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O SECTION

Poles, Wires	Rating	NEMA Prefix	15A Straight Blade		20A Straight Blade	
			Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet	Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet
2-Pole, 2-Wire	125V/AC	1	4882 ★  1-15R	4862 ◆  1-15P		
2-Pole, 3-Wire Grounding	125V/AC	5	AH5262 ■M 5252 ■ 6262 ■D IG5262 ■IM 5261 ✚M VGF15 ■GM BR15 ■ TRBR15 ■R CR15 ■ TRVGF15 ■RGM 5262 ■M AH8200 ■M 8200 ■HM 8210 ✚M IG8200 ■IM TR8200 ■RM VGFH15 ■GM TRVGFH15 ■RGM 5269N ★NC 5279C ● 5969BLK ★O 6269 ★L 4887 ★ 5269NHG ★N 6269HG ★L  5-15R	5266N ◆NC 5278C ▲ 6266 ◆ 4867 ◆ 5266NHG ◆N 6266HG ◆L 8115GY ◆O  5-15P	AH5362 ■M 5352 ■M 6362 ■DM IG5362 ■IM 5361 ✚M VGF20 ■GM BR20 ■ TRBR20 ■R CR20 ■ TRVGF20 ■RGM 5362 ■M AH8300 ■M 8300 ■M 8310 ✚M IG8300 ■IM TR8300 ■RM VGFH20 ■GM TRVGFH20 ■RGM 5369N ★NC 5779C ● 6769 ★L 4228 ★ 5369NHG ★N 6769HG ★L  5-20R	5366N ◆NC 5778C ▲ 6766 ◆ L 4409 ◆ 5366NHG ◆N 6766HG ◆L  5-20P
	250V/AC	6	AH5662 ■M 5661 ✚ IG5662 ■I 6662 ■D 826 ■ 816 ✚ 5662C ■ AH8600 ■M 5669N ★N 5679C ● 6669 ★L 4227 ★ 8610 ✚  6-15R	5666N ◆N 5678C ▲ 6666 ◆ 4866 ◆ 6665HG ◆L  6-15P	AH5462 ■M 5461 ✚ IG5462 ■I 6462 ■D 815 ■ 5462C ■ AH8400 ■M IG8400 ■I 5469N ★N 5879C ● 6869 ★L 4229 ★ 8410 ✚  6-20R	5466N ◆N 5878C ▲ 6866 ◆L 4509 ◆ 6865HG ◆AL  6-20P
	277V/AC	7	5302 ■  7-15R	 7-15P	 7-20R	7624N ◆L  7-20P
3-Pole, 3-Wire	125/250V/AC	10			805 ✚  10-20R	9151N ◆L 2836 ◆  10-20P
3-Pole, 4-Wire Grounding	125/250V/AC	14			5759 ✚  14-20R	 14-20P
	3Ø 250V/AC	15				
4-Pole, 4-Wire	3ØY 120/208V/AC	18				7251N ◆L  18-20P

Straight Blade Legend

HOW TO USE THIS CHART:

Core catalog number color indicates a devices' grade:

BLACK = Industrial Specification Grade
BLUE = Commercial Specification Grade
ORANGE = Construction Specification Grade
GREEN = Hospital Specification Grade

A suffix combining a **RED** shape and alpha letter indicate a device's body, type and available options.

Device body:

- ■ Duplex Receptacle
- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ● Flanged Outlet

Device type:

- **A** Angled
- **D** Decorator
- **G** GFCI
- **H** Compact
- **I** Isolated Ground
- **L** Safety Grip™
- **N** AutoGrip™
- **O** QuickGrip™
- **R** Tamper Resistant
- **S** Surface

Device options available:

- **C** Corrosion Resistant
- **M** ArrowLink™ Modular

Due to spatial constraints not all products are shown on this page. For additional product options in these configurations consult sections A, B, G, H & I.

NEMA Configurations For Select Devices

Poles, Wires	Rating	NEMA Prefix	30A Straight Blade		50A Straight Blade		60A Straight Blade	
			Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet	Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet	Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet
2-Pole, 2-Wire	125V/AC	1						
2-Pole, 3-Wire Grounding	125V/AC	5	6716N ★N 1233 ✚ 5716N ✚ 5-30R	5717AN ◆AN 5717N ◆N 5717NFI ▲N S41 ◆A 5-30P	6711N ★N 1253 ✚ 5-50R	5712AN ◆AN 5712N ◆N 5712NFI ▲N S41 ◆A 5-50P		
	250V/AC	6	6700N ★N 5700N ✚ 1232 ✚S 1234 ✚ 6-30R	5701AN ◆AN 5701N ◆N 5701NFI ▲N S42 ◆A 6-30P	6709N ★N 5709N ✚ 1252 ✚S 1254 ✚ 6-50R	5710AN ◆AN 5710N ◆N 5710NFI ▲N S42 ◆A 6-50P		
	277V/AC	7	6795N ★N 5795N ✚ 7-30R	5703AN ◆AN 5703N ◆N 5703NFI ▲N 7-30P	6796N ★N 7-50R	5705AN ◆AN 5705N ◆N 5705NFI ▲N 7-50P		
3-Pole, 3-Wire	125/250V/AC	10	9341N ★N 38B ✚ 125 ✚S 10-30R	9352AN ◆AN 9337N ◆N 9337NFI ▲N S80 ◆A 10-30P	4526N ★N 7985N ✚ 32B ✚ 112 ✚S 122B ✚ 10-50R	4524N ◆N 4524NFI ▲N 7952AN ◆AN S80 ◆A 10-50P		
3-Pole, 4-Wire Grounding	125/250V/AC	14	5744N ✚ 1225 ✚S 1257 ✚ 14-30R	5732AN ◆AN 5746N ◆N S21 ◆A 14-30P	5754N ✚ 1212 ✚S 1258 ✚ 14-50R	5752AN ◆AN 5745N ◆N S21 ◆A 14-50P	9460N ✚ 14-60R	9462AN ◆AN 9462N ◆N S20 ◆AN 14-60P
	3Ø 250V/AC	15	8430N ✚ 15-30R	8432AN ◆AN 8432N ◆N 15-30P	8450N ✚ 15-50R	8452AN ◆AN 8452N ◆N 15-50P	8460N ✚ 15-60R	AH8462AN ◆AN AH8462N ◆N 15-60P
4-Pole, 4-Wire	3ØY 120/208V/AC	18	18-30R	8332AN ◆AN 8332N ◆N 18-30P	18-50R	8352AN ◆AN 8352N ◆N 18-50P	5515N ✚ 18-60R	4516AN ◆N 5517N ◆N S19 ◆A 18-60P

Straight Blade Legend

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- ■ Duplex Receptacle
- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ● Flanged Outlet

Device type:

- **A** Angled
- **D** Decorator
- **G** GFCI
- **H** Compact
- **I** Isolated Ground
- **L** Safety Grip™
- **N** AutoGrip™
- **O** QuickGrip™
- **R** Tamper Resistant
- **S** Surface

Device options available:

- **C** Corrosion Resistant
- **M** ArrowLink™ Modular

Due to spatial constraints not all products are shown on this page. For additional product options in these configurations consult sections A, B, G, H & I.

NEMA Configurations For Select Devices

Poles, Wires	Rating	NEMA Prefix	15A Locking		20A Locking	
			Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet	Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet
2-Pole, 2-Wire	125V/AC	ML1	7464N ★ 7427N ★ 7468 ●  ML1R	7465N ◆ 7466 ▲ 7428N ◆ 7467 ▲ 7479N ◆ 7429N ◆  ML1P		
	125V/AC	L1	CWL115FO ● CWL115R ✚ 7506 ★ 7540 ■  L1-15R	CWL115FI ▲ 7546 ◆ 7548 ◆  L1-15P		
	250V/AC	L2			CWL220C ★L CWL220FO ● CWL220R ✚  L2-20R	CWL220P ◆L CWL220P-6 ◆ZL  L2-20P
2-Pole, 3-Wire Grounding	125V/AC	ML2	7593 ★ 7596 ● 7596N ●  ML2R	7594 ◆ 7595 ▲ 7595N ▲  ML2P		
	125V/AC	L5	CWL515C ★L CWL515FO● IG4700 ■I 25W47 ★W 65W47 ✚W CR4700 ■C 4731N ★N 4731NCR ★CN CWL515CAN ★AL CWL515R ✚ IGL515R ✚I 2547 ★Y 65W47DPLX ■W 4700 ■ **5792** ■ CR5792 ■C  L5-15R	CWL515FI ▲ CWL515P ◆L CWL515PAN ◆AL 24W47 ◆W 2447 ◆Y 4721N ◆N 4721NCR ◆CN  L5-15P	CWL520C ★L CWL520FO ● IGL520R ✚I L520CW ★W L520CY ★Y L520RW ✚W CRL520C ★CL CRL520R ✚C CWL520CBK ★L CWL520R ✚  L5-20R	CWL520FI ▲ CWL520P ◆L CWL520PBK ◆L L520PW ◆W L520PY ◆Y CRL520P ◆CL  L5-20P
	250V/AC	L6	CWL615C ★L CWL615R ✚ IGL615R ✚I 2549 ★Y 65W49DPLX ■W 6566N ★N 6580 ■ CWL615FO ● 25W49 ★W 65W49 ✚W  L6-15R	CWL615FI ▲ CWL615P ◆L 24W49 ◆W 2449 ◆Y 6565N ◆N  L6-15P	CWL620C ★L CWL620R ✚ L620CW ★W L620RW ✚W CRL620R ✚C CRL620C ★CL CWL620FO ● IGL620R ✚I L620CY ★Y  L6-20R	CWL620FI▲ CWL620P ◆L L620PW ◆W L620PY ◆Y CRL620P ◆C  L6-20P
	277V/AC	L7	CWL715C ★ CWL715R ✚ 25W34 ★W 65W34 ✚W 4772N ★N CWL715FO ● 65W34DPLX ■W 4750 ■ 2534 ★Y  L7-15R	CWL715FI ▲ CWL715P ◆L 24W34 ◆W 2434 ◆Y 4771N ◆N  L7-15P	CWL720C ★L CWL720FO ● CWL720R ✚ IGL720R ✚I L720CW ★W L720CY ★Y L720RW ✚W  L7-20R	CWL720FI▲ CWL720P ◆L L720PW ◆W L720PY ◆Y  L7-20P
	480V/AC	L8			CWL820C ★L CWL820R ✚ L820CW ★W L820CY ★Y L820RW ✚W CWL820FO ● IGL820R ✚I  L8-20R	CWL820FI ▲ CWL820P ◆L L820PW ◆W L820PY ◆Y  L8-20P
	600V/AC	L9			CWL920C ★ CWL920FO ● CWL920R ✚  L9-20R	CWL920FI ▲ CWL920P ◆  L9-20P
3-Pole, 3-Wire	125/250V/AC	ML3	7484 ★ 7487 ● 7487N ●  ML3R	7485 ◆ 7486 ▲ 7486N ▲  ML3P		
	125/250V/AC	L10			CWL1020C ★L CWL1020R ✚ L1020CY ★Y L1020RW ✚W L1020CW ★W CWL1020FO ●  L10-20R	CWL1020FI ▲ CWL1020P ◆L L1020PW ◆W L1020PY ◆Y  L10-20P
	3Ø 250V/AC	L11			CWL1120C ★L CWL1120R ✚ L1120CY ★Y L1120RW ✚W CWL1120FO ● L1120CW ★W  L11-20R	CWL1120FI ▲ CWL1120P ◆L L1120PW ◆W L1120PY ◆Y  L11-20P
	3Ø 480V/AC	L12			CWL1220C ★ CWL1220FO ● CWL1220R ✚  L12-20R	CWL1220FI ▲ CWL1220P ◆  L12-20P
	3Ø 600V/AC	L13				

Locking Device Legend

HOW TO USE THESE CHARTS:

Core catalog number color indicates the type of use a device is designed for:

BLACK = Industrial Use

A suffix combining a **RED** shape and alpha letter indicate a device's body and type.

Device body:

- ■ Duplex Receptacle
- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ● Flanged Outlet

Device type:

- **A** Angled
- **C** Corrosion Resistant
- **I** Isolated Ground
- **L** Safety Grip™
- **N** AutoGrip™
- **P** Pro-Grip™ Nylon
- **W** Watertight
- **Y** Sever Duty Insulated
- **Z** With Lid or Cover

Poles, Wires	Rating	NEMA Prefix	30A Locking	
			Receptacle, Connector, & Flanged Outlet	Plug & Flanged Inlet
2-Pole, 2-Wire	125V/AC	ML1		
	125V/AC	L1		
	250V/AC	L2		
2-Pole, 3-Wire Grounding	125V/AC	ML2		
	125V/AC	L5	CWL530FO ● CWL530C ★L CWL530R ✚ IGL530R ✚I L530CW ★W L530CY ★Y L530RW ✚W CRL530C ★CL CRL530R ✚C L5-30R	CWL530FI ▲ CWL530P ◆L IGL530P ◆IL L530PW ◆W L530PY ◆Y CRL530P ◆CL L5-30P
	250V/AC	L6	CWL630C ★L CWL630FO ● CWL630R ✚C IGL630R ✚I L630CW ★W L630CY ★Y L630RW ✚W CRL630C ★CL CRL630R ✚C L6-30R	CWL630FI ▲ CWL630P ◆L L630PW ◆W L630PY ◆Y CRL630P ◆CL L6-30P
	277V/AC	L7	CWL730C ★L CWL730FO ● CWL730R ✚ IGL730R ✚I L730CW ★W L730CY ★Y L730RW ✚W L7-30R	CWL730FI ▲ CWL730P ◆L L730PW ◆W L730PY ◆Y L7-30P
	480V/AC	L8	CWL830C ★L CWL830FO ● CWL830R ✚ IGL830R ✚I L830CW ★W L830CY ★Y L830RW ✚W L8-30R	CWL830FI ▲ CWL830P ◆L L830PW ◆W L830PY ◆Y L8-30P
	600V/AC	L9	CWL930C ★ CWL930FO ● CWL930R ✚ L9-30R	CWL930FI ▲ CWL930P ◆ L9-30P
3-Pole, 3-Wire	125/250V/AC	ML3		
	125/250V/AC	L10	CWL1030C ★L CWL1030R ✚ L1030CW ★W L1030CY ★Y L1030RW ✚W CWL1030FO ● L10-30R	CWL1030FI ▲ CWL1030P ◆L L1030PW ◆W L1030PY ◆Y L10-30P
	3Ø 250V/AC	L11	CWL1130C ★ CWL1130R ✚ L1130CW ★W L1130CY ★Y L1130RW ✚W CWL1130FO ● L11-30R	CWL1130FI ▲ CWL1130P ◆L L1130PW ◆W L1130PY◆Y L11-30P
	3Ø 480V/AC	L12	CWL1230C ★ CWL1230FO ● CWL1230R ✚ L12-30R	CWL1230FI ▲ CWL1230P ◆ L12-30P
	3Ø 600V/AC	L13	CWL1330C ★ CWL1330FO ● CWL1330R ✚ L13-30R	CWL1330FI ▲ CWL1330P ◆ L13-30P

For NEMA Configurations L-14 through L-24, see page O-6

Locking Device Legend

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Core catalog number color indicates the type of use a device is designed for:

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A suffix combining a **RED** shape and alpha letter indicate a device's body and type.

Device body:

- ■ Duplex Receptacle
- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ● Flanged Outlet

Device type:

- **A** Angled
- **C** Corrosion Resistant
- **I** Isolated Ground
- **L** Safety Grip™
- **N** AutoGrip™
- **W** Watertight
- **Y** Severe Duty Insulated

Poles, Wires	Rating	NEMA Prefix	20A Locking		30A Locking	
			Receptacle, Connector & Flanged Outlet	Plug & Flanged Inlet	Receptacle, Connector, & Flanged Outlet	Plug & Flanged Inlet
3-Pole, 4-Wire Grounding	125/250V/AC	L14	CWL1420C ★L CWL1420CBK ★L CWL1420FO ● CWL1420R ✚ IGL1420R ✚I L1420CY ★Y L1420CW ★W L1420RW ✚W CRL1420C ★CL CRL1420R ✚C 6406BK ● L14-20R	CWL1420FI ▲ CWL1420P ◆L CWL1420PBK ◆L L1420PW ◆W L1420PY ◆Y CRL1420P ◆CL 6405BK ▲ L14-20P	CWL1430C ★L CWL1430FO ● CWL1430R ✚ IGL1430R ✚I L1430CW ★W L1430CY ★Y L1430RW ✚W CRL1430C ★CL CRL1430R ✚C L14-30R	CWL1430FI ▲ CWL1430P ◆L L1430PW ◆W L1430PY ◆Y CRL1430P ◆CL 6512BK ◆ L14-30P
	3Ø 250V/AC	L15	CWL1520C ★L CWL1520FO ● CWL1520R ✚ IGL1520R ✚I L1520CW ★W L1520CY ★Y L1520RW ✚W CRL1520C ★CL CRL1520R ✚C L15-20R	CWL1520FI ▲ CWL1520P ◆L L1520PW ◆W L1520PY ◆Y CRL1520P ◆CL L15-20P	CWL1530C ★L CWL1530FO ● CWL1530R✚ IGL1530R ✚I L1530CW ★W L1530CY ★Y L1530RW ✚W CRL1530C ★CL L15-30R	CWL1530FI ▲ CWL1530P ◆L L1530PW ◆W L1530PY ◆Y CRL1530P ◆CL L15-30P
	3Ø 480V/AC	L16	CWL1620C ★L CWL1620CBK ★L CWL1620FO ● CWL1620R ✚ IGL1620R ✚I L1620CW ★W L1620CY ★Y L1620RW ✚W CRL1620C ★CL L16-20R	CWL1620P ◆L CWL1620PBK ◆L L1620PW ◆W L1620PY ◆Y CRL1620P ◆CL CWL1620FI ▲ L16-20P	CWL1630C ★L CWL1630FO ● CWL1630R ✚ L1630CW ★W L1630CY ★Y L1630RW ✚W L16-30R	CWL1630FI ▲ CWL1630P ◆L L1630PW ◆W L1630PY ◆Y CRL1630P ◆CL L16-30P
	3Ø 600V/AC	L17			CWL1730C ★L CWL1730FO ● CWL1730R ✚ L1730CW ★W L1730CY ★Y L1730RW ✚W L17-30R	CWL1730FI ▲ CWL1730P ◆L L1730PW ◆W L1730CY ◆Y L17-30P
4-Pole, 4-Wire	3ØY 120/208V/AC	L18	CWL1820C ★L CWL1820FO ● CWL1820R ✚ L1820CW ★W L1820CY ★Y L1820RW ✚W L18-20R	CWL1820FI ▲ CWL1820P ◆L L1820PW ◆W L1820PY ◆Y L18-20P	CWL1830C ★L CWL1830FO ● CWL1830R ✚ L1830CW ★W L1830CY ★Y L1830RW ✚W L18-30R	CWL1830FI ▲ CWL1830P ◆L L1830PW ◆W L1830PY ◆Y L18-30P
	3ØY 277/480V/AC	L19	CWL1920C ★L CWL1920FO ● CWL1920R ✚ L1920CW ★W L1920CY ★W L1920RW ✚W L19-20R	CWL1920FI ▲ CWL1920P ◆L L1920PW ◆W L1920PY ◆Y L19-20P	CWL1930C ★L CWL1930FO ● CWL1930R ✚ L1930CW ★W L1930CY ★Y L1930RW ✚W L19-30R	CWL1930FI ▲ CWL1930P ◆ L1930PW ◆W L1930PY ◆Y L19-30P
	3ØY 347/600V/AC	L20	CWL2020C★L CWL2020FO ● CWL2020R✚ L2020CW ★W L2020CY ★Y L2020RW ✚W L20-20R	CWL2020FI ▲ CWL2020P◆L L2020PW ◆W L2020PY ◆Y L20-20P	CWL2030C ★L CWL2030FO ● CWL2030R ✚ L2030CW ★W L2030CY ★Y L2030RW ✚W L20-30R	CWL2030FI ▲ CWL2030P ◆L L2030PW ◆W L2030PY ◆Y L20-30P
4-Pole, 5-Wire Grounding	3ØY 120/208V/AC	L21	CWL2120C ★L CWL2120CBK ★L CWL2120FO ● CWL2120R ✚ IGL2120R ✚I L2120CF ★L L2120CW ★W L2120CY ★Y L2120RW ✚W L21-20R	CWL2120FI ▲ CWL2120P◆L CWL2120PBK ◆L L2120PW ◆W L2120PY ◆Y L2120PF ◆L L21-20P	CWL2130C ★L CWL2130FO ● CWL2130R✚ IGL2130R ✚I L2130CW ★W L2130CY ★W L2130RW ✚W L2130CF ★L L21-30R	CWL2130FI ▲ CWL2130P ◆L L2130PW ◆W L2130PY ◆Y L2130PF ◆L L21-30P
	3ØY 277/480V/AC	L22	CWL2220C ★L CWL2220FO ● CWL2220R ✚ IGL220R ✚I L2220CW ★W L2220CY ★Y L2220RW ✚W L22-20R	CWL2220FI ▲ CWL2220P ◆L L2220PW ◆W L2220PY ◆Y L22-20P	CWL2230C ★L CWL2230FO ● CWL2230R ✚ L22230CF ★L IGL2230R ✚I L2230CW ★W L2230CY ★Y L2230RW ✚W L22-30R	CWL2230FI ▲ CWL2230P ◆L L2230PW ◆W L2230PY ◆Y L2230PF ◆L L22-30P
	3ØY 347/600V/AC	L23	CWL2320C ★L CWL2320FO ● CWL2320R ✚ IGL2320R ✚I L2320CW ★W L2320CY ★Y L2320RW ✚W L23-20R	CWL2320FI ▲ CWL2320P ◆L L2320PW ◆W L2320PY ◆Y L23-20P	CWL2330C ★L CWL2330FO ● CWL2330R ✚ IGL2330R ✚I L2330CW ★W L2330CY ★Y L2330RW ✚W L23-30R	CWL2330FI ▲ CWL2330P ◆L L2330PW ◆W L2330PY ◆Y L23-30P

Locking Device Legend

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Device body:

- ■ Duplex Receptacle
- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ● Flanged Outlet

Device type:

- **A** Angled
- **C** Corrosion Resistant
- **I** Isolated Ground
- **L** Safety Grip™
- **N** AutoGrip™
- **W** Watertight
- **Y** Severe Duty Insulated

Poles, Wires	Rating	10A - 30A Non-NEMA Locking	
		Receptacle, Connector, & Flanged Outlet	Plug & Flanged Inlet
3-Pole, 3-Wire	10/15A 125/250V/AC	4755 ★L 7565N ★N 7580 ■ 7582 ✚ Receptacle Non-NEMA	4767 ◆L 4767AN ◆AL 7567N ◆N Plug Non-NEMA
	20A 125/250V/AC	7310B ✚ 7314C ★L 7314CW ★W 7314CY ★Y 7314RW ✚W 7328N ● Receptacle Non-NEMA	7327N ▲ 9965C ◆L 9965PW ◆W 9965PY ◆Y Plug Non-NEMA
	30A 125/250V/AC	3330-2 ✚ 3333CW ★W 3333CY ★Y 3333RW ✚W 3333N ★L 3336N ● Receptacle Non-NEMA	3331N ◆L 3331PW ◆W 3331PY ◆Y 3337N ▲ Plug Non-NEMA
4-Pole, 4-Wire	20A 3Ø 120/208V/AC	7409N ● 7410B ✚ 7413C ★L 7413CW ★W 7413CY ★Y 7413RW ✚W Receptacle Non-NEMA	7408N ▲ 7411C ◆L 7411PW ◆W 7411PY ◆Y Plug Non-NEMA
	30A 3Ø 120/208V/AC	3430 ✚ 3433CW ★W 3433CY ★Y 3433N ★L 3433RW ✚W 3436N ● Receptacle Non-NEMA	3431N ◆L 3431PW ◆W 3431PY ◆Y 3434N ▲ Plug Non-NEMA
4-P, 5-W Grounding	20/10A 250/600V/AC	3523BK ★L 3525BK ● Receptacle Non-NEMA	3521BK ◆L 3524BK ▲ Plug Non-NEMA

Poles, Wires	Rating	50A Non-NEMA Locking	
		Receptacle & Connector	Plug, Flanged Inlets & Hull Inlet
2-Pole, 3-Wire Grounding	125V/AC Marine Corrosion Resistant	63CR60EX ★P 63CR60 ★T 63CR70 ✚ Receptacle Non-NEMA	63CR61EX ◆P 63CR61 ◆T Plug Non-NEMA
	125V/AC California Standard	CS6360EX ★P CS6360 ★T CS6370 ✚ Receptacle Non-NEMA	CS6361EX ◆P CS6361 ◆T CS6377 ▲ CS6378 ▲Z Plug Non-NEMA
	250V/AC California Standard	CS8264EX ★P CS8264 ★T CS8269 ✚ Recptacle Non-NEMA	CS8265EX ◆P CS8265 ◆T CS8275 ▲ CS8277 ▲Z Plug Non-NEMA
	250V/DC 600V/AC	3762EX ★P 3762 ★T 3771 ✚ Receptacle Non-NEMA	3763EX ◆P 3763 ◆T 3777 ▲ 3767 ▲Z Plug Non-NEMA
	480V/AC California Standard	CS8464EX ★P CS8464 ★T CS8469 ✚ Receptacle Non-NEMA	CS8465EX ◆P CS8465 ◆T CS8475 ▲ CS8477 ▲Z Plug Non-NEMA
3-Pole, 4-Wire Grounding	125/250V/AC Marine Corrosion Resistant	63CR64EX ★P 63CR64 ★T 63CR69 ✚ Receptacle Non-NEMA	63CR65EX ◆P 63CR65 ◆T Plug Non-NEMA
	125/250V/AC California Standard	CS6364EX ★P CS6364 ★T CS6369 ✚ Receptacle Non-NEMA	CS6365EX ◆P CS6365 ◆T CS6375 ▲ CS6376 ▲Z Plug Non-NEMA
	3Ø 250V/AC California Standard	CS8364EX ★P CS8364 ★T CS8369 ✚ Receptacle Non-NEMA	CS8365EX ◆P CS8365 ◆T CS8375 ▲ CS8377 ▲Z Plug Non-NEMA
	250V/DC 600V/AC	3764EX ★P 3764 ★T 3769 ✚ Receptacle Non-NEMA	3765EX ◆P 3765 ◆T 3775 ▲ 3768 ▲Z Plug Non-NEMA
	250V/DC 600V/AC	7764EX ★P 7764 ★T 7379 ✚ Receptacle Non-NEMA	7765EX ◆P 7765 ◆T 7958 ▲ 7968 ▲Z Plug Non-NEMA
	3Ø 480V/AC California Standard	CS8164EX ★P CS8164 ★T CS8169 ✚ Receptacle Non-NEMA	CS8165EX ◆P CS8165 ◆T CS8175 ▲ CS8177 ▲Z Plug Non-NEMA

Locking Device Legend

HOW TO USE THESE CHARTS:

Core catalog number color indicates the type of use a device is designed for:

BLACK = Industrial Use

A suffix combining a **RED** shape and alpha letter indicate a device's body and type.

Device body:

- ■ Duplex Receptacle
- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ● Flanged Outlet
- ◗ Hull Inlet

Device type:

- **A** Angled
- **C** Corrosion Resistant
- **L** Safety Grip™
- **N** AutoGrip™
- **P** Pro-Grip™ Nylon
- **T** Armored Body
- **W** Watertight
- **Y** Severe Duty Insulated
- **Z** With Lid or Cover

Poles, Wires	Rating	20A Watertight Pin & Sleeve		30A Watertight Pin & Sleeve	
		Receptacle, Connector & Mechanical Interlocks	Plug & Inlet	Receptacle, Connector & Mechanical Interlocks	Plug & Inlet
2-Pole, 3-Wire Grounding	125V	CD320HMI4W ➤QX CD320R4W ✚ CD320C4W ★	CD320P4W ◆ CD320B4W ▲	CD330MI4W ➤Q CD330R4W ✚ CD330C4W ★	CD330P4W ◆ CD330B4W ▲
	250V	CD320HMI6W ➤QX CD320R6W ✚ CD320C6W ★	CD320P6W ◆ CD320B6W ▲	CD330MI6W ➤Q CD330MIF6W ➤E CD330R6W ✚ CD330C6W ★	CD330P6W ◆ CD330B6W ▲
	480V/AC	CD320HMI7W ➤QX CD320R7W ✚ CD320C7W ★	CD320P7W ◆ CD320B7W ▲	CD330MI7W ➤Q CD330R7W ✚ CD330C7W ★	CD330P7W ◆ CD330B7W ▲
3-Pole, 4-Wire Grounding	125/250V/AC	CD420HMI12W ➤QX CD420MIB12W ➤F CD420MICB12W ➤B CD420R12W ✚ CD420C12W ★	CD420P12W ◆ CD420B12W ▲	CD430MI12W ➤Q CD430MIB12W ➤F CD430MICB12W ➤B CD430MIF12W ➤E CD430R12W ✚ CD430C12W ★	CD430P12W ◆ CD430B12W ▲
	3Ø 250V/AC	CD420HMI9W ➤QX CD420MIB9W ➤F CD420MICB9W ➤B CD420R9W ✚ CD420C9W ★	CD420P9W ◆ CD420B9W ▲	CD430MI9W ➤Q CD430MIB9W ➤F CD430MICB9W ➤B CD430MIF9W ➤E CD430R9W ✚ CD430C9W ★	CD430P9W ◆ CD430B9W ▲
	3Ø 480V/AC	CD420HMI7W ➤QX CD420MIB7W ➤F CD420MICB7W ➤B CD420R7W ✚ CD420C7W ★	CD420P7W ◆ CD420B7W ▲	CD430MI7W ➤Q CD430MIB7W ➤F CD430MICB7W ➤B CD430MIF7W ➤E CD430R7W ✚ CD430C7W ★	CD430P7W ◆ CD430B7W ▲
	3Ø 600V/AC	CD420HMI5W ➤QX CD420R5W ✚ CD420C5W ★	CD420P5W ◆ CD420B5W ▲	CD430MI5W ➤Q CD430MIF5W ➤E CD430R5W ✚ CD430C5W ★	CD430P5W ◆ CD430B5W ▲
4-Pole, 5-Wire Grounding	3ØY 120/208V/AC	CD520HMI9W ➤QX CD520R9W ✚ CD520C9W ★	CD520P9W ◆ CD520B9W ▲	CD530MI9W ➤Q CD530MIB9W ➤F CD530MICB9W ➤B CD530R9W ✚ CD530C9W ★	CD530P9W ◆ CD530B9W ▲
	3ØY 277/480V/AC	CD520R7W ✚ CD520C7W ★	CD520P7W ◆ CD520B7W ▲	CD530MI7W ➤Q CD530MIB7W ➤F CD530MICB7W ➤B CD530R7W ✚ CD530C7W ★	CD530P7W ◆ CD530B7W ▲
	3ØY 347/600V/AC	CD520R5W ✚ CD520C5W ★	CD520P5W ◆ CD520B5W ▲	CD530MI5W ➤Q CD530MIB5W ➤F CD530MICB5W ➤B CD530R5W ✚ CD530C5W ★	CD530P5W ◆ CD530B5W ▲

Locking Device LEGEND

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Core catalog number color indicates the type of use a device is designed for:

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A suffix combining a **RED** shape and alpha letter indicate a device's body and type.

Device body:

- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ➤ Mechanical Interlock

Device type:

- **B** Circuit Breaker Option
- **E** Fusible
- **F** Fuse Option
- **Q** Non-Fusible
- **X** Horizontal

Poles, Wires	Rating	60A Watertight Pin & Sleeve		100A Watertight Pin & Sleeve	
		Receptacle, Connector & Mechanical Interlocks	Plug & Inlet	Receptacle, Connector & Mechanical Interlocks	Plug & Inlet
2-Pole, 3-Wire Grounding	125V	CD360R4W ✚ CD360C4W ★	CD360P4W ◆ CD360B4W ▲	CD3100MI4W ➤Q CD3100R4W ✚ CD3100C4W ★	CD3100P4W ◆ CD3100B4W ▲
	250V	CD360MI6W ➤Q CD360MIF6W ➤E CD360R6W ✚ CD360C6W ★	CD360P6W ◆ CD360B6W ▲	CD3100MI6W ➤Q CD3100R6W ✚ CD3100C6W ★	CD3100P6W ◆ CD3100B6W ▲
	480V/AC	CD360MI7W ➤Q CD360R7W ✚ CD360C7W ★	CD360P7W ◆ CD360B7W ▲	CD3100MI7W ➤Q CD3100R7W ✚ CD3100C7W ★	CD3100P7W ◆ CD3100B7W ▲
3-Pole, 4-Wire Grounding	125/250V/AC	CD460MI12W ➤Q CD460MIB12W ➤F CD460MICB12W ➤B CD460MIF12W ➤E CD460R12W ✚ CD460C12W ★	CD460P12W ◆ CD460B12W ▲	CD4100MI12W ➤Q CD4100R12W ✚ CD4100C12W ★	CD4100P12W ◆ CD4100B12W ▲
	3Ø 250V/AC	CD460MI9W ➤Q CD460MIB9W ➤F CD460MICB9W ➤B CD460MIF9W ➤E CD460R9W ✚ CD460C9W ★	CD460P9W ◆ CD460B9W ▲	CD4100MI9W ➤Q CD4100R9W ✚ CD4100C9W ★	CD4100P9W ◆ CD4100B9W ▲
	3Ø 480V/AC	CD460MI7W ➤Q CD460MIB7W ➤F CD460MICB7W ➤B CD460MIF7W ➤E CD460R7W ✚ CD460C7W ★	CD460P7W ◆ CD460B7W ▲	CD4100MI7W ➤Q CD4100R7W ✚ CD4100C7W ★	CD4100P7W ◆ CD4100B7W ▲
	3Ø 600V/AC	CD460MI5W ➤Q CD460MIB5W ➤F CD460MICB5W ➤B CD460MIF5W ➤E CD460R5W ✚ CD460C5W ★	CD460P5W ◆ CD460B5W ▲	CD4100MI5W ➤Q CD4100R5W ✚ CD4100C5W ★	CD4100P5W ◆ CD4100B5W ▲
4-Pole, 5-Wire Grounding	3ØY 120/208V/AC	CD560MI9W ➤Q CD560MIB9W ➤F CD560MICB9W ➤B CD560MIF9W ➤E CD560R9W ✚ CD560C9W ★	CD560P9W ◆ CD560B9W ▲	CD5100MI9W ➤Q CD5100R9W ✚ CD5100C9W ★	CD5100P9W ◆ CD5100B9W ▲
	3ØY 277/480V/AC	CD560MI7W ➤Q CD560MIB7W ➤F CD560MICB7W ➤B CD560MIF7W ➤E CD560R7W ✚ CD560C7W ★	CD560P7W ◆ CD560B7W ▲	CD5100MI7W ➤Q CD5100R7W ✚ CD5100C7W ★	CD5100P7W ◆ CD5100B7W ▲
	3ØY 347/600V/AC	CD560MI5W ➤Q CD560MIF5W ➤E CD560R5W ✚ CD560C5W ★	CD560P5W ◆ CD560B5W ▲	CD5100MI5W ➤Q CD5100R5W ✚ CD5100C5W ★	CD5100P5W ◆ CD5100B5W ▲

Locking Device LEGEND

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- ✚ Single Receptacle
- ◆ Plug
- ★ Connector
- ▲ Flanged Inlet
- ➤ Mechanical Interlock

Device type:

- **B** Circuit Breaker Option
- **E** Fusible
- **F** Fuse Option
- **Q** Non-Fusible
- **X** Horizontal

Horsepower Ratings for NEMA Configurations (Plugs & Receptacles Only)

Straight Blade Configurations

NEMA	AC HP Rating	Rating
1-15	0.5	15A-125V
2-15	1.5*	15A-250V
2-20	2*	20A-250V
2-30	2*	30A-250V
5-15	0.5	15A-125V
5-20	1	20A-125V
5-30	2	30A-125V
5-50	2	50A-125V
6-15	1.5*	15A-250V
6-20	2*	20A-250V
6-30	2*	30A-250V
6-50	3*	50A-250V
7-15	2	15A-277V/AC Only
7-20	2	20A-277V/AC Only
7-30	3	30A-277V/AC Only
7-50	5	50A-277V/AC Only
10-20	2L-L*/1 L-N	20A-125/250V
10-30	2 L-L*/2 L-N	30A-125/250V
10-50	3 L-L*/2 L-N	50A-125/250V
11-15	2	15A-3Ø 250V
11-20	3	20A-3Ø 250V
11-30	3	30A-3Ø 250V
11-50	7.5	50A-3Ø 250V
14-15	1.5 L-L*/0.5 L-N	15A-125/250V
14-20	2 L-L*/1 L-N	20A-125/250V
14-30	2 L-L*/2 L-N	30A-125/250V
14-50	3 L-L*/2 L-N	50A-125/250V
14-60	3 L-L*/2 L-N	60A-125/250V
15-15	2	15A-3Ø 250V
15-20	3	20A-3Ø 250V
15-30	3	30A-3Ø 250V
15-50	7.5	50A-3Ø 250V
15-60	10	60A-3Ø 250V
18-15	2	15A-3ØY 120/208V
18-20	2	20A-3ØY 120/208V
18-30	3	30A-3ØY 120/208V
18-50	7.5	50A-3ØY 120/208V
18-60	7.5	60A-3ØY 120/208V

L-L denotes phase-to-phase HP rating

L-N denotes phase-to-neutral HP rating

*Suitable for 208V motor applications at HP rating

Locking Configurations

NEMA	AC HP Rating	Rating
L1-15	0.5	15A-125V
L2-20	2*	20A-250V
L5-15	0.5	15A-125V
L5-20	1	20A-125V
L5-30	2	30A-125V
L6-15	1.5*	15A-250V
L6-20	2*	20A-250V
L6-30	2*	30A-250V
L7-15	2	15A-277V/AC Only
L7-20	2	20A-277V/AC Only
L7-30	3	30A-277V/AC Only
L8-20	3	20A-480V/AC Only
L8-30	5	30A-480V/AC Only
L9-20	NA	20A-600V/AC Only
L9-30	NA	30A-600V/AC Only
L10-20	2 L-L*/1 L-N	20A-125/250V
L10-30	2 L-L*/2 L-N	30A-125/250V
L11-15	2	15A-3Ø 250V
L11-20	3	20A-3Ø 250V
L11-30	3	30A-3Ø 250V
L12-20	5	20A-3Ø 480V
L12-30	10	30A-3Ø 480V
L13-30	NA	30A-3Ø 600V
L14-20	2L-L*/1 L-N	20A-125/250V
L14-30	2 L-L*/2 L-N	30A-125/250V
L15-20	3	20A-3Ø 250V
L15-30	3	30A-3Ø 250V
L16-20	5	20A-3Ø 480V
L16-30	10	30A-3Ø 480V
L17-30	NA	30A-3Ø 600V
L18-20	2	20A-3ØY 120/208V
L18-30	3	30A-3ØY 120/208V
L19-20	5	20A-3ØY 277/480V
L19-30	10	30A-3ØY 277/480
L20-20	NA	20A-3ØY 347/600V
L20-30	NA	30A-3ØY 347/600V
L21-20	2	20A-3ØY 120/208V
L21-30	3	30A-3ØY 120/208V
L22-20	5	20A-3ØY 277/480V
L22-30	10	30A-3ØY 277/480V
L23-20	NA	20A-3ØY 347/600V
L23-30	NA	30A-3ØY 347/600V

L-L denotes phase-to-phase HP rating

L-N denotes phase-to-neutral HP rating

*Suitable for 208V motor applications at HP rating

Organization Abbreviations Glossary

Common abbreviations for organizations often referred to in the electrical industry, and also noted throughout the Arrow Hart catalog:

ANSI

American National Standards Institute, Inc.

ANSI is a private, non-profit organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. The Institute's mission is to enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity. **www.ansi.org**

CSA

Canadian Standards Association

The Canadian Standards Association is a not-for-profit, membership-based association that conducts product safety testing, and issues certifications. **www.csa.org**

GSA

General Services Administration Federal Supply Service

GSA's Federal Supply Service provides federal customers with a specific list of manufacturer's products that have been approved to meet stated requirements. The most frequently cited Federal Specifications regarding electrical wiring devices are those for Electrical Power Connector, Plug, Receptacle and Cable Outlet (Fed. Spec. W-C 596) and for Toggle and Lock, Flush Mounted Switches (Fed. Spec. W-S 896). **www.gsa.gov**

NEC®

National Electrical Code®
Published by the NFPA (see listing) as NFPA 70, the National Electrical Code

This publication, renewed every 3 years under the auspices of ANSI, provides for the adequate protection of life and property from dangers associated with the use of electricity. It is now adopted and enforced in all 50 states in the United States, and is also the basis for electrical codes in several other countries. **www.nfpa.org**

NEMA

National Electrical Manufacturers Association

Comprised of electrical manufacturers, NEMA provides a forum for the standardization and testing of electrical equipment, enabling consumers to select from a range of safe, effective, and compatible electrical products. NEMA-standards of testing is frequently required by both government and third-party endorsees such as UL and CSA prior to their approval. **www.nema.org**

NFPA

National Fire Protection Association

The mission of the international non-profit NFPA is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically based consensus codes and standards, research, training and education. The NFPA authors the NEC® and NPPA 70E electrical safety in the workplace. **www.nfpa.org**

NOM

Normas Officials de Mexico
(Official Mexican Standards)

The Official Mexican Standards (referred to as Normas or NOMs) augment the Mexican Hazardous Materials Land Transportation Regulation and provide information relative to importing and exporting hazardous materials from and to Mexico.

OSHA

Occupational Health and Safety Administration, U.S. Department of Labor

OSHA's mission is to assure safe and healthful working conditions for working men and women (having been authorized to enforce standards first created under the Occupational Health and Safety Act of 1970 and since evolved), by assisting and encouraging the States in their efforts to assure safe and healthful working conditions. **www.osha.gov**

UL

Underwriters Laboratories

Underwriters Laboratories Inc. (UL) is an independent, not-for-profit product safety testing and certification organization. **www.ul.com**

NSF

NSF International

NSF International helps protect people by certifying products and writing standards for consumer goods. As an independent, not-for-profit organization, NSF works toward allowing everyone to live safer. **www.nsf.org**

Common Industry Organization Acronyms

Standards Development Organizations

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
CANENA	Consejo de Armonizacion de Normas Electrotecnicas de Norte America (Council for Harmonization of Electrotechnical Standardization of North America)
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
ISA	Instrument Society of America
ISO	International Standards Organization
NFPA	National Fire Protection Agency
NSF	NSF International
SAE	Society of Automotive Engineers
SME	Society of Manufacturing Engineers

Certification Agencies

ANCE	National Association of Normalization and Certification of the Electrical Sector (Mexico)
BSI	British Standards Institute
CI	European Compliance *(This is not a certification agency, but CE is the European Compliance Mark)*
CSA	Canadian Standards Association
cUL	Certified to CSA Standards by Underwriters Laboratories
cULus	Meets Canadian & US UL requirements
DESC	Defense Electronic Supply Center
ETL	Electrical Testing Laboratories
FCC	Federal Communications Commission
FM	Factory Mutual
IAPA	Independent Accident and Protection Association (Canada)
LEED	Leadership in Energy and Environmental Design
NRTL	National Recognized Testing Laboratories
OSHA	Occupational Safety and Health Administration
TUV	TUV Rheinland of N.A., Inc.
VDE	Verband Deutscher Elektrotechniker (Germany)
UL	Underwriters Laboratories

Codes and Standards

CEC	Canadian Electrical Code
CEE	European Electrotechnical Committee
NEC	National Electrical Code®
NMX	Normas Mexicanas
NOM	Normas Oficiales de Mexicanas (Official Mexican Standard)

Industry Associations

ABYC	American Boat and Yacht Council
BICSI	Building Industry Consulting Services International
BOMA	Building Owners Management Association
CANAME	Camara Nacional de Manufacturas Electricas (Mexico)
CEMRA	Canadian Electrical Manufacturers Representatives Association
ECOC	Electrical Contractors of Canada
EFI	Electro-Federation Incorporated
EIA	Electronics Industry Association
EPRI	Electric Power Research Institute
IAEI	International Association of Electrical Inspectors
IBI	Intelligent Building Institute
IECA	Independent Electrical Contractors Association
IFMA	International Facilities Management Association
NAED	National Association of Electrical Distributors
NAW	National Association of Wholesalers
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NEMRA	National Electrical Manufacturers Representative Association
NMDA	National Marine Distributor Association
NMRA	National Marine Representative Association
SEMI	Semi-Conductor Equipment and Material International
TIA	Telecommunications Industry Association
USGBC	US Green Building Council

Common UL & CSA Standards For Wiring Devices

UL Standards Pertaining to Arrow Hart Products

UL 20	General-use switches
UL 50	Enclosures for electrical equipment
UL 94	Flammability testing for materials, plastic
UL 486E	Equipment and wiring terminals
UL 496	Lampholders
UL 498	Plugs, connectors, receptacles, inlets, outlets
UL 498A	Taps and adapters
UL 508	Industrial equipment (including motor control switches)
UL 514A	Metallic boxes/covers/wallplates
UL 514D	Nonmetallic boxes/covers/wallplates
UL 817	Cord sets
UL 943	GFCIs
UL 1054	Special use switches
UL 1363	Temporary power taps
UL 1436	Outlet circuit testers
UL 1449	Surge suppression devices
UL 1472	Dimmers
UL 1567	Switches and receptacles used with AL wire
UL 1699	Arc fault circuit interrupters

UL Standards Pertaining to Arrow Hart Products

UL 1786	Night-lights
UL 1863	Communications circuit accessories
UL 1917	Solid state fan speed control
FSWC596	Fed. Spec. receptacles
FSWS896	Fed. Spec. switches

CSA Standards Pertaining to Arrow Hart Products

C22.2 No. 0.17	Polymeric materials
C22.2 No. 12	Night Lights
C22.2 No. 42	General-use receptacles, attachment plugs
C22.2 No. 55	Special-use switches
C22.2 No. 111	General-use switches
C22.2 No. 144	GFCI
C22.2 No. 182.1	Industrial-type, special-use attachment plugs, receptacles and connectors. Pin and sleeve devices.
C22.2 No. 182.2	Industrial locking type

General Purpose Wiring Device Definitions from NEMA Standard WD-1

NEMA Standards Pertaining to Arrow Hart Products (in accordance with NEMA Standard WD-1)

WD 1-1.01 Cord Connector
A portable receptacle with means for attachment to a flexible cord, the cord connector is not intended for permanent mounting.
NEMA Standard 7-13-1967

WD 1-1.02 Grounded Conductor (System Ground)
This is a usually current-carrying circuit conductor that's purposely connected to earth ground, and is identified as the white conductor.
NEMA Standard 7-13-1967

WD 1-1.03 Grounding Conductor (Equipment Ground)
Unlike the System Ground version, this conductor connects non-current-carrying metallic equipment parts to earth ground, providing a specific path for fault current to ground. It can be bare or covered, in which case it is identified as the green conductor, or green with yellow stripes.
NEMA Standard 7-13-1967

WD 1-1.04 Lampholder
Lampholders mechanically support an electric lamp, and electrically connect it to a circuit.
NEMA Standard 7-13-1967

WD 1-1.05 Male Base (Inlet)
Designed for flush or surface mounting on an appliance or other equipment, male-based plugs serve to connect utilization equipment to a connector.
NEMA Standard 7-13-1967

WD 1-1.06 Outlet
An outlet is a point on the wiring system at which current is taken to supply utilization equipment.
NEMA Standard 7-13-1967

WD 1-1.07 Plug
The male blades of our plugs serve to connect the conductors of the attached, flexible cord with those of the female receptacle.
NEMA Standard 7-1-1967

WD 1-1.08 Polarization (Plugs and Receptacles)
Polarization assures the correct positioning for proper mating of plugs and receptacles of the same rating.
NEMA Standard 7-1-1967

WD 1-1.09 Pole
When used to designate plugs and receptacles, "pole" refers to a terminal that is connected to a regularly current-carrying circuit conductor. In switches, the number of poles indicates how many conductors are being controlled.
NEMA Standard 7-1-1967

WD 1-1.10 Receptacle
This device features female contacts, and is installed primarily at an outlet or on equipment meant to establish electrical connection with an inserted plug.
NEMA Standard 7-1-1967

WD 1-1.11 Slant Symbol (/)
As it applies to wiring device ratings, the "slant" line(/) indicates that there's more than one voltage potential present between different terminals of a wiring device.
NEMA Standard 7-1-1967

WD 1-1.12 Switch
There are several different types of switches available for making, breaking, or changing electrical circuit connections, including:

A. **Single-Pole Switch** (Single-Pole, Single-Throw), which makes or breaks the connection of a single conductor.
B. **Double-Pole Switch** (Double-Pole, Single-Throw), which makes or breaks the connection of two conductors on a single branch circuit.
C. **Three-Way Switch** (Single-Pole, Double-Throw), which changes the connection of a single conductor and is most often utilized in tandem to better control one piece of equipment from two locations.
D. **Four-Way Switch** (Double-Pole, Double-Throw Reversing) is a double-pole switch used with two three-way switches to control a single piece of equipment from more than two locations.

NEMA Standard 7-13-1967

WD 1-1.13 Terminal (on a Wiring Device)
A terminal is a fixed location on a wiring device where a conductor is designated for connection.
NEMA Standard 7-13-1967

WD 1-1.14 Wire (Plugs and Receptacles)
As it applies in designating plugs and receptacles, the term "wire" stands for the number of either regularly current-carrying or equipment grounding connected conductors.
NEMA Standard 7-13-1967

For answers to technical questions, or for more information on UL, CSA, and NEMA standards pertaining to Cooper Wiring Devices' products, call our toll free number: 1-866-853-4293. Or, visit our website at www.cooperwiringdevices.com.

Selected Articles, National Electric Code (NEC®) Requirements for Wiring Devices From NFPA 70™, NEC® 2008 Edition

Article 210 — Branch Circuits
210.8 Ground-Fault Circuit-Interrupter Protection for Personnel
210.21 Branch Circuit Ratings, Outlet Devices
210.24 Branch Circuit Requirements - Summary
210.50 Required Outlets, General
210.60 Required Outlets, Guest Rooms, Guest Suites, Dormitories and Similar Occupancies
210.62 Required Outlets, Show Windows
210.70 Lighting Outlets Required

Article 404 — Switches
404.2 Installation, Switch Connections
404.3 Installation, Enclosure
404.4 Installation, Damp or Wet Locations
404.9 Installation, Provisions for General-Use Snap Switches
404.14 Rating and Use of Snap Switches
404.15 Construction Specifications, Marking

Article 406 — Receptacles, Cord Connectors and Attachment Plugs (Caps)
406.2 Receptacle Rating and Type
406.3 General Installation Requirements
406.4 Receptacle Mounting
406.5 Receptacle Faceplates (Cover Plates)
406.6 Attachment Plugs, Cord Connectors and Flanged Surface Devices
406.7 Noninterchangeability
406.8 Receptacles in Damp or Wet Locations
406.9 Grounding-Type Receptacles, Adapters, Cord Connectors and Attachment Plugs
406.11 Tamper-Resistant Receptacles in Dwelling Units

Article 430 — Motors, Motor Circuits and Controllers
430.8 Marking on Controllers
430.81 Motor Controllers, General
430.82 Motor Controllers, Controller Design
430.83 Motor Controllers, Ratings
430.90 Combination Fuseholder and Switch as Controller
430.102 Disconnecting Means, Location
430.109 Disconnecting Means, Type

Article 517 — Health Care Facilities
517.2 Definitions
517.10 Wiring and Protection, Applicability
517.13 Grounding of Receptacles and Fixed Electrical Equipment in Patient Care Areas
517.14 Panelboard Bonding
517.16 Receptacles with Insulated Grounding Terminals
517.17 Ground-Fault Protection
517.18 Wiring and Protection, General Care Areas
517.19 Wiring and Protection, Critical Care Areas
517.20 Wiring and Protection, Wet Procedure Locations
517.21 Ground-Fault-Circuit-Interrupter Protection for Personnel
517.30 Essential Electrical Systems for Hospitals
517.31 Emergency System
517.35 Sources of Power
517.40 Essential Electrical Systems for Nursing Homes and Limited Care Facilities
517.41 Essential Electrical Systems (Nursing Homes, etc.)
517.45 Essential Electrical Systems for Other Health Care Facilities
517.61 Inhalation Anesthetizing Locations, Wiring and Equipment
517.62 Inhalation Anesthetizing Locations, Grounding
517.63 Grounded Power Systems in Anesthetizing Locations
517.64 Inhalation Anesthetizing Locations, Low-Voltage Equipment and Instruments
517.71 X-Ray Installations Connection to Supply Circuit
517.72 X-Ray Installations Disconnecting Means
517.160 Isolated Power Systems

Article 555 — Marinas and Boatyards
555.1 Scope
555.13 Wiring Methods and Installations
555.19 Receptacles (including GFCI)

Article 590 — Temporary Installations
590.4 General (including Receptacles and GFCI)

Article 604 — Manufactured Wiring Systems
604.2 Definition
604.6 Construction (including Receptacles and Connectors)

Article 630 — Electric Welders
630.13 Arc Welders, Disconnecting Means
630.33 Resistance Welders, Disconnecting Means

Article 647 — Sensitive Electronic Equipment
647.7 Receptacles (including Isolated Ground Receptacles)

Article 660 — X-Ray Equipment
660.4 Connection to Supply Circuit
660.5 Disconnecting Means

Article 700 — Emergency Systems
700.26 Overcurrent Protection, Ground-Fault Protection of Equipment

Wire & Cable Type Abbreviations

KEY:

S = Service
J = Junior
T = Thermoplastic/Vinyl
W = Weather Approved
P = Parallel

- **SJT:** Hard usage thermoplastic rubber-insulated conductors and overall thermoplastic jacket. 300V, 60ºC to 105ºC.
- **SJTW:** Hard usage thermoplastic or rubber-insulated conductors and overall thermoplastic jacket. 300V, 60ºC to 105ºC. Weather resistant for outdoor use.
- **SPT-1:** All thermoplastic construction, parallel jacketed. 300V, 60ºC to 105ºC, 2 or 3-conductor (18 gauge).
- **SPT-2:** Same as SPT-1, but heavier construction (18-16 gauge).
- **SPT-3:** Same as SPT-2, but heavier construction (18-10 gauge).
- **SRDT:** Portable range or dryer cable, 3-conductor parallel type or 4 insulated conductors, jacketed. All thermoplastic construction. 300V, maximum temperature of 60ºC.
- **HPN:** Two-conductor, neoprene-insulated heater cord. Parallel construction. For use in damp locations. 300V, 90ºC.

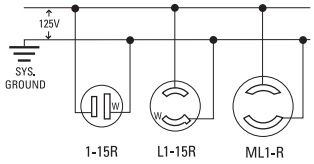
Diameter Ranges of Jacketed Cord in Accordance with Standard UL62

Acceptable Range for Overall Diameter of Jacketed Cord

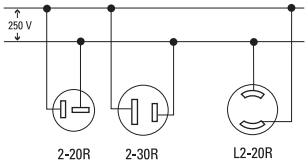
Type of Cord	Avg. Size	2-Conductor	3-Conductor	4-Conductor	5-Conductor
SV, SVO, SVT, SVTO	18	0.22"-0.26" (5.6mm-6.6mm)	0.23"-0.27" (5.8mm-6.9mm)	—	—
SJ, SJO, SJT, SJTO	18	0.28"-0.32" (7.1mm-8.1mm)	0.30"-0.34" (7.6mm-8.6mm)	0.33"-0.37" (8.4mm-9.4mm)	—
	16	0.31"-0.34" (7.9mm-8.6mm)	0.33"-0.36" (8.4mm-9.1mm)	0.35"-0.40" (8.9mm-10.2mm)	—
	14	0.34"-0.38" (8.6mm-9.7mm)	0.36"-0.40" (9.1mm-10.2mm)	0.39"-0.44" (9.9mm-11.2mm)	—
	12	0.41"-0.46" (10.4mm-11.7mm)	0.43"-0.48" (10.9mm-12.2mm)	0.47"-0.52" (11.9mm-13.2mm)	—
	10	0.54"-0.61" (13.7mm-15.5mm)	0.57"-0.64" (14.5mm-16.3mm)	0.63"-0.70" (16.0mm-17.8mm)	—
S, SO, ST, STO	18	0.34"-0.39" (8.6mm-9.9mm)	0.36"-0.40" (9.1mm-10.2mm)	0.39"-0.43" (9.9mm-10.9mm)	0.46"-0.51" (11.7mm-13.0mm)
	16	0.37"-0.41" (9.4mm-10.4mm)	0.39"-0.43" (9.9mm-10.9mm)	0.41"-0.46" (10.4mm-11.7mm)	0.49"-0.55" (12.4mm-14.0mm)
	14	0.50"-0.55" (12.7mm-14.0mm)	0.52"-0.58" (13.2mm-14.7mm)	0.56"-0.62" 14.2mm-15.7mm)	0.63"-0.71" (16.0mm-18.0mm)
	12	0.57"-0.63" (14.5mm-16.0mm)	0.59"-0.66" (15.0mm-16.8mm)	0.64"-0.71" (16.3mm-18.0mm)	0.70"-0.77" (17.8mm-19.6mm)
	10	0.62"-0.69" (15.7mm-17.5mm)	0.65"-0.72" (16.5mm-18.3mm)	0.70"-0.78" (17.8mm-19.8mm)	0.76"-0.84" (19.3mm-21.3mm)
	8	0.78"-0.88" (19.8mm-22.4mm)	0.83"-0.93" (21.1mm-23.6mm)	0.93"-1.05" 23.6mm-26.7mm)	1.00"-1.15" (25.4mm-29.2mm)
	6	0.92"-1.05" (23.4mm-26.7mm)	0.97"-1.10" (24.6mm-27.9mm)	1.05"-1.20" (26.7mm-30.5mm)	1.18"-1.33" (30.0mm-33.8mm)
	4	1.06"-1.21" (26.9mm-30.7mm)	1.13"-1.28" (28.7mm-32.5mm)	1.25"-1.45" (31.8mm-3.8mm)	—
	2	1.21"-1.40" (30.7mm-35.6mm)	1.30"-1.50" 33.0mm-38.1mm)	1.45"-1.65" (36.8mm-41.9mm)	—

Wiring Diagrams by NEMA Configurations

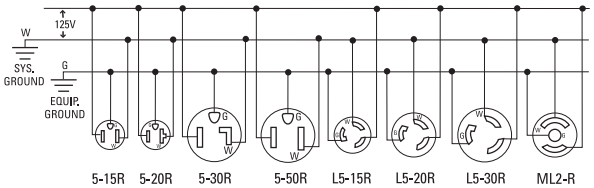
2-Pole, 2-Wire Non-Grounding: 125V



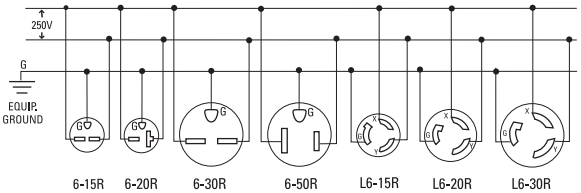
2-Pole, 2-Wire Non-Grounding: 250V



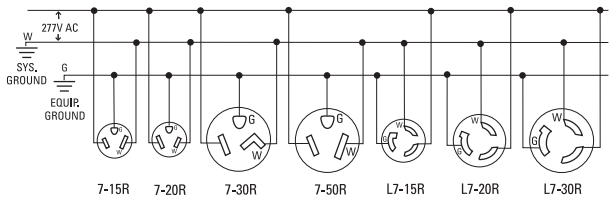
2-Pole, 3-Wire Grounding: 125V



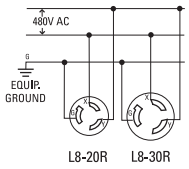
2-Pole, 3-Wire Grounding: 250V



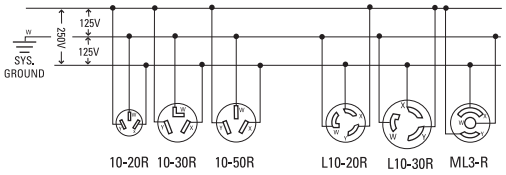
2-Pole, 3-Wire Grounding: 277V AC



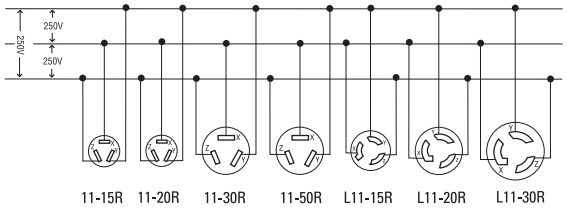
2-Pole, 3-Wire Grounding: 480V AC



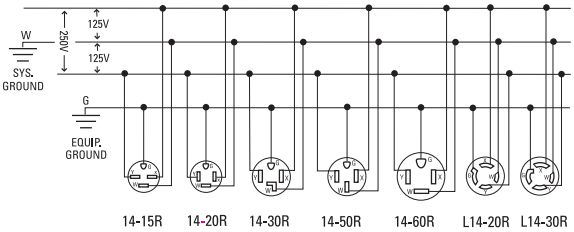
3-Pole, 3-Wire Non-Grounding: 125/250V



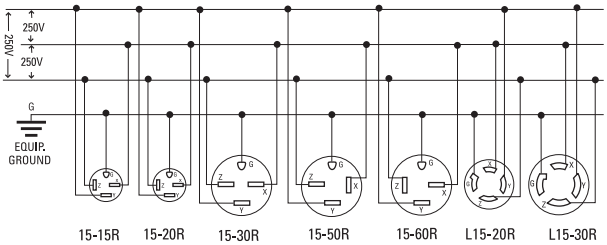
3-Pole, 3-Wire Non-Grounding: 3Ø 250V



3-Pole, 4-Wire Grounding: 125/250V

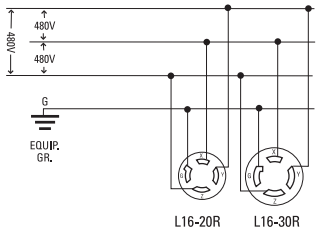


3-Pole, 4-Wire Grounding: 3Ø 250V



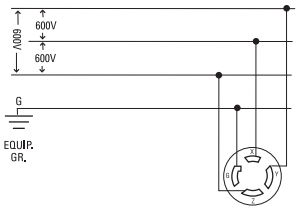
Wiring Diagrams by NEMA Configurations

3-Pole, 4-Wire Grounding: 3Ø 480V



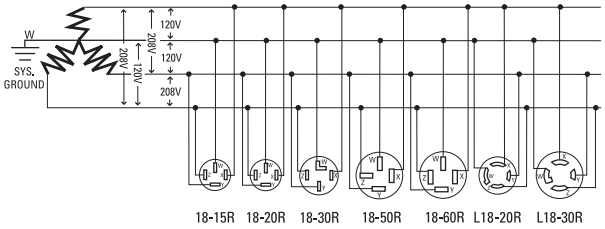
L16-20R L16-30R

3-Pole, 4-Wire Grounding: 3Ø 600V



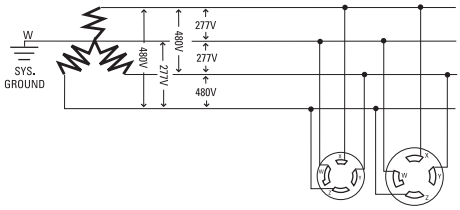
L17-30R

4-Pole, 4-Wire Non-Grounding: 3Ø 120/208V



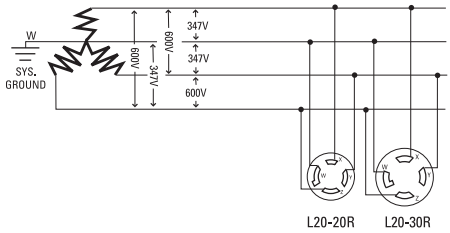
18-15R 18-20R 18-30R 18-50R 18-60R L18-20R L18-30R

4-Pole, 4-Wire Non-Grounding: 3Ø 277/480V



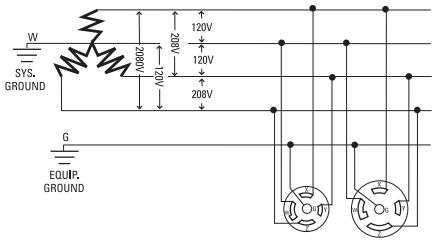
L19-20R L19-30R

4-Pole, 4-Wire Non-Grounding: 3Ø 347/600V



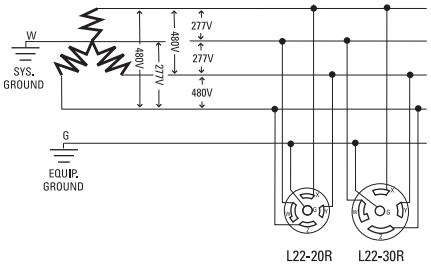
L20-20R L20-30R

4-Pole, 5-Wire Grounding: 3Ø 120/208V



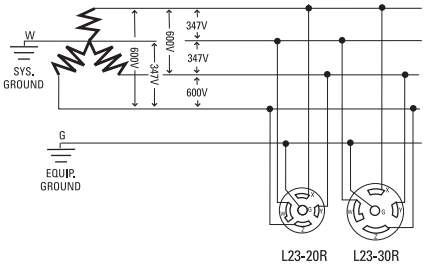
L21-20R L21-30R

4-Pole, 5-Wire Grounding: 3Ø 277/480V



L22-20R L22-30R

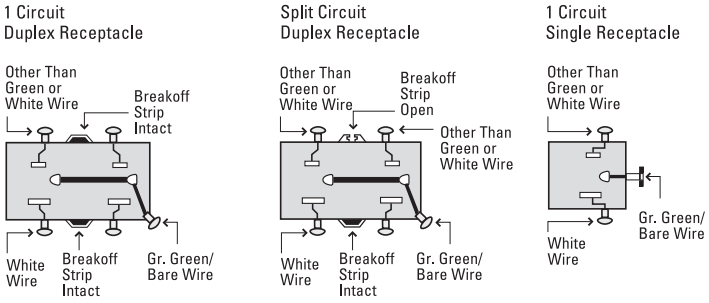
4-Pole, 5-Wire Grounding: 3Ø 347/600V



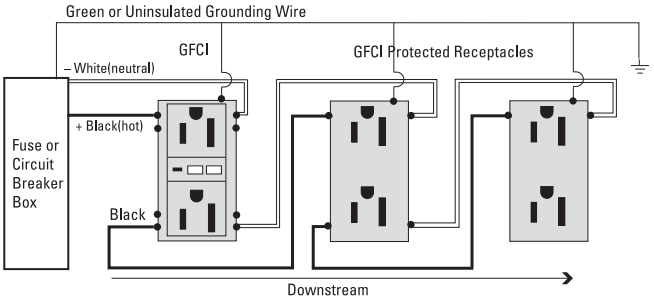
L23-20R L23-30R

Receptacles

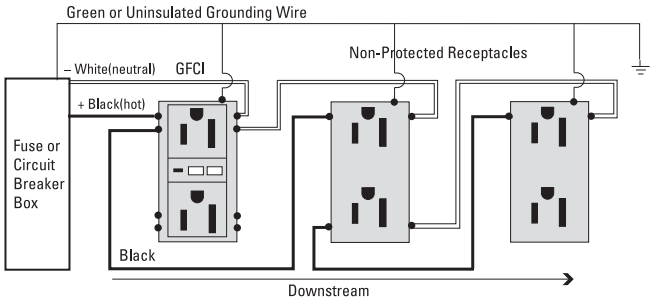
15A-125V



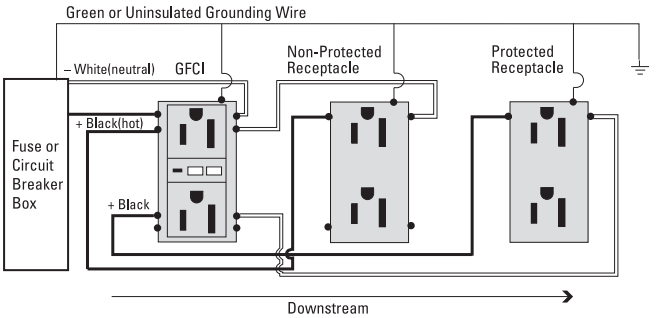
GFCI: Feed-Through Installation with Protection Provided Downstream



GFCI: Feed-Through Installation with Non-Protected Receptacles Downstream

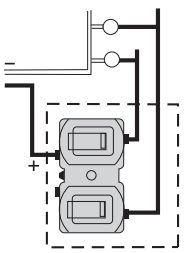


GFCI: Feed-Through Installation with Both Protected and Non-Protected Receptacles Downstream

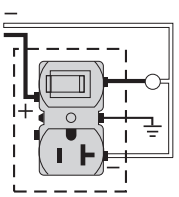


Combination Devices

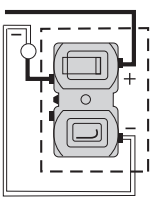
2 Single-Pole Switches



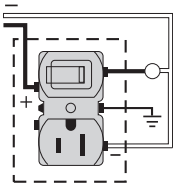
Single-Pole Switch and 2-Pole, 3-Wire 20A U Grounding Receptacle



Single-Pole Switch and Neon Pilot Light

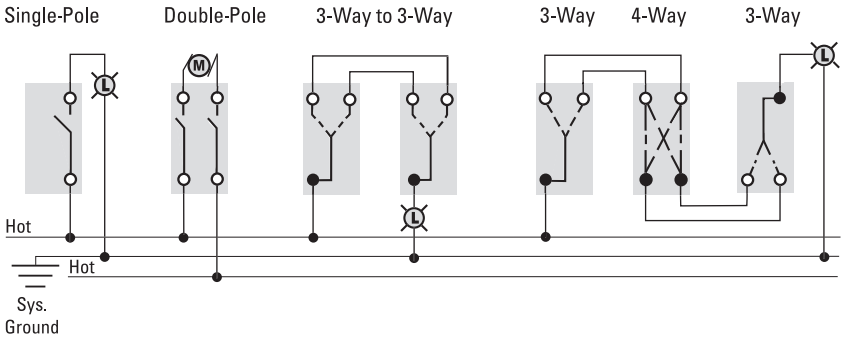


Single-Pole Switch and 2-Pole, 3-Wire U Grounding Receptacle

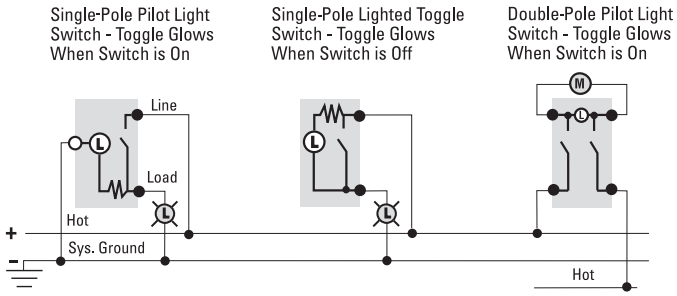


Switches

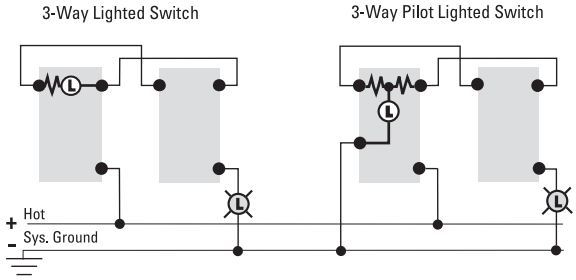
AC Switches & Standard Switches



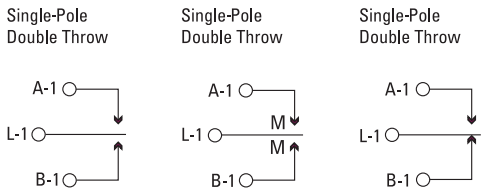
Pilot Light Switch & Lighted Switch, Single and Double Pole



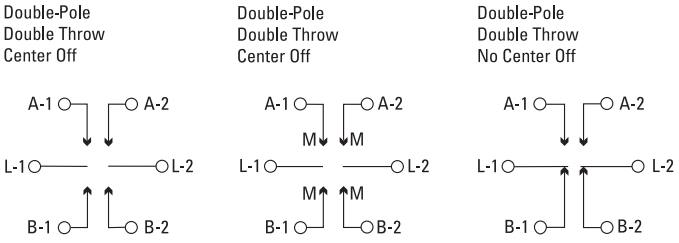
Pilot Light Switch & Lighted Switch, 3-Way



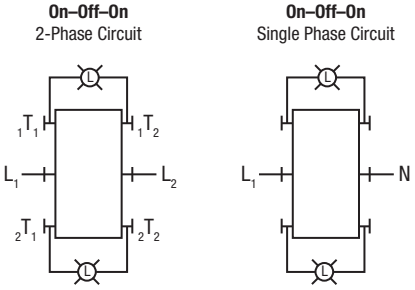
Maintained & Momentary Contact, Single-Pole



Maintained & Momentary Contact, Double-Pole



Manual Contactors & Disconnect Switches



Manual Contacts & Disconnect Switches, by Motor Variations

Capacitor Two Windings

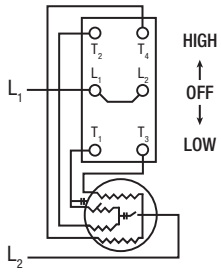


Diagram 1

Repulsion Induction

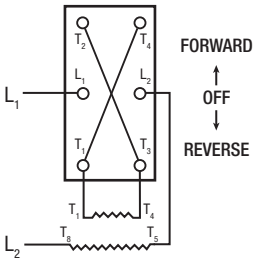


Diagram 2

Series

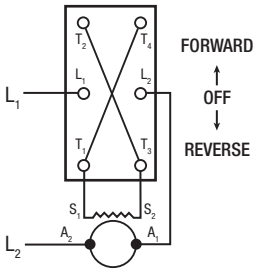


Diagram 3

Capacitor Consequent Pole

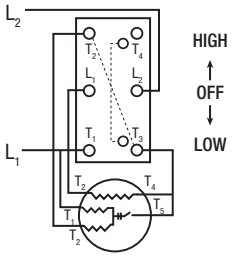


Diagram 4

Diagram 4 Internal Connections		
LOW	L_1 & T_2	L_2 & T_3 & T_4
HIGH	L_1 & T_1	L_2 to T_2 & T_3

Capacitor

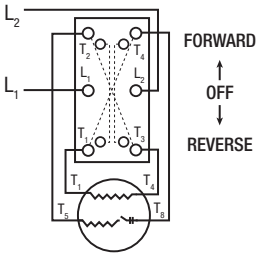


Diagram 5

Diagram 5 & 6 Internal Connections		
	L_1	L_2
FORWARD	T_1 & T_2	T_3 & T_4
REVERSE	T_1 & T_4	T_3 & T_2

Split Phase

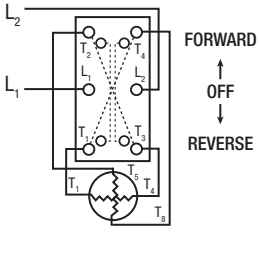


Diagram 6

3-Phase Separate Winding

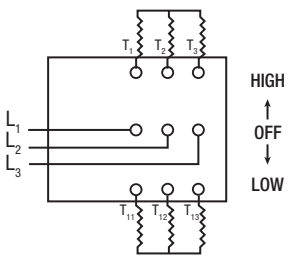


Diagram 7

3-Phase Induction

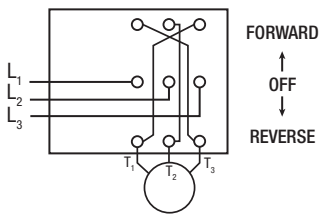


Diagram 8

Series DC

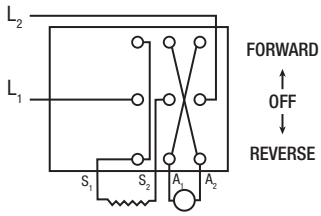


Diagram 9

Shunt DC

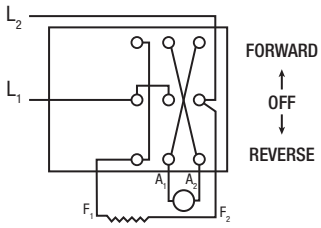


Diagram 10

Compound DC

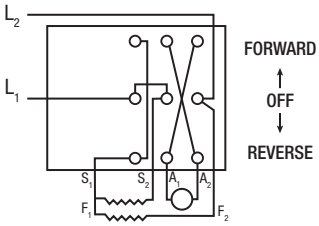


Diagram 11

2-Phase Separate Winding

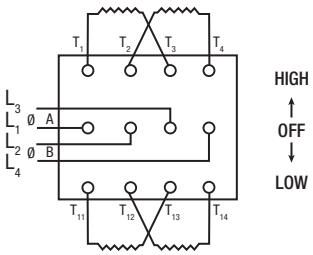


Diagram 12

2-Phase Induction

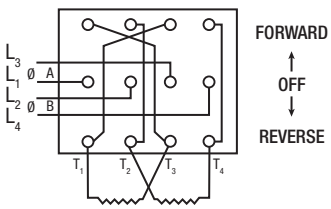
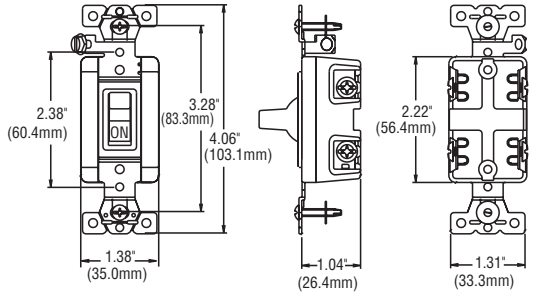


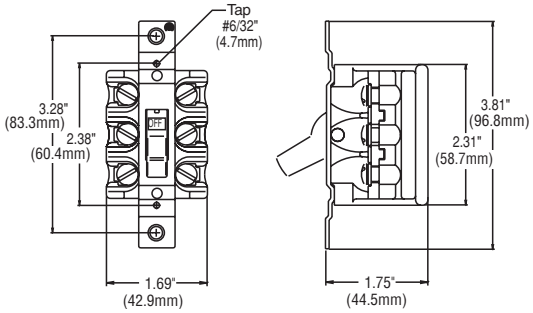
Diagram 13

Switch Dimensional Data

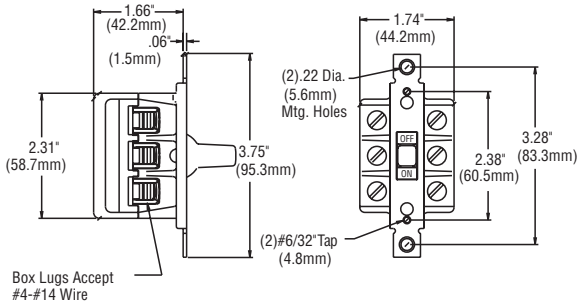
AH6808UDAC, AH6808UCO



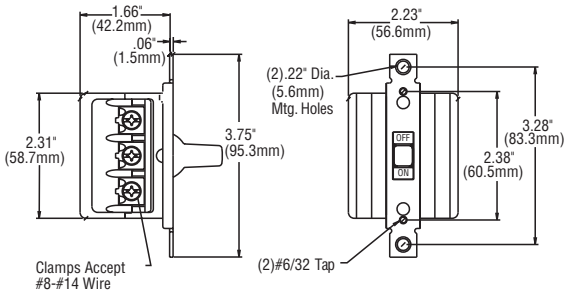
AH6810U, AH7810UD



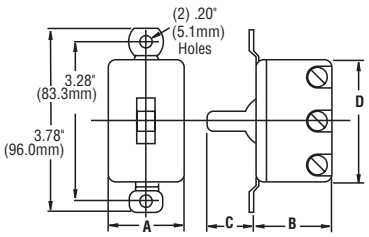
AHMC240L, AHMC340L, AHMC260L, AHMC360L



AHMC240C, AHMC340C



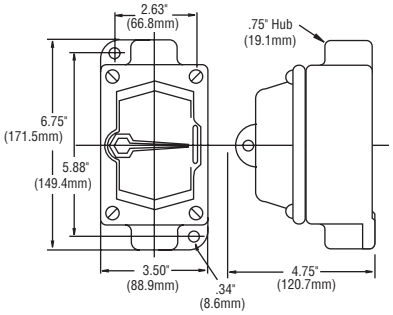
AH4361, AH4371



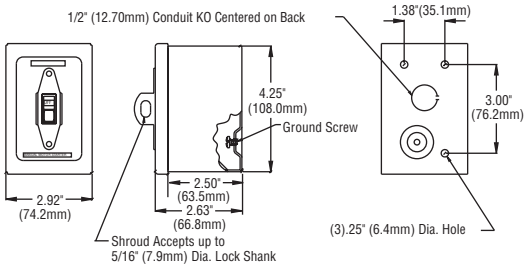
	A	B	C	D
AH4361	1.59" (40.4mm)	1.66" (42.2mm)	0.66" (16.8mm)	2.50" (63.5mm)
AH4371	1.81" (46.0mm)	1.98" (50.3mm)	1.22" (31.0mm)	2.88" (73.2mm)

Enclosure Dimensional Data

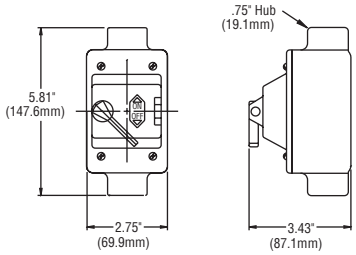
AH6810E, AH7810ED



AHMC360L-1, AHMC260L-1, AH781OGD, AHMC340C-1, AHMC340L-1, AH6808GDAC, AH6810G, AHMC240C-1, AHMC240L-1, AH27940G, AHN1GD

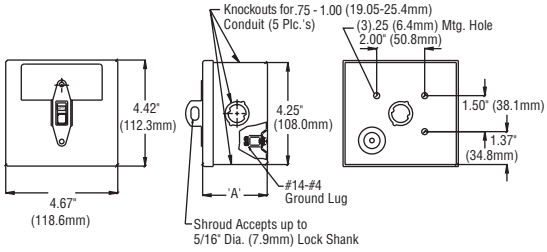


AH6808WDAC

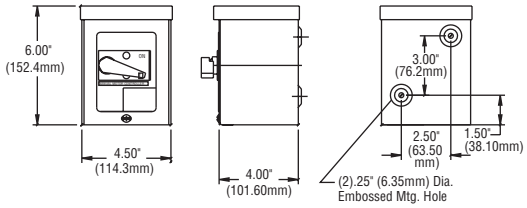


AH7810GDB, AHN1GD2
Dim A=2.63" (66.80mm)

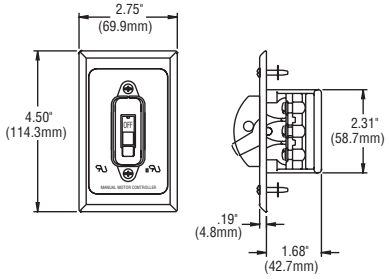
AHN1GD2D
Dim A=3.87" (98.30mm)



AHN3WD, AH6808WDAC, AH6810W, AHMC240C-3, AHMC240L-2, AHMC260L-3, AHMC340C-3, AHMC340L-2, AHMC360L-2

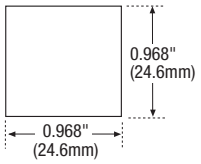


AH6808FDAC (plate only, no toggle guard)
AH7810FD



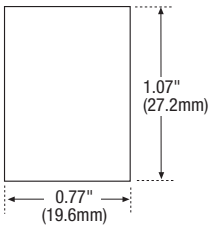
Snap-In Receptacle Panel Cutouts

Panel Cutout
49



Panel Thickness **0.032" ñ 0.070"**
(0.81mm ñ 1.78mm)

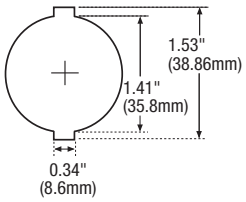
Panel Cutout
67



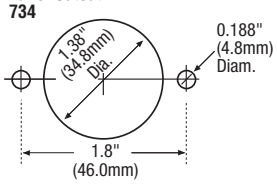
Panel Thickness **0.032" – 0.070"**
(0.81mm – 1.78mm)

Attachon Lampholder Cutouts

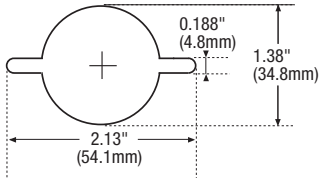
Panel Cutout
732-3



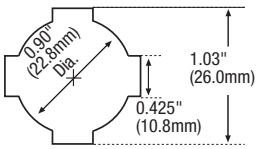
Panel Cutout
734



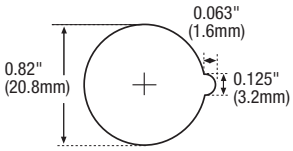
Panel Cutout
4734-2



Panel Cutout
731-2, 731-3



Panel Cutout
974-2



Test Requirements

The maximum permitted load for which a switch is suitable depends on the switch rating and the nature of the load. Proper selection of switches is determined by test standards and requirements of the National Electrical Code®, Articles 380, 430, and 600.

General Use AC switches are suitable for use at full rated current and voltage on loads of fluorescent and incandescent lighting and for other inductive or resistance loads. Our switches are rated for motor loads at 80% of their rated current.

Special Use AC switches may be used at full rating on resistance or inductive loads, including fluorescent. For incandescent (tungsten) lighting loads, they must carry an "L" rating. For motor loads they require an "HP" (horsepower) rating.

To ensure safety and reliability, Arrow Hart switches are tested, rated and marked according to various standards. The following charts indicate both the required performance tests specified by industry standards for switches with standard ratings, and the loads they may control.

Test Requirements - Switches* General Use - AC Only

Rating	Standard*	Overload				Endurance		Resistance Cycles 1.0 pf. †	Inductive Cycles .75 to .8 pf. †	Tungsten Cycles 1,0 pf. †
		Amps	Volts	Power Factor	Cycles	Amps	Volts (Max)			
15A, 120V/AC	UL 20 & NEMA G.D.	72	120 AC	.4 to .5	100	15	120 AC	10,000	10,000	10,000
	WS 896 & NEMA H.D.	72	120 AC	.4 to .5	100	15	120 AC	10,000	50,000	50,000
15A 120/277 277V/AC	UL 20 & NEMA G.D.	72	277 AC	.4 to .5	100	15	277 AC	10,000	10,000	10,000
	WS 896 & NEMA H.D.	72	277 AC	.4 to .5	100	15	277 AC	10,000	50,000	50,000
20A, 120/277 277V/AC	UL 20 & NEMA G.D.	96	277 AC	.4 to .5	100	20	277 AC	10,000	10,000	10,000
	WS 896 & NEMA H.D.	96	277 AC	.4 to .5	100	20	277 AC	10,000	50,000	50,000
20A, 120/277 277V/AC	UL 20 & NEMA G.D.	144	277 AC	.4 to .5	100	30	277 AC	10,000	10,000	10,000
	WS 896 & NEMA H.D.	144	277 AC	.4 to .5	100	30	277 AC	10,000	50,000	50,000

Test Requirements - Switches Special Use - AC Only

Rating	Standard*	Overload				Endurance				Horse Power				"L" Tungsten		
		Amps	Volts	Power Factor	Cycles	Amps	Volts	Power Factor	Cycles	Amps	Volts	Power Factor	Cycles	Amps	Volts	Cycles
8A, 120V/AC	UL 1054	12	120 AC	.4-.5	50	8	120 AC	.75-.8	6000	–	–	–	–	–	–	–
15A, 120V/AC 10A, 240V/AC 3/4 HP, 120-240V/AC	UL 1054	15	240 AC	.4-.5	50	10	240 AC	.75-.8	6000	82.8	120 AC	.4-.5	50	–	–	–
										41.4	240 AC	.4-.5	50			
15A, 125-250V/AC 3/4 HP, 120-240V/AC	UL 1054	22.5	250 AC	.4-.5	50	15	250 AC	.75-.8	6000	82.8	120 AC	.4-.5	50	–	–	–
										41.4	240 AC	.4-.5	50			
20A, 125V/AC "L" 20A, 250V/AC 1 HP, 120-240V/AC	UL 1054	30	240 AC	.4-.5	50	20	250 AC	.75-.8	6000	96	120 AC	.4-.5	50	20	125 AC	6000
										48	240 AC	.4-.5	50			

*NEMA G.D. is NEMA Standard WD-1 General Duty.
NEMA H.D. is NEMA Standard WD-1 Heavy Duty.
WS896 is current Federal Specification.

All switches are subjected to Resistive Endurance, Inductive Endurance, Tungsten Endurance and then verified that they meet less than a 86°F (30°C) temperature rise at rated current and voltage, followed by a dielectric test at 1500 VAC for 1 minute.

† Power Factor

Maximum Loads

Maximum Loads - Switches - General Use - AC Only

Switch Rating	Incandescent		Inductive (Fluorescent)		Resistance		Motors		
	Volts	Amps	Volts	Amps	Volts	Amps	Volts	HP	Amps
15A, 120V/AC	120 AC	15	120 AC	15	120 AC	15	120 AC	1/2	12
20A, 120V/AC	120 AC	20	120 AC	20	120 AC	20	120 AC	1	16
15A, 120/277V/AC	120 AC	15	277 AC	15	277 AC	15	120 AC	1/2	12
							240 AC	1	12
20A, 120/277V/AC	120 AC	20	277 AC	20	277 AC	20	120 AC	1	16
							240 AC	2	16
30A, 120/277V/AC	120 AC	30	277 AC	30	277 AC	30	120 AC	2	24
							240 AC	2	24

Maximum Loads - Switches - Special Use - AC Only

Switch Rating	Incandescent		Inductive (Fluorescent)		Resistance		Motors		
	Volts	Amps	Volts	Amps	Volts	Amps	V/AC	HP	Amps
8A, 120V/AC 15A, 120V/AC	Not Suitable		120 AC	8	120 AC	8	Not Suitable		
			120 AC	15	120 AC	15			
10A, 240V/AC 3/4HP, 120/240V/AC	Not Suitable		250 AC	10	240 AC	10	240V/AC	3/4	12
15A, 120-240V/AC 3/4HP, 120/240V/AC	Not Suitable		250 AC	15	250 AC	15	240V/AC	3/4	12
20A,120V/AC “L” 20A, 250V/AC 1HP, 120/240V/AC	125 AC	20	250 AC	20	250 AC	20	240V/AC	1	12

Chemical Resistant Properties of Common Materials in Wiring Devices

Material	Acids	Alcohol	Caustic Bases	Gasoline	Grease	Kerosene	Oil	Solvents	Water
Nylon (Thermoplastic)	3	1	1	1	1	1	1	1	1
Polycarbonate (Thermoplastic)	2	1	3	2	2	2	2	3	1
302/304 Stainless Steel	2	1	3	1	1	1	1	2	1
Polyvinyl Chloride (PVC)	1	1	1	1	1	1	1	3	1
Polypropylene (Thermoplastic)	1	1	1	1	1	1	1	2	1
Polyester	1	1	2	1	1	1	1	2	1
Rubber (Thermoplastic)	2	2	3	2	2	1	1	3	2
Phenolic (Thermoset)	2	1	2	1	1	1	1	1	1
ABS (Thermoplastic)	2	2	1	1	1	2	2	3	1

Chemical resistance factor
1 – Completely resistant — Good to excellent for general use when exposed to these factors.
2 – Resistance is fair to good — Recommended for limited service when exposed to these factors.
3 – Slow attack. Not recommended for use when exposed to these factors.

*The chemical resistance factor represents general applications. Additional testing is required to determine resistance to chemicals in specific environments.

Terms describing material enhancements

Thermoplastic: Material treated for UV stability to increase tensile strength and decrease discoloration when exposed to UV radiation. Manufactured by injection molding. Superior resistance to impacts, chemical and solvent attack.

Thermoset: Flame resistant material with dimensional stability. Manufactured by compression molding.

Glass Filled: Glass-filled material (most commonly nylon) yields increased material rigidity and permits operation at a higher temperature.

Nickel-Plated: Plating of steel or brass with nickel to increase the corrosion-resistant properties of the metal component.

Zinc-Plated: Plating of cold-rolled steel with zinc to increase the corrosion-resistant properties of the metal component or casing.

NEMA Enclosure Ratings

Protection From	Device Locations		
	Indoors	Indoors or Outdoors	Outdoors with external mechanisms
Limited amounts of falling dirt	**NEMA Type 1**		
Limited amounts of falling dirt and dripping water	**NEMA Type 2**		
Rain, sleet, falling dirt, windblown dust, damage from ice formation		**NEMA Type 3**	
Rain, sleet, falling dirt, damage from ice formation		**NEMA Type 3R**	
Rain, sleet, windblown dust, ice laden operation possible			**NEMA Type 3S**
Windblown dust and rain, splashing water, hose-directed water, damage from ice formation		**NEMA Type 4**	
Corrosion, windblown dust and rain, splashing water, hose-directed water, damage from ice formation		**NEMA Type 4X**	
Falling dirt and settling airborn dust, lint, fibers and dripping non-corrosive liquids	**NEMA Type 5**		
Hose-directed water, entry of water during occasional short-term limited depth submersion, damage from ice formation		**NEMA Type 6**	
Hose-directed water, entry of water during long-term limited depth submersion, damage from ice formation		**NEMA Type 6P**	
Class I, Division 1, groups A,B,C or D hazardous locations (as defined by NEC®, NFPA 70)	**NEMA Type 7** (commonly referred to as explosion-proof)		
Class I, Division 1, groups A,B,C or D hazardous locations (as defined by NEC®, NFPA 70)	**NEMA Type 8** (commonly referred to as oil-immersed)		
Class II, Division 1, groups E, F and G hazardous locations (as defined by NEC®, NFPA 70)	**NEMA Type 9** (commonly referred to as dust-ignition-proof)		
Meets applicable requirements of the Mine Safety & Health Administration, 30 CFR, Part 18		**NEMA Type 10**	
Circulating dust, falling dirt, dripping non-corrosive liquids	**NEMA Type 12** **NEMA Type 12K**		
Dust, spraying of water, oil and non-corrosive coolant	**NEMA Type 13**		

IP Enclosure Ratings

	Second Digit - protection against penetration of liquids	IP_0	IP_1	IP_2	IP_3	IP_4	IP_5	IP_6	IP_7	IP_8
First Digit - protection against persons - touching & ingress of solid objects		Non-protected	Vertical falling of water drops	Falling of water drops at angle up to 15° from vertical	Spraying water (rain) at angle up to 60° from vertical	Splashing water from any direction (360°)	Water jets from any direction (360°)	Power jetting water	Temporary immersion in water	Continuous immersion in water
IP0_	Without protection	IP**00**								
IP1_	Touching with hand & solid objects > 50mm dia.	IP**10**	IP**11**	IP**12**						
IP2_	Touching with finger & solid objects > 12mm dia.	IP**20**	IP**21**	IP**22**	IP**23**					
IP3_	Touching with tools, wires, etc. > 2.5mm thick & solid objects > 2.5mm dia.	IP**30**	IP**31**	IP**32**	IP**33**	IP**34**				
IP4_	Touching with tools, wires, etc. > 1mm thick & solid objects > 1mm dia.	IP**40**	IP**41**	IP**42**	IP**43**	IP**44**				
IP5_	Unlimited protection against contact with live parts & damaging dust deposits	IP**50**				IP**54**	IP**55**			
IP6_	Unlimited protection against contact with live parts & any dust penetration	IP**60**					IP**65**	IP**66**	IP**67**	IP**68**

Enclosure Type Cross Reference: NEMA/UL/CSA

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION *NEMA Standards Publication No. 250-1991, Enclosures for Electrical Equipment (1000V max.)*	**UNDERWRITERS LABORATORIES UL50** *Standard for Enclosures for Electrical Equipment (10th Edition)*	**CANADIAN STANDARDS ASSOCIATION** **CAN/CSA C22.2 No. 94-M91** *Special Purposes Enclosures*
Intended Use and Description	**Intended Use and Description**	**Intended Use and Description**
An enclosure is a surrounding case that provides personnel with protection against incidental contact with enclosed equipment, and simultaneously protects enclosed equipment against specific environmental conditions.	An enclosure is a surrounding case that protects equipment enclosed within against incidental contact, as well as specific environmental conditions. A complete enclosure shall be provided for all live parts that may be housed in it. Such an enclosure shall be tight and come with a means for mounting, unless it's designed for a special installation, for example, a cast metal junction or pull-box intended for installation in poured concrete.	Enclosures are constructed to protect against specific environmental conditions, as well as accidental contact with the equipment enclosed within.
Type 1 - Enclosures are intended for indoor use primarily to protect against limited amounts of falling dirt.	**Type 1 -** Enclosures are intended for indoor use primarily to protect against limited amounts of falling dirt.	**Type 1 -** (There is no CSA equivalent.)
Type 2 - Enclosures provide a degree of protection, mainly indoors, against limited amounts of dripping water or falling dirt.	**Type 2 -** Enclosures provide a degree of protection, mainly indoors, against limited amounts of dripping water or falling dirt.	**Type 2 -** Enclosures are designed to provide protection, primarily indoors, against dripping and small amounts of splashing of non-corrosive liquids, and dirt.
Type 3 - Enclosures, intended primarily for use outdoors, protect against rain, sleet, wind-blown dust, and damage from external ice formation.	**Type 3 -** Enclosures, intended primarily for use outdoors, protect against rain, sleet, wind-blown dust, and damage from external ice formation.	**Type 3 -** Enclosures, designed for both indoor and outdoor use, protect against rain and snow, and remain undamaged by the external formation of ice.
Type 3R - Enclosures provide protection primarily against rain, sleet, and damage from external ice formation.	**Type 3R -** Used primarily outdoors for protection against rain, sleet, and exterior damage caused by the formation of ice.	**Type 3R -** Enclosures used both indoors and out for protection against rain and snow, remaining undamaged by exterior ice formation.
Type 3S - Enclosures protect primarily against rain, sleet, and wind-blown dust, and enable external mechanisms to operate efficiently even when ice laden.	**Type 3S -** Used primarily outdoors for protection against rain, sleet, and wind-blown dust, and to enable exterior mechanisms to operate when ice laden.	**Type 3S -** Enclosures used both indoors and out for protection against rain, snow, and airborne dust, and enable external mechanisms to operate efficiently even when ice laden.
Type 4 - Enclosures provide protection, both indoors and out, against wind-blown dust and rain, splashing or hose-directed water, and ice damage.	**Type 4 -** For indoor and outdoor use to protect against wind-blown dust and rain, splashing or hose-directed water, and damage caused by exterior ice formation.	**Type 4 -** Enclosures used both indoors and out for protection against rain, snow, airborne dust, and both splashing and hose-directed water, remaining undamaged by exterior ice.

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Intended Use and Description	**Intended Use and Description**	**Intended Use and Description**
Type 4X - Enclosures used both indoors and out to protect against corrosion, wind-blown dust and rain, splashing or hose-directed water, and damage caused by exterior ice formation.	**Type 4X -** For protection indoors and out from corrosion, wind-blown dust and rain, splashing or hose-directed water, and damage caused by exterior ice formation.	**Type 4X -** Enclosures used both indoors and out for protection against rain, snow, airborne dust, and both splashing and hose-directed water, remaining undamaged by exterior ice formation.
Type 5 - Enclosures used primarily indoors to provide protection against airborne dust and dirt, and non-corrosive liquids.	**Type 5 -** Used primarily indoors for protection against airborne dust or dirt, and non-corrosive liquids.	**Type 5 -** Enclosures exclusively for indoor use, providing protection against dripping and light splashing of non-corrosive liquids, as well as airborne dust, lint, fibers, and filings.
Type 6 - Enclosures provide protection both indoors and out against hose-directed water, water entry during occasional short-term submersion at low-pressure depths, and damage caused by exterior ice formation.	**Type 6 -** For protection indoors and out against hose-directed water, water entry during occasional short-term submersion at low-pressure depths, and damage caused by exterior ice formation.	**Type 6 -** Enclosures used both indoors and out for protection against water entry during occasional short-term submersion at low-pressure depths, remaining undamaged by exterior ice formation.
Type 6P - Enclosures protect both indoors and out against hose-directed water, water entry during long-term submersion at low-pressure depths, and ice damage.	**Type 6P -** For protection indoors and out against hose-directed water, water entry during long-term submersion at low-pressure depths, and damage caused by exterior ice formation.	**Type 6P -** Enclosures for use both indoors and out for protection against water entry during long-term submersion at low-pressure depths. In addition, it provides corrosion resistance over extended periods of time and remains undamaged by exterior ice formation.
Type 12 - Enclosures used primarily indoors to protect against airborne dust or dirt, and non-corrosive liquids.	**Type 12 -** Used primarily indoors to protect against airborne dust and dirt, and non-corrosive liquids.	**Type 12 -** Enclosures exclusively for indoor use, providing protection against airborne dust, lint, fibers, and filings, as well as dripping and light splashing of non-corrosive liquids. These enclosures are not provided with knockouts.
Type 12K - Enclosures with knockouts are used primarily indoors for protection against airborne dust and dirt, and non-corrosive liquids.	**Type 12K -** Used primarily indoors to protect against dust and dirt, and non-corrosive liquids.	**Type 12K -** Enclosures provided with knockouts and used exclusively indoors for protection against airborne dust, lint, fibers, and filings, as well as dripping and light splashing of non-corrosive liquids.
Type 13 - Enclosures used primarily indoors to protect against dust, as well as accidental spraying by water, oil, or non-corrosive coolants.	**Type 13 -** Used primarily indoors to protect against dust, as well as accidental spraying by water, oil, or non-corrosive coolants.	**Type 13 -** Enclosures exclusively for indoor use, providing protection against airborne dust, lint, fibers, and filings, as well as from seepage and spraying of non-corrosive liquids, including oils and coolants.

Products that are identified as NAFTA compliant may qualify under the Buy American Act or ARRA program guidelines. Consult specific project guidelines and compliance requirements to assure suitability for your project needs.

Buy American Act (US Code, Title 41, Section 10 (a-d))

The Buy American Act (often BAA, not to be confused with the Buy America (no "n") Act) applies to all U.S. federal government agency purchases of goods over certain contract thresholds. The BAA restricts purchases of supplies and construction materials to domestic products, unless an exception or waiver applies. Unmanufactured products must be mined or produced in the United States. There is a two-part test for manufactured articles: (1) article must be manufactured in the United States, and (2) cost of U.S. components must exceed 50% of the cost of all components in the item. Note: this calculation does not include labor and overhead for final assembly in the United States. The component cost test is waived for commercial-off-the-shelf (COTS) items. (FAR 25.001(c)(1). BAA waivers may be available, often at the discretion of the contracting officer.

Buy American Provision, American Recovery and Reinvestment Act (ARRA) (Section 1605)

ARRA Section 1605 establishes requirements for federal government projects funded with stimulus monies: “None of the funds appropriated or otherwise made available by [the ARRA] may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States.” Iron and steel used as components or subcomponents of other manufactured construction materials do not need to be produced in the United States. There is no requirement that components and subcomponents be U.S.-origin provided the manufactured construction material is “produced in the United States.” (FAR 25.001(c)(4)) Section 1605 does not contain a domestic cost requirement. However, the government has not defined “produced” for purposes of the ARRA Buy American provision. Many commentators have adopted the “substantial transformation” test to determine whether a manufactured article is “produced” in the United States for purposes of Section 1605. Section 1605 contains a requirement that the Buy American provision be applied in a manner consistent with U.S. obligations under international agreements. As a result, national treatment is extended to products from countries with which the United States has entered a free trade agreement (e.g., Canada, Mexico, Bahrain, Chile, etc.) and to products from countries that have signed the WTO Government Procurement Agreement. National treatment is also extended to least developed countries (LDCs) (e.g., Bhutan, Mali, Zambia, etc.) but not to Caribbean basin countries (e.g., Belize, Haiti, Bahamas, etc.).

NAFTA compliant products meet specifications at time of print. Product listing subject to change. For specific product details visit www.arrowhart.com or email cwdmarketing@cooperindustries.com.