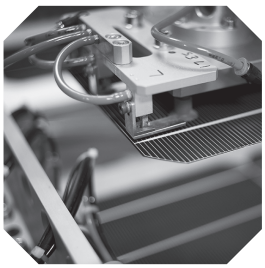
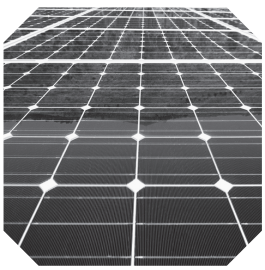
United Electric Supply

CATALOG



SOLAR PRODUCTS

Commercial/Industrial
Wholesale Distributors

ABOUT UNITED ELECTRIC

United Electric delivers cost-effective solutions for all your solar and electrical needs!

United Electric has the commitment and flexibility to tailor our services to meet your individual requirements.

Diversified Experience

United Electric has the capacity to handle any size project, from inception to completion. Our in-house team of engineers and product specialists offer complete design and application assistance.

Contact our Solar Product Manager

Michael Howell Direct 302-324-3226
Toll Free 855-787-9748 (855-PV-PWR-4U)
Mhowell@UnitedElectric.com

Group Email: SolarGroup@UnitedElectric.com

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Sunmodule®

SOLARWORLD
We turn sunlight into power.

World-Class Quality

Fully-automated production lines and seamless monitoring of the process and material ensure the quality that the company sets as its benchmark for its sites wordwide.

SolarWorld Plus-Sorting

Plus-Sorting guarantees highest system efficiency. SolarWorld only delivers modules that have greater than or equal to the nameplate rated power.

25 years linear performance quarantee and extension of product warranty to 10 years

SolarWorld guarantees a maximum performance degression of 0.7% p.a. in the course of 25 years, a significant added value compared to the two-phase warranties common in the industry. In addition, SolarWorld is offering a product warranty, which has been extended to 10 years.*

**In accordance with the applicable SolarWorld Limited Warranty at purchase.*
www.solarworld.con/warranty

TUV Power controlled: Lowest measuring tolerance in industry

Every component is tested to meet 3 times IEC requirements

Designed to withstand heavy accumulations of snow and ice

Sunmodule Plus: Positive performance tolerance

25-year linear performance warranty and 10-year product warranty

Sunmodule®
Plus SW 270 mono black

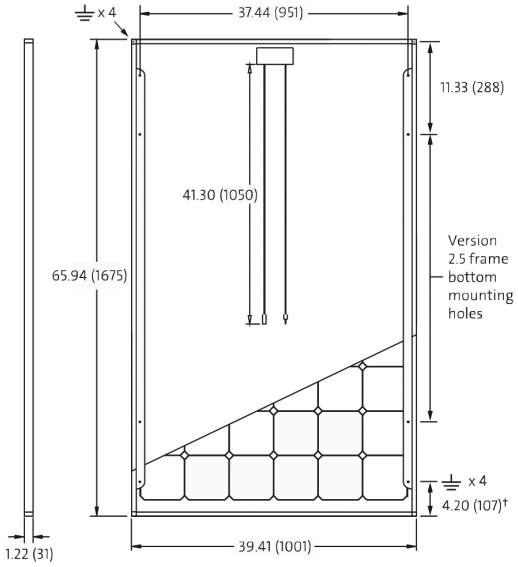
Sunmodule®
Plus SW 275 mono

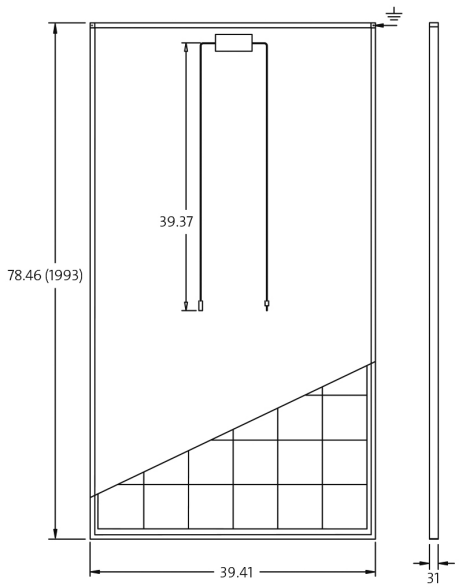
Module Number	Pmax (W)	"Color Backsheet/Frame*"	Cells per Module	Voc (V)	Vmp (V)	Isc (A)	Imp (A)
SW 315	315	White/Clear	72	47.7	38.6	8.59	8.20
SW 310	310	White/Clear	72	47.2	38.7	8.27	8.01
SW 280	280	White/Clear	60	39.5	31.2	9.71	9.07
SW 275	275	White/Clear	60	39.4	31.0	9.54	8.94
SW 270B	270	Black/Black	60	39.2	30.9	9.44	8.81
SW 270	270	White/Clear	60	38.3	32.1	8.90	8.42
SW 265B	265	Black/Black	60	38.1	31.9	8.82	8.33
SW 255	255	White/Clear	60	37.8	31.4	8.66	8.15

*Frame is aluminum with either clear anodization or black anodization.

SOLARWORLD
We turn sunlight into power.

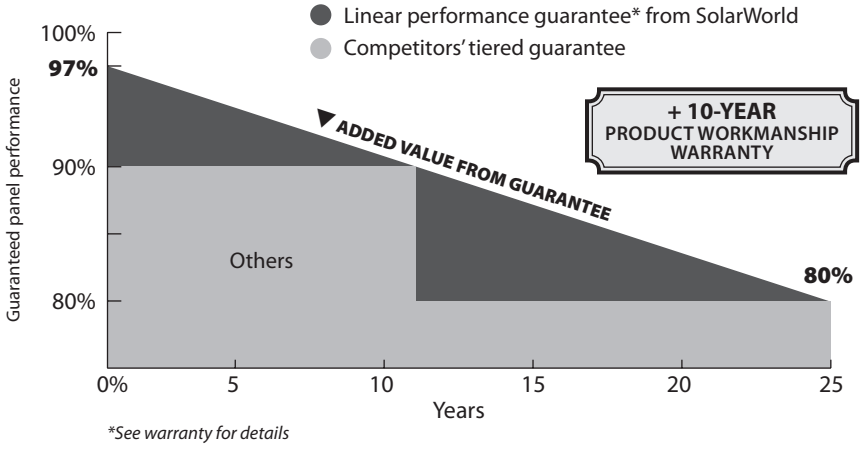
60 Cell Module Dimensions





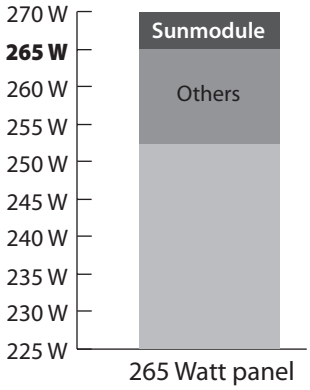
72 Cell Module Dimensions

25-Year Limited Warranty



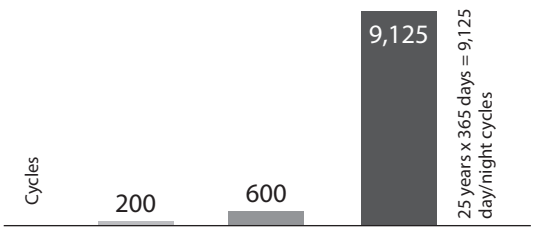
*See warranty for details

Plus-Sorting



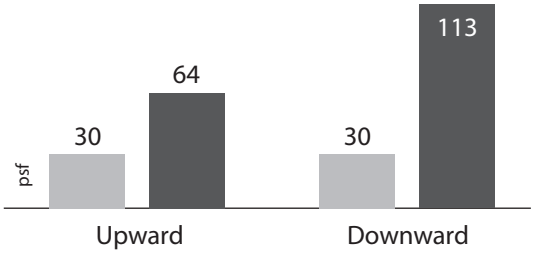
Temperature cycling tests (-40° to 85° C)

- IEC standard
- SolarWorld temperature cycling test
- SolarWord temperature shock test



UL test loads in psf

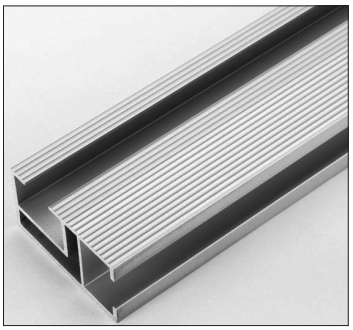
- UL standard
- SolarWorld standard



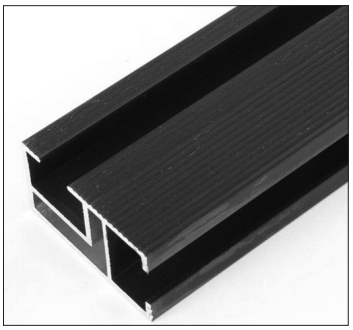
SolarWorld Sunfix Plus

The SolarWorld Sunfix plus® pitched roof mounting system is optimized for simple and efficient installation of SolarWorld Sunmodule™ panels. The Sunfix plus system offers many value-added improvements ensuring trouble free assembly.

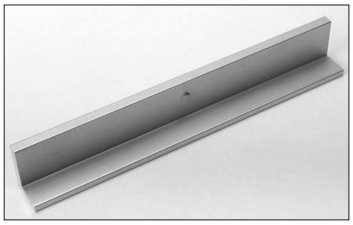
- For flush mounting to pitched roofs
- Multiple roofing applications: composition shingle, standing metal seam, flat or curved concrete tile
- Supports high wind and snow loads
- Pre-assembled hardware designed for fast and easy installation
- Preset rail lengths simplify planning and reduce material cut-off
- P.E. certified CA. 2010 Building Code, ASCE 7-05 & 2009 International Building Code



Rail



Black Rail



Rail Connector

Standard Rail Lengths Clear

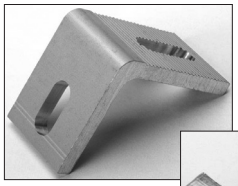
SWDEC0587	Sunfix Plus Rail 42" long, Clear Anodized Aluminum
SWDEC0589	Sunfix Plus Rail 82" long, Clear Anodized Aluminum
SWDEC0591	Sunfix Plus Rail 122" long, Clear Anodized Aluminum
SWDEC0592	Sunfix Plus Rail 162" long, Clear Anodized Aluminum

Standard Rail Lengths Black

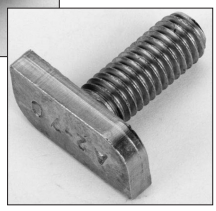
SWDEC0416	Sunfix Plus Rail 42" long, Black Anodized Aluminum
SWDEC0408	Sunfix Plus Rail 82" long, Black Anodized Aluminum
SWDEC0409	Sunfix Plus Rail 122" long, Black Anodized Aluminum
SWDEC0410	Sunfix Plus Rail 162" long, Black Anodized Aluminum

Special Order Sunfix Plus Rail Lengths Only Available in Standard Quantities(100 pieces)

SWDEC0203	Sunfix Plus Rail 204" long, Clear Anodized Aluminum
SWDEC0205	Sunfix Plus Rail 244" long, Clear Anodized Aluminum
SWDEC0245	Sunfix Plus Rail 288" long, Clear Anodized Aluminum
SWDEC0262	Sunfix Plus Rail 324" long, Clear Anodized Aluminum



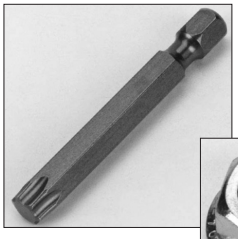
L-Bracket



T-Head Bolt

Sunfix Accessories

SWDEC0421	Sunfix Plus Rail Connector Clear Anodized Aluminum
SWDEC0427	Sunfix Plus L- Bracket Clear Anodized Aluminum
SWDEC0411	Sunfix Plus L- Bracket Black Anodized Aluminum
SWDRC0496	Sunfix Plus M8 Serrated Hex Nut
SH0001	Sunfix Plus T-Head Bolt M8 x 20 A2
EC0604	Drive Bit 'Torx' T40, 1/4" hex 2" Lg.



Drive Bit

Serrated Hex Nut

SolarWorld Sunfix Plus

Sunfix

Sunfix Module Clamps

SA0192	Sunfix Plus Top Clamp Assembly M8 31mm Silver
SA0215	Sunfix Plus End Spacer, 31mm Silver
SA0193	Sunfix Plus Top Clamp Assembly M8 31mm Black
SA0181	Sunfix Plus End Spacer, 31mm Black

Sunfix Grounding

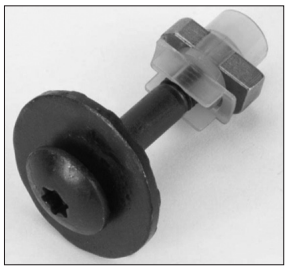
EC0602	Sunfix Plus Equipment Ground Lug 8.0 Kit with T-Bolt
EC0603	Sunfix Plus Splice Ground 8.0 Kit with T-Bolt

Sunfix QuickMount Flashing

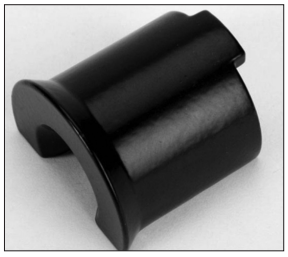
EC0217	QuickMount Composition Mount 12" x 12" Bronze Anodized
EC0218	QuickMount Composition Mount 12" x 12" Clear Anodized
EC0596	QuickMount Composition Mount 12" x 12" Mill Finish Aluminum
EC0137	Hanger Bolt Set 6" 12PK SST

Sunfix Module Clamps for Other Module Sizes

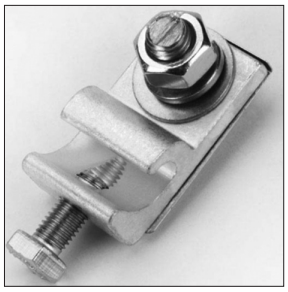
SH0015	Sunfix Plus Top Clamp Assembly M8 40mm Silver
SA5190	Sunfix Plus End Spacer, 40mm Silver
SH0005	Sunfix Plus Top Clamp Assembly M8 42mm Silver
SA5099	Sunfix Plus End Spacer, 42mm Silver
SH0005	Sunfix Plus Top Clamp Assembly M8 45mm Silver
SA5104	Sunfix Plus End Spacer, 45mm Silver
SH0005	Sunfix Plus Top Clamp Assembly M8 46mm Silver
SK5115	Sunfix Plus End Spacer, 46mm Silver
SH0006	Sunfix Plus Top Clamp Assembly M8 50mm Silver
SK5222	Sunfix Plus End Spacer, 50mm Silver



Top Clamp

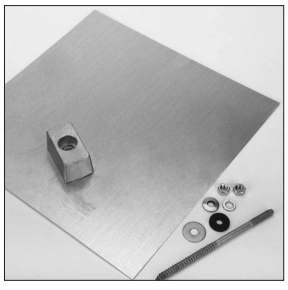


End Spacer



Equipment Ground Lug

Rail Splice Ground



Clear Anodized QuickMount Flashing

Power Rail™ Module Mounting System

DPW | SOLAR
PREFORMED LINE PRODUCTS

Top-clamping PV module mounting system engineered to reduce installation costs and provide maximum strength for parallel-to-roof or tilt up mounting applications.

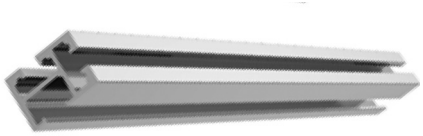
The Power Rail top-clamping mounting system is designed with the professional PV solar installer in mind. The top-clamping rails utilize a single tool with a revolutionary RAD™ Fastener for faster bolt placement. The unique shape of the RAD provides an anti-rotation feature, locking the bolt in the proper orientation when installed. The high strength rigid rails also include an integral wiring channel for securing cables and providing a professional finish. The system includes a wide selection of mounting options designed for secure and water tight attachments to any roof style.

Power Rail™ Extrusions

Power Rail is an engineered profile extrusion made from Series 6000 structural aluminum. Standard finish is mill-finish aluminum.

P6 RAIL

Part #	P6-84	P6-126	P6-162	P6-204	P6-240	P6-282	P6-324
Length	84″	126″	162″	204″	240″	282″	324″
Weight (lb)	5	7.5	9.5	12	14	16.5	19



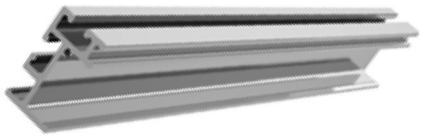
P6 Rail Span and Cantilever Distances (inches)

	SPAN/ C'VER	Snow Load (PSF)										
		0	10	20	30	40	50	60	70	80	90	100
Wind Speed (MPH)	90	72/36	60/32	54/26	48/24	43/21	40/20	36/18	33/16	31/15	29/14	28/14
	100	60/32	58/28	48/24	46/23	42/21	38/19	36/18	33/16	31/15	29/14	28/14
	110	58/28	54/26	48/24	44/22	40/20	37/18	35/17	33/16	31/15	29/14	28/14
	120	54/26	54/26	46/23	42/21	39/19	36/18	34/17	32/16	31/15	29/14	28/14
	130	48/24	48/24	44/22	40/20	37/18	35/17	33/16	32/16	30/15	29/14	28/14

**Exposure C Category Only, refer to design guidelines and ASCE requirements for more information.*

P8 RAIL

Part #	P8-84	P8-126	P8-162	P8-204	P8-240	P8-282	P8-324
Length	84″	126″	162″	204″	240″	282″	324″
Weight (lb)	7	10.5	1305	17	20	23.5	27



P8 Rail Span and Cantilever Distances (inches)

	SPAN/ C'VER	Snow Load (PSF)										
		0	10	20	30	40	50	60	70	80	90	100
Wind Speed (MPH)	90	96/48	92/46	80/40	72/36	66/33	62/31	58/29	52/26	50/25	46/23	44/22
	100	88/44	86/43	76/38	68/34	64/32	60/30	56/28	52/26	50/25	46/23	44/22
	110	80/40	80/40	72/36	66/33	62/31	58/29	54/27	52/26	50/25	46/23	44/22
	120	74/37	74/37	68/34	64/32	60/30	56/28	52/26	50/25	48/24	46/23	44/22
	130	68/34	68/34	66/33	60/30	56/28	54/27	52/26	48/24	46/23	44/22	44/22
	140	64/32	64/32	62/31	58/29	54/27	52/26	50/25	48/24	46/23	44/22	42/21
	150	60/30	60/30	60/30	56/28	52/26	50/25	48/24	46/23	44/22	42/21	42/21

**Exposure C Category Only, refer to design guidelines and ASCE requirements for more information.*

Power Rail™ Extrusions (cont')

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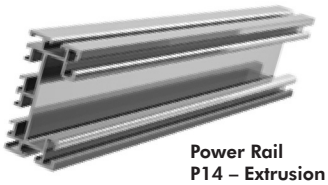
PREFORMED LINE PRODUCTS

Power Rail is an engineered profile extrusion made from Series 6000 structural aluminum. Standard finish is mill-finish aluminum.

P14 RAIL

Part #	P14-84	P14-126	P14-162	P14-204	P14-240	P14-282	P14-324
Length	84″	126″	162″	204″	240″	282″	324″
Weight (lb)	15.5	23.5	29	38	44.5	52	60



Power Rail P14 – Extrusion

P14 Rail Span and Cantilever Distances (inches)

	SPAN/ C'VER	Snow Load (PSF)										
		0	10	20	30	40	50	60	70	80	90	100
Wind Speed (MPH)	90	168/79	160/75	141/66	128/60	118/55	110/52	103/48	96/45	90/42	85/40	81/38
	100	153/72	150/71	134/63	123/58	113/53	106/50	100/47	95/45	90/42	85/40	81/38
	110	140/66	140/66	127/60	117/55	109/51	103/48	97/46	92/43	88/41	85/40	81/38
	120	129/61	129/61	121/57	112/53	105/49	99/47	94/44	90/42	86/40	83/39	80/38
	130	120/56	120/56	115/54	107/50	101/47	96/45	91/43	87/41	84/39	81/38	78/37
	140	112/53	112/53	109/51	103/48	97/46	93/44	88/41	85/40	82/39	79/37	76/36
	150	105/49	105/49	104/49	99/47	94/44	89/42	86/40	82/39	79/37	77/36	74/35

**Exposure C Category Only, refer to design guidelines and ASCE requirements for more information.*

Mounting Feet

"L" Style Foot w/Turn Bolt

Power Post Bracket w/Turn Bolt

P14 "L" Style Foot w/Bolt

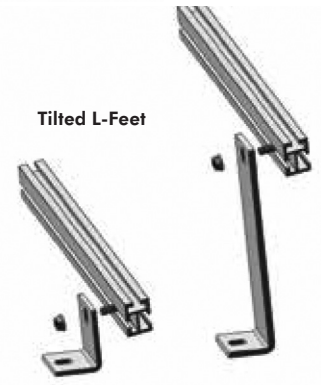
L-Mounting Feet

"L" Feet are fabricated from high strength 3/16" aluminum and include a vertical slot for adjusting to irregular surfaces.

Part #	Description	Weight (lb)
LF2-1.5VS	2.5″ Tall L-Mounting Foot with 1.5″ Vertical Slot	0.2
LF2	2.5″ Tall L-Mounting Foot	0.2
LF3	3.5″ Tall L-Mounting Foot	0.24
LF5	5″ Tall L-Mounting Foot	0.4
LF6	6″ Tall L-Mounting Foot	0.45
PPB	Power Post Bracket	0.09
P14-LF	L-Mounting Foot for P14 Rail	0.5

Tilted L-Feet

Part #	Description	Weight (lb)
FF5	5 Degree Front Foot	0.25
BF5	5 Degree Back Foot	0.5
FF10	10 Degree Front Foot	0.25
BF10	10 Degree Back Foot	0.75



Tilted L-Feet

Mounting Feet (cont')

DPW | SOLAR
PREFORMED LINE PRODUCTS

Easy Feet

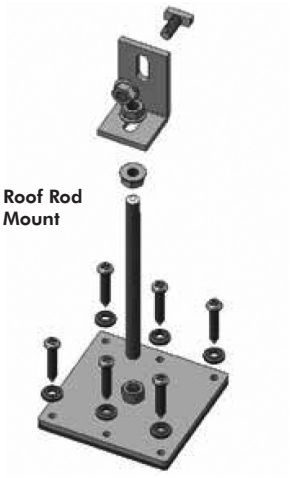
Easy Feet mount directly to metal and composite shingles or other roofing materials and do not require attachment to a roof structural member. Sealing butyl mastic backing and RSS PHEinox™ screws are included.

Part #	Description	Weight (lb)
PEF-1.5	Pivot Easy Mounting Foot w/ 1.5" Screws	0.76
PEF-2.0	Pivot Easy Mounting Foot w/ 2.0" Screws	0.78
PEF-3.0	Pivot Easy Mounting Foot w/ 3.0" Screws	0.82

Roof Rod Mount

Roof Rod mounts attach directly to the roof deck and are suitable for tile and other roofing materials. Simply drill a hole through the roofing material. Sealing butyl mastic backing and RSS PHEinox™ screws included

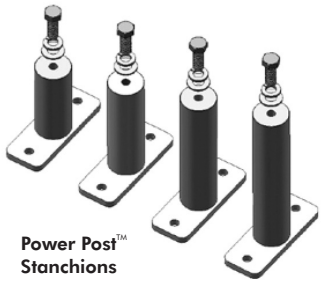
Part #	Description	Weight (lb)
RRM	Threaded Rod Mount	1.5



Power Post Stanchions

Power posts offer high strength solid aluminum construction and are used with flashing cones.

Part #	Description	Weight (lb)
PP3	3" Power Post, 1.31" Diameter	0.55
PP4	4" Power Post, 1.31" Diameter	0.67
PP5	5" Power Post, 1.31" Diameter	0.81
PP6	6" Power Post, 1.31" Diameter	0.94
PP7	7" Power Post, 1.31" Diameter	1.1



Easy Power Post Stanchions

Part #	Description	Weight (lb)
EP3	3" Easy Post, 1.31" Diameter	0.82
EP4	4" Easy Post, 1.31" Diameter	0.94
EP5	5" Easy Post, 1.31" Diameter	1.08
EP6	6" Easy Post, 1.31" Diameter	1.21
EP7	7" Easy Post, 1.31" Diameter	1.37

Mounting Feet (cont')

DPW | SOLAR
PREFORMED LINE PRODUCTS

Super Post Stanchions

Super posts offer high strength solid aluminum construction for larger arrays and higher roof clearance.

Part #	Description	Weight (lb)
SP7	7" Super Mounting Post, 1.75" Diameter	2.4
SP8	8" Super Mounting Post, 1.75" Diameter	2.6
SP9	9" Super Mounting Post, 1.75" Diameter	2.9
SP10	10" Super Mounting Post, 1.75" Diameter	3.2

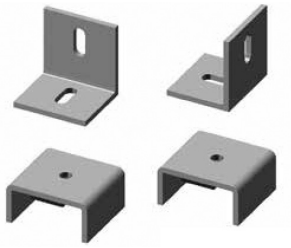
Super Post™ Stanchions

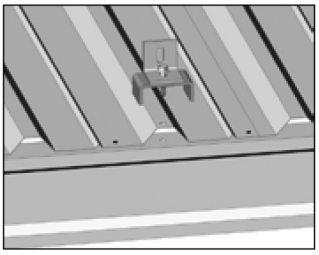
Corrugated Roof Mounts

The CMB provides a mounting bridge over the peak of a metal corrugated roof keeping the penetration above the water diverting valleys. Includes Butyl Mastic, L-Foot not included.

Part #	Description
CMB	Mounting Bridge to Span Peaks of Corrugated Metal Roofs

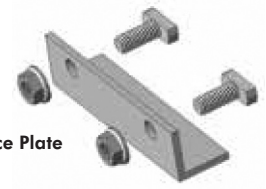
Note: Not all corrugated metal roofs are the same. Please contact United Electric to design mounting bridges that are specific to your application. Pricing subject to change.
"L" Foot not included.





Includes Butyl Mastic, "L" Foot Ordered Separately

Power Rail™ Splice Plates



P6 – Splice Plate

Splice Plates

The Power Rail Splice Plates are made from High Strength Aluminum. Includes hardware.

Part #	Description	Weight (lb)
P6-SPK	Splice Plate for P6, Two Hole	0.2
P6-4HSPK	Splice Plate for P6, Four Hole	0.4
P8-SPK	Splice Plate for P8, Four Hole	0.55
P14-SPK	Splice Plate for P14, Four Hole	1

P6/P8 – 4-Hole Splice Plate

P14 – Splice Plate

Telescoping Tilt Kits

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PREFORMED LINE PRODUCTS

P6 Low-Profile Telescoping Tilt Kits

Part #	Description	Weight (lb)
P6-TL35	Telescoping legs that range from 20-35 degrees	9.0
P6-TL45	Telescoping legs that range from 24-45 degrees	11.0
P6-TL55	Telescoping legs that range from 28-55 degrees	13.0
P6-TL65	Telescoping legs that range from 30-65 degrees	15.0

P6 Low-Profile Telescoping Tilt Kit
Includes Strong Back, Adjustable Leg, Mounting Feet, Rail Brackets and Hardware. (Module Mounting Rail not included)

P8 Low-Profile Telescoping Tilt Kits

Part #	Description	Weight (lb)
P8-TL35	Telescoping legs that range from 20-35 degrees	10.0
P8-TL45	Telescoping legs that range from 24-45 degrees	12.0
P8-TL55	Telescoping legs that range from 28-55 degrees	14.0
P8-TL65	Telescoping legs that range from 30-65 degrees	16.0

P8 Low-Profile Telescoping Tilt Kit
Includes Strong Back, Adjustable Leg, Mounting Feet, Rail Brackets and Hardware. (Module Mounting Rail not included)

One-Piece Tilt Kits

P6 Low-Profile One-Piece Tilt Kits

Part #	Description	Weight (lb)
P6-OP15	One-Piece legs for a 15 degree tilt	6.5
P6-OP25	One-Piece legs for a 25 degree tilt	7.0
P6-OP35	One-Piece legs for a 35 degree tilt	7.5
P6-OP45	One-Piece legs for a 45 degree tilt	8.0
P6-OP55	One-Piece legs for a 55 degree tilt	8.5
P6-OP65	One-Piece legs for a 65 degree tilt	9.0

P6 Low-Profile One-Piece Tilt Kit
Includes Strong Back, Fixed Leg, Mounting Feet, Rail Brackets and Hardware. (Module Mounting Rail not included)

P8 Low-Profile One-Piece Tilt Kits

Part #	Description	Weight (lb)
P8-OP15	One-Piece legs for a 15 degree tilt	6.5
P8-OP25	One-Piece legs for a 25 degree tilt	7.0
P8-OP35	One-Piece legs for a 35 degree tilt	7.5
P8-OP45	One-Piece legs for a 45 degree tilt	8.0
P8-OP55	One-Piece legs for a 55 degree tilt	8.5
P8-OP85	One-Piece legs for a 65 degree tilt	9.0

P8 Low-Profile One-Piece Tilt Kit
Includes Strong Back, Fixed Leg, Mounting Feet, Rail Brackets and Hardware. (Module Mounting Rail not included)

Module Clamps with RAD™ Hardware

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RAD End Clamps with RAD Bolt Hardware

Module Clamps are Type 304 stainless steel for higher yield strength and durability. The low profile design and slim 3/8" gap between modules provide a professional appearance and higher module density.

Part #	Description	Weight (lb)
EC-xx-RAD	Module End Clamp	0.15
EC-xx-RAD-BLACK	Module End Clamp with black powder coat	0.15

Note: Replace xx with the module depth in millimeters

End Clamp w/RAD Bolt

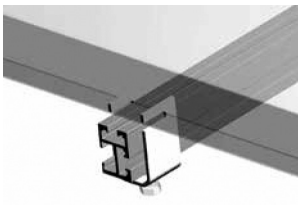
RAD Mid Clamps with RAD Bolt Hardware

Part #	Description	Weight (lb)
MC-28-33-RAD	Module Mid Clamp for 28-33 mm thick frame	0.08
MC-34-39-RAD	Module Mid Clamp for 34-39 mm thick frame	0.08
MC-40-46-RAD	Module Mid Clamp for 40-46 mm thick frame	0.08
MC-47-52-RAD	Module Mid Clamp for 47-52 mm thick frame	0.08
MC-53-59-RAD	Module Mid Clamp for 53-59 mm thick frame	0.08

Mid Clamp w/RAD Bolt A

Universal End Clamp

Part #	Description	Weight (lb)
P6-ECU	Universal End Clamp w/Set Bolt for P6	0.15
P8-ECU	Universal End Clamp w/Set Bolt for P8	0.25



Turn Bolts

Turn Bolts

Part #	Description	Weight (lb)
TB	5/16" x 3/4" Stainless Steel Turn Bolt with Flange Nut	0.05

Large Ground Mount (LGM)

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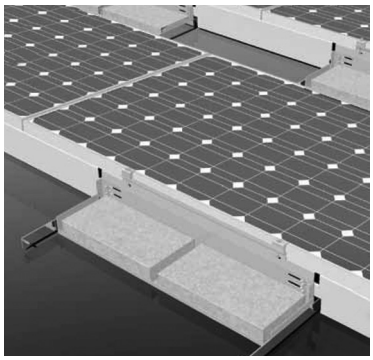
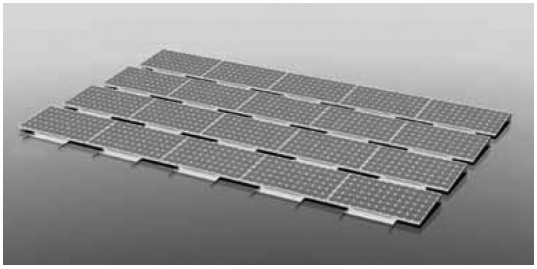
The POWER-FAB LGM is designed to install quickly and provide a secure mounting structure for PV modules using 2" or 2.5" SCH 40/80 steel pipe. The module-specific design reduces the number of components and provides for an easier assembly. The LGM structure utilizes high strength welded aluminum components and corrosion resistant hardware for long term reliability. A fixed tilt angle reduces maintenance and installation time.

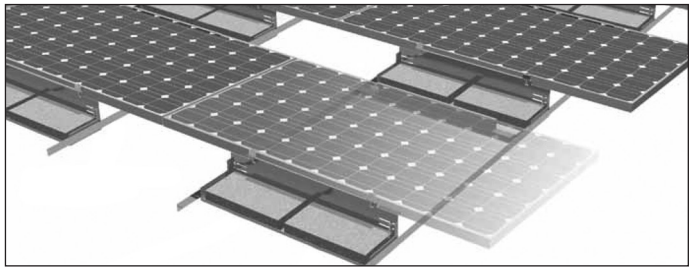
Please contact United Electric for a custom quote specific for your job site - 1-855-787-9748

Non-Penetrating Flat Roof Mounting System (CRS-G2)



The CRS-G2 is a fully ballasted, high strength mounting system designed for the professional installer. Featuring a drastic reduction in total number of parts, the CRS-G2 allows for a quick learning curve and fast assembly. The new improved modular design simplifies roof layout, ordering and installation. Also, the simplified design and compact components allow pallatized shipments of material for easy To-The-Roof transport of materials. The CRS-G2 includes integrated grounding to meet new standards, in addition to slotted connections to accommodate roof contours. The new system includes other well known features and benefits and is backed by our dedicated customer service.





Please contact United Electric for a custom quote specific for your job site - 1-855-787-9748

Top of Pole PV Mounting System

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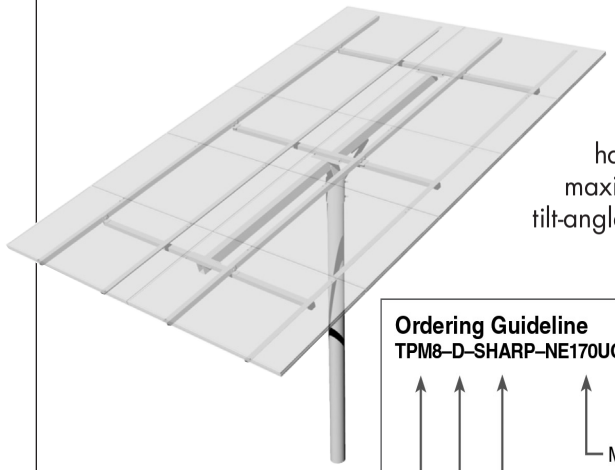

The POWER-FAB TPM is designed to install quickly and provide a secure mounting structure for PV modules on a single pole. The module specific design reduces the number of components and provides for an easier assembly. The TPM utilizes high strength welded steel components and corrosion resistant hardware for long term reliability. Seasonal adjustability for maximizing production is provided by six different tilt-angle settings and is a single person operation.

Ordering Guideline
TPM8–D–SHARP–NE170UC1–HWV–AA

- Upgrade Options
- Module Mftr's Part Number*
- Module Manufacturer
- DPW Module Series
- Number of modules

***Important:** Include complete module part # as listed on module manufacturer's specification sheet

Module Orientation

Rack	90 mph Standard	130 mph HWV
TPM6-D	2hx3w -P	3hx2w-L
TPM12-D	3hx4w-P	6hx2w-L
TPM12-E	3hx4w-P	6hx2w-L
TPM12-F	3hx4w-P	6hx2w-L
TPM12-G	3hx4w-P	6hx2w-L
TPM12-H	3hx4w-P	6hx2w-L
TPM15-D	3hx5w-P	5hx3w-L

Ordering Guideline

Part Suffix	Description
HWV	High Wind Version
SSH	Stainless Steel Hardware for Rack Assembly
TRH	Tamper Resistant Hardware for Module Mounting
HGS	Hot-dip Galvanized Steel Components
PCS	Powder Coated Steel Components
PCA	Powder Coated Aluminum Components
AA	Anodized Aluminum Components
8IN	Mounting sleeve ugrade to 8" steel pipe
6IN	Mounting sleeve ugrade to 6" steel pipe
4IN	Mounting sleeve ugrade to 4" steel pipe
3IN	Mounting sleeve ugrade to 3" steel pipe
2.5IN	Mounting sleeve ugrade to 2.5" steel pipe

MODULE SIZE Range (W x L)"	"DPW MODULE Series"	Number of Modules												
		1	2	3	4	6	8	9	10	12	14	15	16	18
19-23" x 35-44"	A	2"SCH40 1HX1W-P	2"SCH40 1HX2W-P	2.5"SCH40 1hx3w-P	3"SCH40 1hx4w-P	4"SCH40 2hx3w-P	4"SCH40 2hx4w-P	NA	6"SCH40 5hx2w-L	6"SCH40 6hx2w-L	6"SCH40 7hx2w-L	NA	6"SCH80 8hx2w-L	NA
20-26" x 39-53"	B	2"SCH40 1hx1w-P"	2"SCH40 1hx2w-P	2.5"SCH40 1hx3w-P	3"SCH40 1hx4w-P	4"SCH40 2hx3w-P	4"SCH80 2hx4w-P	NA	6"SCH40 5hx2w-L	6"SCH40 6hx2w-L	6"SCH80 7hx2w-L	NA	6"SCH80 8hx2w-L	NA
22-27" x 56-63"	C	2"SCH40 1hx1w-P	2.5"SCH40 1hx2w-P	3"SCH40 1hx3w-P	4"SCH40 1hx4w-P	4"SCH80 2hx3w-P	6"SCH40 4hx2w-L	6"SCH40 3hx3w-p	6"SCH40 5hx2w-L	6"SCH80 6hx2w-L	8"SCH40 7hx2w-L	NA	8"SCH80 8hx2w-L	8"SCH80 3hx6w-P
31-33" x 60-67"	D	2"SCH40 1hx1w-P	3"SCH40 1hx2w-P	4"SCH40 1hx3w-P	4"SCH80 2hx2w-P	6"SCH40 *	6"SCH40 4hx2w-L	6"SCH80 3hx3w-p	8"SCH40 5hx2w-L	8"SCH40 *	8"SCH80 7hx2w-L	8"SCH80 *	8"SCH80 4hx4w-P	8"SCH80 6hx3w-L
38-40" x 51-56"	E	2"SCH40 1hx1w-P	3"SCH40 1hx2w-P	4"SCH40 1hx3w-P	4"SCH40 2hx2w-P	6"SCH40 3hx2w-L	6"SCH40 4hx2w-L	6"SCH80 3hx3w-p	8"SCH40 5hx2w-L	8"SCH40 *	8"SCH80 7hx2w-L	8"SCH80 5hx3w-L"	8"SCH80 4hx4w-P	8"SCH80[2] 6hx3w-L
38-40" x 58-61"	F	2"SCH80 1hx1w-P	3"SCH40 1hx2w-P	4"SCH40 1hx3w-P	4"SCH80 2hx2w-P	6"SCH40 3hx2w-L	6"SCH80 4hx2w-L	6"SCH80 3hx3w-p	8"SCH40 5hx2w-L	8"SCH80 *	8"SCH80[3] 7hx2w-L	8"SCH80 5hx3w-L	8"SCH80[2] 4hx4w-P	8"SCH80[4] 6hx3w-L
37-42" x 61-67"	G	2"SCH80 1hx1w-P	3"SCH40 1hx2w-P	4"SCH40 1hx3w-P	4"SCH80[1] 2hx2w-P	6"SCH40 3hx2w-L	6"SCH80 4hx2w-L	8"SCH40 3hx3w-p	8"SCH40 5hx2w-L	8"SCH80 *	8"SCH80[3] 7hx2w-L	8"SCH80 5hx3w-L	NA	NA
38-42" x 77-82"	H	2.5"SCH80 1hx1w-P	3"SCH80 1hx2w-P	4"SCH40 1hx3w-P	6"SCH40 2hx2w-P	6"SCH40 3hx2w-L	8"SCH40 4hx2w-L	8"SCH80 3hx3w-p	8"SCH80 5hx2w-L	8"SCH80 *	NA	NA	NA	NA
50-52" x 65-79"	I	3"SCH80 1hx1w-P	4"SCH80 1hx2w-P	6"SCH40 1hx3w-P	6"SCH40 2hx2w-P	8"SCH40 3hx2w-L"	8"SCH80 4hx2w-L	8"SCH80 3hx3w-p	8"SCH80[3] 5hx2w-L	NA	NA	NA	NA	NA

All pipe recommendations conform to ASCE 7-05, IBC2006, and are based on 90MPH, Exposure C, 65-Degree Max Tilt, 12" Max.
Front edge ground clearance, except for those noted: [1] 6" Max. Front Edge Ground Clearance [2] 55-Degree Max. Tilt [3] 6" Max. Front Edge Ground Clearance and 55-Degree Max. Tilt
[4] 45-Degree Max. Tilt *Module Orientation changes with high wind version (HWV) upgrade

Multi-Pole PV Mounting (MPM-G2) System

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The POWER-FAB MPM-G2 is designed to install quickly and provide a secure mounting structure for PV modules on a single row of vertical pipe. The module specific design reduces the number of components and provides for an easier assembly. The MPM-G2 utilizes high strength welded steel components and corrosion resistant hardware for long-term reliability. Seasonal adjustability for maximizing production is provided by nine positive locking tilt angle settings.

Rail Set Selection Guide Instructions:

1. Determine Module Series by matching dimensions to size range (left column, below)
2. Select size of Horizontal Tube (4" x 4" square or 5" x 4" rectangular) If horizontal tube size is unknown, please contact United for further assistance
3. Select number of modules to mount (move across chart)
4. Determine Multi-Pole Mount part number to order using Ordering Guidelines Block (to the right).

Refer to Options block (below) for more details.

RAILSETS (Includes Module Rails, Tilt Brackets, and Associated SS HW)		**For 4" x 4" Square Steel Horizantal Tube Number of Modules**			**For 5" x 5" Rectangular Steel Horizantal Tube Number of Modules**		
MODULE SIZE RANGE (W X L)	**DPW MODULE TYPE**	**2**	**3**	**4**	**2**	**3**	**4**
31-33" x 60-67"	D	2h x 1w-L	3h x 1w-L	4h x 1w-L	2h x 1w-L	3h x 1w-L	4h x 1w-L
38-40" x 51-56"	E	2h x 1w-L	3h x 1w-L	4h x 1w-L	2h x 1w-L	3h x 1w-L	4h x 1w-L
38-40" x 58-61"	F	2h x 1w-L	3h x 1w-L	4h x 1w-L	2h x 1w-L	3h x 1w-L	4h x 1w-L
37-42" x 61-67"	G	2h x 1w-L	3h x 1w-L	4h x 1w-L	2h x 1w-L	3h x 1w-L	4h x 1w-L
38-42" x 77-82"	H	2h x 1w-L	3h x 1w-L	NA	2h x 1w-L	3h x 1w-L	NA
50-52"x 65-79"	I	2h x 1w-L	3h x 1w-L	NA	2h x 1w-L	3h x 1w-L	NA

Note: The above racks do not include module mounting clamps, Mid and End Clamps are purchased seperately.

Multi-Pole Mount (MPM-G2) Finish Upgrades

Instructions:	Add Option to the end of MPM part number in the order listed below. **Example: MPM4–D–4x4–AA**
Part Suffix	**Description**
PCA	Powder Coated Aluminum Components (Available for Rail Sets Only)
AA	Anodized Aluminum Components (Available for Rail Sets Only)
HGS	Hot-Dip Galvanized Steel Components

Side of Pole (SPM) PV Mounting System

DPW | SOLAR
PREFORMED LINE PRODUCTS

The POWER-FAB SPM is designed to install quickly and provide a secure mounting structure for PV modules on a single pole. The module-specific design reduces the number of components and provides for an easy assembly. The SPM utilizes high strength aluminum components and corrosion resistant hardware for long-term reliability. Seasonal adjustability for maximizing production is provided by several tilt-angle settings and is a one person operation.

Selection Guide Instructions:

1. Determine Module Series by matching dimensions to size range (left column, below)
2. Select number of modules to mount (move across chart)
   Note - SPM Configuration block, which includes the pole size, layout and price.
3. Determine Side of Pole Mount part number to order using Ordering Guidelines Block (to the right).
   Refer to Options table on next page for more details.

MODULE SIZE RANGE (W x L)	DPW MODULE Series	1	2	3	4
19-23" x 35-44"	A	2-3.5" OD 1h x 1 w-L	2-3.5" OD 2h x 1 w-L	NA	NA
20-26" x 39-53"	B	2-3.5" OD 1h x 1 w-L	2-3.5" OD 2h x 1 w-L	3-4.5" OD 3h x 1w-L	3-4.5" OD 4h x 1w-L
22-27" x 56-63"	C	2-3.5" OD 1h x 1 w-L	2-3.5" OD 2h x 1 w-L	3-4.5" OD 3h x 1w-L	3-4.5" OD 4h x 1w-L
31-33" x 60-67"	D	2-3.5" OD 1h x 1 w-L	3-4.5" OD 2h x 1 w-L	3-4.5" OD 3h x 1w-L	3-4.5" OD 4h x 1w-L
38-40" x 51-56"	E	2-3.5" OD 1h x 1 w-L	3-4.5" OD 2h x 1 w-L	3-4.5" OD 3h x 1w-L	NA
38-42" x 58-61"	F	2-3.5" OD 1h x 1 w-L	3-4.5" OD 2h x 1 w-L	3-4.5" OD 3h x 1w-L	NA
37-42" x 61-67"	G	2-3.5" OD 1h x 1 w-L	3-4.5" OD 2h x 1 w-L	3-4.5" OD 3h x 1w-L	NA
38-40" x 77-78"	H	2-3.5" OD 1h x 1 w-L	3-4.5" OD 2h x 1 w-L	3-4.5" OD 3h x 1w-L	NA
50-52" x 65-79"	I	2-3.5" OD 1h x 1 w-L	3-4.5" OD 2h x 1 w-L	NA	NA

See next page for more information.

Side of Pole (SPM) PV Mounting System

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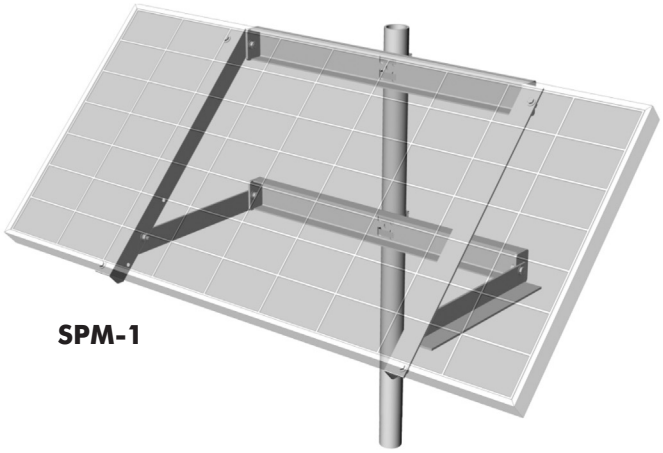
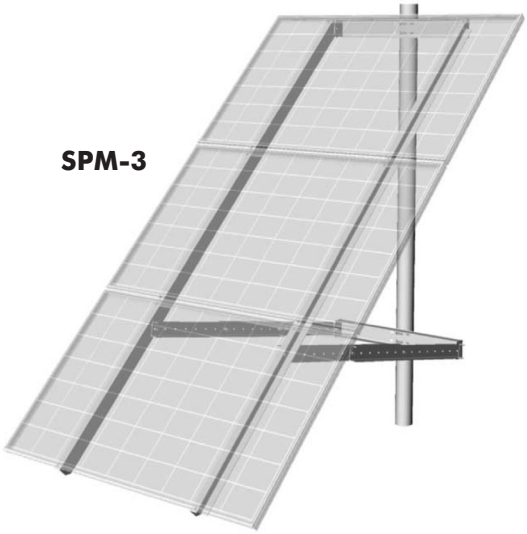


SPM-1

SPM-2



SPM-3

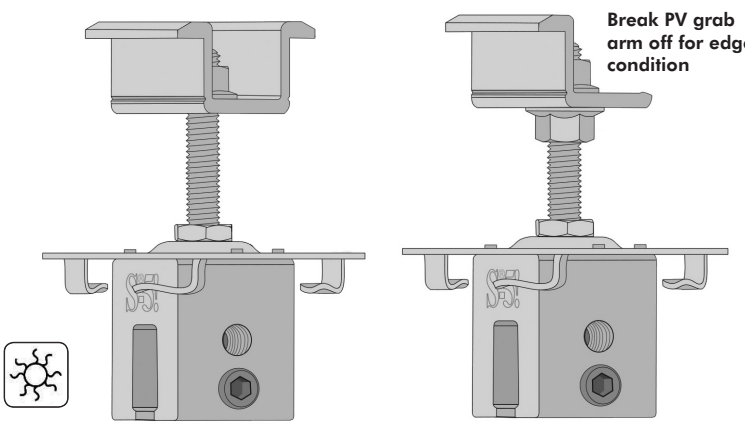
SPM-4

Side-of-Pole Mount Options Selection Guide (SPM)

Add Options to the end of SPM part number in the order listed below		**Example:**	**SPM4–D–SHARP–NE170UC1–HWV–AA**
Part Suffix	Description	Part Suffix	Description
HWW	High Wind Version	9IN	Band Clamp upgrade for 8-9.5" OD pipe
SSH	Stainless Steel Hardware for Rack Assembly	8IN	Band Clamp upgrade for 7-8.5" OD pipe
TRH	tamper Resistant Hardware for Module Mounting	7IN	Band Clamp upgrade for 6-7.5" OD pipe
PCA	Powder Coated Aluminum Components	6IN	Band Clamp upgrade for 5-6.5" OD pipe
AA	Anodized Aluminum Components	5IN	Band Clamp upgrade for 4-4.5" OD pipe
12IN	Band Clamp upgrade for 10-12"OD pipe	4IN	Band Clamp upgrade for 3-4.5" OD pipe
11IN	Band Clamp upgrade for 9-11" OD" pipe		

S-5! Metal Roof Clamps

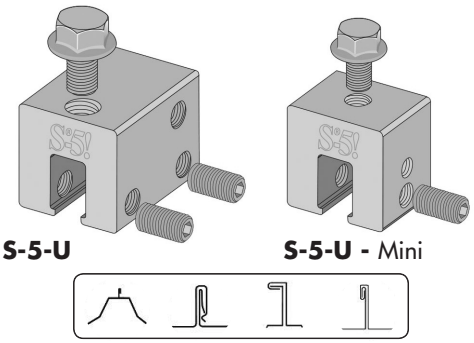
The S-5!® clamps and brackets are extraordinarily versatile and allow you to attach almost anything to standing seam, exposed-fastened, and corrugated metal roof profiles.



Break PV grab arm off for edge condition

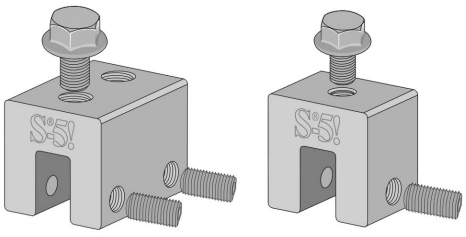
S-5 PV Kit - Mid Clamp

S-5 PV Kit - End Clamp



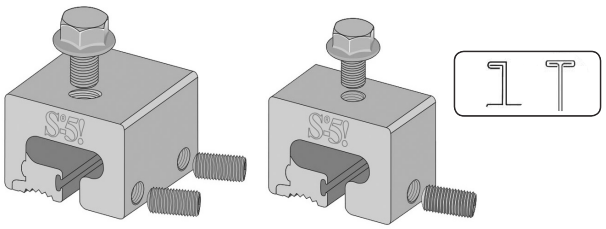
S-5-U

S-5-U - Mini



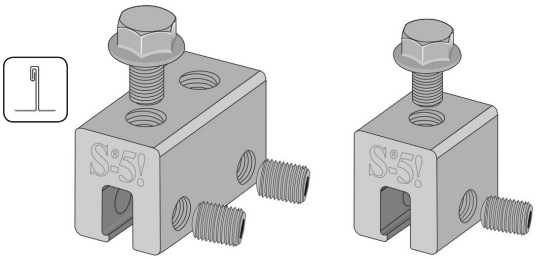
S-5-S

S-5-S - Mini



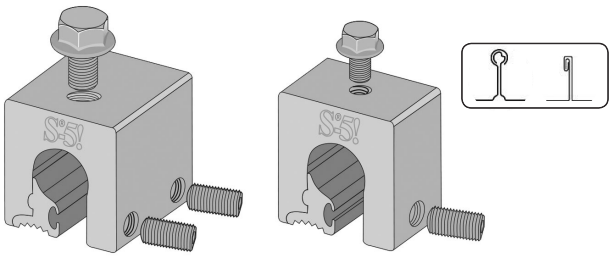
S-5-T

S-5-T - Mini



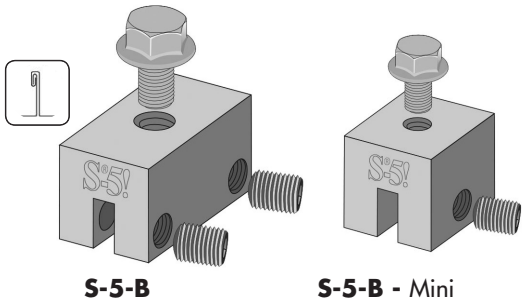
S-5-E

S-5-E - Mini



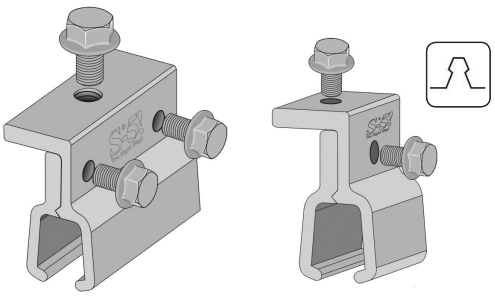
S-5-Z

S-5-Z - Mini



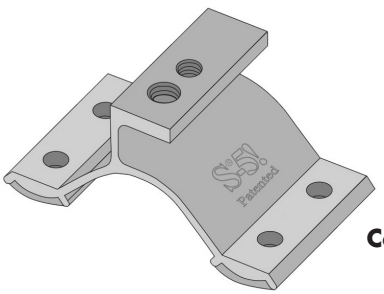
S-5-B

S-5-B - Mini



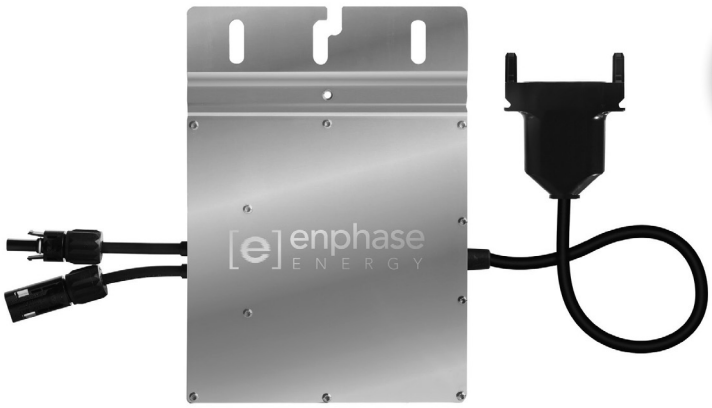
S-5-K

S-5-K - Mini



CorruBracket™

Enphase MicroInverters



Enphase **M250**

Envoy Communications Gateway

Enphase Engage Cable

Part Number	M215-60-2LL-S22/S23	M250-60-2LL-S22/S23/S24
Recommended Input Power (STC)	190 - 270 W	210 - 300 W
Maximum Input DC Voltage	45 V	48 V
Operating Range	16 - 36 V	16 V - 48 V
Min./Max. Start Voltage	22 V / 45 V	22 V / 48 V
Max. Input Current	10.5 A	9.8 A
Rated Output Power @208VAC	215 W	250 W
Rated Output Power @240 VAC	215 W	250 W
Maximum units per 20 A branch circuit (208 V)	25 (three phase)	24 (three phase)
Maximum units per 20 A branch circuit (240 V)	17 (single phase)	16 (single phase)
Enclosure Rating	NEMA 6	NEMA 6

CABLE TYPES / ORDERING OPTIONS

Voltage	Connector Spacing	PV Module Orientation	Model Number
240 VAC, 4 Conductors	1.025 meter (40")	Portrait	ET10-240
240 VAC, 4 Conductors	1.7 meter (67")	Landscape	ET17-240
208 VAC, 5 Conductors	1.025 meter (40")	Portrait	ET10-208
208 VAC, 5 Conductors	1.7 meter (67")	Landscape	ET17-208
240 VAC, 4 Conductors TRAY CABLE	Extension Cable, 12 AWG, No Ends or Connectors		WTC124

Part Number	Engage Accessories
ET-TERM	Branch Terminator
ET-SEAL	Watertight Sealing Cap
ET-SPLK	Engage Coupler
ET-DISC	Disconnect Tool

Part Number	Monitoring and Metering
ENV-120-01	Envoy Communications Gateway
RGM-MTR-01	Enphase Compatible GE i210+ Revenue grade Meter with integrated wireless ZigBee Communication
RGM-ZGB-01	ZigBee USB stick for Envoy communication with RGM
Enlighten Software	Free with Envoy
RGM-RR-01	ZigBee repeater for RGM

String Inverters

SB **3000**-US
SB **4000**-US

The Sunny Boy 3000-US and 4000-US inverters are specially designed for countries that require UL certification. Automatic grid voltage detection and an integrated DC disconnect switch simplifies installation, ensuring safety as well as saving time. These models feature galvanic isolation and can be used with all types of modules — crystalline as well as thinfilm. The die-cast aluminum enclosure, with the OptiCool active temperature management system, guarantees the highest yields possible and a long service life, even under extreme conditions.

Part Number	SB 3000-US-208V	SB 3000-US-240V	SB 4000-US-208V	SB 4000-US-240V
Maximum Input Voltage	500VDC	600VDC	600VDC	600 VDC
MPPT Input Voltage Range	175-400 VDC	200-400 VDC	220-480 VDC	250-480 VDC
Maximum Operating Input Current	17A	17A	18A	18 A
Minimum DC Voltage	175 VDC	200 VDC	220 VDC	250 VDC
Start-up Voltage	228 VDC	228 VDC	220VDC	285 VDC
Nominal Output Voltage	208 VAC	240 VAC	208 VAC	240 VAC
AC Nominal Power	3000 W	3000 W	3500 W	4000 W
Max Output Current	15 A	13 A	16 A	17 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (WxHxD)	18”x 14” x 9”	18”x 14” x 9”	18”x 14” x 9”	18”x 14” x 9”
Weight	84 lb	84 lb	84 lb	84 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

String Inverters

SB **5000**-US
SB **6000**-US
SB **7000**-US
SB **8000**-US

The Sunny Boy 5000-US, 6000-US, 7000-US and 8000-US inverters are UL certified and feature excellent efficiency. Graduated power classes provide flexibility in system design. Automatic grid voltage detection and an integrated DC disconnect switch simplify installation, ensuring safety as well as saving time. These models feature galvanic isolation and can be used with all types of modules — crystalline as well as thin-film.

Part Number	SB 5000-US	SB 6000-US	SB 7000-US	SB 8000-US
Maximum Input Voltage	600VDC	600VDC	600VDC	600 VDC
MPPT Input Voltage Range	250-480 VDC	250-480 VDC	250-480 VDC	300-480 VDC
Maximum Operating Input Current	21A	25A	30A	30 A
Minimum DC Voltage	250 VDC	250 VDC	250 VDC	300 VDC
Start-up Voltage	300 VDC	300 VDC	300 VDC	365 VDC
AC Nominal Power	5000 W	6000 W	7000 W	7680(240) 8000(277)
Nominal Output Voltage	208/240/277 VAC	208/240/277 VAC	208/240/277 VAC	240/277 VAC
Max Output Current 208 VAC	24 A	29 A	34 A	NA
Max Output Current 240 VAC	21 A	25 A	29 A	32 A
Max Output Current 277 VAC	18 A	22 A	25 A	29 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (WxHxD)	18.5"x 24" x 9"	18.5"x 24" x 9"	18.5"x 24" x 9"	18.5"x 24" x 9"
Weight	141 lb	141 lb	141 lb	145 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

String Inverters

SB **3000**TL-US
SB **4000**TL-US
SB **5000**TL-US

The Sunny Boy 3000TL-US/4000TL US/5000TL-US represents the next step in performance for UL certified inverters. Its transformerless design means high efficiency and reduced weight. Maximum power production is derived from wide input voltage and operating temperature ranges. Multiple MPP trackers and OptiTrac™ Global Peak mitigate the effect of shade and allow for installation at challenging sites. The unique Secure Power Supply feature provides daytime power in the event of a grid outage. High performance, flexible design and innovative features make the Sunny Boy TL-US series the first choice among solar professionals.

Part Number	SB 3000TL-US 208V	SB 3000TL-US 240V	SB 4000TL-US 208V	SB 4000TL-US 240V	SB 5000TL-US 208V	SB 5000TL-US 240V
Maximum Input Voltage	600VDC	600VDC	600VDC	600 VDC	600VDC	600 VDC
MPPT Input Voltage Range	175-480 VDC	175-480 VDC	175-480 VDC	175-480 VDC	175-480 VDC	175-480 VDC
Maximum Operating Input Current	18 A	18 A	24 A	24 A	30 A	30 A
Minimum DC Voltage	125 VDC	125 VDC	125 VDC	125 VDC	125 VDC	125 VDC
Start-up Voltage	150 VDC	150 VDC	150 VDC	150 VDC	150 VDC	150 VDC
Nominal Output Voltage	208 VAC	240 VAC	208 VAC	240 VAC	208 VAC	240 VAC
AC Nominal Power	3000 W	3000 W	4000 W	4000 W	4550 W	5000 W
Max Output Current	15 A	15 A	20 A	20 A	22 A	22 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (WxHxD)	19.3 "x 32.7" x 7.5"	19.3 "x 32.7" x 7.5"	19.3 "x 32.7" x 7.5"	19.3 "x 32.7" x 7.5"	19.3 "x 32.7" x 7.5"	19.3 "x 32.7" x 7.5"
Weight	53 lb	53 lb	53 lb	53 lb	53 lb	53 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

String Inverters

SB **6000**TL-US
SB **7000**TL-US
SB **8000**TL-US
SB **9000**TL-US
SB **10000**TL-US
SB **11000**TL-US

The Sunny Boy TL-US series is UL listed for North America and features SMA's innovative H5 topology, resulting in superior efficiencies of more than 98 percent and unmatched solar power production. The transformerless design reduces weight, increases the speed of payback and provides optimum value for any residential or decentralized commercial PV system. The Sunny Boy TL-US series for North America is the ideal choice in transformerless technology.

Part Number	SB 6000TL-US 208V	SB 6000TL-US 240V	SB 7000TL-US 208V	SB 7000TL-US 240V
Maximum Input Voltage	600VDC	600VDC	600VDC	600 VDC
MPPT Input Voltage Range	300-480 VDC	345-480 VDC	300-480 VDC	345-480 VDC
Maximum Operating Input Current	20.9 A	18.1 A	24.4 A	21.1 A
Minimum DC Voltage	300 VDC	345 VDC	300 VDC	345 VDC
Start-up Voltage	360 VDC	360 VDC	360 VDC	360 VDC
Nominal Output Voltage	208 VAC	240 VAC	208 VAC	240 VAC
AC Nominal Power	6000 W	6000 W	7000 W	7000 W
Max Output Current	28.8 A	25 A	33.7 A	29.2 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (WxHxD)	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"
Weight	78 lb	78 lb	78 lb	78 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

String Inverters

SB **6000**TL-US
SB **7000**TL-US
SB **8000**TL-US
SB **9000**TL-US
SB **10000**TL-US
SB **11000**TL-US

Part Number	SB 8000TL-US 208V	SB 8000TL-US 240V	SB 9000TL-US 208V	SB 9000TL-US 240V
Maximum Input Voltage	600VDC	600VDC	600VDC	600 VDC
MPPT Input Voltage Range	300-480 VDC	345-480 VDC	300-480 VDC	345-480 VDC
Maximum Operating input Current	27.9 A	24.1 A	31.4 A	27.1 A
Minimum DC Voltage	300 VDC	345 VDC	300 VDC	345 VDC
Start-up Voltage	360 VDC	360 VDC	360 VDC	360 VDC
Nominal Output Voltage	208 VAC	240 VAC	208 VAC	240 VAC
AC Nominal Power	8000 W	8000 W	9000 W	9000 W
Max Output Current	28.8 A	25 A	33.7 A	29.2 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (WxHxD)	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"
Weight	78 lb	78 lb	78 lb	78 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

Part Number	SB 10000TL-US 208V	SB 10000TL-US 240V	SB 11000TL-US 240V
Maximum Input Voltage	600VDC	600VDC	600VDC
MPPT Input Voltage Range	300-480 VDC	345-480 VDC	345-480 VDC
Maximum Operating Input Current	35 A	30.2 A	33.3 A
Minimum DC Voltage	300 VDC	345 VDC	345 VDC
Start-up Voltage	360 VDC	360 VDC	360 VDC
Nominal Output Voltage	208 VAC	240 VAC	240 VAC
AC Nominal Power	10000 W	10000 W	11000 W
Max Output Current	48.1 A	41.7 A	45.8 A
Standard Warranty	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (WxHxD)	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"	18"x 35.8" x 9.5"
Weight	78 lb	78 lb	78 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R

Commercial String Inverters

12000TL-US **20000**TL-US
15000TL-US **24000**TL-US

SMA's new Sunny Tripower TL-US is raising the level of performance for decentralized commercial PV plants. This three-phase transformerless inverter is UL listed for up to 1000 V DC maximum system voltage and has peak efficiency above 98 percent, while OptiTrac Global Peak minimizes the effects of shade for maximum energy production. The Sunny Tripower delivers a future-proof solution with full grid management, and communications and monitoring features. The Sunny Tripower is also equipped with all-pole ground fault protection and integrated AFCI for a safe, reliable solution. It offers unmatched flexibility with a wide input voltage range and two independent MPP trackers. Suitable for both 600 V DC and 1,000 V DC applications, the Sunny Tripower allows for flexible design and a lower levelized cost of energy.

Part Number	Sunny Tripower 12000TL-US	Sunny Tripower 15000TL-US	Sunny Tripower 20000TL-US	Sunny Tripower 24000TL-US
Maximum Input Voltage	1000VDC	1000VDC	1000VDC	1000VDC
MPPT Input Voltage Range	300-800 VDC	300-800 VDC	380-800 VDC	450-800 VDC
Maximum Operating Input Current	66 A	66 A	66 A	66 A
Minimum DC Voltage	150 VDC	150 VDC	150 VDC	150 VDC
Start-up Voltage	188 VDC	188 VDC	188 VDC	188 VDC
Nominal Output Voltage	480 / 277 V WYE	480 / 277 V WYE	480 / 277 V WYE	480 / 277 V WYE
AC Nominal Power	12000 W	15000 W	20000 W	24000 W
Max Output Current	14.4 A	18 A	24 A	29 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (WxHxD)	26.1" x 27.1" x 10.4"	26.1" x 27.1" x 10.4"	26.1" x 27.1" x 10.4"	26.1" x 27.1" x 10.4"
Weight	121 lb	121 lb	121 lb	121 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

Inverters

The AE 3TL 600 and 1000 Series add broader functionality to a proven robust design. The 1000 Series additionally offers system voltage options. With over 3 GW installed world-wide, these are well established products with great reliability track records. The AE 3TL qualifies for the Buy America Act and is light weight and easy to install. With a peak efficiency over 98% and versatile monitoring options, this is the fieldproven string inverter of choice for project developers, site designers and installers.

Advanced Energy 600 Series Inverters

Part Number	AE3TL-12	AE3TL-16	AE3TL-20	AE3TL-23
AC kW Output	12kW	16kW	20kW	23.2kW
AC Voltage	3 Phase, 480V, Wye +N			
Array Configuration	Balanced Dual Array Input, Ungrounded			
MPPT Input Voltage Range	125V to 450V			
Start Up Voltage	200V			
Maximum DC Input Voltage per Input	500V			
Maximum Operating input Current	2x 27.5A	2x 33A	2x 37.5A	2x 40A
Standard Warranty	5 Year			
Optional Warranty	10, 15, and 20 Year			
Dimensions (HxWxD)	35" x 21" x 11"			
Weight	108 lb			
Enclosure Rating	NEMA 4 Inverter, NEMA 3R Connection Box			

Advanced Energy 1000 Series Inverters

Part Number	AE3TL-12	AE3TL-16	AE3TL-20	AE3TL-23
AC kW Output	12kW	16kW	20kW	23.2kW
AC Voltage	3 Phase, 480V, Wye +N			
Array Configuration	Ungrounded			
MPPT Input Voltage Range	250V to 900V			
Start Up Voltage	200V			
Maximum DC Input Voltage per Input	1000V			
Maximum Operating input Current	27.5A	33A	37.5A	40A
Standard Warranty	5 Year			
Optional Warranty	10, 15, and 20 Year			
Dimensions (HxWxD)	35" x 21" x 11"			
Weight	108 lb			
Enclosure Rating	NEMA 4 Inverter, NEMA 3R Connection Box			

String Inverters

SOLECTRIA RENEWABLES

PVI **1800**
PVI **2500**

The PVI 1800 and PVI 2500 are the smallest single phase string inverters in the industry and tested in the harshest weather conditions. This compact, lightweight inverter is easy to handle and install and comes pre-wired with AC and DC connections. The integrated panel assembly option allows for this inverter series to be mounted on an industrial grade aluminum panel, with disconnects and a revenue grade meter.

Part Number	**PVI 1800-xxxV**	**PVI 2500-xxxV**
Absolute Maximum Input Voltage	400VDC	400VDC
MPPT Input Voltage Range	125-350 VDC	125-350 VDC
Maximum Operating Input Current	11A	15A
Nominal Output Voltage	208 or 240 VAC, 1-PH	208 or 240 VAC, 1-PH
Continuous Output Power 208/240 VAC	1.8 KW	2.5 KW
Continuous Output Current at 208 VAC	8.7 A	12 A
Continuous Output Current at 240 VAC	7.5 A	10.4 A
Standard Warranty	5 Year	5 Year
Optional Warranty	10 Year	10 Year
Dimensions (HxWxD)	18.5″x 13.1″ x 5.6″	23.6″x 13.1″ x 5.6″
Weight	34.1 lb	36.3 lb
Enclosure Rating	NEMA 4X	NEMA 4X

*Replace xxxV with AC Nominal Voltage

Transformerless String Inverters

SOLECTRIA RENEWABLES

PVI **3800TL**
PVI **5200TL**
PVI **6600TL**
PVI **7600TL**

Solectria Renewables' PVI 3800TL, 5200TL, 6600tl and 7600TL are compact, transformerless, single-phase inverters with the highest peak and CEC efficiencies in the industry. These inverters come standard with an integrated DC disconnect, optional DC arc-fault detection and interrupt, 1 or 2 MPP tracker(s), and a userinteractive LCD and keypad. Its small and lightweight design make for quick and easy installation and maintenance. These inverters include an enhanced DSP control, comprehensive protection functions, and advanced thermal design enabling highest reliability and uptime. They also come with a standard 10 year warranty with options for 15 and 20 years.

Part Number	PVI-3800TL	PVI-5200TL	PVI-6600TL	PVI-7600TL
Maximum Input Voltage	600 VDC	600 VDC	600 VDC	600 VDC
Operating Input Voltage Range	120-550 VDC	120-550 VDC	120-550 VDC	120-550 VDC
MPPT Input Voltage Range	200-500 VDC	200-500 VDC	200-500 VDC	200-500 VDC
Maximum Operating Input Current	20 A	15A per MPPT	18 A per MPPT	20 A per MPPT
Nominal Output Voltage	208 or 240 VAC	208 or 240 VAC	208 or 240 VAC	208 or 240 VAC
Continuous Output Power 208 VAC	3300 W	5200 W	6600 W	6600W
Continuous Output Power 240 VAC	3800 W	5200 W	6600 W	7600 W
Continuous Output Current 208 VAC	15.8 A	25.0 A	31.7 A	31.7 A
Continuous Output Current 240 VAC	15.8 A	21.7 A	27.5 A	31.7 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15 or 20 Year	15 or 20 Year	15 or 20 Year	15 or 20 Year
Dimensions(HxWxD)	17.7"x15.8"x6.9"	23.2"x15.8"x6.9"	23.2"x15.8"x6.9"	23.2"x15.8"x6.9"
Weight	42 lb	64 lb	64 lb	64 lb
Enclosure Rating	NEMA 4	NEMA 4	NEMA 4	NEMA 4

Nominal AC Voltage is Field Selectable

Commercial Inverters, 3-Phase

SOLECTRIA RENEWABLES

PVI **10KW**
PVI **13KW**
PVI **15KW**

Popular among schools and small business customers, Solectria Renewables' PVI 10KW, PVI 13KW, and PVI 15KW inverters are the smallest true three-phase PV Inverter series in the industry. This series of central inverters is available in 208 VAC, 240 VAC, 480 VAC, and 600 VAC versions and comes standard with integrated AC and DC disconnects, LCD display, and monitoring gateway. Options include an integrated 8 position fused string combiner, forward facing disconnects, and web-based monitoring.

Part Number	PVI 10KW-xxxV	PVI 13KW-xxxV	PVI 15 KW-xxxV
Maximum Input Voltage	475 VDC	475 VDC	475 VDC
Operating Voltage Range	205-430 VDC	205-430 VDC	205-430 VDC
MPPT Input Voltage Range	205-385 VDC	205-385 VDC	205-385 VDC
Maximum Operating Input Current	52 A	69 A	77 A
Nominal Output Voltage	208, 240, 480 or 600 VAC	208, 240, 480 or 600 VAC	208, 240, 480 or 600 VAC
Continuous Output Power	10 KW	13.2 KW	15 KW
Continuous Output Current at 208 VAC	28 A	37 A	42 A
Continuous Output Current at 240 VAC	24 A	32 A	36 A
Continuous Output Current at 480 VAC	12:00 AM	16 A	18 A
Continuous Output Current at 600 VAC	9.6 A	12.7 A	14.4 A
Standard Warranty	5 Year	5 Year	5 Year
Optional Warranty	10, 15, 20 Year	10, 15, 20 Year	10, 15, 20 Year
Dimensions (HxWxD)	27.5"x 36.5"x 12.8"	27.5"x 36.5"x 12.8"	27.5"x 36.5"x 12.8"
Dimensions with forward facing discnt.	27.5"x 46.5"x 13.2"	27.5"x 46.5"x 13.2"	27.5"x 46.5"x 13.2"
Weight	357 lb	357 lb	357 lb
Enclosure Rating	NEMA 3R	NEMA	NEMA 3R

Nominal AC Voltage is Field Selectable

Options

Part Number	Description
OPT-DISCO-FF	Factory Installed Option, Forward Facing AC and DC Disconnects, PVI 10-15KW
OPT-FUSCOM-08X-06A-20A	Factory Installed Option, String Combiner with DC Fuses, 8 Positions, 06A-20A Class, PVI 10-15KW (Customer to Specify Individual Fuses)

3-PH Transformerless String Inverters, 3-Phase

SOLECTRIA RENEWABLES

PVI **14TL**
PVI **20TL**
PVI **23TL**
PVI **28TL**

Solectria Renewables' PVI 14TL, PVI 20TL, PVI 23TL, and PVI 28TL are compact, transformerless three-phase inverters with dual MPP tracker. These inverters come standard with AC and DC disconnect, user-interactive LCD, 8-fuse string combiner. Its small and lightweight design make for quick and easy installation and maintenance. These inverters include an enhanced DSP control, comprehensive protection functions, and advanced thermal design enabling highest reliability and uptime. They also come with a standard 10 year warranty with options for 15 and 20 years.

Part Number	**PVI 14TL**	**PVI20TL**	**PVI 23TL**	**PVI 28TL**
Maximum Input Voltage	600 VDC	600 VDC	600 VDC	600 VDC
Operating Voltage Range	180-580 VDC	260-580 VDC	300-900 VDC	300-900 VDC
MPPT Input Voltage Range	300-550 VDC	300-550 VDC	450-800 VDC	450-800 VDC
Maximum Operating Input Current	2x 30A	2x 35A	2x 27A	2x 32A
Nominal Output Voltage	208 VAC, 3-PH	480 VAC, 3-PH	480 VAC, 3-PH	480 VAC, 3-PH
Continuous Output Power	14 kw	20 kw	23 kw	28 kw
Continuous Output Current	39 A	27.3 A	32 A	40 A
Standard Warranty	10 Year	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (HxWxD)	41.6"x 21.4"x 8.5"	39.4"x 23.6"x 9.1"	42.6"x 21.4"x 8.5"	42.6"x 21.4"x 8.5"
Weight	129 lb	129 lb	144 lb	144 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

Commercial Inverters

SOLECTRIA RENEWABLES

PVI **50KW**
PVI **60KW**
PVI **75KW**
PVI **85KW**
PVI **100KW**

The most customizable full-line of commercial grid-tied PV inverters available today, the PVI 50-100KW series has been utilized in projects ranging from 30kW to multimegawatt solar farms including a 30MW solar farm. This series of inverters is capable of operating at 208 VAC, 240 VAC, 480 VAC, and 600 VAC and comes standard with AC and DC disconnects, transformer isolation, LCD, and monitoring gateway. This line of inverters contain a lightweight power stage for serviceability. Options include premium efficient models, integrated fuse or breaker subcombiners, forward facing disconnects, stainless steel enclosure, web-based and sub-array monitoring, built-in cellular connectivity, and a dust filter. AC voltage and frequency settings may be customized according to utility specifications.

Part Number	**PVI 50KW-xxxV**	**PVI 60KW-xxxV**	**PVI75KW-xxxV PVI 75KW-PE-xxxV**	**PVI 85KW-xxxV PVI 8 KW-PE-xxxV**	**PVI 100KW-xxxV PVI 100KW-PE-xxxV**
Maximum Input Voltage	600 VDC	600 VDC	600 VDC	600 VDC	600 VDC
MPPT Input Voltage Range	300-500 VDC	300-500 VDC	300-500 VDC	300-500 VDC	300-500 VDC
Maximum Operating Input Current	176 A	211 A	264 A	299 A	351 A
Nominal Output Voltage	208, 240, 480 or 600 VAC	208, 240, 480 or 600 VAC	208, 240, 480 or 600 VAC	208, 240, 480 or 600 VAC	208, 240, 480 or 600 VAC
Continuous Output Power	50 KW	60 KW	75 KW	85 KW	100 KW
Continuous Output Current at 208 VAC	139 A	167 A	208 A	236 A	278 A
Continuous Output Current at 240 VAC	120 A	144 A	180 A	205 A	240 A
Continuous Output Current at 480 VAC	60 A	72 A	90 A	102 A	120 A
Continuous Output Current at 600 VAC	48 A	58 A	72 A	82 A	96 A
Standard Warranty	5 Year	5 Year	5 Year	5 Year	5 Year
Optional Warranty	10, 15, 20 Year	10, 15, 20 Year	10, 15, 20 Year	10, 15, 20 Year	10, 15, 20 Year
Dimensions (HxWxD)	78.2"X 50-53"X 33"	78.2"X 50-53"X 33"	78.2"X 50-53"X 33"	78.2"X 50-53"X 33"	78.2"X 50-53"X 33"
Dimensions with forward facing discnt.	78.2"X 79-88"X 33"	78.2"X 79-88"X 33"	78.2"X 79-88"X 33"	78.2"X 79-88"X 33"	78.2"X 79-88"X 33"
Weight	1450 LB	1450 LB	1875 LB	2070 LB	2070 LB
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
*PE=Premium Efficient model. Peak Efficiency is increased on 208 & 480 VAC units.	NA	NA	*208 VAC +.5% *480 VAC +.4%	*208 VAC +.8% *480 VAC +.4%	*208 VAC +.8% *480 VAC +.3%

Commercial Inverters

SOLECTRIA RENEWABLES

SubCombiner Options

Part Number	Description
OPT-BRKCOM-02X-040A-100A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 2 Positions, 40A-100A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-02X-110A-200A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 2 Positions, 110A-200A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-02X-225A-300A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 2 Positions, 225A-300A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-03X-040A-100A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 3 Positions, 40A-100A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-03X-110A-200A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 3 Positions, 110A-200A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-04X-040A-100A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 4 Positions, 40A-100A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-04X-110A-200A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 4 Positions, 110A-200A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-05X-040A-100A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 5 Positions, 40A-100A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-06X-040A-100A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 6 Positions, 40A-100A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-07X-040A-100A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 7 Positions, 40A-100A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-08X-040A-100A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 8 Positions, 40A-100A Class, PVI 50-100KW, (Customer to Specify Individual Breakers)
OPT-FUSCOM-02X-070A-100A	Factory Installed Option, Sub-combiner with DC Fuses, 2 Positions, 70A-100A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-02X-110A-200A	Factory Installed Option, Sub-combiner with DC Fuses, 2 Positions, 110A-200A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-02X-225A-300A	Factory Installed Option, Sub-combiner with DC Fuses, 2 Positions, 225A-300A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-03X-110A-200A	Factory Installed Option, Sub-combiner with DC Fuses, 3 Positions, 110A-200A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-04X-070A-100A	Factory Installed Option, Sub-combiner with DC Fuses, 4 Positions, 70A-100A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-04X-110A-200A	Factory Installed Option, Sub-combiner with DC Fuses, 4 Positions, 110A-200A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-06X-040A-060A	Factory Installed Option, Sub-combiner with DC Fuses, 6 Positions, 40A-60A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-06X-070A-100A	Factory Installed Option, Sub-combiner with DC Fuses, 6 Positions, 70A-100A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-08X-040A-060A	Factory Installed Option, Sub-combiner with DC Fuses, 8 Positions, 40A-60A Class, PVI 50-100KW, (Customer to Specify Individual Fuses)

Disconnect Options

Part Number	Description
OPT-DISCO-FFFAC	Factory Installed Option, Forward Facing AC and DC Disconnects, Fused AC Disconnect, PVI 50-100KW
OPT-DISCO-FFUAC	Factory Installed Option, Forward Facing AC and DC Disconnects, PVI 50-100KW
OPT-DISCO-SFFAC	Factory Installed Option, Fused AC Disconnect, PVI 50-100KW

Commercial Inverters

SGI **225**
SGI **250**
SGI **266**
SGI **300**
SGI **500**
SGI **500PE**

Solectria Renewables' SmartGri d 225-500PE series of inverters boasts an industry leading 97.5% CEC weighted efficiency which translates into significantly greater energy production and cost savings over the lifetime of the system. The SGI line has been deployed in a large number of commercial and utility-scale PV systems across North America ranging from 200kW to multi-MW. Our customers find these inverters to be the most cost-effective, reliable and efficient in the market. The SGI product family offers options such as VAR support, voltage and frequency ride through, controlled ramp rates and real power curtailment. Such critical utility options, combined with unsurpassed efficiencies and the lowest nighttime tare loss in the industry, earmark the SGI Series as the premier inverter for next generation large commercial and utility-scale systems.

Part Number	**SGI 225-xxxV**	**SGI 250-xxxV**	**SGI266-xxxV**	**SGI300-xxxV**	**SGI 500-xxxV SGI 500PE-xxxV**
Maximum Input Voltage	625 VDC	625 VDC	625 VDC	625 VDC	625 VDC
MPPT Input Voltage Range	300-500 VDC	300-500 VDC	300-500 VDC	300-500 VDC	300-500 VDC
Maximum Operating input Current	768 A	853 A	908 A	1026 A	1721 A *PE 1712 A
Nominal Output Voltage	480 or 600 VAC, 3-PH	480 or 600 VAC, 3-PH	480 or 600 VAC, 3-PH	480 or 600 VAC, 3-PH	480 or 600 VAC, 3-PH
Continuous Output Power	225 KW	250 KW	266 KW	300 KW	500 KW
Continuous Output Current at 480 VAC	271 A	301 A	320 A	360 A	602 A
Continuous Output Current at 600 VAC	217 A	240 A	256 A	389 A	480 A
Standard Warranty	5 Year	5 Year	5 Year	5 Year	5 Year
Optional Warranty	10, 15, 20 Year	10, 15, 20 Year	10, 15, 20 Year	10, 15, 20 Year	10, 15, 20 Year
Dimensions (HxWxD)	79"X 109"X 41"	79"X 109"X 41"	79"X 109"X 41"	79"X 109"X 41"	79"X 109"X 41"
Shading Set Back at 30* Solar Elevation	137"	137"	137"	137"	137"
Weight	5170 lb	5650 lb	5650 lb	5650 lb	6980 lb *PE 7107 lb
Enclosure Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
*PE=Premium Efficient model. Peak Efficiency increase	NA	NA	NA	NA	*480 and 600 VAC +.4%

Commercial Inverters

SGI **225**
SGI **250**
SGI **266**
SGI **300**
SGI **500**
SGI **500PE**

SOLECTRIA RENEWABLES

SubCombiner Options

Part Number	Description
OPT-BRKCOM-06X-225A-400A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 6 Positions, 225A-400A Class, SGI 225-300KW , (Customer to Specify Individual Breakers)
OPT-BRKCOM-08X-225A-400A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 8 Positions, 225A-400A Class, SGI 500KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-12X-110A-200A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 12 Positions, 110A-200A Class, SGI 225-300KW, (Customer to Specify Individual Breakers)
OPT-BRKCOM-16X-110A-200A	Factory Installed Option, Sub-combiner with DC Circuit Breakers, 16 Positions, 110A-200A Class, SGI 500KW, (Customer to Specify Individual Breakers)
OPT-FUSCOM-06X-225A-400A	Factory Installed Option, Sub-combiner with DC Fuses, 6 Positions, 225A-400A Class, SGI 225-300KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-08X-225A-400A	Factory Installed Option, Sub-combiner with DC Fuses, 8 Positions, 225A-400A Class, SGI 500KW (Customer to Specify Individual Fuses)
OPT-FUSCOM-12X-110A-200A	Factory Installed Option, Sub-combiner with DC Fuses, 12 Positions, 110A-200A Class, SGI 225-300KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-16X-110A-200A	Factory Installed Option, Sub-combiner with DC Fuses, 16 Positions, 110A-200A Class, SGI 500KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-24X-070A-100A	Factory Installed Option, Sub-combiner with DC Fuses, 24 Positions, 70A-100A Class, SGI 225-300KW, (Customer to Specify Individual Fuses)
OPT-FUSCOM-32X-070A-100A	Factory Installed Option, Sub-combiner with DC Fuses, 32 Positions, 70A-100A Class, SGI 500KW, (Customer to Specify Individual Fuses)

Web-Based Monitoring for Solectria Inverters

SOLECTRIA RENEWABLES

Solectria Renewables' SolrenView web-based monitoring solution is available for use with residential, commercial or SMARTGRID Inverters, allowing for real-time, seamless recording and reporting of PV system production. The SolrenView gateway hardware provides data via Ethernet (standard) or cellular modem. The required hardware comes standard and fully-integrated within all commercial and SMARTGRID inverters. A standalone version is available for residential use with LCD or LITE gateway systems. The complete SolrenView system features inverter direct monitoring, revenue grade monitoring, agency reporting, SolZone sub-array current monitoring, XML feed and a weather station.

Step 1: Required: Inverter Direct Setup a) or b)
Step 1a: Residential Single Phase (One of the hardware options below required per system)

Gateways

Part Number	Description
SRV-LCD	SolrenView Monitoring, Gateway, LCD Screen, Rated for Indoor Installation
SRV-LCD-OUTDOOR	SolrenView Monitoring, Gateway, LCD Screen, Rated for Outdoor Installation
SRV-LITE	SolrenView Monitoring, Gateway, Non-LCD Version, Rated for Indoor Installation
SRV-LITE-OUTDOOR	SolrenView Monitoring, Gateway, Non-LCD Version, Rated for Outdoor Installation

Step 1b: Commercial Three-Phase (One of the software setup options below required per 3-Phase inverter)

Software

Part Number	Description
OPT-SRV-ID-COM1	Factory Installed Option, Enable Software, SolrenView Inverter Direct Monitoring, PVI 10-15KW
OPT-SRV-ID-COM2	Factory Installed Option, Enable Software, SolrenView Inverter Direct Monitoring, PVI 50-100KW
OPT-SRV-ID-COM3	Factory Installed Option, Enable Software, SolrenView Inverter Direct Monitoring, SGI 225-500KW

Step 2 Required: Web-Based Monitoring Service (One required per system - select based on system size and term of contract)

SOLECTRIA RENEWABLES

Service Contract

Part Number	Description
SRV-SERVICE-1000KW-05Y	SolrenView Monitoring, Service Charge for Systems 501kW-1000kW, 5 Years
SRV-SERVICE-1000KW-10Y	SolrenView Monitoring, Service Charge for Systems 501kW-1000kW, 10 Years
SRV-SERVICE-100kW-05Y	SolrenView Monitoring, Service Charge for Systems 31kW-100kW, 5 Years
SRV-SERVICE-100kW-10Y	SolrenView Monitoring, Service Charge for Systems 31kW-100kW, 10 Years
SRV-SERVICE-2000kW-05Y	SolrenView Monitoring, Service Charge for Systems 1001kW-2000kW, 5 Years
SRV-SERVICE-2000kW-10Y	SolrenView Monitoring, Service Charge for Systems 1001kW-2000kW, 10 Years
SRV-SERVICE-30kW-05Y	SolrenView Monitoring, Service Charge for Systems 10kW-30kW, 5 Years
SRV-SERVICE-30kW-10Y	SolrenView Monitoring, Service Charge for Systems 10kW-30kW, 5 Years
SRV-SERVICE-4000kW-05Y	SolrenView Monitoring, Service Charge for Systems 2001kW-4000kW, 5 Years
SRV-SERVICE-4000kW-10Y	SolrenView Monitoring, Service Charge for Systems 2001kW-4000kW, 10 Years
SRV-SERVICE-500kW-05Y	SolrenView Monitoring, Service Charge for Systems 101kW-500kW, 5 Years
SRV-SERVICE-500kW-10Y	SolrenView Monitoring, Service Charge for Systems 101kW-500kW, 10 Years
SRV-SERVICE-7000kW-05Y	SolrenView Monitoring, Service Charge for Systems 4001kW-7000kW, 5 Years
SRV-SERVICE-7000kW-10Y	SolrenView Monitoring, Service Charge for Systems 4001kW-7000kW, 10 Years

Step 3 Optional: Revenue Grade Metering Service
Step 3a: Revenue Grade Meters (If Revenue Grade date is required, one meter necessary per AC point of connection)

Revenue Grade Meters

Part Number	Description
SRV-MET-CT-0300A	SolrenView Monitoring, 300A Revenue Grade Meter (MODBUS), 3-Phase 208VAC; up to 108kW, 3-Phase-480VAC; up to 249kW
SRV-MET-CT-0400A	SolrenView Monitoring, 400A Revenue Grade Meter (MODBUS), 3-Phase 208VAC; up to 144kW, 3-Phase-480VAC; up to 332kW
SRV-MET-CT-0800A	SolrenView Monitoring, 800A Revenue Grade Meter (MODBUS), 3-Phase 208VAC; up to 288kW, 3-Phase-480VAC; up to 665kW
SRV-MET-CT-1600A	SolrenView Monitoring, 1600A Revenue Grade Meter (MODBUS), 3-Phase 208VAC; up to 576kW, 3-Phase-480VAC; up to 1,330kW
SRV-MET-CT-2400A	SolrenView Monitoring, 2400A Revenue Grade Meter (MODBUS), 3-Phase 208VAC; up to 1,152kW, 3-Phase-480VAC; up to 2,660kW
SRV-MET-GL-1PH	SolrenView Monitoring, 135A Revenue Grade Meter 240VAC, 1-Phase, 4 Terminal, Digital LCD, KYZ Pulse
SRV-MET-GL-3PH	SolrenView Monitoring, 200A Revenue Grade Meter 120-480VAC, 3-Phase, 7 Terminal, Digital LCD, KYZ Pulse
SRV-MET-SKT-1PH	SolrenView Monitoring, 135A Meter Socket, 4 Terminal, 1-Phase
SRV-MET-SKT-3PH	SolrenView Monitoring, 200A Meter Socket, 7 Terminal, 3-Phase
OPT-SRV-RG-0400A	Factory Installed Option, SolrenView Revenue Grade Monitoring System (MODBUS), 400A Current Transducers, SGI 225-300KW
OPT-SRV-RG-0800A	Factory Installed Option, SolrenView Revenue Grade Monitoring System (MODBUS), 800A Current Transducers, SGI 500KW

Step 3b: Revenue Grade Data Reporting Service (One required per meter if monthly data reporting to agency is required)

Agency Reporting

Part Number	Description
SRV-AGENCY-05Y	SolrenView Monitoring, Service Charge for Agency Reporting, 5 Years
SRV-AGENCY-10Y	SolrenView Monitoring, Service Charge for Agency Reporting, 10 Years

Battery Based Inverter

XW Inverter Typical System Configuration. XW Inverter Shown With Distribution Panel and Charge Controller

The XW inverter is a pure sine wave output inverter. It can provide battery backup power when the utility grid fails. Under normal operation, the inverter can also sell excess solar power back to the utility grid. This inverter has a standard residential output voltage of 120V/240V. The inverters can also be installed in parallel to increase their output wattage. For example (2) 6000 watt inverters can be installed side by side to increase their combined output to 12,000 watts. United Electric also carries a complete line of battery banks and battery enclosures. Please contact us for a custom system designed to meet your needs.

Model	XW6048	XW4548	XW4024
Continuous Output	6000 W	4500 W	4000 W
Surge Rating (10 Seconds)	12000 W	9000 W	8000 W
Output Voltage	120/240VAC	120/240VAC	120/240VAC
Battery Bank Voltage	48VDC	48VDC	24VDC

Accessories

XW Power Distribution Panel
XW Conduit Box
XW Connection Kit for Second Inverter
XW System Control Panel
Automatic Generator Start
Network Cables, 3ft, 25ft, 75ft
Network Terminators
Conext Communication Box
MPPT 60A 150V Charge Controller
MPPT 80A 600V Charge Controller

Off Grid Battery Based Inverter

The SW inverter is a pure sine wave output inverter. This inverter is designed for off grid systems and will convert the DC energy stored in a battery bank into AC energy. The inverter can be used as a pure battery backup system without a solar input and has a built in battery charger for generator or utility integration. This inverter can also be installed with solar to create a complete standalone solar system. United Electric also carries a complete line of battery banks and battery enclosures. Please contact us for a custom system designed to meet your needs.

SW Inverter Typical System Configuration.
SW Inverter Shown With AC & DC Gear and System Control Panel

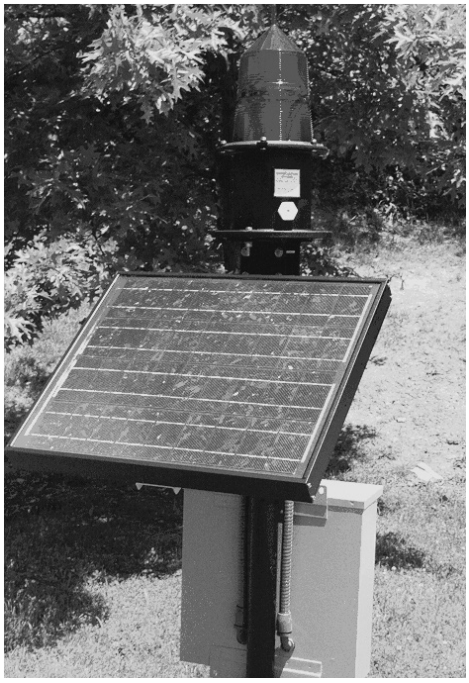
Model	SW2524	SW4024
Continuous Output	2500 W	3400 W
Output for 30 Min	2700 W	4000 W
Maximum Current Output	11 A	15 A
Surge Rating (5 Seconds)	5000 W	7000 W
Output Voltage	120/240VAC	120/240VAC
Battery Bank Voltage	24VDC	24VDC

Accessories

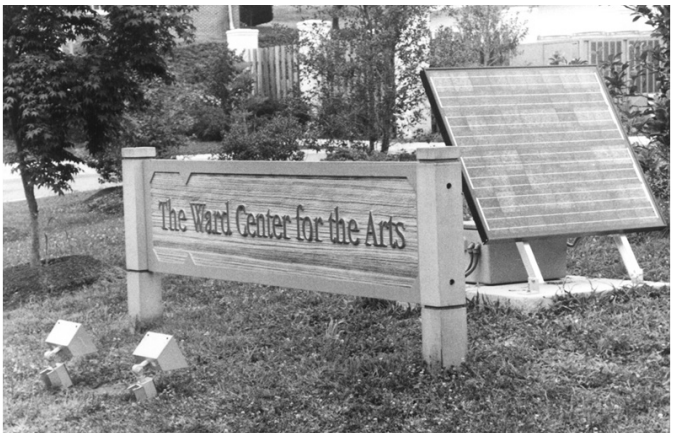
SW DC Switchgear
SW AC Switchgear
Stacking Kit
SW Remote On/Off Switch
System Control Panel
Conext Communication Box
Automatic Generator Start
Battery Temperature Sensor
Network Cables, 3ft, 25ft, 75ft
Network Terminators
MPPT 60A 150V Charge Controller
MPPT 80A 600V Charge Controller

United Electric Supply

UNITED ELECTRIC CAN ALSO SUPPLY YOU WITH...



- ➔ Off Grid Remote Power Systems
- ➔ Solar Sign Lighting
- ➔ Fronious Inverters
- ➔ E-Gauge Monitoring
- ➔ Deck Monitoring
- ➔ And Much More…



eGauge
capture your footprint [tread lightly]

DECK Monitoring

Fronius

Power One Inverters

power-one® Renewable Energy Solutions

Features:

- 96% CEC efficiency and Industry-leading MPPT for real time power tracking and improved energy harvesting
- Wide MPPT input voltage range enables high flexibility in string design
- Extra quiet high frequency transformer inverter architecture, NEMA4X enclosure and light weight design enable leading inverter mounting flexibility
- Fully inverter-integrated DC disconnect and wiring box saves installation time and cost
- Standard 10-Year Warranty, available extensions to 15 and 20 years

UNO-2.0-I
UNO-2.5-I

Part Number	UNO-2.0-I-OUTD-US	UNO-2.5-I-OUTD-US
Maximum Input Voltage	520 VDC	520 VDC
MPPT Input Voltage Range	170-470 VDC	205-470 VDC
Maximum Operating Input Current	12.5 A	12.8 A
Start-up Voltage	200 VDC	200 VDC
AC Nominal Power	2000 W	2500 W
Nominal Output Voltage	208/240/277 VAC	208/240/277 VAC
Max Output Current 208 VAC	10 A	12 A
Max Output Current 240 VAC	10 A	12 A
Max Output Current 277 VAC	10 A	12 A
Standard Warranty	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year
Dimensions (H x W x D) In.	30.3 x 14.4 x 6.3	30.3 x 14.4 x 6.3
Weight	42.5 lb	42.5 lb
Enclosure Rating	NEMA 4X	NEMA 4X

AC Voltage is Field Selectable

Power One Inverters

power-one® Renewable Energy Solutions

Features:

- Single phase output
- Dual input sections with independent MPPT, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- High speed and precise MPPT algorithm for real-time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- Integrated DC disconnect switch in compliance with international Standards (-S Version)
- RS-485 communication interface (for connection to laptop or datalogger)

PVI-3.0-TL
PVI-3.6-TL
PVI-4.2-TL

Part Number	PVI-3.0-OUTD-US	PVI-3.6-OUTD-US	PVI-4.2-OUTD-US
Maximum Input Voltage	600VDC	600VDC	600VDC
MPPT Input Voltage Range	160-530 VDC	120-530 VDC	140-530 VDC
Maximum Operating Input Current	20 A	32 A	32 A
Start-up Voltage	200 VDC	200 VDC	200 VDC
Nominal Output Voltage	208/240/277 VAC	208/240/277 VAC	208/240/277 VAC
AC Nominal Power	3000 W	3600 W	4200 W
Max Output Current 208 VAC	14.5 A	17.2 A	20 A
Max Output Current 240 VAC	14.5 A	16 A	20 A
Max Output Current 277 VAC	12:00 AM	16 A	20 A
Standard Warranty	10 Year	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year	15, 20 Year
Dimensions (H x W x D) In.	33.8 x 12.8 x 8.7	33.8 x 12.8 x 8.7	33.8 x 12.8 x 8.7
Weight	47.3 lb	47.3 lb	47.3 lb
Enclosure Rating	NEMA 4X	NEMA 4X	NEMA 4X

Power One Inverters

power-one® Renewable Energy Solutions

Features:

- Single phase output
- Dual input sections with independent MPPT, allows optimal energy harvesting from two sub-arrays oriented in different directions
- Wide input range
- High speed and precise MPPT algorithm for real-time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- Outdoor enclosure for unrestricted use under any environmental conditions
- RS-485 communication interface (for connection to laptop or datalogger)

PVI-5000-TL
PVI-6000-TL

Part Number	PVI-5000-OUTD-US	PVI-6000_OUTD-US
Maximum Input Voltage	600 VDC	600 VDC
MPPT Input Voltage Range	200-530 VDC	200-530 VDC
Maximum Operating input Current	36 A	36 A
Start-up Voltage	200 VDC	200 VDC
AC Nominal Power	5000 W	6000 W
Nominal Output Voltage	208/240/277 VAC	208/240/277 VAC
Max Output Current 208 VAC	27 A	30 A
Max Output Current 240 VAC	23 A	28 A
Max Output Current 277 VAC	20 A	24 A
Standard Warranty	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year
Dimensions (H x W x D) In.	41.4 x 12.8 x 8.6	41.4 x 12.8 x 8.6
Weight	78 lb	78 lb
Enclosure Rating	NEMA 4X	NEMA 4X

AC Voltage is Field Selectable

Power One Inverters

power-one® Renewable Energy Solutions

Features:

- High speed and precise MPPT algorithm for real-time power tracking and improved energy harvesting
- Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range
- 'Electrolyte-free' power converter to further increase the life expectancy and long-term reliability
- True three-phase bridge topology for DC/AC output converter
- Night wake-up button to access energy harvesting data and error log when inverter is sleeping
- Dual input sections with independent MPPT, allows optimal energy harvesting from two sub-arrays oriented in different directions
- NEMA 4X outdoor enclosure for unrestricted use under any environmental conditions
- Integrated combiner box equipped with a DC switch in compliance with international standards (-S1,-S2)
- RS-485 communication interface (for connection to laptop or datalogger)

PVI-12.0-I

S1 version

S2 version

Part Number	PVI-10.0-I-OUTD-US	PVI-12.0-I-OUTD-US
Maximum Input Voltage	520 VDC	520 VDC
MPPT Input Voltage Range	220-470 VDC	250-470 VDC
Maximum Operating Input Current	48 A	50 A
Start-up Voltage	200 VDC	200 VDC
AC Nominal Power	10000 W	12000 W
Nominal Output Voltage	208/480 VAC	480 VAC
Max Output Current 208 VAC	30 A	NA
Max Output Current 480 VAC	14 A	16 A
Standard Warranty	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year
Dimensions (H x W x D) In.	28.2 x 25.4 x 8.7	28.2 x 25.4 x 8.7
Weight	101 lb	101 lb
Enclosure Rating	NEMA 4X	NEMA 4X

Power One Inverters

power-one® Renewable Energy Solutions

Features:

- Maximize energy production with 97.5% CEC efficiency and industry leading MPPT algorithm
- Fully utilize available roof space and maximize harvest with dual independent MPP trackers
- Wall mountable design and 1000Vdc input voltage lower installation costs
- Wide DC input voltage and operating temperature range enable greater PV array design flexibility
- Improve system uptime and eliminate single point of failure with a modular design using TRIO
- Utility interactive control features and Modbus protocol integrates with monitoring and control systems
- Design uses natural convection cooling and no electrolytic capacitors for segment leading reliability
- Standard 10 year warranty

TRIO-20.0-TL
TRIO-27.6-TL

Part Number	TRIO-20.0-TL US	TRIO-27.6-TL US
Maximum Input Voltage	1000 VDC	1000 VDC
MPPT Input Voltage Range	450-800 VDC	550-800 VDC
Maximum Operating Input Current	25 A	30.9 A
Start-up Voltage	200 VDC	200 VDC
AC Nominal Power	20000 W	27600 W
Nominal Output Voltage	480 VAC	480 VAC
Max Output Current 480 VAC	27 A	36 A
Standard Warranty	10 Year	10 Year
Optional Warranty	15, 20 Year	15, 20 Year
Dimensions (H x W x D) In.	41.7 x 27 x 11.5	41.7 x 27 x 11.5
Weight	157 lb	168 lb
Enclosure Rating	NEMA 4X	NEMA 4X

Roof Penetration

SolaDeck
FLASHED PV ROOF-MOUNT COMBINER/ENCLOSURE

Basic Features

- Stamped Seamless Construction
- 18 Gauge Galvanized Steel
- Powder Coated Surfaces
- Flashes into the roof deck
- 3 Roof deck knockouts .5", .75", 1"
- 5 Centering dimples for entry/exit fittings or conduit
- 2 Position Ground Lug Installed
- Mounting Hardware Included

Part Number	Description
SOLADECK078641	Flashed Enclosure with 6" Din Rail, 600 Vdc 120 A Max
SOLADECK0784BB	Positive bus bar, 120A, use up to 4 midget fuse holders
SOLADECK0785BB	Negative bus bar, 120A, use with up to 4 combining terminals
FUSUSM1	Midget fuse holder, 600V, 30A for ATM fuses
WEI1020300000	Terminal strip for combining and transitioning,16-6 AWG
WEI1020200000	Alternative terminal strip for transitioning, 26-8 AWG
WEI1050000000	End Plate
WEI1061200000	End Barrier

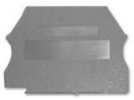
SOLADECK078641

SOLADECK0784BB

SOLADECK0785BB

FUSUSM1

WEI1020300000



WEI1050000000

WEI1061200000

ATM Fuses

MERSEN

- Commonly used in solar combiner boxes
- 600 V AC / DC
- 1-1/2" x 13/32" (10mm x 38mm) dimensions
- Standard sizes of 1 amps to 30 amps

ATM 30 AMP Fuse

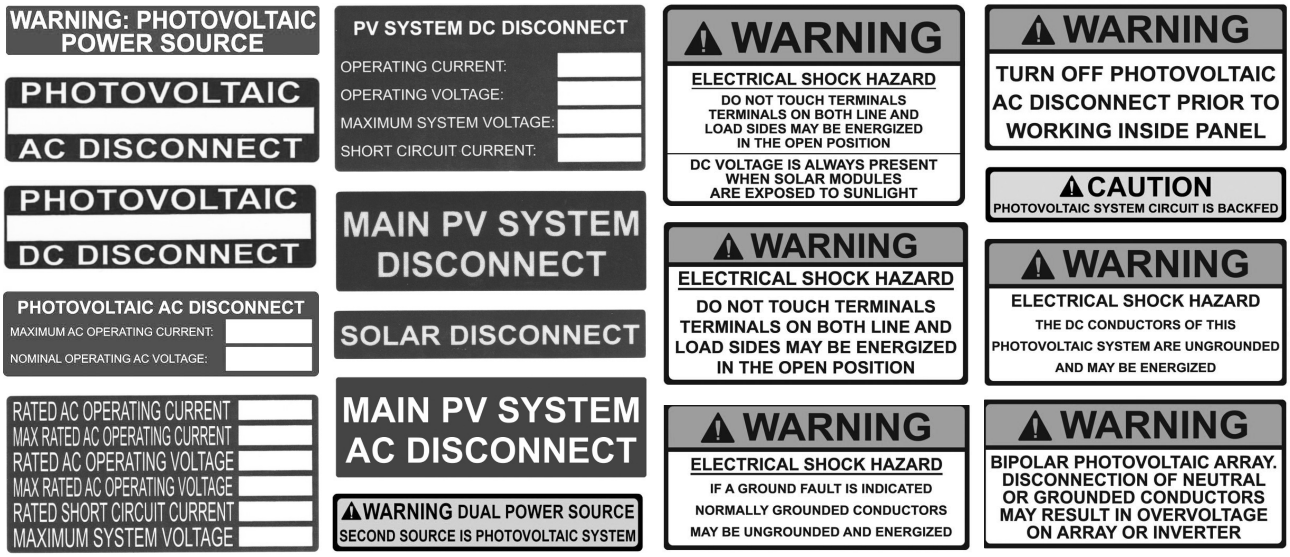
TR-R and TRS-R Fuses

- Commonly used in disconnects
- TR-R rated 250VAC, 250VDC (35-400A), 160VDC (3-30A; 450-600A)
- TRS-R rated 600VAC, 600VDC (70-600A), 300VDC (15-60A)

Tri-Onic® TR-R and TRS-R current limiting, time delay fuses

Pre-Printed Labels

HellermannTyton



Part Number	Description	Width	Length
596-00495	Warning - Dual Power Source Second Source is Photovoltaic System	4.12"	0.75"
596-00496	Warning - Electric Shock Hazard Do not Touch Terminals...DC Voltage is Always Present…	3.75	2.5"
596-00497	Warning - Electric Shock Hazard Do not Touch Terminals…	3.75"	2"
596-00498	Warning - Electric Shock Hazard If Ground Fault is Indicated…	4.125"	2"
596-00588	Warning - Electric Shock Hazard The DC Conductors of this Photovoltaic System are Ungrounded…	4.125"	2"
596-00499	Warning - Turn Off Photovoltaic AC Disconnect Prior to Working Inside Panel	4.125"	2"
596-00587	Caution - Photovoltaic System Circuit is Backfed	4.12"	0.75"
596-00591	Warning - Single 120-Volt Supply Do Not Connect Multiwire Branch Circuits	3.75	2
596-00590	Warning - Bipolar Photovoltaic Array. Disconnection of Neutral or Grounded Conductors May Result…	3.75	2
596-00589	Warning - Inverter Output Connection. Do Not Relocate this Overcurrent Device	4.12"	0.75"
596-00237	Photovoltaic * AC Disconnect	3.75"	1"
596-00238	Photovoltaic * DC Disconnect	3.75"	1"
596-00239	Photovoltaic AC Disconnect Maximum AC Operating Current:*, Nominal Operating AC Voltage:*	3.75"	1"
596-00240	Rated AC Operating Current:*, Max Rated AC Operating Current:*, Rated AC Operating Voltage:*, Max Rated AC Operating Voltage:*, Rated Short Circuit Current:*, Maximum System Voltage:*	4.0"	2"
596-00241	PV System DC Disconnect - Operating Current:*, Operating Voltage:*, Maximum System Voltage:*, Short Circuit Current:*	3.75"	2"
596-00242	Clear Overlaminate to UV Protect Field Applied Ratings, Cut in Half for Smaller Labels	4.2"	2.25"
596-00243	Main PV System Disconnect (Reflective)	5.5"	1.75"
596-00255	Main PV System AC Disconnect (Reflective)	5.5	1.75
596-00244	Do Not Disconnect Under Load (Reflective)	6.5"	1.0"
596-00613	Caution: Solar Electric System Connected (Reflective)	6.5"	1.0"
596-00246	Solar Disconnect (Reflective)	6.5"	1.0"
596-00615	Caution: Solar Circuit (Reflective)	6.5"	1.0"
596-00206	Warning: Photovoltaic Power Source (Reflective)	6.5"	1.0"
596-00474	Photovoltaic System with Rapid Shutdown (Reflective)	5.5"	1.75"

* Denotes a fill in the blank white area on the label for identification and ratings to be added.
Note: All labels sold in rolls of 50.

Solar Combiner Boxes

COOPER Crouse-Hinds

Cooper Crouse-Hinds Solar Combiner Solutions are designed and built to minimize system costs by providing maximum flexibility. Solar Combiner Solutions offer a range of 1 to 48* input circuits, with standard durable non-metallic (NEMA 4X) enclosures, engineered and manufactured to perform in the harshest environmental conditions. ETL Listed to UL 1741 standards*, providing peace of mind and plenty of wiring room for ease of installation.

Features

- Rated for 600VDC or 1000VDC - continuous duty
- Touch-Safe fuse holders
- Lexan shield covers all live components
- 90°C output terminals
- Configured for positive, negative grounded arrays, and bipolar arrays (to 1000VDC combined voltage)
- Busbar design

Enclosure Type	Number of Input Circuits	Fuse Amperage**	Surge Protection	DC Monitoring	Voltage
CCBF (Fiberglass N4X)	**01** (1 input circuit)	**F08** (8A Fuse)	**SP** (Surge Protection)	**DCM** Pre-Installed DC Current Monitoring Unit	**1000V** (1000V)
	02 (2 input circuit)	**F10** (10A Fuse)	30kA/600VDC or 30kA/1000VDC Interrupting Rating IP20 Finger-Safe		
CCBS (Painted Steel N3R)	**03** (3 input circuit)	**F12** (12A Fuse)			
	04 (4 input circuit)	**F15** (15A Fuse)			
CCBSS (Stainless Steel N4X)	**05** (5 input circuit)	Offered up to 30A			
	06 (6 input circuit)	**Blank** (fuses not provided by factory)	**Blank** (No Surge Protection)	**Blank** (No DC Current monitoring)	**Blank** (600V)
CCB4S (Powder Coated Steel N4)	(Offered up to 48 circuits*)				

Example: **CCBF 04 F15 DCM**

*Combiners with 37-48 input circuits are not 3rd party certified, but are built to UL 1741 standards.

**Negative Fused Configurations Availible for positive Grounded Arrays. Replace F15 with NF15 in the catalog number.

Solar Combiner Boxes with Integral DC Disconnect Switches

COOPER Crouse-Hinds

Cooper Crouse-Hinds Solar Combiner Boxes with Integral DC Disconnect Switches provide all the strong and durable features of our standard Solar Combiner and are available with 1-48 input circuits*, save material costs, installation time and labor by joining the combiner box and disconnect within one enclosure and eliminating the need for a disconnect switch in a separate enclosure. ETL Listed to UL 1741 standards*, providing peace of mind and plenty of wiring room for ease of installation.

Features

- Rated for 600VDC or 1000VDC - continuous duty
- Integral Disconnects available in 100A, 250A, 400A and 600A†
- Touch-Safe fuse holders
- Lexan shield covers all live components
- 90°C output terminals
- Configured for positive and negative grounded arrays*

Enclosure Type	Number of Input Circuits	Fuse Amperage**	Rating for Integral Disconnect	Surge Protection	DC Monitoring	Voltage
CCBF (Fiberglass N4X)	**01** (1 input circuit)	**F08** (8A Fuse)	**DS** (Disconnect Switch)	**SP** (Surge Protection)	**DCM** Pre-Installed DC Current Monitoring Unit	**1000V** (1000V)
	02 (2 input circuit)	**F10** (10A Fuse)	**DS100** (100A-up to 6 circuits)	30kA/600VDC or 30kA/1000VDC Interrupting Rating IP20 Finger-Safe		
CCBS (Painted Steel N3R)	**03** (3 input circuit)	**F12** (12A Fuse)	**DS250** (250A-6 to 24 circuits)			
	04 (4 input circuit)	**F15** (15A Fuse)	**DS400** (400A-25+ circuits)			
CCBSS (Stainless Steel N4X)	**05** (5 input circuit)	Offered up to 30A	**DS600** (600A-Consult Factory)			
	06 (6 input circuit)	**Blank** (fuses not provided by factory)	**Blank** (fuses not provided by factory)	**Blank** (No Surge Protection)	**Blank** (No DC Current monitoring)	**Blank** (600V)
CCB4S (Powder Coated Steel N4)	(Offered up to 48 circuits*)					

Example: **CCBF 24 F15 DS250 SP**

*Combiners with 37-48 input circuits are not 3rd party certified, but are built to UL 1741 standards.

**Negative Fused Configurations Availible for positive Grounded Arrays. Replace F15 with NF15 in the catalog number.

†UL98B Listed Disconnect Switch 1000V.

Recombiners

COOPER Crouse-Hinds

In large photovoltaic (PV) systems, multiple combiner boxes are often necessary, and the outputs of these combiner boxes may need to be combined again—recombined—before reaching a central inverter. Cooper Crouse-Hinds Recombiner Boxes allow for ease of installation, saving time, labor, and most importantly, system costs. Solar Recombiners range from 2 to 12 input circuits, with a durable non-metallic (NEMA 4X) or metallic (NEMA 3R) painted steel enclosure.

Features

- Rated for 600VDC or 1000VDC - continuous duty
- 2-12 input circuits with configurations up to 1200A
- Installed fuses included
- Lexan shield covers all live components
- 90°C output terminals
- Configured for positive and negative grounded arrays
- Busbar design

Enclosure Type	Number of Input Circuits	Fuse Amperage**		Surge Protection	DC Monitoring	Voltage
CRBF (Fiberglass N4X)	**01** (1 input circuit)	**F60** (60A Fuse)	**F250** (250A Fuse)	**SP** (Surge Protection)	**DCM** Pre-Installed DC Current Monitoring Unit	**1000V** (1000V)
	02 (2 input circuit)	**F75** (75A Fuse)	**F275** (275A Fuse)	30kA/600VDC or 30kA/1000VDC Interrupting Rating IP20 Finger-Safe		
CRBS (Painted Steel N3R)	**03** (3 input circuit)	**F100** (100A Fuse)	**F300** (300A Fuse)			
	04 (4 input circuit)	**F125** (125A Fuse)	**F325** (325A Fuse)			
CRBSS (Stainless Steel N4X)	(Offered up to 12 circuits)	**F150** (150A Fuse)	**F350** (350 A Fuse)	**Blank** (No Surge Protection)	**Blank** (No DC Current monitoring)	**Blank** (600V)
		F175 (175A Fuse)	**F375** (375A Fuse)			
CRB4S (Powder Coated Steel N4)		**F200** (200A Fuse)	**F400** (400A Fuse)			
		F225 (225A Fuse)				

Example: **CRBF 04 F175 DCM**

Disconnect Boxes

COOPER Crouse-Hinds

Crouse-Hinds Solar Disconnect Enclosures are used as a disconnecting means prior to the inverter and rated for either 600 or 1000 VDC applications. Disconnect Enclosures range from 1 to 12 input circuits, with a wide range of disconnect sizes, configurations, and enclosure options for maximum customer flexibility.

Features

- Rated for 600VDC or 1000VDC - continuous duty
- 1-12 input circuits
- 90°C output terminals
- Includes touch safe protective cover
- Configured for both positive and negative grounded arrays

Enclosure Type	Number of Input Circuits	Fuses	Fuse Amperage**		Number of Diconnects	Rating for Integral Disconnects	Surge Protection	Voltage
CDBF (Fiberglass N4X)	**01** (1 input circuit)	**1** (1 fuse)	**Blank** (non-fused)	**F275** (275A fuse)	**Blank** (1 Dissconnect Switch)	**DS** (Dissconnect Switch for use with 1-12 input circuits)	**Blank** (No Surge Protection)	**1000V** (1000V)
	02 (2 input circuit)	**2** (2 fuse)	**F100** (100A fuse)	**F300** (300A fuse)	**2** (2 Dissconnect Switches)			
CDBS (Painted Steel N3R)	**03** (3 input circuit)	**3** (3 Fuse)	**F125** (125A fuse)	**F325** (325A fuse)	**3** (3 Dissconnect Switches)			
	04 (4 input circuit)	**4** (4 fuse)	**F150** (150A fuse)	**F350** (350A fuse)	**4** (4 Dissconnect Switches)			
CDBSS (Stainless Steel N4X)	**05** (5 input circuit)	**5** (5 Fuse)	**F175** (175A fuse)	**F375** (375A fuse)	Up to 12 Dissconnects allowed	**DS100** (100A)		
	06 (6 input circuit)	**6** (6 fuse)	**F200** (200A fuse)	**F400** (400A Fuse)		**DS250** (250A)	**SP** (Surge Protection)	**Blank** (600V)
CDB4S (Powder Coated Steel N4)	(Offered up to 12 circuits)	(Offered up to 12 Fuses)	**F225** (225A fuse)			**DS400** (400A)		
			F250 (250A fuse)			**DS600** (600A)		

Example: **CDBF 04 4 F175 2 DS200**

Solar Module Connectors

wieland

Wieland Solar **MC4 compatible, 600V Max**

Part Number	Description
RENR624073-1316 PEW 12.73-1	Rennsteig Crimper for Wieland Connectors Includes Die & Locator
WIEY611200531 + WIE0554523028	Wieland Male PV Cable Connector for 10 AWG
WIEY611100531 + WIE0212583028	Wieland Female PV Cable Connector for 10 AWG

Male PV Cable Connector

Female PV Cable Connector

MC

Multi-Contact MC4 **600V Max**

Part Number	Description
RENR62457031	Rennsteig Crimper for MC4 Connectors Includes Die & Locator
PVKST4/6I	Multi-Contact MC4 Male PV Cable Connector for 10 AWG
PVKBT4/6I	Multi-Contact MC4 Female PV Cable Connector for 10 AWG

Multi-Contact MC4 Male PV Cable Connector

Multi-Contact MC4 Female PV Cable Connector

Amphenol®

Amphenol, H4 **MC4 Compatible, 1000V Max**

Part Number	Description
REN624119431	Rennsteig Crimper for H4 Connectors Includes Die & Locator
AMIH4CMC6DI	Amphenol H4 Male PV Cable Connector for 10 AWG, PV-200045-1
AMIH4CFC6DI	Amphenol H4 Female PV Cable Connector for 10 AWG, PV-200009-1

H4 Male PV Cable Connector

H4 Female PV Cable Connector

Tyco Electronics

Tyco Solarlok **600V Max**

Part Number	Description
TYCOSOLARLOK115790042	Hand Crimping Tool, 6.0 mm2, 10 AWG + 4.0 mm2, 12 AWG
TYCOSOLARLOK713944615	Male Cable Coupler 6.0 mm2, 10 AWG, Neutral Keyed
TYCOSOLARLOK713944614	Male Cable Coupler 6.0 mm2, 10 AWG, Negative Keyed
TYCOSOLARLOK713944613	Male Cable Coupler, 6.0 mm2, 10 AWG, Positive Keyed
TYCOSOLARLOK613944624	Female Cable Coupler 6.0 mm2, 10 AWG, Negative Keyed
TYCOSOLARLOK613944623	Female Cable Coupler, 6.0 mm2, 10 AWG, Positive Keyed

Male PV Cable Coupler

Female PV Cable Coupler

Delta Lightning Arrestors

How Arrestors Affect Surges

Surges are comprised of two elements: voltage and quantity of charge. A very high voltage surge can damage equipment by breaking down the insulating medium between elements in a circuit or between those elements and a ground. The amount of damage will be determined by the current from the charge and/or current from the power source. In order to protect a circuit from damage, a surge arrestor must conduct sufficient charge from the surge to lower the surge voltage to a safe level quickly enough to prevent circuit insulation from breaking down.

All circuits can withstand a high voltage for a short time. The shorter the time becomes, the higher the tolerable voltage becomes. Consider a 50,000 volt surge impressed on a 240 volt apparatus having a surge arrestor connected parallel. The surge arrestor will begin to conduct the charge, bleeding it out of the circuit. As the charge is removed from the circuit, the surge voltage will fall. As the charge approaches zero the surge voltage will approach zero. If this happens quickly enough the apparatus will be protected.

How quickly an arrestor can eliminate a surge from a circuit depends on four factors: the magnitude of the voltage, the quantity of the charge, the speed at which the arrestor starts conducting, and the conductivity of the arrestor. Given two arrestors, one having double the conductivity of the other, one will handle the surge twice as rapidly as the other. Given two arrestors of the same conductivity but one which begins to conduct more quickly, the quicker one will eliminate the surge from a circuit more quickly.

Specifications

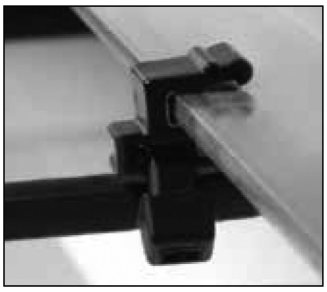
Type of Design	Silicon Oxide Varistor
Maximum Number of Surges	Unlimited
Response Time One Milliamp Test	5 Nanoseconds
Response Time to Clamp 10,000 Amps	10 Nanoseconds
Response Time to Clamp 50,000 Amps	25 Nanoseconds
Maximum Current LA302DC	60,000 Amps
Maximum Energy LA302DC	2,000 Joules per Pole
Maximum Current LA602DC	100,000 Amps
Maximum Energy LA602DC	3,000 Joules per Pole
SK5222	Sunfix Plus End Spacer, 50mm Silver

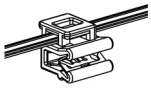
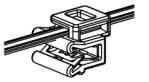
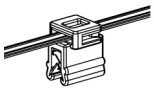
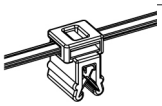
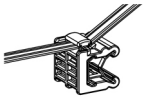
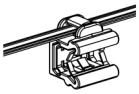
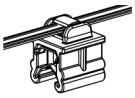
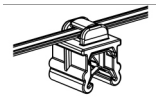
Part Number	Description
LA302DC	Lightning Arrestor, 0 to 500 Volts DC, Weatherproof Enclosure 2.25"x2.25" with 1/2" Threaded Nipple
LA602DC	Lightning Arrestor, 0 to 1100 Volts DC, Weatherproof Enclosure 4.5"x2.25" with 1/2" Threaded Nipple
LA302R	Lightning Arrestor, 0 to 300 Volts AC, Weatherproof Enclosure 2.25"x2.25" with 1/2" Threaded Nipple

Edge Clip and UV Stabilized Cable Tie Assemblies

HellermannTyton

Designed specifically to route cables by securing them to a metal or plastic frame rail edge, Edge Clips and UV Stabilized Cable Tie Assemblies eliminate the need for mounting holes and mechanical fasteners. Edge Clips are easy to secure and the extraction force is high due to the integrated metal clamp that holds the Edge Clip in place. This allows cable ties to firmly hold the cable, preventing chafing of the cable and ensuring long-term reliability.



Part Number	Type	Min Tensile Strength (lb)	Length (in)	Max Bundle (in)	Color	Pkg. Qty	Drawing
1-3 mm Edge Thickness							
156-00468	T50REC5B	50	8	2	Black	100	
156-00589	T50REC5A	50	8	2	Black	100	
156-00588	T50REC4B	50	8	2	Black	100	
156-00635	T50REC4A	50	8	2	Black	100	
3-6 mm Edge Thickness							
156-00592	T50REC23	50	8	2	Black	100	
156-00593	T50REC24	50	8	2	Black	100	
156-00590	T50REC19	50	8	2	Black	100	
156-00591	T50REC20	50	8	2	Black	100	

Cable Tie Material Data

Material	Polyamide 6.6 Heat Stabilized (PA66UV)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Flammability	UL94V-2

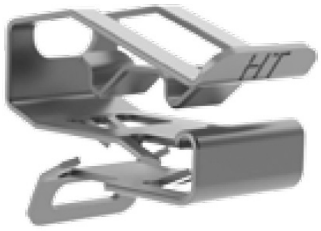
Edge Clip Material Data

Material	Polyamide 6.6 High Impact Modified, Heat Stabilized, UV Stabilized (PA66HIRHSUV)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C)
Flammability	UL94 HB

Metal Edge Clip

HellermannTyton

Developed for solar applications, our corrosion-resistant 304 stainless steel Metal Edge Clip features smooth, rounded edges that will not abrade wire or cable. The Metal Edge Clip accommodates one or two PV cables and works with frames 1 to 3 mm thick. A large thumb surface provides easy insertion.



Part Number	Type	Panel Thickness Min (mm)	Panel Thickness Max (mm)	Cable Diameter Min (mm)	Cable Diameter Max (mm)	Pkg. Qty
151-00982	MSC2	1	3	5	7.6	100

Material Data

Material	Stainless Steel
Operating Temperature	-112 °F to +1000 °F (-80 °C to +538 °C)
Flammability	Non-burning

Insulation Piercing Connectors

Blackburn®

- Performs as a splice or tap for non-tension applications up to 600 Volts depending on the size of the connector
- Eliminates need for conductor insulation stripping
- Self-insulated for hot line applications
- No taping required after installation
- For copper to copper, copper to aluminum and aluminum to aluminum applications
- U.L. 486B Listed AL9CU (90°C rated)
- For use on insulated conductor only
- Six connector line covers the range from #10-500 KCMIL

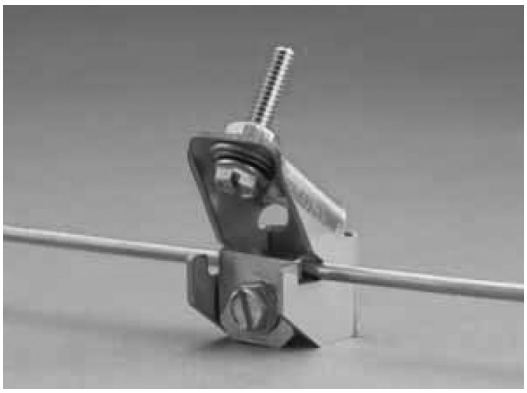
Part Number	Conductor Range (AWG)		Number of Bolts	Max Voltage	Dimensions (in)		
	Main	Tap			W	H	L
IPC1102	1/0–8	2–8	1	600	2-9/16	2	1-17/32
IPC4111	4/0–1/0	1/0–6	2	300	2-1/2	3	1-19/32
IPC4141	4/0–1/0	4/0–1/0	2	300	2-5/8	3-1/4	1-29/32
IPC5041	500–350	4/0–4	1	600	2	2-1/2	2-5/8

Stamped Bonding Lug

ERICO

ERITECH brand of solar bonding lugs are designed to bond the frames and mounting structures of solar photovoltaic systems in accordance with NEC requirements. These lugs are corrosion-resistant and galvanically compatible with copper grounding conductors and aluminum photovoltaic module frames.

The solar mounting lugs are supplied with the required mounting hardware and are easy to install. The stamped lug has a lay-in feature that allows the positioning of the ground conductor along multiple frames prior to the securing of the wire. In addition, the same hex head power driver can be used to install the lug to the frame and secure the wire into the lug.

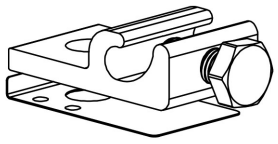
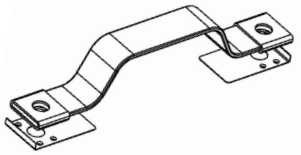
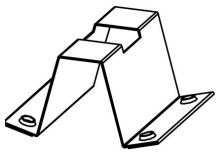
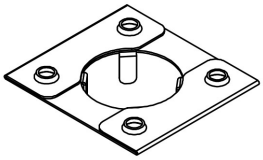
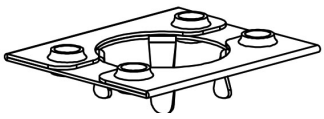


Part Number	Description
EL6CS	Ground Lug with #10 Mounting Harware, Copper Alloy, (1) 14AWG Solid to 6AWG Stranded
Flammability	UL94 HB

wiley Advancing Renewable Technology

BURNDY

Washer, Electrical Equipment Bond - WEEB

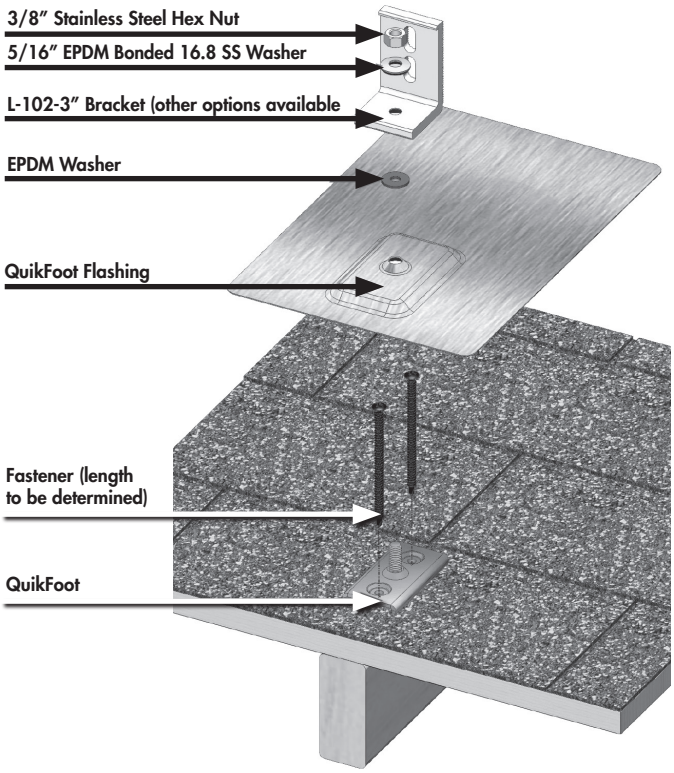
Part Number	Description	Image
WEEB-LUG-8.0	Ground Lug with Stud Hole for M8 or 5/16" Hardware, (1) 14AWG to 6AWG, (2) 10AWG, or (2) 12 AWG	
WEEB-RBJ-8.0	Rail Bonding Jumper 8.0 for M8 or 5/16" Hardware	
WEEB-DPF	Solar Module to Rail Bonding Washer for DPW and SolarWorld Mounting Systems	
WEEB-11.5	Bonding Washer for Use With DPW Splice Kits and Other Racks	
WEEB-9.5	Bonding Washer for Use With DPW TPM Racks and Other Racks	

EcoFasten Roof Flashing

EcoFasten Solar® www.ecofastensolar.com

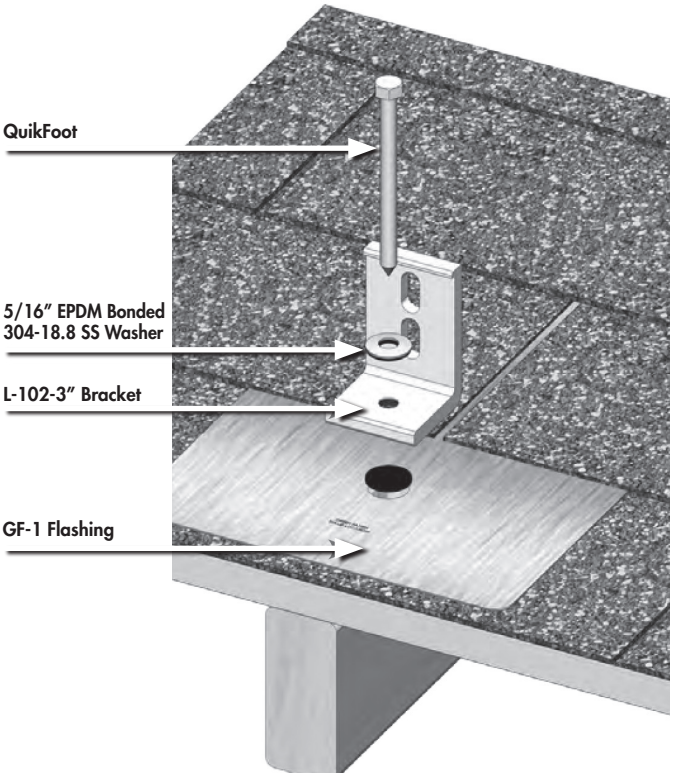
EcoFasten Quikfoot

Part Number	Description
QFL-BLK-0812	Flashing Matte Black, 8" x 12"
QF-S	Base Plate with 1" Long 3/8"-16 Stud
L-102-3	L-Foot, 3" Tall with 2 Slotted Holes in Vertical Leg
L-102-6	L-Foot, 6" Tall with 2 Slotted Holes in Vertical Leg
SCL-101-3	L-Foot, 3" Tall with 1 Slotted Hole in Vertical Leg
XHD003B	3" Heavy Duty Fastners
NA	EPDM Washer, Ships with Flashing
NA	3/8" Stainless Steel EPDM Bonded Washer, Ships with Base Plate
NA	3/8" Stainless Steel Hex Nut, Ships with Base Plate



EcoFasten Quikfoot

Part Number	Description
QF1-BLK-812	Flashing Matte Black, 8" x 12"
L-102-3	L-Foot, 3" Tall with 2 Slotted Holes in Vertical Leg
L-102-6	L-Foot, 6" Tall with 2 Slotted Holes in Vertical Leg
SCL-101-3	L-Foot, 3" Tall with 1 Slotted Hole in Vertical Leg
GRK-PHERSS-5/16x4	GRK Fastener Pheinox RSS Stainless Steel Screw 5/16" x 4"
NA	5/16" EPDM Bonded SS Washer, Ships with Flashing

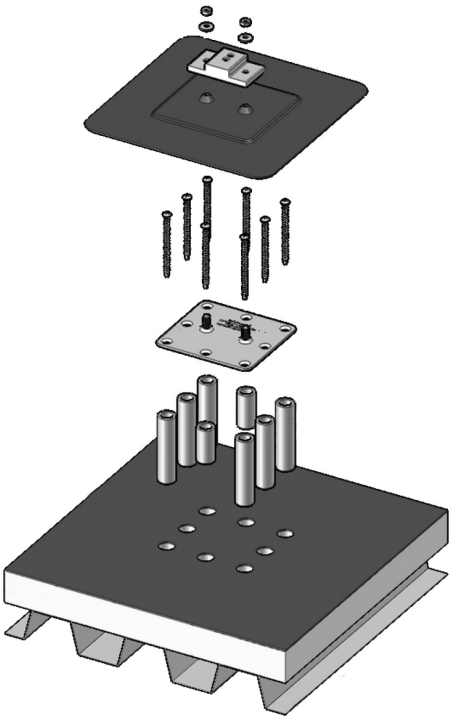


EcoFasten Roof Flashing (cont')

EcoFasten Solar® www.ecofastensolar.com

Additional EcoFasten Items

Part Number	Description
EF-44-SS	Eco-Fasten 4" X 4" Stainless Steel Base Plate with Four Fastener Holes and One 1" Long 3/8" - 16 Stud
EF-44R-SS	Eco-Fasten 6" X 6" Stainless Steel Base Plate with Eight Fastener Holes and One 1" 3/8 - 16 Stud
EF-65-SS	Ecofasten 6"X5.5" Stainless Steel Base Plate with Eight Fastener Holes and Two 1" 5/16- 18 Studs
Ferrule	Ferrule Material 1" O.D. Pipe - 8' Length (Sold Per Foot) - Used with The Eco44R and Eco65R
F-111-A	F-111-A -Square U Shaped Block with One CS Fastener Hole at Bottom, Allows for Standard L-foot to be Used
F-202	F-202 Rectangular Shaped Bracket with Two CS Fastener Holes at Bottom and Two 3/8"- 16 Tapped Holes in The Top
F-203	F-203 Oblong Shaped Bracket with Two CS Fastener Holes at Bottom and Three 3/8"- 16 Tapped Holes in The Top
C-102-6	6" C Bracket 3/8" Hole at Top and 2.0" Hole with Macro Rubber Grommet at Bottom and Two Slotted Holes in The Vertical Leg
L-202-3	L-202-3 3" Tall L Bracket with Two CS Fastener Holes in The Horizontal Leg and Two Slotted Holes in The Vertical Leg
P-3-CSK	P-3-CSK 3" Tall 1" Diameter Post with One CS 3/8"-16 Tapped Hole in Each End
P-6-CSK	P-6-CSK 6" Tall 1.25" Diameter Post with One 3/8"-16 Thread Hole at Top and One Countersunk 3/8"-16 Thread Hole at Bottom
CP-SQ	CP 2"X2" Square with One CS Fastener Hole
Z-101	Z-101 2.75" Tall Z-Bracket with One CS Fastener Hole at Bottom and One Slotted Hole in The Top
Z-202	Z-202 2.75" Tall Z-Bracket with 2 CS Fastener in The Bottom and 2 Slotted Hole in The Top
XHD002B	2" Long Black Coated Olympic Extra Heavy Duty Fasteners
XHD003B	3" Long Black Coated Olympic Extra Heavy Duty Fasteners
XHD004B	4" Long Black Coated Olympic Extra Heavy Duty Fasteners
XHD005B	5" Long Black Coated Olympic Extra Heavy Duty Fasteners
XHD006B	6" Long Black Coated Olympic Extra Heavy Duty Fasteners
XHD007B	7" Long Black Coated Olympic Extra Heavy Duty Fasteners
XHD008B	8" Long Black Coated Olympic Extra Heavy Duty Fasteners
XHD010B	10" Long Black Coated Olympic Extra Heavy Duty Fasteners
HB-D565-16X6P	Hanger Bolt includes 5/16" Hanger Bolt 304 Stainless Steel, 5/16"-18 Finished Hex Nut 18-8 Stainless Steel, 5/16" Flange Nut 18.8 Stainless Steel
GRK-PHERSS-5/16X4	GRK Fastener Pheinox Rss Stainless Steel Screw - 5/16"X 4"
SIM SEAL	Simple Seal Bushing used in Metal Roof Applications



Exploded View of EF-65 with Ferrules

Solar Non-Metallic Cord Grips

Crouse-Hinds

HEYCO

Applications:

Cooper Crouse-Hinds Solar Cord Grips are used in both commercial and residential grid-tied PV solar applications and are designed to accommodate the entry of multiple PV wires coming into a combiner or pass-through box. The Solar Cord Grips provide mechanical strain relief as well as a liquid tight seal around the solar panel wires.

Features:

- Multi-hole cord grip to allow for entry of multiple PV wires.
- Solar cord grips offer customer flexibility by allowing the termination from 1 to 31 PV wires in a single connector.
- Skinned over glands provide a durable, liquid tight seal around the wires.
- No disassembly required for installation.
- 5MM offering accommodates USE-2, 12AWG and 10AWG wire.
- 7MM offering accommodates 1000V PV cable, 12AWG and 10AWG wire.

Photo show with steel locknut (locknuts must be ordered separately

Crouse Part Number	Heyco Part Number	Trade Size	Number of Holes	Hole Size	Wire Type	Wire Size
NCGS25	M3234GBR-SM	3/4"	5 Holes	5MM	USE-2	12AWG, 10 AWG
NCGS237	M3234GBS-SM	3/4"	3 Holes	7MM	1000V PV Cable	12AWG, 10 AWG
NCGS39	M8437GBK-SM	1"	9 Holes	5MM	USE-2	12AWG, 10 AWG
NCGS357	M8437GBT-SM	1"	5 Holes	7MM	1000V PV Cable	12AWG, 10 AWG
NCGS413	M4524GBM-SM	1-1/4"	13 Holes	5MM	USE-2	12AWG, 10 AWG
NCGS497	M4524GBW-SM	1-1/4"	9 Holes	7MM	1000V PV Cable	12AWG, 10 AWG
NCGS631	M3321GBY-SM	2"	31 Holes	5MM	USE-2	12AWG, 10 AWG
NCGS6197	M3321GBX-SM	2"	19 Holes	7MM	1000V PV Cable	12AWG, 10 AWG

Disconnects

Description	Current Rating			
	30A	60A	100A	200A
Square D Disconnect, 600 Vac, 600 Vdc, Outdoor, Non-Fusable, 3 Blades	HU361RB	HU362RB	HU363RB	HU364RB
Square D Disconnect, 600 Vac, 600 Vdc, Indoor, Non-Fusable, 3 Blades	HU361	HU362	HU363	HU364
Square D Disconnect, 600Vac, 600 Vdc, Outdoor, Fusable, 3 Blades	H361RB	H362RB	H363RB	H364RB
Square D Disconnect, 600Vac, 600 Vdc, Indoor, Fusable, 3 Blades	H361	H362	H363	H364
Square D Disconnect, 240 Vac, Outdoor, Non-Fusable, 2 Blades	DU221RB	DU222RB	NA	NA
Square D Disconnect, 240 Vac, Outdoor, Non-Fusable, 3 Blades	DU321RB	DU322RB	DU323RB	DU324RB
Square D Disconnect, 240 Vac, Indoor, Non-Fusable, 3 Blades	DU321	DU322	DU323	DU324
Square D Disconnect, 240 Vac, Outdoor, Fusable, 2 Blades, 1 Neutral	D221NRB	D222NRB	D223NRB	D224NRB
Square D Disconnect, 240 Vac, Outdoor, Fusable, 3 Blades, 1 Neutral	D321NRB	D322NRB	D323NRB	D324NRB
Square D Disconnect, 240 Vac, Indoor, Fusable, 2 Blades, 1 Neutral	D221N	D222N	D223N	D224N
Square D Disconnect, 240 Vac, Indoor, Fusable, 3 Blades, 1 Neutral	D321N	D3222N	D323N	D324N
Midwest Air Conditioning Pull Out Disconnect, 240Vac, Non-Fusable	NA	MIDP065P1	NA	NA

Load Centers and Circuit Breakers

SQUARE D Schneider Electric

Typical Solar Application: Load centers should be used to combine the output of multiple inverters so a single AC disconnect and kWh meter is needed.

Circuit Breakers

Square D QO Style	
Part Number	**Description**
QO215	15A, Double Pole
QO220	20A, Double Pole
QO230	30A, Double Pole
QO240	40A, Double Pole

Also In Stock: Single Pole Breakers and Additional Sizes, Please Contact United Electric

Load Centers

Square D, Outdoor, 1 Phase, 120V/240V	
Part Number	**Description**
Square D, Outdoor, 1 Phase, 120V/240V	100A, 6 Spaces
QO816L100RB	100A, 8 Spaces
QO112L125GRB	125A, 12 Spaces
QO130L150GRB	150A, 30 Spaces

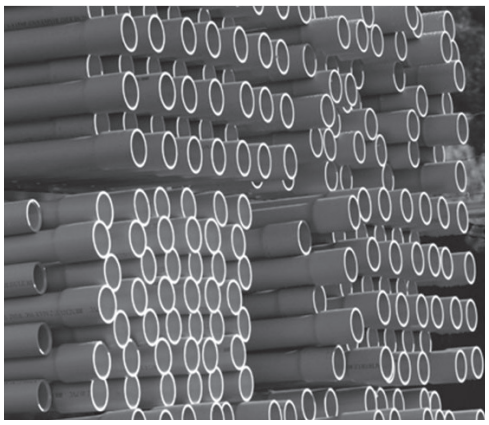
2 Spaces are Needed for Each Double Pole Breaker

Also In Stock: Indoor Load Centers, Load Centers with Main Breakers, Please contact United Electric

United Electric Supply

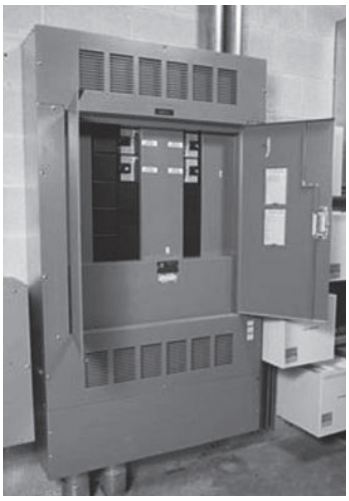
PRODUCT GROUPS

WIRE & CABLE
PRODUCT GROUP



Contact our Wire and Cable Group
for assistance at 1-800-322-3374

DISTRIBUTION & CONTROL
PRODUCT GROUP



Contact our Distribution
and Control Group for assistance
at 1-800-322-3374

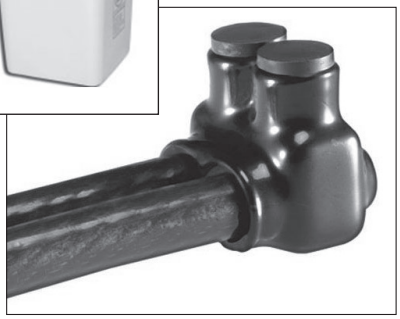
United Electric Supply

PRODUCT GROUPS

LIGHTING
PRODUCT GROUP

Contact our Energy Solutions Group
for lighting applications and design at
ESGWilmington@unitedelectric.com
1-800-322-3374

ELECTRO MECHANICAL
PRODUCT GROUP



Contact our Electro Mechanical Group
for assistance at 1-800-322-3374

United Electric Supply

Product Lines by Manufacturer

A
ABB
Abolite Lighting
Acme
Adalet
Advance Ballast
Advanced Energy
Advanced Test Products
Advanced Illmination
AFC
Agastat
Airmaster
Alcan
Alflex
Alkco
Allied Support Systems
Allied Tube
ALP Lighting
Alpha Wire
APC- American Power Conversion
American Louver
Angelo Brothers
Arlington
ASCO
Austin
AVG/Uticor

B
S.R. Browne
B-Line
Balluff
Bashlin
Belden
Berger Lahr
Bodine
Blackburn (T&B)
Brady
Brad Harrison / Molex
Bright Star
Bridgeport
Briscon
BRK Electronics
Broan
Bulbtronic
Bulbrite
Burndy

C
Candela
C.S.L
C.W. Cole
Caddy
Cadet
Cadweld
Cantex
Carol Cable
Carlon
Cementex
Cholride Systems
Christy Boxes
Coleman Wire & Cable
Columbia Lighting
Control Concepts
Cooper Power
CRC

C
Crescent Lighting
Comac Hand Dryers
Cooper Lighting
Crouse Hinds
Crouse Hinds Lighting
Crestron Electronics
Cully
CME Wire & Cable

D
Dalsa
Data Display Prod
Data-Linc
Datalogic
Daybrite Lighting
Designers Fountain Lighting
DeWalt
Diversified Electronics
DPW Solar
Dual-lite
Duracell

E
Easy Heat
EcoFasten Solar
Edison Price
Edwards
Emergi-Lite
Emerson Network Power
Emon-Demon
EmPhase
Encore Wire & Cable
Enduro
Endot
Ericson
Escort Memory Systems
Eveready
Exide

F
Federal Sign & SIgnal
Firex / Kidde
Fluke
Fronious
FRE Composites

G
G&W Electric
Gardco Lighting
Gardner Bender
GE Lighting
Generac
General Cable
Greenbull
Greenlee Tools
Guardian
Guth Lighting

H
Hadco Lighting
Halo Lighting
Hapco
Harger
Hubbell Building Automation
Hellerman Tyton
Heltx/HiTemp
Heyco

H
Halophane Lighting
Hoffman
Honetwell
Hubbell Lighting
Hubbell Wiring Devices
Houston Wire & Cable

I
I2T Integerated Indust. Tech
Iconics
Ideal
Innovative Technology
Intermatic
Irwin Tools

J
Jokab
Juno Lighting

K
KB Lighting
Keene Lighting
Kellems
Kenny Clamp
Kichler
Kidde
Kim Lighting
Kindorf
Klein
Kurt Verson Lighting

L
Lamp Technology
Landis & Gyr
LSI
Leviton Data Comm
Leviton Wiring Devices
Light Alarms
Lightolier Lighting
Litecontrol
Lithonia Lighting
Louvers International
Lumark Lighting
Lumax Lighting
Lutron Controls

M
M.G.E
M.T.E
3M Company
M&W
Marathon
Master Lock Co.
McGraw Edison Lighting
McGill
Mersen
Meltric
Metallics, Inc.
Metalux
Micro Switch
Midwest
Milbank
Minerallac
Mobern
Modicon / Schneider Electric
Molex
Moldcast
Motech
Mueller

N
NR&D
Nutone
Network Vision IntraView
Nexans
North Star Lighting
Nortech
NSI

O
Ocal / T&B
O.Z. Gedney
Olflex / Lapp USA
Omni Cable
Osram

P
Power Conduit
Powers Fasteners
Panasonic
Penn Panel
Penn Union
Prysmian Cable
Picoma
Powe-One
PPC Seves Tiffin Insul.
Precision
Prescoute
Progress Lighting
Proface/Xycom
Pro Soft
Prudential Lighting

Q
Quartech
Quazite
Q-Mark Heating

R
RAB
Rawl (Powers Fasteners)
Raychem
Red Devil
Red Dot
Red Lion Controls
Rees
Reliance Controls
Russell-Stoll

S
S-5
S&C Electric
S.R. Browne
Schneider Electric
Sea Gull Lighting
Selecta Switch
Service Wire
Shakespeare
Shattershield Lamps
Simkar
SMA
Snake Tray
SOLA / Hevi Duty
Solar LED Innovations
Soladeck
SolarWorld
Solectria
Solmetric
Southwire
Square D / Schneider Electric
Staff Lighting
Stahlin
Steel City
STI
Stonco Lighting
Sumotomo
Superior Electric
Surelites Emergency Lighting
Sylvania

T
TCP Lighting
Taylor Lndustrial Software
Tech Lighting
Telemecanique
Thomas & Betts
Thomas Lighting
Thompson Lighting Protection
Topaz
Tork Timers
Total Control Products
TPI / Fostoria

U
United Copper Industries
United Electric Controls
Universal Ballast
USHIO
Uticor
U.S.I Lighting

V
Venture Lighting
Versabar
Veolia Recycling
Vijeo Citect
Visa Lighting

W
Wave Lighting
WattStopper
Weed Fiber Optic
Weidmuller
Werner Ladder
Widelite
Wide Loyal
Wiley / Burndy
Wiremold
WM Recycling
Woodhead / Molex
World Dryer

X
Proface / Xycom

Z
Zenith

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Building P
Dagsboro, DE 19939
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Fax (302) 537-1088

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