SECTION Q

Technical Reference

RESIDENTIAL | COMMERCIAL | INDUSTRIAL

Q SECTION

Table of contents

NEMA configurations for select devices

Devices Comply with NEMA WD 1 - General Color Requirements for Wiring Devices and NEMA WD 6 - Wiring Devices Dimensional Specifications

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 ◇ 736 □ 1-15R	4862 ◆ 1-15P		
2-pole, 3-wire grounding	125V/AC	5	AH5262C □**MC** AH5252 □ 6262 □**D** AHIG5262 □**IM** AH5269 ◇**U** AH5269BK ◇**U** 5261 △**M** 1547 ◇**Y** 5269N ◇**N** AH5279C ○ 5279C ○ AH5969 ◇**O** AHTR5262 □**R** 60W47 △**Y** 60W47DPLX □**W** 15W47 ◇**W** IG6262 □**DI** TR6252 □**DR** 6252 □**D** SGF15 □**GM** TRSGF15 G □**RGM** WRSGF15 □ TWRSGF15 □**RGM** TR817△**R** 817△ 4887 ◇ TR/WR/BR15 □**R** TR/CR15 □ 5262 □**M** TR6250 △**DR** 6250△**D** IG5262 ◇**O** AH8200 □**M** 8200 □**HM** 8210 △**M** IG8200 □**IM** TR8200 □**RM** SGFH15 □**GM** TRSGFH15 □**RGM** AHTR8200 □**R** 5269NHG ◇**N** AH8219HG ◇**U** AH8119W ◇**O** AH8219HGC ◇**L** TR8262 □**DR** 8262 □**D** 5-15R	5266N ◆**N** AH5266A **LA** AH5965CR **OC** 5266NCR **NC** 5278C ● AH5266 ◆**U** AH5266BK ◆**U** AH5965 ◆**O** 1447 ◆**Y** 14W47 ◆**W** 4867 ◆ 5266NHG ◆**N** AH8215HG ◆**U** AH8115W ◆**O** AH8215HGC ◆**L** AH8215HGA ◆**LA** AH8215HGAC ◆**LA** 5266NHG ◆**N** IG5266NHG ◆**NI** 5-15P	AH5362 □**MC** AH5352 □**M** 6362 □**DM** AHIG5362 □**IM** 1533 ◇**Y** 15W33 ◇**W** 5361 △**M** TR6352 □**DR** 6352 □**D** 5369N ◇**NC** 5779C ○ AH5779C ○ AH5369 ◇**U** AHTR5362 □**R** WRSGF20 □ 60W33 △**W** 60W33DPLX □**W** AH5369Y ◇**O** IG6362 □**DI** SGF20 □**GM** TRBR20 □**R** TRSGF20 □**RGM** 4228 ◇ BR20 □ CR20 □ 5362 □**M** IG5362 ◇**O** TR6350 △**DR** 6350△**D** AH8300 □**M** 8300 □**M** 8310 △**M** IG8300 □**IM** TR8300 □**RM** SGFH20 □**GM** TRSGFH20 □**RGM** AHTR8300 □**R** TR8362□**DR** 8362□**D** 5369NHG ◇**N** AH8319HG ◇**U** 5-20R	5366N ◆**NC** AH5778C ● 5366NCR ◆**NC** 5778C ● AH5366 ◆**U** AH5364Y ◆**O** 1433 ◆**Y** 14W33 ◆**W** 4409 ◆ 5366NHG ◆**N** AH8315HG ◆**U** AH8315HGA ◆**LA** AH8315HGAC ◆**LA** 5-20P
	250V/AC	6	AH5662 □**M** 5661 △ AHIG5662 □**I** 6662 □**D** 1549 ◇**Y** 15W49 ◇**W** IG5661△**I** 5669N ◇**N** AH5679C ○ 5679C ○ AH5669 ◇**U** 60W49 △**W** 60W49DPLX □**W** AH5669Y ◇**O** 826 □ 816 △ 4227 ◇ 5662 □ AH8600 □**M** 8610 △ 6-15R	5666N ◆**N** 5678C ● AH5666Y ◆**O** AH5666 ◆**U** 1449 ◆**Y** 14W49 ◆**W** 4866 ◆ AH8225HG ◆**U** AH8225HGAC ◆**L** 6-15P	AH5462 □**M** 5461 △ AHIG5462 □**I** 6462 □**D** 1548 ◇**Y** 15W48 ◇**W** IG5461△**I** 5469N ◇**N** 5879C ○ AH5879C ○ AH5469 ◇**L** 60W48 △**W** 60W48DPLX □**W** AH5469Y ◇**O** 815 □ 4229 ◇ 5462 □ AH8400 □**M** IG8400 □**I** 8410 △ 6-20R	5466N ◆**N** AH5464Y ◆**O** 5878C ● AH5878C ● AH5466 ◆**U** 1448 ◆**Y** 14W48 ◆**W** 4509 ◆ AH8325HGAC ◆**LA** AH8325HG ◆**L** 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

Due to spatial constraints not all products are shown on this page. For additional product options in these configurations consult appropriate sections in this buyers guide.

Straight blade legend: How to use the chart

Core catalog number color indicates a device's grade:
BLACK = Extra heavy-duty industrial specification grade
BLUE = Commercial specification grade
ORANGE = Heavy-duty construction 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

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **D** Decorator
- **G** GFCI
- **H** Compact
- **I** Isolated ground
- **L** Safety grip
- **N** Auto grip
- **O** Quick grip
- **R** Tamper resistant
- **S** Surface
- **U** Ultra grip

Device options available:

- **C** Corrosion resistant
- **M** ArrowLink modular
- **W** Watertight
- **Y** Severe duty insulated

Compliances, specifications and availability are subject to change without notice.

NEMA configurations for select devices

Devices comply with NEMA WD 1 - general color requirements for Wiring Devices and NEMA WD 6 - Wiring Devices Dimensional Specifications

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

Due to spatial constraints not all products are shown on this page. For additional product options in these configurations consult appropriate sections in this buyers guide.

Straight blade legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade
BLUE = Commercial specification grade
ORANGE = Heavy-duty construction 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

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **D** Decorator
- **G** GFCI
- **H** Compact
- **I** Isolated ground
- **L** Safety grip
- **N** Auto grip
- **O** Quick grip
- **R** Tamper resistant
- **S** Surface
- **U** Ultra grip

Device options available:

- **C** Corrosion resistant
- **M** ArrowLink modular
- **W** Watertight
- **Y** Severe duty insulated

Compliances, specifications and availability are subject to change without notice.

Eaton.com
Eaton.com/wiringdevices

NEMA configurations for select devices

Devices Comply with NEMA WD 1 - General Color Requirements for Wiring Devices and NEMA WD 6 - Wiring Devices Dimensional Specifications

Poles, wires	Rating	NEMA prefix	15A Locking	
			Receptacle, connector & flanged outlet	Plug & flanged inlet
2-pole, 2-wire	125V/AC	ML1	7464N ◇ 7427N ◇ 7468 ○  ML1R	7465N ◆ 7428N ◆ 7479N ◆ 7429N ◆ 7466 ● 7467 ●  ML1P
	125V/AC	L1	CWL115FO ○ 7540 □ CWL115R △ 7506 ◇  L1-15R	CWL115FI ● 7546 ◆ 7548 ◆  L1-15P
	250V/AC	L2		
2-pole, 3-wire grounding	125V/AC	ML2	7593 ◇ 7596 ○ 7596N ○  ML2R	7594 ◆ 7595 ● 7595N ●  ML2P
	125V/AC	L5	CWL515C ◇**L** CWL515FO ○ IG4700 □**I** 65W47 △**W** 25W47 ◇**W** CR4700 □**C** 4731N ◇**N** CR5792 □**C** CWL515CAN ◇**AL** CWL515R △ IGL515R △**I** 65W47DPLX □**W** 4731NCR ◇**CN** 4700 □ 5792 □  L5-15R	CWL515FI ● CWL515P ◆**L** CWL515PAN ◆AL 24W47 ◆**W** 4721N ◆**N** 4721NCR ◆**CN**  L5-15P
	250V/AC	L6	CWL615C ◇**L** CWL615R △ IGL615R △**I** 6566N ◇**N** CWL615FO ○ 65W49DPLX □**W** 25W49 ◇**W** 65W49 △**W** 6580 □  L6-15R	CWL615FI ● CWL615P ◆**L** 24W49 ◆**W** 6565N ◆**N**  L6-15P
	277V/AC	L7	CWL715C ◇**L** CWL715R △ 25W34 ◇**W** 65W34 △**W** 4772N ◇**N** 4750 □ 2534 ◇**Y** CWL715FO ○ 65W34DPLX □**W**  L7-15R	CWL715FI ● CWL715P ◆**L** 24W34 ◆**W** 4771N ◆**N**  L7-15P
	480V/AC	L8		
	600V/AC	L9		
3-pole, 3-wire	125/250V/AC	ML3	7484 ◇ 7487 ○ 7487N ○  ML3R	7485 ◆ 7486 ● 7486N ●  ML3P
	125/250V/AC	L10		
	3Ø 250V/AC	L11		
	3Ø 480V/AC	L12		
	3Ø 600V/AC	L13		

Locking device legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

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

Device body:

- □ Duplex receptacle
- ◆ Plug
- ◇ Connector
- △ Single receptacle
- ● Flanged inlet
- ○ Flanged outlet

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **C** Corrosion resistant
- **I** Isolated ground
- **L** Safety grip
- **N** Auto grip
- **P** Pro grip
- **U** Ultra grip
- **W** Watertight
- **Z** With lid or cover

Compliances, specifications and availability are subject to change without notice.

NEMA configurations for select devices

Devices comply with NEMA WD 1 - general color requirements for Wiring Devices and NEMA WD 6 - Wiring Devices Dimensional Specifications

Poles, wires	Rating	NEMA prefix	20A Locking		30A Locking	
			Receptacle, connector & flanged outlet	Plug & flanged inlet	Receptacle, connector, & flanged outlet	Plug & flanged inlet
2-pole, 2-wire	125V/AC	ML1				
	125V/AC	L1				
	250V/AC	L2	CWL220C ◇L CWL220FO ○ CWL220R △ L2-20R	CWL220P ◆L CWL220P-6 ◆ZL L2-20P		
2-pole, 3-wire grounding	125V/AC	ML2				
	125V/AC	L5	AHCL520C ◇U AHCL520FO ○ AHL520CBK ◇U AHCL520R △ AHIGL520R △I L520CW ◇W L520RW △W CRL520C ◇CL CRL520R △C L5-20R	AHCL520FI ● AHCL520P ◆U AHL520PBK ◆U L520PW ◆W CRL520P ◆CL L5-20P	AHCL530FO ○ AHCL530R △ AHCL530C ◇U AHIGL530R △I L530CW ◇W L530RW △W CRL530C ◇CL CRL530R △C L5-30R	AHCL530FI ● AHCL530P ◆U AHIGL530P ◆IU L530PW ◆W CRL530P ◆CL L5-30P
	240V/AC	L25			AHL2530C ◇ AHL2530R △ IGL2530R △ L25-30R	AHL2530P ◆ L25-30P
	250V/AC	L6	AHCL620C ◇U AHCL620R △ AHCL620FO ○ AHIGL620R △I L620CW ◇W L620RW △W CRL620R △C CRL620C ◇CL L6-20R	AHCL620FI ● AHCL620P ◆U L620PW ◆W CRL620P ◆CL L6-20P	AHCL630C ◇U AHCL630R △C AHCL630FO ○ AHIGL630R △I L630CW ◇W L630RW △W CRL630C ◇CL CRL630R △C L6-30R	AHCL630FI ● AHCL630P ◆U L630PW ◆W CRL630P ◆CL L6-30P
	277V/AC	L7	AHCL720C ◇U AHCL720FO ○ AHCL720R △ AHIGL720R △I L720CW ◇W L720RW △W L7-20R	AHCL720FI ● AHCL720P ◆U L720PW ◆W L7-20P	AHCL730C ◇U AHCL730R △ AHCL730FO ○ AHIGL730R △I L730CW ◇W L730RW △W L7-30R	AHCL730FI ● AHCL730P ◆U L730PW ◆W L7-30P
	347V/AC	L24	L2420R △ L24-20R	L2420P ◆ L24-20P		
	480V/AC	L8	AHCL820C ◇U AHCL820R △ AHCL820FO ○ AHIGL820R △I L820RW △W L820CW ◇W L8-20R	AHCL820FI ● AHCL820P ◆U L820PW ◆W L8-20P	AHCL830C ◇U AHCL830R △ AHCL830FO ○ AHIGL830R △I L830CW ◇W L830RW △W L8-30R	AHCL830FI ● AHCL830P ◆U L830PW ◆W L8-30P
	600V/AC	L9	CWL920C ◇ CWL920FO ○ CWL920R △ L9-20R	CWL920FI ● CWL920P ◆ L9-20P	CWL930C ◇ CWL930FO ○ CWL930R △ L9-30R	CWL930FI ● CWL930P ◆ L9-30P
3-pole, 3-wire	125/250V/AC	ML3				
	125/250V/AC	L10	AHCL1020FO ○ AHCL1020C ◇U AHCL1020R △ L1020RW △W L1020CW ◇W L10-20R	AHCL1020FI ● AHCL1020P ◆U L1020PW ◆W L10-20P	AHCL1030FO ○ AHCL1030C ◇U AHCL1030R △ L1030CW ◇W L1030RW △W L10-30R	AHCL1030FI ● AHCL1030P ◆U L1030PW ◆W L10-30P
	3Ø 250V/AC	L11	AHCL1120FO ○ AHCL1120C ◇U AHCL1120R △ L1120RW △W L1120CW ◇W L11-20R	AHCL1120FI ● AHCL1120P ◆U L1120PW ◆W L11-20P	AHCL1130FO ○ AHCL1130C ◇U AHCL1130R △ L1130CW ◇W L1130RW △W L11-30R	AHCL1130FI ● AHCL1130P ◆U L1130PW ◆W L11-30P
	3Ø 480V/AC	L12	CWL1220C ◇ CWL1220FO ○ CWL1220R △ L12-20R	CWL1220FI ● CWL1220P ◆ L12-20P	CWL1230C ◇ CWL1230FO ○ CWL1230R △ L12-30R	CWL1230FI ● CWL1230P ◆ L12-30P
	3Ø 600V/AC	L13			CWL1330C ◇ CWL1330FO ○ CWL1330R △ L13-30R	CWL1330FI ● CWL1330P ◆ L13-30P

Locking device legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

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

Device body:

- □ Duplex receptacle
- ◆ Plug
- ◇ Connector
- △ Single receptacle
- ● Flanged inlet
- ○ Flanged outlet

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **C** Corrosion resistant
- **I** Isolated ground
- **L** Safety grip
- **N** Auto grip
- **P** Pro grip
- **U** Ultra grip
- **W** Watertight
- **Z** With lid or cover

Compliances, specifications and availability are subject to change without notice.

Eaton.com
Eaton.com/wiringdevices

NEMA configurations for select devices

Devices Comply with NEMA WD 1 - General Color Requirements for Wiring Devices and NEMA WD 6 - Wiring Devices Dimensional Specifications

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	AHCL1420C ◇U AHL1420C ◇U AHCL1420FO ○ AHL1420FOBK ○ AHCL1420R △ IGL1420R △I	L1420CW ◇W CRL1420C ◇CL CRL1420R △C L1420RW △W 6406BK ○ L14-20R	AHCL1420FI ● AHCL1420PBK ◆U AHL1420FIBK ● AHCL1420P ◆U L1420PW ◆W CRL1420P ◆CL 6405BK ● L14-20P	AHCL1430C ◇U AHCL1430R △ AHCL1430FO ○ AHIGL1430R △I L1430CW ◇W	L1430RW △W CRL1430C ◇CL CRL1430R △C L14-30R	AHCL1430FI ● CRL1430P ◆CL AHCL1430P ◆U L1430PW ◆W 6512BK ◆ L14-30P
	3Ø 250V/AC	L15	AHCL1520C ◇U AHL1520CBK ◇U AHCL1520FO ○ AHIGL1520R △I AHCL1520R △	L1520CW ◇W L1520RW △W CRL1520C ◇CL CRL1520R △C L15-20R	AHCL1520FI ● AHCL1520P ◆U AHL1520PBK ◆U L1520PW ◆W CRL1520P ◆CL L15-20P	AHCL1530C ◇U AHCL1530R △ AHCL1530FO ○ AHIGL1530R △I	L1530CW ◇W L1530RW △W CRL1530C ◇CL L15-30R	CRL1530P ◆CL AHCL1530FI ● AHCL1530P ◆U L1530PW ◆W L15-30P
	3Ø 480V/AC	L16	AHCL1620C ◇U AHCL1620FO ○ AHCL1620R △ AHIGL1620R △I L1620CW ◇W L1620RW △W	CRL1620C ◇CL AHL1620CBK ◇U L16-20R	AHCL1620FI ● AHCL1620P ◆U AHL1620PBK ◆U L1620PW ◆W CRL1620P ◆CL AHL1620FI ● L16-20P	AHCL1630C ◇U AHCL1630R △ AHCL1630FO ○ L1630CW ◇W L1630RW △W	L16-30R	CRL1630P ◆CL AHCL1630FI ● AHCL1630P ◆U L1630PW ◆W L16-30P
	3Ø 600V/AC	L17				AHCL1730C ◇U AHCL1730R △ AHCL1730FO ○	L1730CW ◇W L1730RW △W L17-30R	AHCL1730P ◆U AHCL1730FI ● L1730PW ◆W L17-30P
4-pole, 4-wire	3ØY 120/208V/AC	L18	AHCL1820C ◇U AHCL1820FO ○ AHCL1820R △	L1820CW ◇W L1820RW △W AHL1820FO ○ L18-20R	AHCL1820FI ● AHCL1820P ◆U L1820PW ◆W L18-20P	AHCL1830C ◇U AHCL1830R △ AHCL1830FO ○	L1830CW ◇W L1830RW △W L18-30R	AHCL1830P ◆U AHCL1830FI ● L1830PW ◆W L18-30P
	3ØY 277/480V/AC	L19	AHCL1920C ◇U AHCL1920FO ○ AHCL1920R △	L1920CW ◇W L1920RW △W L19-20R	AHCL1920FI ● AHCL1920P ◆U L1920PW ◆W L19-20P	AHCL1930C ◇U AHCL1930R △ AHCL1930FO ○	L1930CW ◇W L1930RW △W L19-30R	AHCL1930P ◆U AHCL1930FI ● L1930PW ◆W L19-30P
	3ØY 347/600V/AC	L20	AHCL2020C ◇U AHCL2020FO ○ AHCL2020R △	L2020CW ◇W L2020RW △W L20-20R	AHCL2020FI ● AHCL2020P ◆U L2020PW ◆W L20-20P	AHCL2030C ◇U AHCL2030R △ AHCL2030FO ○	L2030CW ◇W L2030RW △W L20-30R	AHCL2030P ◆U AHCL2030FI ● L2030PW ◆W L20-30P
4-pole, 5-wire grounding	3ØY 120/208V/AC	L21	AHCL2120C ◇U AHCL2120FO ○ AHCL2120R △ AHIGL2120R △I L2120CW ◇W	AHL2120CBK ◇U AHL2120CF ◇U L2120RW △W L21-20R	AHCL2120FI ● AHCL2120P ◆U AHL2120PBK ◆U L2120PW ◆W AHL2120PF ◆L L21-20P	AHCL2130C ◇U AHCL2130R △ L2130CW ◇W L2130RW △W AHL2130CF ◇U	AHL2130FO ○ AHIGL2130R △I L21-30R	AHCL2130FI ● AHCL2130P ◆U L2130PW ◆W L2130PF ◆L L21-30P
	3ØY 240/415V	L26				AHCL2630C ◇ AHCL2630R △ IGL2630R △	L26-30R	AHL2630P ◆ L26-30P
	3ØY 277/480V/AC	L22	AHCL2220C ◇U AHCL2220R △ AHIGL220R △I AHCL2220FO ○	L2220CW ◇W L2220RW △W L22-20R	AHCL2220FI ● AHCL2220P ◆U L2220PW ◆W L22-20P	AHCL2230C ◇U AHCL2230R △ AHIGL2230R △I AHCL2230FO ○	L2230CW ◇W L2230RW △W L22230CF ◇L L22-30R	AHCL2230FI ● AHCL2230P ◆U L2230PW ◆W L2230PF ◆L L22-30P
	347/600V/AC	L23	AHCL2320C ◇U AHCL2320R △ AHIGL2320R △I	AHCL2320FO ○ L2320CW ◇W L2320RW △W L23-20R	AHCL2320FI ● AHCL2320P ◆U L2320PW ◆W L23-20P	AHCL2330C ◇U AHCL2330R △ AHIGL2330R △I L2330CW ◇W L2330RW △W	AHCL2330FO ○ L23-30R	AHCL2330FI ● AHCL2330P ◆U L2330PW ◆W L23-30P

Locking device legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

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

Device body:

- □ Duplex receptacle
- ◆ Plug
- ◇ Connector
- △ Single receptacle
- ● Flanged inlet
- ○ Flanged outlet

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **C** Corrosion resistant
- **I** Isolated ground
- **L** Safety grip
- **N** Auto grip
- **P** Pro grip
- **U** Ultra grip
- **W** Watertight
- **Y** Severe duty insulated
- **Z** With lid or cover

Compliances, specifications and availability are subject to change without notice.

NEMA configurations for select devices

Devices comply with NEMA WD 1 - general color requirements for Wiring Devices and NEMA WD 6 - Wiring Devices Dimensional Specifications

10A - 30A Non-NEMA locking

Poles, wires	Rating	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 7314RW △W 7328N ○ Receptacle Non-NEMA	7327N ● 9965C ◆L 9965PW ◆W Plug Non-NEMA
	30A 125/250V/AC	AH3330-2 △ 3333CW ◇W 3333RW △W AH3333N ◇U AH3336N ○ Receptacle Non-NEMA	AH3331N ◆U 3331PW ◆W 3337N ● Plug Non-NEMA
4-pole, 4-wire	20A 3Ø 120/208V/AC	7409N ○ 7410B △ 7413C ◇L 7413CW ◇W 7413RW △W Receptacle Non-NEMA	7408N ● 7411C ◆L 7411PW ◆W Plug Non-NEMA
	30A 3Ø 120/208V/AC	3430 △ 3433CW ◇W AH3433N ◇U 3433RW △W 3436N ○ Receptacle Non-NEMA	AH3431N ◆U 3431PW ◆W 3434N ● Plug Non-NEMA
4-P, 5-W grounding	20/10A 250/600V/AC	AH3523BK ◇U 3525BK ○ Receptacle Non-NEMA	AH3521BK ◆U 3524BK ● Plug Non-NEMA

50A Non-NEMA locking

Poles, wires	Rating	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 the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

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

Device body:

- □ Duplex receptacle
- ◆ Plug
- ◇ Connector
- △ Single receptacle
- ● Flanged inlet
- ○ Flanged outlet

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **C** Corrosion resistant
- **I** Isolated ground
- **L** Safety grip
- **N** Auto grip
- **P** Pro grip
- **U** Ultra grip
- **W** Watertight
- **Y** Severe duty insulated
- **Z** With lid or cover

Compliances, specifications and availability are subject to change without notice.

Eaton.com
Eaton.com/wiringdevices

Pin & sleeve and mechanical interlock configurations

North American Standard Amp Rating

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 AH320R4W △ AH320C4W ◇	AH320P4W ◆ AH320B4W ●	CD330MI4W ➢Q AH330R4W △ AH330C4W ◇	AH330P4W ◆ AH330B4W ●
	250V	CD320HMI6W ➢QX AH320R6W △ AH320C6W ◇	AH320P6W ◆ AH320B6W ●	CD330MI6W ➢Q CD330MIF6W ➢E AH330R6W △ AH330C6W ◇	AH330P6W ◆ AH330B6W ●
	480V/AC	CD320HMI7W ➢QX AH320R7W △ AH320C7W ◇	AH320P7W ◆ AH320B7W ●	CD330MI7W ➢Q AH330R7W △ AH330C7W ◇	AH330P7W ◆ AH330B7W ●
3-pole, 4-wire grounding	125/250V/AC	CD420HMI12W ➢QX AH420R12W △ AH420C12W ◇	AH420P12W ◆ AH420B12W ●	CD430MI12W ➢Q AH430R12W △ AH430C12W ◇	AH430P12W ◆ AH430B12W ●
	3Ø 250V/AC	CD420HMI9W ➢QX AH420R9W △ AH420C9W ◇	AH420P9W ◆ AH420B9W ●	CD430MI9W ➢Q CD430MIB9W ➢F CD430MICB9W ➢B CD430MIF9W ➢E AH430R9W △ AH430C9W ◇	AH430P9W ◆ AH430B9W ●
	3Ø 480V/AC	CD420HMI7W ➢QX CD420MIB7W ➢F CD420MICB7W ➢B AH420R7W △ AH420C7W ◇	AH420P7W ◆ AH420B7W ●	CD430MI7W ➢Q CD430MIB7W ➢F CD430MICB7W ➢B CD430MIF7W ➢E AH430R7W △ AH430C7W ◇	AH430P7W ◆ AH430B7W ●
	3Ø 600V/AC	CD420HMI5W ➢QX AH420R5W △ AH420C5W ◇	AH420P5W ◆ AH420B5W ●	CD430MI5W ➢Q CD430MIF5W ➢E AH430R5W △ AH430C5W ◇	AH430P5W ◆ AH430B5W ●
4-pole, 5-wire grounding	3ØY 120/208V/AC	CD520HMI9W ➢QX AH520R9W △ AH520C9W ◇	AH520P9W ◆ AH520B9W ●	CD530MI9W ➢Q AH530R9W △ AH530C9W ◇	AH530P9W ◆ AH530B9W ●
	3ØY 277/480V/AC	AH520R7W △ AH520C7W ◇	AH520P7W ◆ AH520B7W ●	CD530MI7W ➢Q AH530R7W △ AH530C7W ◇	AH530P7W ◆ AH530B7W ●
	3ØY 347/600V/AC	AH520R5W △ AH520C5W ◇	AH520P5W ◆ AH520B5W ●	CD530MI5W ➢Q AH530R5W △ AH530C5W ◇	AH530P5W ◆ AH530B5W ●

Locking device legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

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

Device body:

- □ Duplex receptacle
- ◆ Plug
- ◇ Connector
- ● Flanged inlet
- ○ Flanged outlet

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **B** Circuit breaker option
- **E** Fusible
- **F** Fuse option
- **Q** Non-fusible
- **X** Horizontal

Compliances, specifications and availability are subject to change without notice.

Pin & sleeve and mechanical interlock configurations

North American Standard Amp Rating

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	AH360R4W △ AH360C4W ◇	AH360P4W ◆ AH360B4W ●	AH3100R4W △ AH3100C4W ◇	AH3100P4W ◆ AH3100B4W ●
	250V	CD360MI6W ➢Q CD360MIF6W ➢E AH360R6W △ AH360C6W ◇	AH360P6W ◆ AH360B6W ●	CD3100MI6W ➢Q AH3100R6W △ AH3100C6W ◇	AH3100P6W ◆ AH3100B6W ●
	480V/AC	CD360MI7W ➢Q AH360R7W △ AH360C7W ◇	AH360P7W ◆ AH360B7W ●	CD3100MI7W ➢Q AH3100R7W △ AH3100C7W ◇	AH3100P7W ◆ AH3100B7W ●
3-pole, 4-wire grounding	125/250V/AC	CD460MI12W ➢Q AH460R12W △ AH460C12W ◇	AH460P12W ◆ AH460B12W ●	CD4100MI12W ➢Q AH4100R12W △ AH4100C12W ◇ AH4100R12W-15 △A	AH4100P12W ◆ AH4100B12W ●
	3Ø 250V/AC	CD460MI9W ➢Q CD460MICB9W ➢B CD460MIF9W ➢E AH460R9W △ AH460C9W ◇	AH460P9W ◆ AH460B9W ●	CD4100MI9W ➢Q AH4100R9W △ AH4100C9W ◇	AH4100P9W ◆ AH4100B9W ●
	3Ø 480V/AC	CD460MI7W ➢Q CD460MIB7W ➢F CD460MICB7W ➢B CD460MIF7W ➢E AH460R7W △ AH460C7W ◇	AH460P7W ◆ AH460B7W ●	CD4100MI7W ➢Q AH4100R7W △ AH4100C7W ◇ AH4100R7W-15 △A	AH4100P7W ◆ AH4100B7W ●
	3Ø 600V/AC	CD460MI5W ➢Q CD460MICB5W ➢B CD460MIF5W ➢E AH460R5W △ AH460C5W ◇	AH460P5W ◆ AH460B5W ●	CD4100MI5W ➢Q AH4100R5W △ AH4100C5W ◇ AH5100R9W-15 △A	AH4100P5W ◆ AH4100B5W ●
4-pole, 5-wire grounding	3ØY 120/208V/AC	CD560MI9W ➢Q CD560MIF9W ➢E AH560R9W △ AH560C9W ◇ AH560R9W-15 △A	AH560P9W ◆ AH560B9W ●	CD5100MI9W ➢Q AH5100R9W △ AH5100C9W ◇	AH5100P9W ◆ AH5100B9W ●
	3ØY 277/480V/AC	CD560MI7W ➢Q CD560MIF7W ➢E AH560R7W △ AH560C7W ◇	AH560P7W ◆ AH560B7W ●	CD5100MI7W ➢Q AH5100R7W △ AH5100C7W ◇ AH5100R7W-15 △A	AH5100P7W ◆ AH5100B7W ●
	3ØY 347/600V/AC	CD560MI5W ➢Q CD560MIF5W ➢E AH560R5W △ AH560C5W ◇	AH560P5W ◆ AH560B5W ●	AH5100R5W △ AH5100C5W ◇	AH5100P5W ◆ AH5100B5W ●

Locking device legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

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

Device body:

- □ Duplex receptacle
- ◆ Plug
- ◇ Connector
- ● Flanged inlet
- ➢ Mechanical interlock

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Device type:

- **A** Angled
- **B** Circuit breaker option
- **E** Fusible
- **F** Fuse option
- **Q** Non-fusible
- **X** Horizontal

Compliances, specifications and availability are subject to change without notice.

Eaton.com
Eaton.com/wiringdevices

Pin & sleeve configurations

International Standard Amp Rating

Poles, wires	Rating	16A Watertight pin & sleeve		32A Watertight pin & sleeve	
		Receptacle & connector	Plug & inlet	Receptacle & connector	Plug & inlet
2-pole, 3-wire grounding	110-130V	AH316R4W △ AH316C4W ◇ 	AH316P4W ◆ AH316B4W ● 	AH332R4W △ AH332C4W ◇ 	AH332P4W ◆ AH332B4W ● 
	220-240V	AH316R6W △ AH316C6W ◇ 	AH316P6W ◆ AH316B6W ● 	AH332R6W △ AH332C6W ◇ 	AH332P6W ◆ AH332B6W ● 
3-pole, 4-wire grounding	380V, 50Hz 440V, 60Hz			AH332R3W △ AH332C3W ◇ 	AH332P3W ◆ AH332B3W ● 
	380-415V	AH416R6W △ AH416C6W ◇ 	AH416P6W ◆ AH416B6W ● 	AH432R6W △ AH432C6W ◇ 	AH432P6W ◆ AH432B6W ● 
4-pole, 5-wire grounding	220/380 240/415	AH516R6W △ AH516C6W ◇ 	AH516P6W ◆ AH516B6W ● 	AH532R6W △ AH532C6W ◇ 	AH532P6W ◆ AH532B6W ● 

Locking device legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

Device body:

△ Single receptacle
◆ Plug
◇ Connector
● Flanged inlet

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Compliances, specifications and availability are subject to change without notice.

Pin & sleeve configurations

International Standard Amp Rating

Poles, wires	Rating	63A Watertight pin & sleeve		125A Watertight pin & sleeve	
		Receptacle & connector	Plug & inlet	Receptacle & connector	Plug & inlet
2-pole, 3-wire grounding	220-240V	AH363R6W △ AH363C6W ◇	AH363P6W ◆ AH363B6W ●	AH3125R6W △ AH3125C6W ◇	AH3125P6W ◆ AH3125B6W ●
3-pole, 4-wire grounding	380-415V	AH463R6W △ AH463C6W ◇	AH463P6W ◆ AH463B6W ●	AH4125R6W △ AH4125C6W ◇	AH4125P6W ◆ AH4125B6W ●
4-pole, 5-wire grounding	220/380 240/415	AH563R6W △ AH563C6W ◇	AH563P6W ◆ AH563B6W ●	AH5125R6W △ AH5125C6W ◇	AH5125P6W ◆ AH5125B6W ●

Locking device legend: How to use the chart

Core catalog number color indicates a device's grade:

BLACK = Extra heavy-duty industrial specification grade

Device body:

△ Single receptacle
◆ Plug
◇ Connector
● Flanged inlet

Open shape has holes (receptacles, connectors, outlets)
Closed shape has blades (plugs, inlets)

Compliances, specifications and availability are subject to change without notice.

Horsepower ratings

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
L24-20	NA	20A-347V/AC
L25-30	NA	30A-240V/AC
L26-30	NA	30A-3ØY 240/415V/AC

L-L denotes phase-to-phase HP rating
L-N denotes phase-to-neutral HP rating
*Suitable for 208V motor applications at HP rating

Common Industry Information

Common industry information

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

CEC Title 24
California Energy Commission's Energy Efficiency Standards for Residential and Nonresidential Buildings

Part of the California State Building Code, Title 24 requires a minimum level of energy efficiency for all new heated or cooled structures, including additions and alterations to existing homes and most commercial buildings. Energy efficient lighting and controls must be incorporated per the current standards. Energy-efficient lighting fixtures are required as well as the use of dimmers and vacancy/occupancy sensors. The standard covers all rooms in a home except closets under 70 square feet.

www.energy.ca.gov/title24

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 Oficiales de México (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, nonprofit product safety testing and certification organization.

www.ul.com

NSF
National Sanitation Foundation

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

Organization acronyms

Standards development organizations

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
BRC	British Retail Consortium
CANENA	Consejo de Armonización de Normas Electrotécnicas de Norte América (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	National Sanitation Foundation
SAE	Society of Automotive Engineers
SME	Society of Manufacturing Engineers
TITLE 24	California Building Energy Efficiency Standards

Certification agencies

ANCE	National Association of Normalization and Certification of the Electrical Sector (Mexico)
BSI	British Standards Institute
CCC	China Compulsory Certification
CE	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)

Certification agencies (continued)

UL	Underwriters Laboratories
	Wi-Fi Alliance - Wi-Fi Certification
	Z-Wave Alliance - Z-Wave Plus Certification

Codes & standards

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

Industry associations

ABYC	American Boat and Yacht Council
ASHE	American Society of Healthcare Engineering
ASHRAE	American Society of Heating Refrigerating and Air-Conditioning Engineers
BICSI	Building Industry Consulting Services International
BOMA	Building Owners Management Association
CANAME	Cámara Nacional de Manufacturas Eléctricas (México)
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

UL20	General-use switches
UL50	Enclosures for electrical equipment
UL94	Flammability testing for materials, plastic
UL244A	Appliance controls
UL486E	Equipment and wiring terminals
UL496	Lampholders
UL498	Plugs, connectors, receptacles, inlets, outlets
UL498A	Taps and adapters
UL498B	Receptacles with integral switching means
UL508	Industrial equipment (including motor control switches)
UL514A	Metallic outlet boxes
UL514C	Nonmetallic outlet boxes and covers
UL514D	Wallplates for flush mounted wiring devices
UL746C	Polymeric materials for use in electrical equipment
UL817	Cord sets
UL943	GFCIs
UL1310	Class 2 Power Units
UL1363	Relocatable power taps
UL1436	Outlet circuit testers
UL1449	Surge suppression devices
UL1472	Dimmers
UL1567	Switches and receptacles used with AL wire

UL standards (continued)

UL1698	LED Luminaires
UL1699	Arc fault circuit interrrupters
UL1786	Plug-In nightlights
UL1863	Communications circuit accessories
UL1917	Solid state fan speed control

Standards

IEC 60309-1/2	Plugs, socket-outlets and couplers for industrial purposes
SSL 7A	NEMA phase cut dimming for solid state lighting compatibility
W-C-596	Federal Specification electrical plugs, receptacles and cable outlets
WD-1	NEMA General color requirements for wiring devices
WD-6	NEMA Wiring devices dimensional specifications
W-S-896	Federal Specification switches

CSA standards

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. 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, special-use attachment plugs, receptacles and connectors

Compliances, specifications and availability are subject to change without notice.

Common industry information

Selected articles, National Electric Code (NEC®) requirements for wiring devices from NFPA 70™, NEC® 2020 Edition

Article 210 — Branch circuits

210.8	Ground-fault circuit-interrupter protection for personnel
210.12	Arc-fault circuit-interrupter protection
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
404.20	Construction specifications, marking

Article 406 — Receptacles, cord connectors & attachment plugs (caps)

406.3	Receptacle rating and type
406.4	General installation requirements
406.5	Receptacle mounting
406.6	Receptacle faceplates (cover plates)
406.7	Attachment plugs, cord connectors and flanged surface devices
406.8	Noninterchangeability
406.9	Receptacles in damp or wet locations
406.10	Grounding-type receptacles, adapters, cord connectors and attachment plugs
406.12	Tamper-resistant receptacles

Article 430 — Motors, motor circuits & 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	Use of isolated ground receptacles
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
517.29	Essential electrical systems for hospitals
517.32	Branches requiring automatic connection
517.41	Required power sources
517.42	Essential electrical systems for nursing homes and limited care facilities
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, boatyards, floating buildings, & commercial and noncommercial docking facilities

555.1	Scope
555.33	Receptacles
555.34	Wiring methods and installations
555.35	Ground-Fault Protection of Equipment (GFPE) and Ground-Fault Circuit-Interrupter (GFCI) Protection
555.36	Disconnecting means for shore power connection(s)
555.56	Equipment grounding

Article 590 — Temporary installations

590.4	General
590.6	Ground-fault protection for personnel

Article 604 — Manufactured wiring systems

604.2	Definition
604.100	Construction

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

700.31	Overcurrent protection, ground-fault protection of equipment

Wire & cable type abbreviations

Key

E	Thermoplastic elastomer	**S**	Extra hard usage (600V)	**V**	Vacuum (typically used for portable cleaning equipment)
O	Oil resistant outer jacket	**SJ**	Junior hard usage (300V)		
OO	Oil resistant outer jacket & oil resistant insulation	**T**	Thermoplastic/vinyl	**W**	Weather & water resistant for damp & wet locations
P	Parallel				

Examples

SEOOW Extra hard usage thermoplastic elastomer with oil resistant outer jacket and insulation; approved for outdoor use and water resistance; 600V up to 105ºC.

SJT Hard usage thermoplastic rubber-insulated conductors and overall thermoplastic jacket. 300V up to 105ºC.

SJTW Hard usage thermoplastic or rubber-insulated conductors and overall thermoplastic jacket. 300V up to 105ºC. Weather resistant for outdoor use.

SPT-1 All thermoplastic construction, parallel jacketed. 300V up 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.

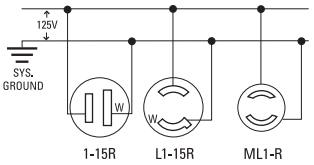
Diameter ranges of jacketed cord in accordance with standard UL62

Acceptable range for overall diameter of jacketed cord

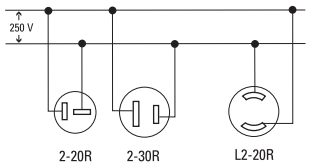
Type of cord	Avg. size	2-Conductor	3-Conductor	4-Conductor	5-Conductor
SV, SVO, SVT SVTO	18	0.22"-0.26" (5.6mm-6.6mm)	0.23"-0.27" (5.8mm-6.9mm)	—	—
SJ, SJE, SJO, SJOO, SJEO, SJEOO, SJT, SJTO, SJTOO, SJEW, SJEOW, SJEOOW, SJTW, SJTOW, SJTOOW	18	0.28"-0.32" (7.1mm-8.1mm)	0.30"-0.34" (7.6mm-8.6mm)	0.33"-0.37" (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, SE, SOO, SEO, SEOO, ST, STOO, STO, SEW, SOOW, SOW, SEOW, SEOWW, STW, STOOW, STOW	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)

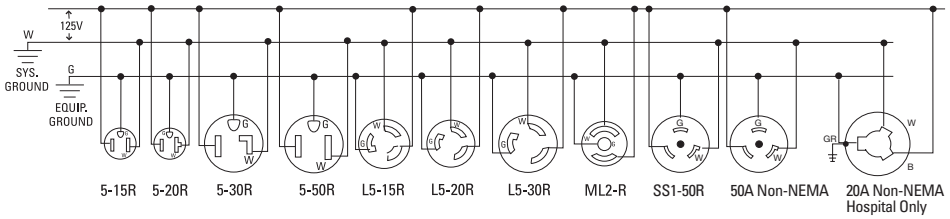
2-pole, 2-wire non-grounding: 125V



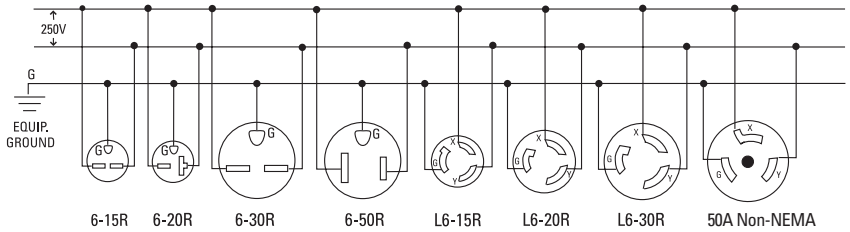
2-pole, 2-wire non-grounding: 250V



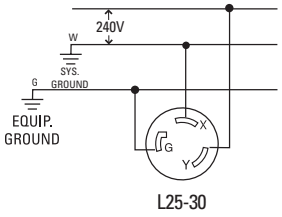
2-pole, 3-wire grounding: 125V



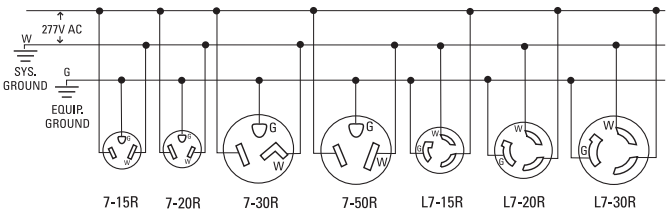
2-pole, 3-wire grounding: 250V/AC



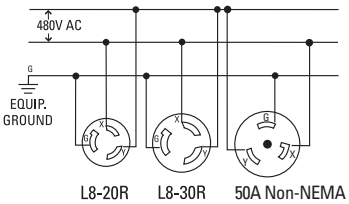
2-pole, 3-wire grounding: 240V



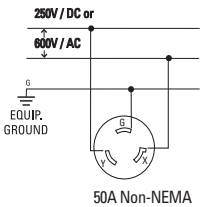
2-pole, 3-wire grounding: 277V AC



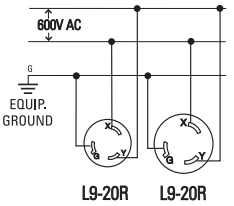
2-pole, 3-wire grounding: 480V/AC



2-pole, 3-wire grounding: 600V/AC, 250V/DC



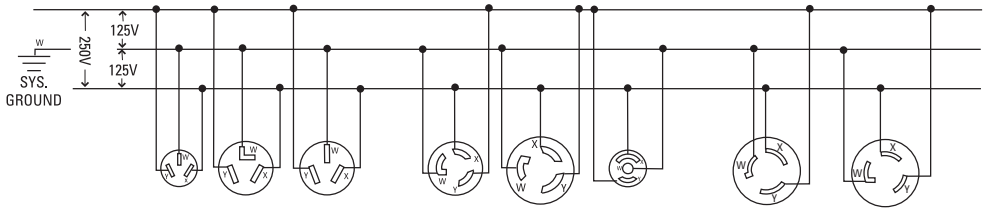
2-pole, 3-wire grounding: 600V/AC



Compliances, specifications and availability are subject to change without notice.

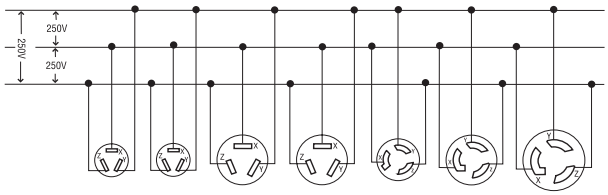
Wiring diagrams (by NEMA configurations)

3-pole, 3-wire non-grounding: 125/250V



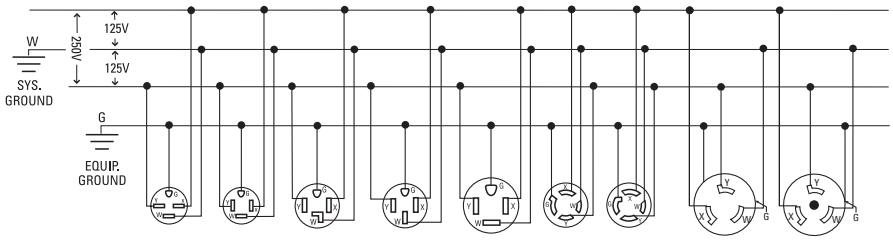
10-20R 10-30R 10-50R L10-20R L10-30R ML3-R 20A Non-NEMA 30A Non-NEMA

3-pole, 3-wire non-grounding: 3Ø 250V



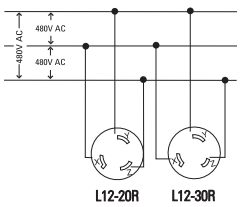
11-15R 11-20R 11-30R 11-50R L11-15R L11-20R L11-30R

3-pole, 4-wire grounding: 125/250V



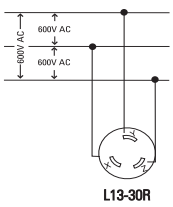
14-15R 14-20R 14-30R 14-50R 14-60R L14-20R L14-30R SS2-50R Non-NEMA

3-pole, 3-wire non-grounding: 3Ø 480V AC



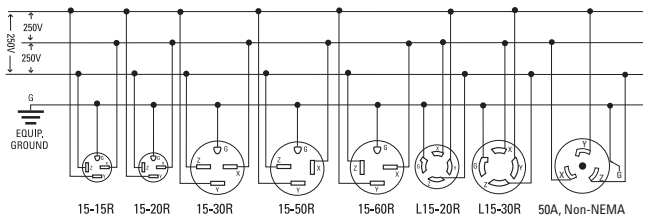
L12-20R L12-30R

3-pole, 3-wire non-grounding: 3Ø 600V AC



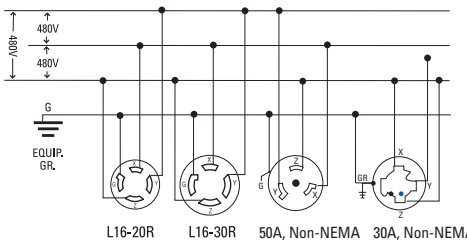
L13-30R

3-pole, 4-wire grounding: 3Ø 250V



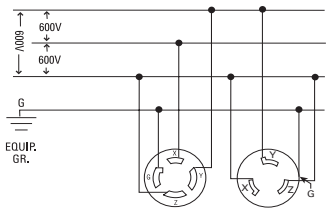
15-15R 15-20R 15-30R 15-50R 15-60R L15-20R L15-30R 50A, Non-NEMA

3-pole, 4-wire grounding: 3Ø 480V



L16-20R L16-30R 50A, Non-NEMA 30A, Non-NEMA

3-pole, 4-wire grounding: 3Ø 600V

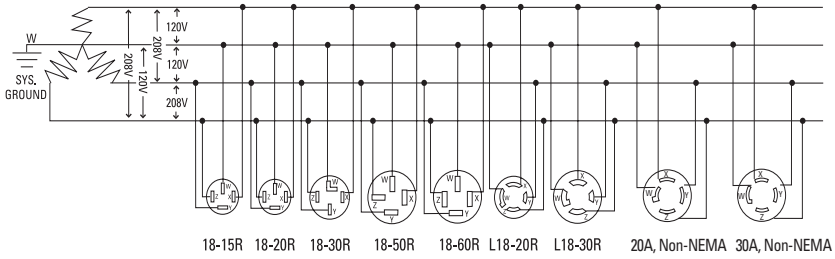


L17-30R 50A, Non-NEMA

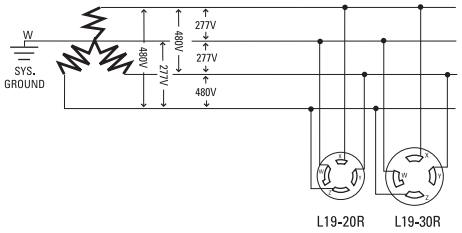
Compliances, specifications and availability are subject to change without notice.

Wiring diagrams (by NEMA configurations)

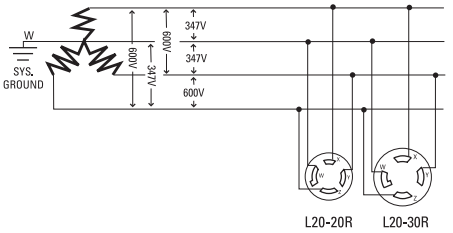
4-pole, 4-wire non-grounding: 3Ø 120/208V



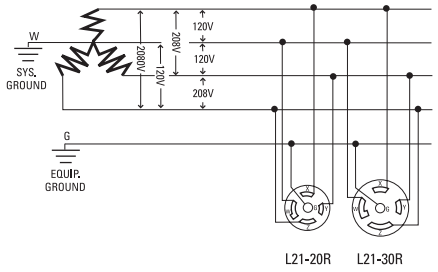
4-pole, 4-wire non-grounding: 3Ø 277/480V



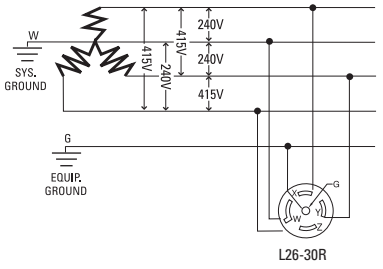
4-pole, 4-wire non-grounding: 3Ø 347/600V



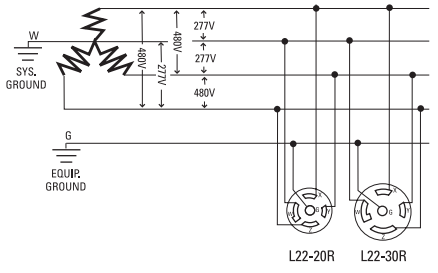
4-pole, 5-wire grounding: 3Ø 120/208V



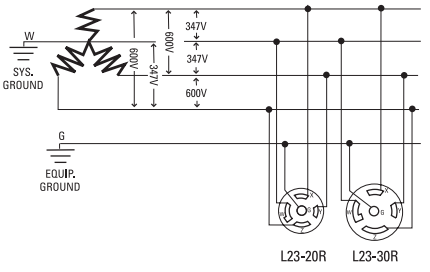
4-pole, 5-wire grounding: 3Ø 240/415V



4-pole, 5-wire grounding: 3Ø 277/480V



4-pole, 5-wire grounding: 3Ø 347/600V

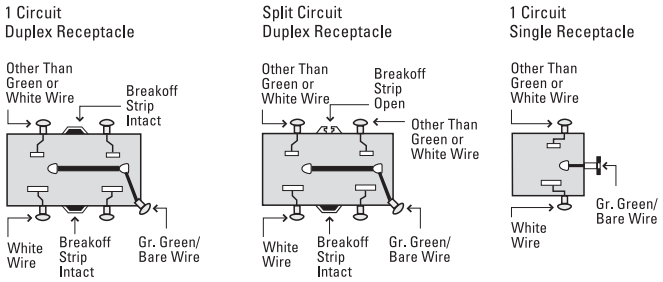


Compliances, specifications and availability are subject to change without notice.

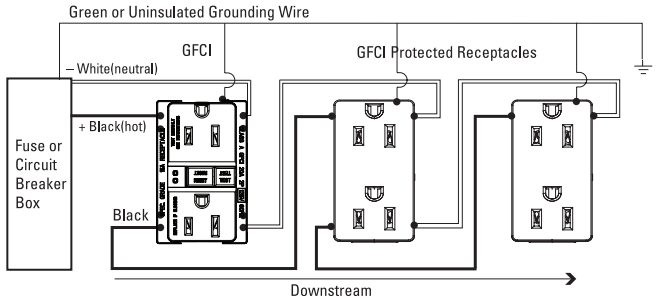
Wiring diagrams (by NEMA configurations)

Receptacles wiring diagrams

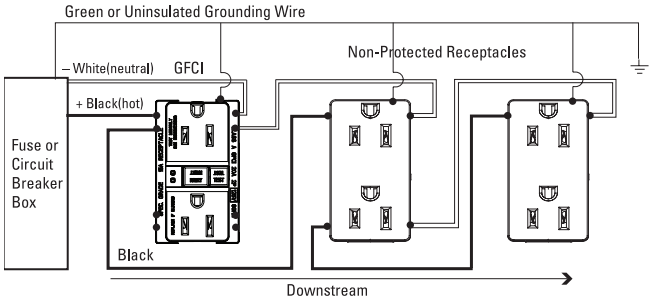
15A-125V



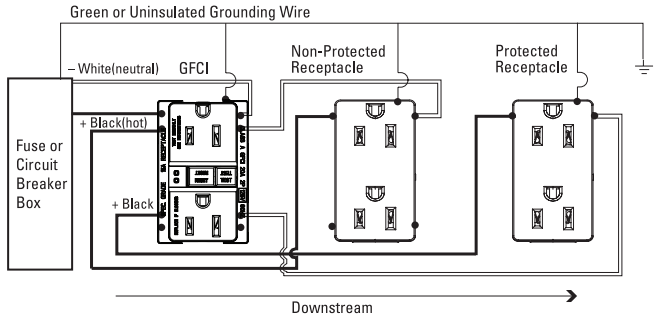
GFCI: Feed-through installation with protection provided downstream



GFCI: Feed-through installation with non-protected receptacles downstream

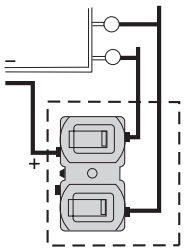


GFCI: Feed-through installation with both protected & non-protected receptacles downstream

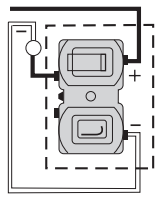


Combination devices wiring diagrams

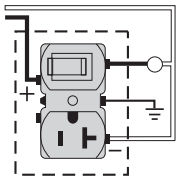
2 Single pole switches



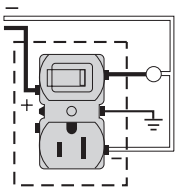
Single pole switch and neon pilot light



Single pole switch & 2-pole, 3-wire 20A U grounding receptacle



Single pole switch & 2-pole, 3-wire U grounding receptacle



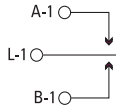
Compliances, specifications and availability are subject to change without notice.

Wiring diagrams (switches)

Switches wiring diagrams

Maintained & momentary contact, single pole

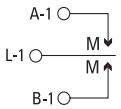
Single pole Double Throw



Maintained Contact 3-Position, 2-Circuit Center "Off"

2225

Single pole Double Throw

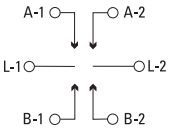


Momentary Contact Either Direction 3-Position, Center "Off"

1895/1995

Maintained contact, double-pole

Double-Pole Double Throw Center Off

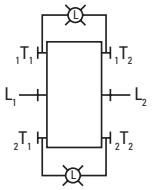


3-Position Maintained Contact

2226

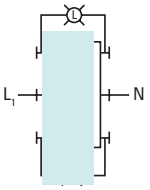
Manual contactors & disconnect switches

On–Off–On
2-Phase Circuit



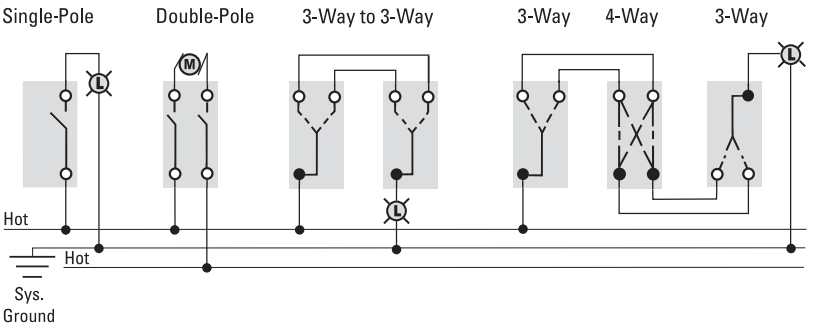
AH4361, AH4371 DPDT
Maintained Contact, Two 2-Pole Circuits With Center OFF

On–Off–On
Single Phase Circuit



AH4361, DPDT
Maintained Contact, Two 1-Pole Circuits With Center OFF

AC switches

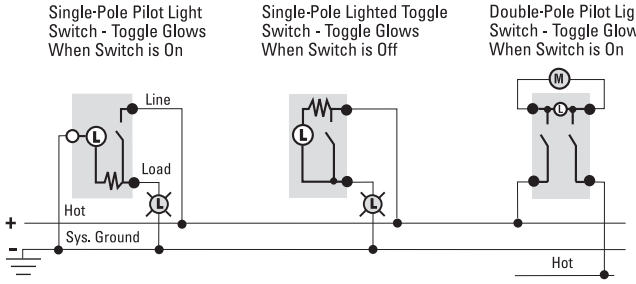


Pilot light switch & lighted switch, single & double pole

Single-Pole Pilot Light Switch - Toggle Glows When Switch is On

Single-Pole Lighted Toggle Switch - Toggle Glows When Switch is Off

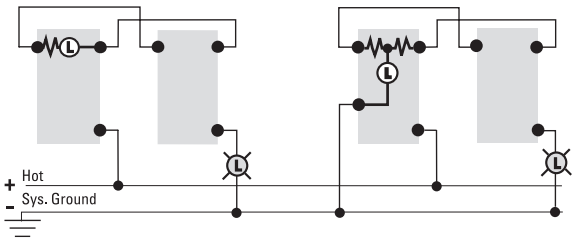
Double-Pole Pilot Light Switch - Toggle Glows When Switch is On



Pilot light switch & lighted switch, 3-Way

3-Way Lighted Switch

3-Way Pilot Lighted Switch

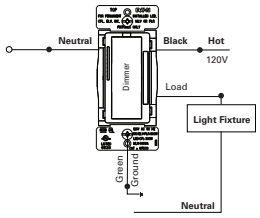


Compliances, specifications and availability are subject to change without notice.

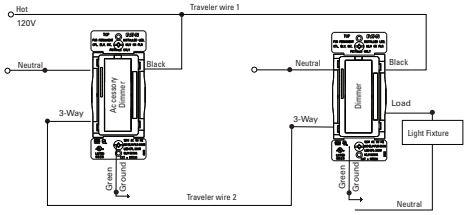
Wiring diagrams (dimmers)

Wi-Fi smart universal dimmer

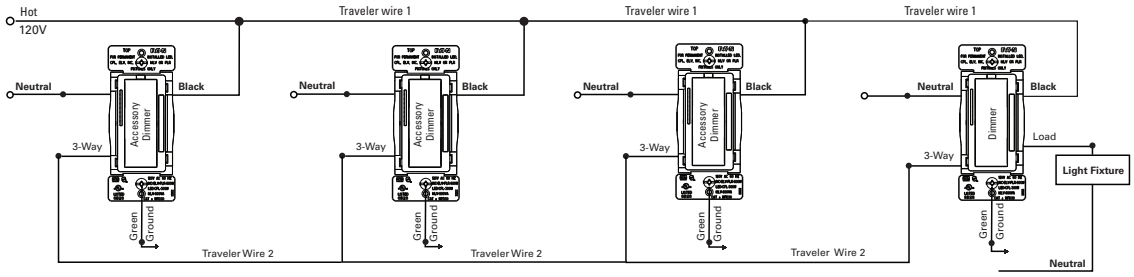
WFD30 — **LED/CFL/INC/MLV/ELV/HAL/FLR**
Single location requires one dimmer



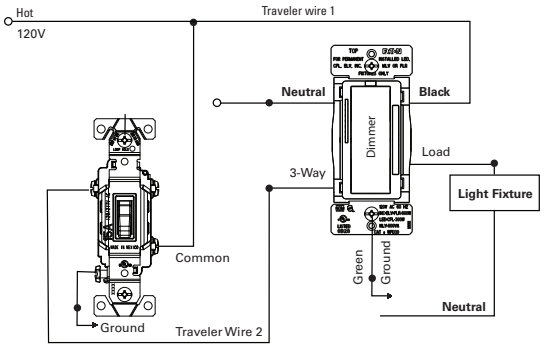
WFD30 — **LED/CFL/INC/MLV/ELV/HAL/FLR**
Two location requires one Wi-Fi dimmer and one accessory dimmer



WFD30 — **LED/CFL/INC/MLV/ELV/HAL/FLR**
Multiple locations using several accessory dimmers



WFD30 — **LED/CFL/INC/MLV/ELV/HAL/FLR**
Two location control usingdimmer and 3-Way switch

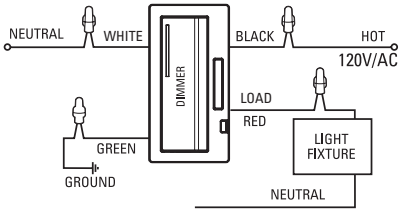


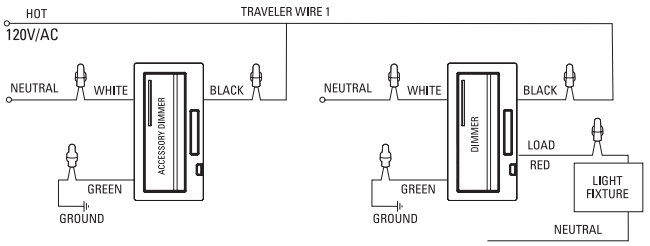
Compliances, specifications and availability are subject to change without notice.

Wiring & coverage diagrams

Z-Wave Plus wireless collection

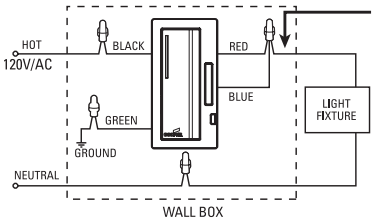
Dimmer with neutral RF9640-N	INC, MLV, ELV, FLR, LED, CFL Single pole	Dimmer with accessory dimmer RF9642-Z, RF9640-N	INC, MLV, ELV, FLR, LED, CFL Multi-location



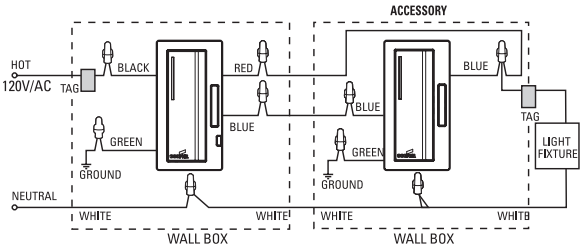


Aspire, Electronic

Dimmer with neutral 9534, 9536, 9537, AIM10	INC, MLV, ELV Single pole	Dimmer with neutral 9534, 9536, 9537, 9542, AIM10, ARD	INC, MLV, ELV Multi-location

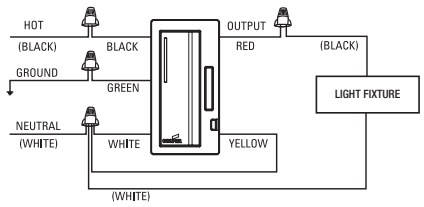


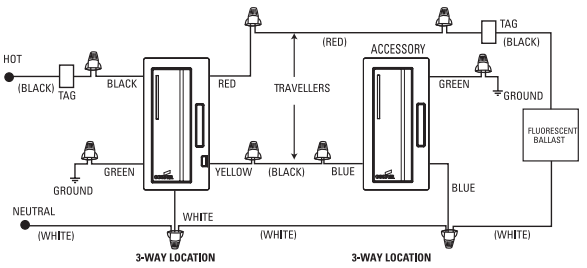
NOTE: FOR SINGLE LOCATION INSTALLATIONS THE BLUE AND RED WIRE MUST BE CONNECTED TOGETHER IN ORDER FOR THE DIMMER TO OPERATE PROPERLY. CONNECTING ONLY ONE OF THESE WIRES WILL CAUSE THE DIMMER TO NOT OPERATE AT ALL.



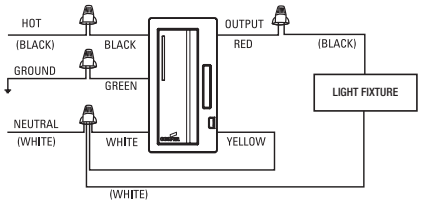
Electronic

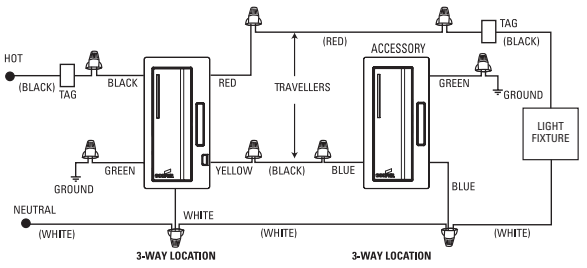
Dimmer with neutral AF10	FLR Single pole	Dimmer with neutral AF10, ARD	FLR Multi-location





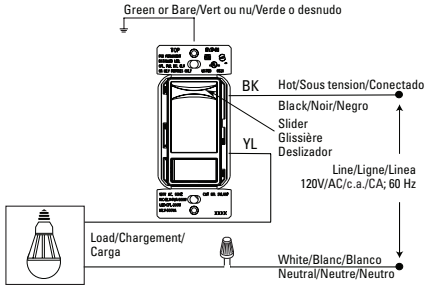
Dimmer with neutral AAL06	INC, MLV, ELV, FLR, LED, CFL Single pole	Dimmer with neutral AAL06, ARD	INC, MLV, ELV, FLR, LED, CFL Multi-location



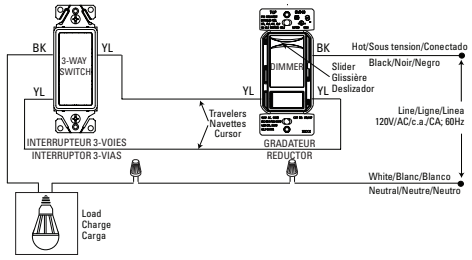


Compliances, specifications and availability are subject to change without notice.

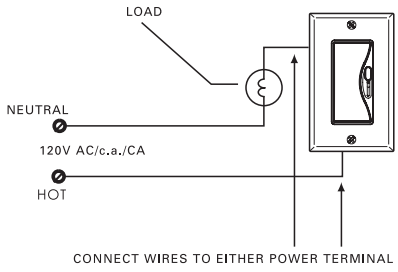
Decorator & Slide dimmer
DUL06P, SUL06P
INC, MLV, ELV, FLR, LED, CFL
Single pole



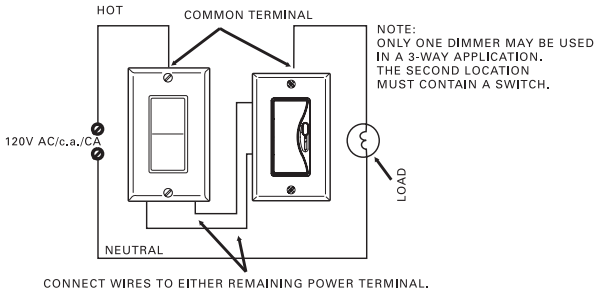
Decorator & Slide dimmer
DUL06P, SUL06P
INC, MLV, ELV, FLR, LED, CFL 3-Way



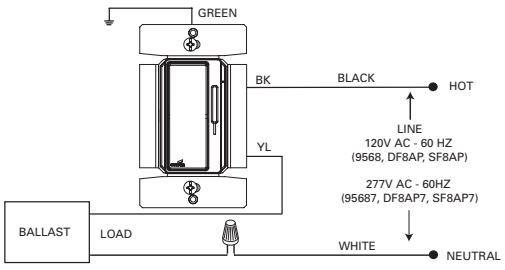
Aspire Slide dimmers
9530, 9531, 9532, 9533
INC, MLV, ELV
Single pole



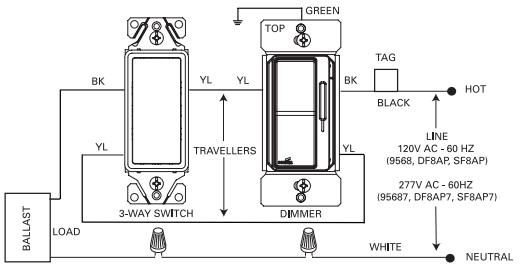
Aspire Slide dimmers
9530, 9531, 9532, 9533
INC, MLV, ELV
3-Way



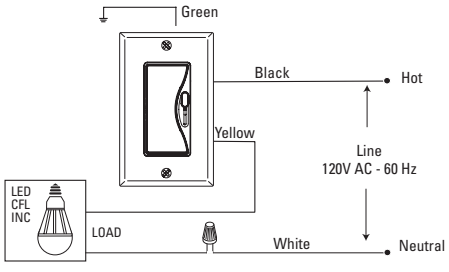
Decorator, Slide dimmers
9568, 95687, DF8AP, DF8AP7, SF8AP7
FLR
Single pole



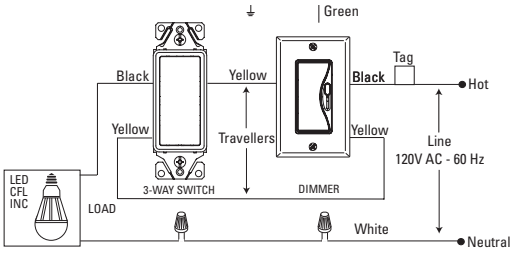
Decorator, Slide dimmers
9568, 95687, DF8AP, DF8AP7, SF8AP7
FLR
3-Way



Slide dimmer
9573
LED, CFL, INC
Single pole



Slide dimmer
9573
LED, CFL, INC
3-Way

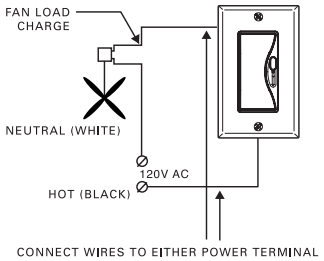


Compliances, specifications and availability are subject to change without notice.

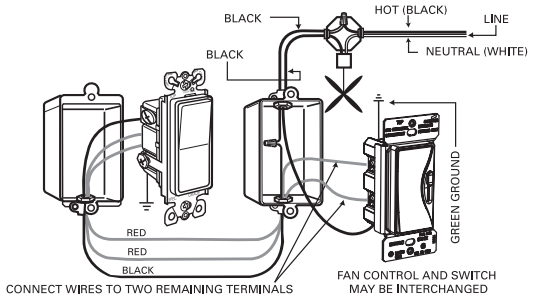
Wiring & coverage diagrams

Dimmers & fan speed controls

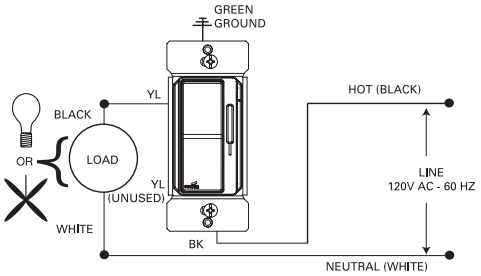
Aspire slide dimmer/fan control
9544, 9543
3-Speed & fully variable
Single pole



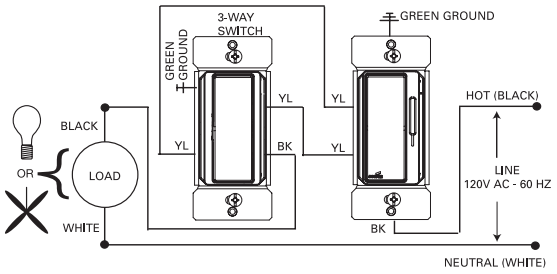
Aspire slide dimmer/fan control
9544, 9543
3-Speed & fully variable
3-Way



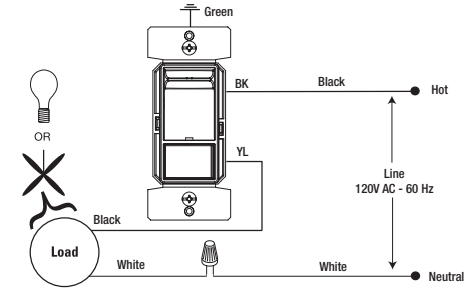
Decorator dimmer/fan control
DI10P, DFS15P1
INC, MLV
Single pole



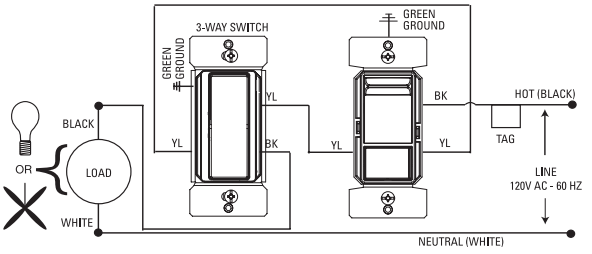
Decorator dimmer/fan control
DI10P, DFS15P1
INC, MLV
3-Way



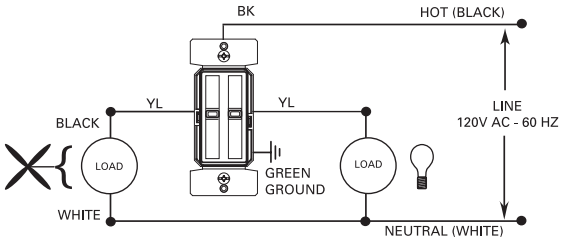
Slide dimmer/fan control
SI061, SI10P, SFS15P, SFS5P, SFS5
INC, MLV
Single pole



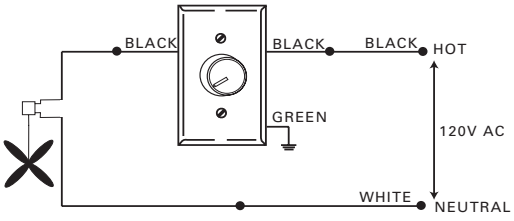
Slide dimmer/fan control
SI061, SI10P, SFS15P, SFS5P, SFS5
INC, MLV
3-Way



Slide dimmer/fan control
SDC15
3-Speed, INC
Single pole

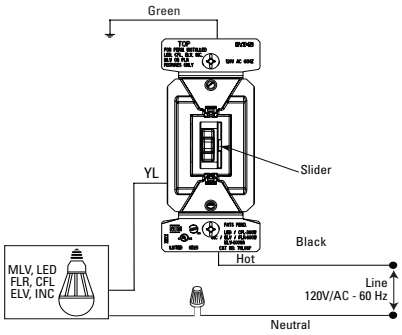


Toggle/rotary fan control
TFS5, RFS5, RFS15
Fully variable
Single pole

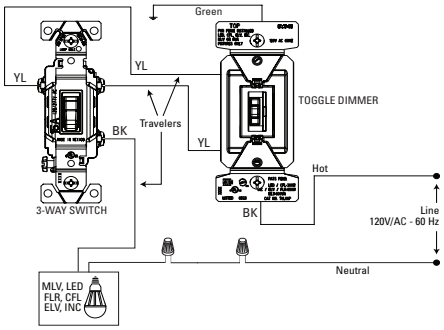


Compliances, specifications and availability are subject to change without notice.

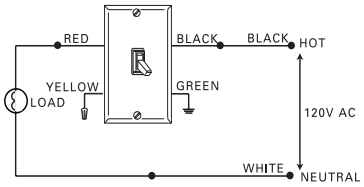
Toggle dimmer
TUL06P
INC, MLV, ELV, FLR, LED, CFL
Single pole



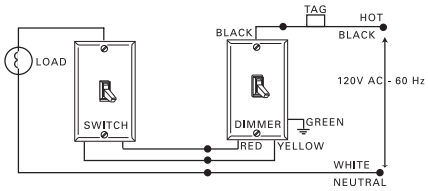
Toggle dimmer
TUL06P
INC, MLV, ELV, FLR, LED, CFL
3-Way



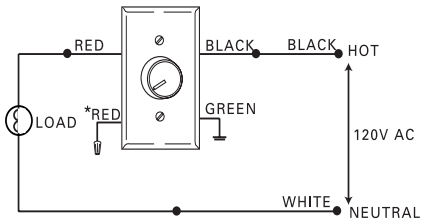
Toggle dimmers
TI061, TI061L, TI3101, TI3101L
INC
Single pole



Toggle dimmer
TI061, TI061L, TI3101, TI3101L
INC
3-Way

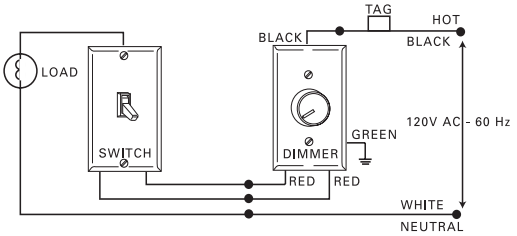


Rotary dimmer
RI061, RI101, RI06P, RI06PL
INC
Single pole

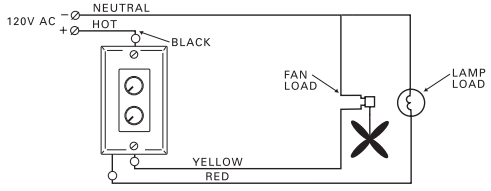


*Not required for RI061, RI101

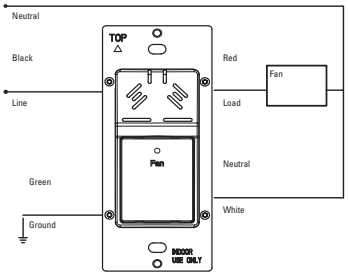
Rotary dimmer
RI06P, RI06PL
INC
3-Way



Rotary fan/dimmer
RDC15, RDC25
4-Speed/INC & fully variable/INC
Single pole



Humidity Sensor and Fan Control
HDFS3P1

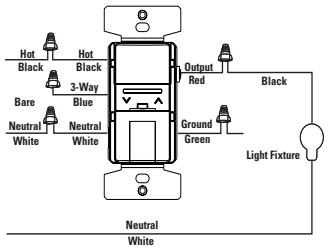


Compliances, specifications and availability are subject to change without notice.

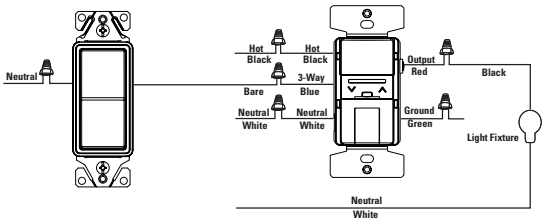
Wiring & coverage diagrams

Occupancy & vacancy sensors

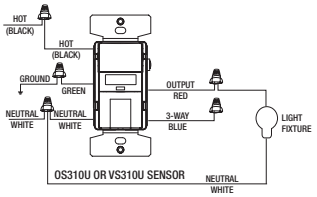
Universal sensor dimmer OSUL06D, VSUL06D — INC, MLV, ELV, FLR, LED, CFL Single pole



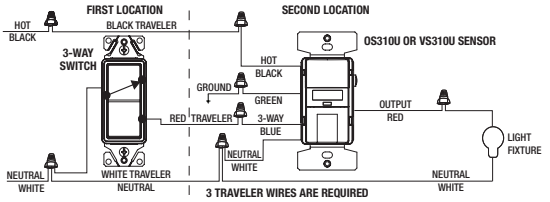
Universal sensor dimmer OSUL06D, VSUL06D — INC, MLV, ELV, FLR, LED, CFL 3-Way



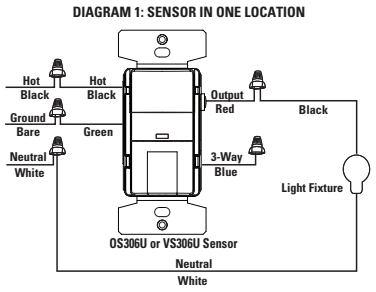
Sensor switch OS310U, VS310U — All load types Single pole



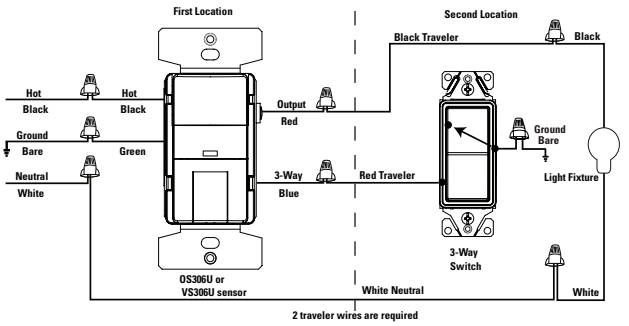
Sensor switch OS310U, VS310U — All load types 3-Way



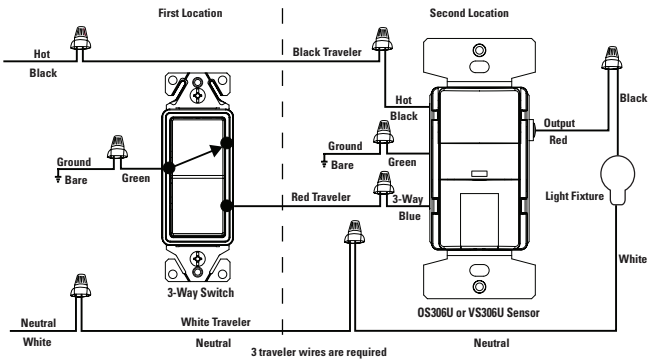
Standard sensor OS306U, VS306U — INC, MLV, ELV, FLR, LED, CFL Single pole



Standard sensor OS306U, VS306U — INC, MLV, ELV, FLR, LED, CFL 3-Way with sensor in location with hot wire



Standard sensor OS306U, VS306U — INC, MLV, ELV, FLR, LED, CFL 3-Way with switch in location with hot wire

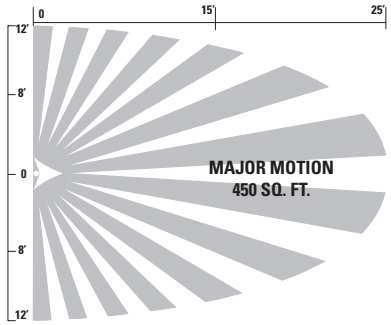


Compliances, specifications and availability are subject to change without notice.

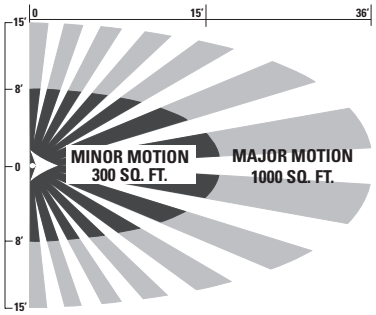
Wiring & coverage diagrams

Occupancy & vacancy sensor coverage areas

Standard series
OS306U, VS306U
All load types

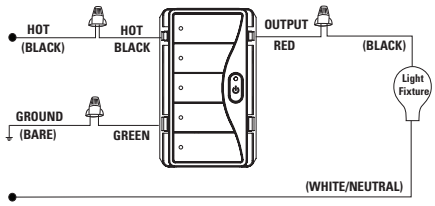


Sensor switch
OS310U, VS310U, OS310R, VS310R, OSUL06D, VSUL06D
All load types

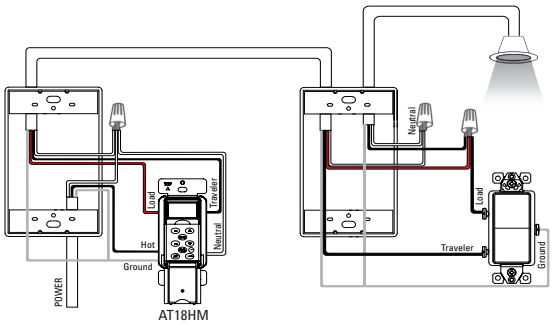


Timers

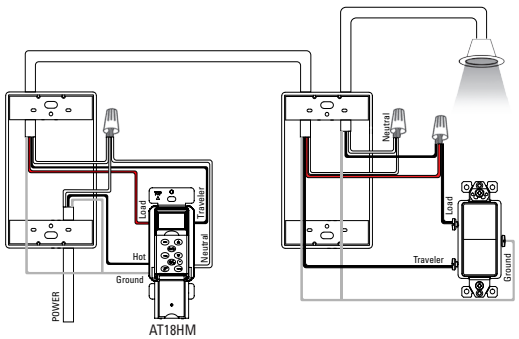
Aspire, electronic timer
9590, 9591, PT18M, PT18H
INC, MLV, ELV, FLR, LED, CFL
Single pole



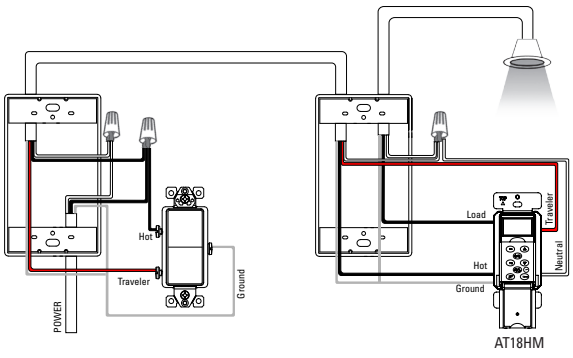
Astronomic Programmable Timer
AT18HM
INC, LED, CFL
Single pole



Astronomic Programmable Timer
AT18HM (Power to 3-Way switch)
INC, LED, CFL
3-Way



Astronomic Programmable Timer
AT18HM (Power to the timer)
INC, LED, CFL
3-Way



Compliances, specifications and availability are subject to change without notice.

Wiring diagrams (manual contacts & disconnect switches, by motor variations)

Motor variations wiring diagrams

Diagram 1
Capacitor Two Windings

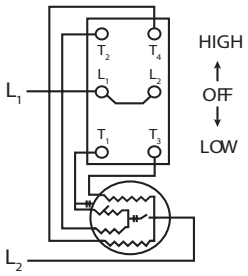


Diagram 2
Repulsion Induction

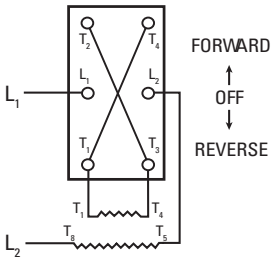


Diagram 3
Series

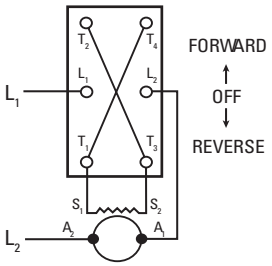


Diagram 4
Capacitor Consequence Pole

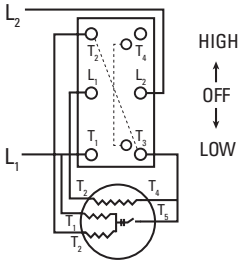


Diagram 4 Internal Connections		
LOW	L_1 & T_2	L_2 & T_3 & T_4
HIGH	L_1 & T_1	L_2 to T_2 & T_3

Diagram 5
Capacitor

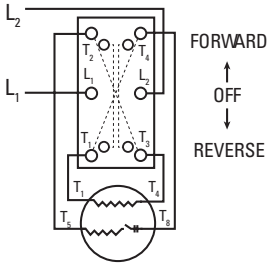


Diagram 5 & 6 Internal Connections		
	L_1	L_2
FORWARD	T_1 & T_2	T_3 & T_4
REVERSE	T_1 & T_4	T_3 & T_2

Diagram 6
Split Phase

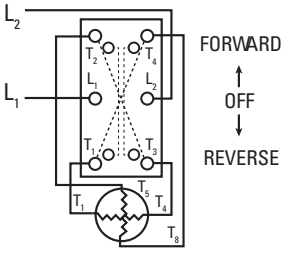


Diagram 7
3-Phase Separate Winding

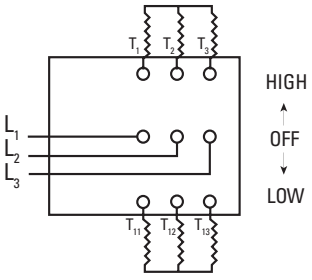


Diagram 8
3-Phase Induction

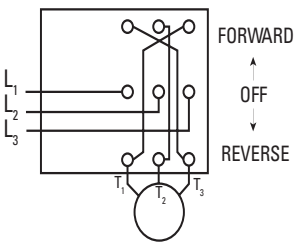


Diagram 9
Series DC

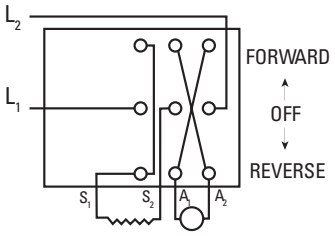


Diagram 10
Shunt DC

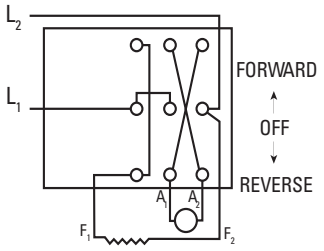


Diagram 11
Compound DC

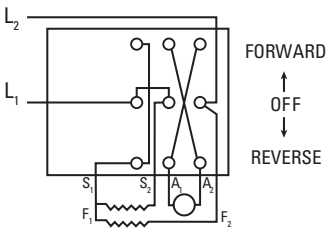


Diagram 12
2-Phase Separate Winding

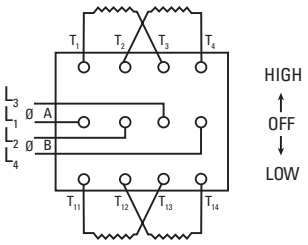
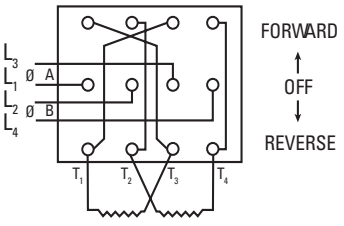


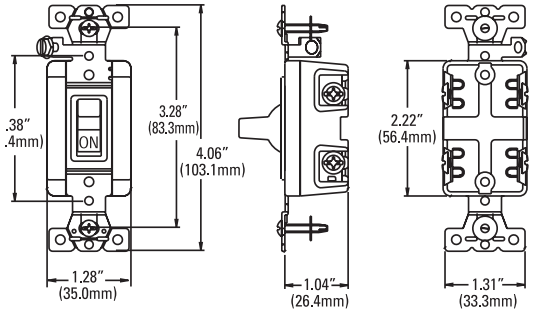
Diagram 13
2-Phase Induction



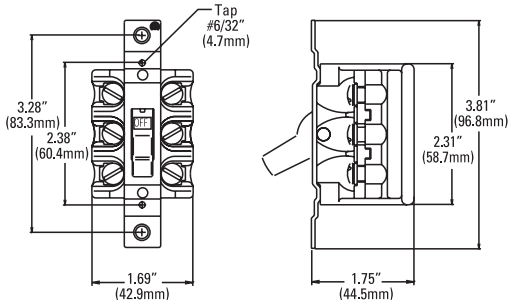
Compliances, specifications and availability are subject to change without notice.

Dimensional data (switches)

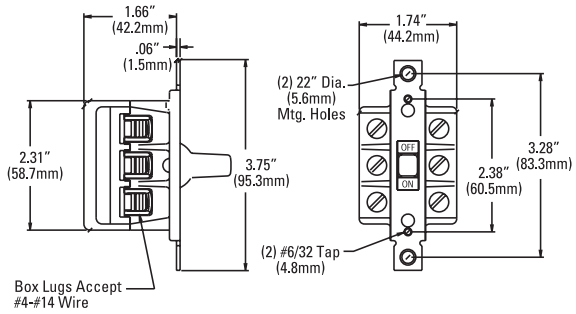
AH6808UDAC, AH6808UCO



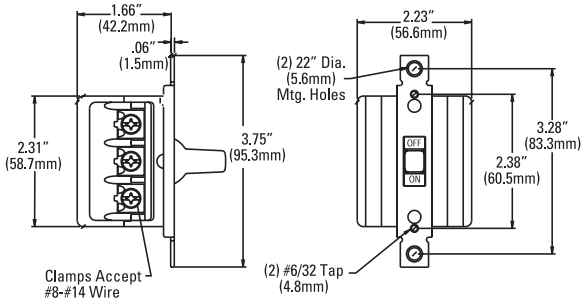
AH6810U, AH7810UD



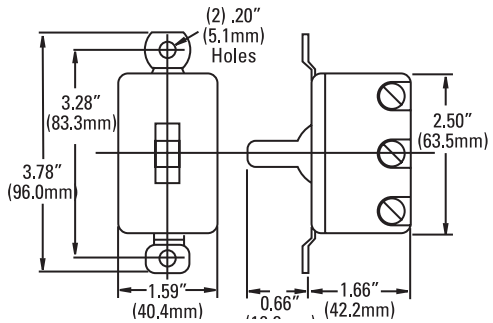
AHMC240L, AHMC340L, AHMC260L, AHMC360L



AHMC240C, AHMC340C



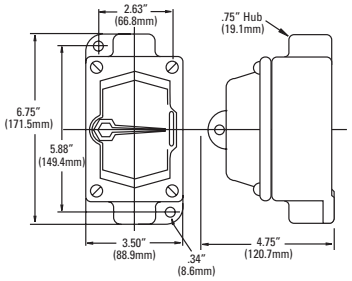
AH4361



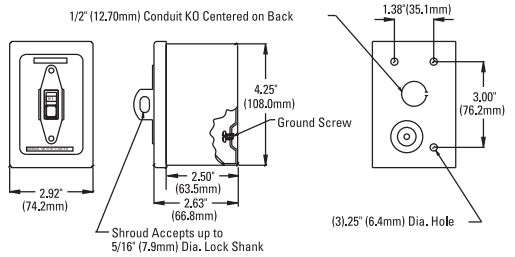
Compliances, specifications and availability are subject to change without notice.

Dimensional data (enclosures)

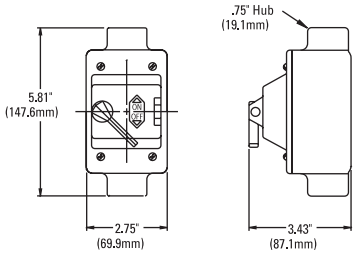
AH6810E, AH7810ED



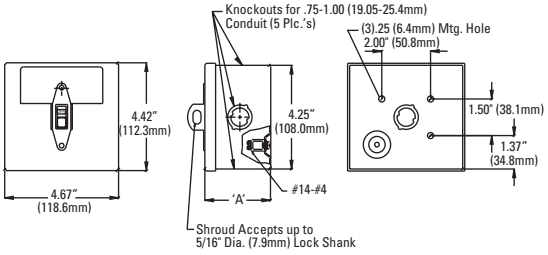
AHMC360L-1, AHMC260L-1, AH781OGD, AHMC340C-1, AHAHMC340L-1, AH6808GDAC, AH6810G, AHMC240C-1, AHMC240L-1, AH27940G, AHN1GD



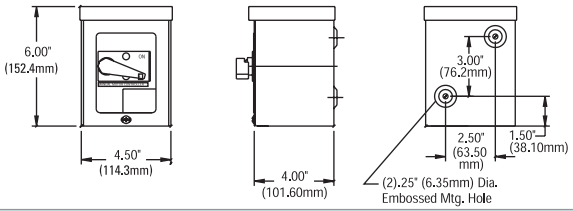
AH6808WDAC



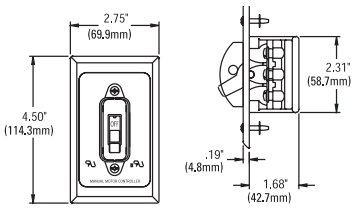
AH7810GDB, AHN1GD2 Dim A=2.63" (66.80mm) AHN1GD2D Dim A=3.87" (98.30mm)



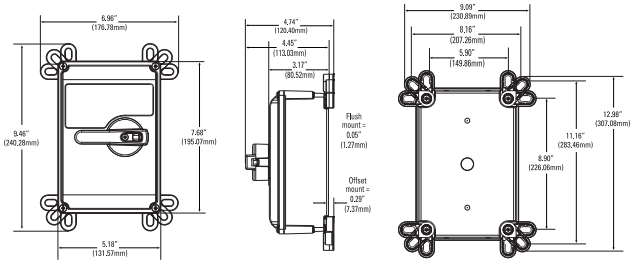
AHN3WD, AH6808WDAC, AH6810W, AHMC240C-3, AHMC240L-2, AHMC260L-3, AHMC340C-3, AHMC340L-2, AHMC360L-2



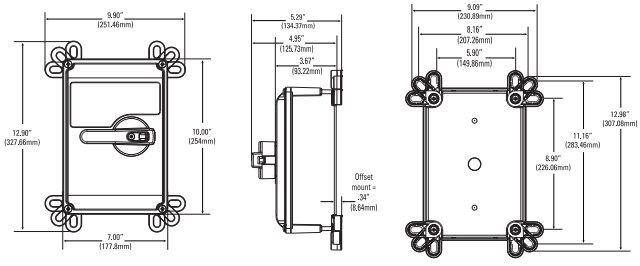
AH6808FDAC (plate only, no toggle guard) AH7810FD



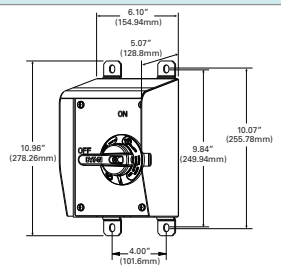
AHDS30, AHDS30AC, AHDS30VFD



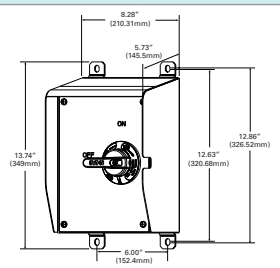
AHDS60, AHDS60AC, AHDS60VFD



AHDS30SSR



AHDS60SSR, AHDS100SSR



Compliances, specifications and availability are subject to change without notice.

Matching the dimmer to the load
A large selection of lighting sources are available in today's lighting environment. These sources have specific individual characteristics which require mating a particular dimmer for each load type (source). For proper use it is important to pick a dimmer that is designed and UL tested for that specific lighting load type.

Incandescent/halogen
Line-voltage tungsten filament lamps, including line-voltage (120V) halogen lamps
Electrical characteristic: resistive
Special requirements: rated for cold filament inrush.

Magnetic Low-Voltage (MLV)
Magnetic transformer-supplied low-voltage lighting (6 volt, 12 volt, or 24 volt)
Electrical characteristic: inductive
Special requirements: symmetric cycles (VDC ≤ 2), smooth turn off
Include transformer losses when calculating the load.

Electronic Low-Voltage (ELV)
Electronic (solid-state) transformer-supplied low-voltage lighting
Electrical characteristic: capacitive
Special characteristic: very smooth turn on.
Neutral wire connection required.

Fluorescent (FLR)
Electronic fluorescent dimming ballast
Special dimmers are designed and UL listed to send power and control signals to each type of electronic fluorescent dimming ballast.

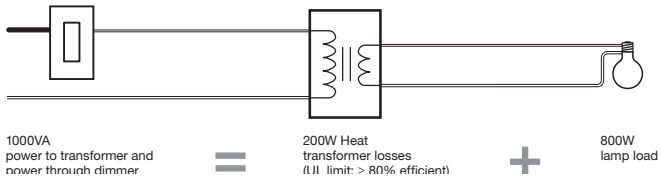
Light Emitting Diode (LED)
Electronic LED driver special dimmers are designed to send power and control signals to each type of electronic LED drive.
Special requirements: LED light source must be properly matched to LED driver, and LED driver must meet control spec for control type.

Fan controls
There are two styles of fan control. Select the one that is right for your application:

Fully variable
- Fully variable fan speed
- Used for controlling one or more ceiling fan(s) or exhaust fan(s)

Quiet 3-Speed
- Three speeds plus off
- Will not cause fan motor hum
- Used for controlling one ceiling fan only

Magnetic low-voltage dimmer ratings
The stated VA (volt-ampere) rating is the rated capacity of the dimmer which includes the magnetic transformer heat losses and the lamp load. A slide dimmer that is UL listed for 1000VA can be loaded with a full 1000VA of lamp load. A transformer dissipates up to 20% of the connected load as heat.
Better transformers dissipate less than 10% as heat. Added together, the lamp load and the transformer loss determine the dimmer capacity required. See example.



Electronic low-voltage dimmer ratings
Electronic Low-Voltage transformers do dissipate some heat. These inefficiencies are small enough to be accounted for in the dimmer rating. A dimmer this is UL listed for 600W can be loaded with a full 600W of lamp load. If ganged with other dimmers, standard derating rules apply.

Heat dissipation
During normal operation, dimmers will get warm to the touch. Wallbox dimmer efficiency is typically around 99%; the remaining 1% is dissipated as heat. Therefore, a 600W load on a 600W dimmer would produce around 6 watts of heat. Operating on its rated load, dimmers will stay below the UL limits of 140°F(60° C). Use screwless wallplates to avoid contact with metal screws that may feel warm to the touch.

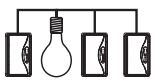
Single pole

Single pole dimmers provide control from one location.

Multi-location

Multi-location dimmers can be used with dimmers for full dimming control of the lights from two or more locations.

3-Way/4-Way

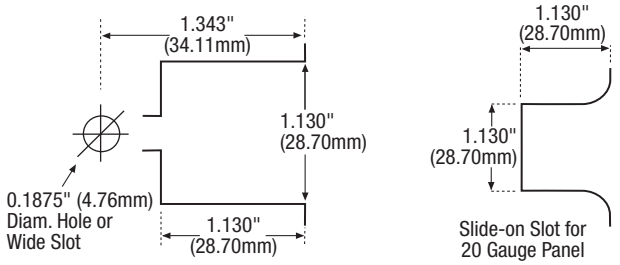
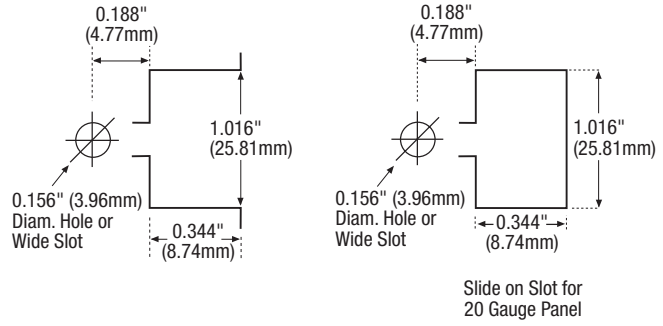


3-Way dimmers adjust the light level from one location. When usedwith 3-Way and 4-way switches, the lights can be turned on to the dimmer level or off from many locations.

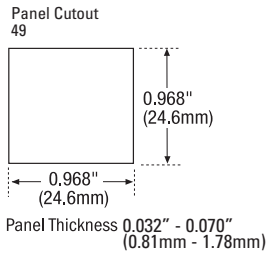
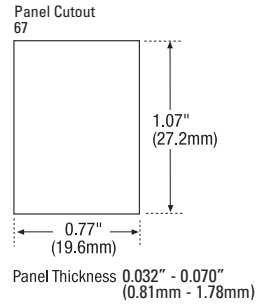
Consult with Eaton's Wiring Devices for driver compatibility: www.eaton.com/wiringdevices

Lighting control basics

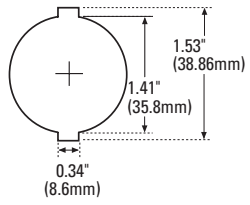
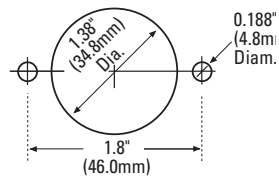
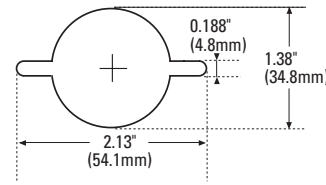
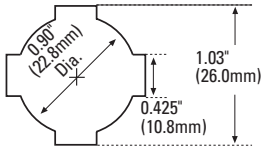
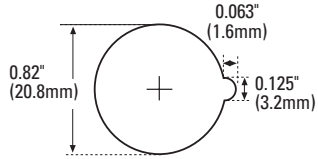
Fluorescent lampholder panel cutout dimensional data

Panel cutouts 2500, 2501, 2503, 2504 2505, 2506	Panel cutouts 2509, 2510 924
	

Snap-in receptacle panel cutouts

Panel cutout 49	Panel cutout 67
	

Attachon lampholder cutouts

Panel cutout 732-3	Panel cutout 734	Panel cutout 4734-2
		
Panel cutout 732-3, 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

		Overload				Endurance				
Rating	Standard	Amps	Volts	Power factor	Cycles	Amps	Volts (Max)	Resistance cycles 1.0 pf.†	Inductive cycles .75 to .8 pf.†	Tungsten cycles 1.0 pf.†
15A, 120V/AC	UL20	72	120 AC	.4 to .5	100	15	120 AC	10,000	10,000	10,000
	WS 896	72	120 AC	.4 to .5	100	15	120 AC	-	50,000	50,000
15A 120/277 277V/AC	UL20	72	277 AC	.4 to .5	100	15	277 AC	10,000	10,000	10,000
	WS 896	72	277 AC	.4 to .5	100	15	277 AC	-	50,000	50,000
20A, 120/277 277V/AC	UL20	96	277 AC	.4 to .5	100	20	277 AC	10,000	10,000	10,000
	WS 896	96	277 AC	.4 to .5	100	20	277 AC	-	50,000	50,000
20A, 120/277 277V/AC	UL20	144	277 AC	.4 to .5	100	30	277 AC	10,000	10,000	10,000
	WS 896	144	277 AC	.4 to .5	100	30	277 AC	-	50,000	50,000

Test requirements - switches special use - AC only

		Overload				Endurance				Horse power				"L" Tungsten		
Rating	Standard	Amps	Volts	Power factor	Cycles	Amps	Volts	Power factor	Cycles	Amps	Volts	Power factor	Cycles	Amps	Volts	Cycles
8A, 120V/AC	UL1054	12	120 AC	.4-.5	50	8	120 AC	.75-.8	6000	–	–	–	–	–	–	–
15A, 120V/AC 10A, 240V/AC 3/4 HP, 120-240V/AC	UL1054	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	UL1054	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	UL1054	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			

WSB 896 Standard
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 followed by a dielectric test at 1500 V/AC for 1 minute.
† Power Factor voltage,

Switch applications

Maximum loads

Maximum loads - switches - general use - AC only

	Incandescent		Inductive (fluorescent)		Resistance		Motors		
Switch rating	**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

	Incandescent		Inductive (fluorescent)		Resistance		Motors		
Switch rating	**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

Key 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.

Materials	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
PBT	1	1	2	1	1	1	1	2	1
Rubber‡ (Thermoplastic)	2	2	1	3	2	3	1	3	1
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.
‡ Thermoplastic rubber is representative of Santoprene.
For additional material compatibility details, please contact Eaton at: TechSupport@eaton.com

Eaton Wiring Device Cleaning Instructions

There is a greater awareness of the possibility of contamination on shared surfaces as well as high contact areas, such as wall plates, dimmers, switches, keypads and receptacles. Eaton has developed recommended guidelines for cleaning our products that will not impact the operation or finish of the product.

Eaton Recommended Cleaning Tips

1. **Never spray any fluids directly into the device**
2. **Use a damp rag or single-use wipe** to avoid excess liquid penetrating the device.
3. Be sure to wipe up remaining excess liquid after cleaning.
4. Ensure the cleaning agent used does not have harsh chemicals such as bleach, ammonia, highly alkaline or concentrated acids (such as hydrochloric acid that can be found in household cleaners such as toilet bowl cleaners, bathroom tile and porcelain cleaners) as they could damage the device, causing them to become brittle and discolored.
5. Eaton recommends the use of a mild liquid detergent and water to clean the devices. Single use wipes (e.g. Lysol brand or equivalent) are acceptable to use for cleaning the devices, however the single-use wipes cannot contain bleach, ammonia, highly alkaline or concentrated acids.

Eaton Recommended Cleaning instructions

1. **Never spray any fluids directly into the device**
2. Apply the mild liquid detergent to a damp cloth or paper towel. Single use wipes (e.g. Lysol brand or equivalent) are acceptable to use for cleaning the devices, however single-use wipes cannot contain bleach, ammonia, highly alkaline or concentrated acids.
3. If excess liquid is present, remove by wringing out the cloth or paper towel to avoid liquid penetration into the device.
4. Clean the Eaton device by wiping over the surface with the damp cloth.
5. Remove an excess liquid remaining on the device with a dry cloth or paper towel.

Additional resources for cleaning and disinfectant guidelines include:
The Center for Disease Control website (CDC.gov) provides a resource on disinfection guidelines for areas of your home or workspace. The Environmental Protection Agency (EPA.gov) site provides an up-to-date database of products that meet EPA criteria for use against COVID-19.

For more information:
Eaton's technical support center
Phone (Toll Free): 866-853-4293, option 2

NEMA & IP enclosure ratings

NEMA enclosure ratings

	Device locations		
Protection from	**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**	**IP_9K**
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**	**High pressure. High tempera-ture water spray from multiple directions and angles.**
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**	IP**69K**

Compliances, specifications and availability are subject to change without notice.

NEMA & IP enclosure

Enclosure type cross reference: NEMA/UL/CSA

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

NEMA Standards publication no.250-1991, enclosures for electrical equipment (1000V max.)

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.

Type 1

Enclosures are intended for indoor use primarily to protect against limited amounts of falling dirt.

Type 2

Enclosures provide a degree of protection, mainly indoors, against limited amounts of dripping water or falling dirt.

Type 3

Enclosures, intended primarily for use outdoors, protect against rain, sleet, wind-blown dust, and damage from external ice formation.

Type 3R

Enclosures provide protection primarily against rain, sleet, and damage from external 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 4

Enclosures provide protection, both indoors and out, against wind-blown dust and rain, splashing or hose-directed water, and ice damage.

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 5

Enclosures used primarily indoors to provide protection against airborne dust and dirt, and non-corrosive liquids.

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 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 12

Enclosures used primarily indoors to protect against airborne dust or dirt, and non-corrosive liquids.

Type 12K

Enclosures with knockouts are used primarily indoors for protection against airborne dust and dirt, and 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.

UNDERWRITERS LABORATORIES UL50

Standard for enclosures for electrical equipment (10th Edition)

Intended use and description

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.

Type 1

Enclosures are intended for indoor use primarily to protect against limited amounts of falling dirt.

Type 2

Enclosures provide a degree of protection, mainly indoors, against limited amounts of dripping water or falling dirt.

Type 3

Enclosures, intended primarily for use outdoors, protect against rain, sleet, wind-blown dust, 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 3S

Used primarily outdoors for protection against rain, sleet, and wind-blown dust, and to enable exterior mechanisms to operate when ice laden.

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 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.

USMCA compliant

USMCA compliant products meet specifications at time of print. Product listing subject to change.

For specific product details visit www.eaton.com/wiringdevices or email TechSupport@eaton.com

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.). Products that are identified as USMCA 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 55% 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.

Restriction of the use of certain hazardous substances (RoHS)

For more information visit eaton.com/us/en-us/products/productstewardship or email ProductStewardship-ES@Eaton.com

Compliances, specifications and availability are subject to change without notice.