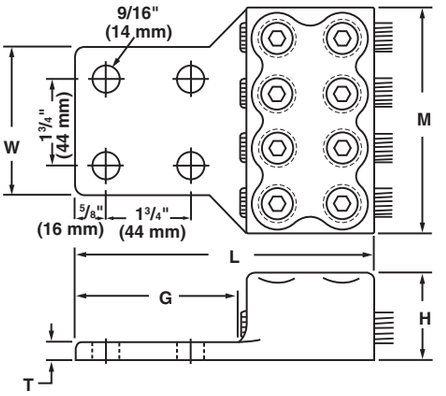


Body is cast from high strength corrosion resistant copper alloy. Bronze screw and pressure bar provides uniform clamping pressure without direct screw contact on conductor. Unique designed protuberances assure better resistance to horizontal pull. Hex head screws can be furnished on request by suffixing catalog numbers with "-HH". For tin plated–suffix catalog number with "-TN".

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			L		M		W		H		G		T	
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VL4-21917/18	2/0 Str.–350 MCM	.419- .682	4 5/16	110	3 7/8	98	3	76	1 3/8	35	3 1/8	79	3/8	10
VL4-21919	300-500 MCM	.634- .815	4 1/2	114	4 3/4	121	3 1/2	89	1 13/16	46	3 1/8	79	1/2	13
VL4-21921	500-800 MCM	.815-1.031	4 5/8	117	5 5/8	143	4	102	1 13/16	46	3 1/8	79	1/2	13
VL4-21925	700-1000 MCM	.965-1.153	5 5/16	135	6 1/4	159	4	102	2 1/16	52	3 1/4	83	1/2	13
VL4-21926	1000-1500 MCM	1.153-1.412	6	152	8	203	4 1/2	114	2 5/16	59	3 1/8	79	5/8	16
VL4-21928	1500-2000 MCM	1.412-1.632	6 1/8	156	9	229	5	127	2 11/16	68	3 1/8	79	3/4	19

‡For conversion to metric range, see page 175.

FOUR CABLE TANDEM HEAD
TYPE VVL4



Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions											
			L		M		W		H		G		T	
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VVL4-21918	3/0 Str.–350 MCM	.470- .682	5 1/2	140	3 7/8	98	3	76	1 3/8	35	3 1/8	79	3/8	10
VVL4-21919	300-500 MCM	.634- .815	5 3/4	146	4 3/4	121	3 1/2	89	1 13/16	46	3 1/8	79	1/2	13
VVL4-21921	500-800 MCM	.815-1.031	6 1/8	156	5 5/8	143	4	102	1 13/16	46	3 1/8	79	1/2	13
VVL4-21925	700-1000 MCM	.965-1.153	6 5/8	168	6 1/4	159	4	102	2 1/16	52	3 1/4	83	1/2	13
VVL4-21926	1000-1500 MCM	1.153-1.412	7 3/4	197	8	203	4 1/2	114	2 5/16	59	3 1/8	79	5/8	16
VVL4-21928	1500-2000 MCM	1.412-1.632	8	203	9	229	5	127	2 11/16	68	3 1/8	79	3/4	19

‡For conversion to metric range, see page 175.

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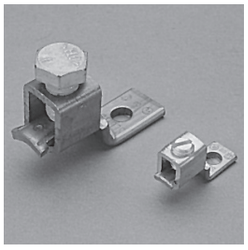
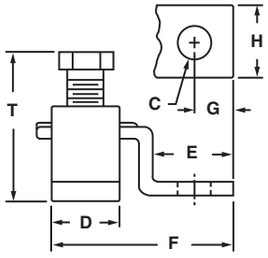
COPPER SOLDERLESS LUGS • TYPES SLU & SAU

One hole, single collar

CU
90°C





100% pure electrolytic copper for utmost efficiency.

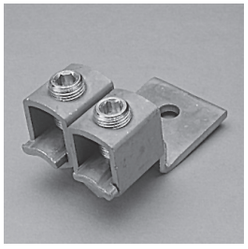
Unique design of the concave pressure bar and V-bottom collar assures positive contact and firm, permanent grip. For tin plated–suffix catalog number "-TN".

	Catalog Number	Conductor Range (Copper Stranded)	Approximate Dimensions C in	C mm	D in	D mm	E in	E mm	F in	F mm	G in	G mm	H in	H mm	T in	T mm	Ampere Rating NEC
	SLU-25†	10, 12, 14	5/32	3.96	9/32	7.14	15/32	5.55	15/16	25.40	3/16	4.76	5/16	7.93	21/32	16.66	25
	SLU-35†	6, 8, 10, 12, 14	13/64	5.15	7/16	11.11	9/16	12.70	1 1/8	30.16	7/32	5.55	3/8	9.52	3/4	19.05	35-50
	SAU-70†	4, 6, 8, 10, 12, 14	17/64	6.74	7/16	11.11	17/32	13.49	1 1/4	33.33	1/4	6.35	1/2	12.70	13/16	20.63	70
	SLU-70†	2, 4, 6, 8	17/64	6.74	1/2	12.70	11/16	18.25	1 7/16	38.89	1/4	6.35	1/2	12.70	1	25.40	70-90
	SLU-125	1/0, 1, 2, 4, 6, 8	17/64	6.74	5/8	15.87	7/8	20.63	1 7/8	50.00	7/16	11.11	5/8	15.87	1 11/32	34.13	125
	SLU-175	3/0, 2/0, 1/0, 1, 2, 4	13/32	10.31	3/4	19.05	1 1/32	26.19	2 1/4	53.97	7/16	11.11	3/4	19.05	1 9/16	39.68	175
	SLU-225	4/0, 3/0, 2/0, 1/0, 1, 2	11/32	8.73	1	25.40	1 3/32	29.36	2 3/8	66.67	15/32	12.70	1	25.40	1 13/16	46.03	225
*	SLU-300	350 MCM, 300 MCM, 250 MCM, 200 MCM, 4/0, 3/0, 2/0, 1/0	13/32	10.31	1 1/4	31.75	1 9/16	38.10	3 7/32	80.96	1/2	12.70	1	25.40	2 5/8	66.67	300
*	SLU-400	500 MCM, 400 MCM, 350 MCM, 300 MCM, 250 MCM, 4/0, 3/0, 2/0, 1/0	13/32	10.31	1 1/2	38.10	1 7/8	49.21	4 1/16	107.95	29/32	23.81	1 1/2	38.10	2 3/4	69.85	400
*	SLU-650	1000 MCM, 900 MCM, 800 MCM, 750 MCM, 700 MCM, 600 MCM	17/32	13.49	1 7/8	47.62	2 1/8	47.62	4 5/8	117.47	1 3/16	30.16	2	50.80	3 11/16	93.66	650

**Add suffix "C" for CSA Certified Product*
†Slotted screw

MULTIPLE SOLDERLESS LUG • TYPE LU

CU
90°C



Made from electrolytic copper for utmost efficiency. Screws are cadmium plated steel. Unique design of the concave pressure bar and V-bottom collar assures positive contact and firm, permanent grip. For tin plated–suffix catalog number "-TN".

Catalog Number	Conductor Range (Copper Stranded)	Ampere Rating NEC
LU-2	2 No. 4/0, 2 No. 3/0, 2 No. 2/0	400
LU-4	2 No. 350 MCM, 2 No. 300 MCM, 2 No. 250 MCM 2 No. 4/0, 2 No. 200 MCM, 2 No. 3/0, 2 No. 2/0, 2 No. 1/0	600
LU-6	2 No. 500 MCM, 2 No. 400 MCM, 2 No. 350 MCM 2 No. 300 MCM, 2 No. 250 MCM, 2 No. 4/0	800

PENNUNION
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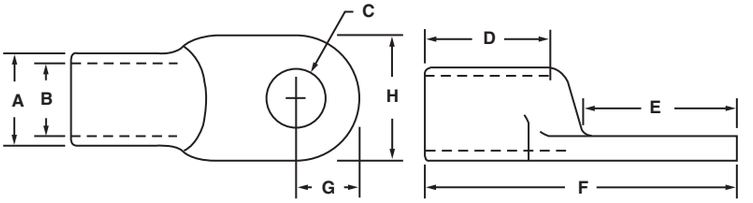
COPPER SINGLE-HOLE SOLDERING LUGS • TYPE SL

CU
90°C

Made of pure electrolytic copper tubing.

Except when requirements are shown, 25-amp. to 250-amp. will be furnished round end, and 325-amp. to 650-amp. square end.



Catalog Number	Mfg's Size	Amp. Rate NEC	Conductor Size	Wire Dia.‡	Approximate Dimensions															
					A Out-Side Dia.		B Dia. of Cable Hole		C Stud Hole Size		D Depth of Cable Hole		E Length of Tang		F Length Over-All		G Center of Last Stud Hole to End of Tang		H Width of Tang	
				in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
SL-25	3/16	25	10 Str.	.116	3/16	4.76	.143	3.57	11/64	4.36	11/32	8.73	15/32	11.90	15/16	23.81	3/16	4.76	1/4	6.35
SL-35	1/4	35	8 Str.	.146	1/4	6.35	.186	4.76	13/64	5.15	11/32	8.73	1/2	12.70	1 1/32	26.19	7/32	5.55	3/8	9.52
SL-50	5/16	50	6 Str.	.184	5/16	7.93	.238	5.95	13/64	5.15	3/8	9.52	19/32	15.08	1 7/32	30.95	1/4	6.35	7/16	11.11
SL-70	3/8	70	4 Str.	.232	3/8	9.52	.289	7.54	9/32	7.14	7/16	11.11	11/16	17.46	1 3/8	34.92	9/32	7.14	17/32	13.49
SL-90	7/16	90	2 Str.	.292	7/16	11.11	.347	8.73	9/32	7.14	1/2	12.70	3/4	19.05	1 1/2	38.10	11/32	8.73	5/8	15.87
SL-125	1/2	125	1/0 Str.	.375	1/2	12.70	.398	9.92	11/32	8.73	9/16	14.28	13/16	20.63	1 3/4	44.45	13/32	10.31	3/4	19.05
SL-150	9/16	150	2/0 Str.	.419	9/16	14.28	.460	11.50	13/32	10.31	11/16	17.46	15/16	23.81	2	50.80	7/16	11.11	13/16	20.63
SL-175	5/8	175	3/0 Str.	.470	5/8	15.87	.519	13.09	13/32	10.31	25/32	19.84	1	25.40	2 1/8	53.97	1/2	12.70	29/32	23.01
SL-225	11/16	225	4/0 Str.	.528	11/16	17.46	.559	14.28	13/32	10.31	27/32	21.43	1 5/32	29.36	2 3/8	60.32	17/32	13.49	31/32	24.60
SL-250	13/16	250	250 MCM	.575	13/16	20.63	.660	16.66	13/32	10.31	31/32	24.60	1 1/4	31.75	2 21/32	67.46	5/8	15.87	1 3/16	30.16
SL-325	15/16	325	400 MCM	.728	15/16	23.81	.776	19.84	13/32	10.31	1 3/16	30.16	1 5/8	41.27	3 3/8	85.72	3/4	19.05	1 3/8	34.92
SL-400	1 1/16	400	500 MCM	.815	1 1/16	26.98	.887	22.62	13/32	10.31	1 1/2	38.10	2 1/8	53.97	4 5/32	105.56	15/16	23.81	1 9/16	39.68
SL-450	1 1/8	450	600 MCM	.893	1 1/8	28.57	.943	23.81	13/32	10.31	1 1/2	38.10	2 1/4	57.15	4 7/16	112.71	1	25.40	1 5/8	41.27
SL-550	1 5/16	550	800 MCM	1.031	1 5/16	33.33	1.084	26.98	17/32	13.49	2	50.80	2 1/2	63.50	5 1/16	128.58	1 1/8	26.57	1 15/16	49.21
SL-650	1 7/16	650	1000 MCM	1.153	1 7/16	36.51	1.21	30.95	29/32	23.01	2	50.80	2 1/2	63.50	5 3/8	136.52	1 3/16	30.16	2 1/8	53.97

‡For conversion to metric range, see page 175.

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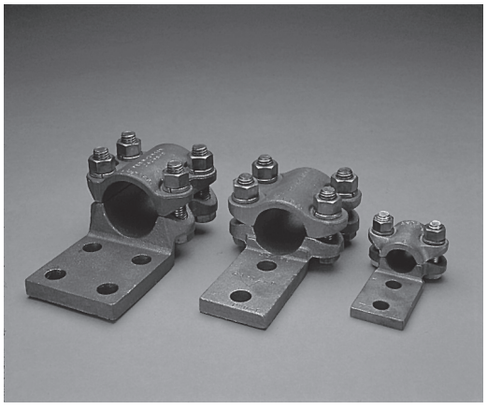
BRONZE TERMINAL LUG • TYPE RA

Side formed for tubing



Made from high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

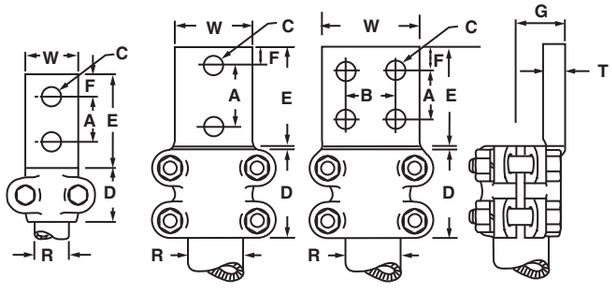


Fig. 1 Fig. 2 Fig. 3

Catalog Number	R IPS Size	No. Holes in Contact Tongue	Fig. No.	Approximate Dimensions																		Bolt Size
				W		A		B		C		D		E		F		T		G		
				in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
RA-03-2B	3/8	2	1	1 3/8	35	1	25	–	–	7/16	11	1 3/8	35	2	51	7/16	11	1/4	6	7/8	22	3/8
RA-03-2N	3/8	2	1	1 3/8	35	1 3/4	44	–	–	9/16	14	1 3/8	35	3	76	9/16	14	9/32	7	7/8	22	3/8
RA-05-2B	1/2	2	1	1 1/2	38	1 1/8	29	–	–	7/16	11	1 1/2	38	2	51	7/16	11	5/16	8	7/8	22	3/8
RA-05-2N	1/2	2	2	1 1/2	38	1 3/4	44	–	–	9/16	14	2 1/4	57	3	76	9/16	14	5/16	8	7/8	22	3/8
RA-07-2B	3/4	2	2	1 1/2	38	1 3/8	35	–	–	7/16	11	2	51	2 1/4	57	7/16	11	5/16	8	13/16	21	3/8
RA-07-2N	3/4	2	2	1 1/2	38	1 3/4	44	–	–	9/16	14	2	51	3	76	9/16	14	5/16	8	13/16	21	3/8
RA-07-F	3/4	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	2	51	3	76	9/16	14	3/8	9	7/8	22	3/8
RA-10-2B	1	2	2	2	51	1 3/8	35	–	–	7/16	11	2 1/4	57	2 3/8	60	7/16	11	3/8	9	1	25	3/8
RA-10-D	1	2	2	2	51	1 3/4	44	–	–	9/16	14	2 1/4	57	3 1/4	83	9/16	14	3/8	9	1	25	3/8
RA-10-F	1	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	2 1/4	57	3 1/4	83	9/16	14	5/16	8	15/16	24	3/8
RA-12-D	1 1/4	2	2	2	51	1 3/4	44	–	–	9/16	14	2 3/4	70	3	76	9/16	14	7/16	11	1 1/4	32	1/2
RA-12-F	1 1/4	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	3	76	9/16	14	11/32	8	1 5/32	29	1/2
RA-12-E	1 1/4	4	3	4	102	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	4	102	1 1/8	29	5/16	8	1 1/8	29	1/2
RA-15-D	1 1/2	2	2	2	51	1 3/4	44	–	–	9/16	14	2 3/4	70	3	76	9/16	14	7/16	11	1 1/4	32	1/2
RA-15-F	1 1/2	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	3	76	9/16	14	1/2	13	1 5/16	33	1/2
RA-15-E	1 1/2	4	3	4	102	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	4	102	1 1/8	29	3/8	9	1 3/16	30	1/2
RA-20-D	2	2	2	2	51	1 3/4	44	–	–	9/16	14	2 3/4	70	3	76	9/16	14	1/2	13	1 11/16	43	1/2
RA-20-F	2	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	3	76	9/16	14	1/2	13	1 11/16	43	1/2
RA-20-E	2	4	3	4	102	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	4	102	1 1/8	29	7/16	11	1 5/8	41	1/2
RA-25-D	2 1/2	2	2	2	51	1 3/4	44	–	–	9/16	14	2 3/4	70	3	76	9/16	14	11/16	17	2	51	1/2
RA-25-F	2 1/2	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	3	76	9/16	14	11/16	17	2	51	1/2
RA-25-E	2 1/2	4	3	4	102	1 3/4	44	1 3/4	44	9/16	14	2 3/4	70	4	102	1 1/8	29	5/8	16	1 15/16	49	1/2
RA-30-F	3	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	3 1/4	83	3	76	9/16	14	11/16	17	2 1/2	64	5/8
RA-30-E	3	4	3	4	102	1 3/4	44	1 3/4	44	9/16	14	3 1/4	83	4	102	1 1/8	29	5/8	16	2 7/16	62	5/8
RA-35-F	3 1/2	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	3 1/4	83	3	76	9/16	14	3/4	19	2 11/16	68	5/8
RA-35-E	3 1/2	4	3	4	102	1 3/4	44	1 3/4	44	9/16	14	3 1/4	83	4	102	1 1/8	29	3/4	19	2 11/16	68	5/8
RA-40-F	4	4	3	3	76	1 3/4	44	1 3/4	44	9/16	14	3 1/4	83	3	76	9/16	14	3/4	19	3 1/8	79	5/8
RA-40-E	4	4	3	4	102	1 3/4	44	1 3/4	44	9/16	14	3 1/4	83	4	102	1 1/8	29	3/4	19	3 1/8	79	5/8

For use with aluminum conductors, order tin plated–suffix catalog numbers with "-TN".

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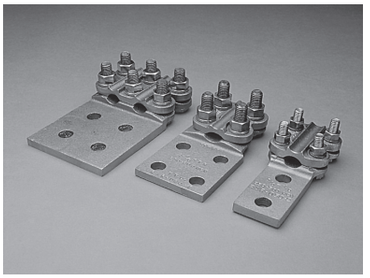
BRONZE TERMINAL LUG • TYPES RAR, RARE and RAR2

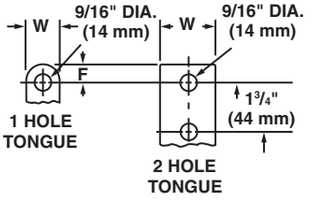
For cable range to flat

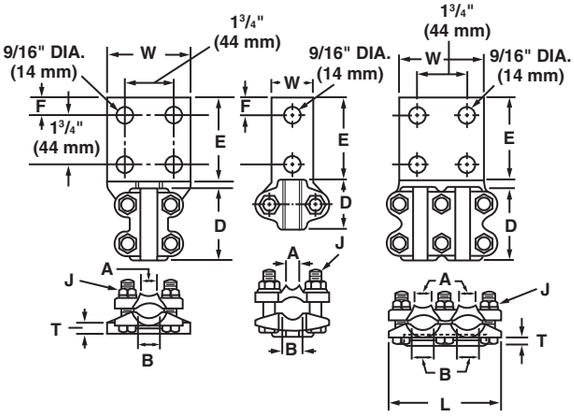


Reversible, range taking, high strength cap.

Cast from high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

Standard NEMA drilled tongue.





TYPE RAR *(1 cable–4 bolts)*

Catalog Number	Conductor Range A	Wire Diameter Range‡	Conductor Range B	Wire Diameter Range‡	No. of Holes in Tongue	Approximate Dimensions											
						D		E		F		T		W		J	
		In		in		in	mm	in	mm	in	mm	in	mm	in	mm	in	
RAR-021-S	8 Sol.-1 Str.	.128- .332	1/0 Str.-4/0 Str.	.375- .528	1	2 1/4	57	1 3/4	44	3/4	19	5/16	8	1 1/2	38	3/8	
RAR-021-D	6 Str.-1 Str.	.184- .332	1/0 Str.-4/0 Str.	.375- .528	2	2 1/4	57	3	76	5/8	16	1/4	6	1 1/2	38	3/8	
RAR-025-D	6 Sol.-1 Str.	.162- .332	1/0 Str.-250 MCM	.375- .575	2	2 1/2	64	3	76	5/8	16	1/4	6	1 1/2	38	3/8	
RAR-025-DH	6 Sol.-1 Str.	.162- .332	1/0 Str.-250 MCM	.375- .575	2	2 1/2	64	3	76	5/8	16	1/4	6	1 1/2	38	1/2	
RAR-025-F	4 Sol. 1/0 Str.	.204- .375	2/0 Str.-250 MCM	.419- .575	4	2 1/2	64	3	76	5/8	16	1/4	6	3	76	3/8	
RAR-025-FH	4 Sol.-1/0 Str.	.204- .375	2/0 Str.-250 MCM	.419- .575	4	2 1/2	64	3	76	5/8	16	1/4	6	3	76	1/2	
RAR-050-D	1/0 Str.-4/0 Str.	.375- .528	250-500 MCM	.575- .815	2	2 1/2	64	3	76	5/8	16	3/8	9	1 3/4	44	3/8	
RAR-050-DH	1/0 Str.-4/0 Str.	.375- .528	250-500 MCM	.575- .815	2	2 1/2	64	3	76	5/8	16	3/8	9	1 3/4	44	1/2	
RAR-050-F	1/0 Str.-4/0 Str.	.375- .528	250-500 MCM	.575- .815	4	2 1/2	64	3	76	5/8	16	3/8	9	3	76	3/8	
RAR-050-FH	1/0 Str.-4/0 Str.	.375- .528	250-500 MCM	.575- .815	4	2 1/2	64	3	76	5/8	16	3/8	9	3	76	1/2	
RAR-080-D	2 Sol.-4/0 Str..	.258- .528	250-800 MCM	.575-1.031	2	2 1/2	64	3	76	5/8	16	13/32	10	2	51	1/2	
RAR-080-F	2 Sol.-4/0 Str.	.258- .528	250-800 MCM	.575-1.031	4	2 1/2	64	3	76	5/8	16	13/32	10	3	76	1/2	
RAR-100-D	4/0 Str.-550 MCM	.528- .855	600-1000 MCM	.893-1.153	2	3	76	3	76	5/8	16	7/16	11	2	51	1/2	
RAR-100-F	4/0 Str.-550 MCM	.528- .855	600-1000 MCM	.893-1.153	4	3	76	3	76	5/8	16	3/8	9	3	76	1/2	
RAR-200-D	500-1000 MCM	.815-1.153	1100-2000 MCM	1.209-1.632	2	5 1/4	133	3	76	5/8	16	9/16	14	1 1/2	38	1/2	
RAR-200-F	500-1000 MCM	.815-1.153	1100-2000 MCM	1.209-1.632	4	5 1/4	133	3	76	5/8	16	1/2	13	3	76	1/2	

TYPE RARE *(1 cable–2 bolts)*

RARE-025-D	6 Sol.-1 Str.	.162-.332	1/0 Str.-250 MCM	.375-.575	2	1 1/2	38	3	76	5/8	16	1/4	6	1 1/2	38	3/8	
RARE-050-D	1/0 Str.-1/0 Str.	.375-.528	250-500 MCM	.575-.815	2	1 3/4	44	3	76	5/8	16	1/4	6	1 1/2	38	3/8	

TYPE RAR2 *(2 cables–6 bolts)*

																		L	
																		in	mm
RAR2-025-D	6 Sol.-1 Str.	.162- .332	1/0 Str.-250 MCM	.375- .575	2	2 1/2	64	3	76	5/8	16	1/4	6	2	51	1/2		3 5/8	92
RAR2-025-F	6 Sol.-4/0 Str.	.204- .375	2/0 Str.-250 MCM	.419- .575	4	2 1/2	64	3	76	5/8	16	1/4	6	3	76	1/2		3 5/8	92
RAR2-050-D	1/0 Str.-4/0 Str.	.375- .528	250-500 MCM	.575- .815	2	2 1/2	64	3	76	5/8	16	1/2	13	2 1/2	64	1/2		4 1/8	105
RAR2-050-E	1/0 Str.-4/0 Str.	.375- .528	250-500 MCM	.575- .815	4	2 1/2	64	4	102	1 1/8	29	3/8	9	4	102	3/8		4 1/8	105
RAR2-080-D	2 Sol.-4/0 Str.	.258- .528	250-800 MCM	.575-1.031	2	2 11/32	59	3	76	5/8	16	1/2	13	2 1/2	64	1/2		4 1/4	108
RAR2-080-E	2 Sol.-4/0 Str.	.258- .528	250-800 MCM	.575-1.031	4	2 11/32	59	4	102	1 1/8	29	13/32	10	4	102	1/2		4 1/4	108
RAR2-100-D	4/0 Str.-550 MCM	.528- .855	600-1000 MCM	.893-1.153	2	3	76	3	76	5/8	16	1/2	13	2 1/2	64	1/2		4 9/16	116
RAR2-100-E	4/0 Str.-550 MCM	.528- .855	600-1000 MCM	.893-1.153	4	3	76	4	102	1 1/8	29	1/2	13	4	102	1/2		4 9/16	116
RAR2-200-D	500-1000 MCM	.815-1.153	1100-2000 MCM	1.209-1.632	2	5 1/4	133	3	76	5/8	16	9/16	14	2 1/2	64	1/2		5 3/8	143
RAR2-200-E	500-1000 MCM	.815-1.153	1100-2000 MCM	1.209-1.632	4	5 1/4	133	4	102	5/8	16	1/2	13	4	102	1/2		5 5/8	143

‡For conversion to metric range, see page 175.

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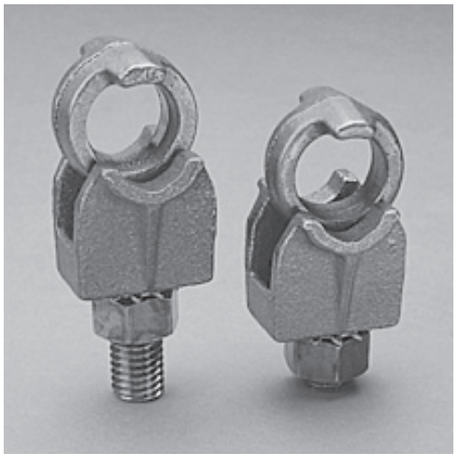
BRONZE EYEBOLT TERMINAL • TYPE LS AND LSN

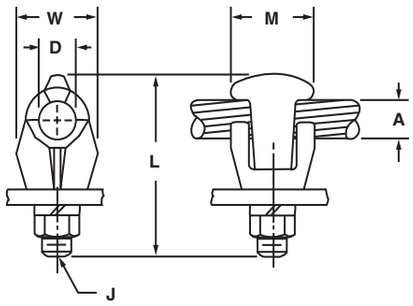
Single eyebolt type for copper cable to copper flat



A practical and highly versatile connector that may be used for numerous applications. Used extensively by all manufacturers who bring out flat studs, bus, or spades on their equipment. Used also for grounding cables to steel substation structures.

Cups (bodies) are made from corrosion resistant, high conductivity copper alloy. Eyebolts are made from a special, aluminum bronze alloy, for maximum strength.

Silicon bronze nuts and lockwashers.



FOR 1/4" THICK BAR

Catalog Number	A Conductor Range	Wire Diameter Range‡	Approximate Dimensions								
			D		L		M		W		J
		in	in	mm	in	mm	in	mm	in	mm	in
LS-C1E	10 Sol.-1 Str.	.102-.332	11/32	9	2 3/8	60	1 1/16	27	7/8	22	3/8
LSN-2/0N	8 Sol.-2/0 Str.	.128-.419	7/16	11	2 3/8	60	1 3/8	35	1	25	1/2
LS-2/0	8 Sol.-2/0 Str.	.128-.419	7/16	11	2	51	1 1/4	32	1	25	3/8
LSN-025N	6 Sol.-250 MCM	.162-.575	5/8	16	2 9/16	65	1 1/4	32	1 1/16	27	1/2
LSN-035N	2 Sol.-350 MCM	.258-.682	13/16	21	3 1/16	78	1 1/4	32	1 5/16	33	1/2
LSN-050N	1/0 Sol.-500 MCM	.325-.815	15/16	24	3 1/4	83	1 1/4	32	1 7/16	37	1/2
LSN-075	350-750 MCM	.682-.999	1 1/16	27	3 3/16	81	1 1/2	38	1 19/32	40	1/2
LSN-100N	2/0 Sol.-1000 MCM	.365-1.153	1 1/4	32	4 1/4	108	1 23/32	44	1 11/16	43	1/2
LS-150E	1000-1500 MCM	1.153-1.412	1 1/2	38	4 3/8	111	2 1/4	57	2 1/2	64	1/2
LS-200E	500-2000 MCM	.325-1.632	1 23/32	44	5 1/4	133	2 1/4	57	2 3/4	70	1/2

FOR 1/4" TO 3/4" THICK BAR

LS-C1E	10 Sol.-1 Str.	.102-.332	11/32	9	2 3/8	60	1 1/16	27	7/8	22	3/8
LSN-2/0NE	8 Sol.-2/0 Str.	.128-.419	7/16	11	2 3/4	70	1 3/8	35	1	25	1/2
LS-2/0E	8 Sol.-2/0 Str.	.128-.419	7/16	11	2 1/2	64	1 1/4	32	1	25	3/8
LSN-025NE	6 Sol.-250 MCM	.162-.575	5/8	16	3 1/16	78	1 1/4	32	1 1/16	27	1/2
LSN-035NE	2 Sol.-350 MCM	.258-.682	13/16	21	3 5/16	84	1 1/4	32	1 5/16	33	1/2
LSN-050NE	1/0 Sol.-500 MCM	.325-.815	15/16	24	3 3/4	95	1 1/4	32	1 7/16	37	1/2
LSN-075E	350-750 MCM	.682-.999	1 1/16	27	3 11/16	94	1 1/2	38	1 19/32	40	1/2
LSN-100NE	2/0 Sol.-1000 MCM	.365-1.153	1 1/4	32	4 1/2	114	1 23/32	44	1 11/16	43	1/2
LS-150E	1000-1500 MCM	1.153-1.412	1 1/2	38	4 3/8	111	2 1/4	57	2 1/2	64	1/2
LS-200E	500-2000 MCM	.325-1.632	1 23/32	44	5 1/4	133	2 1/4	57	2 3/4	70	1/2

‡For conversion to metric range, see page 175.
"N" in prefix qualifies terminal for mounting on NEMA pads.
"N" in suffix qualifies eyebolt opening to NEMA.

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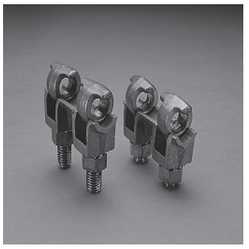
BRONZE EYEBOLT TERMINAL • TYPES LD AND LDN

Double eyebolt type for copper cable to copper flat



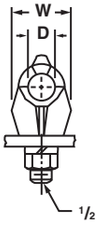


FIG. 1

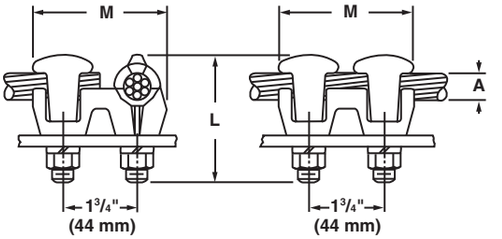


FIG. 2

FOR 1/4" THICK BAR

Catalog Number	A Conductor Range	Wire Diameter Range‡	Fig. No·	Approximate Dimensions							
				D		L		M		W	
		in		in	mm	in	mm	in	mm	in	mm
LDN-2/0N	8 Sol.-2/0 Str.	.128- .419	2	7/16	11	2 5/16	59	2 13/16	71	29/32	23
LDN-2/0N2	8 Sol.-2/0 Str.	.128- .419	1	7/16	11	2 3/8	60	3 1/8	79	1 3/8	35
LDN-025N	6 Str.-250 MCM	.184- .575	2	5/8	16	2 9/16	65	3	76	1 1/16	27
LDN-025N2	6 Str.-250 MCM	.184- .575	1	5/8	16	2 5/8	67	3 3/8	86	1 5/8	41
LDN-035N	2 Sol.-350 MCM	.258- .682	2	13/16	21	3 5/16	84	3	76	1 5/16	33
LDN-050N	1/0 Sol.-500 MCM	.325- .815	2	15/16	24	3 1/4	83	3	76	1 7/16	37
LDN-075	350-750 MCM	.682- .999	2	1 1/16	27	3 3/16	81	3 1/4	83	1 19/32	40
LDN-100N	2/0 Sol.-1000 MCM	.365-1.153	2	1 1/4	32	3 13/16	97	3 7/16	87	1 11/16	43
LD-200E	500-2000 MCM	.815-1.632	2	1 23/32	44	5 1/4	133	4	102	2 3/4	70

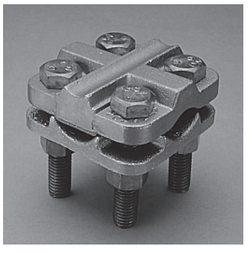
FOR 1/4" TO 3/4" THICK BAR

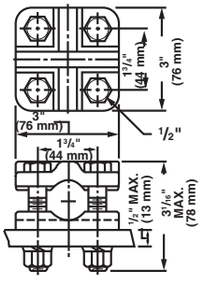
LDN-2/0N2E	8 Sol.-2/0 Str.	.128- .419	1	7/16	11	2 7/8	73	3 1/8	79	1 3/8	35
LDN-025NE	6 Sol.-250 MCM	.162- .575	2	5/8	16	3 1/16	78	3	76	1 1/16	27
LDN-025N2E	6 Sol.-250 MCM	.162- .575	1	5/8	16	3 1/16	78	3 3/8	86	1 5/8	41
LDN-035NE	2 Sol.-350 MCM	.258- .682	2	13/16	21	3 5/16	84	3	76	1 5/16	33
LDN-050NE	1/0 Sol.-500 MCM	.325- .815	2	15/16	24	3 3/4	95	3	76	1 7/16	37
LDN-075E	350-750 MCM	.682- .999	2	1 1/16	27	3 11/16	94	3 1/4	83	1 19/32	40
LDN-100NE	2/0 Sol.-1000 MCM	.365-1.153	2	1 1/4	32	4 1/16	103	3 7/16	87	1 11/16	43
LD-200E	500-2000 MCM	.815-1.632	2	1 23/32	44	5 1/4	133	4	102	2 3/4	70

‡For conversion to metric range, see page 175.
"N" in prefix qualifies terminal for mounting on NEMA pads.
"N" in suffix qualifies eyebolt opening to NEMA.
"2" in suffix indicates two-way cable entrance.

TERMINAL CONNECTOR • TYPE CTB

For cable range or tubing range to flat four hole NEMA mounting





- Cast from copper alloy.
- Reversible, range taking, high strength cap.
- Front or side entrance available by rotating cap 90°.
- Furnished with silicon bronze bolts, nuts and lockwashers.
- Bolts with sufficient length for mounting to a pad up to 1/2" thick.

Catalog Number	Conductor Range	Wire Diameter Range‡	IPS Range
CTB-100	6 Sol.-1000 MCM	.162-1.153	1/8-3/4

‡For conversion to metric range, see page 175.

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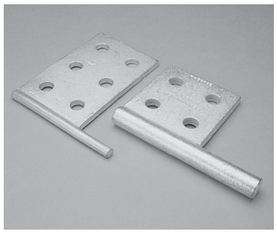
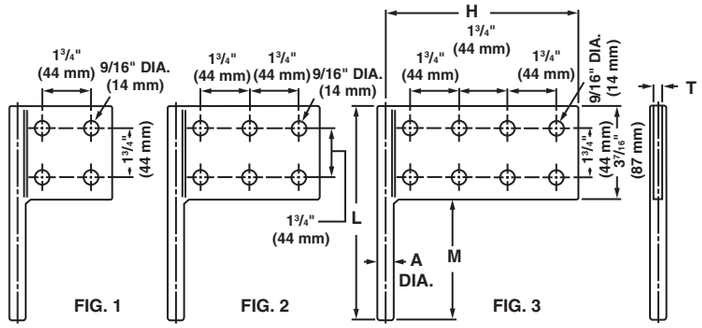
COPPER TRANSFORMER ADAPTOR TERMINAL • TYPE FT*





Designed for multiple take-off from the transformer eyebolt secondary connector. Cast from copper and electrotin plated for use with copper or aluminum connectors.

Catalog Number	Fig. No.	A Stud Diameter	Approximate Dimensions							
			M		H		L		T	
		in	in	mm	in	mm	in	mm	in	mm
FT-4-037	1	3/8	1 3/4	44	3 5/8	92	5 3/16	132	1/4	6.35
FT-4-056	1	9/16	2	51	3 3/32	79	5 7/16	138	3/8	9.52
FT-4-075	1	3/4	2 1/2	64	3 13/16	97	5 15/16	151	3/8	9.52
FT-4-087	1	7/8	3 3/4	95	3 7/8	98	7 3/16	183	3/8	9.52
FT-4-118	1	1 3/16	4 1/4	108	4 1/16	103	7 11/16	195	3/8	9.52
FT-6-037	2	3/8	1 3/4	44	5 3/8	137	5 3/16	132	1/4	6.35
FT-6-056	2	9/16	2	51	5 15/32	139	5 7/16	138	3/8	9.52
FT-6-075	2	3/4	2 1/2	64	5 9/16	141	5 15/16	151	3/8	9.52
FT-6-087	2	7/8	3 3/4	95	5 5/8	143	7 3/16	183	3/8	9.52
FT-6-118	2	1 3/16	4 1/4	108	5 13/16	148	7 11/16	195	3/8	9.52
FT-8-037	3	3/8	1 3/4	44	7 1/8	181	5 3/16	132	1/4	6.35
FT-8-056	3	9/16	2	51	7 7/32	183	5 7/16	138	3/8	9.52
FT-8-075	3	3/4	2 1/2	64	7 5/16	186	5 15/16	151	3/8	9.52
FT-8-087	3	7/8	3 3/4	95	7 3/8	187	7 3/16	183	3/8	9.52
FT-8-118	3	1 3/16	4 1/4	108	7 9/16	192	7 11/16	195	3/8	9.52

**We recommend using Penn-Union Cual-Aid, an oxide inhibiting compound with these connectors. When connecting aluminum or ACSR wire, wire brush the conductor with Cual-Aid #11.*

BRONZE GROUND ROD CLAMPS • TYPES CAB & CEB


CAB-M


CAB


CEB

c UL us
467 LISTED
SUITABLE FOR
DIRECT BURIAL

RUS ACCEPTED

Made from corrosion resistant cast aluminum bronze. Furnished with silicon bronze hexagon head bolt. Socket head screws can be furnished by suffixing catalog number with "-S". For example: CAB-4-S.

Type CEB is an economical ground rod clamp made from corrosion resistant cast aluminum bronze. Furnished with silicon bronze hexagon head bolt.

HEAVY DUTY CLAMP

Catalog Number	Accommodates Rod Size	Conductor Range	Wire Diameter Range‡
	in		in
CAB-1M	1/2	10 Sol.-2 Str.	.102-.292
CAB-2M*	5/8	8 Sol.-1/0 Str.	.128-.375
CAB-3M	3/4	8 Sol.-1/0 Str.	.128-.375

STANDARD CLAMP

CAB-0	3/8	14 Sol.-6 Str.	.064-.184
CAB-1	1/2	10 Sol.-2 Str.	.102-.292
CAB-2	5/8	8 Sol.-1/0 Str.	.128-.375
CAB-3	3/4	8 Sol.-1/0 Str.	.128-.375
CAB-4	3/4	4/0 Str.	.528
CAB-5	1	8 Sol.-1/0 Str.	.128-.375
CAB-6	1	4/0 Str.	.528

ECONOMY CLAMP

Catalog Number	Accommodates Rod Size	Conductor Range	Wire Diameter Range‡
	in		in
CEB-1†	1/2	8 Sol.-2 Str.	.128-.292
CEB-2†	5/8	8 Sol.-2 Str.	.128-.292
CEB-3•	3/4	8 Sol.-2 Str.	.128-.292

‡For conversion to metric range, see page 175. †RUS accepted plain and tin plated. •RUS accepted tin plated only.
*For tin plating, suffix catalog number with "-TN". * For 1/2 thread bolt and extra long body use CAB 2ML.*

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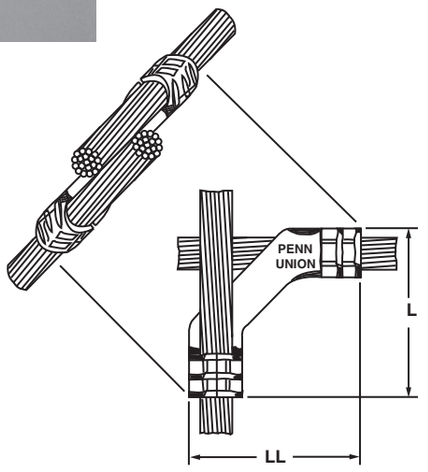
COPPER GROUND GRID CONNECTOR • TYPE GGCP



Provides a compression connector for installing a ground grid system in wire sizes from #2 to 750 MCM; it is ideal for installations like generating stations, substations, chemical plants and heavy industrial plants, where fault-current surges must be dissipated quickly and safely.

High-conductivity cast copper.

Faster and safer to install than exothermic welding connections.

Easier to install than similar compression ground grid connectors which require bending of grid wires to install the connector between them.

Installed with standard T & B tools and dies.

EASY TO INSPECT–Easy to inspect for proper installation. Die imprints die number which must correspond to recommendation cast into connector web.

LOW RESISTANCE CONNECTION–Compression joint provides a conducting path of less resistance than an equivalent length of the installed conductor.

UNIQUE DESIGN–Connector installation does not disturb the position of the grid wires.

Can be used in cross-over or tap applications.

Can be imbedded in concrete or used in direct burial systems.

Catalog Number	Conductor Range	Wire Diameter Range‡	Conductor Range	Wire Diameter Range‡	Installation									Approximate Dimensions			
					T&B			Burndy			Kearney			L		LL	
	(Main)	In	(Tap)	In	Tool	Die	No. Crimps	Tool	Index	No. Crimps	Tool	Die	No. Crimps	In	mm	In	mm
GGCP-1	2 Str.-1 Str.	.292-.332	2 Str.-1 Str.	.292-.332	15 Ton 40 Ton	54H 54	2 1	Y35+	BG	1	WH-1	5/8-1	2	2 7/16	62	2 7/16	62
GGCP-2/0	1/0 Str.-2/0 Str.	.375-.419	1/0 Str.-2/0 Str.	.375-.419	15 Ton 40 Ton	66	1	Y45L	251	1	PH-4	K-3/4	1	3 5/8	92	3 5/8	92
GGCP-025-2/0	4/0 Sol.-.250 MCM	.460-.575	1/0 Str.-2/0 Str.	.375-.419	15 Ton 40 Ton	87H 87	2 1	Y45L	299	1	PH-4	K-1-2	1	3 21/32	93	3 21/32	93
GGCP-025	4/0 Sol.-.250 MCM	.460-.575	4/0 Sol.-250 MCM	.460-.575	15 Ton 40 Ton	87H 87	2 1	Y45L	299	1	PH-4	K-1-2	1	3 21/32	93	3 21/32	93
GGCP-050-025	500 MCM	.815	4/0 Sol.-250 MCM	.460-.575	15 Ton 40 Ton	115H 115	2 1	Y45L	936	2	PH-4	K-1 5/16H	2	4 5/16	110	4 7/16	113
GGCP-050	500 MCM	.815	500 MCM	.815	15 Ton 40 Ton	115H 115	2 1	Y45L	936	2	PH-4	K-1 5/16H	2	4 1/2	114	4 1/2	114
GGCP-075-025	750 MCM	.990	4/0 Str.-250 MCM	.528-.575	40 Ton	150	1	Y488H	352	1	PH-4	K-1 1/2H	2	4 5/8	117	5 9/32	134
GGCP-075-050	750 MCM	.990	500 MCM	.815	40 Ton	150	1	Y48BH	352	1	PH-4	K-1 1/2H	2	5 9/32	134	5 9/32	134
GGCP-075	750 MCM	.990	750 MCM	.990	40 Ton	150	1	Y48BH	352	1	PH-4	K-1 1/2H	2	5 1/2	140	5 1/2	140

Type GGCP-2U (Both U-Shaped elements facing in same direction)

GGCP-2U-4/0	4/0 Str.	.528	4/0 Str.	.528	15 Ton 40 Ton	87H 87	2 1	Y45L	299	1	PH-4	K-1-2	1	3 43/64	93	3 43/64	93
GGCP-2U-025	250 MCM	.575	250 MCM	.575	15 Ton 40 Ton	87H 87	2 1	Y45L	299	1	PH-4	K-1-2	1	3 21/32	93	3 21/32	93

Type GGCP - GR (Special Design for use with Ground Rod)

GGCP-025 5/8GR	4/0 Sol.-250 MCM	.528-.575	5/8 GR. ROD	.562	15 Ton 40 Ton	87H 87	2 1	Y45L	299	1	PH-4	K-1-2	1	3 1/8	79	3 1/8	79
GGCP-2/0 5/8GR	1/0 Str.-2/0 Str.	.375-.419			15 Ton 40 Ton	87H 87	2 1	Y45L	299	1	PH-4	K-1-2	1	3 1/8	79	3 1/8	79
GGCP-025 3/4GR	4/0 Sol.-250 MCM	.528-.575	3/4 GR. ROD	.683	15 Ton 40 Ton		2 1	–	–	–	–	–	–	4 19/64	109	4 7/16	113
GGCP-2/0 3/4GR	1/0 Str.-2/0 Str.	.375-.419			15 Ton 40 Ton		2 1	–	–	–	–	–	–	4 19/64	109	4 7/16	113

‡For conversion to metric range, see page 175.
+Penn-Union's TPU-12B hydraulic hand tool can be used in place of Burndy's Y35.

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A whole new line of Water Pipe Ground Clamps!


KP


KP-1J


KPB


KPL


KP-DB


KZ

Catalog Number	Water Pipe Range	Ground Rod	Rebar Number	Conductor Range of Tap
Bronze Clamp - Steel Screws				
KP-1	1/2" - 1"	1/2" - 1"	5 & 6	10 Sol. - 2 Str.
KP-1J	1/2" - 1"	1/2" - 1"	-	10 Sol. - 4 Str.
KP-2	1-1/4" - 2"	-	-	10 Sol. - 2 Str.
KP-4	2-1/2" - 4"	-	-	10 Sol. - 2 Str.
KP-6	4-1/2" - 6"	-	-	10 Sol. - 2 Str.
Bronze Clamp - Brass Screws				
KPB-1	1/2" - 1"	1/2" - 1"	5 & 6	10 Sol. - 2 Str.
Bronze Clamp - Bronze Screws				**SUITABLE FOR DIRECT BURIAL**
KPL-1-DB	1/2" - 1"	1/2" - 1"	3, 4, 5, 6 & 8	10 Sol. - 2 Str.
KP-0-DB	1/2" - 1"	1/2" - 1"	3,4, 5, 6, & 8	10 Sol. - 2 Str.
KP-1-DB	1/2" - 1"	1/2" - 1"	4, 5, 6 & 8	10 Sol. - 2 Str.
KP-2-DB	1-1/4" - 2"	-	-	10 Sol. - 2 Str.
Zinc Die Cast - Zinc Plated Steel Screws				**DUAL RATED CU or AL**
KZ-1	1/2" - 1"	-	-	10 Sol. - 2 Str. CU 8 Str. - 2 Str. AL
KZ-1-ZN +	1/2" - 1"	-	-	

+ Brass colored zinc plated - Not UL listed or CSA certified

Bronze, Zinc Die Cast, or Aluminum Clamps!

For all your applications:

Bare Copper Wire
Armored Cable
Rigid Conduit
Rebar
Ground Rod
EMT
Aluminum Wire

In a variety of styles and screws!

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KC


KC-1-DB


KW


KH


KHB


KL-0
KL-20
KL-40


KL-1
KL-1A
KL-2
KL-2A
KL-4
KL-4A

Catalog Number	Water Pipe Range	Conduit Hub Size	Conductor Range of Tap
Bronze Clamp for Armored Cable - Steel Screws			
KC-1	1/2" - 1"	-	8 Sol. - 4 Str.
KC-2	1-1/4"- 2"	-	8 Sol. - 4 Str.
KC-4	2-1/2"-4"	-	8 Sol. - 4 Str.
KC-6	4-1/2" - 6"	-	8 Sol. - 4 Str.
Bronze Clamp for Armored Cable -Bronze Screws **SUITABLE FOR DIRECT BURIAL**			
KC-1-DB	1/2" - 1"	-	8 Sol. - 4 Str.
Bronze Clamp for Armored Cable -Steel Screws—360° Swivel			
KW-1	1/2" - 1"	-	10 Sol. - 6 Str.
KW-2	1-1/4" - 2"	-	10 Sol. - 6 Str.
KW-4	2-1/2" - 4"	-	10 Sol. - 6 Str
Bronze Clamp for Rigid Conduit - Steel Screws			
KH-1	1/2" - 1"	1/2"	8 Sol. - 4 Str.
KH-134	1/2" - 1"	3/4"	8 Sol. - 4 Str.
KH-11	1/2" - 1"	1"	8 Sol. - 4 Str.
KH-2	1-1/4" - 2"	1/2"	8 Sol. - 4 Str.
KH-234	1-1/4" - 2"	3/4"	8 Sol. - 4 Str.
KH-21	1-1/4" - 2"	1"	8 Sol. - 4 Str.
KH-4	2-1/2" - 4"	1/2"	8 Sol. - 4 Str.
KH-434	2-1/2" - 4"	3/4"	8 Sol. - 4 Str.
KH-41	2-1/2" - 4"	1"	8 Sol. - 4 Str.
KH-6	4-1/2" - 6"	1/2"	8 Sol. - 4 Str.
KH-634	4-1/2" - 6"	3/4"	8 Sol. - 4 Str.
KH-61	4-1/2" - 6"	1"	8 Sol. - 4 Str.
Bronze Clamp for Rigid Conduit - Brass Screws			
KHB-1	1/2" - 1"	1/2"	8 Sol. - 4 Str.
Bronze Clamp for Rigid Conduit - Zinc Plated Screws - 360° Swivel			
KL-0	1/2" - 1"	1/2"	10 Sol. - 6 Str.
KL-1	1/2" - 1"	3/4"	10 Sol. - 2/0 Str.
KL-1A	1/2" - 1"	1"	10 Sol. - 3/0 Str
KL-20	1-1/4" - 2"	1/2"	10 Sol. - 6 Str.
KL-2	1-1/4" - 2"	3/4"	10 Sol. - 2/0 Str.
KL-2A	1-1/4" - 2"	1"	10 Sol. - 3/0 Str
KL-40	2-1/2" - 4"	1/2"	10 Sol. - 6 Str.
KL-4	2-1/2" - 4"	3/4"	10 Sol. - 2/0 Str.
KL-4A	2-1/2" - 4"	1"	10 Sol. - 3/0 Str


KS


KLS-0
KLS-1
KLS-1A


KLS-0S


KLS-1S
KLS-1AS


KHH


KLH-12


KLH-34
KLH-1


GC

Catalog Number	Water Pipe Range	Conduit Hub Size	Conductor Range of Tap
Bronze Clamp for Rigid Conduit or EMT - 360° Swivel			
KS-1	1/2" - 1"	1/2" 3/4" EMT 1/2" Rigid	-
KS-2	1-1/4" - 2"	1/2" 3/4" EMT 1/2" Rigid	-
KS-4	2-1/2" - 4"	1/2" 3/4" EMT 1/2" Rigid	-
Bronze Clamp for Rigid Conduit With Copper Strap			
KLS-0	1/2" - 1"	1/2"	8 Sol. - 4 Str.
KLS-1	1/2" - 1"	3/4"	8 Sol. - 4 Str.
KLS-1A	1/2" - 1"	1"	8 Sol. - 4 Str.
Bronze Clamp for Rigid Conduit With Copper Strap - 360° Swivel			
KLS-0S	1/2" - 1"	1/2"	10 Sol. - 6 Str.
KLS-1S	1/2" - 1"	3/4"	10 Sol. - 2/0 Str.
KLS-1AS	1/2" - 1"	1"	10 Sol. - 3/0 Str
Bronze Conduit Hubs - Regular			
KHH-12	-	1/2"	8 Sol. - 4 Str.
KHH-34	-	3/4"	8 Sol. - 4 Str.
KHH-1	-	1"	8 Sol. - 4 Str.
Bronze Conduit Hubs - 360° Swivel			
KLH-12	-	1/2"	10 Sol. - 6 Str.
KLH-34	-	3/4"	10 Sol. - 2/0 Str.
KLH-1	-	1"	10 Sol. - 3/0 Str
Aluminum Clamps - Tin Plated **DUAL RATED FOR CU or AL**			
GC-1+	1/2" - 1"	-	14 Sol. - 1/0 Str.
GC-2+	1-1/4" - 2"	-	6 Sol.-250 MCM
GC-4+	2-1/2" - 4"	-	6 Sol.-250 MCM

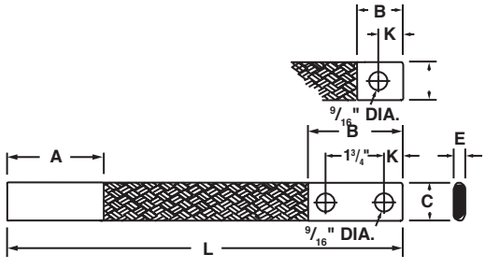
+ Not CSA certified

UL 467 LISTED

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

COPPER GROUND FLEXIBLE BRAID • TYPE GFXB

Tin plated flexible lead



Highly flexible leads suitable for use wherever it is necessary to take up expansion. Made of flat, extra flexible, tinned, pure copper, with tin plated, seamless, pure copper ferrules cold pressed on each end. Inside ends of ferrules are rounded to prevent chafing of strands.

Sizes and combinations not shown readily supplied. Special drilling can be supplied on request. Refer to factory if different ferrule dimensions are desired. For lengths other than 24" change catalog number suffix accordingly.

467 LISTED SUITABLE FOR DIRECT BURIAL

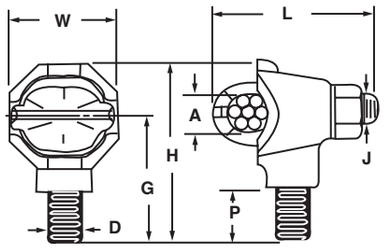
Catalog Number	Ampere Ratings•	Circular Mils. of Braids	Fig. No.	Approximate Dimensions											
				A		B		C		E		K		L	
				in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
GFXBA-24-S1	200	77,184	1	2	51	1 1/2	38	1	25	5/32	4	3/4	19	24	610
GFXBA-24-D1	200	77,184	2	2	51	3	76	1	25	5/32	4	5/8	16	24	610
GFXBC-24-S1	350	168,840	1	2	51	1 1/2	38	1 1/2	38	3/16	5	3/4	19	24	610
GFXBC-24-D1	350	168,840	2	2	51	3	76	1 1/2	38	3/16	5	5/8	16	24	610
GFXBC-24-S	350	168,840	1	3	76	1 1/2	38	1 1/2	38	3/16	5	3/4	19	24	610
GFXBC-24-D	350	168,840	2	3	76	3	76	1 1/2	38	3/16	5	5/8	16	24	610

•Ampere ratings are suggested for use as a guide only. Actual values used for a given application will depend on such factors as permissible temperature rise, permissible voltage drop, number of cables together and other conditions of service. For outdoor use, these ratings may be increased from 22% to 40% depending upon the size and position of the bus bars being joined.

TRANSFORMER GROUND CLAMPS • TYPES GSE AND HGSE

RUS ACCEPTED

Eye bolt style



Bodies are cast from high conductivity, high strength copper alloy with cast high strength bronze eyebolts. Steel nuts and lockwashers are standard on all clamps. For silicon bronze hardware, suffix catalog number with "-SBH." Example: GSE-C1-SBH. The HGSE provides a hex or square shoulder for wrench tightening. Its flat surface also acts as a seal to the tank. The GSE may be tightened by using a wrench on the body.

Catalog Number	A Copper Conductor Range	Wire Diameter Range‡	Approximate Dimensions												
			D	G		H		J	L		P		W	
		in	Stud Size	in	mm	in	mm	(Eyebolt) in	in	mm	in	mm	in	mm
GSE-C1†	10 Sol.-1 Str.	.102-.332	1/2-13	13/16	21	1 1/4	32	3/8-16	1 1/2	38	7/16	11	7/8	22
GSE-020	8 Sol.-2/0 Str.	.128-.419	1/2-13	1	25	1 7/16	37	3/8-16	1 31/32	50	7/16	11	7/8	22
GSE-025	6 Sol.-250 MCM	.162-.575	1/2-13	1 11/16	43	1 15/16	49	1/2-13	2 9/16	65	5/16	8	1 1/4	32
HGSE-C1*	10 Sol.-1 Str.	.102-.332	1/2-13	1 3/16	30	1 3/4	44	3/8-16	1 31/32	50	7/16	11	1 1/8	28
HGSE-020*	8 Sol.-2/0 Str.	.128-.419	1/2-13	1 5/16	33	1 15/16	49	3/8-16	2	51	7/16	11	1 1/4	32
HGSE-250*	6 Sol.-250 MCM	.162-.575	1/2-13	1 3/16	30	2 1/8	54	1/2-13	2 5/8	67	15/32	12	1 7/8	48

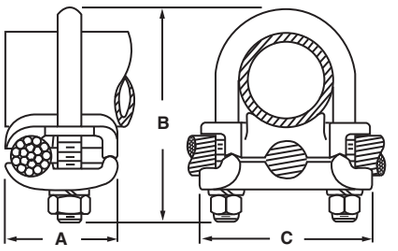
‡For conversion to metric range, see page 175.
**Designates two-way basket.*
For tin plating, suffix catalog number with "-TN." Example: GSE-C1-TN.
†RUS accepted plain and tin plated.

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTOR • TYPE GPL

Universal parallel or 90° cable connection to rod or pipe

C UL US
467
LISTED
SUITABLE FOR
DIRECT BURIAL



Made from high copper content alloy. Furnished with silicon bronze bolt, nuts and lockwashers.

Catalog Number	Accommodates		Conductor Range	Wire Diameter Range‡	Approximate Dimensions						
					A		B		C		Bolt Dia.†
	Rod	IPS		in	in	mm	in	mm	in	mm	
GPL-1 *	1/2	1/4	8 Sol.-4 Str.	.128- .232	1 3/8	34	2 1/2	64	1 7/8	47	3/8
GPL-2 *	1/2	1/4	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	2 1/2	64	1 7/8	47	3/8
GPL-3 *	1/2	1/4	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	2 1/2	64	1 7/8	47	3/8
GPL-4	5/8 or 3/4	3/8	8 Sol.-4 Str.	.128- .232	1 3/8	34	2 3/4	70	2	51	3/8
GPL-5	5/8 or 3/4	3/8	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	2 3/4	70	2	51	3/8
GPL-6	5/8 or 3/4	3/8	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	2 3/4	70	2	51	3/8
GPL-7 •	5/8 or 1	3/8 or 3/4	300-500 MCM	.634- .815	2 1/4	57	3 1/2	89	2 3/8	60	1/2
GPL-8	7/8 or 1	1/2 or 3/4	8 Sol.-4 Str.	.128- .232	1 3/8	34	2 5/8	67	2 3/8	60	3/8
GPL-9	7/8 or 1	1/2 or 3/4	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	2 5/8	67	2 3/8	60	3/8
GPL-10	7/8 or 1	1/2 or 3/4	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	3	76	2 3/8	60	3/8
GPL-12 •	7/8 or 1	1/2 or 3/4	500-750 MCM	.815- .999	2 5/8	67	3 3/4	95	2 3/4	70	1/2
GPL-13 •	7/8 or 1	1/2 or 3/4	750-1000 MCM	.999-1.153	3	76	4	102	3 1/2	89	1/2
GPL-14	–	1	8 Sol.-4 Str.	.128- .232	1 3/8	34	2 3/4	70	2 5/8	67	3/8
GPL-15	–	1	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	2 3/4	70	2 5/8	67	3/8
GPL-16	–	1	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	3 1/4	82	2 5/8	67	3/8
GPL-17 •	–	1	300-500 MCM	.634- .815	2 3/8	60	4 1/2	115	3	76	1/2
GPL-18 •	–	1	500-750 MCM	.815- .999	2 5/8	67	4 1/2	115	3	76	1/2
GPL-19 •	–	1	750-1000 MCM	.999-1.153	3	76	4 3/4	121	3 1/2	89	1/2
GPL-20	–	1 1/4	8 Sol.-4 Str.	.128- .232	1 3/8	34	3 1/2	89	3	76	3/8
GPL-21	–	1 1/4	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	3 1/2	89	3	76	3/8
GPL-22	–	1 1/4	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	3 1/2	89	3	76	3/8
GPL-23 •	–	1 1/4	300-500 MCM	.634- .815	2 3/8	60	4 1/4	108	3 3/8	85	1/2
GPL-24 •	–	1 1/4	500-750 MCM	.815- .999	2 3/4	70	5	127	3 3/4	95	1/2
GPL-25 •	–	1 1/4	750-1000 MCM	.999-1.153	3	76	5 1/2	140	4 1/4	108	1/2
GPL-26	–	1 1/2	8 Sol.-4 Str.	.128- .232	1 3/8	34	4	102	3 1/4	82	3/8
GPL-27	–	1 1/2	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	4	102	3 1/4	82	3/8
GPL-28	–	1 1/2	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	4	102	3 1/4	82	3/8
GPL-29 •	–	1 1/2	300-500 MCM	.634- .815	2 3/8	60	4 5/8	118	3 5/8	92	1/2
GPL-30 •	–	1 1/2	500-750 MCM	.815- .999	2 3/4	70	5 1/4	133	4	102	1/2
GPL-31 •	–	1 1/2	750-1000 MCM	.999-1.153	3	76	5 3/4	146	4 1/2	115	1/2
GPL-32	–	2	8 Sol.-4 Str.	.128- .232	1 3/8	34	4 1/4	108	3 3/4	95	3/8
GPL-33	–	2	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	4 1/4	108	3 3/4	95	3/8
GPL-34	–	2	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	4 1/4	108	3 3/4	95	3/8
GPL-35 •	–	2	300-500 MCM	.634- .815	2 3/8	60	5 1/4	133	4	102	1/2
GPL-36 •	–	2	500-750 MCM	.815- .999	2 3/4	70	5 1/2	140	4 1/2	115	1/2
GPL-37 •	–	2	750-1000 MCM	.999-1.153	3	76	6	152	5	127	1/2

‡For conversion to metric range, see page 175.

Chart continued next page

•UL listing is limited to a maximum wire size of 250 MCM.
**Not UL listed for 1/4" Pipe.*
†3/8" U-Bolt threaded as shown above, add suffix "FT" for full thread. 1/2" U-Bolt standard is full thread.

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTOR • TYPE GPL

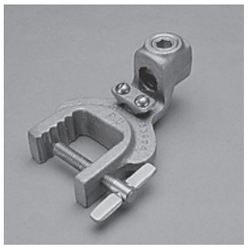
Continued from preceding page

Catalog Number	Accommodates		Conductor Range	Wire Diameter Range‡	Approximate Dimensions						
					A		B		C		Bolt Dia.†
	Rod	IPS		in	in	mm	in	mm	in	mm	
GPL-38	–	2 1/2	8 Sol.-4 Str.	.128- .232	1 3/8	34	5	127	4 1/4	108	3/8
GPL-39	–	2 1/2	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	5	127	4 1/4	108	3/8
GPL-40	–	2 1/2	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	5	127	4 1/4	108	3/8
GPL-41•	–	2 1/2	300-500 MCM	.634- .815	2 3/8	60	5 5/8	143	4 1/2	115	1/2
GPL-42•	–	2 1/2	500-750 MCM	.815- .999	2 3/4	70	6	152	5	127	1/2
GPL-43•	–	2 1/2	750-1000 MCM	.999-1.153	3	76	6 1/2	165	5 1/2	140	1/2
GPL-44	–	3	8 Sol.-4 Str.	.128- .232	1 3/8	34	5 1/2	140	4 3/4	121	3/8
GPL-45	–	3	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	5 1/2	140	4 3/4	121	3/8
GPL-46	–	3	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	5 1/2	140	4 3/4	121	3/8
GPL-47•	–	3	300-500 MCM	.634- .815	2 3/8	60	6 1/4	158	5 1/4	133	1/2
GPL-48•	–	3	500-750 MCM	.815- .999	2 3/4	70	6 3/4	171	5 1/2	140	1/2
GPL-49•	–	3	750-1000 MCM	.999-1.153	3	76	7 1/4	184	6	152	1/2
GPL-50	–	3 1/2	8 Sol.-4 Str.	.128- .232	1 3/8	34	6 1/4	158	5 1/4	133	3/8
GPL-51	–	3 1/2	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	6 1/4	158	5 1/4	133	3/8
GPL-52	–	3 1/2	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	6 1/4	158	5 1/4	133	3/8
GPL-53•	–	3 1/2	300-500 MCM	.634- .815	2 3/8	60	6 3/4	171	5 3/4	146	1/2
GPL-54•	–	3 1/2	500-750 MCM	.815- .999	2 3/4	70	7 1/2	191	6	152	1/2
GPL-55•	–	3 1/2	750-1000 MCM	.999-1.153	3	76	8	203	6 1/2	165	1/2
GPL-56	–	4	8 Sol.-4 Str.	.128- .232	1 3/8	34	6 3/8	161	5 3/4	146	3/8
GPL-57	–	4	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	6 3/8	161	5 3/4	146	3/8
GPL-58	–	4	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	6 3/8	161	5 3/4	146	3/8
GPL-59•	–	4	300-500 MCM	.634- .815	2 3/8	60	6 3/4	171	6 1/4	158	1/2
GPL-60•	–	4	500-750 MCM	.815- .999	2 3/4	70	8	203	6 1/2	165	1/2
GPL-61•	–	4	750-1000 MCM	.999-1.153	3	76	8 1/2	216	7	178	1/2
GPL-68	–	5	8 Sol.-4 Str.	.128- .232	1 3/8	34	6 3/8	161	6 3/4	171	3/8
GPL-69	–	5	4 Sol.-2/0 Str.	.204- .419	1 17/32	38	5 5/8	143	6 13/16	173	3/8
GPL-70	–	5	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	6 1/8	155	6 13/16	173	3/8
GPL-71•	–	5	300-500 MCM	.634- .815	2 5/16	59	6 1/8	155	7 1/8	181	1/2
GPL-75	–	6	4 Sol.-2/0 Str.	.204- .419	1 17/32	38	5 7/8	149	7 7/8	200	3/8
GPL-76	–	6	2/0 Sol.-250 MCM	.365- .575	1 7/8	47	7 1/8	181	7 13/16	199	3/8
GPL-77•	–	6	300-500 MCM	.634- .815	2 5/16	59	6 3/16	157	8 3/16	208	1/2
GPL-87	–	8	4 Sol. 2/0 Str.	.204- .419	1 17/32	38	7 1/8	181	9 7/8	251	3/8

‡For conversion to metric range, see page 175.
•UL listing is limited to a maximum wire size of 250 MCM by UL467.
†3/8" U-Bolt threaded as shown above, add suffix "FT" for full thread. 1/2" U-Bolt standard is full thread.

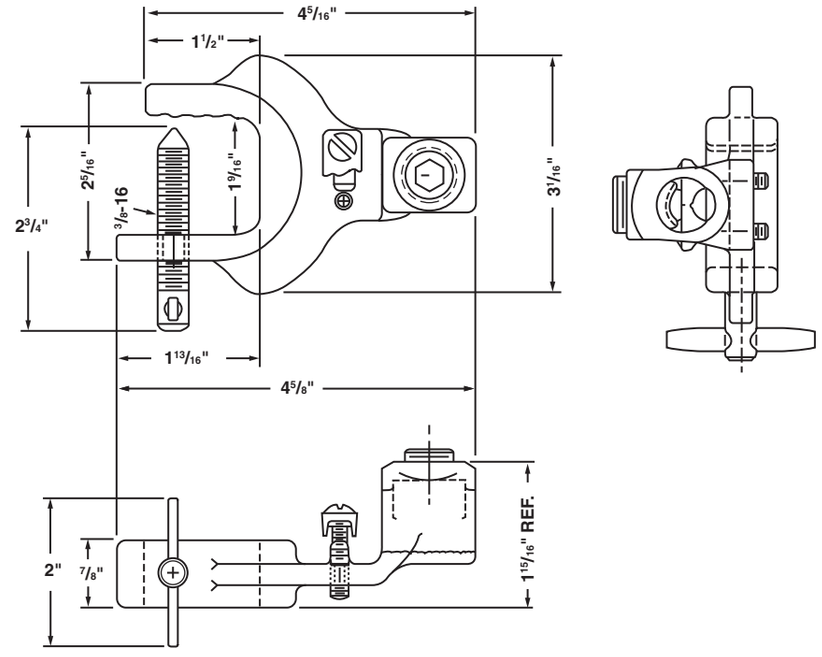
CAST COPPER TANKER STATIC GROUND CLAMPS • CATALOG NO. TSGC-030

For #6 – #2 conductor



Made of high strength cast copper alloy. Ribs provide multiple contact with the tank car. Clamp is secured to the vehicle by means of a low carbon steel, case hardened, wing screw designed to lock and penetrate the vehicle surface to insure a positive contact with the tanker or tank car.

Designed to accommodate flexible rubber sheath cable ranging from #6-#2 conductor.

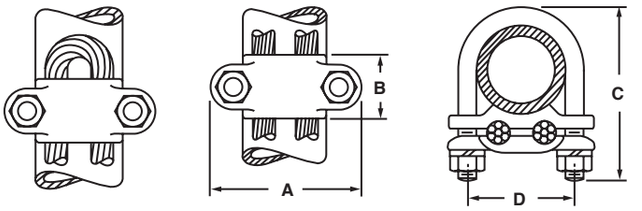


PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTOR • TYPE GU

For clamping two cables or a looped cable or wire to pipe

UL US
467
LISTED
SUITABLE FOR
DIRECT BURIAL



Made from high copper content alloy. Furnished with silicon bronze bolt, nuts and lockwashers.

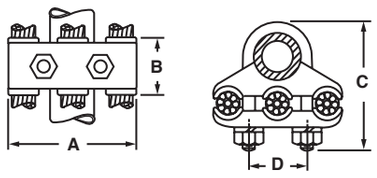
Catalog Number	IPS	Conductor Range	Wire Diameter Range‡	Approximate Dimensions								Bolt Dia.†
				A		B		C		D		
			in	in	mm	in	mm	in	mm	in	mm	
GU-0	3/4	8 Sol.-4 Str.	.128- .232	2 1/2	64	7/8	22	2 5/8	67	1 1/2	38	3/8
GU-00	3/4	4 Sol.-2/0 Str.	.204- .419	2 1/2	64	7/8	22	2 5/8	67	1 1/2	38	3/8
GU-1	1	8 Sol.-4 Str.	.128- .232	2 3/4	70	1 1/8	28	3	76	1 3/4	44	3/8
GU-2	1	4 Sol.-2/0 Str.	.204- .419	2 3/4	70	1 1/8	28	3 1/4	82	1 3/4	44	3/8
GU-3	1	2/0 Sol.-250 MCM	.365- .575	2 3/4	70	1 1/4	32	3 1/2	89	1 3/4	44	3/8
GU-4	1 1/4	8 Sol.-4 Str.	.128- .232	3	76	1 1/8	28	3 1/4	82	2 1/16	53	3/8
GU-5	1 1/4	4 Sol.-2/0 Str.	.204- .419	3	76	1 1/4	32	3 1/2	89	2 1/16	53	3/8
GU-6	1 1/4	2/0 Sol.-250 MCM	.365- .575	3	76	1 3/8	34	3 3/4	95	2 1/16	53	3/8
GU-7	1 1/2	8 Sol.-4 Str.	.128- .232	3 3/8	85	1 1/4	32	3 1/2	89	2 3/8	60	3/8
GU-8	1 1/2	4 Sol.-2/0 Str.	.204- .419	3 3/8	85	1 3/8	34	3 5/8	92	2 3/8	60	3/8
GU-9	1 1/2	2/0 Sol.-250 MCM	.365- .575	3 3/8	85	1 1/2	38	3 3/4	95	2 3/8	60	3/8
GU-10	2	8 Sol.-4 Str.	.128- .232	3 3/4	95	1 3/8	34	3 7/8	98	2 13/16	71	3/8
GU-11	2	4 Sol.-2/0 Str.	.204- .419	3 3/4	95	1 3/8	34	4 1/8	105	2 13/16	71	3/8
GU-12	2	2/0 Sol.-250 MCM	.365- .575	3 3/4	95	1 3/8	34	4 1/4	108	2 13/16	71	3/8
GU-13 •	2	300-500 MCM	.634- .815	4	102	1 1/2	38	4 5/8	118	2 15/16	75	1/2
GU-14	2 1/2	8 Sol.-4 Str.	.128- .232	4 1/4	108	1 3/8	34	5	127	3 5/16	84	3/8
GU-15	2 1/2	4 Sol.-2/0 Str.	.204- .419	4 1/4	108	1 3/8	34	5 1/8	130	3 5/16	84	3/8
GU-16	2 1/2	2/0 Sol.-250 MCM	.365- .575	4 1/4	108	1 3/8	34	5 1/4	133	3 5/16	84	3/8
GU-17 •	2 1/2	300-500 MCM	.634- .815	4 1/2	115	1 1/2	38	5 1/2	140	3 7/16	87	1/2
GU-18 •	2 1/2	500-750 MCM	.815- .999	4 1/2	115	1 1/2	38	5 3/4	146	3 7/16	87	1/2
GU-19	3	8 Sol.-4 Str.	.128- .232	5	127	1 3/8	34	5 1/4	133	3 15/16	100	3/8
GU-20	3	4 Sol.-2/0 Str.	.204- .419	5	127	1 3/8	34	5 1/2	140	3 15/16	100	3/8
GU-21	3	2/0 Sol.-250 MCM	.365- .575	5	127	1 3/8	34	5 3/4	146	3 15/16	100	3/8
GU-22 •	3	300-500 MCM	.634- .815	5 1/4	133	1 1/2	38	6	152	4 1/16	104	1/2
GU-23 •	3	500-750 MCM	.815- .999	5 1/2	140	1 3/4	44	6 3/8	161	4 3/16	107	5/8
GU-25	3 1/2	8 Sol.-4 Str.	.128- .232	5 1/2	140	1 1/2	38	6	152	4 7/16	113	3/8
GU-26	3 1/2	4 Sol.-2/0 Str.	.204- .419	5 1/2	140	1 1/2	38	6 1/8	155	4 7/16	113	3/8
GU-27	3 1/2	2/0 Sol.-250 MCM	.365- .575	5 1/2	140	1 1/2	38	6 1/4	158	4 7/16	113	3/8
GU-28 •	3 1/2	300-500 MCM	.634- .815	5 3/4	146	1 3/4	44	6 3/8	161	4 9/16	116	1/2
GU-29 •	3 1/2	500-750 MCM	.815- .999	6	152	1 7/8	47	6 5/8	168	4 11/16	119	5/8
GU-30 •	3 1/2	750-1000 MCM	.999-1.153	6	152	2 1/8	54	7	178	4 11/16	119	5/8
GU-31	4	8 Sol.-4 Str.	.128- .232	6	152	1 1/2	38	6 1/2	165	4 15/16	126	3/8
GU-32	4	4 Sol.-2/0 Str.	.204- .419	6	152	1 1/2	38	6 3/4	171	4 15/16	126	3/8
GU-33	4	2/0 Sol.-250 MCM	.365- .575	6	152	1 5/8	41	7	178	4 15/16	126	3/8
GU-34 •	4	300-500 MCM	.634- .815	6 1/4	158	1 5/8	41	7 1/4	184	5 1/16	129	1/2
GU-35 •	4	500-750 MCM	.815- .999	6 1/2	165	1 7/8	47	7 1/2	191	5 3/16	132	5/8
GU-36 •	4	750-1000 MCM	.999-1.153	6 1/2	165	2 1/8	54	7 3/4	197	5 3/16	132	5/8
GU-37 •	4	1250-1500 MCM	1.290-1.412	6 1/2	165	2 3/8	60	8 1/8	206	5 3/16	132	5/8

‡For conversion to metric range, see page 175.
†3/8" U-Bolt threaded as shown above, add suffix "FT" for full thread. 1/2" U-Bolt standard is full thread.
• UL Listing is limited to a maximum wire size of 250 mcm by UL 467.

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTOR • TYPE GR

For clamping three equal size cables to pipe or rod



Made from high copper content alloy. Furnished with silicon bronze bolt, nuts and lockwashers.

UL US
467
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SUITABLE FOR
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Catalog Number	Accommodates		Conductor Range	Wire Diameter Range‡	Approximate Dimensions								Bolt Dia.†
					A		B		C		D		
	Rod	IPS		in	in	mm	in	mm	in	mm	in	mm	
GR-1	1/2	1/4	8 Sol.-4 Str.	.128- .232	2 1/2	64	1 1/2	38	2 1/4	57	1	25	3/8
GR-2	1/2	1/4	4 Sol.-2/0 Str.	.204- .419	3	76	1 1/2	38	2 1/2	64	1	25	3/8
GR-3	1/2	1/4	2/0 Sol.-250 MCM	.365- .575	3 5/8	92	1 1/2	38	2 3/4	70	1	25	3/8
GR-4	5/8 or 3/4	3/8	8 Sol.-4 Str.	.128- .232	2 3/4	70	1 1/2	38	2 1/2	64	1 1/8	28	3/8
GR-5	5/8 or 3/4	3/8	4 Sol.-2/0 Str.	.204- .419	3	76	1 1/2	38	2 3/4	70	1 1/8	28	3/8
GR-6	5/8 or 3/4	3/8	2/0 Sol.-250 MCM	.365- .575	3 1/2	89	1 5/8	41	3	76	1 1/8	28	3/8
GR-7 •	5/8 or 3/4	3/8	300-500 MCM	.634- .815	4	102	1 5/8	41	3 1/4	82	1 1/8	28	1/2
GR-8	7/8 or 1	1/2 or 3/4	8 Sol.-4 Str.	.128- .232	2 7/8	73	1 1/2	38	3	76	1 1/2	38	3/8
GR-9	7/8 or 1	1/2 or 3/4	4 Sol.-2/0 Str.	.204- .419	3 1/2	89	1 1/2	38	3 1/4	82	1 1/2	38	3/8
GR-10	7/8 or 1	1/2 or 3/4	2/0 Sol.-250 MCM	.365- .575	3 7/8	98	1 5/8	41	3 3/8	85	1 1/2	38	1/2
GR-11 •	7/8 or 1	1/2 or 3/4	300-500 MCM	.634- .815	4 3/8	111	1 5/8	41	3 1/2	89	1 1/2	38	1/2
GR-12 •	7/8 or 1	1/2 or 3/4	500-750 MCM	.815- .999	5	127	1 3/4	44	4	102	1 5/8	41	1/2
GR-13	–	1	8 Sol.-4 Str.	.128- .232	3 1/4	82	1 1/2	38	3	76	1 3/4	44	3/8
GR-14	–	1	4 Sol.-2/0 Str.	.204- .419	3 5/8	92	1 1/2	38	3 1/4	82	1 3/4	44	3/8
GR-15	–	1	2/0 Sol.-250 MCM	.365- .575	4 1/8	105	1 5/8	41	3 1/2	89	1 3/4	44	3/8
GR-16 •	–	1	300-500 MCM	.634- .815	4 1/2	115	1 5/8	41	3 3/8	95	1 3/4	44	1/2
GR-17 •	–	1	500-750 MCM	.815- .999	5 1/8	130	1 3/4	44	4 1/4	108	1 7/8	47	1/2
GR-18 •	–	1	750-1000 MCM	.999-1.153	5 1/2	140	1 3/4	44	4 1/2	115	1 7/8	47	1/2
GR-19	–	1 1/4	8 Sol.-4 Str.	.128- .232	3 1/2	89	1 1/2	38	3 1/2	89	2 1/16	53	3/8
GR-20	–	1 1/4	4 Sol.-2/0 Str.	.204- .419	4	102	1 1/2	38	3 3/4	95	2 1/16	53	3/8
GR-21	–	1 1/4	2/0 Sol.-250 MCM	.365- .575	4 1/2	115	1 5/8	41	3 7/8	98	2 1/16	53	3/8
GR-22 •	–	1 1/4	300-500 MCM	.634- .815	5 1/8	130	1 3/4	44	4 3/8	111	2 3/16	56	1/2
GR-23 •	–	1 1/4	500-750 MCM	.815- .999	5 3/4	146	2	51	5 1/8	130	2 5/16	59	5/8
GR-24 •	–	1 1/4	750-1000 MCM	.999-1.153	6 1/4	158	2	51	5 3/8	136	2 5/16	59	5/8
GR-25	–	1 1/2	8 Sol.-4 Str.	.128- .232	3 3/4	95	1 1/2	38	3 3/4	95	2 3/8	60	3/8
GR-26	–	1 1/2	4 Sol.-2/0 Str.	.204- .419	4 1/4	108	1 1/2	38	4	102	2 3/8	60	3/8
GR-27	–	1 1/2	2/0 Sol.-250 MCM	.365- .575	4 3/4	121	1 3/4	44	4 1/4	108	2 3/8	60	3/8
GR-28 •	–	1 1/2	300-500 MCM	.634- .815	5 1/2	140	2	51	4 3/4	121	2 1/2	64	1/2
GR-29 •	–	1 1/2	500-750 MCM	.815- .999	6 1/4	158	2 1/4	57	5 1/4	133	2 5/8	67	5/8
GR-30 •	–	1 1/2	750-1000 MCM	.999-1.153	6 1/2	165	2 1/4	57	5 1/2	140	2 5/8	67	5/8
GR-31	–	2	8 Sol.-4 Str.	.128- .232	4 3/8	111	1 1/2	38	4 1/4	108	2 13/16	71	3/8
GR-32	–	2	4 Sol.-2/0 Str.	.204- .419	4 7/8	124	1 1/2	38	4 1/2	115	2 13/16	71	3/8
GR-33	–	2	2/0 Sol.-250 MCM	.365- .575	5 1/4	133	1 3/4	44	5	127	2 13/16	71	1/2
GR-34 •	–	2	300-500 MCM	.634- .815	5 3/4	140	2	51	5	127	2 15/16	75	1/2
GR-35 •	–	2	500-750 MCM	.815- .999	6 5/8	168	2 1/4	57	5 3/4	146	3 1/16	78	1/2
GR-36 •	–	2	750-1000 MCM	.999-1.153	7	178	2 1/4	57	6	152	3 1/16	78	5/8
GR-37	–	2 1/2	8 Sol.-4 Str.	.128- .232	4 7/8	124	1 1/2	38	4 5/8	118	3 5/16	84	3/8
GR-38	–	2 1/2	4 Sol.-2/0 Str.	.204- .419	5 3/8	136	1 1/2	38	5	127	3 5/16	84	3/8
GR-39	–	2 1/2	2/0 Sol.-250 MCM	.365- .575	5 7/8	149	1 3/4	44	5 1/4	133	3 5/16	84	1/2
GR-40 •	–	2 1/2	300-500 MCM	.634- .815	6 1/2	165	2	51	5 3/4	146	3 7/16	87	1/2
GR-41 •	–	2 1/2	500-750 MCM	.815- .999	7 1/4	184	2 1/4	57	6 1/4	158	3 9/16	90	5/8
GR-42 •	–	2 1/2	750-1000 MCM	.999-1.153	7 1/2	191	2 1/4	57	6 1/2	185	3 9/16	90	5/8
GR-43	–	3	8 Sol.-4 Str.	.128- .232	5 1/2	140	1 1/2	38	5 1/4	133	3 15/16	100	3/8
GR-44	–	3	4 Sol.-2/0 Str.	.204- .419	6	152	1 1/2	38	5 5/8	143	3 15/16	100	3/8
GR-45	–	3	2/0 Sol.-250 MCM	.365- .575	6 3/8	161	1 3/4	44	5 3/4	146	3 15/16	100	1/2
GR-46 •	–	3	300-500 MCM	.634- .815	6 7/8	174	2	51	6 1/4	158	4 1/16	104	1/2
GR-47 •	–	3	500-750 MCM	.815- .999	7 1/2	191	2 1/4	57	6 5/8	168	4 3/16	107	5/8
GR-48 •	–	3	750-1000 MCM	.999-1.153	8 1/8	206	2 1/4	57	6 7/8	174	4 3/16	107	5/8
GR-49	–	3 1/2	8 Sol.-4 Str.	.128- .232	6	152	1 1/2	38	5 5/8	143	4 7/16	113	3/8
GR-50	–	3 1/2	4 Sol.-2/0 Str.	.204- .419	6 3/8	161	1 1/2	38	5 7/8	149	4 7/16	113	1/2
GR-51	–	3 1/2	2/0 Sol.-250 MCM	.365- .575	6 3/4	171	1 3/4	44	6 3/8	161	4 7/16	113	1/2
GR-60	–	4	8 Sol.-4 Str.	.128- .232	6 3/8	161	1 1/2	38	6 3/8	161	4 15/16	120	3/8
GR-61	–	4	4 Sol.-2/0 Str.	.204- .419	6 11/16	169	1 1/2	38	6 3/8	161	4 15/16	126	1/2
GR-62	–	4	2/0 Sol.-250 MCM	.365- .575	7 1/4	184	1 3/4	44	6 3/4	171	4 15/16	126	1/2

‡For conversion to metric range, see page 175. †3/8" U-Bolt threaded as shown above, add suffix "FT" for full thread. 1/2" U-Bolt standard is full thread.
• UL Listing is limited to a maximum wire size of 250 mcm by UL 467.

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTORS • TYPE GO

For clamping braid, cable or strip copper to pipe

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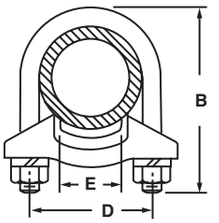
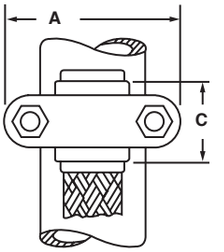




Made from high copper content alloy. Furnished with silicon bronze bolt, nuts and lockwashers.

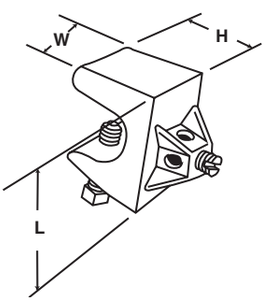
Catalog Number	IPS	Approximate Dimensions										Bolt Dia.†
		A		B		C		D		E		
		in	mm	in	mm	in	mm	in	mm	in	mm	
GO-0	3/4	2 1/2	64	2 1/2	64	1 1/8	28	1 1/2	38	1	25	3/8
GO-1	1	2 3/4	70	3 1/4	82	1 1/4	32	1 3/4	44	1	25	3/8
GO-2	1 1/4	3	76	3 1/2	89	1 3/8	34	2 1/16	53	1	25	3/8
GO-3	1 1/2	3 3/8	85	3 1/2	89	1 1/2	38	2 3/8	60	1	25	3/8
GO-4	1 1/2	3 3/8	85	3 1/2	89	1 1/2	38	2 3/8	60	1 1/2	38	3/8
GO-4A	1 1/2	3 3/8	85	3 1/2	89	1 1/2	38	2 3/8	60	2	51	1/2
GO-5	2	3 3/4	95	4 1/4	108	1 1/2	38	2 13/16	71	1	25	3/8
GO-6	2	3 3/4	95	4 1/4	108	1 1/2	38	2 13/16	71	1 1/2	38	3/8
GO-7	2	4	102	4 3/8	111	1 3/4	44	2 15/16	75	2	51	1/2
GO-7A	2 1/2	4 1/2	115	5	127	1 3/4	44	3 7/16	87	1 1/2	38	1/2
GO-8	2 1/2	4 1/2	115	5	127	1 7/8	47	3 7/16	87	2	51	1/2
GO-9	2 1/2	4 1/2	115	5	127	2	51	3 7/16	87	2 1/2	84	1/2
GO-10	3	5 1/4	133	6 1/4	158	2	51	4 1/16	104	2	51	1/2
GO-11	3	5 1/4	133	6 1/4	158	2	51	4 1/16	104	2 1/2	64	1/2
GO-12	3	5 1/4	133	6 1/4	158	2	51	4 1/16	104	3	76	1/2
GO-13	3 1/2	5 3/4	146	5 7/8	149	2 1/4	57	4 9/16	116	2	51	1/2
GO-14	3 1/2	5 3/4	146	5 7/8	149	2 1/4	57	4 9/16	116	2 1/2	64	1/2
GO-15	3 1/2	5 3/4	146	5 7/8	149	2 1/4	57	4 9/16	116	3	76	1/2
GO-16	4	6 1/4	158	6 1/2	165	2 1/4	57	5 1/16	129	2	51	1/2
GO-17	4	6 1/4	158	6 1/2	165	2 3/8	60	5 1/16	129	2 1/2	64	1/2
GO-18	4	6 1/4	158	6 1/2	165	2 1/2	64	5 1/16	129	3	76	1/2
GO-19	4	6 1/4	158	6 1/2	165	2 3/4	70	5 1/16	129	3 1/2	89	1/2

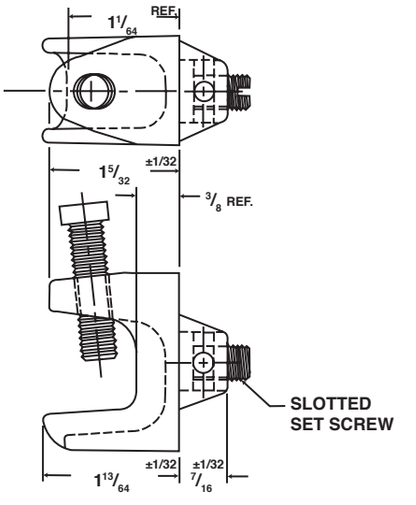
† 3/8" U-Bolt threaded as shown above, add suffix "FT" for full thread. 1/2" U-Bolt standard is full thread.

TRAILER GROUND CLAMPS • TYPE GBC AND GBCH

Grounds Trailer Frames, Cable Trays, Pedestals - Connects #6-#14 solid copper conductor to metal frames where continuity of grounding can be assured. Ground wire may be installed on clamp prior to mounting the clamp on metal frame, reducing installation time. High strength copper alloy (91% nominal) provides conductivity, durability and excellent corrosion resistant characteristics. High strength steel zinc plated anchoring bolt penetrates paint or metal oxide. Hex head bolt installs with can wrench, socket or cresent wrench. Square head bolt allows clamp to be installed with pliers when tighter ground connection is needed.

C UL US
UL listed 467



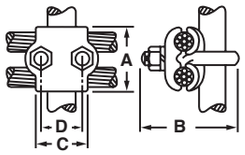


Catalog Number	Wire Range	Beam Bolt	L	W	H
GBC-6	#6-#14	Sq HD 5/16-18	1 5/8	1"	1 3/16
GBCH-6		Hex HD 5/16-18			

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTOR • TYPE GT

For clamping parallel cables or wires to pipe or rod



Made from high copper content alloy. Furnished with silicon bronze bolt, nuts and lockwashers.

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Catalog Number	Accommodates Rod	Accommodates IPS	Conductor Range	Wire Diameter Range‡ in	Approximate Dimensions A in	A mm	B in	B mm	C in	C mm	D in	D mm	Bolt Dia.†
GT-1	1/2	1/4	8 Sol.-4 Str.	.128- .232	1 5/8	41	2	51	1 5/8	41	1	25	3/8
GT-2	1/2	1/4	4 Sol.-2/0 Str.	.204- .419	2	51	2 1/8	54	1 3/4	44	1	25	3/8
GT-3	1/2	1/4	2/0 Sol.-250 MCM	.365- .575	2 1/2	64	2 1/4	57	1 7/8	47	1	25	3/8
GT-4	5/8 or 3/4	3/8	8 Sol.-4 Str.	.128- .232	1 5/8	41	2 1/8	54	1 5/8	41	1 1/8	28	3/8
GT-5	5/8 or 3/4	3/8	4 Sol.-2/0 Str.	.204- .419	2	51	2 1/2	64	1 3/4	44	1 1/8	28	3/8
GT-6	5/8 or 3/4	3/8	2/0 Sol.-250 MCM	.365- .575	2 1/2	64	2 5/8	67	1 7/8	47	1 1/8	28	3/8
GT-7 •	5/8 or 3/4	3/8	300-500 MCM	.634- .815	2 3/4	70	2 3/4	70	2	51	1 1/8	28	3/8
GT-8	7/8 or 1	1/2 or 3/4	8 Sol.-4 Str.	.128- .232	1 5/8	41	2 1/2	64	1 5/8	41	1 1/2	38	3/8
GT-9	7/8 or 1	1/2 or 3/4	4 Sol.-2/0 Str.	.204- .419	2	51	2 3/4	70	1 3/4	44	1 1/2	38	3/8
GT-10	7/8 or 1	1/2 or 3/4	2/0 Sol.-250 MCM	.365- .575	2 1/2	64	2 7/8	73	1 7/8	47	1 1/2	38	3/8
GT-11 •	7/8 or 1	1/2 or 3/4	300-500 MCM	.634- .815	2 3/4	70	3	76	2	51	1 1/2	38	3/8
GT-12 •	7/8 or 1	1/2 or 3/4	500-750 MCM	.815- .999	3 1/8	79	3 3/4	95	2 1/4	57	1 5/8	41	1/2
GT-13	–	1	8 Sol.-4 Str.	.128- .232	1 5/8	41	2 3/4	70	1 5/8	41	1 3/4	44	3/8
GT-14	–	1	4 Sol.-2/0 Str.	.204- .419	2	51	3	76	1 3/4	44	1 3/4	44	3/8
GT-15	–	1	2/0 Sol.-250 MCM	.365- .575	2 1/2	64	3 7/8	98	3 1/8	79	1 3/4	44	3/8
GT-16 •	–	1	300-500 MCM	.634- .815	2 3/4	70	3 3/4	95	2	51	1 3/4	44	3/8
GT-17 •	–	1	500-750 MCM	.815- .999	3 1/8	79	4 1/8	105	2 1/4	57	1 7/8	47	1/2
GT-18	–	1 1/4	8 Sol.-4 Str.	.128- .232	1 5/8	41	3	76	1 7/8	47	2 1/16	53	3/8
GT-19	–	1 1/4	4 Sol.-2/0 Str.	.204- .419	2	51	3 1/4	82	2	51	2 1/16	53	3/8
GT-20	–	1 1/4	2/0 Sol.-250 MCM	.365- .575	2 1/2	64	3 1/2	89	2 1/8	54	2 1/16	53	3/8
GT-21 •	–	1 1/4	300-500 MCM	.634- .815	2 3/4	70	4 1/8	105	2 1/4	57	2 3/16	56	1/2
GT-22 •	–	1 1/4	500-750 MCM	.815- .999	3 3/4	95	4 3/8	111	2 1/2	64	2 5/16	59	5/8
GT-23 •	–	1 1/4	750-1000 MCM	.999-1.153	4	102	4 5/8	118	2 3/4	70	2 5/16	59	5/8
GT-24	–	1 1/2	8 Sol.-4 Str.	.128- .232	1 5/8	41	3 1/4	82	2 1/4	57	2 3/8	60	3/8
GT-25	–	1 1/2	4 Sol.-2/0 Str.	.204- .419	2	51	3 1/2	89	2 3/8	60	2 3/8	60	3/8
GT-26	–	1 1/2	2/0 Sol.-250 MCM	.365- .575	2 1/2	64	3 7/8	98	2 1/2	64	2 3/8	60	3/8
GT-27 •	–	1 1/2	300-500 MCM	.634- .815	2 3/4	70	4 3/8	111	2 5/8	67	2 1/2	64	1/2
GT-28 •	–	1 1/2	500-750 MCM	.815- .999	3 3/4	95	4 3/8	121	2 3/4	70	2 5/8	67	5/8
GT-29 •	–	1 1/2	750-1000 MCM	.999-1.153	4	102	5	127	2 7/8	73	2 5/8	67	5/8
GT-30	–	2	8 Sol.-4 Str.	.128- .282	1 3/4	44	3 7/8	98	2 3/4	70	2 13/16	71	3/8
GT-31	–	2	4 Sol. 2/0 Str.	.204- .419	2	51	4 1/8	105	2 7/8	73	2 13/16	71	3/8
GT-32	–	2	2/0 Sol.-250 MCM	.365- .575	2 5/8	67	4 1/4	108	3	76	2 13/16	71	3/8
GT-33 •	–	2	300-500 MCM	.634- .815	2 7/8	73	4 5/8	118	3 1/8	79	2 15/16	75	1/2
GT-34 •	–	2	500-750 MCM	.815- .999	3 3/4	95	5 1/4	133	3 1/4	82	3 1/16	78	5/8
GT-35 •	–	2	750-1000 MCM	.999-1.153	4	102	5 1/2	140	3 1/4	82	3 1/16	78	5/8
GT-36	–	2 1/2	8 Sol.-4 Str.	.128- .232	1 3/4	44	4 3/8	111	3 3/8	85	3 5/8	92	3/8
GT-37	–	2 1/2	4 Sol.-2/0 Str.	.204- .419	2	51	4 1/2	115	3 3/8	85	3 5/16	84	3/8
GT-38	–	2 1/2	2/0 Sol.-250 MCM	.365- .575	2 5/8	67	4 3/4	121	3 1/2	89	3 5/16	84	3/8
GT-39 •	–	2 1/2	300-500 MCM	.634- .815	2 7/8	73	5 1/8	130	3 5/8	92	3 7/16	87	1/2
GT-40 •	–	2 1/2	500-750 MCM	.815- .999	3 3/4	95	5 5/8	143	3 3/4	95	3 9/16	90	5/8
GT-41 •	–	2 1/2	750-1000 MCM	.999-1.153	4	102	5 3/4	146	3 3/4	95	3 9/16	90	5/8
GT-42	–	3	8 Sol.-4 Str.	.128- .232	1 3/4	44	5	127	3 5/8	92	3 15/16	100	3/8
GT-43	–	3	4 Sol.-2/0 Str.	.204- .419	2	51	5 1/4	133	3 3/4	95	3 15/16	100	3/8
GT-44	–	3	2/0 Sol.-250 MCM	.365- .575	2 5/8	67	5 1/2	140	3 3/4	95	3 15/16	100	3/8
GT-45 •	–	3	300-500 MCM	.634- .815	2 7/8	73	5 7/8	149	3 7/8	98	4 1/16	104	1/2
GT-46 •	–	3	500-750 MCM	.815- .999	3 3/4	95	6 1/2	165	4 1/8	105	4 3/16	107	5/8
GT-47 •	–	3	750-1000 MCM	.999-1.153	4	102	6 3/4	171	4 1/8	105	4 3/16	107	5/8
GT-48	–	3 1/2	8 Sol.-4 Str.	.128- .232	1 3/4	44	5 1/2	140	3 7/8	98	4 7/16	113	3/8
GT-49	–	3 1/2	4 Sol.-2/0 Str.	.204- .419	2	51	5 7/8	149	3 7/8	98	4 7/16	113	3/8
GT-50	–	3 1/2	2/0 Sol.-250 MCM	.365- .575	2 5/8	67	6 1/8	155	4	102	4 7/16	113	3/8
GT-51 •	–	3 1/2	300-500 MCM	.634- .815	2 7/8	73	6 1/2	165	4 1/4	105	4 9/16	116	1/2
GT-52 •	–	3 1/2	500-750 MCM	.815- .999	3 3/4	95	7 1/8	181	4 5/8	118	4 11/16	119	5/8
GT-53 •	–	3 1/2	750-1000 MCM	.999-1.153	4	102	7 3/8	187	4 5/8	118	4 11/16	119	5/8
GT-54 •	–	3 1/2	1250-1500 MCM	1.290-1.412	4 1/4	108	7 5/8	194	4 3/4	121	4 11/16	119	5/8
GT-55	–	4	2/0 Sol.-250 MCM	.365- .575	2 5/8	67	6 1/2	165	4 3/4	121	4 15/16	126	3/8
GT-56 •	–	4	300-500 MCM	.634- .815	2 7/8	73	7	178	5	127	5 1/16	129	1/2

‡For conversion to metric range, see page 175. †3/8" U-Bolt threaded as shown above, add suffix "FT" for full thread. 1/2" U-Bolt standard is full thread.
• UL Listing is limited to a maximum wire size of 250 mcm by UL 467.

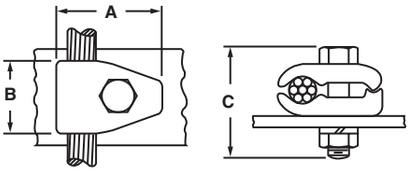
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTORS • TYPES GM, GMS & GWL

For clamping cable or wire to flat surface

Made from high copper content alloy. Furnished with silicon bronze bolt, nut and lockwasher. Standard catalog items for 1/4" bar, for other applications, specify bar thickness.

C UL US
467
LISTED
SUITABLE FOR
DIRECT BURIAL



TYPE GM

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions						
			A		B		C		Bolt Dia.
		in	in	mm	in	mm	in	mm	
GM-1	8 Sol.-4 Str.	.128- .232	1 1/4	32	1	25	1 5/8	41	3/8
GM-2	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	1 1/8	28	1 3/4	44	3/8
GM-3	2/0 Sol.-250 MCM	.365- .575	2 1/8	54	1 1/2	38	2	51	1/2
GM-4•	300-500 MCM	.634- .815	2 3/8	60	1 5/8	41	2 1/2	64	1/2
GM-5•	500-750 MCM	.815- .999	3	76	1 3/4	44	3	76	5/8
GM-6•	750-1000 MCM	.999-1.153	3 1/2	89	1 7/8	47	3 1/8	79	5/8

‡For conversion to metric range, see page 175.
•UL listing is limited to a maximum wire size of 250 MCM by UL467.

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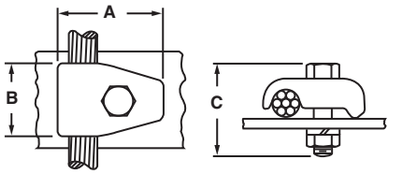

TYPE GMS

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions						
			A		B		C		Bolt Dia.
		in	in	mm	in	mm	in	mm	
GMS-1	8 Sol.-4 Str.	.128- .232	1 1/4	32	1	25	1 5/8	41	3/8
GMS-2	4 Sol.-2/0 Str.	.204- .419	1 5/8	41	1 1/8	28	1 3/4	44	3/8
GMS-3	2/0 Sol.-250 MCM	.365- .575	2 1/8	54	1 1/2	38	2	51	1/2
GMS-4•	300-500 MCM	.634- .815	2 3/8	60	1 5/8	41	2 1/2	64	1/2
GMS-5•	500-750 MCM	.815- .999	3	76	1 3/4	44	3	76	5/8
GMS-6•	750-1000 MCM	.999-1.153	3 1/2	89	1 7/8	47	3 1/8	79	5/8

‡For conversion to metric range, see page 175.
•UL listing is limited to a maximum wire size of 250 MCM by UL467.

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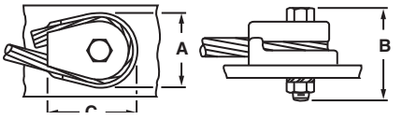


TYPE GWL

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions						
			A		B		C		Bolt Dia.
		in	in	mm	in	mm	in	mm	
GWL-1	8 Str.-4 Str.	.146- .232	1 1/8	28	1 1/2	38	1 3/8	34	3/8
GWL-2	8 Str.-4 Str.	.146- .232	1 3/4	44	1 3/4	44	1 7/8	47	1/2
GWL-3	3 Str.-2/0 Str.	.260- .419	1 11/16	42	2	51	1 7/8	47	3/8
GWL-4	3 Str.-2/0 Str.	.260- .419	1 13/16	46	2 1/8	54	1 7/8	47	1/2
GWL-5	3/0 Str.-250 MCM	.470- .575	2 1/4	57	2 1/4	57	2 3/8	60	3/8
GWL-6	3/0 Str.-250 MCM	.470- .575	2 1/4	57	2 3/8	60	2 3/8	60	1/2
GWL-7	3/0 Str.-250 MCM	.470- .575	2 1/4	57	2 1/2	64	2 3/8	60	5/8

‡For conversion to metric range, see page 175.

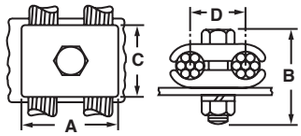
PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE GROUND CLAMP CONNECTORS • TYPES GH, GHS, GJ & GJS

For clamping cable or wires to flat bar

Made from high copper content alloy. Furnished with silicon bronze bolt, nut and lockwasher. Standard catalog items for 1/4" bar, for other applications specify bar thickness.

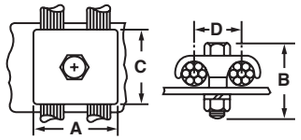
UL US
467
LISTED
SUITABLE FOR
DIRECT BURIAL



TYPE GH

Cat. No.	Conductor Range	Wire Diameter Range‡	Approximate Dimensions								
			A		B		C		D		Bolt
		in	in	mm	in	mm	in	mm	in	mm	Dia.
GH-1	8 Sol.-4 Str.	.128- .232	1 1/4	32	1 1/2	38	1 3/8	34	3/4	19	3/8
GH-2	4 Sol.-2/0 Str.	.204- .419	1 1/2	38	2	51	1 5/8	41	1	25	3/8
GH-3	2/0 Sol.-250 MCM	.365- .575	2	51	2 1/4	57	1 3/4	44	1 1/4	32	1/2
GH-4 •	300-500 MCM	.634- .815	2 1/2	64	2 7/8	73	2	51	1 1/2	38	1/2
GH-5 •	500-750 MCM	.815- .999	3 1/4	82	3 3/8	85	2 3/8	60	1 3/4	44	5/8
GH-6 •	750-1000 MCM	.999-1.153	3 5/8	92	3 3/4	95	2 1/2	64	2	51	5/8
GH-7 •	1000-1250 MCM	1.153-1.290	4	102	4	102	2 3/4	70	2 1/4	57	5/8

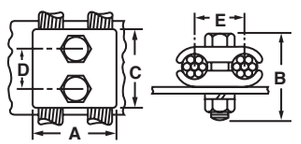
‡For conversion to metric range, see page 175.



TYPE GHS

Cat. No.	Conductor Range	Wire Diameter Range‡	Approximate Dimensions								
			A		B		C		D		Bolt
		in	in	mm	in	mm	in	mm	in	mm	Dia.
GHS-1	8 Sol.-4 Str.	.128- .232	1 1/4	32	1 3/8	34	1 3/8	34	3/4	19	3/8
GHS-2	4 Sol.-2/0 Str.	.204- .419	1 1/2	38	1 1/2	38	1 5/8	41	1	25	3/8
GHS-3	2/0 Sol.-250 MCM	.365- .575	2	51	1 7/8	47	1 3/4	44	1 1/4	32	1/2
GHS-4 •	300-500 MCM	.634- .815	2 1/2	64	2 3/8	60	2	51	1 1/2	38	1/2
GHS-5 •	500-750 MCM	.815- .999	3 1/4	82	2 3/4	70	2 3/8	60	1 3/4	44	5/8
GHS-6 •	750-1000 MCM	.999-1.153	3 5/8	92	2 7/8	73	2 1/2	64	2	51	5/8
GHS-7 •	1000-1250 MCM	1.153-1.290	4	102	3	76	2 3/4	70	2 1/4	57	5/8

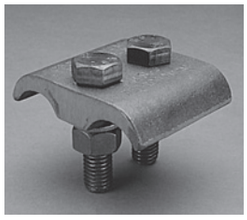
‡For conversion to metric range, see page 175.

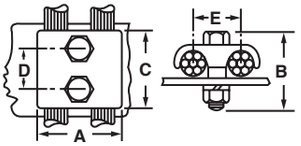


TYPE GJ

Cat. No.	Conductor Range	Wire Diameter Range‡	Approximate Dimensions										
			A		B		C		D		E		Bolt
		in	in	mm	in	mm	in	mm	in	mm	in	mm	Dia.
GJ-1	8 Sol.-4 Str.	.128- .232	1 1/4	32	1 1/2	38	2	51	15/16	24	3/4	19	3/8
GJ-2	4 Sol.-2/0 Str.	.204- .419	1 1/2	38	2	51	2	51	1	25	1	25	3/8
GJ-3	2/0 Sol.-250 MCM	.365- .575	2	51	2 1/4	57	2 1/2	64	1 5/16	33	1 5/16	33	1/2
GJ-4 •	300-500 MCM	.634- .815	2 1/2	64	2 7/8	73	2 1/2	64	1 3/8	34	1 1/2	38	1/2
GJ-5 •	500-750 MCM	.815- .999	3 1/4	82	3 3/8	85	3	76	1 9/16	39	1 3/4	44	5/8
GJ-6 •	750-1000 MCM	.999-1.153	3 5/8	92	3 3/4	95	3	76	1 9/16	39	2	51	5/8
GJ-7 •	1000-1250 MCM	1.153-1.290	4	102	4	102	3 1/2	89	1 3/4	44	2 1/4	57	5/8

‡For conversion to metric range, see page 175.





TYPE GJS

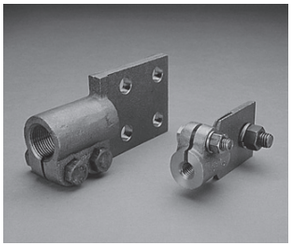
Cat. No.	Conductor Range	Wire Diameter Range‡	Approximate Dimensions										
			A		B		C		D		E		Bolt
		in	in	mm	in	mm	in	mm	in	mm	in	mm	Dia.
GJS-1	8 Sol.-4 Str.	.128- .232	1 1/4	32	1 3/8	34	2	51	15/16	24	3/4	19	3/8
GJS-2	4 Sol.-2/0 Str.	.204- .419	1 1/2	38	1 1/2	38	2	51	1	25	1	25	3/8
GJS-3	2/0 Sol.-250 MCM	.365- .575	2	51	1 7/8	47	2 1/2	64	1 5/16	33	1 5/16	33	1/2
GJS-4 •	300-500 MCM	.634- .815	2 1/2	64	2 3/8	60	2 1/2	64	1 3/8	34	1 1/2	38	1/2
GJS-5 •	500-750 MCM	.815- .999	3 1/4	82	2 3/4	70	3	76	1 9/16	39	1 3/4	44	5/8
GJS-6 •	750-1000 MCM	.999-1.153	3 5/8	92	2 7/8	73	3	76	1 9/16	39	2	51	5/8
GJS-7 •	1000-1250 MCM	1.153-1.290	4	102	3	76	3 1/2	89	1 3/4	44	2 1/4	57	5/8

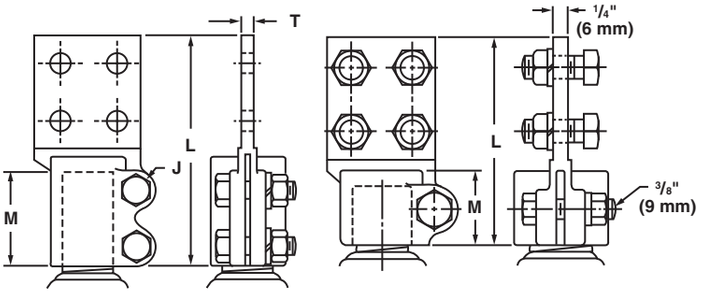
‡For conversion to metric range, see page 175.
• UL Listing is limited to a maximum wire size of 250 mcm by UL 467.

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

BRONZE STUD CONNECTOR • TYPE SLB & SSLB

Stud to single or multiple bus bar vertical take off





TYPE SLB TYPE SSLB

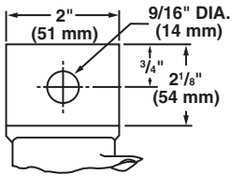


FIG. 1
(SUFFIX-S)

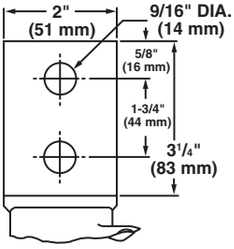


FIG. 2
(SUFFIX-D)

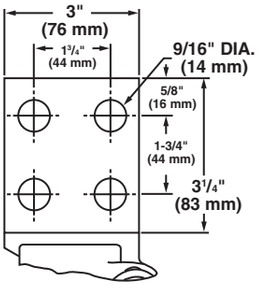


FIG. 3
(SUFFIX-F)

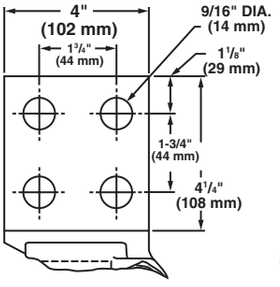
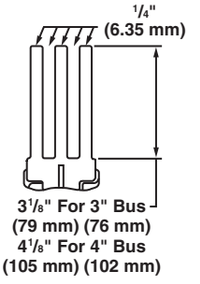


FIG. 4
(SUFFIX-E)



MULTI-TONGUE
(ILLUSTRATION 3 BAR)

TYPE SLB

Double bolt clamping.

Complete connector cast in one piece from high copper content alloy.

Furnished with silicon bronze bolts, nuts and lockwashers.

TYPE SSLB

Single bolt clamping of stud is suitable for normal requirements.

Pads are 1/4" thick and mounting holes are to NEMA standards.

Mounting hardware is supplied for mounting bars to pad of connector.

Catalog Number	Stud Diameter No. Threads in	No. Bars	Fig. No.	Approximate Dimensions						
				L		T		J	M	
				in	mm	in	mm	in	in	mm
SLB-0513-D	1/2-13	1	2	5 1/4	133	1/4	6.35	3/8	1 3/4	44
SLB-0513-F	1/2-13	1	3	5 1/4	133	1/4	6.35	3/8	1 3/4	44
SLB-0611-D	5/8-11	1	2	5 1/4	133	1/4	6.35	3/8	1 3/4	44
SLB-0611-F	5/8-11	1	3	5 1/4	133	1/4	6.35	3/8	1 3/4	44
SLB-0716-D	3/4-16	1	2	5 1/4	133	1/4	6.35	3/8	1 3/4	44
SLB-0716-F	3/4-16	1	3	5 1/4	133	1/4	6.35	3/8	1 3/4	44
SLB-1014-D	1 -14	1	2	6	152	3/8	9.52	1/2	2 1/4	57
SLB-1014-F	1 -14	1	3	6	152	3/8	9.52	1/2	2 1/4	57
SLB-1014-E	1 -14	1	4	7	178	3/8	9.52	1/2	2 1/4	57
SLB-1014-2D	1 -14	2	2	5 7/8	149	1/4	6.35	1/2	2 1/4	57
SLB-1014-2F	1 -14	2	3	5 7/8	149	1/4	6.35	1/2	2 1/4	57
SLB-1014-2E	1 -14	2	4	6 7/8	174	1/4	6.35	1/2	2 1/4	57
SLB-1112-D	1 1/8-12	1	2	6	152	3/8	9.52	1/2	2 1/4	57
SLB-1112-F	1 1/8-12	1	3	6	152	3/8	9.52	1/2	2 1/4	57
SLB-1112-E	1 1/8-12	1	4	7	178	3/8	9.52	1/2	2 1/4	57
SLB-1112-2D	1 1/8-12	2	2	5 7/8	149	1/4	6.35	1/2	2 1/4	57
SLB-1112-2F	1 1/8-12	2	3	5 7/8	149	1/4	6.35	1/2	2 1/4	57
SLB-1112-2E	1 1/8-12	2	4	6 7/8	174	1/4	6.35	1/2	2 1/4	57

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BRONZE STUD CONNECTOR • TYPE SLB

Continued from preceding page

Catalog Number	Stud Diameter No. Threads in	No. Bars	Fig. No.	Approximate Dimensions L in	L mm	T in	T mm	J in	M in	M mm
SLB-1212-D	1 1/4-12	1	2	6 1/2	165	3/8	9.52	1/2	2 3/4	70
SLB-1212-F	1 1/4-12	1	3	6 1/2	165	3/8	9.52	1/2	2 3/4	70
SLB-1212-E	1 1/4-12	1	4	7 1/2	191	3/8	9.52	1/2	2 3/4	70
SLB-1212-2D	1 1/4-12	2	2	6 3/8	161	1/4	6.35	1/2	2 3/4	70
SLB-1212-2F	1 1/4-12	2	3	6 3/8	161	1/4	6.35	1/2	2 3/4	70
SLB-1212-2E	1 1/4-12	2	4	7 3/8	187	1/4	6.35	1/2	2 3/4	70
SLB-1512-D	1 1/2-12	1	2	6 1/2	165	3/8	9.52	1/2	2 3/4	70
SLB-1512-F	1 1/2-12	1	3	6 1/2	165	3/8	9.52	1/2	2 3/4	70
SLB-1512-E	1 1/2-12	1	4	7 1/2	191	3/8	9.52	1/2	2 3/4	70
SLB-1512-2D	1 1/2-12	2	2	6 3/8	161	1/4	6.35	1/2	2 3/4	70
SLB-1512-2F	1 1/2-12	2	3	6 3/8	161	1/4	6.35	1/2	2 3/4	70
SLB-1512-2E	1 1/2-12	2	4	7 3/8	187	1/4	6.35	1/2	2 3/4	70
SLB-1512-3D	1 1/2-12	3	2	6 3/8	161	1/4	6.35	1/2	2 3/4	70
SLB-1512-3F	1 1/2-12	3	3	6 3/8	161	1/4	6.35	1/2	2 3/4	70
SLB-1512-3E	1 1/2-12	3	4	7 3/8	187	1/4	6.35	1/2	2 3/4	70
SLB-2012-F	2 -12	1	3	6 3/8	161	1/2	12.70	1/2	2 11/16	68
SLB-2012-E	2 -12	1	4	7 3/8	187	1/2	12.70	1/2	2 11/16	68
SLB-2012-2F	2 -12	2	3	6 1/4	158	1/4	6.35	1/2	2 11/16	68
SLB-2012-2E	2 -12	2	4	7 1/4	184	1/4	6.35	1/2	2 11/16	68
SLB-2012-3F	2 -12	3	3	6 1/4	158	1/4	6.35	1/2	2 11/16	68
SLB-2012-3E	2 -12	3	4	7 1/4	184	1/4	6.35	1/2	2 11/16	68
SLB-2512-F	2 1/2-12	1	3	6 5/8	168	1/2	12.70	1/2	2 3/4	70
SLB-2512-E	2 1/2-12	1	4	7 5/8	194	1/2	12.70	1/2	2 3/4	70
SLB-2512-2F	2 1/2-12	2	3	6 1/2	165	1/4	6.35	1/2	2 3/4	70
SLB-2512-2E	2 1/2-12	2	4	7 1/2	191	1/4	6.35	1/2	2 3/4	70
SLB-2512-3F	2 1/2-12	3	3	6 1/2	165	1/4	6.35	1/2	2 3/4	70
SLB-2512-3E	2 1/2-12	3	4	7 1/2	191	1/4	6.35	1/2	2 3/4	70
SLB-3012-F	3 -12	1	3	7 1/8	181	3/4	19.05	5/8	3 1/4	83
SLB-3012-E	3 -12	1	4	8 1/8	206	3/4	19.05	5/8	3 1/4	83
SLB-3012-2F	3 -12	2	3	7	178	1/4	6.35	5/8	3 1/4	83
SLB-3012-2E	3 -12	2	4	8	203	1/4	6.35	5/8	3 1/4	83
SLB-3012-3F	3 -12	3	3	7	178	1/4	6.35	5/8	3 1/4	83
SLB-3012-3E	3 -12	3	4	8	203	1/4	6.35	5/8	3 1/4	83
SLB-3512-F	3 1/2-12	1	3	7 1/8	181	3/4	19.05	5/8	3 1/4	83
SLB-3512-E	3 1/2-12	1	4	8 1/8	206	3/4	19.05	5/8	3 1/4	83
SLB-3512-2F	3 1/2-12	2	3	7	178	1/4	6.35	5/8	3 1/4	83
SLB-3512-2E	3 1/2-12	2	4	8	203	1/4	6.35	5/8	3 1/4	83
SLB-3512-3F	3 1/2-12	3	3	7	178	1/4	6.35	5/8	3 1/4	83
SLB-3512-3E	3 1/2-12	3	4	8	203	1/4	6.35	5/8	3 1/4	83
SLB-4012-2E	4 -12	2	4	9 1/4	235	1/4	6.35	5/8	3 3/4	95
SLB-4012-3F	4 -12	3	3	8 1/4	209	1/4	6.35	5/8	3 3/4	95
SLB-4012-3E	4 -12	3	4	9 1/4	235	1/4	6.35	5/8	3 3/4	95
SLB-4012-4E	4 -12	4	4	9 1/4	235	1/4	6.35	5/8	3 3/4	95

TYPE SSLB • SINGLE BOLT CLAMPING

Catalog Number	Stud Diameter No. Threads in	Fig. No.	Approximate Dimensions L in	L mm	M in	M mm
SSLB-0513-S	1/2-13	1	4	102	1 1/2	38
SSLB-0513-D	1/2-13	2	5 1/4	133	1 1/2	38
SSLB-0611-S	5/8-11	1	4 1/4	108	1 1/2	38
SSLB-0611-D	5/8-11	2	5 1/4	133	1 1/2	38
SSLB-0716-S	3/4-16	1	3 7/8	98	1 1/2	38
SSLB-0716-D	3/4-16	2	5	127	1 1/2	38
SSLB-1014-S	1 -14	1	4	102	1 1/2	38
SSLB-1014-D	1 -14	2	5	127	1 1/2	38
SSLB-1112-D	1 1/8-12	2	5 3/8	136	1 1/2	38
SSLB-1112-F	1 1/8-12	3	5 1/4	133	1 1/2	38
SSLB-1212-D	1 1/4-12	2	5 1/8	130	1 1/2	38
SSLB-1212-F	1 1/4-12	3	5 1/4	133	1 1/2	38
SSLB-1512-D	1 1/2-12	2	5 1/4	133	1 1/2	38
SSLB-1512-F	1 1/2-12	3	5 1/8	130	1 1/2	38

For sizes not listed, please consult factory.

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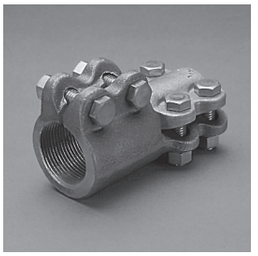
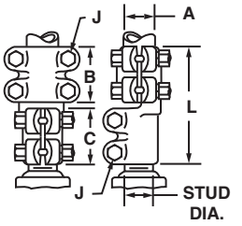
BRONZE STUD CONNECTOR • TYPE TS

Stud to tube vertical take off





Made from high copper content alloy.

Stud contact tapped, but can be supplied plain and bored to size. Number of threads other than listed supplied at no extra cost. Furnished with silicon bronze bolts, nuts and lockwashers.

Catalog Number	Stud Diameter No. Threads	Approximate Dimensions							
		A IPS	B		C		J	L	
	in	in	in	mm	in	mm	in	in	mm
TS-0513-05	1/2-13	1/2	1 15/16	49	1 3/8	34	3/8	3 1/2	89
TS-0513-07	1/2-13	3/4	1 15/16	49	1 7/8	47	3/8	3 15/16	100
TS-0513-10	1/2-13	1	1 15/16	49	1 7/8	47	3/8	3 15/16	100
TS-0716-05	3/4-16	1/2	1 15/16	49	1 15/16	49	3/8	3 15/16	100
TS-0716-07	3/4-16	3/4	1 15/16	49	1 15/16	49	3/8	4 1/16	104
TS-0716-10	3/4-16	1	1 15/16	49	1 15/16	49	3/8	4 1/16	104
TS-0716-12	3/4-16	1 1/4	2 3/16	56	1 15/16	49	3/8	4 5/16	110
TS-1014-05	1 -14	1/2	1 15/16	49	1 7/8	47	3/8	4 1/8	105
TS-1014-07	1 -14	3/4	1 15/16	49	1 7/8	47	3/8	4	102
TS-1014-10	1 -14	1	1 15/16	49	1 7/8	47	3/8	4	102
TS-1014-12	1 -14	1 1/4	2 1/8	54	1 15/16	49	3/8	4 3/8	111
TS-1014-15	1 -14	1 1/2	2 11/16	68	2 11/16	68	1/2	5 5/8	143
TS-1014-20	1 -14	2	2 11/16	68	2 11/16	68	1/2	5 5/8	143
TS-1112-05	1 1/8-12	1/2	1 15/16	49	1 15/16	49	3/8	4 3/16	107
TS-1112-07	1 1/8-12	3/4	1 15/16	49	1 15/16	49	3/8	4 1/8	105
TS-1112-10	1 1/8-12	1	1 15/16	49	1 15/16	49	3/8	4 1/4	108
TS-1112-12	1 1/8-12	1 1/4	2 11/16	68	2 11/16	68	1/2	5 1/2	140
TS-1112-15	1 1/8-12	1 1/2	2 11/16	68	2 11/16	68	1/2	5 5/8	143
TS-1112-20	1 1/8-12	2	2 11/16	68	2 11/16	68	1/2	5 7/8	149
TS-1212-05	1 1/4-12	1/2	1 15/16	49	1 15/16	49	3/8	4 3/16	107
TS-1212-07	1 1/4-12	3/4	1 15/16	49	1 15/16	49	3/8	4 1/8	105
TS-1212-10	1 1/4-12	1	1 15/16	49	1 15/16	49	3/8	4 1/4	108
TS-1212-12	1 1/4-12	1 1/4	2 11/16	68	2 11/16	68	1/2	5 1/2	140
TS-1212-15	1 1/4-12	1 1/2	2 11/16	68	2 11/16	68	1/2	5 5/8	143
TS-1212-20	1 1/4-12	2	2 11/16	68	2 11/16	68	1/2	5 7/8	149
TS-1512-07	1 1/2-12	3/4	1 15/16	49	2	51	3/8	4 1/4	108
TS-1512-10	1 1/2-12	1	1 15/16	49	2	51	3/8	4 1/4	108
TS-1512-12	1 1/2-12	1 1/4	2 5/8	67	2 5/8	67	1/2	5 1/2	140
TS-1512-15	1 1/2-12	1 1/2	2 11/16	68	2 11/16	68	1/2	5 5/8	143
TS-1512-20	1 1/2-12	2	2 11/16	68	2 11/16	68	1/2	5 5/8	143
TS-1512-25	1 1/2-12	2 1/2	2 3/4	70	2 11/16	68	1/2	5 11/16	144
TS-2012-07	2 -12	3/4	1 15/16	49	1 15/16	49	3/8	4 5/16	110
TS-2012-10	2 -12	1	1 15/16	49	1 15/16	49	3/8	4 5/16	110
TS-2012-12	2 -12	1 1/4	2 5/8	67	2 3/4	70	1/2	5 5/8	143
TS-2012-15	2 -12	1 1/2	2 11/16	68	2 11/16	68	1/2	5 11/16	144
TS-2012-20	2 -12	2	2 11/16	68	2 3/4	70	1/2	5 11/16	144
TS-2012-25	2 -12	2 1/2	2 3/4	70	2 3/4	70	1/2	5 3/4	146
TS-2212-10	2 1/4-12	1	1 15/16	49	2 3/16	56	3/8	4 1/2	115
TS-2212-12	2 1/4-12	1 1/4	2 5/8	67	2 3/4	70	1/2	5 7/8	149
TS-2212-15	2 1/4-12	1 1/2	2 11/16	68	2 3/4	70	1/2	6	152
TS-2212-20	2 1/4-12	2	2 11/16	68	2 3/4	70	1/2	6	152
TS-2212-25	2 1/4-12	2 1/2	2 3/4	70	2 3/4	70	1/2	5 3/4	146
TS-2512-10	2 1/2-12	1	1 15/16	49	2 3/16	56	3/8	4 11/16	119
TS-2512-12	2 1/2-12	1 1/4	2 5/8	67	2 3/4	70	1/2	5 13/16	148
TS-2512-15	2 1/2-12	1 1/2	2 5/8	67	2 3/4	70	1/2	5 13/16	148
TS-2512-20	2 1/2-12	2	2 11/16	68	2 3/4	70	1/2	5 7/8	149
TS-2512-25	2 1/2-12	2 1/2	2 3/4	70	2 3/4	70	1/2	5 13/16	148
TS-2512-30	2 1/2-12	3	3 3/8	85	3 1/4	82	5/8	7	178
TS-3010-15	3 -10	1 1/2	2 3/4	70	2 3/4	70	1/2	6 1/16	154
TS-3010-20	3 -10	2	2 3/4	70	2 3/4	70	1/2	6 1/16	154
TS-3010-25	3 -10	2 1/2	2 3/4	70	2 3/4	70	1/2	6 1/16	154
TS-3010-30	3 -10	3	3 3/8	85	3 1/4	82	5/8	7	178
TS-3010-35	3 -10	3 1/2	3 1/4	82	3 1/4	82	5/8	7	178
TS-3010-40	3 -10	4	3 1/4	82	3 1/4	82	5/8	7	178

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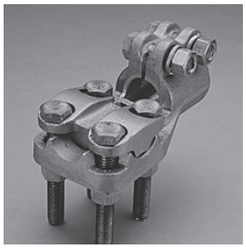
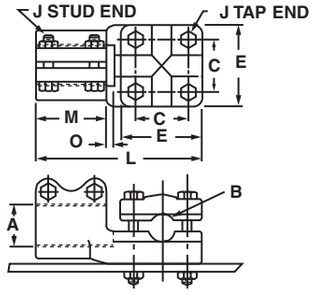
BRONZE STUD CONNECTOR • TYPE CSR

Stud to cable, tube, or flat bar vertical or horizontal take off





Made from high copper content alloy.

Furnished with silicon bronze bolts, nuts and lock washers.

Cap on tap end can be rotated to utilize two grooves which accommodate a wide range of cable and a limited range of IPS.

Connector may be mounted directly to flat bar, if necessary, as shown in line drawing at right.

Stud contact is tapped, but can be supplied plain and bored to size.

Catalog Number	A	B Conductor Range				
	Stud Diameter No. Threads	IPS Range	Small Groove Range	Wire Diameter Range‡	Large Groove Range	Wire Diameter Range‡
	in	in		in		in
CSR-0513-025	1/2-13	–	6 Sol.-1 Str.	.162- .332	1 Str.-250 MCM	.332- .575
CSR-0716-025	3/4-16	–	6 Sol.-1 Str.	.162- .332	1 Str.-250 MCM	.332- .575
CSR-0716-050	3/4-16	3/8-1/2	6 Sol.-4/0 Str.	.162- .528	4/0 Str.-500 MCM	.528- .815
CSR-0716-100	3/4-16	3/8-3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1014-025	1 -14	–	6 Sol.-1 Str.	.162- .332	1 Str.-250 MCM	.332- .575
CSR-1014-050	1 -14	3/8-1/2	6 Sol.-4/0 Str.	.162- .528	4/0 Str.-500 MCM	.528- .815
CSR-1014-100	1 -14	3/8-3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1112-025	1 1/8-12	–	6 Sol.-1 Str.	.162- .332	1 Str.-250 MCM	.332- .575
CSR-1112-050	1 1/8-12	3/8-1/2	6 Sol.-4/0 Str.	.162- .528	4/0 Str.-500 MCM	.528- .815
CSR-1112-100	1 1/8-12	3/8-3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1212-100	1 1/4-12	3/8-3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1512-025	1 1/2-12	–	6 Sol.-1 Str.	.162- .332	1 Str.-250 MCM	.332- .575
CSR-1512-050	1 1/2-12	3/8-1/2	6 Sol.-4/0 Str.	.162- .528	4/0 Str.-500 MCM	.528- .815
CSR-1512-100	1 1/2-12	3/8-3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1512-200	1 1/2-12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632
CSR-2012-100	2 -12	3/8-3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-2012-200	2 -12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632
CSR-2512-200	2 1/2-12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632
CSR-3012-200	3 -12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632

‡For conversion to metric range, see page 175.

Catalog Number	Approximate Dimensions											
	C		E		J Stud End	J Tap End	L		M		O	
	in	mm	in	mm	in	in	in	mm	in	mm	in	mm
CSR-0513-025	1 1/8	28	1 7/8	47	3/8	3/8	3 7/8	98	1 3/4	44	1/8	3
CSR-0716-025	1 1/8	28	1 7/8	47	3/8	3/8	3 7/8	98	1 3/4	44	1/8	3
CSR-0716-050	1 3/8	34	2 1/8	54	3/8	3/8	4 1/8	105	1 3/4	44	1/8	3
CSR-0716-100	1 7/8	47	2 7/8	73	1/2	1/2	5 3/8	136	2 1/4	57	1/8	3
CSR-1014-025	1 1/8	28	1 7/8	47	3/8	3/8	3 7/8	98	1 3/4	44	1/8	3
CSR-1014-050	1 3/8	34	2 1/8	54	3/8	3/8	4 1/8	105	1 3/4	44	1/8	3
CSR-1014-100	1 7/8	47	2 7/8	73	1/2	1/2	5 3/8	136	2 1/4	57	1/8	3
CSR-1112-025	1 1/8	28	1 7/8	47	3/8	3/8	4 7/16	113	2 1/4	57	3/16	5
CSR-1112-050	1 3/8	34	2 1/8	54	3/8	3/8	4 11/16	119	2 1/4	57	3/16	5
CSR-1112-100	1 7/8	47	2 7/8	73	1/2	1/2	5 7/16	138	2 1/4	57	3/16	5
CSR-1212-100	1 7/8	47	2 7/8	73	1/2	1/2	5 7/16	138	2 1/4	57	3/16	5
CSR-1512-025	1 1/8	28	1 7/8	47	1/2	3/8	4 7/16	113	2 1/4	57	3/16	5
CSR-1512-050	1 3/8	34	2 1/8	54	1/2	3/8	4 11/16	119	2 1/4	57	3/16	5
CSR-1512-100	1 7/8	47	2 7/8	73	1/2	1/2	5 7/16	138	2 1/4	57	3/16	5
CSR-1512-200	2 3/8	60	3 3/8	85	1/2	1/2	5 15/16	151	2 1/4	57	3/16	5
CSR-2012-100	1 7/8	47	2 7/8	73	1/2	1/2	5 15/16	151	2 3/4	70	3/16	5
CSR-2012-200	2 3/8	60	3 3/8	85	1/2	1/2	6 7/16	163	2 3/4	70	3/16	5
CSR-2512-200	2 3/8	60	3 3/8	85	1/2	1/2	6 7/16	163	2 3/4	70	3/16	5
CSR-3012-200	2 3/8	60	3 3/8	85	1/2	1/2	6 7/16	163	2 3/4	70	3/16	5

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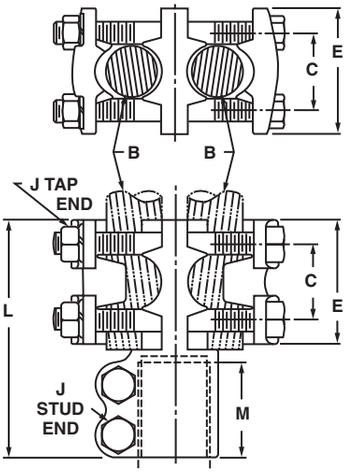
BRONZE STUD CONNECTOR • TYPE CSR-2

Stud to two cables or two tubes vertical or horizontal take off



Made from high copper content alloy.

Furnished with silicon bronze bolts, nuts and lockwashers.

Caps on tap end can be rotated to utilize two grooves which accommodate a wide range of cable and a limited range of IPS.

The reversible caps can be rotated 90 degrees to provide straight or horizontal take-off.

Stud contact is tapped, but can be supplied plain and bored to size.

Catalog Number	A Stud Diameter No. Threads in	B Conductor Range IPS Range in	Small Groove Range	Wire Diameter Range‡ in	Large Groove Range	Wire Diameter Range‡ in
CSR-0716-050-2	3/4-16	3/8- 1/2	6 Sol.-4/0 Str.	.162- .528	4/0 Str.-500 MCM	.528- .815
CSR-0716-100-2	3/4-16	3/8- 3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1014-050-2	1 -14	3/8- 1/2	6 Sol.-4/0 Str.	.162- .528	4/0 Str.-500 MCM	.528- .815
CSR-1014-100-2	1 -14	3/8- 3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1112-050-2	1 1/8-12	3/8- 1/2	6 Sol.-4/0 Str.	.162- .525	4/0 Str.-500 MCM	.528- .815
CSR-1112-100-2	1 1/8-12	3/8- 3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1212-100-2	1 1/4-12	3/8- 3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1512-050-2	1 1/2-12	3/8- 1/2	6 Sol.-4/0 Str.	.162- .528	4/0 Str.-500 MCM	.528- .815
CSR-1512-100-2	1 1/2-12	3/8- 3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-1512-200-2	1 1/2-12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632
CSR-2012-100-2	2 -12	3/8- 3/4	2 Sol.-350 MCM	.258- .682	350-1000 MCM	.682-1.153
CSR-2012-200-2	2 -12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632
CSR-2512-200-2	2 1/2-12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632
CSR-3012-200-2	3 -12	3/8-1 1/4	4/0 Str.-900 MCM	.528-1.094	900-2000 MCM	1.094-1.632

‡For conversion to metric range, see page 175.

Catalog Number	Approximate Dimensions C in	C mm	E in	E mm	J Stud End in	J Tap End in	L in	L mm	M in	M mm
CSR-0716-050-2	1 3/8	34	2 1/8	54	3/8	3/8	4 3/8	111	1 3/4	44
CSR-0716-100-2	1 7/8	47	2 7/8	73	1/2	1/2	5 5/8	143	2 1/4	57
CSR-1014-050-2	1 3/8	34	2 1/8	54	3/8	3/8	4 3/8	111	1 3/4	44
CSR-1014-100-2	1 7/8	47	2 7/8	73	1/2	1/2	5 5/8	143	2 1/4	57
CSR-1112-050-2	1 3/8	34	2 1/8	54	3/8	3/8	5	127	2 1/4	57
CSR-1112-100-2	1 7/8	47	2 7/8	73	1/2	1/2	5 3/4	146	2 1/4	57
CSR-1212-100-2	1 7/8	47	2 7/8	73	1/2	1/2	5 3/4	146	2 1/4	57
CSR-1512-050-2	1 3/8	34	2 1/8	54	1/2	3/8	5	127	2 1/4	57
CSR-1512-100-2	1 7/8	47	2 7/8	73	1/2	1/2	5 3/4	146	2 1/4	57
CSR-1512-200-2	2 3/8	60	3 3/8	85	1/2	1/2	6 1/8	155	2 1/4	57
CSR-2012-100-2	1 7/8	47	2 7/8	73	1/2	1/2	5 3/4	146	2 3/4	70
CSR-2012-200-2	2 3/8	60	3 3/8	85	1/2	1/2	6 3/8	161	2 3/4	70
CSR-2512-200-2	2 3/8	60	3 3/8	85	1/2	1/2	6 3/8	161	2 3/4	70
CSR-3012-200-2	2 3/8	60	3 3/8	85	1/2	1/2	6 3/4	171	2 3/4	70

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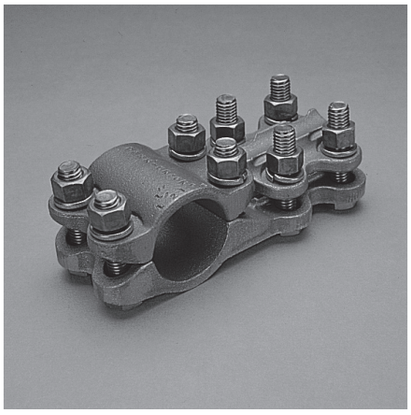
BRONZE TEE CONNECTOR • TYPES ABR AND ABRE

For tubing range to cable range

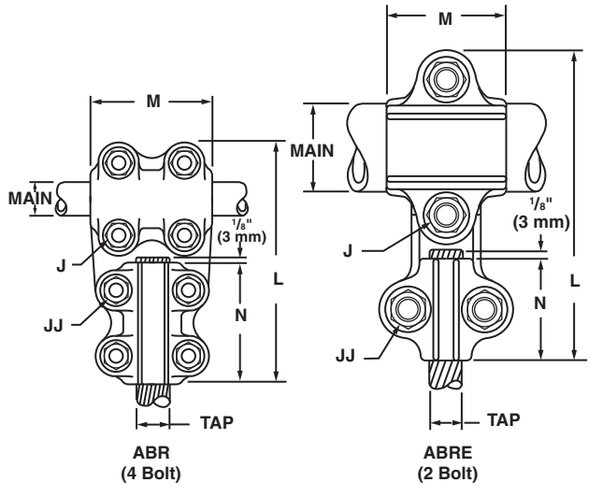


Cast of high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

Bolt heads pocketed for single wrench installation. Rounded contours.

Independent clamping action on run and tap.

Reversible, range taking, high strength clamping elements.



FOUR BOLT CLAMPING

Catalog Number	IPS Range (Main)	Cable Range (Tap)	Wire Diameter Range‡	Approximate Dimensions L in	L mm	M in	M mm	N in	N mm	Bolt Diameter J	Bolt Diameter JJ
ABR-10-025		6 Sol.-250 MCM	.162-.575	5 9/16	141	2 1/4	57	2 1/2	64	1/2	1/2
ABR-10-050	3/8-1	1/0 Sol.-500 MCM	.325-.815	5 9/16	141	2 1/4	57	2 1/2	64	1/2	1/2
ABR-10-100		4/0 Sol.-1000 MCM	.460-1.153	6 1/16	154	2 1/4	57	3	76	1/2	1/2
ABR-10-200		500-2000 MCM	.815-1.632	6 1/16	154	2 1/4	57	3	76	1/2	1/2
ABR-12-025		6 Sol.-250 MCM	.162-.575	6	152	2 3/4	70	2 1/2	64	1/2	1/2
ABR-12-050	1 1/4	1/0 Sol.-500 MCM	.325-.815	6	152	2 3/4	70	2 1/2	64	1/2	1/2
ABR-12-100		4/0 Sol.-1000 MCM	.460-1.153	6 1/2	165	2 3/4	70	3	76	1/2	1/2
ABR-12-200		500-2000 MCM	.815-1.632	6 1/2	165	2 3/4	70	3	76	1/2	1/2
ABR-15-025		6 Sol.-250 MCM	.162-.575	6 3/4	171	2 3/4	70	2 1/2	64	1/2	1/2
ABR-15-050	1 1/2	1/0 Sol.-500 MCM	.325-.815	6 3/4	171	2 3/4	70	2 1/2	64	1/2	1/2
ABR-15-100		4/0 Sol.-1000 MCM	.460-1.153	7 1/4	184	2 3/4	70	3	76	1/2	1/2
ABR-15-200		500-2000 MCM	.815-1.632	7 1/4	184	2 3/4	70	3	76	1/2	1/2
ABR-20-025		6 Sol.-250 MCM	.162-.575	7 3/16	183	2 3/4	70	2 1/2	64	1/2	1/2
ABR-20-050	2	1/0 Sol.-500 MCM	.325-8.815	7 3/16	183	2 3/4	70	2 1/2	64	1/2	1/2
ABR-20-100		4/0 Sol.-1000 MCM	.460-1.153	7 11/16	195	2 3/4	70	3	76	1/2	1/2
ABR-20-200		500-2000 MCM	.815-1.632	7 11/16	195	2 3/4	70	3	76	1/2	1/2
ABR-25-025		6 Sol.-250 MCM	.163-.575	7 11/16	195	2 3/4	70	2 1/2	64	1/2	1/2
ABR-25-050	2 1/2	1/0 Sol.-500 MCM	.325-.815	7 11/16	195	2 3/4	70	2 1/2	64	1/2	1/2
ABR-25-100		4/0 Sol.-1000 MCM	.460-1.153	8 3/16	208	2 3/4	70	3	76	1/2	1/2
ABR-25-200		500-2000 MCM	.815-1.632	8 3/16	208	2 3/4	70	3	76	1/2	1/2
ABR-30-025		6 Sol.-250 MCM	.162-.575	8 3/8	213	3 1/4	83	2 1/2	64	1/2	1/2
ABR-30-050	3	1/0 Sol.-500 MCM	.325-.815	8 3/8	213	3 1/4	83	2 1/2	64	1/2	1/2
ABR-30-100		4/0 Sol.-1000 MCM	.460-1.153	8 7/8	225	3 1/4	83	3	76	1/2	1/2
ABR-30-200		500-2000 MCM	.815-1.632	8 7/8	225	3 1/4	83	3	76	1/2	1/2

TWO BOLT CLAMPING

ABRE-10-025	3/8-1	6 Sol.-250 MCM	.162-.575	4 1/8	105	1 1/2	38	1 1/2	38	3/8	3/8

‡For conversion to metric range, see page 175.

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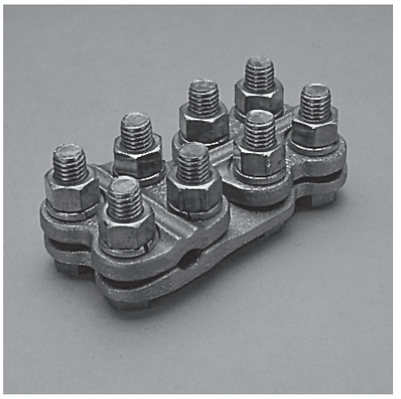
BRONZE TEE CONNECTOR • TYPES ABRR AND ABRRE

For cable range to cable range

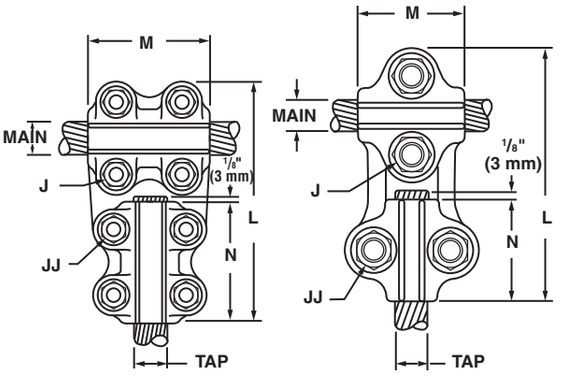


Cast of high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

Bolt heads pocketed for single wrench installation. Rounded contours.

Independent clamping action on run and tap.

Reversible, range taking, high strength clamping elements.



ABRR (4 Bolts) **ABRRE (2 Bolt)**

FOUR BOLT CLAMPING

Catalog Number	Cable Range (Main)	Wire Diameter Range	Cable Range (Tap)	Wire Diameter Range‡	Approximate Dimensions L in	L mm	M in	M mm	N in	N mm	Bolt Diameter J	Bolt Diameter JJ
ABRR-025	6 Sol.-250 MCM	.162-.575	6 Sol.-250 MCM	.162-.575	4 11/16	119	2 1/2	64	2 1/2	64	3/8	3/8
ABRR-025H					5 1/16	129	2 1/2	64	2 1/2	64	1/2	1/2
ABRR-050025	1/0 Sol.-500 MCM	.325-.815	6 Sol.-250 MCM	.162-.575	4 7/8	124	2 1/2	64	2 1/2	64	3/8	3/8
ABRR-050025H			6 Sol.-250 MCM	.162-.575	5 1/4	133	2 1/2	64	2 1/2	64	1/2	1/2
ABRR-050			1/0 Sol.-500 MCM	.325-.815	4 7/8	124	2 1/2	64	2 1/2	64	3/8	3/8
ABRR-050H			1/0 Sol.-500 MCM	.325-.815	5 1/4	133	2 1/2	64	2 1/2	64	1/2	1/2
ABRR-100025	4/0 Sol.-1000 MCM	.460-1.153	6 Sol.-250 MCM	.162-.575	5 7/8	149	3	76	2 1/2	64	1/2	1/2
ABRR-100050			1/0 Sol.-500 MCM	.325-.815	5 7/8	149	3	76	2 1/2	64	1/2	1/2
ABRR-100			4/0 Sol.-1000 MCM	.460-1.153	6 3/8	162	3	76	3	76	1/2	1/2
ABRR-200025	500-2000 MCM	.815-1.631	6 Sol.-250 MCM	.162-.575	6 1/8	156	3	76	2 1/2	64	1/2	1/2
ABRR-200050			1/0 Sol.-500 MCM	.325-.815	6 1/8	156	3	76	2 1/2	64	1/2	1/2
ABRR-200100			4/0 Sol.-1000 MCM	.460-1.153	6 5/8	168	3	76	3	76	1/2	1/2
ABRR-200			500-2000 MCM	.815-1.631	6 5/8	168	3	76	3	76	1/2	1/2

TWO BOLT CLAMPING

ABRRE-050	1/0 Sol.-500 MCM	.325-.815	1/ 0 Sol.-500 MCM	.325-.815	4 5/16	110	1 3/4	44	1 3/4	44	3/8	3/8
ABRRE-050-025	1/0 Sol.-500 MCM	.325-.815	6 Sol.-250 MCM	.162-.575	4 1/16	103	1 3/4	44	1 1/2	38	3/8	3/8

‡For conversion to metric range, see page 175.

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BRONZE RANGE TAKING COUPLERS AND REDUCERS • TYPE RM ALL-PURPOSE CONNECTOR

For joining a range of cables, tubing, and solid rod to make tee taps, couplers, elbows and parallel clamps

Cast of high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

Bolt heads pocketed for single wrench installation.

Rounded contours.

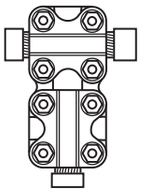
Independent clamping action on run and tap.

Reversible, range taking, high strength clamping elements.

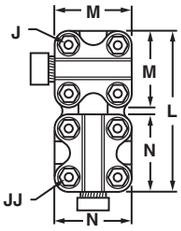
Square clamp members can be mounted in either direction or reversed to take small wire, tubing or rod.

Bolt centers located in a square pattern to allow clamping caps to be placed for holding in either direction.

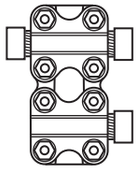
Cross-Groove design takes conductors from both sides, side and end, or both ends.



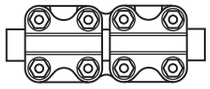
Tee Connector
Cable to Cable or
IPS to Cable or
IPS to IPS



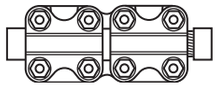
Elbow
Cable to Cable or
IPS to Cable or
IPS to IPS



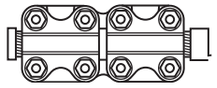
Cable Main
and Parallel
or
Oblique Tap



Coupler
IPS to IPS



Coupler
IPS to Cable



Coupler
Cable to Cable

Catalog Number	Main			Tap		
	IPS	Cable	Wire Diameter Range‡ in	IPS	Cable	Wire Diameter Range‡ in
RM-080	1/4-3/4	2 Sol.-800 MCM	.258-1.031	1/4-3/4	2 Sol.-800 MCM	.258-1.031
RM-085	1/4-3/4	6 Sol.-850 MCM	.162-1.050	1/4-3/4	6 Sol.-850 MCM	.162-1.050
RM-150085	1/2-1	4/0 Sol.-1500 MCM	.460-1.412	1/4-3/4	6 Sol.-850 MCM	.162-1.050
RM-150	1/2-1	4/0 Sol.-1500 MCM	.460-1.412	1/2-1	4/0 Sol.-1500 MCM	.460-1.412
RM-200085	3/4-1 1/2	500-2000 MCM	.815-1.632	1/4-3/4	6 Sol.-850 MCM	.162-1.050
RM-200150	3/4-1 1/2	500-2000 MCM	.815-1.632	1/2-1	4 Sol.-1500 MCM	.204-1.412
RM-200	3/4-1 1/2	500-2000 MCM	.815-1.632	3/4-1 1/2	500-2000 MCM	.815-1.632

‡For conversion to metric range, see page 175.

Catalog Number	Approximate Dimensions							
	L		M		N		J	JJ
	in	mm	in	mm	in	mm	in	in
RM-080	4 5/8	117	2 1/4	57	2 1/4	57	3/8	3/8
RM-085	6 1/8	156	3	76	3	76	1/2	1/2
RM-150085	6 3/8	162	3 1/4	83	3	76	1/2	1/2
RM-150	6 5/8	168	3 1/4	83	3 1/4	83	1/2	1/2
RM-200085	6 5/8	168	3 1/2	89	3	76	1/2	1/2
RM-200150	6 7/8	175	3 1/2	89	3 1/4	83	1/2	1/2
RM-200	7 3/16	183	3 1/2	89	3 1/2	89	1/2	1/2

NOTE–Clamping members can be furnished tin or silver plated by adding "-TN" for tin and "-SV" for silver plating.
Example: RM-080-TN.

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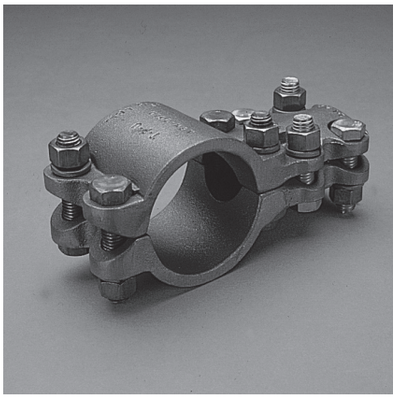
BRONZE TEE CONNECTOR • TYPE ABN

Heavy duty – for tube to tube



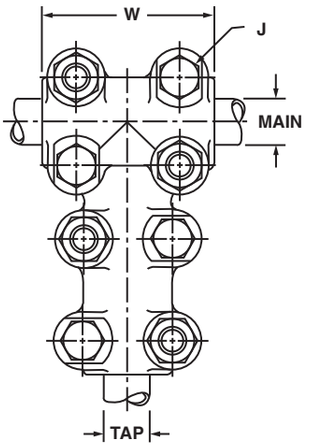
Heavy duty tee connectors with four bolts on both main and tap.

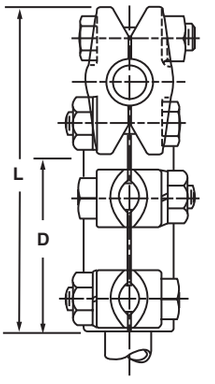
Cast of high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

Bolt heads pocketed for single wrench installation.

Rounded contours.

Catalog Number	IPS		Approximate Dimensions						
			W		L		D		J
	Main	Tap	in	mm	in	mm	in	mm	in
ABN-0707	3/4	3/4	2 1/2	64	5 3/4	146	2 1/2	64	1/2
ABN-1005	1	1/2	2 1/2	64	6	152	2 1/2	64	1/2
ABN-1007	1	3/4	2 1/2	64	6	152	2 1/2	64	1/2
ABN-1010	1	1	2 1/2	64	6	152	2 1/2	64	1/2
ABN-1205	1 1/4	1/2	2 3/4	70	6 1/8	156	2 1/2	64	1/2
ABN-1207	1 1/4	3/4	2 3/4	70	6 1/8	156	2 1/2	64	1/2
ABN-1210	1 1/4	1	2 3/4	70	6 1/8	156	2 1/2	64	1/2
ABN-1212	1 1/4	1 1/4	2 3/4	70	6 3/8	162	2 3/4	70	1/2
ABN-1505	1 1/2	1/2	2 3/4	70	6 1/2	165	2 1/2	64	1/2
ABN-1507	1 1/2	3/4	2 3/4	70	6 1/2	165	2 1/2	64	1/2
ABN-1510	1 1/2	1	2 3/4	70	6 1/2	165	2 1/2	64	1/2
ABN-1512	1 1/2	1 1/4	2 3/4	70	6 3/4	171	2 3/4	70	1/2
ABN-1515	1 1/2	1 1/2	2 3/4	70	6 3/4	171	2 3/4	70	1/2
ABN-2005	2	1/2	2 3/4	70	6 3/4	171	2 1/2	64	1/2
ABN-2007	2	3/4	2 3/4	70	6 3/4	171	2 1/2	64	1/2
ABN-2010	2	1	2 3/4	70	6 3/4	171	2 1/2	64	1/2
ABN-2012	2	1 1/4	2 3/4	70	7	178	2 3/4	70	1/2
ABN-2015	2	1 1/2	2 3/4	70	7	178	2 3/4	70	1/2
ABN-2020	2	2	2 3/4	70	7	178	2 3/4	70	1/2
ABN-2507	2 1/2	3/4	2 3/4	70	7 1/2	191	2 1/2	64	1/2
ABN-2510	2 1/2	1	2 3/4	70	7 1/2	191	2 1/2	64	1/2
ABN-2512	2 1/2	1 1/4	2 3/4	70	7 3/4	197	2 3/4	70	1/2
ABN-2515	2 1/2	1 1/2	2 3/4	70	7 3/4	197	2 3/4	70	1/2
ABN-2520	2 1/2	2	2 3/4	70	7 3/4	197	2 3/4	70	1/2
ABN-2525	2 1/2	2 1/2	3 1/4	83	8 1/4	210	3 1/4	83	1/2
ABN-3007	3	3/4	2 1/2	64	8 1/4	210	2 1/2	64	1/2
ABN-3010	3	1	2 1/2	64	8 1/4	210	2 1/2	64	1/2
ABN-3012	3	1 1/4	2 3/4	70	8 1/2	216	2 3/4	70	1/2
ABN-3015	3	1 1/2	2 3/4	70	8 1/2	216	2 3/4	70	1/2
ABN-3020	3	2	2 3/4	70	8 1/2	216	2 3/4	70	1/2
ABN-3025	3	2 1/2	3 1/4	83	9	229	3 1/4	83	1/2
ABN-3030	3	3	3 1/2	89	9 3/4	248	3 1/2	89	5/8
ABN-3507	3 1/2	3/4	2 1/2	64	8 3/4	222	2 1/2	64	1/2
ABN-3510	3 1/2	1	2 1/2	64	8 3/4	222	2 1/2	64	1/2
ABN-3512	3 1/2	1 1/4	2 3/4	70	9	229	2 3/4	70	1/2
ABN-3515	3 1/2	1 1/2	2 3/4	70	9	229	2 3/4	70	1/2
ABN-3520	3 1/2	2	2 3/4	70	9	229	2 3/4	70	1/2
ABN-3525	3 1/2	2 1/2	3 1/4	83	9 3/4	248	3 1/4	83	1/2
ABN-3530	3 1/2	3	3 1/2	89	10	254	3 1/2	89	5/8
ABN-3535	3 1/2	3 1/2	3 1/2	89	10	254	3 1/2	89	5/8
ABN-4007	4	3/4	2 1/2	64	9 1/2	241	2 1/2	64	1/2
ABN-4010	4	1	2 1/2	64	9 1/2	241	2 1/2	64	1/2
ABN-4012	4	1 1/4	2 3/4	70	9 3/4	248	2 3/4	70	1/2
ABN-4015	4	1 1/2	2 3/4	70	9 3/4	248	2 3/4	70	1/2
ABN-4020	4	2	2 3/4	70	9 3/4	248	2 3/4	70	1/2
ABN-4025	4	2 1/2	3 1/4	83	10 1/4	260	3 1/4	83	1/2
ABN-4030	4	3	3 1/2	89	11	279	3 1/2	89	5/8
ABN-4040	4	4	4	102	11 1/2	292	4	102	5/8





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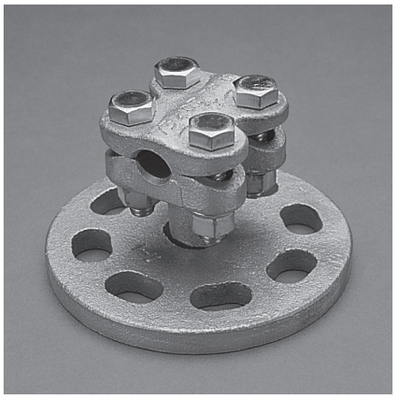
BRONZE BUS SUPPORT CLAMP • TYPE BS

Tube to bolt circle



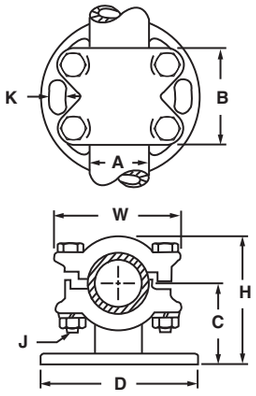
Made from high copper content alloy.

Installed for grip or slide fit by rotating clamping elements 180°.

Oval slots in base permit easy alignment.

Clamping bolts, nuts and lockwashers are of silicon bronze.

Mounting hardware is stainless steel. Cap screws and lockwashers furnished for cap mounting (standard). Bolts, nuts and lockwashers furnished for base mounting (suffix catalog number with "BM". Example: BS-05-3-BM).



3" BOLT CIRCLE BASE

Catalog Number	IPS Size	Approximate Dimensions														
		A		B		C		D		H		J	K		W	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	in	mm	in	mm
BS-05-3	1/2	.840	21	2	51	2	51	4 1/4	108	2 3/4	70	3/8	9/16	14	2 3/8	60
BS-07-3	3/4	1.050	27	2	51	2	51	4 1/4	108	2 3/4	70	3/8	9/16	14	2 5/8	67
BS-10-3	1	1.315	33	2	51	2 1/8	54	4 1/4	108	3	76	3/8	9/16	14	2 7/8	73
BS-12-3	1 1/4	1.660	42	2 5/8	67	2 3/8	60	4 1/4	108	3 3/8	86	1/2	9/16	14	3 5/8	92
BS-15-3	1 1/2	1.900	48	2 3/4	70	2 7/16	62	4 1/4	108	3 5/8	92	1/2	9/16	14	3 7/8	98
BS-20-3	2	2.375	60	2 3/4	70	2 9/16	65	4 1/4	108	4 1/16	103	1/2	9/16	14	4 1/2	114
BS-25-3	2 1/2	2.875	73	2 3/4	70	3 1/16	78	4 1/4	108	4 3/4	121	1/2	9/16	14	5	127
BS-30-3	3	3.500	89	3 1/4	83	3 5/8	92	4 1/4	108	5 11/16	144	5/8	9/16	14	6 1/8	156
BS-35-3	3 1/2	4.000	102	3 1/4	83	4	102	4 1/4	108	6 5/16	160	5/8	9/16	14	6 5/8	168
BS-40-3	4	4.500	114	3 1/4	83	4 1/4	108	4 1/4	108	6 13/16	173	5/8	9/16	14	7 1/8	181

5" BOLT CIRCLE BASE

BS-05-5	1/2	.840	21	2	51	2 1/16	52	6 3/8	162	2 13/16	71	3/8	11/16	17	2 3/8	60
BS-07-5	3/4	1.050	27	2	51	2 1/16	52	6 3/8	162	2 13/16	71	3/8	11/16	17	2 5/8	67
BS-10-5	1	1.315	33	2	51	2 3/16	56	6 3/8	162	3 1/16	78	3/8	11/16	17	2 7/8	73
BS-12-5	1 1/4	1.660	42	2 5/8	67	2 3/8	60	6 3/8	162	3 7/16	87	1/2	11/16	17	3 5/8	92
BS-15-5	1 1/2	1.900	48	2 3/4	70	2 7/16	62	6 3/8	162	3 11/16	94	1/2	11/16	17	3 7/8	98
BS-20-5	2	2.375	60	2 3/4	70	2 5/8	67	6 3/8	162	4 1/8	105	1/2	11/16	17	4 1/2	114
BS-25-5	2 1/2	2.875	73	2 3/4	70	3 1/16	78	6 3/8	162	4 13/16	122	1/2	11/16	17	5	127
BS-30-5	3	3.500	89	3 1/4	83	3 5/8	92	6 3/8	162	5 3/4	146	5/8	11/16	17	6 1/8	156
BS-35-5	3 1/2	4.000	102	3 1/4	83	4	102	6 3/8	162	6 3/8	162	5/8	11/16	17	6 5/8	168
BS-40-5	4	4.500	114	3 1/4	83	4 1/4	108	6 3/8	162	6 7/8	175	5/8	11/16	17	7 1/8	181

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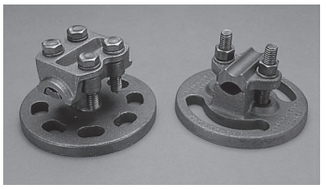
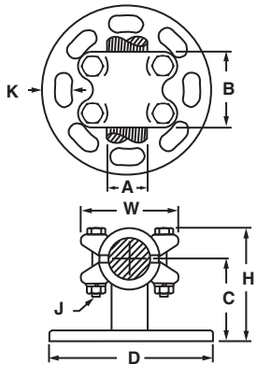
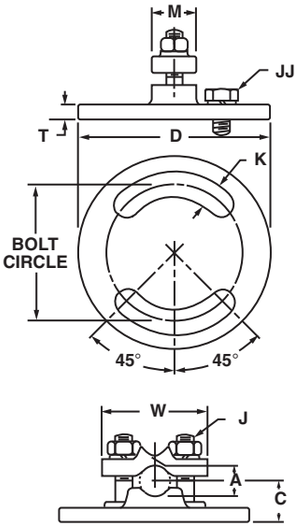
BRONZE BUS SUPPORT CLAMPS • TYPES BSR & BSR2B

Four and two bolt clamping tube or cable to bolt circle



BSR BSR2B





Made from high copper content alloy.

Oval slots in base permit easy alignment. Type BSR, BSR2B-025-5, BSR2B-050-5 and BSR2B-200-5 have 6 slots as shown in photo. All other Type BSR2B have 2 elongated slots as in line drawing and photo.

Clamping bolts, nuts and lockwashers are of silicon bronze.

Mounting hardware is stainless steel. Cap screws and lockwashers furnished for cap mounting (standard). Bolts, nuts and lockwashers furnished for base mounting (suffix catalog number with "-BM". Example: BSR-1-BM).

Catalog Number	IPS Range	Conductor Range	Wire Diameter Range‡
	in		in
BSR-1	1/8-1/2	6 Str.-500 MCM	.184- .840
BSR-2	1/8-1/2	6 Str.-500 MCM	.184- .840
BSR-5	1/4-1	4/0 Str.-1250 MCM	.528-1.315
BSR-6	1/4-1	4/0 Str.-1250 MCM	.528-1.315
BSR-9	3/4-1 1/2	850-2500 MCM	1.050-1.900
BSR-10	3/4-1 1/2	850-2500 MCM	1.050-1.900
BSR-11	1 1/4-2	–	–
BSR-12	1 1/4-2	–	–

Catalog Number	Approximate Dimensions													Bolt Circle Dia.	
	B		C (Max.)		D		H (Max.)		J	K		W			
	in	mm	in	mm	in	mm	in	mm	in	in	mm	in	mm	in	mm
BSR-1	2 3/4	70	2	51	4 1/4	108	3 3/16	81	3/8	9/16	14	2 3/16	56	3	76
BSR-2	2 3/4	70	2 1/16	52	6 3/8	162	3 1/4	83	3/8	11/16	17	2 3/16	56	5	127
BSR-5	3	76	2 1/8	54	4 1/4	108	3 5/8	92	3/8	9/16	14	2 11/16	68	3	76
BSR-6	3	76	2 3/16	56	6 3/8	162	3 11/16	94	3/8	11/16	17	2 11/16	68	5	127
BSR-9	3 7/8	98	2 7/16	62	4 1/4	108	4 3/16	106	1/2	9/16	14	3 11/16	94	3	76
BSR-10	3 7/8	98	2 1/2	64	6 3/8	162	4 1/4	108	1/2	11/16	17	3 11/16	94	5	127
BSR-11	2 7/8	73	2 9/16	65	4 1/4	108	4 5/16	110	1/2	9/16	14	4 3/16	108	3	76
BSR-12	2 7/8	73	2 5/8	67	6 1/4	159	4 3/8	111	1/2	11/16	17	4 3/16	108	5	127

TYPE BSR2B

3" BOLT CIRCLE BASE

Catalog Number	IPS Size	Wire Range	Wire Diameter Range‡	Approximate Dimensions													
				D		C		W		M		T		J	JJ	K Width of Slot	
			in	in	mm	in	mm	in	mm	in	mm	in	mm	in	in	in	mm
BSR2B-025-3	–	6 Sol.-250 MCM	.162- .575	4 1/4	108	13/16	21	2 1/4	57	1	25	5/16	8	3/8	1/2	9/16	14
BSR2B-050-3	–	1/0 Sol.-500 MCM	.325- .815	4 1/4	108	1 3/8	35	2 1/4	57	1 3/8	35	5/16	8	3/8	1/2	9/16	14
BSR2B-200-3	1/2-1 1/2	500-2000 MCM	.500-1.824	4 1/4	108	2 3/32	53	3 7/8	98	1 1/4	32	3/8	9	1/2	1/2	9/16	14
BSR2B-20-3	2	–	–	4 1/4	108	2 3/16	56	4 1/2	114	1 1/2	38	3/8	9	1/2	1/2	9/16	14
BSR2B-25-3	2 1/2	–	–	4 1/4	108	2 3/16	56	4 7/8	124	1 5/8	41	3/8	9	1/2	1/2	9/16	14
BSR2B-30-3	3	–	–	4 1/4	108	3 5/8	92	6 1/8	156	1 3/4	44	5/16	8	5/8	1/2	9/16	14
BSR2B-35-3	3 1/2	–	–	4 1/4	108	4	102	6 5/8	168	1 3/4	44	5/16	8	5/8	1/2	9/16	14

5" BOLT CIRCLE BASE

BSR2B-025-5	–	6 Sol.-250 MCM	.162- .575	6 1/4	159	7/8	22	2 1/4	57	1	25	1/4	6	3/8	5/8	11/16	17
BSR2B-050-5	–	1/0 Sol.-500 MCM	.325- .815	6 1/4	159	1 7/16	37	2 1/4	57	1 3/8	35	1/4	6	3/8	5/8	11/16	17
BSR2B-200-5	1/2-1 1/2	500-2000 MCM	.500-1.824	6 3/8	162	2 3/32	53	3 7/8	98	1 1/4	32	3/8	9	1/2	5/8	11/16	17
BSR2B-20-5	2	–	–	6 3/8	162	2 3/16	56	4 1/2	114	1 1/2	38	3/8	9	1/2	5/8	11/16	17
BSR2B-25-5	2 1/2	–	–	6 3/8	162	2 3/16	56	4 7/8	124	1 5/8	41	3/8	9	1/2	5/8	11/16	17
BSR2B-30-5	3	–	–	6 3/8	162	3 5/8	92	6 1/8	156	1 3/4	44	3/8	9	5/8	5/8	11/16	17
BSR2B-35-5	3 1/2	–	–	6 3/8	162	4	102	6 5/8	168	1 3/4	44	3/8	9	5/8	5/8	11/16	17

‡For conversion to metric range, see page 175.

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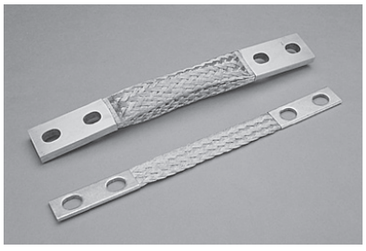
TIN PLATED COPPER FLEXIBLE BRAID • TYPE FXB

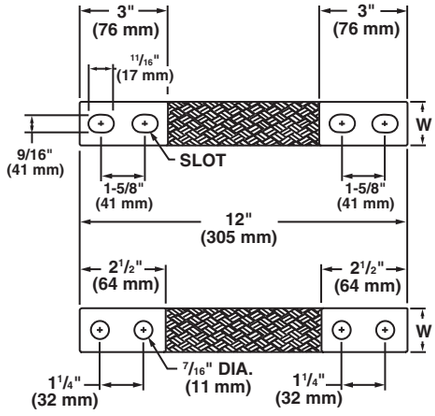


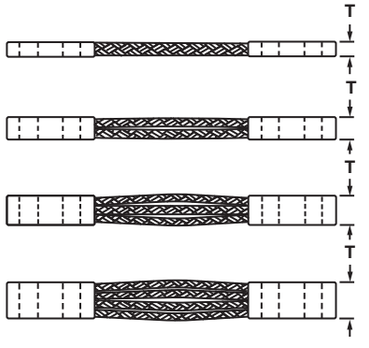
Flexible leads suitable for use wherever it is necessary to take up expansion, allow for misalignment, or take up vibration. Made of flat, extra flexible, tinned, pure copper braid, with tin plated, seamless, pure copper ferrules formed on each end. Inside ends of ferrules are rounded to prevent chafing of strands.

Sizes and combinations not shown readily supplied. Special drilling can be supplied on request. For NEMA drilling, substitute "N" for "S" suffix. Refer to factory if different ferrule dimensions are desired. For lengths other than 12" change catalog number suffix accordingly. For example if an 18" length is desired change -12 to -18.

"S" suffix denotes slotted holes which are suitable for 1/2" or 3/8" mounting hardware on 1 1/2" or 1 3/4" hole centers.

Drop "Q" for silver-plated ferrules.





Catalog Number	No. of Braids in Ferrule	Ampere Rating (Indoors)*	Circular Mils. of Braids	Approximate Dimensions			
				T		W	
				in	mm	in	mm
FXBA-12-Q	1	200	77,184	5/32	3.96	1	25
FXB2A-12-Q	2	340	154,368	7/32	5.55	1	25
FXB3A-12-Q	3	470	231,552	1/4	6.35	1 1/8	29
FXB4A-12-Q	4	600	308,736	5/16	7.93	1 1/8	29
FXBA-12S-Q	1	200	77,184	5/32	3.96	1	25
FXB2A-12S-Q	2	340	154,368	7/32	5.55	1	25
FXB3A-12S-Q	3	470	231,552	1/4	6.35	1 1/8	29
FXB4A-12S-Q	4	600	308,736	5/16	7.93	1 1/8	29
FXBB-12S-Q	1	330	135,072	1/4	6.35	1	25
FXB2B-12S-Q	2	500	270,144	1/4	6.35	1 1/2	38
FXB3B-12S-Q	3	650	405,216	3/8	9.52	1 1/2	38
FXB4B-12S-Q	4	750	540,288	1/2	12.70	1 1/2	38
FXBC-12S-Q	1	350	168,840	3/16	4.76	1 1/2	38
FXB2C-12S-Q	2	550	337,680	1/4	6.35	1 1/2	38
FXB3C-12S-Q	3	720	506,520	11/32	8.73	1 1/2	38
FXB4C-12S-Q	4	870	675,360	1/2	12.70	1 1/2	38
FXBD-12S-Q	1	360	202,608	1/4	6.35	1 3/8	35
FXB2D-12S-Q	2	600	405,216	13/32	10.31	1 1/2	38
FXB3D-12S-Q	3	780	607,824	15/32	11.90	1 1/2	38
FXB4D-12S-Q	4	900	810,432	9/16	14.28	1 1/2	38
FXBE-12S-Q	1	430	303,912	1/4	6.35	1 1/2	38
FXB2E-12S-Q	2	710	607,824	1/2	12.70	1 1/2	38
FXB3E-12S-Q	3	980	911,736	11/16	17.46	1 1/2	38
FXB4E-12S-Q	4	1200	1,215,648	7/8	22.22	1 1/2	38

**Ampere ratings are suggested for use as a guide only. Actual values used for a given application will depend on such factors as permissible temperature rise, permissible voltage drop, number of cables together and other conditions of service. For outdoor use, these ratings may be increased from 22% to 40% depending upon the size and position of the braid.*

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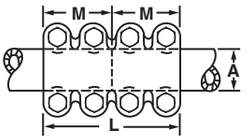
BRONZE COUPLERS AND REDUCERS • TYPE BA

For joining two conductors of the same size IPS tubing

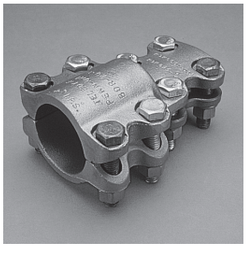


Made from high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

Catalog Number	IPS	Approximate Dimensions A in	A mm	L in	L mm	M in	M mm	Bolt Size	Number of Bolts
BA-0303	3/8	.675	17.15	3	76	1 1/2	38	3/8	4
BA-0505	1/2	.840	21.34	4	102	2	51	3/8	6
BA-0707	3/4	1.050	26.67	4	102	2	51	3/8	6
BA-1010	1	1.315	33.40	6	152	3	76	3/8	8
BA-1212	1 1/4	1.660	42.16	6	152	3	76	1/2	8
BA-1515	1 1/2	1.900	48.26	6	152	3	76	1/2	8
BA-2020	2	2.375	60.32	6	152	3	76	1/2	8
BA-2525	2 1/2	2.875	73.02	7	178	3 1/2	89	1/2	8
BA-3030	3	3.500	88.90	8	203	4	102	5/8	8
BA-3535	3 1/2	4.000	101.60	9	229	4 1/2	114	5/8	8
BA-4040	4	4.500	114.30	10	254	5	127	5/8	8
BA-5050	5	5.563	141.30	12	305	6	162	5/8	8

BRONZE COUPLERS AND REDUCER CONNECTORS • TYPE BDR

For tubing range to cable range



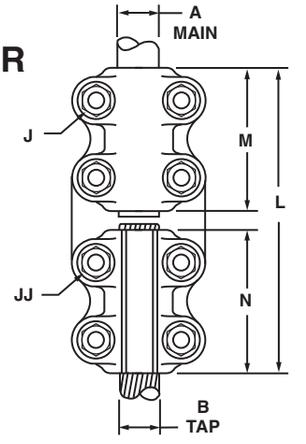
Cast of high copper content alloy. Furnished with silicon bronze bolts, nuts and lockwashers.

Bolt heads pocketed for single wrench installation.

Rounded contours.

Independent clamping action on run and tap.

Reversible, range taking, high strength clamping elements.



Catalog Number	A IPS Main	B Cable Tap	Conductor Range Wire Diameter Range‡ in	Approximate Dimensions L in	L mm	M in	M mm	N in	N mm	Bolt Dia. J	Bolt Dia. JJ
BDR-20-025	2	6 Sol.-250 MCM	.162- .575	5 5/8	143	2 3/4	70	2 1/2	64	1/2	1/2
BDR-20-050	2	1/0 Sol.-500 MCM	.325- .815	5 5/8	143	2 3/4	70	2 1/2	64	1/2	1/2
BDR-20-100	2	4/0 Sol.-1000 MCM	.460-1.529	6 1/8	156	2 3/4	70	3	76	1/2	1/2
BDR-20-200	2	500-2000 MCM	.815-1.632	6 1/8	156	2 3/4	70	3	76	1/2	1/2
BDR-25-025	2 1/2	6 Sol.-250 MCM	.162- .575	5 5/8	143	2 3/4	70	2 1/2	64	1/2	1/2
BDR-25-050	2 1/2	1/0 Sol.-500 MCM	.325- .815	5 5/8	143	2 3/4	70	2 1/2	64	1/2	1/2
BDR-25-100	2 1/2	4/0 Sol.-1000 MCM	.460-1.529	6 1/8	156	2 3/4	70	3	76	1/2	1/2
BDR-25-200	2 1/2	500-2000 MCM	.815-1.632	6 1/8	156	2 3/4	70	3	76	1/2	1/2
BDR-30-025	3	6 Sol.-250 MCM	.162- .575	6 1/8	156	3 1/4	83	2 1/2	64	1/2	1/2
BDR-30-050	3	1/0 Sol.-500 MCM	.325- .815	6 1/8	156	3 1/4	83	2 1/2	64	1/2	1/2
BDR-30-200	3	500-2000 MCM	.815-1.632	6 5/8	168	3 1/4	83	3	76	1/2	1/2

‡For conversion to metric range, see page 175

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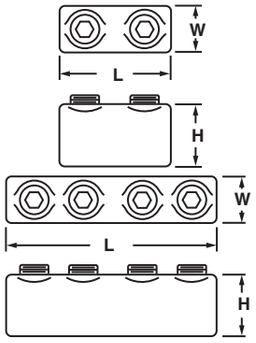
BRONZE VI-TITE TWO-WAY CONNECTORS • TYPE VC AND VVC

CU
90°C



Body is cast from high strength corrosion resistant copper alloy. Screw and saddle are made from bronze. Unique designed protuberances assure higher conductivity and better resistance to pull out. All connectors are provided with cable stops. Hex head screws can be furnished by suffixing catalog numbers with "-HH".

TWO SCREW TYPE

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions						Screw Size	Hex Size
			L		H		W			
		in	in	mm	in	mm	in	mm		
VC-26010*	14 Sol.-8 Str.	.064- .146	1 3/8	35	9/16	14	15/32	12	5/16-24	5/32
VC-26000	8 Sol.-4 Str.	.128- .232	1 1/16	27	5/8	16	1/2	13	5/16-24	5/32
VC-26001	4 Sol.-1 Str.	.204- .332	1 5/8	41	7/8	22	5/8	16	3/8-24	3/16
VC-26002	2 Str.-2/0 Str.	.292- .419	1 7/8	48	1 1/32	26	3/4	19	1/2-20	1/4
VC-26003	1/0 Str.-4/0 Str.	.375- .528	2 5/16	59	1 9/32	32	7/8	22	9/16-18	1/4
VC-26004	3/0 Str.-300 MCM	.470- .634	2 9/16	65	1 3/8	35	1	25	3/4-16	3/8
VC-26005	300-500 MCM	.634- .815	2 7/8	73	1 13/16	46	1 1/4	32	3/4-16	3/8
VC-26006	500-800 MCM	.815-1.031	3 1/4	83	1 13/16	46	1 7/16	37	7/8-14	3/8
VC-26007	700-1000 MCM	.965-1.529	3 3/4	94	2 1/16	52	1 9/16	40	7/8-14	3/8

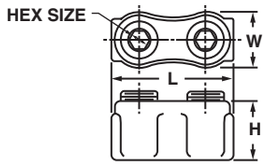
FOUR SCREW TYPE

VVC-26020*	8 Sol.-4 Str.	.128- .232	1 7/8	48	5/8	16	1/2	13	5/16-24	5/32
VVC-26021	4 Sol.-1 Str.	.204- .332	3	76	7/8	22	5/8	16	3/8-24	3/16
VVC-26022	2 Str.-2/0 Str.	.292- .419	3 1/2	89	1 1/32	25	3/4	19	1/2-20	1/4
VVC-26023	1/0 Str.-4/0 Str.	.375- .528	4 3/8	111	1 9/32	32	7/8	22	9/16-18	1/4
VVC-26024	3/0 Str.-300 MCM	.470- .634	4 7/8	124	1 3/8	35	1	25	3/4-16	3/8
VVC-26025	300-500 MCM	.634- .815	5 7/16	138	1 13/16	46	1 1/4	32	3/4-16	3/8
VVC-26026	500-800 MCM	.815-1.031	6 3/16	183	1 13/16	46	1 7/16	37	7/8-14	3/8
VVC-26027	700-1000 MCM	.965-1.529	7 3/16	183	2 1/16	52	1 9/16	40	7/8-14	3/8

*‡For conversion to metric range, see page 175. For tin plated terminals, suffix catalog number with "-TN". *No saddle.*

BRONZE TWO-WAY CONNECTOR • TYPE PNLC

Cable to cable



A low cost two-way connector that gives superior service. Body is cast from high strength copper alloy. Steel, cadmium plated hex socket screws. Annular serrations give higher conductivity and better resistance to pull out.

All connectors are provided with cable stops. Hex head screws can be furnished by suffixing catalog numbers with "-HH".

TWO SCREW TYPE

Catalog Number	Conductor Range	Wire Diameter Range‡	Approximate Dimensions						Screw Size	Hex Size
			L		H		W			
		in	in	mm	in	mm	in	mm		
PNLC-1/0	8 Sol.-1/0 Str.	.128- .375	1 5/8	41	27/32	21	23/32	18	1/2-20	1/4
PNLC-250	6 Sol.-250 MCM	.162- .575	2 1/8	54	1 1/16	27	31/32	25	3/4-16	3/8
PNLC-500	4 Sol.-500 MCM	.204- .815	3	76	1 15/32	37	1 3/8	35	15/16-16	3/8
PNLC-1000	500-1000 MCM	.815-1.529	3 3/4	94	2	51	1 3/4	44	1 3/8-14	3/8

For tin plated terminals, suffix catalog number with "-TN". ‡For conversion to metric range, see page 175.

PENNUNION
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BRONZE SERVICE POST CONNECTORS • TYPES SSS, SCS, STS AND SDS

SSS SCS SSS-A1

STS SDS

C UL US
467 LISTED
SUITABLE FOR
DIRECT BURIAL

Body made from high copper content hard drawn rod. Used for connecting one or two conductors to various sizes external stud or tapped hole.

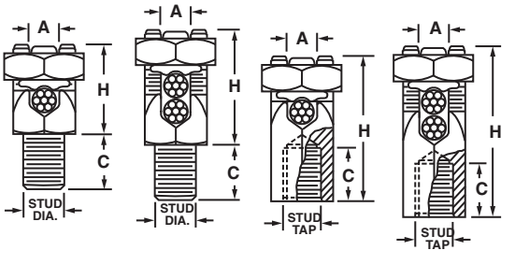

FIG. 1 FIG. 2 FIG. 3 FIG. 4

MALE TYPES SSS AND SCS

Fig. 1 (One Cable)			Fig. 2 (Two Cables)			Stud Size	Approximate Dimensions									
							Nut Hex.		C		H				Body Hex.	
											One Cable		Two Cable			
Catalog Number	A Conductor Range	Wire Diameter Range‡ in	Catalog Number	A Conductor Range	Wire Diameter Range‡ in		in	mm	in	mm	in	mm	in	mm	in	mm
SSS-0	12 Sol.-8 Str.	.081- .146	SCS-0	12 Sol.-8 Str.	.081- .146	1/4-20	1/2	13	1/2	13	5/8	16	3/4	19	3/8	9
SSS-0A1	12 Sol.-8 Str.	.081- .146	SCS-0A1	12 Sol.-8 Str.	.081- .146	1/4-20	1/2	13	1	25	5/8	16	3/4	19	3/8	9
SSS-1	8 Sol.-7 Str.	.128- .164	SCS-1	10 Sol.-7 Str.	.102- .164	1/4-20	11/16	17	1/2	13	7/8	22	1	25	1/2	13
SSS-1A1	8 Sol.-7 Str.	.128- .164	SCS-1A1	10 Sol.-7 Str.	.102- .164	1/4-20	11/16	17	1	25	7/8	22	1	25	1/2	13
SSS-2	10 Sol.-4 Str.	.102- .232	SCS-2	10 Sol.-4 Str.	.102- .232	5/16-18	3/4	19	9/16	14	15/16	24	1 5/32	29	9/16	14
SSS-2A1	10 Sol.-4 Str.	.102- .232	SCS-2A1	10 Sol.-4 Str.	.102- .232	5/16-18	3/4	19	1	25	15/16	24	1 5/32	29	9/16	14
SSS-3	6 Sol.-3 Str.	.162- .260	SCS-3	10 Sol.-3 Str.	.102- .260	3/8-16	13/16	21	5/8	16	1 1/16	27	1 3/32	28	5/8	16
SSS-3A1	6 Sol.-3 Str.	.162- .260	SCS-3A1	10 So..-3 Str.	.102- .260	3/8-16	13/16	21	1 1/8	29	1 1/16	27	1 3/32	28	5/8	16
SSS-4	4 Str.-2 Str.	.232- .292	SCS-4	10 Sol.-2 Str.	.102- .292	3/8-16	7/8	22	5/8	16	1 1/16	27	1 3/8	35	11/16	17
SSS-4A1	4 Str.-2 Str.	.232- .292	SCS-4A1	10 Sol.-2 Str.	.102- .292	3/8-16	7/8	22	1 1/8	29	1 1/16	27	1 9/32	33	11/16	17
SSS-5	6 Sol.-1/0 Str.	.162- .375	SCS-5	2 sol.-1/0 Str.	.258- .375	1/2-13	1	25	3/4	19	1 5/16	33	1 11/16	43	3/4	19
SSS-5A1	6 Sol.-1/0 Str.	.162- .375	SCS-5A1	2 Sol.-1/0 Str.	.258- .375	1/2-13	1	25	1 1/4	32	1 5/16	33	1 11/16	43	3/4	19
SSS-6	1 Sol.-2/0 Str.	.289- .419	SCS-6	2 Sol.-2/0 Str.	.258- .419	1/2-13	1 1/8	29	3/4	19	1 7/16	37	1 7/8	48	7/8	22
SSS-6A1	1 Sol.-2/0 Str.	.289- .419	SCS-6A1	2 Sol.-2/0 Str.	.258- .419	1/2-13	1 1/8	29	1 1/4	32	1 7/16	37	1 7/8	48	7/8	22
SSS-8	3/0 Sol.-4/0 Str.	.410- .528	SCS-8	1 Sol.-4/0 Str.	.289- .528	5/8-11	1 3/8	35	1	25	1 11/16	43	2 1/4	57	1 1/8	29
SSS-8A1	3/0 Sol.-4/0 Str.	.410- .528	SCS-8A1	1 Sol.-4/0 Str.	.289- .528	5/8-11	1 3/8	35	1 1/2	38	1 11/16	43	2 1/4	57	1 1/8	29
SSS-9	4/0 Str.-350 MCM	.528- .682	SCS-9	1 Str.-350 MCM	.332- .682	5/8-11	1 1/2	38	1	25	2	51	2 11/16	68	1 1/4	32
SSS-9A1	4/0 Str.-350 MCM	.528- .682	SCS-9A1	1 Str.-350 MCM	.332- .682	5/8-11	1 1/2	38	1 1/2	38	2	51	2 11/16	68	1 1/4	32
SSS-10	250-500 MCM	.575- .815	SCS-10	3/0 Str.-500 MCM	.470- .815	3/4-10	1 13/16	46	1 3/8	35	2 5/16	59	3 3/16	81	1 1/2	38
SSS-10A1	250-500 MCM	.575- .815	SCS-10A1	3/0 Str.-500 MCM	.470- .815	3/4-10	1 13/16	46	1 3/4	44	2 5/16	59	3 3/16	81	1 1/2	38
* SSS-11	300-750 MCM	.634- .999	SCS-11	350-750 MCM	.682- .999	3/4-10	2 1/4	57	1 3/8	35	2 1/2	64	3 7/16	87	1 7/8	48
* SSS-11A1	300-750 MCM	.634- .999	SCS-11A1	350-750 MCM	.682- .999	3/4-10	2 1/4	57	1 7/8	48	2 1/2	64	3 7/16	87	1 7/8	48
* SSS-12	750-1000 MCM	.999-1.153	SCS-12	500-1000 MCM	.815-1.153	1-8	2 5/8	67	1 1/2	38	3	76	4	102	2 3/8	60
* SSS-12A1	750-1000 MCM	.999-1.153	SCS-12A1	500-1000 MCM	.815-1.153	1-8	2 5/8	67	2	51	3	76	4	102	2 3/8	60

FEMALE TYPES STS AND SDS

If nut and lockwasher are required, add suffix "-SMH" to catalog number.

Fig. 3. (One Cable)			Fig. 4 (Two Cables)													
STS-0	12 Sol.-8 Str.	.081- .146	SDS-0	12 Sol.-8 Str.	.081- .146	1/4-20	1/2	13	1/4	6	29/32	23	1 1/8	29	3/8	9
STS-1	10 Sol.-7 Str.	.102- .164	SDS-1	10 Sol.-7 Str.	.102- .164	1/4-20	11/16	17	1/4	6	1 1/8	29	1 7/16	37	1/2	13
STS-2	8 Sol.-4 Str.	.128- .232	SDS-2	10 Sol.-4 Str.	.102- .232	5/16-18	3/4	19	5/16	8	1 7/16	37	1 9/16	40	9/16	14
STS-3	6 Str.-3 Str.	.184- .260	SDS-3	10 Sol.-3 Str.	.102- .260	3/8-16	13/16	21	3/8	9	1 1/2	38	1 5/8	41	5/8	16
STS-4	6 Str.-2 Str.	.184- .292	SDS-4	10 Sol.-2 Str.	.102- .292	3/8-16	7/8	22	3/8	9	1 5/8	41	1 15/16	49	11/16	17
STS-5	2 Sol.-1/0 Str.	.258- .375	SDS-5	2 Sol.-1/0 Str.	.258- .375	1/2-13	1	25	7/16	11	1 7/8	48	2 1/8	54	3/4	19
STS-6	1 Sol.-2/0 Str.	.289- .419	SDS-6	2 Sol.-2/0 Str.	.258- .419	1/2-13	1 1/8	29	1/2	13	2 1/16	52	2 5/16	59	7/8	22
STS-8	1/0 Str.-4/0 Str.	.375- .528	SDS-8	1 Sol.-4/0 Str.	.289- .528	5/8-11	1 3/8	35	5/8	16	2 3/8	60	2 1/2	64	1 1/8	29
STS-9	4/0 Str.-350 MCM	.528- .682	SDS-9	1 Str.-350 MCM	.332- .682	5/8-11	1 1/2	38	5/8	16	2 5/8	67	2 11/16	68	1 1/4	32
STS-10	300-500 MCM	.634- .815	SDS-10	3/0 Str.500 MCM	.470- .815	3/4-10	1 13/16	46	3/4	19	3 1/8	79	3 5/16	84	1 1/2	38
* STS-11	600-750 MCM	.893- .999	SDS-11	350-750 MCM	.682- .999	3/4-10	2 1/4	57	7/8	22	3 1/2	89	3 1/2	89	2	51
* STS-12	750-1000 MCM	.964-1.153	SDS-12	500-1000 MCM	.815-1.153	1-8	2 5/8	67	1 1/8	29	4 1/8	105	4	102	2 3/8	60

*‡For conversion to metric range, see page 175. *UL listing is limited to 500 MCM.*

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COPPER COMPRESSION TERMINALS • TYPE TLU

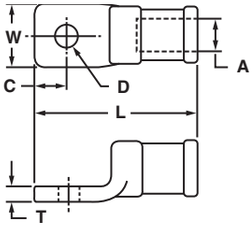

FIG. 1

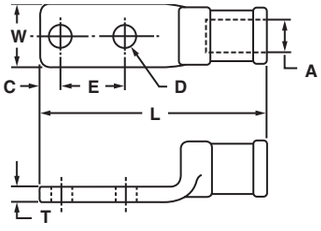

FIG. 2

These heavy duty compression lugs are cast out of high conductivity copper and can be installed with existing crimping tools.

Entire connector is electro-tin plated.

Catalog Number	A Conductor Range	Wire Diam. Range	D Bolt Size	Fig. No.	Approximate Dimensions										T & B Die Size
					L		W		T		C		E		
		in			in	mm	in	mm	in	mm	in	mm	in	mm	
TLU-W8S	8 Str.	.146	10	1	1 7/16	37	1/2	13	1/8	3	5/16	8	–	–	29
TLU-W8D	8 Str.	.146	1/4	2	2	51	1/2	13	1/8	3	11/32	9	5/8	16	29
TLU-W6S	6 Str.	.184	1/4	1	1 7/16	37	1/2	13	1/8	3	5/16	8	–	–	29
TLU-W6D	6 Str.	.184	1/4	2	2	51	1/2	13	1/8	3	11/32	9	5/8	16	29
TLU-W4S	4 Str.	.232	1/4	1	1 7/16	37	1/2	13	1/8	3	5/16	8	–	–	29
TLU-W4D	4 Str.	.232	1/4	2	2	51	1/2	13	1/8	3	11/32	9	5/8	16	29
TLU-W2S	2 Str.	.292	1/4	1	2	51	3/4	19	1/4	6	7/16	11	–	–	45
TLU-W2D	2 Str.	.292	1/4	2	3	76	3/4	19	1/4	6	1/2	13	3/4	19	45
TLU-W1S	1 Str.	.332	1/4	1	2	51	3/4	19	1/4	6	7/16	11	–	–	45
TLU-W1D	1 Str.	.332	1/4	2	3	76	3/4	19	1/4	6	1/2	13	1	25	45
TLU-1/0S	1/0 Str.	.368	3/8	1	2	51	3/4	19	1/4	6	7/16	11	–	–	45
TLU-1/0D	1/0 Str.	.368	3/8	2	3	76	3/4	19	1/4	6	1/2	13	1	25	45
TLU-2/0S	2/0 Str.	.419	3/8	1	2 5/8	67	1	25	9/32	7	9/16	14	–	–	66
TLU-2/0D	2/0 Str.	.419	3/8	2	4 5/8	117	1	25	9/32	7	5/8	16	1 3/4	44	66
TLU-3/0S	3/0 Str.	.470	3/8	1	2 5/8	67	1	25	9/32	7	9/16	14	–	–	66
TLU-3/0D	3/0 Str.	.470	1/2	2	4 5/8	117	1	25	9/32	7	5/8	16	1 3/4	44	66
TLU-4/0S	4/0 Str.	.528	3/8	1	2 5/8	67	1	25	9/32	7	9/16	14	–	–	66
TLU-4/0D	4/0 Str.	.528	1/2	2	4 5/8	117	1	25	9/32	7	5/8	16	1 3/4	44	66
TLU-025S	250 MCM	.575	1/2	1	3 1/4	83	1 3/16	30	5/16	8	3/4	19	–	–	76
TLU-025D	250 MCM	.575	1/2	2	4 7/8	124	1 3/16	30	5/16	8	5/8	16	1 3/4	44	76
TLU-030S	300 MCM	.634	1/2	1	3 1/4	83	1 3/16	30	5/16	8	3/4	19	–	–	76
TLU-030D	300 MCM	.634	1/2	2	4 7/8	124	1 3/16	30	5/16	8	5/8	16	1 3/4	44	76
TLU-035S	350 MCM	.682	1/2	1	3 3/4	95	1 3/8	35	3/8	10	3/4	19	–	–	99
TLU-035D	350 MCM	.682	1/2	2	5 3/8	137	1 3/8	35	3/8	10	5/8	16	1 3/4	44	99
TLU-040S	400 MCM	.728	1/2	1	3 3/4	95	1 3/8	35	3/8	10	3/4	19	–	–	99
TLU-040D	400 MCM	.728	1/2	2	5 3/8	137	1 3/8	35	3/8	10	5/8	16	1 3/4	44	99
TLU-050S	500 MCM	.815	1/2	1	3 3/4	95	1 3/8	35	3/8	10	3/4	19	–	–	99
TLU-050D	500 MCM	.815	1/2	2	5 3/8	137	1 3/8	35	3/8	10	5/8	16	1 3/4	44	99
TLU-060S	600 MCM	.893	1/2	1	3 3/4	95	1 5/8	41	7/16	11	3/4	19	–	–	112
TLU-060D	600 MCM	.893	1/2	2	5 3/8	137	1 5/8	41	7/16	11	5/8	16	1 3/4	44	112
TLU-070S	700 MCM	.965	1/2	1	3 3/4	95	1 5/8	41	7/16	11	3/4	19	–	–	112
TLU-070D	700 MCM	.965	1/2	2	5 3/8	137	1 5/8	41	7/16	11	5/8	16	1 3/4	44	112
TLU-075S	750 MCM	.999	1/2	1	3 3/4	95	1 5/8	41	7/16	11	3/4	19	–	–	112
TLU-075D	750 MCM	.999	1/2	2	5 3/8	137	1 5/8	41	7/16	11	5/8	16	1 3/4	44	112
TLU-080S	800 MCM	1.031	1/2	1	4 1/2	114	1 7/8	48	15/32	12	15/16	24	–	–	130
TLU-080D	800 MCM	1.031	1/2	2	5 3/4	146	1 7/8	48	15/32	12	5/8	16	1 3/4	44	130
TLU-090S	900 MCM	1.094	5/8	1	4 1/2	114	1 7/8	48	15/32	12	15/16	24	–	–	130
TLU-090D	900 MCM	1.094	1/2	2	5 3/4	146	1 7/8	48	15/32	12	5/8	16	1 3/4	44	130
TLU-100S	1000 MCM	1.153	5/8	1	4 1/2	114	1 7/8	48	15/32	12	15/16	24	–	–	130
TLU-100D	1000 MCM	1.153	1/2	2	5 3/4	146	1 7/8	48	15/32	12	5/8	16	1 3/4	44	130
TLU-125S	1250 MCM	1.290	5/8	1	5	127	2 1/4	57	1/2	13	1 1/16	27	–	–	150
TLU-125D	1250 MCM	1.290	1/2	2	6	152	2 1/4	57	1/2	13	5/8	16	1 3/4	44	150
TLU-150S	1500 MCM	1.142	5/8	1	5	127	2 1/4	57	1/2	13	1 1/16	27	–	–	161
TLU-150D	1500 MCM	1.412	1/2	2	6	152	2 1/4	57	1/2	13	5/8	16	1 3/4	44	161
TLU-175S	1750 MCM	1.526	5/8	1	5 7/8	149	2 1/2	64	1/2	13	1 3/16	30	–	–	175
TLU-175D	1750 MCM	1.526	1/2	2	6 5/8	168	2 1/2	64	1/2	13	5/8	16	1 3/4	44	175
TLU-200S	2000 MCM	1.632	5/8	1	6 1/8	156	2 3/4	70	1/2	13	1 5/16	33	–	–	187
TLU-200D	2000 MCM	1.632	1/2	2	6 5/8	168	2 3/4	70	1/2	13	5/8	16	1 3/4	44	187

Above terminals can be installed with the following T & B Tooling: 12 ton head (13642), 20 ton head (21920), 40 ton head (21940).

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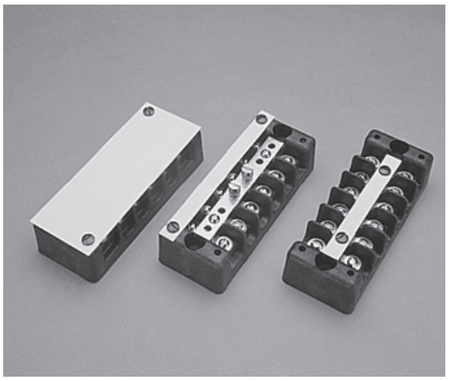
GLASS REINFORCED PLASTIC TERMINAL BLOCKS • SERIES 6000



Catalog Number	No. of Wires	Approximate Dimensions				
		Width	Height	Length	Mounting Hole	
		Inches	Inches	Inches	C. to C.	Dia.
6002	2	2	1 3/16	2 1/2	1 13/16	.225
6004	4	2	1 3/16	3 13/16	3 1/8	.225
6006	6	2	1 3/16	5 1/8	4 3/8	.225
6008	8	2	1 3/16	6 7/16	5 3/4	.225
6012	12	2	1 3/16	9 1/16	8 3/8	.225

SERIES 6000-WIDE SLOT

Series 6000 terminal blocks have a wide slot opening (9/16") to take wires with either a soldered or solderless terminal lug. They are molded of glass reinforced thermoplastic engineering resin. Jumper bars are stamped of .062 inch hard rolled copper, plated to prevent corrosion and cannot be removed from terminal block. Holes are tapped at two corners for attachment of cover. Washer-head screws, No. 10-32, are nickel plated. White marking strips, of a special durable vinyl are furnished.

Rating: 75 amps with #4 max crimp lug 600V 75°C.
45 amps with #8 max wire 600V 75°C.

SERIES 6000-SVS

For white vinyl cover, suffix catalog number with "-SVS".

SERIES 6000-SCS

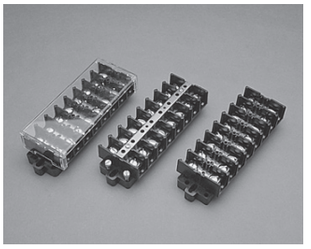
SHORT CIRCUITING

For shorting strip of hard rolled copper, which is pierced to take a shorting pin that makes contact with the jumper bar, suffix catalog number with "-SCS." Two shorting pins furnished as standard. This provides for short circuiting of two of the circuits passing through the block. Extra shorting pins, SCP-1, may be ordered separately.

SERIES 6000-SCC

For short circuiting block with cover instead of the plastic marking strip furnished with the standard 6000 series blocks, suffix catalog number with "-SCC." Two shorting pins furnished as standard.

VERSATILE AND ECONOMICAL NORYL® TERMINAL BLOCKS • SERIES 15-1600



Penn-Union's 15-1600 series of break-resistant terminal blocks are rated for service at 600 volts. Constructed of 94V-1 grade Noryl®, the 15-1600 series of terminal blocks are much stronger than more common phenolic terminal blocks. The 15-1600 series meets 125V UL service entrance equipment requirements. These terminal blocks are designed with a universal mounting feature utilizing adjustable, metal mounting eyelets. This allows easy installation in mounting holes that have been pre-drilled for competitive 1500 and 1600 series blocks. The mounting eyelets evenly distribute mounting screw pressure as well.

Penn-Union's 15-1600 series terminal blocks are available in 4, 6, 8 and 12 position models. All blocks can accommodate up to 7/16" lugs (pad width). Screws in Penn-Union's 15-1600 series of terminal blocks are friction locked to prevent loosening.

Options

Each terminal block is available with a shorting strip and four shorting screws, or, a clear plastic hinged lid. For terminal blocks with shorting strips, add "SC" as a suffix to catalog numbers. For terminal blocks with hinged lids, add "C" as a suffix to catalog number.

Break Resistant 94V-1 Grade Noryl® Terminal Blocks

Catalog Number	Number of Wires Per Side	Ctn. Qty.	L inches	Mounting Hole	
				Range Min.	Inches Max.
50 Amp – 600 Volts					
•15-1604	4	2	3 3/4	2 7/8	3 3/8
•15-1606	6	2	5	4 1/8	4 5/8
•15-1608	8	2	6 1/4	5 3/8	5 7/8
•15-1612	12	2	8 3/4	7 7/8	8 3/8

Ratings: Wire Range – Line Side: CU Max 6 (UL): 8 (CSA)
– Load Side: CU Max 10 (UL): 8 (CSA)

Temp Rating 80°C.

Amp Rating: 60 Amps with #6 Wire
Other Wire 30 Amps

Torque: 20 in-lbs.

•Stock items. *Noryl® is a trademark of General Electric Company.*

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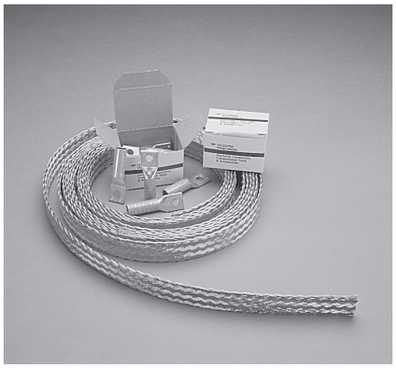
FLEXIBLE BRAID KITS

Create custom flexible connections to your exact job requirements



Penn-Union's Flexible Braid Kits allow you to make custom flexible connections to precisely match your job specifications. Flexible braid kits eliminate the need to wait for special order flexible leads or use leads that are not ideally suited to a particular job application.

Choose from two Flexible Braid Kits.

Penn-Union's Flexible Braid Kits come in small and large braid sizes. Both kits contain a length of tin-plated flexible copper braid and flared end long barrel Penn-Crimp® compression connectors, type BBLU, for ease of braid insertion. Additional connectors are available from Penn-Union stocking distributors.

Flexible Braid Kits are made from quality materials.

Flexible Braid Kits contain braid made from high quality tin-plated copper. The braid's pure copper core provides high conductivity while tin plating makes the braid corrosion resistant. In addition, the woven design of Penn-Union's braid allows maximum flexibility of a connection.

Flexible Braid Kits

Small Braid Kit			Large Braid Kit		
Catalog Number	**Braid Length**	**No. of Connectors**	**Catalog Number**	**Braid Length**	**No. of Connectors**
FBK-125	20'	20-BBLU 1/0 S-FL	FBK-285	10'	10-BBLU 050 D-FL
125 Amp 77,184 Circular mil braid (#1 AWG) 5/32"x1 1/16"			285 Amp 303,912 Circular mil braid (300 MCM) 3/8"x1 3/8"		

TRANSFORMER LUG KITS • TYPE LASK

486B LISTED
AL9CU

Mechanical Transformer Lug Kits contain Type LA aluminum solderless lugs, steel nuts and bolts. They come in four sizes and can be used with any dry-type transformer.

Steel nuts and bolts are yellow chromated for corrosion resistance. Nuts have special captive conical pressure washers that maintain bolted contact pressure when properly torqued.

Type LA aluminum lugs are "dual rated", carrying the UL486B listing for copper and aluminum conductors. Each lug is marked "AL9CU" to signify this level of performance.

Catalog Number	Transformer KVA Size	Kit Contents			
		Lugs	Qty.	Bolts & Nuts	Qty.
LASK-1	15-37 1/2 1-Phase 15-45 3-Phase	LA2 LA-250	8 4	1/4 x 3/4"	8
LASK-2	50-75 1-Phase 75-112 1/2 3-Phase	LA-250	12	1/4 x 3/4" 1/4 x 1 3/4"	8 8
LASK-3	100-167 1-Phase 150-300 3-Phase	LA-250 LA-600	3 22	1/4 x 3/4" 3/8 x 2"	3 16
LASK-4	500 3-Phase	LA-600	29	3/8 x 2"	18

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DOUBLE ROW TERMINAL BLOCKS • SERIES 3000

Terminals are Ultrasonically welded in the block for improved pull-out strength. Closed back or feed through construction, in black thermoplastic, of 1 to 30 terminals.

Current ratings, amps (UL)-20, (UL flame retardant rating 94V-0).

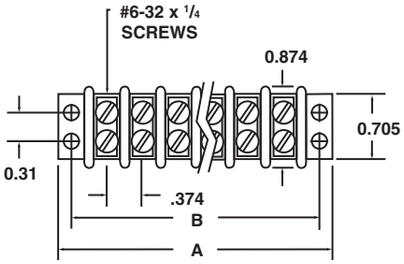
Voltage Rating, rms:

(A) UL Recognized
1. General Industrial – 150 to 300
2. Commercial Equipment – 250

(B) Withstand and Volts, rms – 7,500

Recommended wire size of 14 to 22 AWG solid/stranded.

Screws are $^{6}/_{32}$ x $^{1}/_{4}$ steel nickel plated binding head.



Catalog No.	Number Terminals	Decimal Dimensions	
		A	B
3004-1B	4	2.16	1.88
3006-1B	6	2.91	2.63
3008-1B	8	3.66	3.38
3010-1B	10	4.41	4.13

-1B suffix, packaged in plastic bags for merchandising display. For bulk packaged product, contact factory for availability.

Bulk pack items available on special order. ***Contact factory for price and availability.***

Bulk Pack Catalog Numbers	Fraction Dimension		Decimal Dimension		Millimeters Dimension	
	A	B	A	B (+/-.015)	A	B
3002	$1^{13}/_{32}$	$1^{1}/_{8}$	1.41	1.13	35.7	28.6
3003	$1^{25}/_{32}$	$1^{1}/_{2}$	1.78	1.50	45.2	38.1
3004	$2^{5}/_{32}$	$1^{7}/_{8}$	2.16	1.88	54.7	47.6
3005	$2^{17}/_{32}$	$2^{1}/_{4}$	2.53	2.25	64.3	57.2
3006	$2^{29}/_{32}$	$2^{5}/_{8}$	2.91	2.63	73.8	66.7
3007	$3^{9}/_{32}$	3	3.28	3.00	83.3	76.2
3008	$3^{21}/_{32}$	$3^{3}/_{8}$	3.66	3.38	92.8	85.7
3009	$4^{1}/_{32}$	$3^{3}/_{4}$	4.03	3.75	102.4	95.3
3010	$4^{13}/_{32}$	$4^{1}/_{8}$	4.41	4.13	111.9	104.8
3011	$4^{25}/_{32}$	$4^{1}/_{2}$	4.78	4.50	121.4	114.3
3012	$5^{5}/_{32}$	$4^{7}/_{8}$	5.16	4.88	130.9	123.8
3013	$5^{17}/_{32}$	$5^{1}/_{4}$	5.53	5.25	140.5	133.4
3014	$5^{29}/_{32}$	$5^{5}/_{8}$	5.91	5.63	150	142.9
3015	$6^{9}/_{32}$	6	6.28	6.00	159.5	152.4
3016	$6^{21}/_{32}$	$6^{3}/_{8}$	6.66	6.38	169	161.9
3017	$7^{1}/_{32}$	$6^{3}/_{4}$	7.03	6.75	153.2	171.5
3018	$7^{13}/_{32}$	$7^{1}/_{8}$	7.41	7.13	188	181
3019	$7^{25}/_{32}$	$7^{1}/_{2}$	7.78	7.50	197.6	190.1
3020	$8^{5}/_{32}$	$7^{7}/_{8}$	8.16	7.88	207.1	200
3021	$8^{17}/_{32}$	$8^{1}/_{4}$	8.53	8.25	216.7	209.6
3022	$8^{29}/_{32}$	$8^{5}/_{8}$	8.91	8.63	226.2	219.1
3023	$9^{9}/_{32}$	9	9.28	9.00	235.7	228.6
3024	$9^{21}/_{32}$	$9^{3}/_{8}$	9.66	9.38	245.2	238.1
3025	$10^{1}/_{32}$	$9^{3}/_{4}$	10.03	9.75	254.8	247.7
3026	$10^{13}/_{32}$	$10^{1}/_{8}$	10.41	10.13	264.3	257.2
3027	$10^{25}/_{32}$	$10^{1}/_{2}$	10.78	10.50	273.8	266.7
3028	$11^{5}/_{32}$	$10^{7}/_{8}$	11.16	10.88	283.3	276.2
3029	$11^{17}/_{32}$	$11^{1}/_{4}$	11.53	11.25	292.9	285.8
3030	$11^{29}/_{32}$	$11^{5}/_{8}$	11.91	11.63	302.4	295.3

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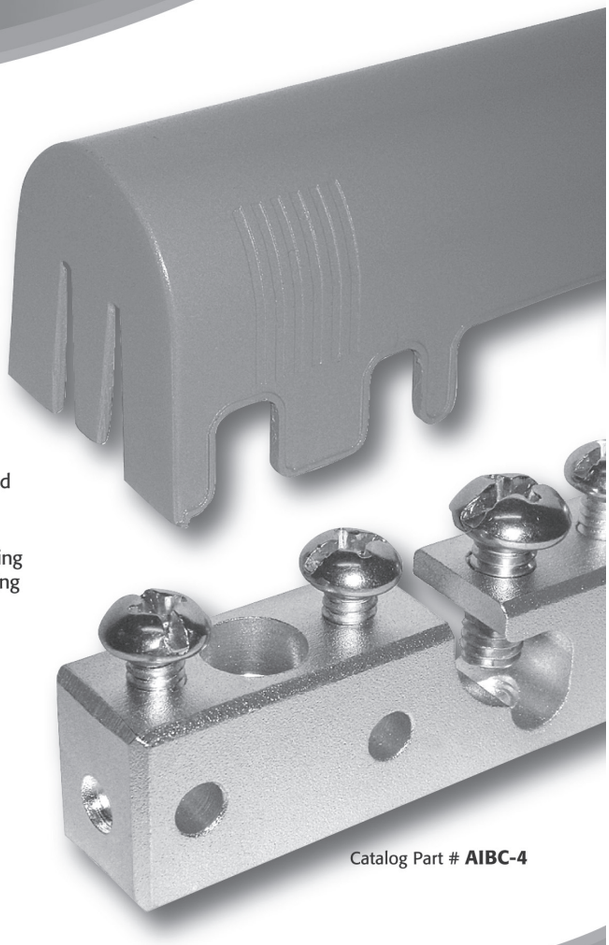
Intersystem Bonding Connector

Our electro-tin plated aluminum connector offers superior corrosion resistance compared to zinc connectors... and our top access screws with snap-on cover make them easier to install.



Catalog Part # **AIBC-4**

Penn-Union's Intersystem Bonding Connector meets the requirements of 2008 NEC® Article 250.94, "Bonding for Other Systems." The Article requires all intersystem bonding and grounding conductors to be bonded to the grounding electrode conductor in a single location for residential and small commercial facilities.

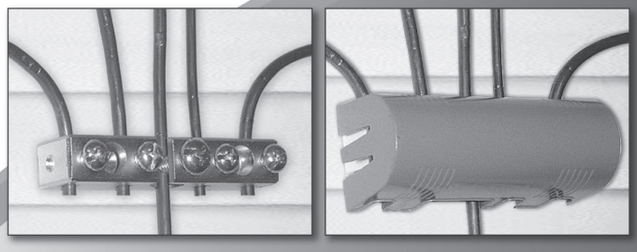
The AIBC-4 connector is designed to connect directly to the grounding electrode conductor, providing a single location for all intersystem bonding and grounding conductors. Featuring a convenient lay-in style lug and integrated mounting holes, the Intersystem Bonding Connector offers customers a quick, easy and compact installation.

Features/Benefits

- Electro-tin plated extruded aluminum construction provides superior corrosion resistance compared to zinc die-cast
- Listed to UL467 for grounding and bonding
- c UL us listed for installations in the USA and Canada
- Lay-in style lug and integrated mounting holes allow for easy installation
- Paintable, snap-on cover is impact resistant, UV stabilized and flame retardant for long outdoor life
- Electro-tin plated for maximum conductivity
- All stainless steel hardware for maximum corrosion resistance
- 4 Taps (14-4AWG) solid or stranded conductor allows for bonding and grounding of communication circuits, radio and television equipment, satellite systems and CATV circuits

Conductor Range

- 6-2 AWG grounding electrode conductor
- (Four) 14-4 AWG bonding conductors



c UL us LISTED

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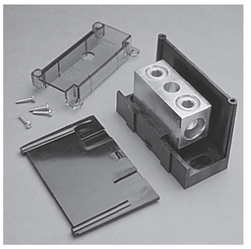
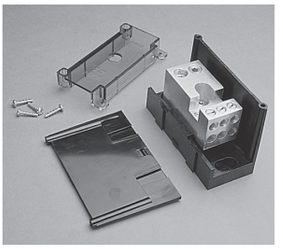
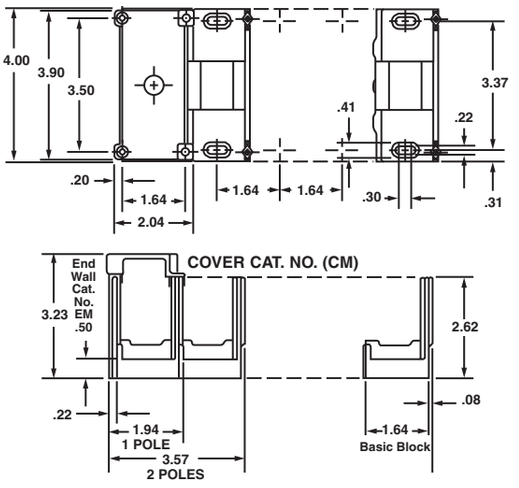
MODULAR POWER DISTRIBUTION BLOCKS • TYPE ADB

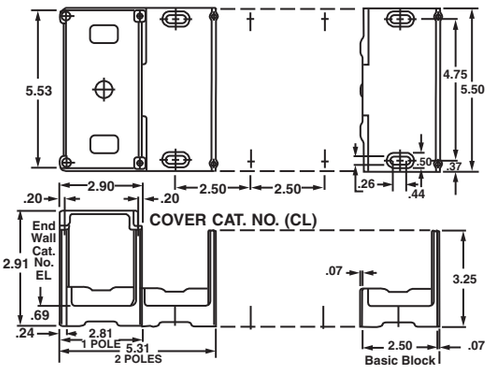




- Dual rated AL9CU - UL recognized, CSA certified 600 volt rated
- Easy to assemble
- Triple interlocking features
- Single piece tin plated aluminum connector
- Blocks molded from high strength glass filled polycarbonate insulating material
- Highly versatile - only one basic building block to stock
- Snap as many basic blocks together as desired, finish with one end wall for custom installation every time
- See through polycarbonate safety covers, with test hole, are available to provide dead-front protection, one cover protects one pole



MEDIUM BLOCK (M)



LARGE BLOCK (L)

Basic Block Catalog Number	Primary		Secondary		Amperage Rating per Pole	Block Size	End Wall Catalog Number	Cover Catalog Number
	Wire Range AL9CU	Opening per Pole	Wire Range AL9CU	Opening per Pole				
ADB 16-2/0	2/0 - 14	1	2 - 14	6	175	M	EM	CM
ADB 26-2/0	2/0 - 14	2	2 - 14	6	350	M	EM	CM
ADB 112-350	350MCM - 6	1	4 - 14	12	310	L	EL	CL
ADB 162-350	350MCM - 6	1	2 - 14	6	310	M	EM	CM
ADB 14-500	500MCM - 4	1	2/0 - 14	4	380	M	EM	CM
ADB 16-350	350MCM - 6	1	2/0 - 14	6	310	L	EL	CL
ADB 16-500	500MCM - 4	1	2/0 - 14	6	380	L	EL	CL
ADB 162-500	500MCM - 4	1	2 - 14	6	380	M	EM	CM
ADB 26-350	350MCM - 6	2	2/0 - 14	6	620	L	EL	CL
ADB 26-500	500MCM - 4	2	2/0 - 14	6	760	L	EL	CL
ADB 24-500	500MCM - 4	2	4/0 - 6	4	760	L	EL	CL
ADB 212-500	500MCM - 4	2	4 - 14	12	760	L	EL	CL
ADB 11-2/0	2/0 - 14	1	2/0 - 14	1	175	M	EM	CM
ADB 11-350	350MCM - 6	1	350MCM - 6	1	310	M	EM	CM
ADB 11-500	500MCM - 4	1	500MCM - 4	1	380	L	EL	CL
ADB 22-350	350MCM - 6	2	350MCM - 6	2	620	L	EL	CL
ADB 22-500	500MCM - 4	2	500MCM - 4	2	760	L	EL	CL
ADB 22-2/0	2/0 -14	2	2/0 - 14	2	350	M	EM	CM
ADB 22-4/0	4/0 - 6	2	4/0 - 6	2	460	M	EM	CM

To order simply determine the number of poles desired per block. Order that number of basic blocks and one end wall for each complete block. If covers are desired, order the same number of covers as basic blocks. For example: If a 3 pole 350MCM block is needed with one primary and 6 secondaries of 2/0-14 range - order three pieces of ADB 16-350 and one piece of EL. If covers are required order three pieces of CL.

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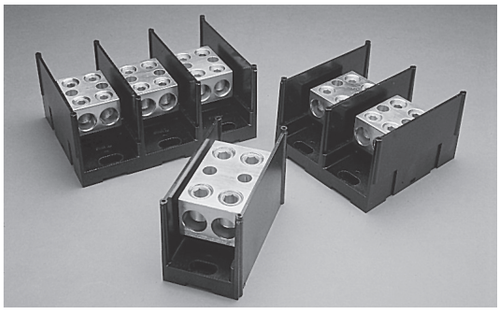
POWER DISTRIBUTION BLOCKS • TYPE ADB



- Dual rated AL9CU - UL recognized, CSA certified 600 volt rated
- Easy to assemble
- Single piece tin plated aluminum connector
- Blocks molded from high strength glass filled polycarbonate insulating material
- See through polycarbonate safety covers, with test hole, are available to provide dead-front protection, one-cover protects one pole

Basic Block Catalog Number	Primary		Secondary		Amperage Rating per Pole	Number of Poles	Block Size	Length in.	Width in.	Height in.	Cover Catalog Number
	Wire Range AL9CU	Opening per Pole	Wire Range AL9CU	Opening per Pole							
ADB 16-2/0-1	2/0-14	1	2-14	6	175	1	M	4.00	1.94	2.62	CM
ADB 16-2/0-2	2/0-14	1	2-14	6	175	2	M	4.00	3.57	2.62	CM
ADB 16-2/0-3	2/0-14	1	2-14	6	175	3	M	4.00	5.20	2.62	CM
ADB 26-2/0-1	2/0-14	2	2-14	6	350	1	M	4.00	1.94	2.62	CM
ADB 26-2/0-2	2/0-14	2	2-14	6	350	2	M	4.00	3.57	2.62	CM
ADB 26-2/0-3	2/0-14	2	2-14	6	350	3	M	4.00	5.20	2.62	CM
ADB 112-350-1	350 MCM-6	1	4-14	12	310	1	L	5.35	2.81	3.25	CL
ADB 112-350-2	350 MCM-6	1	4-14	12	310	2	L	5.35	5.31	3.25	CL
ADB 112-350-3	350 MCM-6	1	4-14	12	310	3	L	5.35	7.81	3.25	CL
ADB 162-350-1	350 MCM-6	1	2-14	6	310	1	M	4.00	1.94	2.62	CM
ADB 162-350-2	350 MCM-6	1	2-14	6	310	2	M	4.00	3.57	2.62	CM
ADB 162-350-3	350 MCM-6	1	2-14	6	310	3	M	4.00	5.20	2.62	CM
ADB 14-500-1	500 MCM-4	1	2/0-14	4	380	1	M	4.00	1.94	2.62	CM
ADB 14-500-2	500 MCM-4	1	2/0-14	4	380	2	M	4.00	3.57	2.62	CM
ADB 14-500-3	500 MCM-4	1	2/0-14	4	380	3	M	4.00	5.20	2.62	CM
ADB 16-350-1	350 MCM-6	1	2/0-14	6	310	1	L	5.35	2.81	3.25	CL
ADB 16-350-2	350 MCM-6	1	2/0-14	6	310	2	L	5.35	5.31	3.25	CL
ADB 16-350-3	350 MCM-6	1	2/0-14	6	310	3	L	5.35	7.81	3.25	CL
ADB 16-500-1	500 MCM-4	1	2/0-14	6	380	1	L	5.35	2.81	3.25	CL
ADB 16-500-2	500 MCM-4	1	2/0-14	6	380	2	L	5.35	5.31	3.25	CL
ADB 16-500-3	500 MCM-4	1	2/0-14	6	380	3	L	5.35	7.81	3.25	CL
ADB 162-500-1	500 MCM-4	1	2-14	6	380	1	M	4.00	1.94	2.62	CM
ADB 162-500-2	500 MCM-4	1	2-14	6	380	2	M	4.00	3.57	2.62	CM
ADB 162-500-3	500 MCM-4	1	2-14	6	380	3	M	4.00	5.20	2.62	CM
ADB 26-350-1	350 MCM-6	2	2/0-14	6	620	1	L	5.35	2.81	3.25	CL
ADB 26-350-2	350 MCM-6	2	2/0-14	6	620	2	L	5.35	5.31	3.25	CL
ADB 26-350-3	350 MCM-6	2	2/0-14	6	620	3	L	5.35	7.81	3.25	CL
ADB 26-500-1	500 MCM-4	2	2/0-14	6	760	1	L	5.35	2.81	3.25	CL
ADB 26-500-2	500 MCM-4	2	2/0-14	6	760	2	L	5.35	5.31	3.25	CL
ADB 26-500-3	500 MCM-4	2	2/0-14	6	760	3	L	5.35	7.81	3.25	CL
ADB 24-500-1	500 MCM-4	2	4/0-6	4	760	1	L	5.35	2.81	3.25	CL
ADB 24-500-2	500 MCM-4	2	4/0-6	4	760	2	L	5.35	5.31	3.25	CL
ADB 24-500-3	500 MCM-4	2	4/0-6	4	760	3	L	5.35	7.81	3.25	CL
ADB 212-500-1	500 MCM-4	2	4-14	12	760	1	L	5.35	2.81	3.25	CL
ADB 212-500-2	500 MCM-4	2	4-14	12	760	2	L	5.35	5.31	3.25	CL
ADB 212-500-3	500 MCM-4	2	4-14	12	760	3	L	5.35	7.81	3.25	CL
ADB 11-2/0-1	2/0-14	1	2/0-14	1	175	1	M	4.00	1.94	2.62	CM
ADB 11-2/0-2	2/0-14	1	2/0-14	1	175	2	M	4.00	3.57	2.62	CM
ADB 11-2/0-3	2/0-14	1	2/0-14	1	175	3	M	4.00	5.20	2.62	CM
ADB 11-350-1	350 MCM-6	1	350 MCM-6	1	310	1	M	4.00	1.94	2.62	CM
ADB 11-350-2	350 MCM-6	1	350 MCM-6	1	310	2	M	4.00	3.57	2.62	CM
ADB 11-350-3	350 MCM-6	1	350 MCM-6	1	310	3	M	4.00	5.20	2.62	CM
ADB 11-500-1	500 MCM-4	1	500 MCM-4	1	380	1	L	5.35	2.81	3.25	CL
ADB 11-500-2	500 MCM-4	1	500 MCM-4	1	380	2	L	5.35	5.31	3.25	CL
ADB 11-500-3	500 MCM-4	1	500 MCM-4	1	380	3	L	5.35	7.81	3.25	CL
ADB 22-350-1	350 MCM-6	2	350 MCM-6	2	620	1	L	5.35	2.81	3.25	CL
ADB 22-350-2	350 MCM-6	2	350 MCM-6	2	620	2	L	5.35	5.31	3.25	CL
ADB 22-350-3	350 MCM-6	2	350 MCM-6	2	620	3	L	5.35	7.81	3.25	CL
ADB 22-500-1	500 MCM-4	2	500 MCM-4	2	760	1	L	5.35	2.81	3.25	CL
ADB 22-500-2	500 MCM-4	2	500 MCM-4	2	760	2	L	5.35	5.31	3.25	CL
ADB 22-500-3	500 MCM-4	2	500 MCM-4	2	760	3	L	5.35	7.81	3.25	CL
ADB 22-2/0-1	2/0-14	2	2/0-14	2	350	1	M	4.00	1.94	2.62	CM
ADB 22-2/0-2	2/0-14	2	2/0-14	2	350	2	M	4.00	3.57	2.62	CM
ADB 22-2/0-3	2/0-14	2	2/0-14	2	350	3	M	4.00	5.20	2.62	CM
ADB 22-4/0-1	4/0-6	2	4/0-6	2	460	1	M	4.00	1.94	2.62	CM
ADB 22-4/0-2	4/0-6	2	4/0-6	2	460	2	M	4.00	3.57	2.62	CM
ADB 22-4/0-3	4/0-6	2	4/0-6	2	460	3	M	4.00	5.20	2.62	CM

PENNUNION
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ALUMINUM UNDERGROUND DIRECT BURIAL SERVICE CONNECTOR • TYPE DBA

RUS ACCEPTED

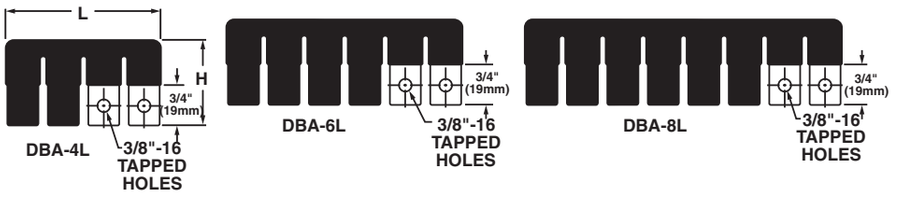
For aluminum or copper conductor range

Type DBA is an economical insulated aluminum service connector suitable for direct burial or for use in enclosures. Contact pads allow new services to be added as needed without disturbing previous installations. Taping is eliminated by use of force-fit EPDM rubber insulating sleeves.

Upper DBA body is PVC insulated; each leg is independently capped with a water-tight cover which may be removed for the addition of compression terminal force-fit insulating sleeves.

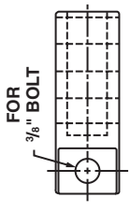
NOTE:

For street lighting tap add suffix "-S" to catalog number. Example: DBA-6L-S. For insulating sleeve for the street lighting tap, consult the factory.



Catalog Number	Approximate Dimensions			
	L		H	
	in	mm	in	mm
DBA-4L	5 1/2	140	2 3/8	60
DBA-6L	8 1/2	216	2 3/8	60
DBA-8L	11 1/2	292	2 3/8	60

ALUMINUM UNDERGROUND COMPRESSION TERMINAL KITS • TYPE DBTBF



RUS ACCEPTED

The DBTBF Kit consists of an aluminum compression lug, hex head cap screw with captive conical pressure washer, and a prelubricated force-fit rubber sleeve with internal rings that provide a positive seal.

Catalog Number	Conductor Range		Wire Diameter Range‡	EEI Die Index	Die Index	Tools, Dieset Catalog Number and Number of Crimps		TDY-U Pressure Setting
Force Fit	Copper	Aluminum	in			MD 6 Series	Y 35 Series	
DBTBF-C6	6 Str.-4 Sol.	6 Str.-4 Sol. 6 Str. Comp.	.179-.204	8A	BG or 5/8 or 243	BG 3 or W243 2	UBG 1 or U243 1	2
DBTBF-W2	2 Sol.-4 Str.	2 Sol.-4 Str. 4 Str. Comp.	.225-.258					
DBTBF-C1	2 Str.-1/0 Sol.	2 Str.-1/0 Sol. 2 - 1 Str. Comp.	.283-.325					
DBTBF-010A	1/0 Str.	1/0 Str.-2/0 Sol. 1/0 Str. Comp.	.362-.375					
DBTBF-013	2/0 Str.	2/0 Str.-3/0 Sol. 2/0 Str. Comp.	.406-.419	11A	249 or 840	W249 3 or WK840 5	U249 *2 or UK840 3	4
DBTBF-017	3/0 Str.	3/0 Str.-4/0 Sol. 3/0 Str. Comp.	.456-.470					
DBTBF-025	4/0 Str.	4/0 Str.-250 MCM 4/0 Comp.-250 Comp.	.512-.575					
DBTBF-030	250	250 MCM-300 MCM 300 Comp.	.575-.634	13A	299 or 655 or 750	– – –	U31ART 2 or U655 3 or U705 2	5 +
DBTBF-035	–	300 MCM-350 MCM 350 Comp.	.634-.682					

*‡For conversion to metric range, see page 175. *Overlap compressions. +To be tested.*

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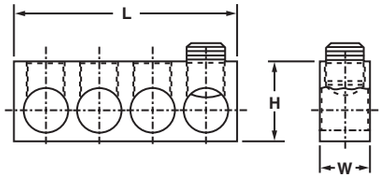
ALUMINUM MULTIPLE TAP CONNECTOR • TYPE NA

For any combination of copper or aluminum

486B
AL7CU



Connectors are made from high strength aluminum alloy, tin plated for bimetalic applications. Fills the need for a UL Recognized 486B, AL7CU and CSA Certified connector for more than one tap conductor not met by split bolts.

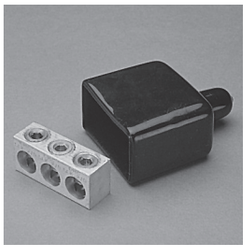
Black Plastisol (105˚ C rated) cover is available for connectors. Covers type NC are listed below as a convenience. The covers are not UL nor CSA.

Catalog Number	Conductor Range		Number of Conductors	Approximate Dimensions						Cover Catalog Number
				H		W		L		
	AWG	MM²		in	mm	in	mm	in	mm	
NA250-4T	10-250 MCM	4-120	4	1.13	28.70	.88	22.35	3.63	92.20	NC4-250
NA250-6T	10-250 MCM	4-120	6	1.13	28.70	.88	22.35	5.38	136.65	NC6-250
NA250-8T	10-250 MCM	4-120	8	1.13	28.70	.88	22.35	7.13	181.10	NC8-250
NA350-4T	10-350 MCM	4-185	4	1.38	35.05	1.00	25.40	3.79	96.27	NC4-350
NA350-6T	10-350 MCM	4-185	6	1.38	35.05	1.00	25.40	5.61	142.49	NC6-350
NA350-8T	10-350 MCM	4-185	8	1.38	35.05	1.00	25.40	7.43	188.72	NC8-350
NA500-4T	10-500 MCM	4-240	4	1.63	41.40	1.00	25.40	4.84	122.94	NC4-500
NA500-6T	10-500 MCM	4-240	6	1.63	41.40	1.00	25.40	7.22	183.39	NC6-500
NA500-8T	10-500 MCM	4-240	8	1.63	41.40	1.00	25.40	9.59	243.57	NC8-500

ALUMINUM STREET LIGHT CONNECTOR WITH COVER • TYPE SLK

For any combination of copper or aluminum

486B
AL9CU



Connectors are made from high strength aluminum alloy, tin plated for bimetalic applications. The connector is UL Listed 486B, AL9CU and CSA Certified.

Black Plastisol (105˚C Rated) cover is provided with the connector. The cover is not UL Listed nor CSA.

Catalog Number	Conductor Range		Number of Conductors	Approximate Dimensions					
				H		W		L	
	AWG	MM²		in	mm	in	mm	in	mm
SLK-2/0	14-2/0	1.5-50	3	.742	18.85	.565	14.35	1.690	42.93

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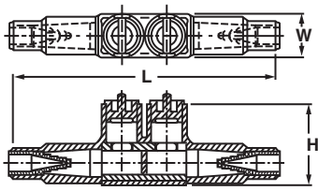
ALUMINUM UNDERGROUND SUBMERSIBLE EPDM RUBBER INSULATED SECONDARY CONNECTOR • TYPE ULS

For aluminum or copper conductors

Connector body manufactured from aluminum alloy for high strength and conductivity. Clear plated for low contact resistance. Pre-filled with oxide inhibitor.

Type ULS is tested and passes the requirements of ANSI 119.1, Western Underground Guide 2.5 for submersible applications, and ANSI 119.4 for class “A” connectors.

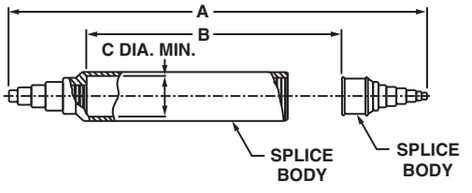


Catalog Number	Conductor Range		Approximate Dimensions					
	AWG	MM²	H		W		L	
			in	mm	in	mm	in	mm
ULS2-350	10-350 MCM	4-185	2.48	62.99	1.34	34.04	8.09	205.49

RUBBER UNDERGROUND SUBMERSIBLE EPDM RUBBER COVER FOR INSULATING SECONDARY CONNECTORS • TYPE SSI

Made from durable EPDM rubber. Designed to produce a tight submersible seal on the conductor by allowing the installer to cut the end to fit the conductor size used.

Covers mechanical splices type SR2 through SR350-2 and compression splices types BCU, BBCU, and BCUA 6 through 500. Type SSI cover is tested and passes ANSI 119.1, Western Underground Guide 2.5 for submersible applications, and ANSI 119.4 for class “A” connectors.



Catalog Number	Conductor Range				Accommodates Connectors		Approximate Dimensions					
	Mechanical		Compression				A		B		C	
	AWG	MM²	AWG	MM²	Mechanical	Compression	in	mm	in	mm	in	mm
SSI-500	14-350 MCM	1.5-185	8-500 MCM	10-240	SR2 through SR350-2	BCU8 thru 050 BBCU8 thru 025 BCUA8 thru 050	10.13	257.30	4.38	111.25	1.34	34.04

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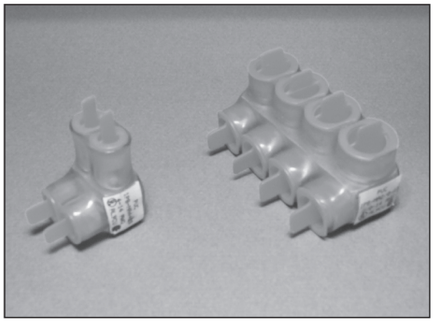
ALUMINUM CLEAR PRE-INSULATED POWER BAR • TYPE IPB

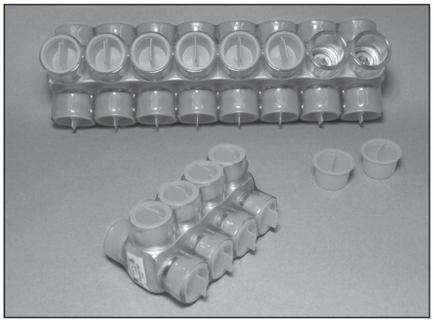
For any combination of copper and aluminum wire.

486B LISTED
AL9CU

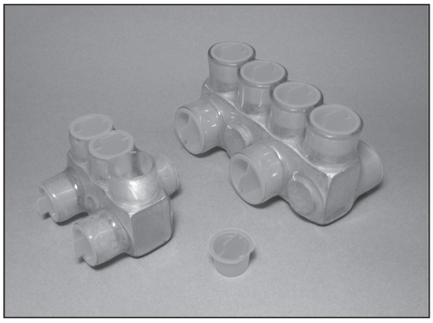
Pre-insulated aluminum connectors for splice, reducer and tap applications. Dual rated for both aluminum and copper conductors, simultaneous accommodations at 600V and 90°C. For use in areas such as troughs, gutters, panels, ducts and wireways. Only one conductor per set screw, and only one supply conductor per connector permitted.



SINGLE SIDED ENTRY TYPE

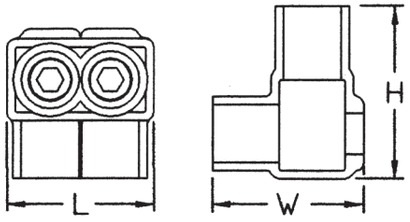


DUAL SIDED ENTRY TYPE



ALTERNATE ENTRY TYPE

Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPB-NA4-2S	2	4 Str - 14 Sol	1.03	1.19	1.19	
IPB-NA4-3S	3	4 Str - 14 Sol	1.39	1.19	1.19	
IPB-NA4-4S	4	4 Str - 14 Sol	1.90	1.19	1.19	
IPB-NA4-5S	5	4 Str - 14 Sol	2.26	1.19	1.19	
IPB-NA4-6S	6	4 Str - 14 Sol	2.70	1.19	1.19	1/8
IPB-NA4-8S	8	4 Str. 14 Sol	3.58	1.19	1.19	
IPB-NA2/0-2S	2	2/0 - 14 Sol	1.39	1.25	1.31	
IPB-NA2/0-3S	3	2/0 - 14 Sol	2.06	1.25	1.31	
IPB-NA2/0-4S	4	2/0 - 14 Sol	2.73	1.25	1.31	
IPB-NA2/0-5S	5	2/0 - 14 Sol	3.40	1.25	1.31	
IPB-NA2/0-6S	6	2/0 - 14 Sol	4.07	1.25	1.31	3/16
IPB-NA2/0-8S	8	2/0 - 14 Sol	5.42	1.25	1.31	
IPB-NA2/0-10S	10	2/0 - 14 Sol	6.77	1.25	1.31	
IPB-NA2/0-12S	12	2/0 - 14 Sol	8.11	1.25	1.31	
IPB-NA2/0-14S	14	2/0 - 14 Sol	9.46	1.25	1.31	
IPB-NA250-2S	2	250 MCM - 10 Sol	1.90	2.00	2.07	
IPB-NA250-3S	3	250 MCM - 10 Sol	2.84	2.00	2.07	
IPB-NA250-4S	4	250 MCM - 10 Sol	3.78	2.00	2.07	
IPB-NA250-5S	5	250 MCM - 10 Sol	4.71	2.00	2.07	
IPB-NA250-6S	6	250 MCM - 10 Sol	5.65	2.00	2.07	5/16
IPB-NA250-8S	8	250 MCM - 10 Sol	7.53	2.00	2.07	
IPB-NA250-10S	10	250 MCM - 10 Sol	9.41	2.00	2.07	
IPB-NA250-12S	12	250 MCM - 10 Sol	11.29	2.00	2.07	
IPB-NA250-14S	14	250 MCM - 10 Sol	13.16	2.00	2.07	
IPB-NA350-2S	2	350 MCM - 10 Sol	2.09	2.47	2.44	
IPB-NA350-3S	3	350 MCM - 10 Sol	3.00	2.47	2.44	
IPB-NA350-4S	4	350 MCM - 10 Sol	3.91	2.47	2.44	
IPB-NA350-5S	5	350 MCM - 10 Sol	4.82	2.47	2.44	
IPB-NA350-6S	6	350 MCM - 10 Sol	5.73	2.47	2.44	5/16
IPB-NA350-8S	8	350 MCM - 10 Sol	7.55	2.47	2.44	
IPB-NA350-10S	10	350 MCM - 10 Sol	10.06	2.47	2.44	
IPB-NA350-12S	12	350 MCM - 10 Sol	12.06	2.47	2.44	
IPB-NA350-14S	14	350 MCM - 10 sol	13.06	2.47	2.44	
IPB-NA600-2S	2	600 MCM - 4 Str	2.59	2.72	2.69	
IPB-NA600-3S	3	600 MCM - 4 Str	3.87	2.72	2.69	
IPB-NA600-4S	4	600 MCM - 4 Str	5.15	2.72	2.69	
IPB-NA600-5S	5	600 MCM - 4 Str	6.43	2.72	2.69	3/8
IPB-NA600-6S	6	600 MCM - 4 Str	7.71	2.72	2.69	
IPB-NA600-8S	8	600 MCM - 4 Str	10.28	2.72	2.69	
IPB-NA600-10S	10	600 MCM - 4 Str	12.84	2.72	2.69	
IPB-NA600-12S	12	600 MCM - 4 Str	15.40	2.72	2.69	
IPB-NA600-14S	14	600 MCM - 4 Str	18.00	2.72	2.69	



SINGLE SIDED ENTRY

FEATURES AND BENEFITS

- Pre-insulated at factory.
  - Clear PVC allows visual inspection of conductor properly inserted at installation and final inspection approval.
  - Eliminates the need for time consuming taping.
- Pre-Filled with oxide inhibitor and plugged ports.
  - Prevents oxidation, moisture and contaminants from contact surfaces.
  - Reduces installation time.
- Wide conductor range.
  - Available in two through fourteen conductor configurations in five conductor sizes.
  - Reduced inventory.
- Compact, versatile design.
  - Dual rated (AL9CU) for copper and aluminum applications.
  - Use as a splice, tap or splice reducer.
  - Low total cost of installation.

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ALUMINUM CLEAR PRE-INSULATED POWER BAR • TYPE IPB

For any combination of copper and aluminum wire.

486B LISTED
AL9CU

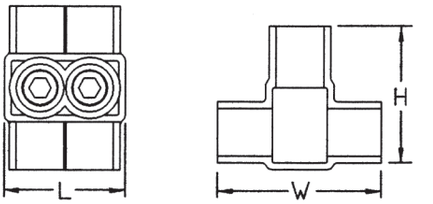
Pre-insulated aluminum connectors for splice, reducer and tap applications. Dual rated for both aluminum and copper conductors at 600V and 90°C. For use in areas such as troughs, gutters, panels, ducts and wireways. Only one conductor per set screw, and only one supply conductor per connector permitted.

DUAL ENTRY

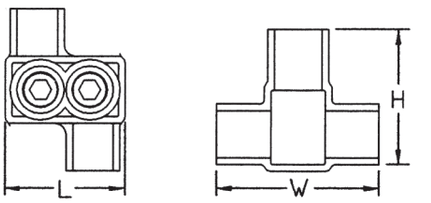
Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPB-NA4-2D	2	4 Str - 14 Sol	1.03	1.53	1.19	
IPB-NA4-3D	3	4 Str - 14 Sol	1.39	1.53	1.19	
IPB-NA4-4D	4	4 Str - 14 Sol	1.90	1.53	1.19	
IPB-NA4-5D	5	4 Str - 14 Sol	2.26	1.53	1.19	
IPB-NA4-6D	6	4 Str - 14 Sol	2.70	1.53	1.19	1/8
IPB-NA4-8D	8	4 Str. 14 Sol	3.58	1.53	1.19	
IPB-NA4-10D	10	4 Str. 14 Sol	4.46	1.53	1.19	
IPB-NA4-12D	12	4 Str. 14 Sol	5.34	1.53	1.19	
IPB-NA4-14D	14	4 Str. 14 Sol	6.21	1.53	1.19	
IPB-NA2/0-2D	2	2/0 - 14 Sol	1.39	1.56	1.31	
IPB-NA2/0-3D	3	2/0 - 14 Sol	2.06	1.56	1.31	
IPB-NA2/0-4D	4	2/0 - 14 Sol	2.73	1.56	1.31	
IPB-NA2/0-5D	5	2/0 - 14 Sol	3.40	1.56	1.31	
IPB-NA2/0-6D	6	2/0 - 14 Sol	4.07	1.56	1.31	3/16
IPB-NA2/0-8D	8	2/0 - 14 Sol	5.42	1.56	1.31	
IPB-NA2/0-10D	10	2/0 - 14 Sol	6.77	1.56	1.31	
IPB-NA2/0-12D	12	2/0 - 14 Sol	8.11	1.56	1.31	
IPB-NA2/0-14D	14	2/0 - 14 Sol	9.46	1.56	1.31	
IPB-NA250-2D	2	250 MCM - 10 Sol	1.90	2.63	2.07	
IPB-NA250-3D	3	250 MCM - 10 Sol	2.84	2.63	2.07	
IPB-NA250-4D	4	250 MCM - 10 Sol	3.78	2.63	2.07	
IPB-NA250-5D	5	250 MCM - 10 Sol	4.71	2.63	2.07	
IPB-NA250-6D	6	250 MCM - 10 Sol	5.65	2.63	2.07	5/16
IPB-NA250-8D	8	250 MCM - 10 Sol	7.53	2.63	2.07	
IPB-NA250-10D	10	250 MCM - 10 Sol	9.41	2.63	2.07	
IPB-NA250-12D	12	250 MCM - 10 Sol	11.29	2.63	2.07	
IPB-NA250-14D	14	250 MCM - 10 Sol	13.16	2.63	2.07	
IPB-NA350-2D	2	350 MCM - 10 Sol	2.09	3.00	2.44	
IPB-NA350-3D	3	350 MCM - 10 Sol	3.00	3.00	2.44	
IPB-NA350-4D	4	350 MCM - 10 Sol	3.91	3.00	2.44	
IPB-NA350-5D	5	350 MCM - 10 Sol	4.82	3.00	2.44	
IPB-NA350-6D	6	350 MCM - 10 Sol	5.73	3.00	2.44	5/16
IPB-NA350-8D	8	350 MCM - 10 Sol	7.55	3.00	2.44	
IPB-NA350-10D	10	350 MCM - 10 Sol	10.06	3.00	2.44	
IPB-NA350-12D	12	350 MCM - 10 Sol	12.06	3.00	2.44	
IPB-NA350-14D	14	350 MCM - 10 sol	13.06	3.00	2.44	
IPB-NA600-2D	2	600 MCM - 4 Str	2.59	3.00	2.69	
IPB-NA600-3D	3	600 MCM - 4 Str	3.87	3.00	2.69	
IPB-NA600-4D	4	600 MCM - 4 Str	5.15	3.00	2.69	
IPB-NA600-5D	5	600 MCM - 4 Str	6.43	3.00	2.69	3/8
IPB-NA600-6D	6	600 MCM - 4 Str	7.71	3.00	2.69	
IPB-NA600-8D	8	600 MCM - 4 Str	10.28	3.00	2.69	
IPB-NA600-10D	10	600 MCM - 4 Str	12.84	3.00	2.69	
IPB-NA600-12D	12	600 MCM - 4 Str	15.40	3.00	2.69	
IPB-NA600-14D	14	600 MCM - 4 Str	18.00	3.00	2.69	

ALTERNATE ENTRY

Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPB-NA4-2A	2	4 Str - 14 Sol	1.03	1.53	1.19	1/8
IPB-NA2/0-2A	2	2/0 Str - 14 Sol	1.39	1.56	1.31	3/16
IPB-N250-2A	2	250 MCM - 10 Sol	1.90	2.63	2.07	5/16
IPB-NA350-2A	2	350 MCM - 10 Sol	2.09	3.00	2.44	5/16
IPB-NA600-2A	2	600 MCM - 4 Str	2.59	3.00	2.69	3/8



DUAL SIDED ENTRY



ALTERNATE SIDED ENTRY

FEATURES AND BENEFITS

- Pre-insulated at factory.
  - Clear PVC allows visual inspection of conductor properly inserted at installation and final inspection approval.
  - Eliminates the need for time consuming taping.
- Pre-Filled with oxide inhibitor and plugged ports.
  - Prevents oxidation, moisture and contaminants from contact surfaces.
  - Reduces installation time.
- Wide conductor range.
  - Available in two through fourteen conductor configurations in five conductor sizes.
  - Reduced inventory.
- Compact, versatile design.
  - Dual rated (AL9CU) for copper and aluminum applications.
  - Use as a splice, tap or splice reducer.
  - Low total cost of installation.

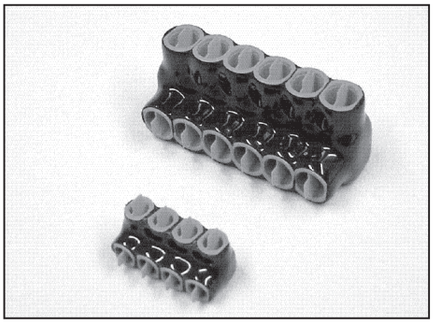
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

ALUMINUM BLACK PRE-INSULATED POWER BAR • TYPE IPBB

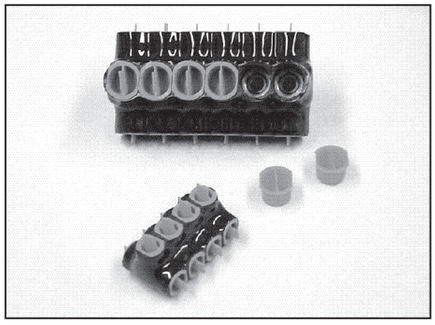
For any combination of copper and aluminum wire.

486B LISTED
AL9CU

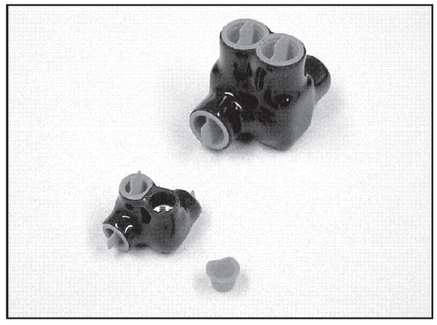
Pre-insulated aluminum connectors for splice, reducer and tap applications. Dual rated for both aluminum and copper conductors, simultaneous accommodations at 600V and 90°C. For use in areas such as troughs, gutters, panels, ducts and wireways. Only one conductor per set screw, and only one supply conductor per connector permitted.



SINGLE SIDED ENTRY TYPE



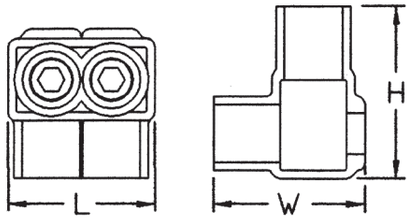
DUAL SIDED ENTRY TYPE



ALTERNATE SIDED ENTRY TYPE

SINGLE SIDED ENTRY TYPE

Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPBB-NA4-2S	2	4 Str - 14 Sol	1.03	1.19	1.19	
IPBB-NA4-3S	3	4 Str - 14 Sol	1.39	1.19	1.19	
IPBB-NA4-4S	4	4 Str - 14 Sol	1.90	1.19	1.19	
IPBB-NA4-5S	5	4 Str - 14 Sol	2.26	1.19	1.19	
IPBB-NA4-6S	6	4 Str - 14 Sol	2.70	1.19	1.19	1/8
IPBB-NA4-8S	8	4 Str. - 14 Sol	3.58	1.19	1.19	
IPBB-NA2/0-2S	2	2/0 Str. - 14 Sol	1.39	1.25	1.31	
IPBB-NA2/0-3S	3	2/0 Str. - 14 Sol	2.06	1.25	1.31	
IPBB-NA2/0-4S	4	2/0 Str. - 14 Sol	2.73	1.25	1.31	
IPBB-NA2/0-5S	5	2/0 Str. - 14 Sol	3.40	1.25	1.31	
IPBB-NA2/0-6S	6	2/0 Str. - 14 Sol	4.07	1.25	1.31	3/16
IPBB-NA2/0-8S	8	2/0 Str. - 14 Sol	5.42	1.25	1.31	
IPBB-NA2/0-10S	10	2/0 Str. - 14 Sol	6.77	1.25	1.31	
IPBB-NA2/0-12S	12	2/0 Str. - 14 Sol	8.11	1.25	1.31	
IPBB-NA2/0-14S	14	2/0 Str. - 14 Sol	9.46	1.25	1.31	
IPBB-NA250-2S	2	250 MCM - 10 Sol	1.90	2.00	2.07	
IPBB-NA250-3S	3	250 MCM - 10 Sol	2.84	2.00	2.07	
IPBB-NA250-4S	4	250 MCM - 10 Sol	3.78	2.00	2.07	
IPBB-NA250-5S	5	250 MCM - 10 Sol	4.71	2.00	2.07	
IPBB-NA250-6S	6	250 MCM - 10 Sol	5.65	2.00	2.07	5/16
IPBB-NA250-8S	8	250 MCM - 10 Sol	7.53	2.00	2.07	
IPBB-NA250-10S	10	250 MCM - 10 Sol	9.41	2.00	2.07	
IPBB-NA250-12S	12	250 MCM - 10 Sol	11.29	2.00	2.07	
IPBB-NA250-14S	14	250 MCM - 10 Sol	13.16	2.00	2.07	
IPBB-NA350-2S	2	350 MCM - 10 Sol	2.09	2.47	2.44	
IPBB-NA350-3S	3	350 MCM - 10 Sol	3.00	2.47	2.44	
IPBB-NA350-4S	4	350 MCM - 10 Sol	3.91	2.47	2.44	
IPBB-NA350-5S	5	350 MCM - 10 Sol	4.82	2.47	2.44	
IPBB-NA350-6S	6	350 MCM - 10 Sol	5.73	2.47	2.44	5/16
IPBB-NA350-8S	8	350 MCM - 10 Sol	7.55	2.47	2.44	
IPBB-NA350-10S	10	350 MCM - 10 Sol	10.06	2.47	2.44	
IPBB-NA350-12S	12	350 MCM - 10 Sol	12.06	2.47	2.44	
IPBB-NA350-14S	14	350 MCM - 10 sol	13.06	2.47	2.44	
IPBB-NA600-2S	2	600 MCM - 4 Str	2.59	2.72	2.69	
IPBB-NA600-3S	3	600 MCM - 4 Str	3.87	2.72	2.69	
IPBB-NA600-4S	4	600 MCM - 4 Str	5.15	2.72	2.69	
IPBB-NA600-5S	5	600 MCM - 4 Str	6.43	2.72	2.69	3/8
IPBB-NA600-6S	6	600 MCM - 4 Str	7.71	2.72	2.69	
IPBB-NA600-8S	8	600 MCM - 4 Str	10.28	2.72	2.69	
IPBB-NA600-10S	10	600 MCM - 4 Str	12.84	2.72	2.69	
IPBB-NA600-12S	12	600 MCM - 4 Str	15.40	2.72	2.69	
IPBB-NA600-14S	14	600 MCM - 4 Str	18.00	2.72	2.69	



SINGLE SIDED ENTRY

FEATURES AND BENEFITS

- ♦ Pre-insulated at factory.
  - Eliminates the need for time consuming taping.
- ♦ Pre-Filled with oxide inhibitor and plugged ports.
  - Prevents oxidation, moisture and contaminants from contact surfaces.
  - Reduces installation time.
- ♦ Wide conductor range.
  - Available in two through fourteen conductor configurations in five conductor ranges.
  - Reduced inventory.
- ♦ Compact, versatile design.
  - Dual rated (AL9CU) for copper and aluminum applications.
  - Use as a splicer, tap or splice reducer.
  - Low total cost of installation.

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

ALUMINUM BLACK PRE-INSULATED POWER BAR • TYPE IPBB

For any combination of copper and aluminum wire.

486B LISTED
AL9CU

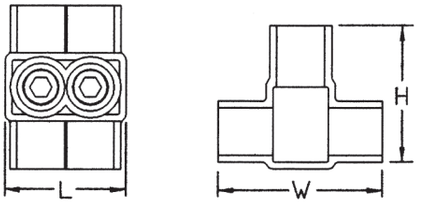
Pre-insulated aluminum connectors for splice, reducer and tap applications. Dual rated for both aluminum and copper conductors at 600V and 90°C. For use in areas such as troughs, gutters, panels, ducts and wireways. Only one conductor per set screw, and only one supply conductor per connector permitted.

DUAL SIDED ENTRY TYPE

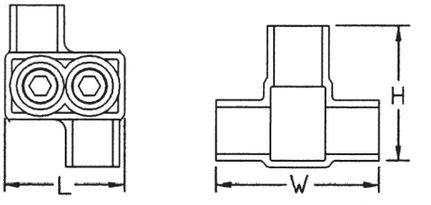
Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPBB-NA4-2D	2	4 Str - 14 Sol	1.03	1.53	1.19	
IPBB-NA4-3D	3	4 Str - 14 Sol	1.39	1.53	1.19	
IPBB-NA4-4D	4	4 Str - 14 Sol	1.90	1.53	1.19	
IPBB-NA4-5D	5	4 Str - 14 Sol	2.26	1.53	1.19	
IPBB-NA4-6D	6	4 Str - 14 Sol	2.70	1.53	1.19	1/8
IPBB-NA4-8D	8	4 Str. - 14 Sol	3.58	1.53	1.19	
IPBB-NA4-10D	10	4 Str. - 14 Sol	4.46	1.53	1.19	
IPBB-NA4-12D	12	4 Str. - 14 Sol	5.34	1.53	1.19	
IPBB-NA4-14D	14	4 Str. - 14 Sol	6.21	1.53	1.19	
IPBB-NA2/0-2D	2	2/0 Str. - 14 Sol	1.39	1.56	1.31	
IPBB-NA2/0-3D	3	2/0 Str. - 14 Sol	2.06	1.56	1.31	
IPBB-NA2/0-4D	4	2/0 Str. - 14 Sol	2.73	1.56	1.31	
IPBB-NA2/0-5D	5	2/0 Str. - 14 Sol	3.40	1.56	1.31	
IPBB-NA2/0-6D	6	2/0 Str. - 14 Sol	4.07	1.56	1.31	3/16
IPBB-NA2/0-8D	8	2/0 Str. - 14 Sol	5.42	1.56	1.31	
IPBB-NA2/0-10D	10	2/0 Str. - 14 Sol	6.77	1.56	1.31	
IPBB-NA2/0-12D	12	2/0 Str. - 14 Sol	8.11	1.56	1.31	
IPBB-NA2/0-14D	14	2/0 Str. - 14 Sol	9.46	1.56	1.31	
IPBB-NA250-2D	2	250 MCM - 10 Sol	1.90	2.63	2.07	
IPBB-NA250-3D	3	250 MCM - 10 Sol	2.84	2.63	2.07	
IPBB-NA250-4D	4	250 MCM - 10 Sol	3.78	2.63	2.07	
IPBB-NA250-5D	5	250 MCM - 10 Sol	4.71	2.63	2.07	
IPBB-NA250-6D	6	250 MCM - 10 Sol	5.65	2.63	2.07	5/16
IPBB-NA250-8D	8	250 MCM - 10 Sol	7.53	2.63	2.07	
IPBB-NA250-10D	10	250 MCM - 10 Sol	9.41	2.63	2.07	
IPBB-NA250-12D	12	250 MCM - 10 Sol	11.29	2.63	2.07	
IPBB-NA250-14D	14	250 MCM - 10 Sol	13.16	2.63	2.07	
IPBB-NA350-2D	2	350 MCM - 10 Sol	2.09	3.00	2.44	
IPBB-NA350-3D	3	350 MCM - 10 Sol	3.00	3.00	2.44	
IPBB-NA350-4D	4	350 MCM - 10 Sol	3.91	3.00	2.44	
IPBB-NA350-5D	5	350 MCM - 10 Sol	4.82	3.00	2.44	
IPBB-NA350-6D	6	350 MCM - 10 Sol	5.73	3.00	2.44	5/16
IPBB-NA350-8D	8	350 MCM - 10 Sol	7.55	3.00	2.44	
IPBB-NA350-10D	10	350 MCM - 10 Sol	10.06	3.00	2.44	
IPBB-NA350-12D	12	350 MCM - 10 Sol	12.06	3.00	2.44	
IPBB-NA350-14D	14	350 MCM - 10 sol	13.06	3.00	2.44	
IPBB-NA600-2D	2	600 MCM - 4 Str	2.59	3.00	2.69	
IPBB-NA600-3D	3	600 MCM - 4 Str	3.87	3.00	2.69	
IPBB-NA600-4D	4	600 MCM - 4 Str	5.15	3.00	2.69	
IPBB-NA600-5D	5	600 MCM - 4 Str	6.43	3.00	2.69	3/8
IPBB-NA600-6D	6	600 MCM - 4 Str	7.71	3.00	2.69	
IPBB-NA600-8D	8	600 MCM - 4 Str	10.28	3.00	2.69	
IPBB-NA600-10D	10	600 MCM - 4 Str	12.84	3.00	2.69	
IPBB-NA600-12D	12	600 MCM - 4 Str	15.40	3.00	2.69	
IPBB-NA600-14D	14	600 MCM - 4 Str	18.00	3.00	2.69	

ALTERNATE SIDED ENTRY TYPE

Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPBB-NA4-2A	2	4 Str - 14 Sol	1.03	1.53	1.19	1/8
IPBB-NA2/0-2A	2	2/0 Str - 14 Sol	1.39	1.56	1.31	3/16
IPBB-NA250-2A	2	250 MCM - 10 Sol	1.90	2.63	2.07	5/16
IPBB-NA350-2A	2	350 MCM - 10 Sol	2.09	3.00	2.44	5/16
IPBB-NA600-2A	2	600 MCM - 4 Str	2.59	3.00	2.69	3/8



DUAL SIDED ENTRY



ALTERNATE SIDED ENTRY

FEATURES AND BENEFITS

- Pre-insulated at factory.
  - Eliminates the need for time consuming taping.
- Pre-Filled with oxide inhibitor and plugged ports.
  - Prevents oxidation, moisture and contaminants from contact surfaces.
  - Reduces installation time.
- Wide conductor range.
  - Available in two through fourteen conductor configurations in five conductor ranges.
  - Reduced inventory.
- Compact, versatile design.
  - Dual rated (AL9CU) for copper and aluminum applications.
  - Use as a splicer, tap or splice reducer.
  - Low total cost of installation.

PENNUNION
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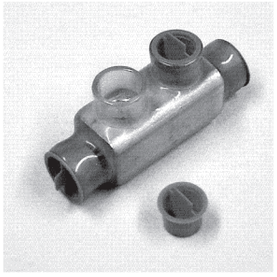
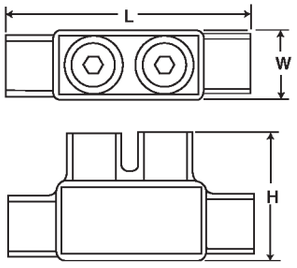
ALUMINUM CLEAR PRE-INSULATED INLINE SPLICER REDUCER • TYPE IISR

For any combination of copper and aluminum





Catalog Number	Conductor Range	Approximate Dimensions Inches		
		L	W	H
IISR-2	2 Str.-14 Sol.	2.38	0.62	1.15
IISR-1/0	1/0 Str.-14 Sol.	2.91	0.78	1.31
IISR-250	250 MCM-10 Sol.	4.01	1.06	2.03
IISR-350	350 MCM-10 Sol.	4.63	1.21	2.28
IISR-500	500 MCM-6 Str.	5.25	1.50	2.56

486B LISTED
AL9CU

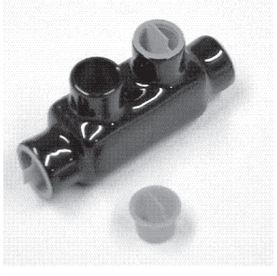
Connectors are made of high strength aluminum alloy. Removable plugs provide easy access for installation. For use with one wire per set screw.

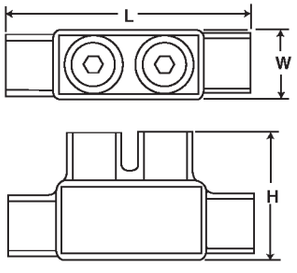
FEATURES AND BENEFITS

- Pre-insulated at factory.
  - Eliminates the need for time consuming taping.
- Pre-Filled with oxide inhibitor and plugged ports.
  - Prevents oxidation, moisture and contaminants from contact surfaces.
  - Reduces installation time.
- Wide conductor range.
  - Available in five conductor ranges.
  - Reduced inventory.
- Compact, versatile design.
  - Dual rated (AL9CU) for copper and aluminum applications.
  - Use as a splice or splicer reducer.
  - Low total cost of installation.

ALUMINUM BLACK PRE-INSULATED INLINE SPLICER REDUCER • TYPE IISRB

For any combination of copper and aluminum





Catalog Number	Conductor Range	Approximate Dimensions Inches		
		L	W	H
IISRB-2	2 Str.-14 Sol.	2.38	0.62	1.15
IISRB-1/0	1/0 Str.-14 Sol.	2.91	0.78	1.31
IISRB-250	250 MCM-10 Sol.	4.01	1.06	2.03
IISRB-350	350 MCM-10 Sol.	4.63	1.21	2.28
IISRB-500	500 MCM-6 Str.	5.25	1.50	2.56

486B LISTED
AL9CU

Connectors are made of high strength aluminum alloy. Removable plugs provide easy access for installation. For use with one wire per set screw.

FEATURES AND BENEFITS

- Pre-insulated at factory.
  - Eliminates the need for time consuming taping.
- Pre-Filled with oxide inhibitor and plugged ports.
  - Prevents oxidation, moisture and contaminants from contact surfaces.
  - Reduces installation time.
- Wide conductor range.
  - Available in five conductor ranges.
  - Reduced inventory.
- Compact, versatile design.
  - Dual rated (AL9CU) for copper and aluminum applications.
  - Use as a splice or splicer reducer.
  - Low total cost of installation.

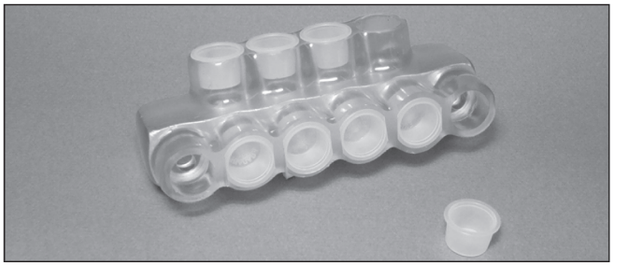
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

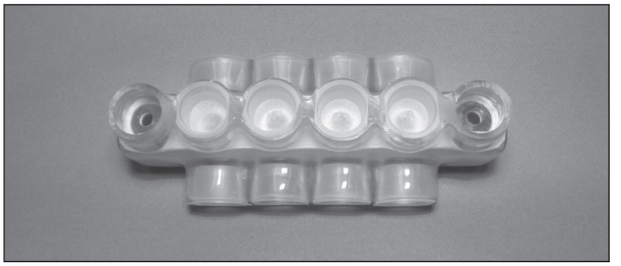
ALUMINUM CLEAR PRE-INSULATED POWER BAR • TYPE IPBM

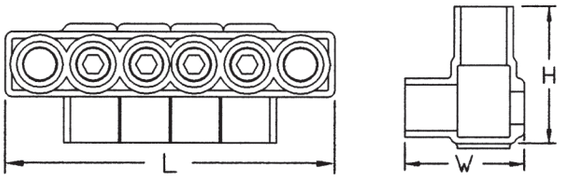
For any combination of copper and aluminum wire.

486B LISTED
AL9CU

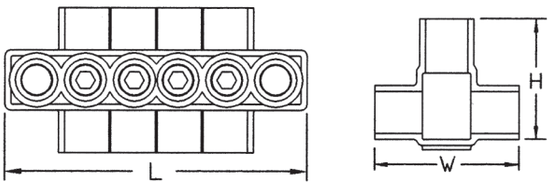
Pre-insulated mount version has the same features as the existing IPB pre-insulated connectors with the additional ability to be mounted. Each IPBM connector has two isolated mounting holes, one at each end of the connector.







SINGLE SIDED ENTRY MOUNTING TYPE



DUAL SIDED ENTRY MOUNTING TYPE

SINGLE ENTRY MOUNTING

Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPBM-NA2/0-4S	4	2/0 - 14 Sol	2.73	1.25	1.31	
IPBM-NA2/0-6S	6	2/0 - 14 Sol	4.07	1.25	1.31	
IPBM-NA2/0-8S	8	2/0 - 14 Sol	5.42	1.25	1.31	3/16
IPBM-NA2/0-10S	10	2/0 - 14 Sol	6.77	1.25	1.31	
IPBM-NA2/0-12S	12	2/0 - 14 Sol	8.11	1.25	1.31	
IPBM-NA250-4S	4	250 MCM - 10 Sol	3.78	2.00	2.07	
IPBM-NA250-6S	6	250 MCM - 10 Sol	5.65	2.00	2.07	
IPBM-NA250-8S	8	250 MCM - 10 Sol	7.53	2.00	2.07	5/16
IPBM-NA250-10S	10	250 MCM - 10 Sol	9.41	2.00	2.07	
IPBM-NA250-12S	12	250 MCM - 10 Sol	11.29	2.00	2.07	

Note: Mounting holes will accept up to and including 5/16" mounting hardware for all sizes.

DUAL ENTRY MOUNTING

Catalog Number	Number of Conductors	Conductor Range	Approximate Dimensions Inches			
			L	W	H	Hex Key
IPBM-NA2/0-4D	4	2/0 - 14 Sol	2.73	1.56	1.31	
IPBM-NA2/0-6D	6	2/0 - 14 Sol	4.07	1.56	1.31	
IPBM-NA2/0-8D	8	2/0 - 14 Sol	5.42	1.56	1.31	3/16
IPBM-NA2/0-10D	10	2/0 - 14 Sol	6.77	1.56	1.31	
IPBM-NA2/0-12D	12	2/0 - 14 Sol	8.11	1.56	1.31	
IPBM-NA250-4D	4	250 MCM - 10 Sol	3.78	2.63	2.07	
IPBM-NA250-6D	6	250 MCM - 10 Sol	5.65	2.63	2.07	
IPBM-NA250-8D	8	250 MCM - 10 Sol	7.53	2.63	2.07	5/16
IPBM-NA250-10D	10	250 MCM - 10 Sol	9.41	2.63	2.07	
IPBM-NA250-12D	12	250 MCM - 10 Sol	11.29	2.63	2.07	
IPBM-NA350-4D	4	350 MCM - 10 Sol	3.91	3.00	2.44	
IPBM-NA350-6D	6	350 MCM - 10 Sol	5.73	3.00	2.44	
IPBM-NA350-8D	8	350 MCM - 10 Sol	7.55	3.00	2.44	5/16
IPBM-NA350-10D	10	350 MCM - 10 Sol	10.06	3.00	2.44	
IPBM-NA350-12D	12	350 MCM - 10 Sol	12.06	3.00	2.44	
IPBM-NA600-4D	4	600 MCM - 4 Str	7.71	3.00	2.69	
IPBM-NA600-6D	6	600 MCM - 4 Str	10.28	3.00	2.69	
IPBM-NA600-8D	8	600 MCM - 4 Str	12.84	3.00	2.69	3/8
IPBM-NA600-10D	10	600 MCM - 4 Str	15.40	3.00	2.69	
IPBM-NA600-12D	12	600 MCM - 4 Str	18.00	3.00	2.69	

Note: Mounting holes will accept up to and including 5/16" mounting hardware for all sizes.

FEATURES AND BENEFITS

- Direct Mounting.
  - Maintains all of the quality features and benefits of the IPB pre-insulated connectors with direct mounting ability.
- Mounting Holes.
  - Two isolated mounting holes, one at each end of connector.
  - Special PVC collared insert to isolate mounting hardware from aluminum body contact.
  - Accommodates up to and including standard 5/16″ diameter mounting hardware.
- Versatile.
  - Direct mounting in the installers' location.
  - Eliminates the need for time consuming taping during installation.
  - Simply drill holes in structure and mount connector.

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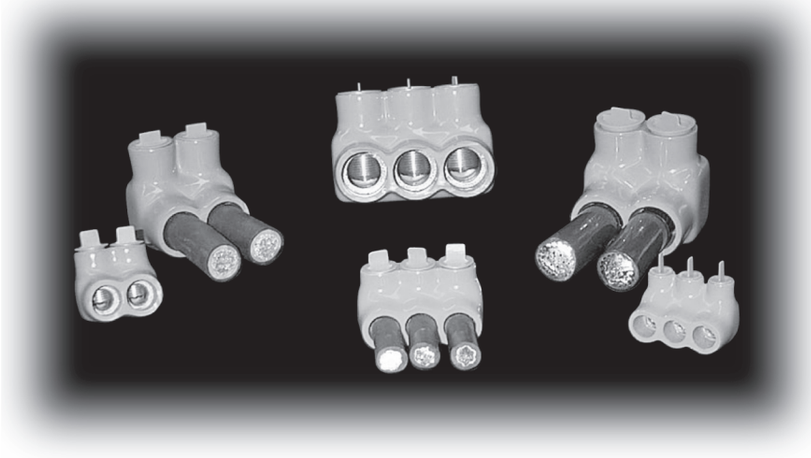
IMLC™



For use with copper cables …

Insulated mechanical connectors for use with copper cables can be used in dry locations where there is a need to join two or three copper wires together. The IMLC™ connectors are ideal for use in cabletrays, raceways, wireways, ducts and troughs. The IMLC™ connector series is suitable for demanding motor applications by providing a fast, simple and economical way to install, test or replace a motor. The multiple port insulated copper alloy bars mechanically connect incoming copper power leads to the winding leads of the motor in the motor junction box.

Catalog Number	CONDUCTOR RANGE			Tightening Torque In-lbs.	Internal Socket Size Across Flats (Inches)	Strip Length (Inches)
	AWG-CU	DLO-CU-Cable	Hypalon®			
IMLC-4-2S IMLC-4-3S	18 SOL. - 4 STR.	14 (19/27) - 6 (61/24)	18 AWG - 6 AWG	45	5/32	9/16
IMLC-1/0-2S IMLC-1/0-3S	8 SOL. - 1/0 STR.	8 (37/24) - 2 (150/24)	8 AWG - 1 AWG	150	1/4	5/8
IMLC-350-2S IMLC-350-3S	4 SOL. - 350 MCM	2 (150/24) - 4/0 (550/24)	4 AWG - 4/0 AWG	375	3/8	1 1/8
IMLC-500-2S IMLC-500-3S	4 SOL. - 500 MCM	2 (150/24) - 313.1 (775/24)	4 AWG - 4/0 AWG	375	3/8	1 1/4

✧ MORE ECONOMICAL ✧ MORE CONVENIENT TO USE ✧ ✧ SAVES TIME ✧ LOWERS INSTALLATION COST ✧

- **COPPER** - Reusable mechanical connector
- **UL & cUL LISTED** - For use only on copper Solid, Stranded, Hypalon® & DLO type cables
- **INSULATED** - High dielectric strength plastisol provides protection against brush contact
- **WIDE CONDUCTOR RANGE** - 18 AWG through 500 MCM
- **VOLTAGE** - 600 V Maximum, Building Wire: 1000 V Maximum, Signs & Fixtures - Insulation Temperature 90ºC
- **HIGHLY VISIBLE** - Bright colors
- **COMPACT** - Factory insulated, one piece, captive set screws, no loose parts
- **PLASTIC PLUGS** - To protect against contamination
- **TORQUE WRENCH & STANDARD HEX SIZES** - Promotes ease of installation to required torques

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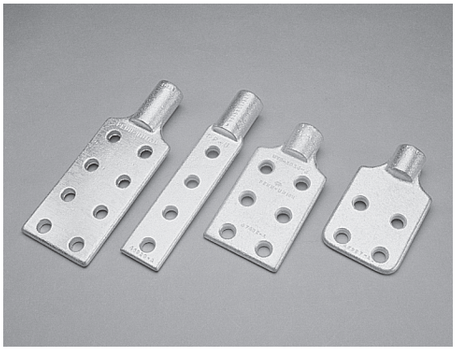
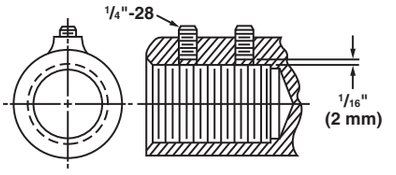
BRONZE UNDERGROUND TRANSFORMER TERMINALS • TYPE UTS



Can be supplied with studs bonded to terminal. Add suffix "-S" to catalog number.

Example: UTS-0513-2-S.

Type UTS is cast of high copper content alloy and electrotin plated. For use with aluminum or copper compression or bolted type lugs.



Stud locking set screws may be ordered by adding suffix "-SS" to catalog numbers (1 stud locking set screw provided on all sizes except where "A" dimension is 1-14, which has 2 stud locking set screws.)

Example without studs: UTS-0513-4L-SS.
Example with studs: UTS-0513-4L-S-SS.

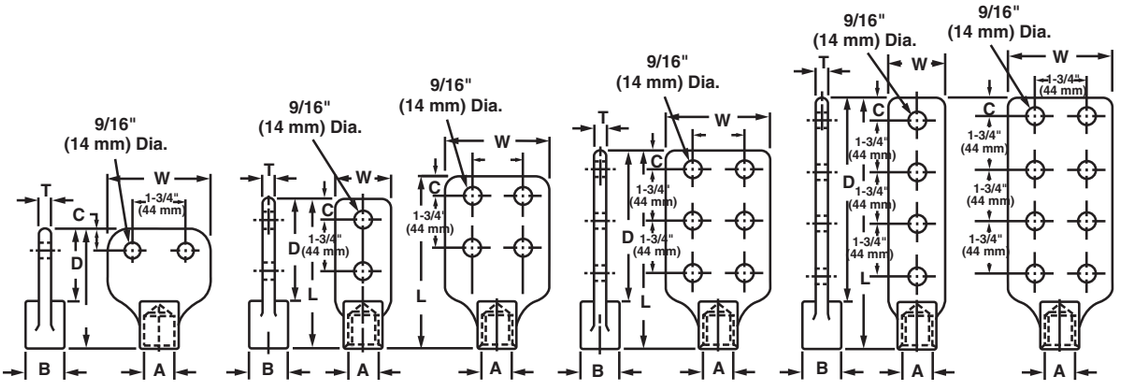


FIG. 1 FIG. 2 FIG. 3 FIG. 4 FIG. 5 FIG. 6

Catalog Number	Fig. No.	Approximate Dimensions												
		A	B		C		D		L		T		W	
		in	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
UTS-0316-2	1	3/8-16	7/8	22	5/8	16	2 3/8	60	4	102	1/4	6.35	3 1/2	89
UTS-0316-2L	2				3/4	19	3 1/2	89	5 1/16	129	5/16	7.94	1 3/8	35
UTS-0316-4	3				5/8	16	4 1/8	105	5 3/4	146	1/4	6.35	3 1/2	89
UTS-0316-4L	5				3/4	19	6 13/16	173	8 3/8	213	5/16	7.94	1 3/8	35
UTS-0513-2	1	1/2-13	7/8	22	5/8	16	2 3/8	60	4	102	1/4	6.35	3 1/2	89
UTS-0513-2L	2				3/4	19	3 1/2	89	5 1/16	129	5/16	7.94	1 3/8	35
UTS-0513-4	3				5/8	16	4 1/8	105	5 3/4	146	1/4	6.35	3 1/2	89
UTS-0513-4L	5				3/4	19	7	178	8 3/8	213	5/16	7.94	1 3/8	35
UTS-0611-2	1	5/8-11	7/8	22	5/8	16	2 3/8	60	4	102	1/4	6.35	3 1/2	89
UTS-0611-2L	2				3/4	19	3 1/2	89	5 1/16	129	5/16	7.94	1 3/8	35
UTS-0611-4	3				5/8	16	4 1/8	105	5 3/4	146	1/4	6.35	3 1/2	89
UTS-0611-4L	5				3/4	19	7	178	8 3/8	213	5/16	7.94	1 3/8	35
UTS-1014-2	1	1-14	1 3/8	35	5/8	16	2 3/8	60	4	102	3/8	9.53	3 1/2	89
UTS-1014-2L	2				3/4	19	3 9/16	90	5 1/8	130	11/32	8.73	1 15/16	49
UTS-1014-4	3				5/8	16	4 1/8	105	5 3/4	146	3/8	9.53	3 1/2	89
UTS-1014-4L	5		1 7/16	37	3/4	19	7 1/16	179	9 7/16	240	11/32	8.73	1 15/16	49
UTS-1014-6	4		1 3/8	35	5/8	16	5 1/8	130	6 11/16	170	3/8	9.53	3 1/2	89
UTS-1014-8	6				5/8	16	6 7/8	175	9 7/16	240	3/8	9.53	3 1/2	89

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OXIDE INHIBITOR COMPOUNDS • CUAL-AID® #11C, #12C AND CUAL-GEL®

CUAL-GEL®

Newest formulation designed for user & protective benefits. A high quality general use non-melting, non-petroleum base compound specifically designed to prevent oxidation and corrosion of aluminum, copper, tin and steel.The compound works over a wide temperature range, sealing out moisture and air, while having little or no effect on rubber and most other insulating materials. Easiest cleanup with soap and water.

CUAL-AID® #11C

A high quality general use compound consists of a non-melting, non-petroleum base material with suspended zinc particles. Compatible with insulating materials such as rubber or polyethylene. Recommended for aluminum to aluminum, aluminum to copper, conduit threads and bolted applications.

CUAL-AID® #12C

A high quality compression use compound consisting of a non-melting, non-petroleum base material with suspended zinc particles and abrasive grit. Not for use on threads or bolted applications. Compatible with rubber, polyethylene and other insulating materials. Recommended for aluminum to aluminum and aluminum to copper in all compression applications.

PROPERTIES OF CUAL-AID® & CUAL-GEL®

PROPERTY	VALUE DEFINITION	CUAL-AID® #11C (w/zinc particles)	CUAL-AID® #12C (w/zinc & grit)	CUAL-GEL®
PENETRATION (UNWORKED)	The value in accordance to ASTM D217 indicates the consistency of a compound. The higher the number, the softer the compound.	230-270	240-280	220-260
DROPPING POINT (MIN.)	The temperature at which the compound passes from the semi-solid to a liquid state under test conditions.	500°F (non-melting)	500°F (non-melting)	500°F (non-melting)
POUR POINT (MAX.)	The lowest temperature at which the compound will flow. Pour point is the lubricant's ability to perform in cold conditions.	-10°F	-10°F	-10°F
SERVICE TEMP. RANGE	After installation, the temperature at which compound is expected to perform and protect.	-50°C to 150°C	-50°C to 150°C	-50°C to 150°C

ORDERING INFORMATION

CATALOG NUMBERS AND CONTAINERS				
CUAL-GEL®	CUAL-AID®#11C	CUAL-AID®#12C	*CONTAINER	SIZE
	4OZNO11C		Squeeze Tube	4 oz.
CUALGEL4OZ			Squeeze Bottles	4 oz.
CUALGEL8OZ			Squeeze Bottles	8 oz.
**PTCUALGEL	PTNO11C	PTNO12C	Pint Can	pint
**QTCUALGEL	QTNO11C	QTNO12C	Quart Can	quart
**GALCUALGEL	GALNO11C	GALNO12C	Gallon Can	gallon
**5GALCUALGEL	5GALNO11C	5GALNO12C	5 Gallon Can	5 gallon
**55GALCUALGEL	55GALNO11C	55GALNO12C	55 Gallon Drum	55 gallon

* Squeeze tubes and bottles sold 12 per carton only. **Consult factory for price and availability

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OXIDE INHIBITOR COMPOUNDS • CUAL-AID® #11C, #12C AND CUAL-GEL®

FEATURES:

- Non-melting, non-petroleum based compounds.
- Will not wash off from exposure to the elements.
- Provides air-tight seal.
- Easy clean up. #11C, #12C with detergent. Cual-Gel with soap and water.
- Available in various packaging
- CUAL-GEL®

BENEFITS:

- Little or no effect on rubber and most other insulating materials.
- Remains in place as expected to perform and protect.
- Prevents oxidation for increased connection service.
- No special or extra costly cleaners.
- Convenience of right size package per job.
- Specifically designed to prevent oxidation and corrosion of aluminum, copper, tin and steel. Multiple uses with conductors, connectors, conduits and connections.

EASY TO APPLY:

Connectors: DO NOT wire-brush the grooves or contact surfaces of plated or grease-coated connectors. For unplated, ungreased connectors, wire brush contact surfaces until bright and clean. Immediately apply compound to the conductive surfaces. Install conductor and finish installation.

Cable: Apply compound and wire-brush into strands of aluminum cable.This removes oxide coating from the strands, and prevents it from reforming. Install conductor and finish installation.

Bar: Wire-brush compound across the surface of the bar to remove oxide coating and finish installation. DO NOT wire-brush plated surfaces, simply apply compound and finish installation.

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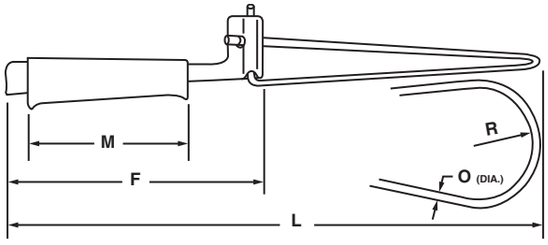
WEDGE DEAD END CLAMP • TYPE WDC

A service-drop, sliding type dead end clamp for use on solid and stranded aluminum or ACSR conductors.



RUS ACCEPTED

Catalog Number	Conductor Size		Approximate Dimensions					Approx. Shpg. Wt. per 100 pcs.
			F	L	M	O	R	
	Minimum	Maximum	in	in	in	in	in	
WDC-2S*	6 Stranded Al. 6 ACSR 6/1	1/0 Solid Al. 2 ACSR 6/1 or 7/1	$4\frac{1}{2}$	$10\frac{3}{4}$	3	$\frac{1}{8}$	1	21
WDC-10S	4 ACSR 6/1 or 7/1	1/0 ACSR 6/1	$6\frac{7}{8}$	$12\frac{7}{8}$	$3\frac{11}{16}$	$\frac{5}{32}$	1	44

*RUS accepted

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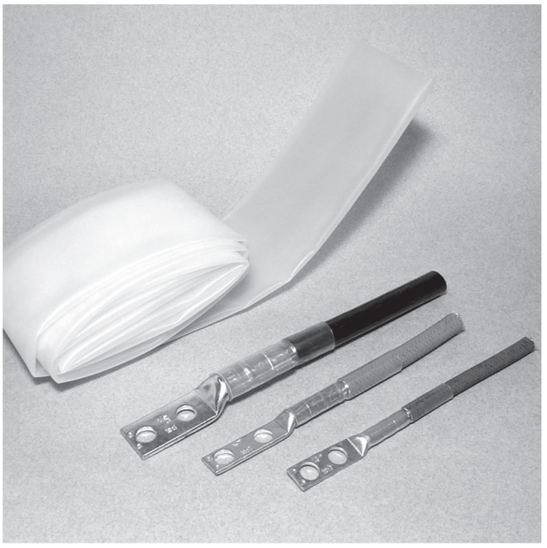
PENN-SHRINK CLEAR - TYPE PSC

Flexible, general purpose polyolefin tubing



Specifications/Approvals

Series	Military
PSC	SAE-AMS-DTL-23053/5, Class 2 VG 95343 Pt 5 Type 8 *Formerly MIL-I-23053/5.

Applications

Designed to provide superior mechanical (abrasion, cut-through, and strain relief), thermal, and fluid-resistance performance in demanding environments. Widely used to provide insulation and strain relief of wire terminations and connections. Used for jacketing wire bundles and light-duty harnesses where superior abrasion resistance is a plus.

Operating Temperature Range

-55°C to 135°C

Features/Benefits

- 2:1 shrink ratio.
- Superior abrasion and solvent resistance when compared with that of many flexible, general purpose polyolefin tubings.
- Excellent physical, chemical, and electrical properties that meet or exceed industrial and military standards for highly reliable, general purpose tubing.
- Flexible; conforms to irregular shapes.

Installation

Minimum shrink temperature: 95°C
Minimum full recovery temperature: 121°C

Production Dimensions (Inches)

Part Number	Size	Length (Inches)	Inside diameter		Wall thickness Recovered after heating**
			Minimum expanded as supplied	Maximum recovered after heating	
PSC18-6	1/8	6	.125	.062	.020
PSC18-48	1/8	48	.125	.062	.020
PSC14-6	1/4	6	.250	.125	.025
PSC14-48	1/4	48	.250	.125	.025
PSC38-6	3/8	6	.375	.187	.025
PSC38-48	3/8	48	.375	.187	.025
PSC12-6	1/2	6	.500	.250	.025
PSC12-48	1/2	48	.500	.250	.025
PSC34-6	3/4	6	.750	.375	.030
PSC34-48	3/4	48	.750	.375	.030
PSC100-6	1	6	1.00	.500	.035
PSC100-48	1	48	1.00	.500	.035
PSC112-6	1-1/2	6	1.500	.750	.040
PSC112-48	1-1/2	48	1.500	.750	.040
PSC200-6	2	6	2.000	1.00	.045
PSC200-48	2	48	2.000	1.00	.045

**Wall thickness will be less if tubing recovery is restricted during shrinkage.

Ordering Information

Size selection: Always order the largest size that will shrink snugly over the component to be covered.
Users should independently evaluate the suitability of the product for their application.

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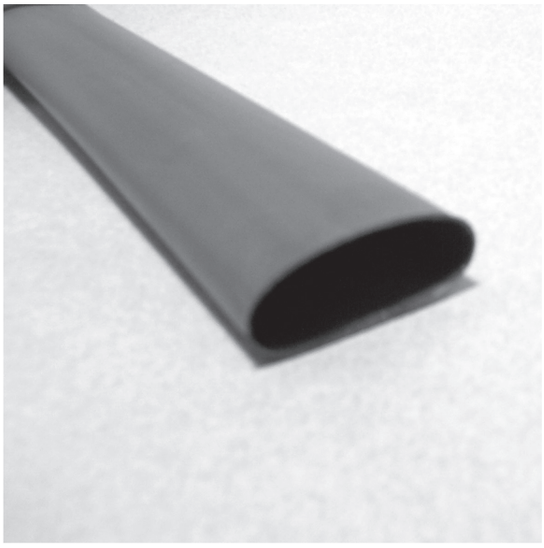
PENN-SHRINK BLACK THIN WALL - TYPE PSBT

Highly flame-retardant, very flexible, low-shrink-temperature polyolefin tubing



Applications

Cost-effective choice for many commercial and military applications. Electrically insulates and protects in-line components, disconnect terminals, and splices. Bundles wires for very flexible light-duty harnesses. Strain-relieves electrical wire connections for commercial applications.

Operating Temperature Range

-55°C to 135°C

Features/Benefits

- 2:1 shrink ratio.
- Low shrink temperature reduces installation time and the risk of damage to temperature-sensitive components.
- Very flexible; doesn't easily wrinkle when bent.
- Highly flame-retardant.
- Hot stamps extremely well.
- Higher temperature rating, better thermal stability, and higher resistance to physical abuse than noncrosslinked materials.
- Free of polybrominated biphenyis (PBBs) and polybrominated biphenyl oxides and ethers (PBBOs and PBBEs), which are classified as environmentally hazardous substances.
- Improved heat aging properties to meet the new requirements of UL 224 VW-1 TESTING.
- Improved fluid resistance to offer higher performance in fuels and oil exposure.
- Improved column strength to allow easier installation over components.
- Enhanced flame retardance to meet the requirements of UL 224 VW-1 testing in the newly revised UL test chamber.
- UL 224 VW-1/CSA OFT Tubing Specifications and Flammability Testing.

Installation

Minimum shrink temperature: 70°C
Minimum full recovery temperature: 90°C

Specifications/Approvals

Series	UL 224 VW-1	CSA VW-1	Military
PSBT		(OFT)	SAE-AMS-DTL-23053/5
	600 V, 125°C	600 V, 125°C	*Formerly MIL-I-23053/5.

Production Dimensions Inches

Part Number	Size	Length (Inches)	Inside diameter		Wall thickness Recovered after heating**
			Minimum expanded as supplied	Maximum recovered after heating	
PSBT14FR-6	1/4	6	.250	.125	.025
PSBT14FR-48	1/4	48	.250	.125	.025
PSBT12FR-6	1/2	6	.500	.250	.025
PSBT12FR-48	1/2	48	.500	.250	.025
PSBT34FR-6	3/4	6	.750	.375	.030
PSBT34FR-48	3/4	48	.750	.375	.030
PSBT100FR-6	1	6	1.000	.500	.035
PSBT100FR-48	1	48	1.000	.500	.035
PSBT112FR-6	1-1/2	6	1.500	.750	.040
PSBT112FR-48	1-1/2	48	1.500	.750	.040
PSBT200FR-6	2	6	2.000	1.00	.045
PSBT200FR-48	2	48	2.000	1.00	.045

**Wall thickness will be less if tubing recovery is restricted during shrinkage.

Ordering Information

Size selection: Always order the largest size that will shrink snugly over the component to be covered.
Users should independently evaluate the suitability of the product for their application.

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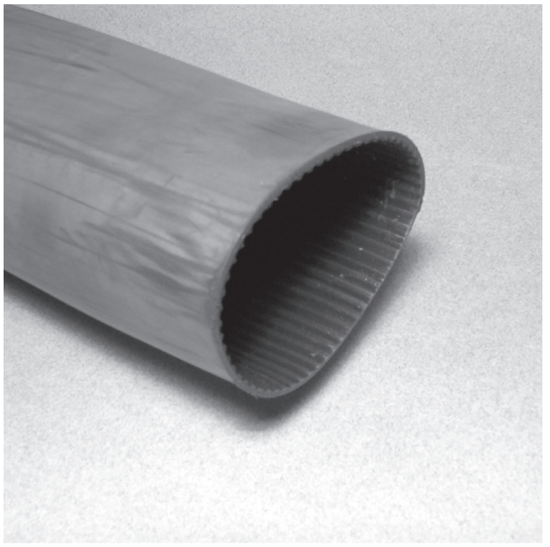
PENN-SHRINK HEAVY WALL WITH ADHESIVE - TYPE PSHA

Polyolefin heavy-wall heat shrinkable tubing - chemical and corrosion resistant, very high impact and abrasion resistance, rated for 600V applications



Specifications/Approvals

UL 486D
DIRECT BURIAL
1000 V, 75°C

Applications

For insulating and sealing low-voltage power cables and accessories. The electrical and physical properties of a cable oversheath material are combined with ruggedness and easy installation. The heavy-wall tubing is supplied with an interior meltable adhesive wall to seal onto the substrate. The adhesive exhibits excellent bonding and sealing characteristics to all materials commonly used in the various cable insulation and sheath constructions such as plastic, rubber, lead and aluminum.

Features/Benefits

PSHA is a heat-shrinkable heavy-wall tubing for insulating and sealing power cables and accessories. In PSHA tubing, the electrical and physical properties of a cable oversheath material are combined with ruggedness and easy installation.

On heating, PSHA tubing recovers to a smaller diameter, fitting tightly over a wide range of cable sizes and accessories because of its high shrink ratio. At the same time the tubing's inner adhesive wall gives a dependable moisture seal over most irregular shapes.

PSHA tubing's mechanical strength enables immediate back-filling of cable trenches after jointing. Widely used to insulate, protect and seal power cable joints, accessories and electrical connections.

PSHA can be installed over variously-shaped objects to make a tight, insulating or fluid-resistant cover. May be used for jacket repair on cables to 35kV.

- 3:1 shrink ratio.
- Chemical and corrosion resistance.
- Very high resistance to impact and abrasion.

Production Dimensions Inches

Part Number	Size	Length (Inches)	Inside diameter	
			Minimum expanded as supplied	Maximum recovered after heating
PSHA51FR-6	#8-#14	6	.51	.15
PSHA51FR-30	#8-#14	48	.51	.15
PSHA78FR-6	#2-#6	6	.78	.23
PSHA78FR-12	#2-#6	12	.78	.23
PSHA78FR-48	#2-#6	48	.78	.23
PSHA130FR-9	1 AWG-3/0 MCM	9	1.30	.31
PSHA130FR-12	1 AWG-3/0 MCM	12	1.30	.31
PSHA130FR-48	1 AWG-3/0 MCM	48	1.30	.31
PSHA169FR-9	2/0-350 MCM	9	1.69	.47
PSHA169FR-12	2/0-350 MCM	12	1.69	.47
PSHA169FR-48	2/0-350 MCM	48	1.69	.47
PSHA200FR-9	250-500 MCM	9	2.00	.62
PSHA200FR-12	250-500 MCM	12	2.00	.62
PSHA200FR-48	250-500 MCM	48	2.00	.62

Ordering Information

Size selection: Always order the largest size that will shrink snugly over the component to be covered.
Users should independently evaluate the suitability of the product for their application.

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PENN-SHRINK END CAPS - TYPE PSEC

Heat-shrinkable end caps

Applications

PSEC heat-shrinkable end caps are made from a thermally stabilized, modified polyolefin, which makes them highly resistant to moisture, fungus, and weathering. The end caps also have excellent electrical properties. End caps are coated with sealant for underwater or underground applications with a pressure differential up to 20 psi between the inside of the cable and the outside environment. End caps may be used over lead, steel, aluminum, copper, polyethylene, polyolefin, EPR, and PVC jacketing materials.

Operating Temperature Range

-40°C to 85°C

Features/Benefits

- Self-sealing for waterproofing.
- Electrical insulation to 1000 V.
- Abrasion-resistant
- Mechanical protection.
- Easy installation, requiring no special skills.
- Operating temperature range of –40° C to 85° C.
- Minimum shrink temperature of 121° C.
- One piece molded construction.

Installation

Minimum shrink temperature: 121°C

Specifications

Military
MIL-I-81765/1/A

Production Dimensions (Inches)

Part Number	Inner Diameter* As Supplied (min.)	Recovered (max.)	Part Length Recovered ±	Wall thickness (nom.) Recovered ±	Wire Range
PSEC-1	.33	.16	1.32	.08	#6 - #8
PSEC-2	.73	.30	2.18	.09	#4 - 3/0
PSEC-3	1.32	.59	3.54	.12	4/0 - 600
PSEC-4	2.11	.98	5.64	.13	600 - 1750
PSEC-5	2.81	1.25	5.91	.13	1250 - 2000
PSEC-6	3.88	1.77	6.40	.16	2000

*Adhesive lined is standard

Users should independently evaluate the suitability of the product for their application.

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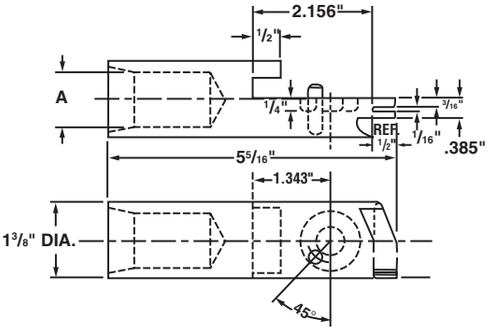
COPPER CLASP CONNECTORS • TYPE LLCS

Solder type LLCS

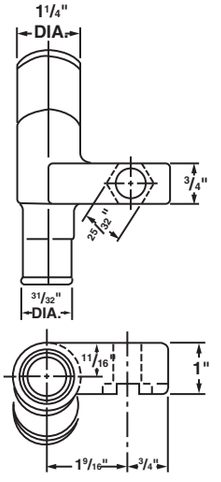


SOLDER TYPE LLCS

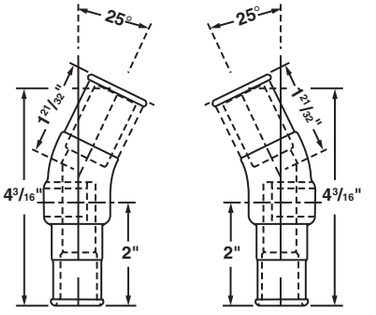
Catalog Number	Cable Hole Dia. A
LLCS-38072	15/16"
LLCS-38073	1"

Note: For silver plating on LLCS add -SV suffix to catalog number.

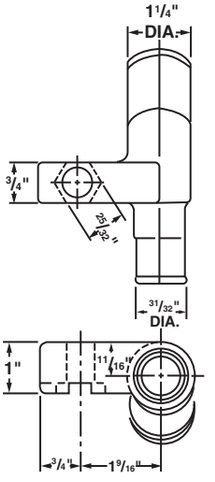
CAST COPPER REDUCERS • TYPE LLR



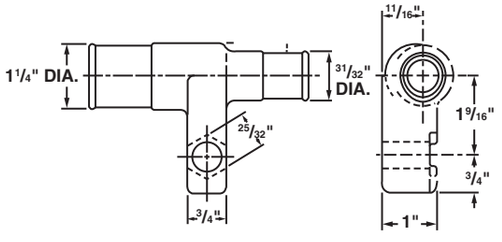
LLR-35569-LH 25
1100/24-775/24

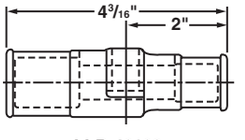


All connectors are electro-tin plated.



LLR-35570-RH 25
1100/24-775/24





LLR-46103
1100/24-775/24

For 1100/24-550/24 application
suffix catalog number with 550/24
For 1100/24 End use T & B Die 99
For 775/24 End use T & B Die 76
For 550/24 End use T & B Die 76

PENNUNION
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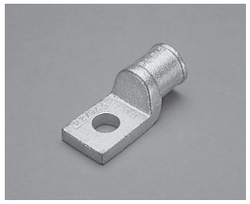
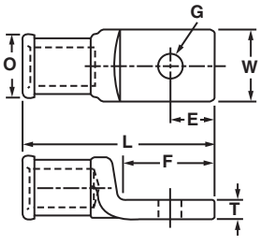
CAST COPPER LUGS – SIDE FORMED • TYPE LL

One hole





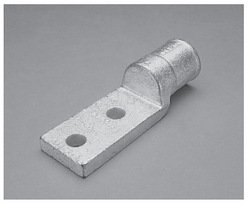
These heavy duty compression lugs are cast out of high conductivity copper. The entire lug is electro-tin plated.

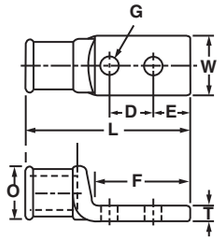
Catalog Number	Cable Size	Approximate Dimensions in Inches							T&B Die Size
		L	F	E	G Hole Size	O	W	T	
LL-49765-S-SF	150/24	1 7/8	13/16	3/8	9/32	21/32	5/8	3/16	50
LL-47244-S-SF	225/24	2 1/8	1	7/16	7/16	23/32	13/16	7/32	54
LL-41157-S-SF	275/24	2 1/8	1	7/16	7/16	23/32	13/16	7/32	54
LL-53178-S-SF	325/24	2 1/8	1	7/16	7/16	23/32	13/16	7/32	54
LL-45087-S-SF	375/24	2 1/2	1 1/4	9/16	7/16	25/32	1	1/4	60
LL-44593-S-SF	450/24	2 1/2	1 1/4	17/32	21/32	25/32	1	1/4	60
LL-41158-S-SF	450/24	2 1/2	1 1/4	17/32	7/16	25/32	1	1/4	60
LL-49332-S-SF	550/24	2 7/8	1 1/2	3/4	5/8	1 3/64	1 3/16	5/16	76
LL-44146-S-SF	550/24	2 7/8	1 1/2	3/4	13/32	1 3/64	1 3/16	5/16	76
LL-41159-S-SF	550/24	2 7/8	1 1/2	3/4	9/16	1 3/64	1 3/16	5/16	76
LL-42608-S-SF	650/24	2 7/8	1 1/2	3/4	9/16	1 3/64	1 3/16	5/16	76
LL-41160-S-SF	775/24	2 7/8	1 1/2	3/4	9/16	1 3/64	1 3/16	5/16	76
LL-40305-S-SF	775/24	3 1/16	1 1/2	3/4	13/32	1 3/64	1 3/16	5/16	76
LL-40744-S-SF	775/24	3 5/16	1 15/16	3/4	21/32	1 3/64	1 3/16	5/16	76
LL-42873-S-SF	925/24	3 3/8	1 1/2	3/4	9/16	1 5/32	1 3/16	11/32	87
LL-41149-S-SF	925/24	3 3/8	1 1/2	3/4	11/16	1 5/32	1 3/16	11/32	87
LL-47526-S-SF	1100/24	4	2	7/8	9/16	1 11/32	1 5/8	13/32	99
LL-44127-S-SF	1325/24	4	2	7/8	9/16	1 3/8	1 5/8	13/32	107
LL-44231-S-SF	1600/24	4 1/4	2 1/8	1	9/16	1 7/16	1 5/8	7/16	112
LL-47742-S-SF	1600/24	4 1/4	2 1/8	1	3/4	1 7/16	1 5/8	7/16	112
LL-47833-S-SF	1600/24	4 1/4	2 1/8	1	7/16	1 7/16	1 5/8	7/16	112
LL-40862-S-SF	1925/24	4 1/4	2 1/8	1	9/16	1 7/16	1 5/8	7/16	112
LL-50747-S-SF	2300/24	4 3/4	2 3/8	1 3/16	11/16	1 21/32	1 7/8	1/2	130

For blank pad, add suffix -U to catalog number.

CAST COPPER LUGS – SIDE FORMED • TYPE LL

Two hole





These heavy duty compression lugs are cast out of high conductivity copper. The entire lug is electro-tin plated.

Catalog Number	Cable Size	Approximate Dimensions in Inches								T&B Die Size
		L	F	D	E	G Hole Size	O	W	T	
LL-51797-D-SF	150/24	3 1/16	2	1	11/32	9/32	21/32	5/8	3/16	50
LL-49763-D-SF	225/24	3 1/8	2	1	1/2	7/16	23/32	13/16	7/32	54
LL-49764-D-SF	275/24	3 1/8	2	1	1/2	7/16	23/32	13/16	7/32	54
LL-46111-D-SF	450/24	4 1/4	3	1 3/4	5/8	9/16	25/32	1	1/4	60
LL-49238-D-SF	550/24	3 5/16	1 15/16	1	1/2	13/32	1 3/64	1 3/16	5/16	76
LL-41147-D-SF	550/24	4 3/8	3	1 3/4	5/8	9/16	1 3/64	1 3/16	5/16	76
LL-47272-D-SF	650/24	4 3/8	3	1 3/4	5/8	9/16	1 3/64	1 3/16	5/16	76
LL-50774-D-SF	775/24	2 7/8	1 1/2	13/16	5/16	11/32	1 3/64	1 3/16	5/16	76
LL-52076-D-SF	775/24	3 5/16	1 15/16	7/8	3/4	11/32	1 3/64	1 3/16	5/16	76
LL-40467-D-SF	775/24	3 5/16	1 15/16	1	1/2	13/32	1 3/64	1 3/16	5/16	76
LL-49761-D-SF	775/24	4 3/8	3	1 3/4	5/8	9/16	1 3/64	1 3/16	5/16	76
LL-40743-D-SF	925/24	4 3/8	2 1/2	1	7/16	13/32	1 5/32	1 3/16	11/32	87
LL-41152-D-SF	925/24	5 3/8	3 1/2	1	7/16	7/16	1 5/32	1 3/16	11/32	87
LL-47521-D-SF	925/24	5 3/8	3 1/2	1 3/4	5/8	9/16	1 5/32	1 3/16	11/32	87
LL-50963-D-SF	1100/24	5 1/2	3 1/2	1 3/4	5/8	9/16	1 3/8	1 5/8	13/32	107
LL-41151-D-SF	1325/24	5 1/2	3 1/2	1	1/2	7/16	1 3/8	1 5/8	13/32	107
LL-41148-D-SF	1325/24	5 1/2	3 1/2	1 3/4	5/8	9/16	1 3/8	1 5/8	13/32	107
LL-49758-D-SF	1600/24	5 5/8	3 1/2	1 3/4	5/8	9/16	1 7/16	1 5/8	7/16	112
LL-52943-D-SF	1925/24	4	2 1/16	1	7/16	7/16	1 7/16	2	5/16	112
LL-41150-D-SF	1925/24	4 1/4	2 1/8	1	7/16	13/32	1 7/16	1 5/8	7/16	112
LL-42683-D-SF	1925/24	5 5/8	3 1/2	1 3/4	5/8	9/16	1 7/16	1 5/8	7/16	112
LL-49532-D-SF	2000/25	5 5/8	3 1/2	1 3/4	5/8	9/16	1 7/16	1 5/8	7/16	112
LL-47522-D-SF	2300/24	5 7/8	3 1/2	1 3/4	5/8	9/16	1 21/32	1 7/8	1/2	130
LL-50651-D-SF	2750/24	6 5/8	3 1/2	1 3/4	5/8	9/16	1 29/32	2 1/8	9/16	150

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CAST COPPER LUGS – CENTER FORMED • TYPE LL

Two hole

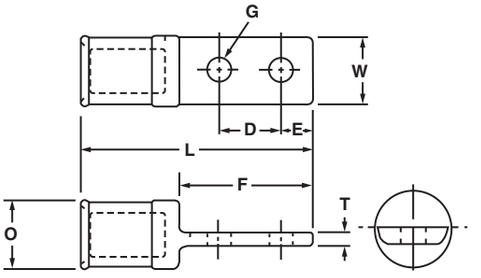


Fig. 1

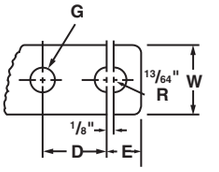


Fig. 2

Entire connector is electro-tin plated.

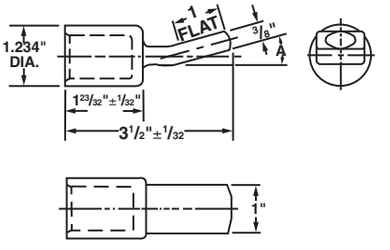
These heavy duty compression lugs are cast out of high conductivity copper and can be installed with existing crimping tools.

Catalog Number	Cable Size	Fig. No.	Approximate Dimensions in Inches								T&B Die Size
			L	F	D	E	G Hole Size	O	W	T	
LL-47248-D-CF	133/27	1	2 15/16	1 7/8	7/8	7/16	11/32	21/32	19/32	13/64	50
LL-47271-D-CF	150/24	1	2 15/16	1 7/8	7/8	7/16	11/32	21/32	19/32	13/64	50
LL-44385-D-CF	225/24	1	3	1 7/8	7/8	7/16	11/32	23/32	11/16	13/64	54
LL-50545-D-CF	275/24	1	3	1 7/8	7/8	7/16	11/32	23/32	11/16	13/64	54
LL-44075-D-CF	325/24	1	3	1 7/8	7/8	7/16	11/32	23/32	11/16	13/64	54
LL-41155-D-CF	375/24	1	3 1/8	2	7/8	7/16	11/32	25/32	25/32	13/64	60
LL-41156-D-CF	450/24	1	3 1/8	2	7/8	7/16	11/32	25/32	25/32	13/64	60
LL-36996-D-CF	550/24	1	3 3/16	1 7/8	7/8	7/16	11/32	1 3/64	15/16	13/64	76
LL-42596-D-CF	650/24	1	3 3/16	1 7/8	7/8	7/16	11/32	1 3/64	15/16	13/64	76
LL-41153-D-CF	775/24	1	3 3/16	1 7/8	7/8	7/16	11/32	1 3/64	15/16	13/64	76
LL-44131-D-CF	925/24	1	3 3/4	2 1/16	1	7/16	13/32	1 3/16	1 1/8	3/8	87
LL-44573-D-CF	1100/24	1	3 3/4	2 1/16	1	7/16	13/32	1 11/32	1 11/32	3/8	99
LL-44096-D-CF	1325/24	1	3 3/4	2 1/16	1	7/16	13/32	1 3/8	1 11/32	3/8	107
LL-43606-D-CF	1325/24	2	3 3/4	2 1/16	7/8	9/16	13/32	1 3/8	1 11/32	3/8	107
LL-50429-D-CF	1600/24	1	3 3/4	2 1/16	1	7/16	13/32	1 3/8	1 11/32	3/8	107
LL-41154-D-CF	1925/24	2	3 13/16	2 1/16	7/8	9/16	13/32	1 7/16	1 7/16	3/8	112
LL-42684-D-CF	2300/24	1	4 3/8	2 1/8	1	7/16	13/32	1 21/32	1 19/32	3/8	130

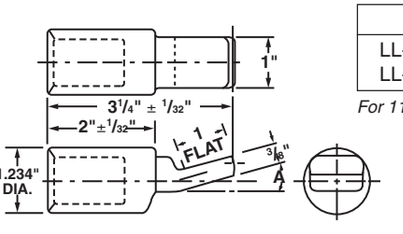
For blank pad add suffix -U to catalog number.

CAST COPPER LUGS – MISCELLANEOUS • TYPE LL

For 1100/24



LL-44879-U-15



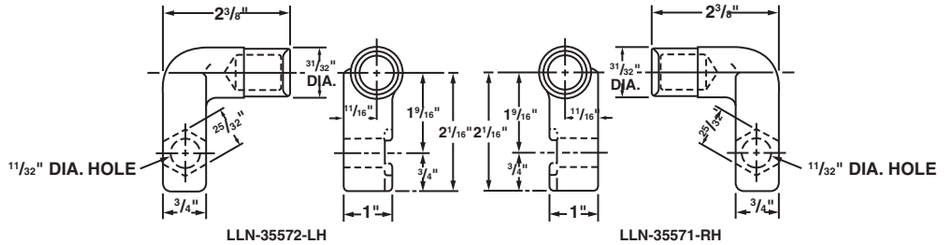
LL-39640-U-30

Cat. No.	A
LL-44879-U-15	15°
LL-39640-U-30	30°

For 1100/24 use T&B Die 99

CAST COPPER LUGS – 90° • TYPE LLN

775/24*



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You can always find the right terminal where you find a Point-Of-Profit® Merchandising Display

Convenient Packaging for the right size and style of connector in the quantity that best fits your needs.

Prominently displayed on our gravity window box dispenser or the small quantity polybag rack, Penn-Crimps® can be recognized quickly for faster counter transactions.

All types of merchandising packaging, bags, window boxes and bulk bins can be displayed on the Penn-Union 3 foot long gondola.

WINDOW BOXES

- Standard quantities of 100 or 500 per box.
- Compact box has a heavy-duty plastic window to resist puncturing and an eye-catching red, white and blue design for increased visibility.
- Displayed in an attractive, compact, two-tiered gravity feed dispenser display. Display holds up to 72 boxes of 12 different styles of Penn-Crimps solderless terminals. At 22" wide by 21½" tall, it easily fits on the counter or can hang from pegboard for easy display.

SMALL QUANTITY POLYBAGS

- Available in quantities of 50, 25 or 10 terminals per bag, perfect for small jobs.
- Heavy-duty, puncture-resistant polybag is sealed at the top to prevent tampering before purchase and has a resealable closure for repeated use afterwards.
- Eye-catching red, white and blue labels are easily recognized hanging on a lightweight, wire rack display, which at 14" tall by 16" wide, saves space either sitting on the countertop or hanging on pegboard.

PENN-UNION TAP KIT
FOR NON-METALLIC SHEATHED CABLE

NMTK 142-122

TAP KIT

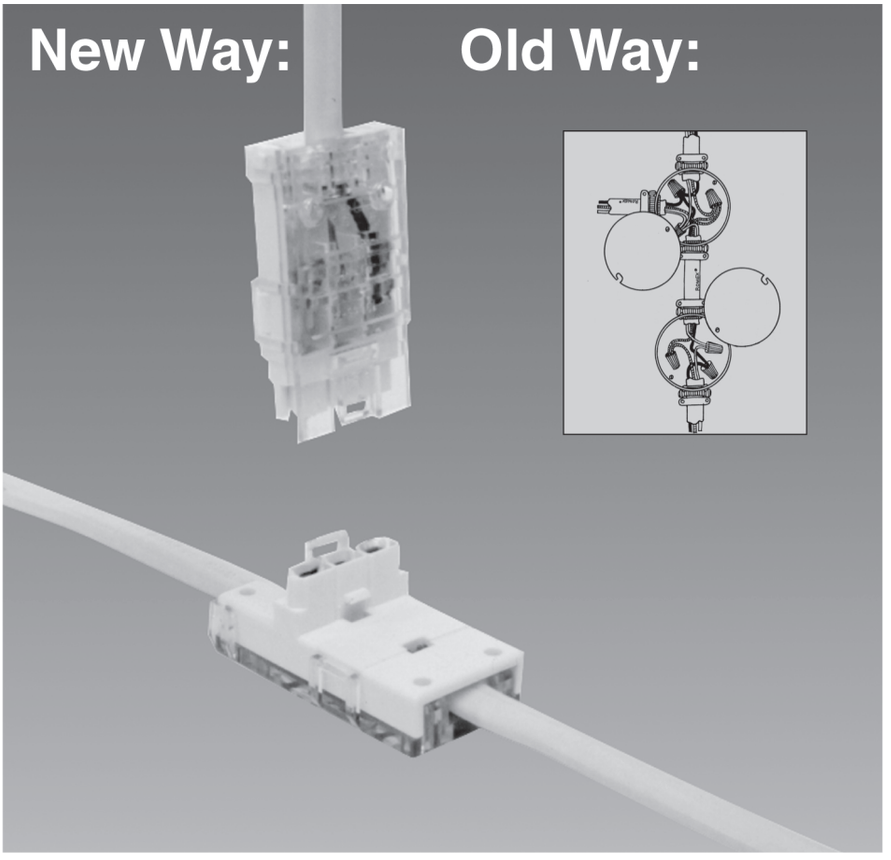
Faster, easier, better **way to tap non-metallic sheathed cable. No need to cut the wire and install junction boxes.**

NEC®

UL Listed Category QAAV; Self-contained interconnectors intended for installation in accordance with NATIONAL ELECTRICAL CODE®, NEC 1999, ARTICLE 336-21. "Devices of Insulating Material. Switch, outlet, and tap devices of insulating material shall be permitted to be used without boxes in exposed cable wiring and for rewiring in existing buildings where the cable is concealed and fished."*

Applications for "built-on-site" type homes/structures, basements, attics, garages, suspended ceilings, etc., anywhere accessible.

- **Concealment applications per NEC: Article 545, Manufactured Buildings Article 550, Manufactured Homes Article 551, Recreational Vehicles**
- **Saves time - installs in just a few minutes.**
- **Eliminates junction boxes.**
- **Taps 14/2 and 12/2 non-metallic sheathed cable with ground.**
- **300 Volt, 20 Amp Rating.**
- **Double insulation displacement contacts for maximum conductivity.**
- **Compact, rugged design.**
- **Conveniently packaged one kit per bag with instructions.**



PENN-UNION CORP.

Manufacturers of Quality Connectors Since 1928

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*Internet - http://www.penn-union.com * e-mail: info@penn-union.com*

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NOTES

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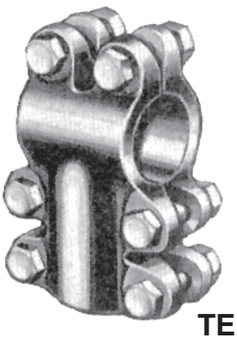
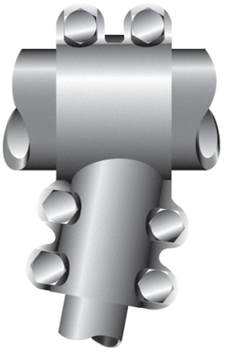
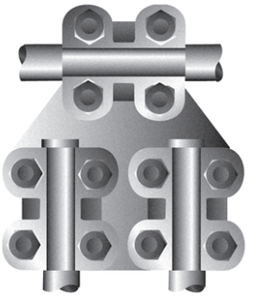
TYPE A
BUS BAR CLAMPS



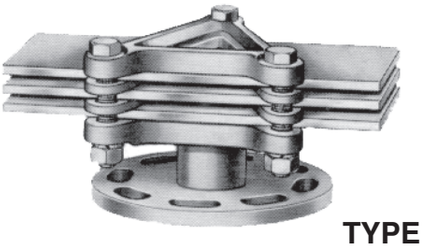
TYPE AB
TEE CONNECTOR



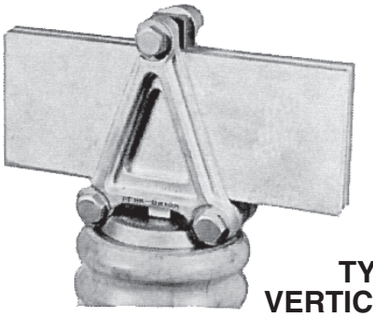
TYPE AB15
ANGLE TEE
CONNECTOR



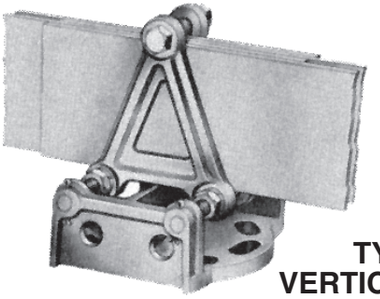
TYPE ABR2T
TEE CONNECTOR



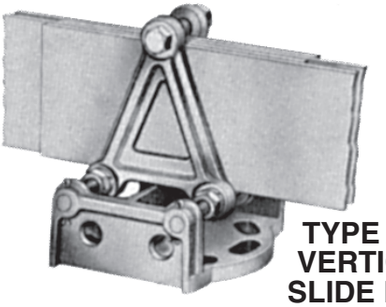
TYPE AHC
HORIZONTAL BUS
SUPPORT CLAMPS



TYPE AVB
VERTICAL BUS
SUPPORT CLAMPS



TYPE AVC
VERTICAL BUS
SUPPORT CLAMPS



TYPE AVS
VERTICAL
SLIDE BUS
SUPPORT CLAMPS

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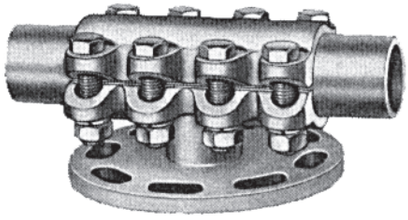
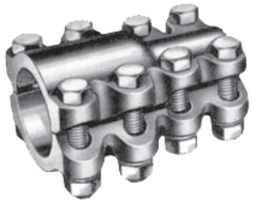
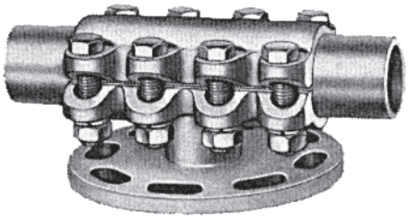


TYPE BAC
BUS SUPPORT COUPLER



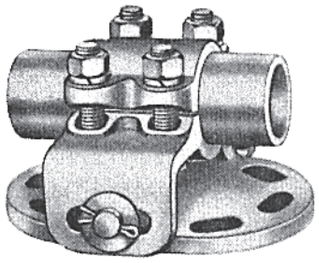
TYPE BD
COUPLERS AND REDUCERS



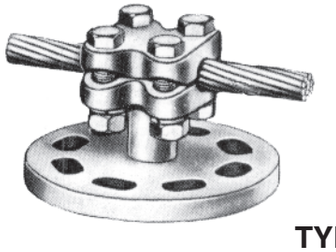
TYPE BSC
SLIDE BUS SUPPORT COUPLER

TYPE BSE
EXPANSION BUS
SUPPORT COUPLER

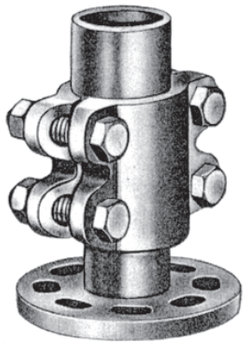
TYPE BSH
EXPANSION BUS
SUPPORT COUPLER



TYPE BSS
SLIDE BUS SUPPORT CLAMP



TYPE BST
BUS SUPPORT CLAMP



TYPE BSV
VERTICAL BUS
SUPPORT CLAMP

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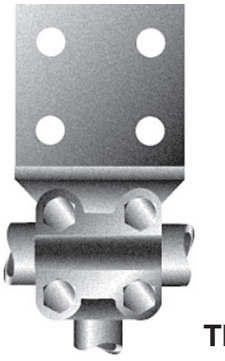
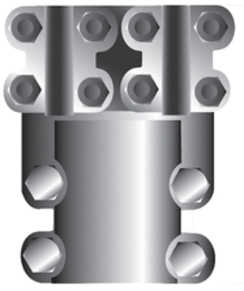
TYPE CBSS
SLIDE BUS SUPPORT

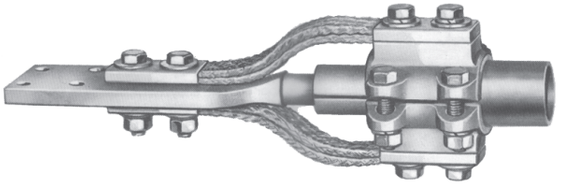


TYPE CTL
TEE CONNECTOR

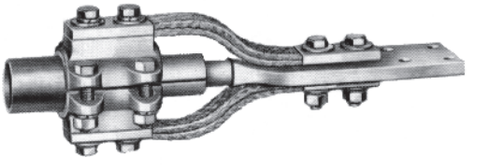


TYPE DTC
STUD CONNECTOR

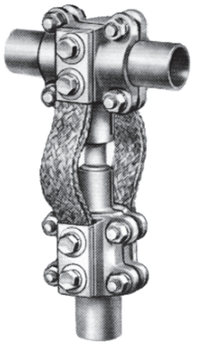
TYPE DTU
STUD CONNECTOR



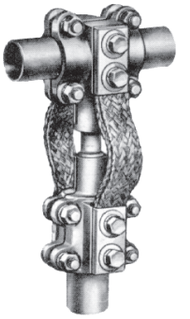
TYPE EXB
EXPANSION TERMINALS



TYPE EXBW
EXPANSION TERMINALS



TYPE EXP
EXPANSION TEE
CONNECTORS



TYPE EXPW
EXPANSION TEE CONNECTORS

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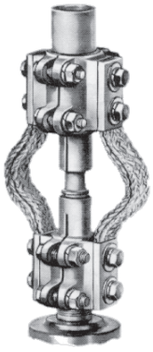
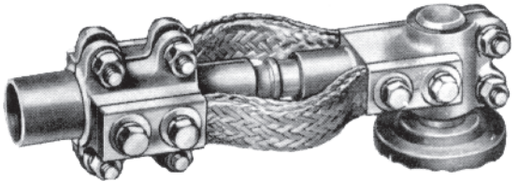
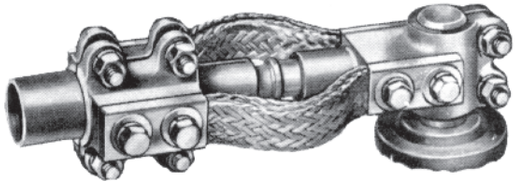
TYPE EXS
EXPANSION STUD
CONNECTORS



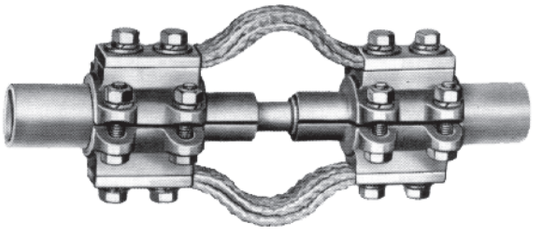
TYPE EXSW
EXPANSION STUD
CONNECTORS



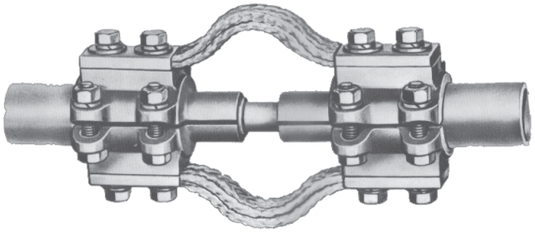
TYPE EXS90
90° EXPANSION STUD
CONNECTORS



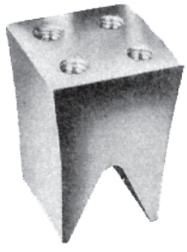
TYPE EXSW90
90° EXPANSION STUD
CONNECTORS



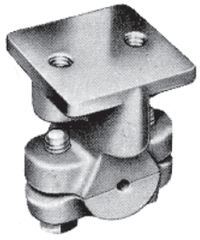
TYPE EXT
EXPANSION COUPLERS



TYPE EXTW
EXPANSION COUPLERS



TYPE GI
GROUNDING INSERT – VARIED CABLE



TYPE GIC
GROUNDING INSERT

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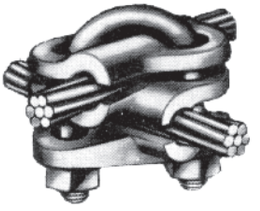
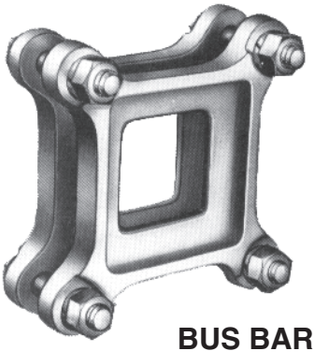
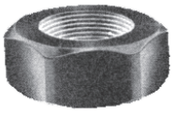


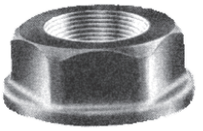
TYPE GXA
GROUND CLAMP CONNECTORS



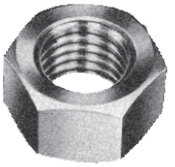
TYPE H
BUS BAR CLAMPS



HN



CNF



CNP

HARDWARE

HHB

FW
FLAT
WASHER

SPLIT
LOCK
WASHER

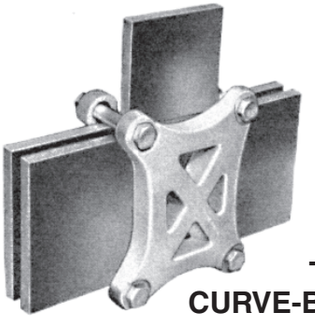
HARDWARE

CPW

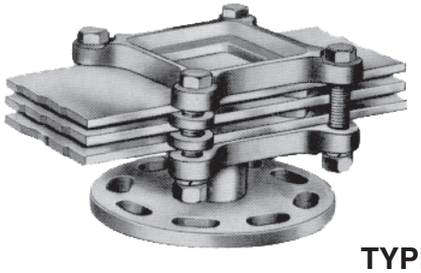
EXTERNAL
TOOTH

INTERNAL
TOOTH

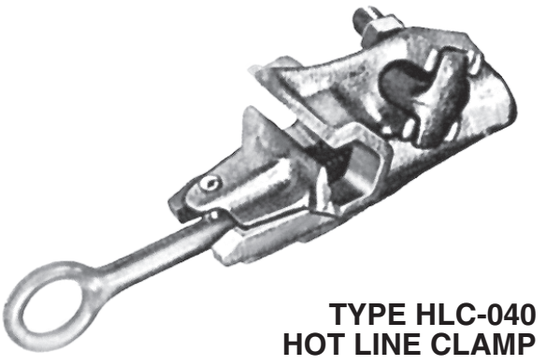
HARDWARE
SHAKEPROOF



TYPE HCB
CURVE-BACK BUS
BAR CLAMPS



TYPE HHC
HORIZONTAL BUS
SUPPORT CLAMPS



TYPE HLC-040
HOT LINE CLAMP

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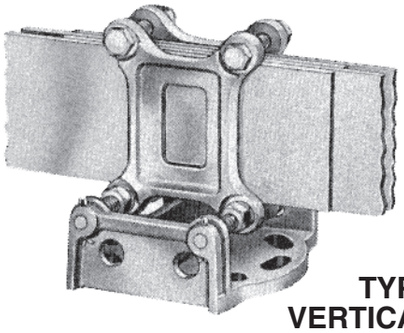
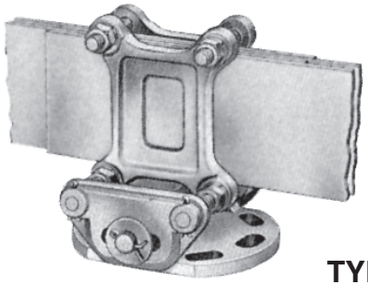
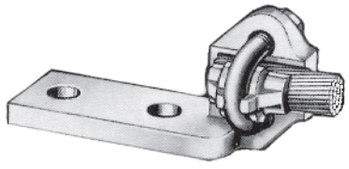
TYPE HP
BUS BAR SPACERS



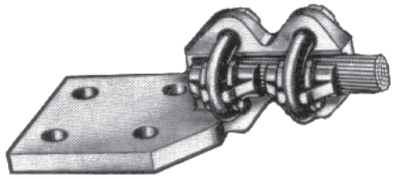
TYPE HVC
VERTICAL BUS
SUPPORT CLAMPS



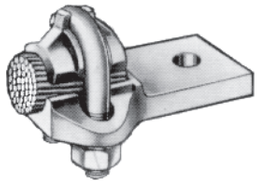
TYPE HVS
VERTICAL SLIDE BUS
SUPPORT CLAMPS



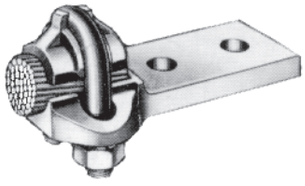
TYPE MF
MULTIFIT TERMINAL LUG



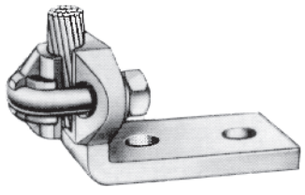
TYPE MFF
MULTIFIT TERMINAL LUG



TYPE ML-1
MULTIFIT TERMINAL LUGS



TYPE ML-2
MULTIFIT TERMINAL LUGS



TYPE ML90
MULTIFIT TERMINAL LUGS

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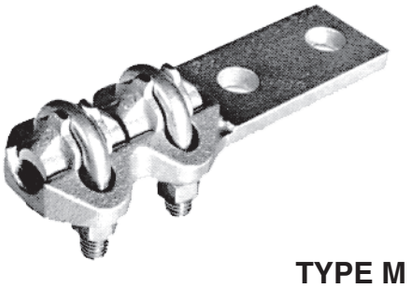
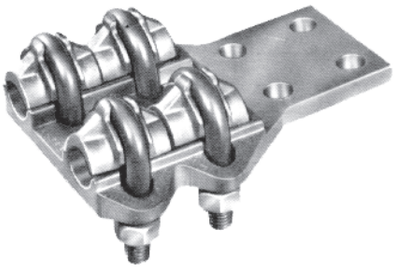
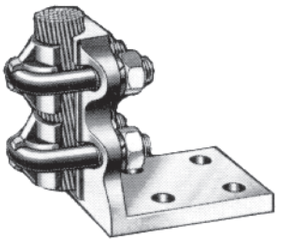


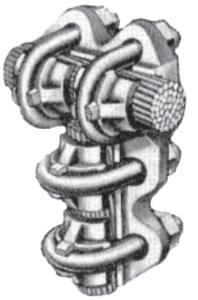
TYPE MML
MULTIFIT TERMINAL LUG



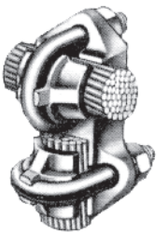
TYPE MML2
MULTIFIT TERMINAL LUG



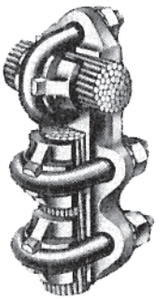
TYPE MML90
MULTIFIT TERMINAL LUG



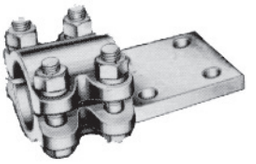
TYPE MMTT
MULTIFIT TEE CONNECTORS



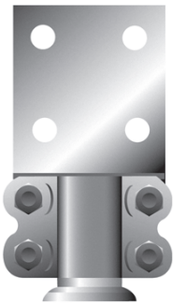
TYPE MT
MULTIFIT TEE CONNECTORS



TYPE MTT
MULTIFIT TEE CONNECTORS



TYPE RC
TERMINAL LUGS



TYPE RCS
STUD CONNECTOR

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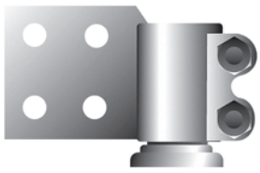
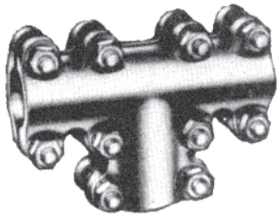
TYPE SCT
SERVICE POST CONNECTORS

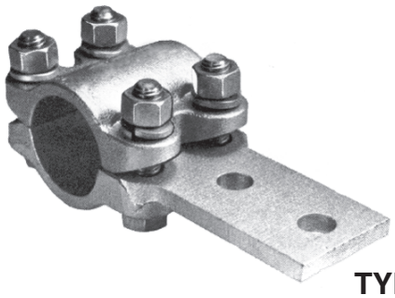


TYPE SLB-90
STUD CONNECTOR

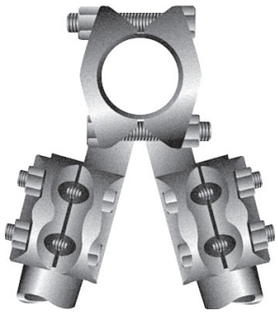
TYPE SLBH
STUD CONNECTOR



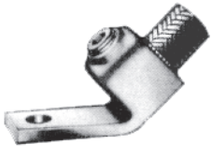
TYPE TC
TEE COUPLER



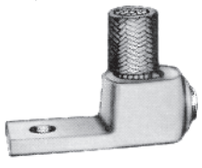
TYPE TVB
TEE CONNECTOR



TYPE VB30
VEE CONNECTOR



VI-TITE
45° SQUARE FLANGE



VI-TITE 90°
SQUARE FLANGE

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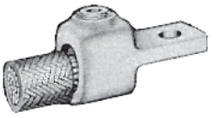
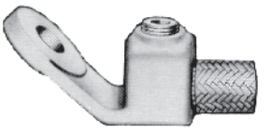
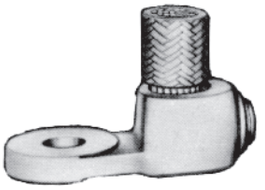


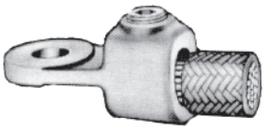
VI-TITE CENTER SQUARE FLANGE



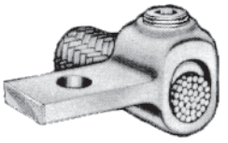
VI-TITE 45° ROUND FLANGE



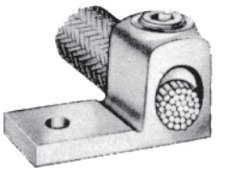
VI-TITE 90° ROUND FLANGE



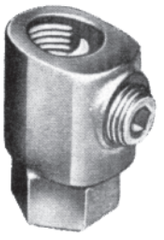
VI-TITE CENTER ROUND FLANGE



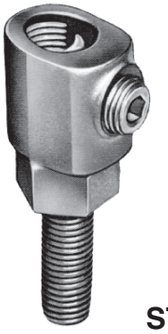
VI-TITE SIDE CENTER SQUARE FLANGE



VI-TITE SIDE OFFSET SQUARE FLANGE



TYPE VSF STUD CONNECTOR



TYPE VSM STUD CONNECTOR

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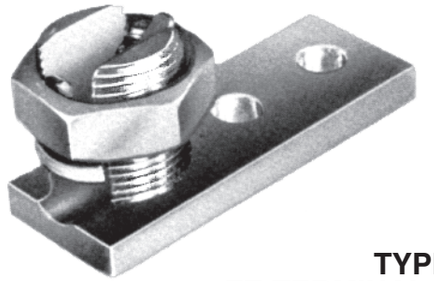
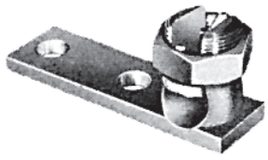
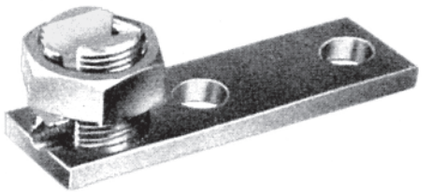


TYPE ZE
EZ-TERMINAL LUG



TYPE ZN
EZ-TERMINAL LUG



TYPE ZW
EZ-TERMINAL LUG

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TECHNICAL REFERENCE

This comparative listing is intended for use as a product substitution guide. It presents a comparison of products believed to be competitive but in no way guarantees that such products are identical or interchangeable.

Before making any substitution, the user should carefully review the installation requirements and critical fit data such as conductor size or range, stud size, pipe size, etc.

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COPPER PENN-CRIMPS® COMPARATIVE LISTING

PUC Catalog Number	Panduit Catalog Number	T & B Catalog Number	3M Catalog Number	Burndy Catalog Number
RING TERMINALS – NON-INSULATED*				
R2A-6S	P18-6R	A18-6	M18-6R/SX	T18-6
R2A-8	P18-8R	A18-8	–	T18-8
R2A-8S	–	–	M18-8R/LX	–
R2A-10	P18-10R	A18-10	M18-10R/LX	T18-10
R2A-14S	P18-14R	A18-14	–	T18-14
R2A-56S	P18-56R	A18-516	–	T18-516
R2A-38	P18-38R	A18-38	–	T18-38
R2B-6	–	B14-6	–	–
R2B-6S	P14-6R	–	M14-6R/SX	T14-6
R2B-8	P14-8R	B14-8	–	T14-8
R2B-8S	–	–	M14-8R/LX	–
R2B-10	P14-10R	B14-10	M14-10R/LX	T14-10
R2B-14S	P14-14R	B14-14	M14-14R/SX	T14-14
R2B-56S	P14-56R	B14-516	–	T14-516
R2B-38	P14-38R	B14-38	–	T14-38
R2C-6S	P10-6R	C10-6	M10-6RX	–
R2C-8S	P10-8R	C10-8	M10-8RX	–
R2C-10	P10-10R	C10-10	M10-10RX	T10-10
R2C-14S	P10-14R	C10-14	M10-14R/SX	T10-14
R2C-56S	P10-56R	C10-516	–	T10-516
R2C-38	P10-38R	C10-38	–	T10-38
R2E-8SS	P8-8R	–	–	–
R2E-10S	P8-10R	D8-10	M8-10R/SX	–
R2E-14S	P8-14R	D8-14	M8-14R/SX	–
R2E-56	P8-56R	D8-516	M8-516RX	–
R2E-38	P8-38R	D8-38	M8-38RX	–
R2E-50	P8-12R	D8-12	–	–
R2F-10S	P6-10R	E6-10	M6-10R/SX	–
R2F-14S	P6-14R	E6-14	M6-14R/SX	–
R2F-56	P6-56R	E6-516	M6-516RX	–
R2F-38	P6-38R	E6-38	M6-38RX	–
R2F-50	P6-12R	E6-12	–	–
R2G-10S	P4-10R	F4-10	–	–
R2G-14S	P4-14R	F4-14	M4-14RX	–
R2G-56	P4-56R	F4-516	M4-516RX	–
R2G-38	P4-38R	F4-38	M4-38RX	–
R2G-50	P4-12R	F4-12	–	–
INSULATED RING TERMINALS – VINYL*				
R4A-6S	PV18-6R	18RA-6	MV18-6R/SX	TP16-6
R4A-8	PV18-8R	18RA-8	–	TP16-8
R4A-8S	–	–	MV18-8R/LX	–
R4A-10	PV18-10R	18RA-10	MV18-10R/LX	TP16-10
R4A-14S	PV18-14R	18RA-14	MV18-14R/SX	TP16-14
R4A-56S	PV18-56R	18RA-516	–	–
R4A-38	PV18-38R	18RA-38	MV18-38RX	–
R4B-6	PV14-6R	14RB-6	–	–
R4B-6S	PV14-6RN	–	MV14-6R/SX	TP14-6
R4B-8	PV14-8R	14RB-8	–	TP14-8
R4B-8S	–	–	MV14-8R/LX	–
R4B-10	PV14-10R	14RB-10	MV14-10R/LX	TP14-10
R4B-14	PV14-14R	14RB-14	MV14-14R/SX	TP14-14
R4B-56	PV14-56R	14RB-516	–	–
R4B-56S	–	–	–	–
R4B-38	PV14-38R	14RB-38	MV14-38RX	–
R4C-6S	PV10-6R(X) +	10RC-6(X) +	MV10-6RX	TP10-6
R4C-8S	PV10-8R(X) +	10RC-8(X) +	MV10-8RX	–
R4C-10	PV10-10R(X) +	10RC-10(X) +	MV10-10RX	TP10-10
R4C-14S	PV10-14R(X) +	10RC-14(X) +	MV10-14R/SX	TP10-14
R4C-56S	PV10-56R(X) +	10RC-516(X) +	MV10-516R/SX	–
R4C-38	PV10-38R(X) +	10RC-38X(X) +	–	TP10-38
NYLON INSULATED*				
R6A-6S	PNF18-6R	RA18-6	MNG18-6R/SX	TN18-6
R6A-8	PNF18-8R	–	–	TN18-8
R6A-8S	–	RA18-8	MNG18-8R/LX	–
R6A-10	PNF18-10R	RA18-10	MNG18-10R/LX	TN18-10
R6A-14S	PNF18-14R	RA18-14	–	TN18-14
R6A-56S	PNF18-56R	RA18-516	–	TN18-516
R6A-38	PNF18-38R	RA18-38	–	TN18-38
R6B-6	PNF14-6R	RB14-6	–	–
R6B-6S	PNF14-6RN	–	MNG14-6R/SX	TN14-6
R6B-8	PNF14-8R	RB14-8	–	TN14-8
R6B-8S	–	–	MNG14-8R/LX	–
R6B-10	PNF14-10R	RB14-10	MNG14-10R/LX	TN14-10
R6B-14S	PNF14-14R	RB14-14	MNG14-14R/SX	TN14-14
R6B-56	–	–	–	–
R6B-56S	PNF14-56R	RB14-516	–	TN14-516
R6B-38	PNF14-38R	RB14-38	–	TN14-38
R6C-6	PNF10-6R	RC10-6(X) +	–	TN10-6
R6C-6S	–	–	MNG10-6RX	–
R6C-8	PNF10-8R	RC10-8(X) +	–	TN10-8
R6C-8S	–	–	MNG10-8RX	–
R6C-10	PNF10-10R	RC10-10(X) +	MNG10-10RX	TN10-10
R6C-14S	PNF10-14R	RC10-14(X) +	MNG10-14R/SX	TN10-14
R6C-56S	PNF10-56R	RC10-516(X) +	–	TN10-516
R6C-38	PNF10-38R	RC10-38(X) +	–	TN10-38

PUC Catalog Number	Panduit Catalog Number	T & B Catalog Number	3M Catalog Number	Burndy Catalog Number
SPADE TERMINALS – NON INSULATED*				
S2A-6	–	–	M18-6FX	–
S2A-8	–	–	M18-8FX	–
S2B-8	–	–	M14-8FX	–
S2B-10	–	–	M14-10FX	–
S2C-8	–	–	M10-8FX	–
S2C-10	–	–	M10-10FX	–
INSULATED SPADE TERMINALS – VINYL*				
S4A-6	–	–	MV18-6FX	–
S4A-8	–	–	MV18-8FX	–
S4A-10	–	–	MV18-10FX	–
S4B-6	–	–	MV14-6FX	–
S4B-8	–	–	MV14-8FX	–
S4B-10	–	–	MV14-10FX	–
S4C-6	–	–	MV10-6FX	–
S4C-8	–	–	MV10-8FX	–
S4C-10	–	–	MV10-10FX	–
INSULATED SPADE TERMINALS – NYLON*				
S6A-6	–	–	MNG18-6FX	–
S6A-8	–	–	MNG18-8FX	–
S6A-10	–	–	MNG18-10FX	–
S6B-6	–	–	MNG14-6FX	–
S6B-8	–	–	MNG14-8FX	–
S6B-10	–	–	MNG14-10FX	–
S6C-8	–	–	MNG10-8FX	–
S6C-10	–	–	MNG10-10FX	–
BLOCK SPADE TERMINALS – NON-INSULATED*				
BS2A-6	P18-6F	–	M18-6FBX	T18-6F
BS2A-6S	–	A18-6F	–	–
BS2A-8	P18-8F	A18-8F	M18-8FBX	T18-8F
BS2A-10	P18-10F	A18-10F	–	T18-10F
BS2B-6	P14-6F	B14-6F	–	T14-6F
BS2B-6S	–	–	M14-6FBX	–
BS2B-8	P14-8F	B14-8F	M14-8FBX	T14-8F
BS2B-10	P14-10F	B14-10F	M14-10FBX	T14-10F
BS2C-6	P10-6F	C10-6F	–	T10-6F
BS2C-8	P10-8F	C10-8F	M10-8FBX	T10-8F
BS2C-10	P10-10F	C10-10F	M10-10FBX	T10-10F
INSULATED BLOCK SPADE TERMINALS – VINYL*				
BS4A-6	PV18-6F	–	–	TP16-6F
BS4A-6S	–	18RA-6F	MV18-6FBX	–
BS4A-8	PV18-8F	18RA-8F	MV18-8FBX	TP16-8F
BS4A-10	PV18-10F	18RA-10F	MV18-10FBX	TP16-10F
BS4B-6	PV14-6F	14RB-6F	–	TP14-6F
BS4B-6S	–	–	MV14-6FBX	–
BS4B-8	PV14-8F	14RB-8F	MV14-8FBX	TP14-8F
BS4B-10	PV14-10F	14RB-10F	MV14-10FBX	TP14-10F
BS4C-6	PV10-6F	10RC-6F	MV10-6FBX	TP10-6F
BS4C-8	PV10-8F(X) +	10RC-8F(X) +	MV10-8FBX	TP10-8F
BS4C-10	PV10-10F(X) +	10RC-10F(X)+	MV10-10FBX	TP10-10F
INSULATED BLOCK SPADE TERMINALS – NYLON*				
BS6A-6	PNF18-6F	–	–	TN18-6F
BS6A-6S	–	RA18-6F	MNG18-6FBX	–
BS6A-8	PNF18-8F	RA18-8F	MNG18-8FBX	TN18-8F
BS6A-10	PNF18-10F	RA18-10F	MNG18-10FBX	TN18-10F
BS6B-6	PNF14-6F	RB14-6F	–	TN14-6F
BS6B-6S	–	–	MNG14-6FBX	–
BS6B-8	PNF14-8F	RB14-8F	MNG14-8FBX	TN14-8F
BS6B-10	PNF14-10F	RB14-10F	MNG14-10FBX	TN14-10F
BS6C-6	PNF10-6F	RC10-6F	MNG10-6FBX	TN10-6F
BS6C-8	PNF10-8F	RC10-8F	MNG10-8FBX	TN10-8F
BS6C-10	PNF10-10F	RC10-10F	MNG10-10FBX	TN10-10F
BLOCK SPADE FLANGED TERMINAL – NON-INSULATED*				
BSF2A-8	P18-8FF	–	M18-8FFB	–
BSF2B-6	P14-6FF	–	M14-6FFB	–
BSF2B-8	P14-8FF	–	M14-8FFB	–
BSF2C-10	P10-10FF	–	M10-10FFB	–

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PUC Catalog Number	Panduit Catalog Number	T & B Catalog Number	3M Catalog Number	Burndy Catalog Number
INSULATED BLOCK SPADE FLANGED TERMINAL – NYLON*				
BSF6A-6	PN18-6FF ^	RA18-6FS	MNG18-6FFB	–
BSF6A-8	PN18-8FF ^	RA18-8FS	MNG18-8FFB	–
BSF6A-10	PN18-10FF ^	RA18-10FS	MNG18-10FFB	–
BSF6B-6	PN14-6FF ^	RB14-6FS	MNG14-6FFB	–
BSF6B-8	PN14-8FF ^	RB14-8FS	MNG14-8FFB	–
BSF6B-10	PN14-10FF ^	RB14-10FS	MNG14-10FFB	–
BSF6C-8	PN10-8FF ^	RC10-8FS	MNG10-8FFB	–
BSF6C-10	PN10-10FF ^	RC10-10FS	MNG10-10FFB	–
LOCKING SPADE TERMINALS – NON-INSULATED*				
LS1A-6	P18-6LFW	A18-6FL	M18-6FLX	–
LS1A-8	P18-8LF	A18-8FL	M18-8FLX	–
LS1A-10	P18-10LF	A18-10FL	M18-10FLX	–
LS1B-6	P14-6LFW	B14-6FL	M14-6FLX	–
LS1B-8	P14-8LF	B14-8FL	M14-8FLX	–
LS1B-10	P14-10LF	B14-10FL	M14-10FLX	–
LS1C-6	P10-6LF	C10-6FL	M10-6FLX	–
LS1C-8	P10-8LF	C10-8FL	M10-8FLX	–
LS1C-10	P10-10LF	C10-10FL	M10-10FLX	–
INSULATED LOCKING SPADE TERMINALS – VINYL*				
LS4A-6	PV18-6LFW	18RA-6FL	MV18-6FLX	TP16-6LF
LS4A-8	PV18-8LF	18RA-8FL	MV18-8FLX	TP16-8LF
LS4A-10	PV18-10LF	18RA-10FL	MV18-10FLX	TP16-10LF
LS4B-6	PV14-6LFW	14RB-6FL	MV14-6FLX	TP14-6LF
LS4B-8	PV14-8LF	14RB-8FL	MV14-8FLX	TP14-8LF
LS4B-10	PV14-10LF	14RB-10FL	MV14-10FLX	TP14-10LF
LS4C-6	PV10-6LF(X) +	10RC-6FL(X) +	MV10-6FLX	TP10-6LF
LS4C-8	PV10-8LF(X) +	10RC-8FL(X) +	MV10-8FLX	TP10-8LF
LS4C-10	PV10-10LF(X)+	10RC-10FL(X)+	MV10-10FLX	TP10-10LF
INSULATED LOCKING SPADE TERMINALS – NYLON*				
LS6A-6	PNF18-6LFW	RA18-6FL	MNG18-6FLX	–
LS6A-8	PNF18-8LF	RA18-8FL	MNG18-8FLX	–
LS6A-10	PNF18-10LF	RA18-10FL	MNG18-10FLX	–
LS6B-6	PNF14-6LFW	RB14-6FL	MNG14-6FLX	–
LS6B-8	PNF14-8LF	RB14-8FL	MNG14-8FLX	–
LS6B-10	PNF14-10LF	RB14-10FL	MNG14-10FLX	–
LS6C-6	PNF10-6LF	RC10-6FL	MNG10-6FLX	–
LS6C-8	PNF10-8LF	RC10-8FL	MNG10-8FLX	–
LS6C-10	PNF10-10LF	RC10-10FL	MNG10-10FLX	–
NON-INSULATED BUTT CONNECTOR				
B7A	BS18	2A-18	M18BCX	YSV18-BOX
B7B	BS14	2B-14	M14BCX	YSV14-BOX
B7C	BS10	2C-10	M10BCX	YSV10-BOX
B7E	–	2D-8	M8BCX	YSV8-L-BOX
B7F	–	2E-6	M6BCX	–
B7G	–	2F-4	M4BCX	–
INSULATED BUTT CONNECTORS – VINYL*				
B4A	BSV18X	2RA18X	–	–
B4B	BSV14X	2RB14X	–	–
B4C	BSV10X	2RC10X	–	–
B4E	–	–	MV8BCX	–
INSULATED BUTT CONNECTORS – VINYL – SEAMLESS				
B4AB	–	–	MV18BCX	SP16
B4BB	–	–	MV14BCX	SP14
B4CB	–	–	MV10BCX	SP10
INSULATED BUTT CONNECTORS – NYLON – SEAMLESS				
B8A	BSN18	2RA18	MN18BCX	SN18
B8B	BSN14	2RB14	MN14BCX	SN14
B8C	BSN10	2RC10	MN10BCX	SN10
NYLON PIGTAILS – SEAMLESS				
NPAB1	JN218-216	RB44	MN14CEC/ST	–
NPBC1	JN418-212	RC55	MN10CEC/ST	–
ADAPTER AND COUPLER				
MMFA	D250-A	F250TA	MA250DMMFX	–
MDT-250	–	RB14-250	MVA250DMMIX	–

PUC Catalog Number	Panduit Catalog Number	T & B Catalog Number	3M Catalog Number	Burndy Catalog Number
FEMALE DISCONNECTS – NON-INSULATED				
FR1A110	D18-111B	A18-111F	–	–
FR1A187	D18-188B	AD18-182	–	Q18F187D
FR1A250	D18-250B	A18-250	MU18-250DFX	Q18F250D
FR1B110	D14-111B	B14-111F	MU14-110DFX	–
FR1B187	D14-188B	BD14-182	MU14-187DFX	Q14F187D
FR1B250	D14-250B	B14-250	MU14-250DFX	Q14F250D
FR1C250	D10-250B	C10-250F	–	Q10F250D
FEMALE DISCONNECTS – VINYL INSULATED				
FR4A187	DV18-188B •	18RAD-182 •	–	QP18F187D
FR4A250	DV18-250B •	18RA-250F •	MVU18-250DFX	QP18F250D
FR4B110	–	–	MVU14-110DFX	–
FR4B187	DV14-188B	14RBD-182	MVU14-187DFX	QP14F187D
FR4B250	DV14-250B	14RB-250F •	MVU14-250DFX	QP14F250D
FR4C-250	–	10RC-250F •	MVU10-250DFX	QP10F250D
FEMALE DISCONNECTS – NYLON INSULATED				
FR6A110	DNF18-111	RA18-111F	–	–
FR6A187	DNF18-188	RAD18-182	–	NQ18F187D
FR6A250	DNF18-250	RA18-250F	MNG18-250DFX	NQ18F250D
FR6B110	DNF14-111	RB14-111F	MNG14-110DFX	–
FR6B187	DNF14-188	RBD14-182	MNG14-187DFX	NQ14F187D
FR6B250	DNF14-250	RB14-250F	MNG14-250DFX	NQ14F250D
FR6C250	–	RC10-250F	MNG10-250DFX	NQ10F250D
FEMALE FULLY INSULATED DISCONNECTS				
CFR4NA250F	DNF18-250FIB	18RA-2577	MNU18-250DFIX	–
CFR4NB250F	DNF14-250FIB	14RB-2577	MNU14-250DFIX	–
MALE FULLY INSULATED DISCONNECTS				
CM4TNA250F	DNF18-250FIM	18RA-251T	MNU18-250DMIX	–
CM4TNB250F	DNF14-250FIM	14RB-251T	MNU14-250DMIX	–
NON-INSULATED MALE DISCONNECTS				
MT1A250	D18-250M	A18-251T	–	Q18M250D
MT1B187	–	BD14-188	–	–
MT1B250	D14-250M	B14-251T	MU14-250DMX	Q14M250D
MT1C250	D10-250M	C10-251T	MU10-250DMX	Q10M250D
VINYL INSULATED MALE DISCONNECTS				
MT4A250	DV18-250M	18RA-250T	MVU18-250DMX	QP18M250D
MT4B187	–	14RDB-188	MVU14-187DMX	QP14M187D
MT4B250	DV14-250M	14RB-250T	MVU14-250DMX	QP14M250D
MT4C250	DV10-250M	10RC-250T	MVU10-250DMX	QP10M250D
NYLON INSULATED MALE DISCONNECTS				
MT6A250	DNF18-250M	–	MNG18-250DMX	NQ18M250D
MT6B250	DNF14-250M	–	MNG14-250DMX	NQ14M250D
MT6C250	DNF10-250M	–	MNG10-250DMX	NQ10M250D
RING FLAG TERMINALS – NON-INSULATED*				
FLR1B-6	–	AB14-6A	–	–
FLR1B-8	–	AB14-8A	–	–
FLR1B-10	–	AB14-10A	MU14-10R/FLAG	–
FLR1C-6	–	C10-6A	–	–
FLR1C-8	–	C10-8A	–	–
FLR1C-10	–	C10-10A	MU10-10R/FLAG	–

* PUC Types 1, 4, 6 and 9 are butted seam.
\+ Includes both standard and expanded insulation.
^ PUC design is funnel entry.
** PUC design is .140 Max Insul. Diam.
++ PUC design is nickel plated steel.
^^ PUC wire ranges are 22-18, 16-14 and 12-10.

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COMPARATIVE LISTING

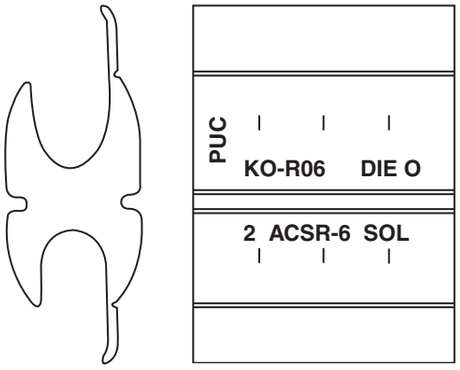
DISTRIBUTION COMPRESSION CONNECTORS

ALUMINUM PRESS-ONS

7 Connector Program

	Penn-Union	Blackburn	Burndy	Homac	Kearney
1	KO-R06	WR-159	YHO-100	OB-22	506-82
2	KO-R08	WR-189*	YHO-150*	OB-103	508-82
3	KD-R04	–	YHD-300	DB-2020	–
4	KD-R02	WR-289	YHD-200	DB-202	502-82
5	KD-R03	WR-379	YHD-250	DB-404	503-82
6	KD-R05	WR-399	YHD-350	DB-4020	505-82
7	KD-R28	WR-419	YHD-400	DB-4040	507-82
	KO-R10	–	–	OB-1010	–

**Has greater range than PUC part.*



Ultimate Range

KR-R03	WR-909	YHR-700	–	603-82
KR-R04	WR-929	YHR-750	–	604-82
KR-R05	WR-949	YHR-800	–	605-82
KR-R06	WR-969	YHR-850	–	606-82
KR-R07	WR-989	YHR-900	–	607-82

Expanded Range

Penn-Union	Kearney
KN-0	480
KN-1	481
KN-R2	482-81
KN-4	484
KN-R5	485-81
KN-R6	486-81
KN-R7	487-81
KN-8	488

ALUMINUM PENN – SLEEVES

Pre-Insulated

Penn-Union	Blackburn	Burndy	Homac	Kearney
PIK-88	–	ES8W8W	–	–
PIK-68	ICS-60	ES6W8W	U1N81	58GBR
PIK-66	ICS-61	ES6W6W	U1N88	58GG
PIK-48	ICS-62	ES4W8W	U1N61	58BLBR
PIK-46	ICS-63	ES4W6W	U1N68	58BLG
PIK-44	ICS-64	ES4W4W	U1N66	58BLBL
PIK-28	ICS-65	ES2W8W	U1N41	580BR
PIK-26	ICS-66	ES2W6W	U1N48	580G
PIK-24	ICS-67	ES2W4W	U1N46	580BL
PIK-22	ICS-68	ES2W2W	U1N44	5800
PIK-18	ICS-69	ES2R8W	U1N21	58RBR
PIK-16	ICS-70	ES2R6W	U1N28	58RG
PIK-14	ICS-71	ES2R4W	U1N26	58RBL
PIK-12	ICS-72	ES2R2W	U1N24	58RO
PIK-11	ICS-73	ES2R2R	U1N22	58RR
PIK-08*	ICS-74	–	–	–
PIK-06*	–	ES25R6W	U1N108	58YG
PIK-04*	ICS-75	ES25R4W	U1N106	58YBL
PIK-02*	ICS-76	ES25R2W	U1N104	58YO
PIK-01*	ICS-77	ES25R2R	U1N102	58YR
PIK-00*	ICS-78	ES25R25R	U1N1010	58YY

**PUC parts not recommended for I/O ACSR.*

Non-Insulated

Penn-Union	Blackburn	Burndy	Homac	Kearney
PSK-88	–	–	U1B11	36316
PSK-68	CS-60	–	U1B81	26394
PSK-66	CS-61	YSU6W6W	U1B88	26427
PSK-48	CS-62	YSU4W8W	U1B61	26527
PSK-46	CS-63	YSU4W6W	U1B68	26393
PSK-44	CS-64	YSU4W4W	U1B66	20693
PSK-28	CS-65	YSU2W8W	U1B41	26412
PSK-26	CS-66	YSU2W6W	U1B48	26467
PSK-24	CS-67	YSU2W4W	U1B46	20692
PSK-22	CS-68	YSU2W2W	U1B44	20691
PSK-18	CS-69	YSU2R8W	U1B21	26526
PSK-16	CS-70	YSU2R6W	U1B28	26525
PSK-14	CS-71	YSU2R4W	U1B26	20690
PSK-12	CS-72	YSU2R2W	U1B24	20689
PSK-11	CS-73	YSU2R2R	U1B22	20688
PSK-08	–	–	–	–
PSK-06	CS-74	YSU25R6W	U1B108	30933
PSK-04	CS-75	YSU25R4W	U1B106	30163
PSK-02	CS-76	YSU25R2W	U1B104	26485
PSK-01	CS-77	YSU25R2R	U1B102	26484
PSK-00	CS-78	YSU25R25R	U1B1010	30198

Non-Tension Splicing Sleeves (PS) & Neutral Splicing Sleeves (PNK)

Penn-Union	Blackburn	Burndy	Homac	Kearney
PS-00	KL-36	–	X1U1010	36715
PS-202	KL-44	YSD26R2W	X1U204	36714
PS-201	KL-45	YSD26R2R	X1U202	36713
PS-200	KL-46	YSD26R25R	X1U2010	36712
PS-2020	KL-47	YSD26R26R	X1U2020	36711
PS-302	KL-54	YSD27R2W	X1U304	36710
PS-301	KL-55	YSD27R2R	X1U302	36709
PS-300	KL-56	YSD27R25R	X1U3010	36708
PS-3020	KL-57	YSD27R26R	X1U3020	36707
PS-3030	KL-58	YSD27R27R	X1U3030	36706

Penn-Union	Blackburn	Burndy	Homac	Kearney
PS-402	KL-64	YSD28R2W	–	36705
PS-401	KL-65	YSD28R2R	X1U402	36704
PS-400	KL-66	YSD28R25R	X1U4010	36703
PS-4020	KL-67	YSD28R26R	X1U4020	36702
PS-4030	KL-68	YSD28R27R	X1U4030	36701
PS-4040	KL-69	YSD28R28R	X1U4040	36700
PNK-44	TR-61	YSS-6RG2	SNG66	30008
PNK-22	TR-63	–	SNG44	30009
PNK-11	TR-64	–	SNG22	30010
PNK-00	TR-65	–	SNG00	30011

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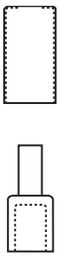
COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)

DISTRIBUTION COMPRESSION CONNECTORS

ALUMINUM TERMINAL PLUGS

AL9CU

Penn-Union	Burndy	Ilsco*	Mac**
TP-6	AYP-6	ACM-6	MPT-6
TP-4	AYP-4	ACM-4	MPT-4
TP-2	AYP-2	ACM-2	MPT-2
TP-1	AYP-1	ACM-1	MPT-1
TP-1/0	AYP-1/0	ACM-1/0	MPT-1/0
TP-2/0	AYP-2/0	ACM-2/0	MPT-2/0
TP-3/0	AYP-3/0	ACM-3/0	MPT-3/0
TP-4/0	AYP-4/0	ACM-4/0	MPT-4/0
TP-250	AYP-250	ACM-250	MPT-250
TP-300	AYP-300	ACM-300	MPT-300
TP-350	AYP-350	ACM-350	MPT-350
TP-400	AYP-400	ACM-400	MPT-400
TP-500	AYP-500	ACM-500	MPT-500
TP-600	AYP-600	ACM-600	MPT-600
TP-750	AYP-750	ACM-750	MPT-750

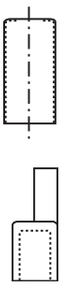


*Has a knurled stem.
**Has a stranded copper stem. Not recommended for installation with TDY-1.

OFFSET ALUMINUM TERMINAL PLUGS

AL9CU

Penn-Union	Burndy	Ilsco*
TPO-2/0	AYPO-2/0	ACO-2/0
TPO-3/0	AYPO-3/0	ACO-3/0
TPO-4/0	AYPO-4/0	ACO-4/0
TPO-250	AYPO-250	ACO-250
TPO-300	AYPO-300	ACO-300
TPO-350	AYPO-350	ACO-350
TPO-400	AYPO-400	–
TPO-500	AYPO-500	ACO-500
TPO-600	AYPO-600	ACO-600
TPO-750	AYPO-750	ACO-750



*Has a knurled stem.

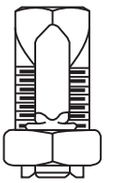
SPLIT BOLT AND SERVICE ENTRANCE CONNECTORS

COPPER ALLOY SPLIT BOLTS

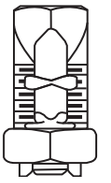
For copper and copperweld wires

CU

Penn-Union	Anderson	Blackburn	Burndy	Dossert	Ilsco	Reliable
S-8	C-8	8H	KS-15	DS-1	IK-8	8F
SEL-8*	C-8-L	8H3	–	–	–	8F
S-6	C-6	6H	KS-17	DS-2	IK-6	6F
SEL-6*	C-6-L	6H3	KS-17-3	DS-2-3	–	6F
S-4	C-4	4H	KS-20	DS-3	IK-4	4F
SEL-4*	C-4-L	4H3	KS-20-3	DS-3-3	–	4F
S-3	C-2	2H	KS-22	DS-5	IK-3	2F
SEL-3*	C-2-L	2H3	KS-22-3	DS-5-3	–	–
S-2	C-1	1H	KS-23	DS-6	IK-2	1F
SEL-2*	C-1-L	1H3	–	DS-6-3	–	–
S-1/0	C-1/0	10H	KS-25	DS-10	IK-1/0	1/0F
S-2/0	C-2/0	20H	KS-26	DS-13	IK-2/0	2/0F
S-3/0	C-3/0	30H	KS-27	DS-17	IK-3/0	–
S-4/0-250	C-4/0	40H	KS-29	DS-25	IK-4/0-250**	4/0F
S-350	C-350	350M	KS-31**	DS-35	IK-350**	679
S-500	C-500	500M	KS-34**	DS-50	IK-500**	813
S-750	C-750	750M	KS-39**	DS-75	IK-750**	996
S-1000	C-1000	1000M	KS-44**	DS-100	IK-1000**	1152



S & SEL



SW & SWA

*Not CSA Certified ** Will take smaller minimum conductor size than PUC part.

TIN PLATED COPPER ALLOY SPLIT BOLTS & ALUMINUM SPLIT BOLTS

For aluminum to aluminum, aluminum to copper and copper to copper.

Penn-Union		Anderson	Blackburn		Burndy		Ilsco	
Copper	Aluminum	Copper	Copper	Aluminum	Copper	Aluminum	Copper	Aluminum
SW-1	–	–	9 HPS	–	–	–	–	–
SW-2	–	–	8 HPS	–	–	–	–	–
SW-3	–	CPS-6	6 HPS	–	KSU-17	–	SK-6	–
SW-4	–	CPS-4	4 HPS	–	KSU-20	–	SK-4	AK-6*
SW-5	–	CPS-2	2 HPS	–	KSU-22	–	SK-3	AK-4
SW-6	–	CPS-1	1 HPS	–	KSU-23	–	SK-2	AK-2
SW-7	SWA-7	CPS-1/0	10 HPS	APS-11	KSU-25	KSA-1/0	SK-1/0	AK-1/0
SW-8	SWA-8	CPS-2/0	20 HPS	APS-21*	KSU-26	KSA-2/0	SK-2/0	AK-2/0
SW-9A	SWA-9	CPS-3/0	–	–	KSU-27	–	SK-3/0	–
SW-10	SWA-10	CPS-4/0	–	APS-41*	KSU-29	KSA-4/0•	SK-250	AK-4/0*
SW-11	SWA-11	CPS-350	350 HPS	APS-350	KSU-31	KSA-350*	SK-350*	AK-350*
SW-12	SWA-12	CPS-500	500 HPS	APS-500	KSU-34	KSA-500	SK-500*	AK-500
SW-13	–	–	750 HPS	–	–	–	–	–
SW-14	–	–	1000 HPS	–	–	–	–	–

*Will take a smaller minimum conductor size than PUC part. UL 486A Listed UL 486B Listed AL9CU

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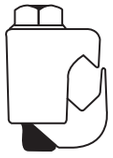
COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)

SPLIT BOLT AND SERVICE ENTRANCE CONNECTORS

COPPER SERVICE ENTRANCE CONNECTORS

Penn-Union	Blackburn	Burndy	Dossert	Ilsco
SX-12	–	–	–	SX-12
SX-10-8	–	–	ES-1V	SX-10-8
SX-6	6N	KP-6C	ES-2	SX-6
SX-4	4N	KP-4C	ES-4	SX-4
SX-2	–	–	ES-6	SX-2
SAX-12-8	–	–		–
SAX-6	6NPW	–	ESSN-2	–
SAX-4	4NPW	–	ESSN-4	–
SAX-2	2NPW	–	ESSN-6	–



SILICON BRONZE VISE GRIPS

Penn-Union	Anderson	Fargo
FF-6	DG-6	GC-5006-SH
FF-4	DG-4	GC-5004
FF-2	DG-2	GC-5002-S
FF-2/0	DG-2/0	GC-5020-S
FF-4/0	DG-4/0	GC-5040
MGC-167*	–	GC-167P*

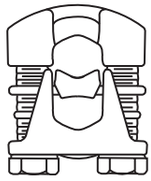
**Insulation Piercing*

PARALLEL CONNECTORS

COPPER JUMPER CLAMPS

Penn-Union	Blackburn	T&B
JC-1-AC*	BK-1	K-1
JC-2-AA	BK-2	K-2
JC-3-CC	BK-3	K-3

**RUS Accepted*



BRONZE PENN-TAPS

Penn-Union	Anderson	Blackburn	Burndy	Dossert
VT-0 •	K-1*†	2B10	–	DSU10
VT-1 •	K-2*†	2B20	KVS-26†	DSU13
VT-2 •	K-3*†	2B40*	KVS-28†	DSU21
VT-3 •	K-4*†	2B350*	KVS-31†	DSU35
VT-4 •	K-5*†	2B500	KVS-34†	DSU50
VT-5 •	K-6*†	2B800*	KVS-40†	DSU80
VT-6 •	K-7*†	2B1000*	KVS-44†	DSU100

•UL Listed

With Spacer

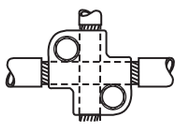
VTW-0 •	KR-1*†	2B10W*†	–	DSUS10
VTW-1 •	KR-2*†	2B20W*†	KVSW-26†	DSUS13
VTW-2 •	KR-3*†	2B40W*†	KVSW-28†	DSUS21
VTW-3 •	KR-4*†	2B350W*†	KVSW-31†	DSUS35
VTW-4 •	KR-5*†	2B500W*†	KVSW-34†	DSUS50
VTW-5 •	KR-6*†	2B800W*†	KVSW-40†	DSUS80
VTW-6 •	KR-7*†	2B1000W*†	KVSW-44†	DSUS100

•UL Listed

Tin-Plated with Spacer

VTA-0**	KR-1TP*†	2B10PW*†	–	DSUN10
VTA-1	KR-2TP*†	2B20PW*†	KVSU26†	DSUN13
VTA-2	KR-3TP*†	2B40PW*†	KVSU28†	DSUN21
VTA-3	KR-4TP*†	2B350PW*†	KVSU31†	DSUN35
VTA-4	KR-5TP*†	2B500PW*†	KVSU34†	DSUN50
VTA-5	KR-6TP*†	2B800PW*†	KVSU40†	DSUN80
VTA-6	KR-7TP*†	2B1000PW*†	KVSU44†	DSUN100

**Includes wire range of PUC connector.*
†Includes one bolt longer than the other.
***UL 486B Listed AL9CU*



BRONZE VARIABLE GUTTER TAP

Penn-Union	Anderson	Blackburn	Burndy	Dossert
VX-1	XP-018018	XT-11*	QPX-2C2C	GTX-6-6
VX-3	XP-024018 and XP-024024	XT-12 and XT-13*	QPX-282C and QPX-2828	GTX-216 and GTX-21-21
VX-4	XP-050018*	XT-21*	QPX-342C	GTX-50-6
VX-5S	XP-050024*	–	–	GTX-50-21
VX-6	XP-050050*	XT-22	QPX-3434	–
VX-7	XP-100018	–	QPX-442C	GTX-100-6
VX-8	XP-100024	–	QPX-4428	GTX-100-21
VX-8S	–	–	–	–
VX-10	XP-100050 and XP-100100	XT-33 and XT-34	QPX-4434 and QPX-4444	GTX-100-50 and GTX-100-100

**Difference in minimum wire size*

COMPRESSION LUGS & SPLICES

COPPER PENN-CRIMPS®

Single Crimp Lugs for AN-8 thru AN-4/0

Penn-Union	Burndy
BLY8C-L	YAV8C-L
BLY8C-L1	YAV8C-L1
BLY8C-L2	YAV8C-L2
BLY8C-L3	YAV8C-L3
BLY8C-L4	YAV8C-L4
BLY6C-L1	YAV6C-L1
BLY6C-L	YAV6C-L
BLY6C-L4	YAV6C-L4
BLY6C-L2	YAV6C-L2
BLY6C-L10	YAV6C-L10
BLY4C-L3	YAV4C-L3
BLY4C-L	YAV4C-L
BLY4C-L4	YAV4C-L4
BLY4C-L2	YAV4C-L2
BLY4C-L5	YAV4C-L5
BLY2C-L1 •	YAV2C-L1
BLY2C-L2 •	YAV2C-L2
BLY2C-L •	YAV2C-L
BLY2C-L4 •	YAV2C-L4
BLY1C-L1	YAV1C-L1
BLY1C-L2	YAV1C-L2
BLY1C-L	YAV1C-L
BLY1C-L3	YAV1C-L3
BLY25-L1	YAV25-L1
BLY25-L2	YAV25-L2
BLY25-L	YAV25-L
BLY25-L3	YAV25-L3
BLY26-L1	YA26-L1
BLY26-L2	YA26-L2
BLY26-L	YA26-L
BLY26-L3	YA26-L3
BLY27-L1	YAV27-L1
BLY28-L	YAV28-L
BLY28-L12	YAV28-L12
BLY28-L13	YAV28-L13
BLY28-L14	YAV28-L14

•UL Listed

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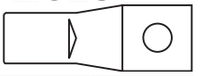
Phone 814.734.1631 • Fax 814.734.4946

COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)

COMPRESSION LUGS & SPLICES

COPPER PENN-CRIMPS®
Standard Barrel Lugs

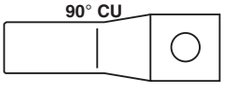


Penn-Union	Blackburn	Burndy	Dossert	Ilsco	T & B
BLU8S14 •	CTL8-10	–	–	CRA-8	54104
BLU-8D •	–	–	–	–	54204
BLU-8S15 •	CTL8-14	–	–	–	54130
BLU-8S16 •	CTL8-516	–	–	–	54131
BLU-8S17 •	–	–	–	–	54132
BLU-8S18 •	–	–	–	–	–
BLU-6S •	CTL6-10	YA6C-L1	DPLS2-1-18	CRA-6	54134
BLU-6S1 •	CTL6-14	YA6C-L	DPLS2-1	CRB-6	54105
BLU-6D •	–	YA6C-2L	DPLS2-2	–	54205
BLU-6S2 •	CTL6-516	YA6C-L3	DPLS2-1-31	–	54135
BLU-6S8 •	–	YA6C-L4	–	–	54136
BLU-4S •	CTL4-10	YA4C-L1	DPLS4-1-18	CRA-4	54138
BLU-4S1 •	CTL4-14	YA4C-L	DPLS4-1	CRB-4	54106
BLU-4D •	–	YA4C-2L	DPLS4-2	–	54206
BLU-4S10 •	CTL4-516	YA4C-L3	–	–	54139
BLU-4S2 •	CTL4-38	YA4C-L4	DPLS4-1-38	–	54140
BLU-2S •	CTL2-14	YA2C-L2	DPLS6-1-25	CRA-2	54107
BLU-2D •	–	YA2C-2L	–	–	54207
BLU-2S1 •	CTL2-516	YA2C-L	DPL56-1	CRB-2	54142
BLU-2S2 •	CTL2-38	YA2C-L4	DPLS6-1-38	–	54143
BLU-2S10 •	–	YA2C-L6	–	–	54145
BLU-1S9 •	CTL1-14	–	–	–	54108
BLU-1D2 •	–	–	–	–	54208
BLU-1S •	CTL1-516	YA1C-L	DPLS8-1	CRA-1	54147
BLU-1D4 •	–	YA1C-2L	DPLS8-2	–	–
BLU-1S1 •	CTL1-38	YA1C-L4	–	–	54148
BLU-1S4 •	–	YA1C-L6	–	–	54150
BLU-1/0S19 •	–	–	–	–	54152
BLU-1/0S •	CTL10-516	YA25-L	DPLS10-1	CRA-0	54153
BLU-1/0D •	–	YA25-2L	DPLS10-2	–	54255
BLU-1/0S1 •	CTL10-38	YA25-L4	DPLS10-1-38	CRB-0	54109
BLU-1/0D4 •	–	–	–	–	54209
BLU-1/0S20 •	–	YA25-L6	–	–	54155
BLU-2/0S20 •	–	–	–	–	54157
BLU-2/0S21 •	–	–	–	–	54158
BLU-2/0D3 •	–	–	DPLS13-2	–	–
BLU-2/0S •	CTL20-38	YA26-L	DPLS31-1	CRA-2/0	54110
BLU-2/0D4 •	–	–	–	–	54210
BLU-2/0S4 •	CTL20-12	YA26-L6	–	–	54160
BLU-2/0D •	–	YA26-2LN	DPLS13-2N	–	54260
BLU-3/0S14 •	–	–	–	–	54162
BLU-3/0S15 •	–	–	–	–	54163
BLU-3/0S •	CTL30-38	YA27-L4	DPLS17-1-38	CRA-3/0	54111
BLU-3/0D3 •	–	–	DPLS17-2	–	54211
BLU-3/0S1 •	CTL30-12	YA27-L	DPLS17-1	CRB-3/0	54165
BLU-3/0D •	–	YA27-2LN	DPLS17-2N	–	54265
BLU-4/0S19 •	–	–	–	–	54167
BLU-4/0S25 •	–	–	–	–	54168
BLU-4/0S •	CTL40-38	YA28-L4	DPLS21-1-38	CRA-4/0	54112
BLU-4/0D10 •	–	–	DPLS21-2	–	54212
BLU-4/0S1 •	CTL40-12	YA28-L	DPLS21-1	CRB-4/0	54170
BLU-4/0D •	CTL402	YA28-2LN	DPLS21-2N	–	54270
BLU-025S4 •	–	–	–	–	54172
BLU-025SS •	–	–	–	–	54173
BLU-025S2 •	–	–	–	–	54174
BLU-025D3 •	–	–	DPLS25-2	–	54213
BLU-025S •	CTL250-12	YA29-L	DPLS25-1	CRA-250	54113
BLU-025D •	CTL2502	YA29-2LN	DPLS25-2N	–	54275
BLU-030S6 •	–	–	–	–	54178
BLU-030S7 •	–	–	–	–	54179
BLU-030D9 •	–	–	DPLS30-2	–	54214
BLU-030S •	CTL300-12	YA30-L	DPLS30-1	CRA-300	54114
BLU-030D •	CTL3002	YA30-2LN	DPLS30-2N	–	54280
BLU-030S8 •	–	–	–	–	54181
BLU-035D13 •	–	–	DPLS35-2	–	54215
BLU-035S •	CTL350-12	YA31-L	DPLS35-1	CRA-350	54115
BLU-035D •	CTL3502	YA31-2LN	DPLS35-2N	–	54282
BLU-035S3 •	–	–	–	–	54183
BLU-040D7 •	–	–	DPLS40-2	–	54216
BLU-040S4 •	CTL400-12	–	–	–	54116
BLU-040D •	CTL4002	YA32-2LN	DPLS40-2N	–	–
BLU-040S •	–	YA32-L	DPLS40-1	CRA-400	54185
BLU-050D13 •	–	–	DPLS50-2	–	54218
BLU-050S2 •	CTL500-12	–	–	–	54118
BLU-050D •	CTL5002	YA34-2LN	DPLS50-2N	–	54286
BLU-050S •	–	YA34-L	DPLS50-1	CRA -500	54187
BLU-060D •	–	YA36-2LN	DPLS60-2N	–	54289
BLU-060S •	–	YA36-L	DPLS60-1	–	54120
BLU-075D •	CTL7502	YA39-2LN	DPLS75-2N	–	54223
BLU-075S •	–	YA39-L	DPLS75-1	CRA-750	54123
BLU-080D •	–	YA40-2LN	DPLS80-2N	–	54224
BLU-080S •	–	YA40-L	DPLS80-1	–	54124
BLU-100D •	CTL10002	YA44-2LN	DPLS100-2N	–	54228
BLU-100S •	–	YA44-L	DPLS100-1	CRA-1000	54128
BLU-100S4 •	–	–	–	–	54129
BLU-150D •	–	–	DPLS150-2N	–	–
BLU-150S •	–	–	DPLS150-1	–	–
BLU-200D •	–	–	DPLS200-2N	–	–
BLU-200D •	–	–	DPLS200-1	–	–

•UL Listed
"S" in suffix = single hole pad
"D" in suffix = double hole pad

BLUA, BLU and BBLU lugs are suitable for use @ voltages up to 35KV, provided connector is taped in accordance with accepted practices. 5KV is maximum voltage level in all bare splice applications.

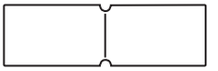
COPPER PENN-CRIMPS®
Long Barrel Lugs – One Hole



Penn-Union	Blackburn	Burndy	Dossert	Ilsco	T & B
BBLU-6S •	–	YA6C	DPL2-1	CRB-6L	54905
BBLU-4S •	–	YA4C	DPL4-1	CRB-4L	54906
BBLU-2S •	–	YA2C	DPL6-1	CRB-2L	54942
BBLU-1S •	–	YA1C	DPL8-1	CRA-1L	54947
BBLU-1/0S •	–	YA25	DPL10-1	CRA-1/0L	–
BBLU-2/0S •	–	YA26	DPL13-1	CRA-2/0L	54910
BBLU-3/0S •	–	YA27	DPL17-1	CRB-3/0L	54965
BBLU-4/0S •	–	YA28	DPL21-1	CRB-4/0L	54970
BBLU-025S •	–	YA29	DPL25-1	CRA-250L	54913
BBLU-030S •	–	YA30	DPL30-1	CRA-300L	54914
BBLU-035S •	–	YA31	DPL35-1	CRA-350L	54915
BBLU-040S •	–	YA32	DPL40-1	CRA-400L	–
BBLU-050S •	–	YA34	DPL50-1	CRA-500L	–
BBLU-060S •	–	YA36	DPL60-1	CRA-600L	54920
BBLU-075S •	–	YA39	DPL75-1	CRA-750L	54923
BBLU-080S •	–	YA40	DPL80-1	–	–
BBLU-100S •	–	YA44	DPL100-1	CRA-1000L	54928
BBLU-150S •	–	YA46	DPL150-1	–	–
BBLU-200S •	–	–	DPL200-1	–	–

Long Barrel Lugs – Two Hole

BBLU-6D •	–	YA6C-2	DPL2-2	CRB-6L2	54852
BBLU-4D •	–	YA4C-2	DPL4-2	CRB-4L2	54854
BBLU-2D •	–	YA2C-2	DPL6-2	CRB-2L2	54856
BBLU-1D •	–	YA1C-2	DPL8-2	CRA-1L2	54858
BBLU-1/0D •	LCN10	YA25-2	DPL10-2	CRA-1/0L2	54860
BBLU-2/0D •	LCN20	YA26-2N	DPL13-2N	CRA-2/0L2	54862
BBLU-3/0D •	LCN30	YA27-2N	DPL17-2N	CRB-3/0L2	54864
BBLU-4/0D •	LCN40	YA28-2N	DPL21-2N	CRB-4/0L2	54866
BBLU-025D •	LCN250	YA29=2N	DPL25-2N	CRA-250L2	54868
BBLU-030D •	–	YA30-2N	DPL30-2N	CRA-300L2	54870
BBLU-035D •	LCN350	YA31-2N	DPL35-2N	CRA-350L2	54872
BBLU-040D •	–	YA32-2N	DPL40-2N	CRA-400L2	54874
BBLU-050D •	LCN500	YA34-2N	DPL50-2N	CRA-500L2	54876
BBLU-060D •	–	YA36-2N	DPL60-2N	CRA-600L2	54878
BBLU-075D •	LCN750	YA39-2N	DPL75-2N	CRA-750L2	54880
BBLU-080D •	–	YA40-2N	DPL80-2N	–	–
BBLU-100D •	LCN1000	–	DPL100-2	CRA-1000L2	–
BBLU-100D1•	–	YA44-2N	DPL100-2N	–	–
BBLU-150D •	–	–	DPL150-2	–	–
BBLU-150D1•	–	YA46-2N	DPL150-2N	–	–
BBLU-200D •	–	–	DPL200-2	–	–
BBLU-200D1•	–	–	DPL200-2N	–	–



Splices

Penn-Union	Blackburn	Burndy	Dossert	Ilsco	T & B
BCU-8 •	CSP8	YS8C-L	–	CT-8	54504
BCU-6 •	CSP6	YS6C-L	DPCS-2	CT-6	54505
BCU-5 •	–	YS5C-L	–	–	–
BCU-4 •	CSP4	YS4C-L	DPCS-4	CT-4	54506
BCU-3	CSP3	YS3C-L	–	–	–
BCU-2 •	CSP2	YS2C-L	DPCS-6	CT-2	54507
BCU-1 •	CSP1	YS1C-L	DPCS-8	CT-1	54508
BCU-1/0 •	CSP10	YS25-L	DPCS-10	CT-1/0	54509
BCU-2/0 •	CPS20	YS26-L	DPCS-13	CT-2/0	54510
BCU-3/0 •	CSP30	YS27-L	DPCS-17	CT-3/0	54511
BCU-4/0 •	CSP40	YS28-L	DPCS-21	CT-4/0	54512
BCU-025 •	CSP250	YS29-L	DPCS-25	CT-250	54513
BCU-030 •	CSP300	YS30-L	DPCS-30	CT-300	54514
BCU-035 •	CSP350	YS31-L	DPCS-35	CT-350	54515
BCU-040 •	CSP400	YS32-L	DPCS-40	CT-400	54516
BCU-050 •	CSP500	YS34-L	DPCS-50	CT-500	54518
BCU-060 •	CSP600	YS36-L	DPCS-60	–	54520
BCU-065	–	–	–	–	–
BLU-075 •	CSP750	YS39-L	DPCS-75	CT-750	54523
BCU-080 •	–	–	DPCS-80	–	54524
BCU-100 •	CSP1000	YS44-L	DPCS-100	CT-1000	54528
BCU-150 •	–	–	DPCS-150	–	–
BCU-200 •	–	–	DPCS-200	–	–

Long Barrel Splices

BBCU-6 •	C46	YS6C	DPC-2	CTL-6	54805
BBCU-4 •	C44	YS4C	DPC-4	CTL-4	54806
BBCU-2 •	C42	YS2C	DPC-6	CTL-2	54807
BBCU-1 •	C41	YS1C	DPC-8	CTL-1	54808
BBCU-1/0 •	CU-10	YS25	DPC-10	CTL-1/0	54809
BBCU-2/0 •	CU-20	YS26	DPC-13	CTL-2/0	54810
BBCU-3/0 •	CU-30	YS27	DPC-17	CTL-3/0	54811
BBCU-4/0 •	CU-40	YS28	DPC-21	CTL-4/0	54812
BBCU-025 •	CU-250	YS29	DPC-25	CTL-250	54813
BBCU-030 •	CU-300	YS30	DPC-30	CTL-300	54814
BBCU-035 •	CU-350	YS31	DPC-35	CTL-350	54815
BBCU-040 •	CU-400	YS32	DPC-40	CTL-400	54816
BBCU-050 •	CU-500	YS34	DPC-50	CTL-500	54818
BBCU-060 •	CU-600	YS36	DPC-60	CTL-600	54820
BBCU-075 •	CU-750	YS39	DPC-75	CTL-750	54823
BBCU-080 •	–	–	DPC-80	–	–
BBCU-100 •	CU-1000	YS44	DPC-100	CTL-1000	54828
BBCU-150 •	–	YS46	DPC-150	–	–
BBCU-200 •	–	YS48	DPC-200	–	–

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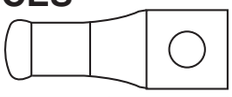
COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)

COMPRESSION LUGS & SPLICES

ALUMINUM PENN-CRIMPS® Lugs – One & Two Hole

AL9 CU



Penn-Union	Blackburn	Burndy	Dossert	Ilsco	T & B
BLUA-8S	ATL8-14	YA8CA3	DPL-1-1-AA	ACL-8	60102
BLUA-6S •	ATL6-14	YA6CA1	DPL-2-1-AA	ACL-6	60107
BLUA-6S2 •	–	–	–	–	60108
BLUA-4S3 •	ATL4-14	YA4CA1	–	ACL-4	60112
BLUA-4S2 •	ATL4-516	YA4CA3	DPL-4-1-AA	–	60113
BLUA-2S3 •	ATL2-14	–	–	ACL-2	60116
BLUA-2S4 •	ATL2-516	YA2CA1	–	–	60117
BLUA-2S •	ATL2-38	YA2CA3	DPL-6-1-AA	–	60118
BLUA-1S1 •	–	–	–	ACL-1	60112
BLUA-1S3 •	ATL1-516	–	–	ACN-1	60123
BLUA-1S •	ATL1-38	YA1CA1	DPL-8-1-AA	–	60124
BLUA-1S2 •	–	–	–	–	60126
BLUA-1/0S2 •	–	–	–	–	60128
BLUA-1/0S3 •	ATL10-516	YA25A1	–	ACN-1/0	60129
BLUA-1/0S •	ATL10-38	YA25A3	DPL-10-1-AA	ACL-1/0	60130
BLUA-1/0D1 •	ATL102-38*	–	–	2ACL-1/0	60230
BLUA-1/0D2 •	–	YA25A5	DPL-10-2-AA	–	–
BLUA-1/0S1 •	ATL1012	YA25A9	–	ACL-1/0-9/16	60132
BLUA-1/0D3 •	ATL-102	YA25A7	–	–	–
BLUA-2/0S4 •	–	–	–	–	60134
BLUA-2/0S5 •	–	–	–	–	60135
BLUA-2/0S6 •	ATL20-38	YA26A6	–	ACL-2/0	60136
BLUA-2/0D2 •	–	YA26A5	–	–	60236
BLUA-2/0S •	ATL20-12	YA26A1	DPL-13-1-AA	ACN-2/0	60138
BLUA-2/0D •	ATL202*	YA26A3	DPL-13-2N-AA	2ACL-2/0	60238
BLUA-3/0S5 •	–	–	–	–	60141
BLUA-3/0S2 •	ATL30-38	YA27A1	–	ACL-3/0	60142
BLUA-3/0D1 •	–	YA27A7	–	–	60242
BLUA-3/0S •	ATL30-12	YA27A3	DPL-17-1-AA	ACN-3/0	60144
BLUA-3/0D •	ATL302*	YA27A5	DPL-17-2N-AA	2ACL-3/0	60244
BLUA-4/0S3 •	–	–	–	–	60147
BLUA-4/0S2 •	ATL40-38	YA28A1	–	ACL-4/0	60148
BLUA-4/0D2 •	–	YA28A7	–	–	60248
BLUA-4/0S •	ATL40-12	YA28A3	DPL-21-1-AA	–	60150
BLUA-4/0D •	ATL402*	YA28A5	DPL-21-2N-AA	2ACL-4/0	60250
BLUA-4/0S4 •	ATL-4012	YA28A3	DPL-211-AA	ACN-4/0	60151
BLUA-025S2 •	–	–	–	–	60154
BLUA-025D1 •	–	YA29A5	–	–	60254
BLUA-025S •	ATL250-12	YA29A1	DPL-25-1-AA	ACL-250	60156
BLUA-025D •	ATL2502*	YA29A3	DPL-25-2N-AA	2ACL-250	60256
BLUA-025S3 •	–	–	–	–	60157
BLUA-030S2 •	–	YA30A6	–	–	60160
BLUA-030D1 •	–	YA30A5	–	–	60260
BLUA-030S1 •	ATL30012	YA30A1	–	ACL-300	60162
BLUA-030D •	ATL3002	YA30A3	DPL-30-2N-AA	2ACL-300	60262
BLUA-030S •	–	–	DPL-30-1-AA	–	60163
BLUA-035D1 •	–	YA31A5	–	–	60265
BLUA-035S1 •	ATL350-12	YA31A1	–	ACL-350	60165
BLUA-035D •	ATL3502*	YA31A3	DPL-35-2N-AA	2ACL-350	60267
BLUA-035S •	–	–	–	–	60166
BLUA-040D1 •	–	YA32A5	–	–	60268
BLUA-040S2 •	–	–	–	ACL-400	60168
BLUA-040D2 •	ATL 4002	YA32A3	DPL-40-2N-AA	2ACL-400	60269
BLUA-040S3 •	ATL40058	YA32A1	–	–	60169
BLUA-050D1 •	–	YA34A5	–	–	60271
BLUA-050S2 •	ATL-500-12	–	–	ACL-500	60171
BLUA-050D2 •	ATL5002*	YA34A3	DPL-50-2N-AA	2ACL-500	60273
BLUA-050S3 •	ATL50058	YA34A1	–	–	60172
BLUA-060D1 •	–	YA36A5	–	–	60274
BLUA-060D2 •	ATL6002	YA36A3	DPL-60-2N-AA	2ACL-600	60275
BLUA-060S1 •	–	–	–	ACL-600	60174
BLUA-075S1 •	ATL-750-58	YA39A3	–	ACL-750	60178
BLUA-075D1 •	ATL-7502*	YA39A5	DPL-75-2N-AA	2ACL-750	60278
BLUA-080D1 •	–	YA40A3	DPL-80-2N-AA	–	60280
BLUA-080S1 •	–	YA40A1	–	–	60180
BLUA-100D2 •	ATL10002	YA44A3	DPL-100-2N-AA	2ACL-1000	60284
BLUA-100S1 •	ATL1000-58	YA44A1	–	ACL-1000	60184

• UL 486B Listed • Hole spacing different. "S" in suffix = single hole lug "D" in suffix = double hole lug

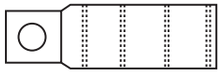
Splices

AL9 CU

Penn-Union	Blackburn	Burndy	Dossert	Ilsco	T & B
BCUA-6 •	ASP6	YS6CA1	DPC-2 AA	AS-6	60507
BCUA-4 •	ASP4	YS4CA1	DPC-4-AA	AS-4	60512
BCUA-2 •	ASP2	YS2CA1	DPC-6-AA	AS-2	60516
BCUA-1 •	ASP1	YS1CA1	DPC-8-AA	AS-1	60522
BCUA-1/0 •	ASP10	YS25A1	DPC-10-AA	AS-1/0	60530
BCUA-2/0 •	ASP20	YS26A1	DPC-13-AA	AS-2/0	60536
BCUA-3/0 •	ASP30	YS27A1	DPC-17-AA	AS-3/0	60542
BCUA-4/0 •	ASP40	YS28A1	DPC-21-AA	AS-4/0	60548
BCUA-025 •	ASP250	YS29A1	DPC-25-AA	AS-250	60554
BCUA-030 •	ASP300	YS30A1	DPC-30-AA	AS-300	60560
BCUA-035 •	ASP350	YS31A1	DPC-35-AA	AS-350	60565
BCUA-040 •	ASP400	YS32A1	DPC-40-AA	AS-400	60568
BCUA-050 •	ASP500	YS34A1	DPC-50-AA	AS-500	60571
BCUA-060 •	ASP600	YS36A1	DPC-60-AA	AS-600	60574
BCUA-075 •	ASP750	YS39A1	DPC-75-AA	AS-750	60578
BCUA-080 •	–	YS40A1	DPC-80-AA	–	60580
BCUA-100 •	ASP1000	YS44A1	DPC-100-AA	AS-1000	60584

• UL 486B Listed

ALUMINUM COMPRESSION TERMINALS



For alum., copper or ACSR wire. ONE HOLE PAD

Penn-Union	Burndy	Homac	Kearney
FKLA-W8-S	–	SA-10-48	–
FKLA-W6-S	YRA8CU•	SA-8-48*	–
FKLA-W4-S	YRA6CU	SA-6-48	–
FKLA-W2-S	YRA4CU	SA-4-48	–
FKLA-C2-S	–	SA-3-48	–
FKLA-R2-S	YRA1CU	SA-2-48	–
FKLA-010-S	YRA25A	SA-1/0-48	–
FSLA-W2-S	YRAL4CU	–	104761-1*
FSLA-C2-S	YRAL1CU	–	–
FSLA-010-S	YRA25U	–	104761-3*
FSLA-013-S	YRA26U	SA-2/0-48	104761-4
FSLA-017-S	YRA27U	SA-3/0-48	104761-5
FSLA-025-S	YRA28U	SA-4/0-48 and SA250-48	104761-6 and 104761-7
FSLA-030-S	–	–	104761-8
FULA-030-S	–	SA300-48	–
FULA-035-S	YCAK31AG1	SA350-48	–
FULA-045-S	–	SA400-48	–
FULA-050-S	–	CFA500-48	–

TWO HOLE PAD

FULA-025-D	YCAK29A-2G1	SAB4/0-N	–
FULA-030-D	–	SAB300-N	–
FULA-035-D	YCAK31A-2G1	SA35048	–
FULA-R033-D	–	SAB350-N	–
FULA-045-D	–	SAB400-N	–
FULA-050-D	YCAK34A-2G3	SAB500-N	–

*Difference in minimum wire size.

COMPRESSION TOOLS

Penn-Union	Blackburn	Burndy	Ilsco	T & B
TPU-12B	JB 12A	Y35	ILC-12	TBM-12M
TDM-250	NRG 2508	MY29-3	MT-25	–
TDM-250XF	–	MY29-11	–	–
TDM-500	–	–	–	–
TPU-12BH	JB12HA	Y35BH	ILC-12H	–
TPU-15BH	–	Y46	–	TBM15PF

Die Sets

Penn-Union Die Set Cat. No.	Burndy Index	Burndy Die Set Cat. No.	T & B Index	Color Code	Range
T-10	10	U2CRT	33	Brown	#2 CU
T-11/375	11 375	U1CRT U4CABT	37	Green	#1 CU #4 AL
T-12/348	12 348	U25RT U2CABT	42	Pink	1/0 CU #2 AL
T-13 T-14	13 14	U26RT U27RT	45 50	Black Orange	2/0 CU 3/0 CU
T-15 T-16	15 16	U28RT U29RT	54 62	Purple Yellow	4/0 CU 250MCM CU
T-298	298	U28ART	66H	White	4/0 AL
T-18/324	18 324	U31RT U29ART	71H	Red	350MCM CU 250MCM AL
T-20/299	20 299	U34RT U31ART	87H	Brown	500MCM CU 350MCM AL
T-22/472	22 472	U36RT U32ART	94 H	Green	600MCM CU 400MCM AL
T-296 T-297	296 297	U25ART U26ART	50 54	Tan Olive	1/0 AL 2/0 AL
T-300	300	U34ART	99H	Pink	500MCM AL
T-467	467	U27ART	60	Ruby	3/0 AL
T-473	473	U36ART	106H	Black	750MCM CU 600MCM AL

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COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)

COMPRESSION DIES

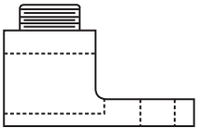
DIE SETS/(UTILITY)

PUC Die Set	Burndy Index	Burndy Die Set	T&B Index	Color Code	Range
T-BG	BG	U-BG	52	–	–
T-0	O	U-O	O	–	–
T-D3	D3	U-D3	D	–	–
T-N	N	U-N	N	–	–
T-249	249	U-249	76	–	–
T-316	316	U-316	96	–	–
T-317	317	U-317	106A	–	–

TERMINAL LUGS

ALUMINUM SOLDERLESS LUGS

AL9 CU



One Hole – One Conductor

Penn-Union	Blackburn	Burndy	Ilsco
LA-6	ADR6	–	TA-6S
LA-2	ADR2	KA-2U	TA-2
LA-0	ADR11	KA-25U	TA-0
LA-2/0	ADR21	KA-26U	TA-2/0
LA-250	ADR25	KA-29U	TA-250
LA-350	ADR35	KA-31U	TA-350
LA-500	ADR50	KA-34U	TA-500
LA-600	ADR60	KA-36U	TA-600*
LA-800	ADR80	KA-40U	TA-800*
LA-1000	ADR99	KA-44U	TA-1000*

Difference in min. wire size.

One Hole – Two Conductors

L2A-0	ADR11-21	K2A-26U*	AU-0
L2A-250	ADR25-21	K2A-29U	AU-250
L2A-350	ADR35-21	K2A-31U	AU-350
L2A-500	–	–	–
L2A-600	ADR60-21	K2A-36U	AU-600

Difference in max. wire size.

Two Hole – Two Conductors

L2A-800	ADR80-21	–	AU-800
L2A-1000	ADR99-21	K2A-44U	AU-1000

Two Hole – One Conductor

LA-350-2	–	–	TA-350-2N
LA-600-2	–	KA-36U-2N	TA-600-2N
LA-800-2	–	KA-40U-2N	TA-800-2N*
LA-1000-2	–	KA-44U-2N	TA-1000-2N

Difference in min. wire size.

Two Hole – Two Conductors

L2A-350-2	–	–	AU-350-2N
L2A-600-2	–	K2A-36U-2N	AU-600-2N
L2A-800-2	–	K2A-40U-2N	AU-800-2N*
L2A-1000-2	–	K2A-44U-2N	AU-1000-2N

Difference in min. wire size.

Two Hole – Three Conductors

L3A-250-2	ADR25-32	K3A-29U-2N	T3A2-250N
L3A-350-2	ADR35-32	K3A-31U-2N	T3A2-350N
L3A-500-2	ADR50-32	K3A-36U-2N	T3A2-500N

Four Hole – Three Conductors

L3A-250-4	ADR25-34	K3A-29U-4N	T3A4-250N
L3A-350-4	ADR35-34	K3A-31U-4N	T3A4-350N
L3A-500-4	ADR50-34	K3A-36U-4N	T3A4-500N

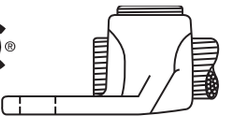
Two Hole – Three Conductors – Double Head

L3A-800-2	ADR80-32	K3A-40U-2N	T3A2-800N

Four Hole – Three Conductors – Double Head

L3A-800-4	ADR80-34	K3A-40U-4N	T3A4-800N

BRONZE PENN-LUGS



One Hole – One Conductor

Penn-Union	Anderson	Blackburn	Burndy	Dossert	T & B
PNL-8 •*	LU-08	L-35	KA-8C	D-35	71003
PNL-4 •*	LU-04	L-70	KA-4C	D-70	71005
PNL-1/0 •*	LU-1/0	L-125	KA-25	D-10	–
PNL-250 •*	LU-4/0	L-250	KA-28	D-21/D-25	71015
PNL-500 •*	LU-500	L-400	KA-34	D-50	71020
PNL-1000 •*	LU-1000	L-650	–	D-100	–

Two Hole – One Conductor

Penn-Union	Anderson	Blackburn
PNL-1/0-2 •	–	L-125-2
PNL-1/0-2N •	LU-1/0-2	–
PNL-250-2 •	–	L-250-2
PNL-250-2N •*	LU-4/0-2N	–
PNL-500-2 •	–	L-400-2
PNL-500-2N •*	LU-500-2N	–
PNL-1000-2 •	–	L-650-2
PNL-1000-2N •*	LU-1000-2N	–

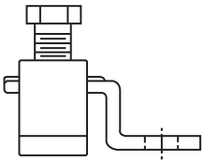
Two Hole – Two Conductors

Penn-Union	Anderson	Blackburn	Dossert
P2NL-1/0-2N	LU2-1/0-2N	–	–
P2NL-250-2N	–	TL-250	D2-25
P2NL-500-2N	LU2-500-2N	TL-400	D2-50

Four Hole – Two Conductors

P2NL-500-4N	LU2-500-4N	–	–
P2NL-1000-4N	LU2-1000-4N	TL-600	D2-100

•UL Listed
*CSA Certified



COPPER SOLDERLESS LUGS

One Hole – Single Collar

Penn-Union	Burndy	Dossert	Ilsco
SLU-25	–	–	SLU-25
SLU-35	KPA-8C	G-35-1	SLU-35
SAU-70	–	G-35-E1	SAU-70
SLU-70	KPA-4C	G-70-1	SLU-70
SLU-125	KPA-25	G-125-1	SLU-125
SLU-175	–	G-175-1	SLU-175
SLU-225	KPA-28	G-225-1	SLU-225
SLU-300	–	–	SLU-300
SLU-400	KPA-34	G-400-1	SLU-400
SLU-650	–	G-650-1	SLU-650

One Hole – Double Collar

Penn-Union	Ilsco
LU-2	LU-2
LU-4	LU-4
LU-6	LU-6

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COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)
EYEBOLT TERMINALS & TRANSFORMER GROUND CLAMPS

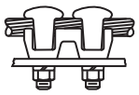
BRONZE EYEBOLT TERMINALS

Single Eyebolt
For 1/4" Thick Bar

Penn-Union	Anderson	Burndy	Dossert
LS-C1E	TLS-22	QGFL-1CB1	QL-8
LSN-2/0N	TLS-32	QGFL-26B2	QL-13-50
LS-2/0	TLS-35	QGFL-26B1	QL-13
LSN-025N	TLS-42	QGFL-29B1	QL-25
LSN-035N	TLS-52	QGFL-31B1	QL-35
LSN-050N	TLS-62	QGFL-34B1	QL-50
LSN-075	TLS-72	QGFL-39B1	QL-75
LSN-100N	TLS-86	QGFL-44B1*	QL-100
LS-150E	TLS-92L	QGFL-46B1	–
LS-200E	–	QGFL-48B1*	–

For 1/4" to 3/4" Thick Bar

LS-C1E	TLS-22L	QGFL-1CB1	QL-8E
LSN-2/0NE	TLS-32L	QGFL-26B1T6	QL-13-50
LSN-2/0E	–	QGFL-26B2	QL-13E
LSN-025NE	TLS-42L	QGFL-29B1T6	QL-25E
LSN-035NE	TLS-52L	QGFL-31B1T6	QL-35E
LSN-050NE	TLS-62L	QGFL-34B1T6	QL-50E
LSN-075E	TLS-72L	QGFL-39B1T6	QL-75E
LSN-100NE	TLS-86L	QGFL-44B1T6*	QL-100E
LSN-150E	TLS-92L	QGFL-46B1T6	–
LSN-200E	–	QGFL-48B1T6*	–



Double Eyebolt (Parallel Connection)
For 1/4" Thick Bar

LDN-2/0N	–	QQGFL-26B2	–
LDN-025N	–	QQGFL-29B1	–
LDN-035N	–	QQGFL-31B1	–
LDN-050N	TLD-62	–	Q2L-50
LDN-075	TLD-72	–	Q2L-75
LDN-100N	TLD-86	–	Q2L-100*
LD-200E	TLD-102L	–	–

For 1/4" to 3/4" Thick Bar

LDN-025NE	–	QQGFL-29B1T6	–
LDN-035NE	–	QQGFL-31B1T6	–
LDN-050NE	TLD-62L	–	Q2L-50E
LDN-075E	TLD-72L	–	Q2L-75E
LDN-100NE	TLD-86L	–	QL-100E*
LD-200E	TLD-102L	–	–

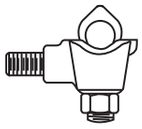
Double Eyebolt (Tee Connection)
For 1/4" Thick Bar

LDN-2/0N2	TLD-32	–	Q2L-13-50
LDN-025N2	TLD-42	–	Q2L-25

For 1/4" to 3/4" Thick Bar

LDN-2/0N2E	TLD-32L	–	Q2L-13-50
LDN-025N2E	TLD-42L	–	Q2L-25E

*Difference in min. wire size.



TRANSFORMER GROUND CLAMPS

Penn-Union	Anderson	Blackburn	Burndy	Dossert
GSE-C1	GTCL-23A	–	–	–
GSE-020	GTCL-34A	–	EQCG32C	–
GSE-025	–	–	–	–

Two-way basket

HGSE-C1	GTCS-21	–	–	TGC850
HGSE-020	GTCS-34A	TTC2	–	–
HGSE-250	GTCS-41	–	–	–

For tin-plating add suffix

– TN	– TP	– P	– TN	– TP

GROUNDING CONNECTORS

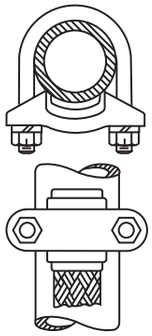
GROUND ROD CLAMPS SUITABLE FOR DIRECT BURIAL

Penn-Union	Anderson	Blackburn	Burndy	Dossert	Weaver
CAB-0	–	–	GKP622W	–	–
CAB-1	–	J-AB-1/2H	GKP632W	GN-50	WB1/2
CAB-2	–	J-AB-5/8H	–	GN-62	WB5/8
CAB-3	–	J-AB-3/4H	GKP642W	GN-75	WB3/4
CAB-4	–	–	–	–	–
CAB-5	–	–	GKP652W	–	–
CAB-6	–	–	–	–	WB1

Economy Clamps

Penn-Union	Anderson	Blackburn	Burndy	Weaver
CEB-1	GC-4	G4	GRC-12	WG4
CEB-2	GC-5	G5	GRC-58	WG5
CEB-3	GC-6	G6	GRC-34	WG6

GROUND CLAMP CONNECTORS



For clamping braid, cable or strip copper to pipe.

Penn-Union	Anderson	Burndy	Dossert
GO-0	GC-109-03	–	–
GO-1	GC-109-04	GG-15-1	GR-100A
GO-2	GC-109-05	GG-16-1	GR-125A
GO-3	–	GG-17-1	GR-150A
GO-4	–	GG-17-5	GR-150B
GO-4A	GC-109-06	–	–
GO-5	–	GG-18-1	GR-200A
GO-6	–	GG-18-15	GR-200B
GO-7	GC-109-07	GG-18-2	GR-200C
GO-7A	GC-109-08	–	–
GO-8	–	GG-19-2	GR-250A
GO-9	–	GG-19-25	GR-250B
GO-10	GC-109-09	GG-20-2	GR-300A
GO-11	–	GG-20-25	GR-300B
GO-12	–	GG-20-3	GR-300C
GO-13	GC-109-10	GG-21-2	GR-350A
GO-14	–	GG-21-25	GR-350B
GO-15	–	GG-21-3	GR-350C
GO-16	–	GG-22-2	GR-400A
GO-17	–	GG-22-25	GR-400B
GO-18	–	GG-22-3	GR-400C
GO-19	–	GG-22-35	GR-400D

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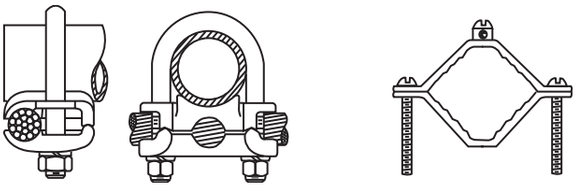
COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)

GROUNDING CONNECTORS



GROUND CLAMP CONNECTORS

SUITABLE FOR DIRECT BURIAL

Universal parallel or 90° cable connection to rod or pipe

Penn-Union	Anderson	Burndy	Dossert
GPL-1	GC-111-2A	GAR-114C	GPC-25-4
GPL-2	GC-111-2B	GAR-1126	GPC-25-13
GPL-3	GC-111-2C3	GAR-1129	GPC-25-25
GPL-4	–	GAR-644C	GPC-38-4
GPL-5	–	GAR-6426	GPC-38-13
GPL-6	–	GAR-6429	GPC-38-25
GPL-7 •	GC-111-3D	GAR-6434	GPC-38-50
GPL-8	**	GAR-144C	GPC-75-4
GPL-9	**	GAR-1426	GPC-75-13
GPL-10	**	GAR-1429	GPC-75-25
GPL-12 •	**	GAR-1439	GPC-75-50
GPL-13 •	**	–	GPC-75-75
GPL-14	GC-111-4A	GAR-154C	GPC-100-4
GPL-15	GC-111-4B	GAR-1526	GPC-100-13
GPL-16	GC-111-4C	GAR-1529	GPC-100-25
GPL-17 •	**	GAR-1534	GPC-100-50
GPL-18 •	**	GAR-1539	GPC-100-75
GPL-20	GC-111-5A	GAR-164C	GPC-125-4
GPL-21	GC-111-5B	GAR-1626	GPC-125-13
GPL-22	GC-111-5C	GAR-1629	GPC-125-25
GPL-23 •	**	GAR-1634	GPC-125-50
GPL-24 •	**	GAR-1639	GPC-125-75
GPL-25 •	**	–	GPC-125-100
GPL-26	GC-111-6A	GAR-174C	GPC-150-4
GPL-27	GC-111-6B	GAR-1726	GPC-150-13
GPL-28	GC-111-6C	GAR-1729	GPC-150-25
GPL-29 •	**	GAR-1734	GPC-150-50
GPL-30 •	**	GAR-1739	GPC-150-75
GPL-31 •	**	–	GPC-150-100
GPL-32	GC-111-7A	GAR-184C	GPC-200-4
GPL-33	GC-111-7B	GAR-1826	GPC-200-13
GPL-34	GC-111-7C	GAR-1829	GPC-200-25
GPL-35 •	**	GAR-1834	GPC-200-50
GPL-36 •	**	GAR-1839	GPC-200-75
GPL-37 •	**	–	GPC-200-100
GPL-38	–	GAR-194C	GPC-250-4
GPL-39	GC-111-8B	GAR-1926	GPC-250-13
GPL-40	GC-111-8C	GAR-1929	GPC-250-25
GPL-41 •	**	GAR-1934	GPC-250-50
GPL-42 •	**	GAR-1939	GPC-250-75
GPL-43 •	**	–	GPC-250-100
GPL-44	–	GAR-204C	GPC-300-4
GPL-45	GC-111-9B	GAR-2026	GPC-300-13
GPL-46	GC-111-9C	GAR-2029	GPC-300-25
GPL-47 •	**	GAR-2034	GPC-300-50
GPL-48 •	**	GAR-2039	GPC-300-75
GPL-49 •	**	–	GPC-300-100
GPL-50	–	GAR-214C	GPC-350-4
GPL-51	GC-111-10B	GAR-2126	GPC-350-13
GPL-52	GC-111-10C	GAR-2129	GPC-350-25
GPL-53 •	**	GAR-2134	GPC-350-50
GPL-54 •	**	GAR-2139	GPC-350-75
GPL-55 •	**	–	GPC-350-100
GPL-56	–	GAR-224C	GPC-400-4
GPL-57	GC-111-11B	GAR-2226	GPC-400-13
GPL-58	GC-111-11C	GAR-2229	GPC-400-25
GPL-59 •	**	GAR-2234	GPC-400-50
GPL-60 •	**	GAR-2239	GPC-400-75
GPL-61 •	**	–	GPC-400-100
GPL-68	–	GAR-244C	–
GPL-69	GC-111-13B	GAR-2426	–
GPL-70	GC-111-13C	GAR-2429	–
GPL-71 •	**	GAR-2434	–
GPL-75	GC-111-14B	–	–
GPL-76	GC-111-14C	–	–

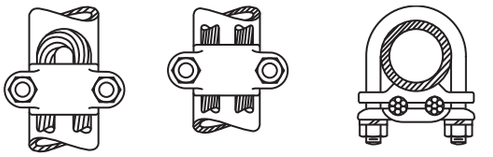
***Wire and/or pipe sizes are not the same.*
Consult factory for your needs.
•UL listing limited to a maximum wire size of 250MCM by UL467

GROUND CLAMPS

For bonding ground wires to water pipe

Penn-Union	Blackburn	Weaver	Ilsco
KP-1*	BJ	J	BGC-1
KP-2*	BJ2	J-2	BGC-2
KP-4*	BJ2124	J-2124	–
GC-1*	–	–	ACG-1

**UL Listed*



GROUND CLAMP CONNECTORS

For clamping two cables or a looped cable or wire to pipe.

Penn-Union	Anderson*	Burndy	Dossert
GU-00	GC-110-31D	GD-1426	–
GU-1	–	GD-154C	GW-100-4
GU-2	GC-110-41C	GD-1526	GW-100-13
GU-3	GC-110-42D	GD-1529	GW-100-25
GU-4	–	GD-164C	GW-125-4
GU-5	GC-110-51C	GD-1626	GW-125-13
GU-6	GC-110-52D	GD-1629	GW-125-25
GU-7	–	GD-174C	GW-150-4
GU-8	GC-110-61C	GD-1726	GW-150-13
GU-9	GC-110-62C	GD-1729	GW-150-25
GU-10	–	GD-184C	GW-200-4
GU-11	GC-110-81C	GD-1826	GW-200-13
GU-12	GC-110-82C	GD-1829	GW-200-25
GU-13	**	GD-1834	GW-200-50
GU-14	–	GD-194C	GW-250-4
GU-15	GC-110-101C	GD-1926	GW-250-13
GU-16	GC-110-102C	GD-1929	GW-250-25
GU-17	**	GD-1934	GW-250-50
GU-18	–	–	–
GU-19	–	GD-204C	GW-300-4
GU-20	GC-110-121C	GD-2026	GW-300-13
GU-21	GC-110-122C	GD-2029	GW-300-25
GU-22	**	GD-2034	GW-300-50
GU-23	–	GD-2039	GW-300-75
GU-25	–	GD-214C	GW-350-4
GU-26	GC-110-141C	GD-2126	GW-350-13
GU-27	GC-110-142C	GD-2129	GW-350-25
GU-28	**	GD-2134	GW-350-50
GU-29	–	**	GW-350-75
GU-30	–	–	GW-350-100
GU-31	–	GD-224C	GW-400-4
GU-32	GC-110-161C	GD-2226	GW-400-13
GU-33	GC-110-162C	GD-2229	GW-400-25
GU-34	**	GD-2234	GW-400-50
GU-35	–	**	GW-400-75
GU-36	–	–	GW-400-100

**Anderson parts are for one, two or three cables.*
***Wire and/or pipe sizes are not the same.*
Consult factory for your needs.

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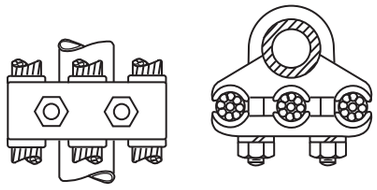
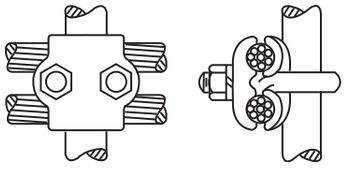
COMPARATIVE LISTING

GROUNDING CONNECTORS





GROUND CLAMP CONNECTORS

For clamping three equal size cables to pipe or rod

Penn-Union	Anderson*	Burndy	Dossert
GR-1	–	GK-114C	GZ-25-4
GR-2	–	GK-1126	GZ-25-13
GR-3	–	–	–
GR-4	–	GK-644C	GZ-38-4
GR-5	–	GK-6426	GZ-38-13
GR-6	–	–	–
GR-7	–	–	GZ-38-50
GR-8	–	GK-144C	GZ-75-4
GR-9	**	GK-1426	GZ-75-13
GR-10	**	GK-1429	–
GR-11	–	GK-1434	–
GR-12	–	–	–
GR-13	–	GK-154C	GZ-100-4
GR-14	GC-110-41C	GK-1526	GZ-100-13
GR-15	GC-110-42D	GK-1529	–
GR-16	–	GK-1534	GZ-100-50
GR-17	–	**	GZ-100-75
GR-18	–	–	–
GR-19	–	–	GZ-125-4
GR-20	GC-110-51C	GK-1626	GZ-125-13
GR-21	GC-110-52C	–	–
GR-22	**	–	–
GR-23	–	–	–
GR-24	–	–	–
GR-25	–	–	–
GR-26	GC-110-61C	GK-1726	GZ-150-13
GR-27	GC-110-62C	GK-1729	–
GR-28	**	GK-1734	–
GR-29	–	**	–
GR-30	–	–	–
GR-31	–	GK-184C	GZ-200-4
GR-32	GC-110-81C	GK-1826	GZ-200-13
GR-33	GC-110-82C	–	–
GR-34	**	–	–
GR-35	–	**	GZ-200-75
GR-36	–	–	–
GR-37	–	–	–
GR-38	GC-110-101C	GK-1926	GZ-250-13
GR-39	GC-110-102C	GK-1929	–
GR-40	**	GK-1934	GZ-250-50
GR-41	–	**	–
GR-42	–	–	GZ-250-100
GR-43	–	GK-204C	GZ-300-4
GR-44	GC-110-121C	GK-2026	–
GR-45	GC-110-122C	GK-2029	–
GR-46	**	GK-2034	–
GR-47	–	**	–
GR-48	–	–	–
GR-49	–	–	–
GR-50	GC-110-141C	GK-2126	–
GR-51	GC-110-142C	–	–
GR-60	–	GK-224C	–
GR-61	GC-110-161C	GK-2226	–
GR-62	GC-110-162C	GK-2229	–

**Anderson parts are for one, two, or three cables.*
***Wire and/or pipe sizes are not the same.*
Consult factory for your needs.

GROUND CLAMP CONNECTORS

For clamping parallel cables or wires to pipe or rod

Penn-Union	Anderson	Burndy	Dossert
GT-1	GC-115-2A	GP-114D	GS-25-4
GT-2	GC-115-2B	GP-1126	GS-25-13
GT-3	GC-115-2C3	GP-1129	GS-25-25
GT-4	GC-115-2A	GP-644C	GS-38-4
GT-5	GC-115-2B	GP-6426	GS-38-13
GT-6	GC-115-2C3	GP-6429	GS-38-25
GT-7	–	GP-6434	–
GT-8	GC-115-3A	GP-144C	GS-75-4
GT-9	GC-115-3B	GP-1426	GS-75-13
GT-10	GC-115-3C3	GP-1429	GS-75-25
GT-11	–	–	GS-75-50
GT-12	–	**	–
GT-13	GC-115-4A	GP-154C	GS-100-4
GT-14	GC-115-4B	GP-1526	GS-100-13
GT-15	–	GP-1529	GS-100-25
GT-16	–	–	GS-100-50
GT-17	–	**	GS-100-75
GT-18	GC-115-5A	GP-164C	GS-125-4
GT-19	GC-115-5B	GP-1626	GS-125-13
GT-20	–	GP-1629	GS-125-25
GT-21	**	GP-1634	GS-125-50
GT-22	**	**	GS-125-75
GT-23	**	**	–
GT-24	GC-115-6A	GP-174C	GS-150-4
GT-25	GC-115-6B	GP-1726	GS-150-13
GT-26	–	GP-1729	GS-150-25
GT-27	**	GP-1734	GS-150-50
GT-28	**	**	GS-150-75
GT-29	**	**	GS-150-100
GT-30	GC-115-7A	GP-184C	GS-200-4
GT-31	GC-115-7B	GP-1826	GS-200-13
GT-32	–	GP-1829	GS-200-25
GT-33	**	GP-1834	GS-200-50
GT-34	**	**	GS-200-75
GT-35	**	**	GS-200-100
GT-36	–	GP-194C	GS-250-4
GT-37	GC-115-8B	GP-1926	GS-250-13
GT-38	–	GP-1929	GS-250-25
GT-39	**	GP-1934	GS-250-50
GT-40	**	**	GS-250-75
GT-41	**	**	GS-250-100
GT-42	–	GP-204C	GS-300-4
GT-43	GC-115-9B	GP-2026	GS-300-13
GT-44	–	GP-2029	GS-300-25
GT-45	**	GP-2034	GS-300-50
GT-46	**	**	GS-300-75
GT-47	**	**	GS-300-100
GT-48	–	GP-214C	–
GT-49	–	GP-2126	–
GT-50	–	GP-2129	–
GT-51	**	GP-2134	–
GT-52	**	**	–
GT-53	**	**	–
GT-54	–	–	–
GT-55	–	GP-2229	–
GT-56	**	GP-2234	–

***Wire and/or pipe sizes are not the same.*
Consult factory for your needs.

PENNUNION
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COMPARATIVE LISTING (UL & CSA FOR PENN-UNION)

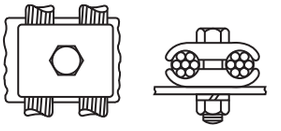
GROUNDING CONNECTORS

GROUND CLAMP CONNECTORS

For clamping cable or wires to flat bar.

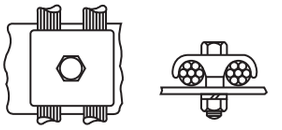
Type GH

Penn-Union	Anderson	Burndy	Dossert
GH-1	–	GC-4C4C	GA-4
GH-2	GC-143-01	GC-2626	GA-13
GH-3	GC-143A-02	GC-2929	GA-25
GH-4	GC-143-03	GC-3434	GA-50
GH-5	–	**	**
GH-6	–	**	**
GH-7	–	–	–



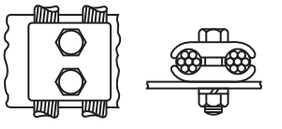
Type GHS

GHS-1	–	GCM-4C	GAM-4
GHS-2	GC-142-G1	GCM-26	GAM-13
GHS-3	GC-142-G2	GCM-29	GAM-25
GHS-4	GC-142-G3	GCM-34	GAM-50
GHS-5	–	**	**
GHS-6	–	**	**
GHS-7	–	–	–



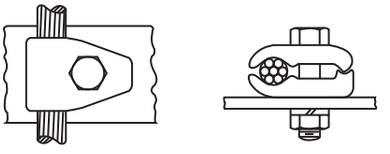
Type GJ

GJ-1	–	GL-4C4C	GAA-4
GJ-2	GC-144-01	GL-2626	GAA-13
GJ-3	GC-144-02	GL-2929	GAA-25
GJ-4	GC-144-03	GL-3434	GAA-50
GJ-5	–	**	**
GJ-6	–	**	**
GJ-7	–	–	–



Type GM

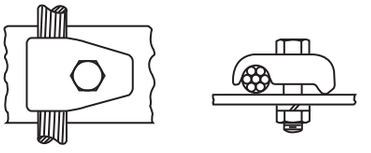
GM-1 •	–	GB-4C	GF-4
GM-2 •	**	GB-26	GF-13
GM-3 •	**	GB-29	GF-25
GM-4	GC-141-03	GB-34	GF-50
GM-5	–	GB-39	**
GM-6	GC-141-10	**	**



SUITABLE FOR DIRECT BURIAL

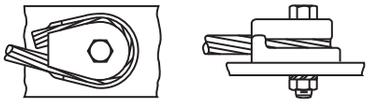
Type GMS

GMS-1 •	–	GBM-4C	GFM-4
GMS-2 •	GC-140-01	GBM-26	GFM-13
GMS-3 •	GC-140-02	GBM-29	GFM-25
GMS-4	GC-140-03	GBM-34	GFM-50
GMS-5	**	**	**
GMS-6	**	GBM-44	**



Type GWL

GWL-1 •	GC-126-01	GZ-4C-38	GL-4-38
GWL-2 •	–	GZ-4C-12	GL-4-50
GWL-3 •	GC-126-02	GZ-26-38	GL-13-38
GWL-4 •	–	GZ-26-12	GL-13-50
GWL-5 •	GC-126-03	GZ-29-38	GL-25-38
GWL-6 •	–	GZ-29-12	GL-25-50
GWL-7 •	–	GZ-29-58	GL-25-63



***Cable range different. Consult factory for your need.*
•UL and CUL listed suitable for direct burial

CONTACT COMPOUND

Penn-Union	Anderson	Blackburn	Burndy	Dossert	Ilsco	T & B
–	155	–	PENETROX A	Z5	–	21059 (½ pt. only)
–	200-GM	–	PENETROX A2	–	–	–
CUAL-AID #11C	173	Contax Type CT	PENETROX A13	ZH	DE-OX	–
CUAL-AID #12C	173-GM	–	PENETROX A14	–	–	–

All of above must specify quantity volume (½ pt. Flask, Pint Can, Quart Can or 5 Gallon Can).
CUAL-AID #11 & 12 are synthetic based which may be substituted for petroleum based product.

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COMPARATIVE LISTING (UL & CSA FOR PENN-UNION) SERVICE POST CONNECTORS

SUITABLE FOR DIRECT BURIAL

SUITABLE FOR DIRECT BURIAL

BRONZE SERVICE POSTS

Male Type – For one cable

Penn-Union	Burndy	Dossert
SSS-0	KC-15	DGN-1
SSS-0A1	KC-15B1	–
SSS-1	KC-17*	DGN-2
SSS-1A1	KC-17B1*	–
SSS-2	KC-20	DGN-3
SSS-2A1	KC-20B1	–
SSS-3	KC-22*	DGN-5
SSS-3A1	KC-22B1*	–
SSS-4	KC-23*	DGN-6
SSS-4A1	KC-23B1*	–
SSS-5	KC-25	DGN-10
SSS-5A1	KC-25B1	–
SSS-6	KC-26*	DGN-13
SSS-6A1	KC-26B1*	–
SSS-8	KC-28*	DGN-21
SSS-8A1	KC-28B1*	–
SSS-9	KC-31*	DGN-35
SSS-9A1	KC-31B1*	–
SSS-10	KC-34*	DGN-50
SSS-10A1	KC-34B1*	–
SSS-11	KC-39	DGN-75
SSS-11A1	KC-39B1	–
SSS-12	KC-44*	DGN-100
SSS-12A1	KC-44B1*	–

Male Type – For two cables

Penn-Union	Burndy	Dossert
SCS-0	K2C-15	DGM-1
SCS-0A1	K2C-15B1	–
SCS-1	K2C-17	DGM-2
SCS-1A1	K2C-17B1	–
SCS-2	K2C-20	DGM-3
SCS-2A1	K2C-20B1	–
SCS-3	K2C-22	DGM-5
SCS-3A1	K2C-22B1	–
SCS-4	K2C-23	DGM-6
SCS-4A1	K2C-23B1	–
SCS-5	K2C-25	DGM-10
SCS-5A1	K2C-25B1	DGM-10L
SCS-6	K2C-26	DGM-13
SCS-6A1	K2C-26B1	–
SCS-8	K2C-28	DGM-21
SCS-8A1	K2C-28B1	–
SCS-9	K2C-31	DGM-35
SCS-9A1	K2C-31B1	–
SCS-10	K2C-34	DGM-50
SCS-10A1	K2C-34B1	–
SCS-11	K2C-39	DGM-75
SCS-11A1	K2C-39B1	–
SCS-12	K2C-44	DGM-100
SCS-12A1	K2C-44B1	–

Female Type – For one cable

Penn-Union	Burndy	Dossert
STS-0	KF-15	DGG-1
STS-1	KF-17	DGG-2
STS-2	KF-20*	DGG-3
STS-3	KF-22*	DGG-5
STS-4	KF-23*	DGG-6
STS-5	KF-25	DGG-10
STS-6	KF-26	DGG-13
STS-8	KF-28*	DGG-21
STS-9	KF-31*	DGG-35
STS-10	KF-34*	DGG-50
STS-11	KF-39*	DGG-75
STS-12	KF-44*	DGG-100

Female Type - For two cables

Penn-Union	Burndy	Dossert
SDS-0	K2F-15	DGF-1
SDS-1	K2F-17	DGF-2
SDS-2	K2F-20	DGF-3
SDS-3	K2F-22	DGF-5
SDS-4	K2F-23	DGF-6
SDS-5	K2F-25	DGF-10
SDS-6	K2F-26	DGF-13
SDS-8	K2F-28	DGF-21
SDS-9	K2F-31	DGF-35
SDS-10	K2F-34	DGF-50
SDS-11	K2F-39	DGF-75
SDS-12	K2F-44	DGF-100

**Difference in minimum wire size.*

486B LISTED
AL9CU

Aluminum Clear Insulated Power Bar

Penn-Union Corp.			Polaris/NSI			Penn-Union Corp.			Polaris/NSI		
Catalog No.	Wire Range	Entry	Catalog No.	Wire Range	Entry	Catalog No.	Wire Range	Entry	Catalog No.	Wire Range	Entry
IPB-NA4-2D	4-14 Sol.	Dual	ITO-4	4-14 Sol.	Alternate	IPB-NA250-8D	250-10 Sol.	Dual	IPL-250-8	250-6	Single
IPB-NA4-2S	4-14 Sol.	Single	IT-4	4-14 Sol.	Single				IPLD-250-8	250-6	Dual
IPB-NA4-4D	4-14 Sol.	Dual	IPL-4-4	4-14 Sol.	Single	IPB-NA350-2D	350-10 Sol.	Dual	IT-350	350-6	Dual (2X1)
IPB-NA4-4S	4-14 Sol.	Single	IPL-4-4	4-14 Sol.	Single				IPL-350-2	350-6	Single
IPB-NA2/0-2S	2/0-14 Sol.	Single	IT-1/0	1/0-14	Single	IPB-NA350-3D	350-10 Sol.	Dual	IPL-350-3	350-6	Single
IPB-NA2/0-2D	2/0-14 Sol.	Dual	ITO-1/0	1/0-14	Alternate				IPLD-350-3	350-6	Dual
IPB-NA2/0-3D	2/0-14 Sol.	Dual	IPL-1/0-3	1/0-14	Single	IPB-NA350-4D	350-10 Sol.	Dual	IPL-350-4	350-6	Single
IPB-NA2/0-4D	2/0-14 Sol.	Dual	IPL-1/0-4	1/0-14	Single				IPLD-350-4	350-6	Dual
IPB-NA2/0-4S	2/0-14 Sol.	Single	IPL-1/0-4	1/0-14	Single	IPB-NA350-6D	350-10 Sol.	Dual	IPL-350-6	350-6	Single
IPB-NA2/0-6D	2/0-14 Sol.	Dual	IPL-1/0-6	1/0-14	Single				IPLD-350-6	350-6	Dual
IPB-NA250-2D	250-10 Sol.	Dual	IT-3/0	3/0-6	Single	IPB-NA350-8D	350-10 Sol.	Dual	IPL-350-8	350-6	Single
			ITO-3/0	3/0-6	Alternate				IPLD-350-8	350-6	Dual
			IT-250	250-6	Dual (2X1)	IPB-NA500-2D	500-6 Sol.	Dual	IT-500	500-4	Dual (2X1)
			IPL-250-2	250-6	Single				IPL-500-2	500-4	Single
IPB-NA250-3D	250-10 Sol.	Dual	IPL-3/0-3	3/0-6	Single	IPB-NA500-3D	500-6 Sol.	Dual	IPL-500-3	500-4	Single
			IPL-250-3	250-6	Single				IPLD-500-3	500-4	Dual
			IPLD-250-3	250-6	Dual	IPB-NA500-4D	500-6 Sol.	Dual	IPL-500-4	500-4	Single
IPB-NA250-4D	250-10 Sol.	Dual	IPL-250-4	250-6	Single				IPLD-500-4	500-4	Dual
			IPLD-250-4	250-6	Dual	IPB-NA500-6D	500-6 Sol.	Dual	IPL-500-6	500-4	Single
IPB-NA250-6D	250-10 Sol.	Dual	IPL-250-6	250-6	Single				IPLD-500-6	500-4	Dual
			IPLD-250-6	250-6	Dual	IPB-NA500-8D	500-6 Sol.	Dual	IPL-500-8	500-4	Single
									IPLD-500-8	500-4	Dual

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General Comments On Connectors

Wherever there is a conductor carrying electric current, it is necessary to make a connection. This is true whether the conductor is a solid or stranded wire, a rectangular bus bar or a piece of copper pipe. This also is true whether the conductor is an inch in length, a foot in length, or several hundred feet in length. Conductors are joined by several methods. The oldest methods are the fusion of conductors by means of soldering, brazing or welding, with the very oldest being the blacksmith form of welding. Joining techniques of this type require special skill and special equipment, consequently, other means have been developed which are more generally applied. These are the pressure method which is divided between the bolted or mechanical type joint and the compression type connector which uses special tools to develop the necessary forces. One other joining technique that is frequently used is soldering. However, this has its limitations, because of the possibility of the joint's melting out during temporary overload conditions.

Connector Materials

Since most electrical conductors are either copper or aluminum, it also has become standard for the connector industry to make connectors of copper and aluminum. The category of copper connectors includes pure copper and alloys of bronze and brasses; these materials can be fabricated by casting, forging, extruding, punching, or any combination of these processes. The aluminum connectors are made of alloys used to provide the best electrical conductivity; however, in some cases, a compromise material is used to give optimum combination of electrical conductivity and mechanical strength. A general practice has been to use copper connectors for copper conductor and aluminum connectors for aluminum conductor. In some cases where a transition from copper to aluminum conductors must be made, it is advantageous to use a bimetallic connector, thus making the transition in the connector rather than in the junction of the connector and conductor.

Welding Connectors

Welding, particularly of aluminum bus, has become increasingly popular because the materials are united in a homogeneous bond. The bus can be joined directly, or through the use of weldments. Weldments eliminate the need for field cutting and matching. They also act as fixtures and help align the bus structure during erection. Tungsten inert gas (TIG) has become increasingly popular for joining of aluminum conductors.

Pressure Connectors–Bolted and Compression

The simplest and most widely used method of joining conductors is by means of externally applied pressure. This pressure can be developed by means of clamp type connectors using bolts and nuts or by compression connectors using special compression tools to develop the necessary forces.

As two surfaces are brought together to make a joint, the microscopic peaks touch each other as shown in Figure 1. As force continues to be applied, the relatively few peaks flatten out into a large number of plateaus and current is transferred across the interface. This relationship is clearly shown in Figure 2 in which resistance is plotted against force. The important thing about this relationship is that once sufficient force has been applied to establish a safe value of resistance, considerable relaxation can occur before the resistance starts to rise again. A well designed clamp or compression connector thus has some safety factor built into it right from the beginning.

All clamp type connectors depend upon the thrust developed by the bolts to deliver the force necessary for a sound, stable connection. For a bolt to do its job, it must have adequate strength so that it can be torqued up properly, it must develop correct thrust for the installation torque recommended, and above all, it must be reliable and not fail during service.

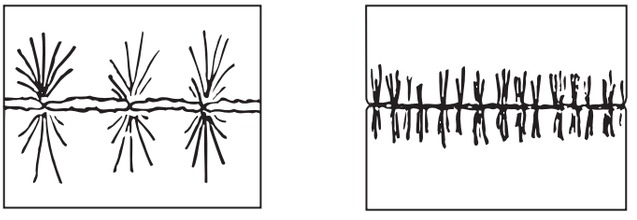

Figure 1. As force is increased the surface roughness flattens out creating a multiplicity of parallel paths.

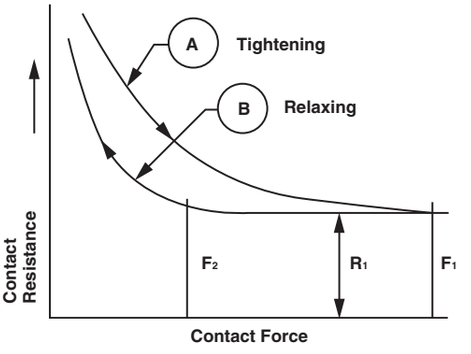

Figure 2. Contact resistance curves.

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Table I shows the recommended tightening torques for silicon bronze, stainless steel, galvanized steel and aluminum alloy hardware. The shaded portion represents torques presently recommended by NEMA-CC1-1984 specification.

TABLE I
TIGHTENING TORQUES

Bolt Diameter	Nominal Torque Values			
	Silicon Bronze, Galvanized or Stainless Steel		Aluminum Alloy (Lubricated)	
	Ft.-Lbs.	Inch-Lbs.	Ft.-Lbs.	Inch-Lbs.
5/16-18	15	180	–	–
3/8-16	20	240	14	168
1/2-13	40	480	25	300
5/8-11	55	660	40	480
3/4-10	80	960	70	840

For optimum efficiency, it is necessary that the correct bolt, nut and washer combination be used with the correct combination of conductor materials. Table II shows acceptable methods of joining different combinations of bus bar. Where different combinations of metals are being joined, a follow-up device such as a conical pressure washer is usually recommended if one, or both, bus materials are soft drawn aluminum. If both bars are hard drawn, large flat washers will suffice regardless of the bolt materials.

Other considerations which should be taken into account when selecting hardware are corrosion and vibration. For example, if severe corrosion is anticipated, non-corrosive materials such as stainless steel or silicon bronze, should be selected in preference to galvanized steel. If vibration is anticipated, the use of locking washers should be considered.

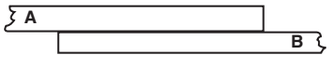
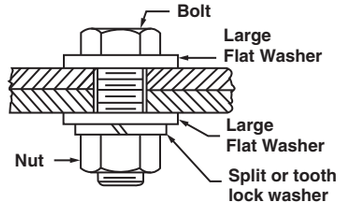
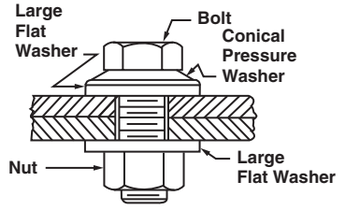


TABLE II
METHODS OF JOINING BUS BARS

If "A" Bar is	Copper	Aluminum	Steel	Aluminum	Steel
and If "B" Bar is	Copper	Copper	Copper	Aluminum	Aluminum
Hard Drawn Bus such as aluminum alloy. 	(1) Silicon Bronze (2) Stainless Steel	(1) Silicon Bronze (2) Aluminum (3) Stainless Steel	(1) Silicon Bronze (2) Stainless Steel	(1) Aluminum (2) Stainless Steel (3) Silicon Bronze, Plated	(1) Aluminum (2) Stainless Steel
Soft Drawn Bus such as EC-H13 Aluminum. 	(1) Silicon Bronze (2) Stainless Steel	(1) Silicon Bronze (2) Aluminum (3) Stainless Steel (4) Conical Pressure Washer Plated or Stainless Steel	(1) Silicon Bronze (2) Stainless Steel	(1) Aluminum (2) Stainless Steel (3) Silicon Bronze Plated (4) Conical Pressure Washer Plated or Stainless Steel	(1) Aluminum (2) Stainless Steel (3) Conical Pressure Washer Plated or Stainless Steel

(1) Denotes preferred hardware usage
Note: Contact sealant recommended between aluminum to aluminum and aluminum to copper connections, unless other protective measures are taken.

Bar Connections

The tang of a compression or a mechanical connector is a bus bar, which connects to another bus bar. If you remember the rule about wire brushing and using joint compound with bare (unplated) aluminum, you cannot go wrong. Plated parts should be cleaned with a solvent if they are dirty, but never abrade or otherwise disturb the plating! Fig. 3 shows a typical bar connection and the type of hardware used.

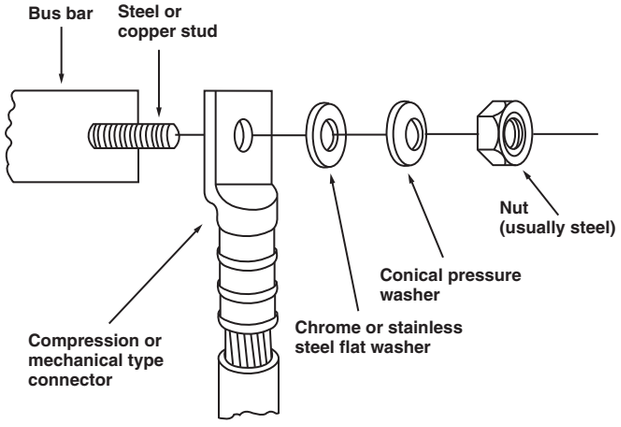


Figure 3. Contact surfaces must be clean. Use a joint compound with bare aluminum. Conical pressure washer is usually recommended if one, or both, bus materials are soft drawn aluminum.

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Compression connector crimping methods

To retain UL or CSA rating, Installation tools and methods must be matched to the connectors used

Of all the methods used to make electrical connections, compression of the connector onto the cable with some type of compression tool is considered by most installers to be the most permanent of the common connection methods. To maintain Underwriters Laboratories Listing (UL) or Canadian Standards Association Certification (CSA) for a completed compression connection, it is necessary to use the installation tools and installation methods which have been qualified for the connectors by those organizations during the listing/certification processes.

Cable preparation

It is imperative that the cable strands and the compression connector be clean and free of dirt and/or corrosion. This is particularly important when making connections on cables which have been installed for a period of time.

Connectors which are Underwriters Laboratories Listed or Canadian Standards Association Certified may contain installation instructions in the connector carton which may include information such as usable cable types, insulation strip lengths, and crimping tools for specific connectors. Proper preparation of the cable can make the difference between a permanent connection and a connection which may require a service call at some point in the future.

The cable material will dictate the type of connector which can be used in the compression connection. Copper cable can be installed in a copper compression connector which as a “CU” rating or in an aluminum compression connector which has a “AL9CU” rating. Aluminum cable on the other hand can ONLY be installed in an aluminum compression connector which has a rating of “AL” or “AL7CU”. ALUMINUM CABLE CAN NEVER BE INSTALLED IN A COPPER COMPRESSION CONNECTOR.

Once the cable preparation has been accomplished and the proper type and size of compression connector has been selected, the connector manufacturer’s recommendations for choice of compression tooling and compression methods should be followed to maintain the UL and/or CSA rating for the completed connection. Connector manufacturers will often be in a position to specify several equivalent UL/CSA crimping recommendations for a specific connector installation. For connectors from No. 22 AWG through No. 10 AWG the compression tools most often have mechanical operation. For No. 8 AWG through 4/0 AWG the compression tools could use either mechanical or hydraulic means to apply the crimping force. Historically at 250 kcmil and above in wire size, the crimping force was almost always applied by a hydraulic crimping tool. With the advent of the TDM500 that has changed to 500 kcmil due to the extra available leverage generated by the extendable handles. Mechanical tools for small wire sizes are generally single leverage types, while those for the medium sized cables apply the crimping force via a compound leverage system. Mechanical crimping tools make either a surrounding type of crimp (Fig. 4A) or a nest and indentor crimp shape (Fig. 4B). The hydraulic crimping tools used for the medium and the large cable sizes can have quite a variety of crimping die systems and hydraulic pressure sources.

Die-type crimpers

The die-type tools require that a separate set of inserts be placed into the crimping tool head for each different size and type (AL or CU) of connector that is to be crimped. These crimping die inserts are shaped to compress their specific connector size the correct amount when the full force of the hydraulic system of the tool is applied to them. Die type crimping tools generally produce crimps that surround the barrel of the connector with either a rounded oval or a hexagonally shaped outer surface.

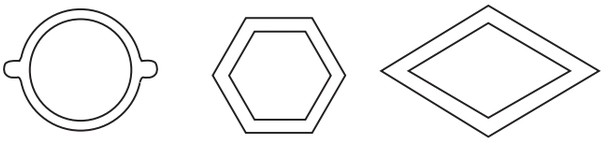
Many of the copper and the aluminum connectors used in the electrical contracting industry have a color code applied to them which matches up with a crimping die reference of the same color. This color code is meant to allow the installer to be able to find the correct die more quickly from as many as several dozen die sets that may be required to crimp all of the connectors within the installation range of the specific hydraulic crimping tool.

Certain styles of connectors used in the electric utility industry are designed to minimize the number of crimping die sets that each line crew must carry. These special connectors are designed to have a constant outside diameter on the crimp barrel portion of the connector with various inside diameter to match conductor size. For example, a popular grouping of electric utility connectors has a constant outside diameter of 0.640 inches for a series of cable sizes from No. 10 AWG through 1/0 AWG and all of the individual connectors are crimped with the same die insert. Electric utilities also use a series of compression taps with a cross section shape similar to the letter “H” which are grouped to install most cable size combinations between No. 6 AWG and 500 kcmil with only three crimping die sizes.

Dieless crimpers

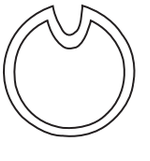
The other class of hydraulic crimping tools are the dieless tools. Dieless actually means that there is no die insert change needed when one needs to crimp a different connector size within the range of the tool. The dieless hydraulic tools can be further classified by the three general crimp shapes that are made. One group of dieless tools makes crimps which are of the nest and indentor style with the next being a stationary portion of the tool and the indentor moving with the hydraulic ram. A second grouping of dieless tools makes use of multiple indentors which indent the connector from multiple sides without the use of a nest. The third group of dieless tools provides a crimp which surrounds the connector barrel and has an appearance more like that of a die type tool than either of the two indentor style dieless tools can provide. All of the dieless tool types are capable of crimping cylindrical connector barrels as recommended by their respective manufacturers.

FIGURE 4A



Surrounding crimp types

FIGURE 4B



Indent

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Some dieless tool brands of each type are also recommended by their manufacturers to be able to provide cable range-taking capabilities (a single connector size could be used for more than one cable size) under very specific conditions of connector brand; catalog number; cable sizes; and installation procedure for which these tool manufacturers have tested and obtained UL and/or CSA listing.

The necessity to maintain UL Listing and/or CSA Certification for a connector installation can limit the available combinations of connectors and crimp tools which can be used in a specific situation. Dieless compression tool systems offer decided advantages in installation flexibility and time saving, particularly if both cylindrical and H-frame connectors can be installed with a single dieless tool.

CONNECTOR COMPARISON CHART
MECHANICAL VS. COMPRESSION

The variety of connectors available to the utility engineer can be broken down into 2 general categories – bolted and compressed. The pros and cons of these different methods of making electrical connections are often puzzling to engineers and consultants. The following chart has been prepared in an effort to clarify thinking on this subject and to provide a yardstick for making a basic decision on connection methods.

	
Mechanical or Clamp Connectors	**Crimp or Compression Connectors**
Range taking and non-range taking. For pipe, cable, bar shapes, etc.	Range taking and non-range taking. For cable conductors only.
Many designs are “universal” for copper or aluminum.	Separate designs required for aluminum, or aluminum to copper.
Salvageable. Conductor can be removed and replaced if necessary. Wiring changes easily made.	Not salvageable. Conductor and connector must be cut-off and scrapped if change is necessary.
Short runs and specials easily handled by manufacturer with better delivery.	Non-standard designs and modifications may be difficult to supply.
Taping depends on design.	Easily taped.
Installed cost comparable on small jobs–higher on large volume jobs.	Installed cost generally lower, particularly where large quantities are involved.
No special tools to install. Can use screwdriver, pliers, wrench.	Special tools and dies required. If wrong tool or die is used, poor joint results.

TIGHTENING TORQUE BY BOLT TYPE

Smaller than No. 10 intended for use with No. 8 AWG or smaller conductors		
	Tightening Torque, Pound-Inches (N•m)	
	Slot Width of Screw, inch (mm)[a]	
Slot Length of Screw, Inch (mm)[b]	Smaller Than 0.047 (1.2)	0.047 (1.2) and Larger
Less than 5/32 (4)	7 (0.79)	9 (1.0)
5/32 (4)	7 (0.79)	12 (1.4)
3/16 (4.8)	7 (0.79)	12 (1.4)
7/32 (5.6)	7 (0.79)	12 (1.4)
1/4 (6.4)	9 (1.0)	12 (1.4)
9/32 (7.1)		15 (1.7)
Above 9/32 (7.1)		20 (2.3)

[a] Slot width is the nominal design value.

[b] For slot lengths of intermediate values, select torques pertaining to next shorter slot length. Slot length is to be measured at the bottom of the slot.

Socket Head Screws			
Socket Size Across Flats, Inch (mm)		Tightening Torque, Pound-Inches (N•m)	
1/8	(3.2)	45	(5.1)
5/32	(4.0)	100	(11.3)
3/16	(4.8)	120	(13.6)
7/32	(5.6)	150	(16.9)
1/4	(6.4)	200	(22.6)
5/16	(7.9)	275	(31.1)
3/8	(9.5)	375	(42.4)
1/2	(12.7)	500	(56.5)
9/16	(14.3)	600	(67.8)

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PROPERTIES OF COPPER PIPE

	Nominal Size Inches (IPS)	Outside Diameter Inches†	Inside Diameter Inches	Wall Thickness Inches	Area		Approx. Weight Lbs./ Ft.	Indoor Capacity for 30°C Temp. Rise NEMA CC1-1984 Ratings	
					Sq. Inches	Sq. CM		Indoors Amps.	Outdoors Amps.
Standard Copper Pipe†	3/8	.675	.494	.0905	.166	1.06	.641	–	–
	1/2	.840	.625	.1075	.247	1.59	.955	380	510
	3/4	1.050	.822	.1140	.335	2.16	1.30	540	710
	1	1.315	1.062	.1265	.472	3.04	1.83	650	850
	1 1/4	1.660	1.368	.1460	.694	4.48	2.69	870	1,120
	1 1/2	1.900	1.600	.1500	.825	5.32	3.20	1,020	1,280
	2	2.375	2.062	.1565	1.09	7.03	4.23	1,250	1,550
	2 1/2	2.875	2.500	.1875	1.58	10.2	6.12	1,700	2,000
	3	3.500	3.062	.2190	2.26	14.6	8.75	2,175	2,550
	3 1/2	4.000	3.500	.2500	2.95	19.0	11.4	2,575	3,050
	4	4.500	4.000	.2500	3.34	21.5	12.9	2,850	3,400
	5	5.563	5.063	.2500	4.17	26.9	16.2	3,450	4,100
	6	6.625	6.125	.2500	5.01	32.3	19.4	4,000	4,700
	8	8.625	8.000	.3125	8.16	52.6	31.6	–	–
	10	10.750	10.019	.3655	11.9	76.8	46.2	–	–
Extra Strong Copper Pipe	1/4	.540	.294	.123	.161	1.04	.624	–	–
	3/8	.675	.421	.127	.219	1.41	.847	–	–
	1/2	.840	.542	.149	.323	2.08	1.25	420	580
	3/4	1.050	.736	.157	.440	2.84	1.71	590	780
	1	1.315	.951	.182	.648	4.18	2.51	750	1,010
	1 1/4	1.660	1.272	.194	.893	5.67	3.46	975	1,250
	1 1/2	1.900	1.494	.203	1.08	6.97	4.19	1,150	1,450
	2	2.375	1.933	.221	1.49	9.68	5.79	1,500	1,850
	2 1/2	2.875	2.315	.280	2.29	14.7	8.84	1,975	2,400
	3	3.500	2.892	.304	3.05	19.7	11.8	2,475	2,950
	3 1/2	4.000	3.358	.321	3.71	23.9	14.4	2,875	3,400
	4	4.500	3.818	.341	4.45	28.8	17.3	3,100	3,800
	5	5.563	4.813	.375	6.11	39.4	23.7	3,850	4,600
	6	6.625	5.751	.437	8.49	54.8	32.9	4,500	5,200
	8	8.625	7.625	.500	12.76	82.6	49.5	–	–
	10	10.750	9.750	.500	16.10	104	62.4	–	–

ASTM-B188
†Standard OD same as rigid steel conduit.

PROPERTIES OF EXTRUDED ALUMINUM PIPE
6063-T6 ALUMINUM ALLOY – 53% IACS

Schedule 40							Schedule 80						
IPS Size	Nominal Outside Diameter Inches	Nominal Inside Diameter Inches	Nominal Wall Thickness Inches	Nominal Weight Lbs./Ft.	Current Rating Amperes Indoors*	Current Rating Amperes Outdoors†	IPS Size	Nominal Outside Diameter Inches	Nominal Inside Diameter Inches	Nominal Wall Thickness Inches	Nominal Weight Lbs./Ft.	Current Rating Amperes Indoors*	Current Rating Amperes Outdoors†
1/2	0.840	0.622	0.109	0.294	315	400	1/2	0.840	0.546	0.147	0.376	360	455
3/4	1.050	0.824	0.113	0.391	400	495	3/4	1.050	0.742	0.154	0.510	455	565
1	1.315	1.049	0.133	0.581	535	650	1	1.315	0.957	0.179	0.751	605	740
1 1/4	1.660	1.380	0.140	0.786	680	810	1 1/4	1.660	1.278	0.191	1.037	780	930
1 1/2	1.900	1.610	0.145	0.940	790	930	1 1/2	1.900	1.500	0.200	1.256	910	1070
2	2.375	2.067	0.154	1.264	1000	1155	2	2.375	1.939	0.218	1.737	1175	1355
2 1/2	2.875	2.469	0.203	2.004	1365	1550	2 1/2	2.875	2.323	0.276	2.650	1570	1780
3	3.500	3.068	0.216	2.621	1670	1895	3	3.500	2.900	0.300	3.547	1935	2195
3 1/2	4.000	3.548	0.226	3.151	1945	2170	3 1/2	4.000	3.364	0.318	4.326	2265	2530
4	4.500	4.026	0.237	3.733	2230	2460	4	4.500	3.826	0.337	5.183	2605	2880
5	5.563	5.047	0.258	5.057	2845	3080	5	5.536	4.813	0.375	7.188	3355	3635
6	6.625	6.065	0.280	6.564	3500	3735	6	6.625	5.761	0.432	9.884	4205	4490

**Indoor ratings are calculated for a 30 °C rise above an ambient temperature of 40 °C install but unconfined air and a surface emissivity, e. equal to 0.35.*
†Outdoor ratings are given for a wind velocity of 2 feet per second, an ambient air temperature of 40 °C, a conductor temperature of 70 °C (30 °C rise), and a surface emissivity, e, equal to 0.50. (NEMA CC!-1984)
ANSI-H35.2-1990 (For Dimensional Data)

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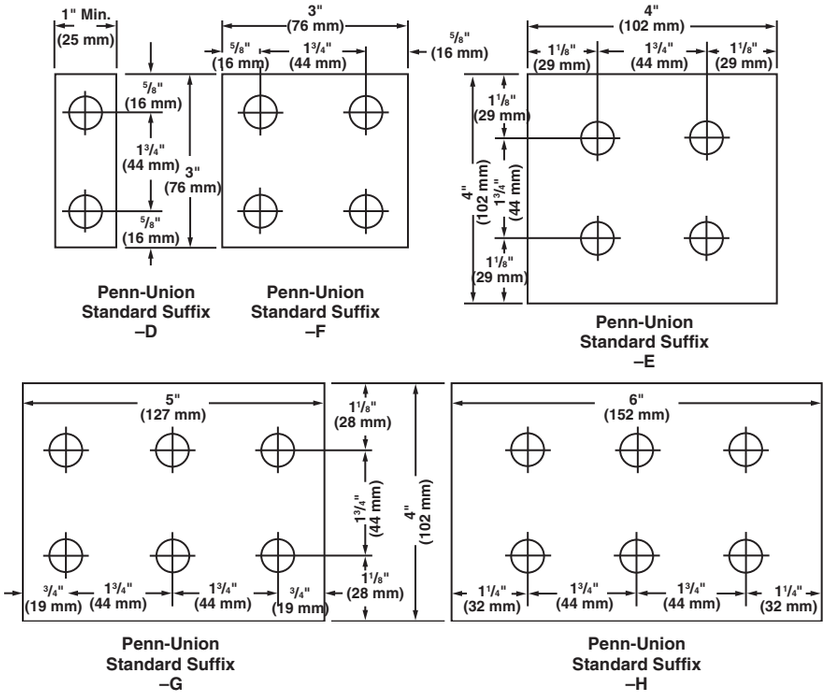
NEMA STANDARD TANGS

These figures show the arrangements of $^{9}/_{16}$" bolt holes which are standardized for electrical power connectors under NEMA Standard CC1.



SOLDERLESS CONNECTORS
STUD SIZE AND CLEARANCE HOLE DIAMETER

Stud Size	Stud Diameter	Clearance Hole Diameter
0	.060	.091-.097
1	.073	.091-.097
2	.086	.091-.097
3	.099	.117-.123
4	.112	.117-.123
5	.125	.143-.149
6	.138	.143-.149
8	.164	.170-.176
10	.190	.195-.201
12	.216	$^{17}/_{64}$
$^{1}/_{4}$	.250	$^{17}/_{64}$
$^{5}/_{16}$	.312	$^{21}/_{64}$
$^{3}/_{8}$	.375	$^{25}/_{64}$
$^{1}/_{2}$	.500	$^{33}/_{64}$

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CATALOG NUMBER SUFFIX LEGEND

A	Aluminum Hardware
B	Conical Pressure
BC	Bronze Chromate Treatment
BM	Base Mounting
BF	Bagged & Filled (with Cual-Aid)
BL-TG	Blank Tongue - (Do Not Use) - Use “U”
BP	Bulk Packed
C	Cual-Aid
CUF	Copper Flashed
CF	Center Formed Tongue
CS	Chatter Spring
DF	Dead Front
FL	Flared End
FT	Full Thread U-Bolt
GF	Grit Filled
GF	Grind Finish
GP	General Purpose - Tin (Hot Line Clamp)
GR	Grit
HDW	Hardware
HH	Hex Head
L	Extra Length
LH	Left Hand Thread
LH	Less Hardware
LS	Less Shear
LS	Less Spacer - AVT Cat. No.
LMH	Less Mounting Hardware
N	NEMA Hole Spacing in Pad
NI	Nickel Plated
NH	Less (No) Hardware
NM(*)	Not Made
P	Plated (Do Not Use)
P	Plugged Center Stop
PMH	Pad Mounting Hardware
PLN	Plain
PT	Plug & Tapered
Q	Tin Plated Braid Ferrules
RH	Right Hand
RW	Restricted Width
SSTL	Stainless Steel
SBH	Silicon Bronze Hardware
SS	Set Screw
SV	Silver Plated
SVS	Silver Plated .0005 Thick
SMH	Stud Mounting Hardware
SF	Side Formed Tongue
S	Street Light Adapter (DBA Series)
S	Stud for UTS, UTSA
S	Slotted Hex Hd FF
S	Slotted Holes Braid
SPEC	Special
SC	Screw
SKH	Socket Head
SP	Shakeproof
SH	Shear Head
SH	Stud w/Hdw for UTS, UTSA
SVC	Silver Plate Complete
SLW	Split Lockwasher
STH	Steel Hardware
STL	Steel

Terminal Blocks

SV	White Vinyl Cover
SVC	White Vinyl Cover w/Short Circuit Strip
SVVS	Two Vinyl Covers w/Mark Cover
SC	Short Circuit Strip
SCS	Short Circuit Strip w/Marking Strip
SCC	Short Circuit Strip w/Cover
ST	Marking Strip w/Studs
STC	Marking Strip w/Studs w/Cover
ST-SC	Short Circuit Strip w/Studs
ST-SCS	Short Circuit Strip w/Studs w/Marking Strip

T	Tapered Ends
TNC	Tin Plated Complete
TN	Tin Plated
TN3	Tin Plate .0003 Thick
TNB	Tin Plated - Conical Pressure
TNF	Tin & Flow
TMH	Tongue Mounting Hardware
TD	Tin Dipped
UA	Unassembled
U	Undrilled
UP	Unplated
WT	Water Tight
XF	Extra Fine Wire
ZN	Zinc Plated

229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

FAX SHEET FOR FACTORY SPECIALS (No Catalog Numbers)

- **Information Required at Factory.**
  - **Conductor Type:**
    - Material (copper, aluminum, ACSR, flex weld, etc.) _____
    - Size _____ AWG, KCMIL, MCM, MM^2 (circle one)
    - Stranding (solid, strand, compact, etc.) _____
    - Bare, Plated, Insulated _____
  - **Product Profile:**

    Type: Compression, mechanical _____
    - Pad mounting (Number holes, blank) _____
    - Pad mounting hole size and location _____
    - Plating (Bare, tin or silver and thickness) _____
    - Standards or listings required (UL, CSA, ANSI, etc.) _____
    - Special temperature requirements _____
    - Mounting hardware required size & material (Bronze, Aluminum, Steel, Stainless Steel) _____
  - **Flexible Connectors:**

    Type: Braid, shunts, lamination, wire _____
    - Circular mills, cross section, width, thickness _____
    - Ampacity _____
    - Mounting style (No. holes, style, etc.) _____
    - Mounting hole size and location _____
    - Plating (Braid, ends) bare or type _____
    - Straight or shapes _____
    - Insulated (Heat shrink) _____
    - Pad size, (Width & thickness) _____
    - Lamination (Type & size) _____

- **Attach sketch, photo, sample, drawing (very helpful).**

  Quantity initial order _____

  Estimated annual quantity _____

CUSTOMER PROFILE:

Company Name _____ SIC Code _____

Address _____

City _____ State_____ Zip _____

Your Name _____ Title _____

Fax Number _____ Telephone Number _____

Delivery Date Required _____

Please make as many copies as you need.

MAILING/FAX DIRECTIONS: Fax to 814-734-4946
Attn: Customer Service

Or mail to: Customer Service, Penn-Union Corp., 229 Waterford Street, Edinboro, PA 16412-2398

PENNUNION

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MILLIMETER/DECIMAL/FRACTION CONVERSION CHART

Milli-meter	Decimal	Fraction (inches)	Milli-meter	Decimal	Fraction (inches)	Milli-meter	Decimal	Fraction (inches)	Milli-meter	Decimal	Fraction (inches)	Milli-meter	Decimal	Fraction (inches)
0.1	.0039		5.159	.2031	13/64	10.2	.4016		15.3	.6024		20.3	.7992	
0.2	.0079		5.2	.2047		10.3	.4055		15.4	.6063		20.4	.8031	
0.3	.0118		5.3	.2087		10.319	.4063	13/32	15.478	.6094	39/64	20.5	.8071	
0.397	.0156	1/64	5.4	.2126		10.4	.4094		15.5	.6102		20.6	.8110	
0.4	.0157		5.5	.2165		10.5	.4134		15.6	.6142		20.638	.8125	13/16
0.5	.0197		5.556	.2188	7/32	10.6	.4173		15.7	.6181		20.7	.8150	
0.6	.0236		5.6	.2205		10.7	.4213		15.8	.6220		20.8	.8189	
0.7	.0276		5.7	.2244		10.716	.4219	27/64	15.875	.6250	5/8	20.9	.8228	
0.794	.0313	1/32	5.8	.2283		10.8	.4252		15.9	.6260		21.0	.8268	
0.8	.0315		5.9	.2323		10.9	.4291		16.0	.6299		21.034	.8281	53/64
0.9	.0354		5.953	.2344	15/64	11.0	.4331		16.1	.6339		21.1	.8307	
1.0	.0394		6.0	.2362		11.1	.4370		16.2	.6378		21.2	.8346	
1.1	.0433		6.1	.2402		11.113	.4375	7/16	16.272	.6406	41/64	21.3	.8386	
1.191	.0469	3/64	6.2	.2441		11.2	.4409		16.3	.6417		21.4	.8425	
1.2	.0472		6.3	.2480		11.3	.4449		16.4	.6457		21.431	.8438	27/32
1.3	.0512		6.350	.2500	1/4	11.4	.4488		16.5	.6496		21.5	.8465	
1.4	.0551		6.4	.2520		11.5	.4528		16.6	.6535		21.6	.8504	
1.5	.0591		6.5	.2559		11.509	.4531	29/64	16.669	.6563	21/32	21.7	.8543	
1.588	.0625	1/16	6.6	.2598		11.6	.4567		16.7	.6575		21.8	.8583	
1.6	.0630		6.7	.2638		11.7	.4606		16.8	.6614		21.828	.8594	55/64
1.7	.0669		6.747	.2656	17/64	11.8	.4646		16.9	.6654		21.9	.8622	
1.8	.0709		6.8	.2677		11.9	.4685		17.0	.6693		22.0	.8661	
1.9	.0748		6.9	.2717		11.906	.4688	15/32	17.066	.6719	43/64	22.1	.8701	
1.984	.0781	5/64	7.0	.2756		12.0	.4724		17.1	.6732		22.2	.8740	
2.0	.0787		7.1	.2795		12.1	.4764		17.2	.6772		22.225	.8750	7/8
2.1	.0827		7.144	.2813	9/32	12.2	.4803		17.3	.6811		22.3	.8780	
2.2	.0866		7.2	.2835		12.3	.4843		17.4	.6850		22.4	.8819	
2.3	.0906		7.3	.2874		12.303	.4844	31/64	17.463	.6875	11/16	22.5	.8858	
2.381	.0938	3/32	7.4	.2913		12.4	.4882		17.5	.6890		22.6	.8898	
2.4	.0945		7.5	.2953		12.5	.4921		17.6	.6929		22.622	.8906	57/64
2.5	.0984		7.541	.2969	19/64	12.6	.4961		17.7	.6968		22.7	.8937	
2.6	.1024		7.6	.2992		12.7	.5000	1/2	17.8	.7008		22.8	.8976	
2.7	.1063		7.7	.3031		12.8	.5039		17.859	.7031	45/64	22.9	.9016	
2.778	.1094	7/64	7.8	.3071		12.9	.5079		17.9	.7047		23.0	.9055	
2.8	.1102		7.9	.3110		13.0	.5118		18.0	.7087		23.019	.9063	29/32
2.9	.1142		7.938	.3125	5/16	13.097	.5156	33/64	18.1	.7126		23.1	.9094	
3.0	.1181		8.0	.3150		13.1	.5157		18.2	.7165		23.2	.9134	
3.1	.1220		8.1	.3189		13.2	.5197		18.256	.7188	23/32	23.3	.9173	
3.175	.1250	1/8	8.2	.3228		13.3	.5236		18.3	.7205		23.4	.9213	
3.2	.1260		8.3	.3268		13.4	.5276		18.4	.7244		23.416	.9219	59/64
3.3	.1299		8.334	.3281	21/64	13.494	.5313	17/32	18.5	.7283		23.5	.9252	
3.4	.1339		8.4	.3307		13.5	.5315		18.6	.7323		23.6	.9291	
3.5	.1378		8.5	.3346		13.6	.5354		18.653	.7344	47/64	23.7	.9331	
3.572	.1406	9/64	8.6	.3386		13.7	.5394		18.7	.7362		23.8	.9370	
3.6	.1417		8.7	.3425		13.8	.5433		18.8	.7402		23.813	.9375	15/16
3.7	.1457		8.731	.3438	11/32	13.891	.5469	35/64	18.9	.7441		23.9	.9409	
3.8	.1496		8.8	.3465		13.9	.5472		19.0	.7480		24.0	.9449	
3.9	.1535		8.9	.3504		14.0	.5512		19.050	.7500	3/4	24.1	.9488	
3.969	.1563	5/32	9.0	.3543		14.1	.5551		19.1	.7520		24.2	.9528	
4.0	.1575		9.1	.3583		14.2	.5591		19.2	.7559		24.209	.9531	61/64
4.1	.1614		9.128	.3594	23/64	14.288	.5625	9/16	19.3	.7598		24.3	.9567	
4.2	.1654		9.2	.3622		14.3	.5630		19.4	.7638		24.4	.9606	
4.3	.1693		9.3	.3661		14.4	.5669		19.447	.7656	49/64	24.5	.9646	
4.366	.1719	11/64	9.4	.3701		14.5	.5709		19.5	.7677		24.6	.9685	
4.4	.1732		9.5	.3740		14.6	.5748		19.6	.7717		24.606	.9688	31/32
4.5	.1772		9.525	.3750	3/8	14.684	.5781	37/64	19.7	.7756		24.7	.9724	
4.6	.1811		9.6	.3780		14.7	.5787		19.8	.7795		24.8	.9764	
4.7	.1850		9.7	.3819		14.8	.5827		19.844	.7813	25/32	24.9	.9803	
4.763	.1875	3/16	9.8	.3858		14.9	.5866		19.9	.7835		25.0	.9843	
4.8	.1890		9.9	.3898		15.0	.5906		20.0	.7874		25.003	.9844	63/64
4.9	.1929		9.922	.3906	25/64	15.081	.5938	19/32	20.1	.7913		25.1	.9882	
5.0	.1969		10.0	.3937		15.1	.5945		20.2	.7953		25.2	.9921	
5.1	.2008		10.1	.3976		15.2	.5984		20.241	.7969	51/64	25.3	.9961	
												25.400	1.0000	1

NOTE: Penn-Union manufactures its products only to commercial standards and sells its products only under commercial terms & conditions.

PENNUNION
229 Waterford Street • Edinboro, PA 16412-2398
Phone 814.734.1631 • Fax 814.734.4946

AWG VS. METRIC WIRE SIZES

Circ. Mils	Equivalent Circ. Mils	Awg. Size	Metric Wire Size mm²	Stranding/ Wire Diameter Per Strand		Approximate Overall Diameter		Circ. Mils	Equivalent Circ. Mils	Awg. Size	Metric Wire Size mm²	Stranding/ Wire Diameter Per Strand		Approximate Overall Diameter	
				in	mm	in	mm					in	mm	in	mm
–	987	–	0.50	1/.032	1/.813	.032	0.81	83690	–	1	–	19/.0664	19/1.69	.332	8.43
1020	–	20	–	7/.0121	7/.307	.036	0.91	–	98680	–	50	19/.073	19/1.85	.365	9.27
–	1480	–	0.75	1/.039	1/.991	.039	0.99	105600	–	1/0	–	19/.0745	19/1.89	.373	9.46
1620	–	18	–	1/.0403	1/1.02	.040	1.02	133100	–	2/0	–	19/.0837	19/2.13	.419	10.6
1620	–	18	–	7/.0152	7/.386	.046	1.16	–	138100	–	70	19/.086	19/2.18	.430	10.9
–	1974	–	1.0	1/.045	1/1.14	.045	1.14	167800	–	3/0	–	19/.094	19/2.39	.470	11.9
–	1974	–	1.0	7/.017	7/.432	.051	1.30	167800	–	3/0	–	37/.0673	37/1.71	.471	12.0
2580	–	16	–	1/.0508	1/1.29	.051	1.29	–	187500	–	95	19/.101	19/2.57	.505	12.8
2580	–	16	–	7/.0192	7/.488	.058	1.46	–	187500	–	95	37/.072	37/1.83	.504	12.8
–	2960	–	1.5	1/.055	1/1.40	.055	1.40	211600	–	4/0	–	19/.1055	19/2.68	.528	13.4
–	2960	–	1.5	7/.021	7/5.33	.063	1.60	–	237.8 MCM	–	120	37/.081	37/2.06	.567	14.4
4110	–	14	–	1/.0641	1/1.63	.064	1.63	250 MCM	–	–	–	37/.0822	37/2.09	.575	14.6
4110	–	14	–	7/.0242	7/.615	.073	1.84	300 MCM	–	–	150	37/.090	37/2.29	.630	16.0
–	4934	–	2.5	1/.071	1/1.80	.071	1.80	350 MCM	–	–	–	37/.0973	37/2.47	.681	17.3
–	4934	–	2.5	7/.027	7/.686	.081	2.06	–	365.1 MCM	–	185	37/.100	37/2.54	.700	17.8
6530	–	12	–	1/.0808	1/2.05	.081	2.05	400 MCM	–	–	–	37/.104	37/2.64	.728	18.5
6530	–	12	–	7/.0305	7/.775	.092	2.32	–	473.6 MCM	–	240	37/.114	37/2.90	.798	20.3
–	7894	–	4	1/.089	1/2.26	.089	2.26	–	473.6 MCM	–	240	61/.089	61/2.26	.801	20.3
–	7894	–	4	7/.034	7/.864	.102	2.59	500 MCM	–	–	–	37/.1162	37/2.95	.813	20.7
10380	–	10	–	1/.1019	1/2.59	.102	2.59	500 MCM	–	–	–	61/.0905	61/2.30	.814	20.7
10380	–	10	–	7/.0385	7/.978	.116	2.93	–	592.1 MCM	–	300	61/.099	61/2.51	.891	22.6
–	11840	–	6	1/.109	1/2.77	.109	2.77	600 MCM	–	–	–	61/.0992	61/2.52	.893	22.7
–	11840	–	6	7/.042	7/1.07	.126	3.21	700 MCM	–	–	–	61/.1071	61/2.72	.964	24.5
13090	–	9	–	1/.1144	1/2.91	.1144	2.91	750 MCM	–	–	–	61/.1109	61/2.82	.998	25.4
13090	–	9	–	7/.0432	7/1.10	.130	3.30	750 MCM	–	–	–	91/.0908	91/2.31	.999	25.4
16510	–	8	–	1/.1285	1/3.26	.128	3.26	–	789.4 MCM	–	400	61/.114	61/2.90	1.026	26.1
16510	–	8	–	7/.0486	7/1.23	.146	3.70	800 MCM	–	–	–	61/.1145	61/2.91	1.031	26.2
–	19740	–	10	1/.141	1/3.58	.141	3.58	800 MCM	–	–	–	91/.0938	91/2.38	1.032	26.2
–	19740	–	10	7/.054	7/1.37	.162	4.12	1000 MCM	986.8 MCM	–	500	61/.1280	61/3.25	1.152	29.3
20820	–	7	–	1/.1443	1/3.67	.144	3.67	1000 MCM	–	–	–	91/.1048	91/2.66	1.153	29.3
20820	–	7	–	7/.0545	7/1.38	.164	4.15	–	1233.7 MCM	–	625	91/.117	91/2.97	1.287	32.7
26240	–	6	–	1/.162	1/4.11	.162	4.11	1250 MCM	–	–	–	91/.1172	91/2.98	1.289	32.7
26240	–	6	–	7/.0612	7/1.55	.184	4.66	1250 MCM	–	–	–	127/.0992	127/2.52	1.290	32.8
–	31580	–	16	7/.068	7/1.73	.204	5.18	1500 MCM	–	–	–	91/.1284	91/3.26	1.412	35.9
33090	–	5	–	7/.0688	7/1.75	.206	5.24	1500 MCM	–	–	–	127/.1087	127/2.76	1.413	35.9
41740	–	4	–	7/.0772	7/1.96	.232	5.88	–	1578.8 MCM	–	800	91/.132	91/3.35	1.452	36.9
–	49340	–	25	7/.085	7/2.16	.255	6.48	–	1973.5 MCM	–	1000	91/.147	91/3.73	1.617	41.1
–	49340	–	25	19/.052	19/1.32	.260	6.60	2000 MCM	–	–	–	127/.1255	127/3.19	1.632	41.5
52620	–	3	–	7/.0867	7/2.20	.260	6.61	2000 MCM	–	–	–	169/.1088	169/2.76	1.632	41.5
66360	–	2	–	7/.0974	7/2.47	.292	7.42								
–	69070	–	35	7/.100	7/2.54	.300	7.62								
–	69070	–	35	19/.061	19/1.55	.305	7.75								

DIESEL LOCOMOTIVE AND CAR WIRING CABLE

Conductor Stranding	Approx. Size Awg	Circular Mil Area	Conductor Diameter Inches
19/.0117	16	2601	.060
19/27	14	3831	.070
19/25	12	6088	.090
27/24	10	10910	.123
37/24	8	14950	.140
61/24	6	24640	.180
91/24	5	36760	.220
105/24	4	42420	.240
125/24	3	50500	.260
150/24	2	60600	.325
225/24	1	90900	.390
275/24	1/0	111100	.420
325/24	2/0	131300	.460
450/24	3/0	181800	.565
550/24	4/0	222200	.590
650/24		262600	.660
775/24		313100	.740
925/24		373700	.790
1100/24		444400	.870
1325/24		535300	.940
1600/24		646400	1.025
1925/24		777700	1.120
2300/24		929200	1.230
2750/24		1111000	1.370