

Compact Circuit Protector

UL 98 Class CF disconnect switches up to 100 A (cat. no. CCP2)



CCP2 switch

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CCP2 right front rotary switch



CCP2 left front rotary switch



CCP2 right side rotary switch



CCP2 left side rotary switch



Catalog symbols for 30, 60 and 100 A switches

Symbol	Description
CCP2-(pole)-(30/60/100)CF	Switch only
CCP2R-(pole)-(30/60/100)CF	Right front rotary, clockwise operated switch
CCP2RL-(pole)-(30/60/100)CF	Left front rotary, clockwise operated switch
CCP2S-(pole)-(30/60/100)CF	Right side rotary, clockwise operated switch
CCP2SL-(pole)-(30/60/100)CF	Left side rotary, counterclockwise operated switch

Description

The revolutionary, next generation Bussmann™ series Compact Circuit Protector (CCP2) is a fused UL® 98 branch circuit disconnect switch utilizing the UL Class CF time-delay or fast-acting CUBEFuse™. With 2/3 the footprint of a traditional fusible solution, these switches provide a high 200 kA SCCR to help improve panel and assembly SCCR.

The switch-only versions of the 30, 60 and 100 A disconnects are direct, drop-in replacements for the earlier models (noted by a catalog number starting “CCP-”). The auxiliary contacts and PLC remote fuse indicator are backwards compatible. The multi-wire lug kits and terminal shrouds are not.

The 35 mm DIN-Rail mount CCP2 is available in a variety of 30, 60 and 100 amp configurations to meet many application needs including rotary operation.

Application flexibility is extended with an optional multi-wire lug kit, featuring finger-safe shrouds, that provides three (30 and 60 A switches) and six (100 A switches) additional wire ports on each pole for power distribution applications.

Other accessories include a PLC fuse monitor for open fuse indication and NO/NC auxiliary contacts that easily integrated into many monitoring systems.

Front and side rotary operated versions are easily applied for through-the-door or through the left or right side operation to enhance safety.

Ratings

- Volts
 - 347 Vac (1-pole switches)
 - 600 Vac (2- and 3-pole switches)
 - 125 Vdc*
- Amps
 - 30 A
 - 60 A
 - 100 A
- SCCR
 - 200 kA RMS Sym.
 - 100 kA DC

Poles

- 1-, 2- and 3-poles catalog number dependent

* Switch amp rating and installed fuse amp rating dependent, see catalog number table for details.

Agency information

- UL 98 Listed, Guide WHTY, File E302370
- cULus to Canadian Standard 22.2 No. 4-04, Guide WHTY7, File 302370
- RoHS compliant
- CE

Conductors/terminals

- 75°C Cu, see conductor tables for size, type and torque information
- Box lug, single/dual conductor
- Fork terminal suitable for line, load or accessory connection, max. 30 A suitable for use with:
 - 10-24 screw for 30 and 60 A switches
 - 1/4-28 screw for 100 A switches
- Multi-wire lug kit — see accessories for details

Storage and operating temperature

- - 20°C to 75°C (-4°F to 167°F)*

* For fuse performance under or above 25°C, consult fuse performance derating charts in the Bussmann Division publication no. 3002, titled Selecting Protective Devices (SPD)

Lockout/tagout provisions

- 1/4" lock, direct use on switches without rotary mechanisms requires a lock with a straight shank of sufficient length to engage all poles

Minimum enclosure size

- 30 and 60 A switch 10" x 8" x 6" (254 x 203 x 152 mm)
- 100 A switch, 14" x 12" x 6" (356 x 305 x 152 mm)

Mounting

- 35 mm DIN-Rail

Local open fuse indication minimum voltage**

- 90 Vac for AC switches
- 12 Vdc for DC switches

** Open fuse indication requires an open fuse to be in the CCP2 and the switch in the ON position.

Accessories

- Multi-wire lug kit with terminal shrouds
- Selector and pistol handles for use with rotary operated switches
- 8 mm shafts for use with selector and pistol handles
- Auxiliary contacts
- PLC remote fuse indicator

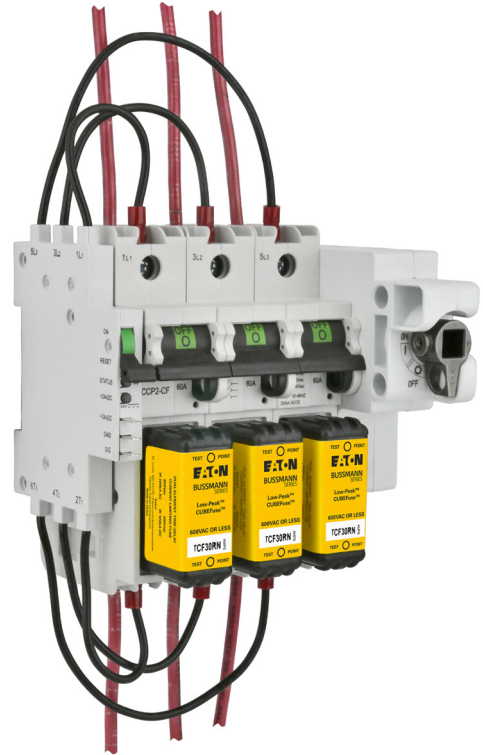
Carton quantity and shipping weight

Item	Switches	Poles	Weight lbs (kg)
30 and 60 amp switches			
Switch only	—	12	3.8 (1.7)
Switch with side rotary mechanism	2-pole	—	1.3 (0.6)
	3-pole	—	1.6 (0.7)
Switch with front rotary mechanism	2-pole	—	1.3 (0.6)
	3-pole	—	1.6 (0.7)
100 amp switches			
Switch only	—	6	3.1 (1.4)
Switch with side rotary mechanism	2-pole	—	1.7 (0.8)
	3-pole	—	2.3 (1.0)
Switch with front rotary mechanism	2-pole	—	1.7 (0.8)
	3-pole	—	2.3 (1.0)

Features

- Uses UL Class CF time-delay or fast-acting CUBEFuse with Class J electrical performance
- Extremely compact design at 25.4 mm (1 inch) wide per pole
- Amp rating rejecting disconnects will not accept a CUBEFuse amp rating greater than switch rating
- High 200 kA short-circuit current rating
- Disconnect rated to provide means for load isolation
- Full voltage rated at 347 Vac (1-pole switches) and 600 Vac (2- and 3-pole switches)
- 125 Vdc* rated to meet specialized applications
- UL 98 Listed and suitable for branch circuit disconnect and branch circuit protection
- 1-, 2- and 3-pole versions are horsepower rated
- Open fuse indication:
 - Local fuse indication light on each pole standard
 - Optional PLC fuse monitor for wired remote open fuse indication by signaling a PLC and open a contactor to de-energize all phases, if required
- Additional open fuse indication can be provided by the time-delay CUBEFuse (6 to 100 A)
- IP20 finger-safe construction with 10 AWG (6 mm²) wire or larger
- Built-in switch interlock prohibits removing the fuse under load
- Padlockable for lockout/tagout procedures with a 1/4" lock
- Rotary operated versions provide for through-the-door and through-the-side operation flexibility and enhanced safety with:
 - Right front switch operation
 - Left front switch operation
 - Right side switch operation
 - Left side switch operation
- Optional selector and pistol handles available for use with rotary operated versions
- Multi-wire lug kit with terminal shrouds allows for power distribution to multiple loads. Each lug has three (30 and 60 A switches) or six (100 A switches) ports rated for single and dual wires. (See lug kit in accessories for conductor and torque details.)

* Switch amp rating and installed fuse amp rating dependent, see catalog number table for details.



Right front rotary operated CCP2 switch with PLC fuse monitor.

Rotary operating switch versions



Left front rotary switch
 Clockwise operating handles



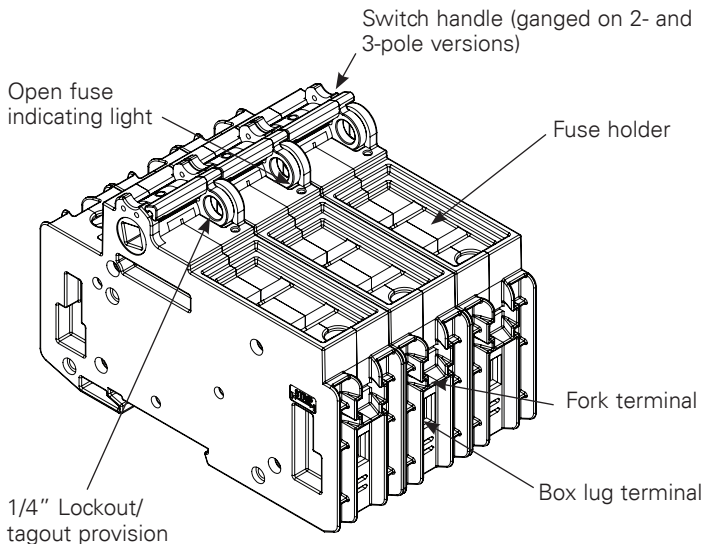
Right front rotary switch
 Clockwise operating handles



Left side rotary switch
 Counterclockwise operating handles



Right side rotary switch
 Clockwise operating handles



30, 60 and 100 A switch catalog numbers

Catalog no.	Poles	Description	Volts	SCCR	Max Hp rating (Vac)			
					120	240	480	600
30 amp switches								
CCP2-1-30CF	1		347 Vac/125 Vdc		1.5	—	—	—
CCP2-2-30CF	2	Switch only	600 Vac/125 Vdc		—	3	—	—
CCP2-3-30CF	3		600 Vac		—	5	15	10
CCP2R-2-30CF	2	Right front rotary, clockwise operated switch	600 Vac/125 Vdc		—	3	—	—
CCP2R-3-30CF	3		600 Vac	200 kA AC	—	5	15	10
CCP2RL-2-30CF	2	Left front rotary, clockwise operated switch	600 Vac/125 Vdc	100 kA DC	—	3	—	—
CCP2RL-3-30CF	3		600 Vac		—	5	15	10
CCP2S-2-30CF	2	Right side rotary, clockwise operated switch	600 Vac/125 Vdc		—	3	—	—
CCP2S-3-30CF	3		600 Vac		—	5	15	10
CCP2SL-2-30CF	2	Left side rotary, counterclockwise operated switch	600 Vac/125 Vdc		—	3	—	—
CCP2SL-3-30CF	3		600 Vac		—	5	15	10
60 amp switches								
CCP2-1-60CF	1		347 Vac/125 Vdc*		3	—	—	—
CCP2-2-60CF	2	Switch only	600 Vac/125 Vdc*		—	7.5	—	—
CCP2-3-60CF	3		600 Vac		—	7.5	20	10
CCP2R-2-60CF	2	Right front rotary, clockwise operated switch	600 Vac/125 Vdc*		—	7.5	—	—
CCP2R-3-60CF	3		600 Vac	200 kA AC	—	7.5	20	10
CCP2RL-2-60CF	2	Left front rotary, clockwise operated switch	600 Vac/125 Vdc*	100 kA DC	—	7.5	—	—
CCP2RL-3-60CF	3		600 Vac		—	7.5	20	10
CCP2S-2-60CF	2	Right side rotary, clockwise operated switch	600 Vac/125 Vdc*		—	7.5	—	—
CCP2S-3-60CF	3		600 Vac		—	7.5	20	10
CCP2SL-2-60CF	2	Left side rotary, counterclockwise operated switch	600 Vac/125 Vdc*		—	7.5	—	—
CCP2SL-3-60CF	3		600 Vac		—	7.5	20	10
100 amp switches								
CCP2-1-100CF	1		347 Vac/125 Vdc**		5	—	—	—
CCP2-2-100CF	2	Switch only	600 Vac/125 Vdc**		—	10	—	—
CCP2-3-100CF	3		600 Vac		—	20	50	40
CCP2R-2-100CF	2	Right front rotary, clockwise operated switch	600 Vac/125 Vdc**		—	10	—	—
CCP2R-3-100CF	3		600 Vac	200 kA AC	—	20	50	40
CCP2RL-2-100CF	2	Left front rotary, clockwise operated switch	600 Vac/125 Vdc**	100 kA DC	—	10	—	—
CCP2RL-3-100CF	3		600 Vac		—	20	50	40
CCP2S-2-100CF	2	Right side rotary, clockwise operated switch	600 Vac/125 Vdc**		—	10	—	—
CCP2S-3-100CF	3		600 Vac		—	20	50	40
CCP2SL-2-100CF	2	Left side rotary, counterclockwise operated switch	600 Vac/125 Vdc**		—	10	—	—
CCP2SL-3-100CF	3		600 Vac		—	20	50	40

* 125 Vdc for installed fuse amp ratings up to 40 A. 24 Vdc for installed fuse amp ratings from 45 to 60 A.

**125 Vdc for installed fuse amp ratings up to 80 A, 24 Vdc for installed fuse amp ratings from 90 to 100 A.

Box lug terminal conductor data

Wire type	AWG range	Class	Quantity	Torque N·m (lb-in)		
30 and 60 A switches						
75°C Cu	4-6	Stranded, Class B to K	Single	3.95 (35)		
	8-18			2.26 (20)		
	6-8	Stranded, Class B/C	Dual	3.39 (30)		
				Stranded, Class K	2.26 (20)	
	10-18	Stranded, Class B to K	Single/dual		2.26 (20)	
	10-18			Solid	2.26 (20)	
	75°C Cu	4-18	Stranded, UL ferrule, Class B/C	Single	3.39 (30)	
		6-18		Twin†		
4-18		Stranded, UL ferrule, Class K	Single	2.82 (25)		
6-18			Twin†			
100 A switches						
75°C Cu		12-18	Stranded, Class B/C	Single	2.26 (20)	
	10	2.82 (25)				
	8	4.52 (40)				
	4-6	5.08 (45)				
	1-3	6.21 (55)				
	4-12	Dual			5.08 (45)	
	12-18	2.26 (20)				
	10	Single			3.95 (35)	
	1-8	Stranded, UL ferrule, Class B/C			4.52 (40)	
	10-18				Twin†	2.26 (20)
	6-9	Solid			2.82 (25)	
	10-18				Single/Dual	2.26 (20)
	8-18	Class K			Single	2.26 (20)
	1-7				3.39 (30)	
	3-10	Dual			5.08 (45)	
	8-18	Class K, UL ferrule			Single	2.26 (20)
1-7	3.39 (30)					
6-18	Twin	2.26 (20)				

† Two stranded conductors placed in one UL Listed twin ferrule.

Lineside and loadside fork terminal

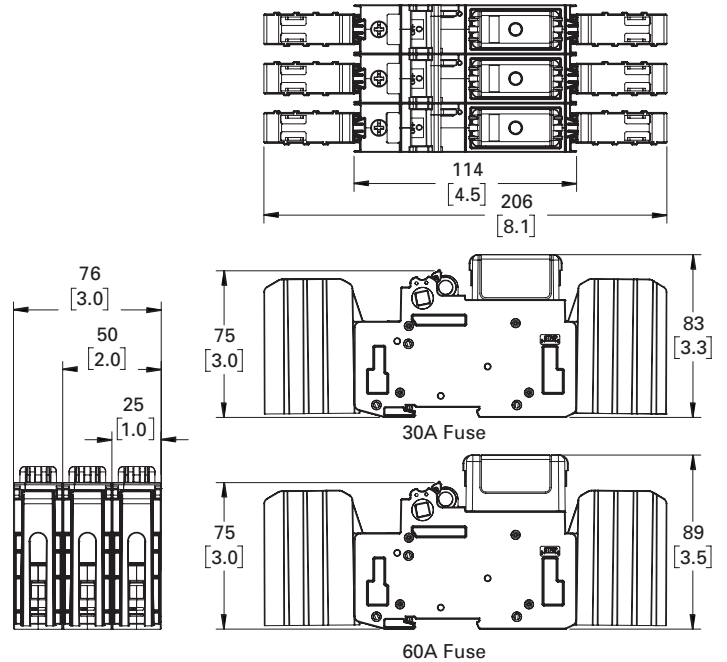
- Fork terminal suitable for line, load or accessory connection, max. 30 A suitable for use with:
 - 10-24 screw for 30 and 60 A switches
 - 1/4-28 screw for 100 A switches

Available Bussmann series fuses

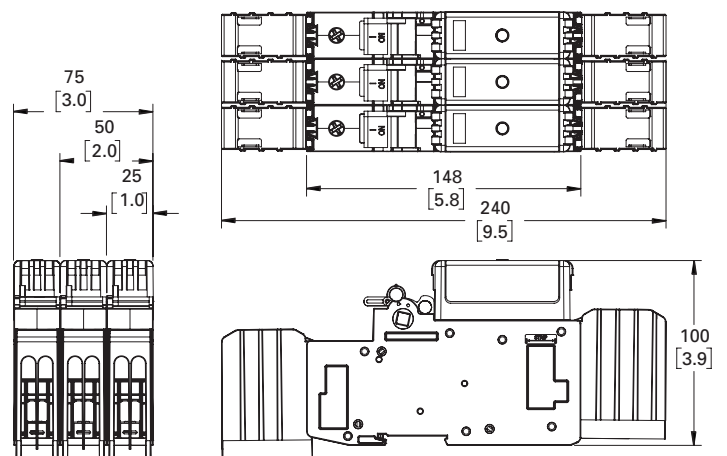
UL fuse class	Type/description	Volts	Data sheet no.
CF	Indicating time-delay, Low-Peak™ CUBEFuse (6-100 A)	600 Vac/ 300 Vdc	9000
	Non-indicating time-delay, Low-Peak CUBEFuse (1-100 A)		
	Non-indicating fast-acting CUBEFuse (1-100 A)	600 Vac/dc	2147

Dimensions – mm (in)

Switch (shown with optional terminal shrouds)

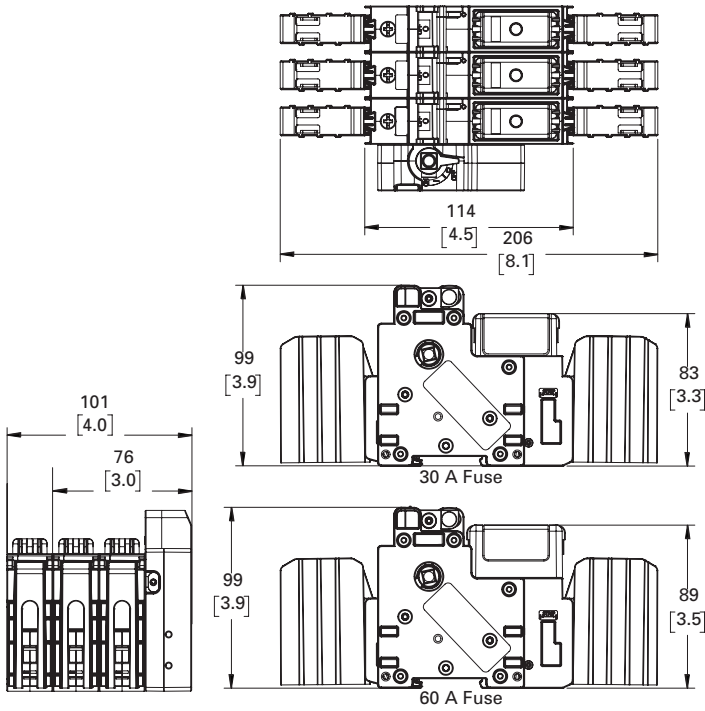


30 and 60 amp switches



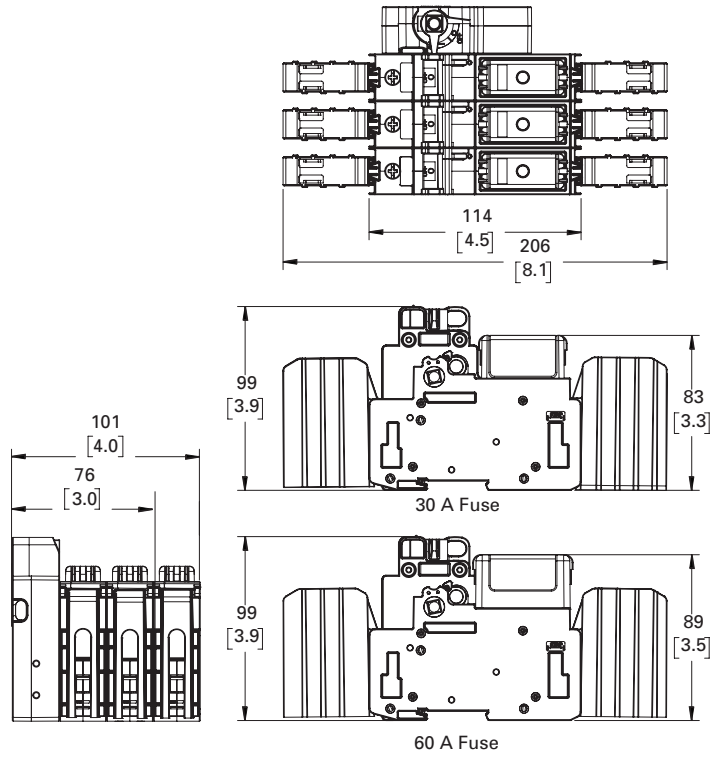
100 amp switches

Left front rotary switches (shown with optional terminal shrouds)

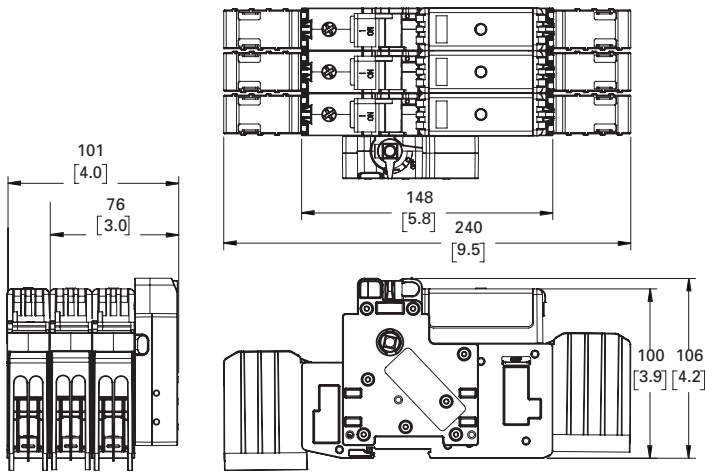


30 and 60 amp switches

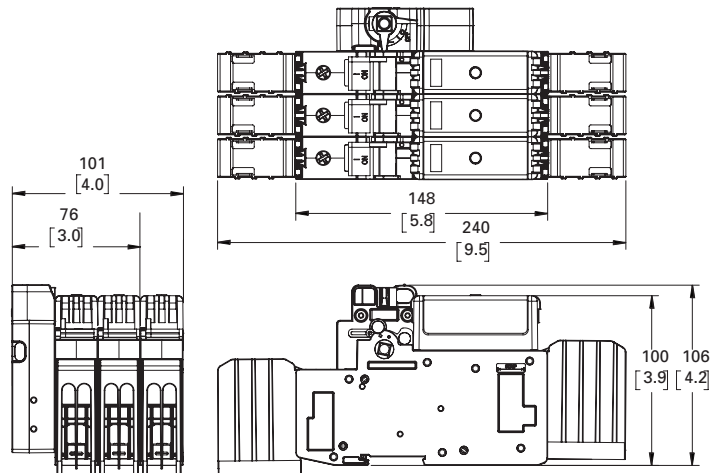
Right front rotary switches (shown with optional terminal shrouds)



30 and 60 amp switches

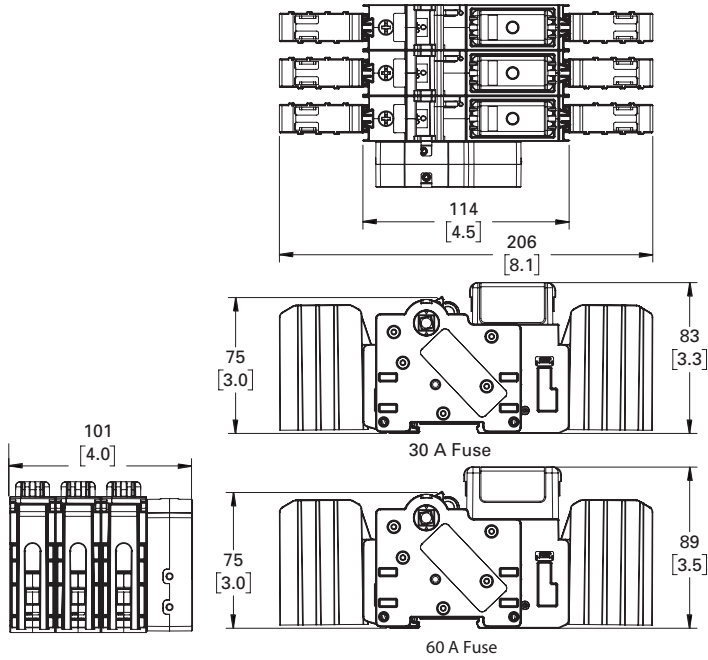


100 amp switches

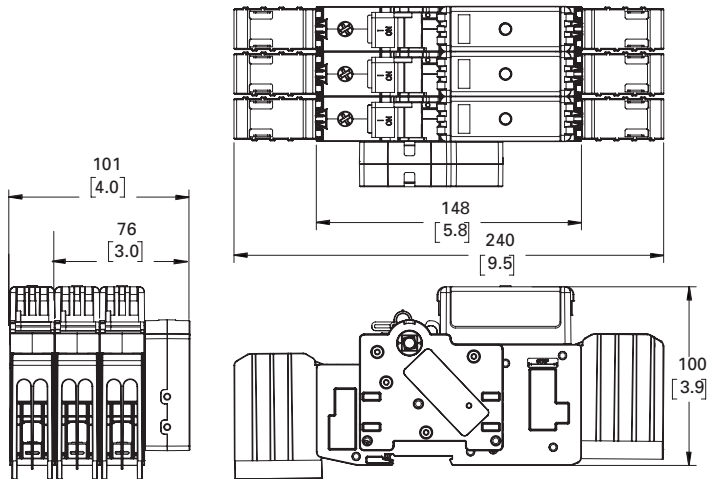


100 amp switches

Left side rotary switches (shown with optional terminal shrouds)

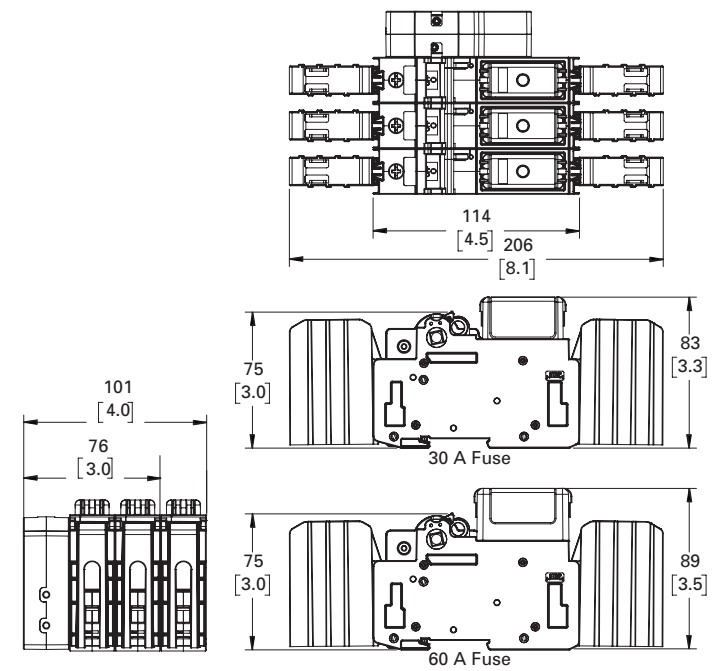


30 and 60 amp switches

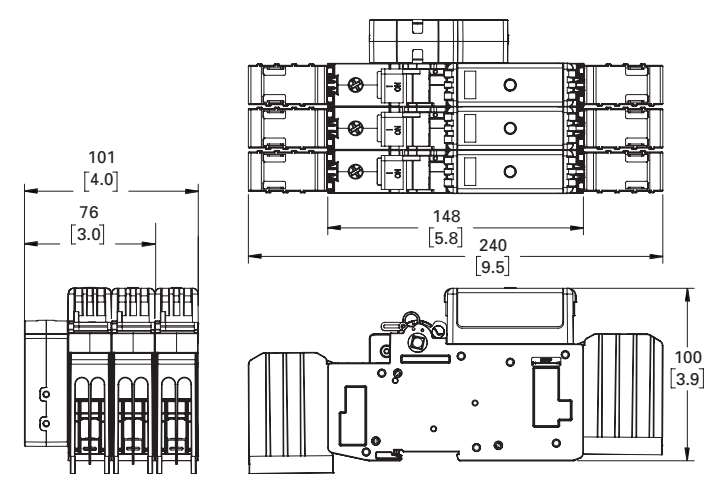


100 amp switches

Right side rotary switches (shown with optional terminal shrouds)



30 and 60 amp switches



100 amp switches

Selector and pistol handles

Catalog symbol

- CCP2-H4X-__

Description

Selector and pistol handles for use with any 2- and 3-pole CCP2 rotary operated switch. Both selector and pistol handles are available in black/grey and red/yellow colors and clockwise/counterclockwise operating modes. The application of clockwise and counterclockwise operation is dependent upon the CCP2 rotary switch configuration. Installation requires an 8 mm shaft (ordered separately).

Each handle is rated NEMA 4X and capable of accepting up to three (3) 1/4" locks for lockout/tagout in the OFF position. They can also be field configured for lock-on.

In application, only the clockwise operating handles in combination with either the left front or right front rotary switches provide a door interlock means to ensure the enclosure door remains shut during lockout/tagout or lock-on. Both clockwise and counterclockwise operating handles when mounted on the enclosure's left or right side do NOT provide a door interlock means.

See the catalog number table below for applicable rotary switch, handle and shaft combinations.

Carton quantity and shipping weight

Handle style	Qty.	Weight lbs (kg)
All selector handles	1	1.1 (0.5)
All pistol handles		1.3 (0.59)

Handle shafts

Catalog symbol

- CCP2-SH1-__

Description

Eight millimeter square shafts available in 290 and 490 millimeter (11.5 and 19.3 inch) lengths. Shafts are indexed to ensure handle/switch orientation for correct operation. Shafts are to be cut to length when installed.

Packaging

- Each shaft is packaged separately

Agency information

- UL Listed, Guide DIHS/DIHS7, File E140305
- NEMA 4X rating
- RoHS compliant
- CE

Storage and operating temperature

- -20°C to 75°C (-4°F to 167°F)

Packaging

- Each handle is packaged individually as a kit

Selector handles



Clockwise

- CCP2-H4X-B1
- CCP2-H4X-R1

Counterclockwise

- CCP2-H4X-B1L
- CCP2-H4X-R1L

Pistol handles



Clockwise

- CCP2-H4X-B2
- CCP2-H4X-R2

Counterclockwise

- CCP2-H4X-B2L
- CCP2-H4X-R2L

Handle shafts



For these switch catalog numbers	Description/operation	Order these handle catalog numbers (description)	Order either shaft catalog number
CCP2R-(pole)-30CF	Right front rotary, clockwise	<ul style="list-style-type: none"> • CCP2-H4X-B1 (selector, black/grey) • CCP2-H4X-R1 (selector, red/yellow) • CCP2-H4X-B2 (pistol, black/grey) • CCP2-H4X-R2 (pistol, red/yellow) 	<ul style="list-style-type: none"> • CCP2-SH1-290 (11.5"/290 mm) • CCP2-SH1-490 (19.3"/490 mm)
CCP2R-(pole)-60CF			
CCP2R-(pole)-100CF			
CCP2RL-(pole)-30CF	Left front rotary, clockwise	<ul style="list-style-type: none"> • CCP2-H4X-B1 (selector, black/grey) • CCP2-H4X-R1 (selector, red/yellow) • CCP2-H4X-B2 (pistol, black/grey) • CCP2-H4X-R2 (pistol, red/yellow) 	<ul style="list-style-type: none"> • CCP2-SH1-290 (11.5"/290 mm) • CCP2-SH1-490 (19.3"/490 mm)
CCP2RL-(pole)-60CF			
CCP2RL-(pole)-100CF			
CCP2S-(pole)-30CF	Right side rotary, clockwise	<ul style="list-style-type: none"> • CCP2-H4X-B1 (selector, black/grey) • CCP2-H4X-R1 (selector, red/yellow) • CCP2-H4X-B2 (pistol, black/grey) • CCP2-H4X-R2 (pistol, red/yellow) 	<ul style="list-style-type: none"> • CCP2-SH1-290 (11.5"/290 mm) • CCP2-SH1-490 (19.3"/490 mm)
CCP2S-(pole)-60CF			
CCP2S-(pole)-100CF			
CCP2SL-(pole)-30CF	Left side rotary, counterclockwise	<ul style="list-style-type: none"> • CCP2-H4X-B1L (selector, black/grey) • CCP2-H4X-R1L (selector, red/yellow) • CCP2-H4X-B2L (pistol, black/grey) • CCP2-H4X-R2L (pistol, red/yellow) 	<ul style="list-style-type: none"> • CCP2-SH1-290 (11.5"/290 mm) • CCP2-SH1-490 (19.3"/490 mm)
CCP2SL-(pole)-60CF			
CCP2SL-(pole)-100CF			

Multi-wire lug kits

Catalog numbers

- CCP2-MW1-3 (for 30 and 60 A switches only)
- CCP2-MW-1-6 (for 100 A switches only)

Description

The multi-wire lug kit permits expanding each box lug terminal on the switch into a three-port (30 and 60 A switches) or six-port (100 A switches) terminal for power distribution applications.

Each multi-wire lug kit comes with three lugs and three terminal shrouds. Shrouds provide finger-safe protection when properly installed.

Lugs may be mounted on either the loadside or lineside to meet various application needs.

Ports on any one lug accept any conductor combination listed, e.g., one of the ports may have dual 14 AWG wires and the other two ports single 10 AWG wires.

Ratings

- Volts 600 V
- Amps
 - 60 A max (CCP2-MW1-3)
 - 100 A max (CCP2-MW1-6)
- SCCR 200 kA

Agency information

- UL Recognized
- RoHS compliant

Storage and operating temperature

- - 20°C to 75°C (-4°F to 167°F)

Multi-wire lug conductor information

- 75°C Cu/AL
- AWG size and quantity per port - see table below

Type	AWG range	Class	Quantity	Torque N•m (lb-in)
Cu/Al	4-6	Stranded, Class B/C	Single	3.95 (35)
	8			2.82 (25)
Cu	10-14	Stranded, Class B/C	Single/dual*	2.26 (20)
	10-14			Solid
	8	UL ferrule, Class B to K	Single/twin†	2.82 (25)
	10-14			2.26 (20)

* Dual wire to be same size and type.

† Two stranded conductors placed in one UL Listed twin ferrule.

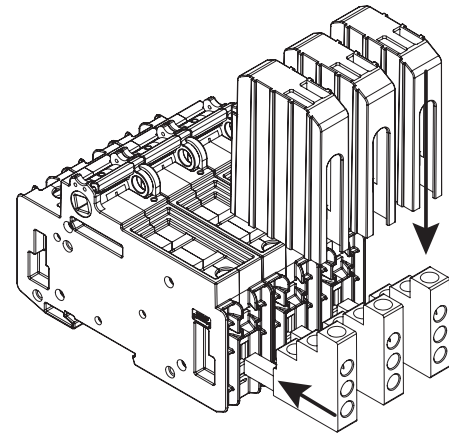
CCP2 box lug torque for multi-wire lugs

- 60 A lug, 4.52 N•m (40 lb-in)
- 100 A lug, 5.09 N•m (45 lb-in)

Carton quantity and shipping weight

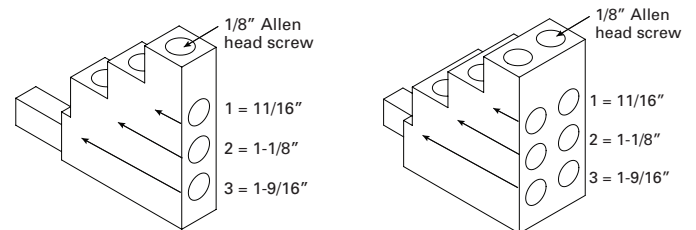
Catalog no.	Description/application	Qty.	Weight lbs (kg)
CCP2-MW1-3	Lug kit, 30/60 A switches	3 lugs and 3 shrouds	0.36 (0.16)
CCP2-MW-1-6	Lug kit, 100 A switches	3 lugs and 3 shrouds	0.49 (0.22)
CCP2-TS1-3	Shrouds, 30/60 A switches	3 shrouds	0.17 (0.077)
CCP2-TS1-6	Shrouds, 100 A switches		0.2 (0.09)

Installed on CCP2-3-xx



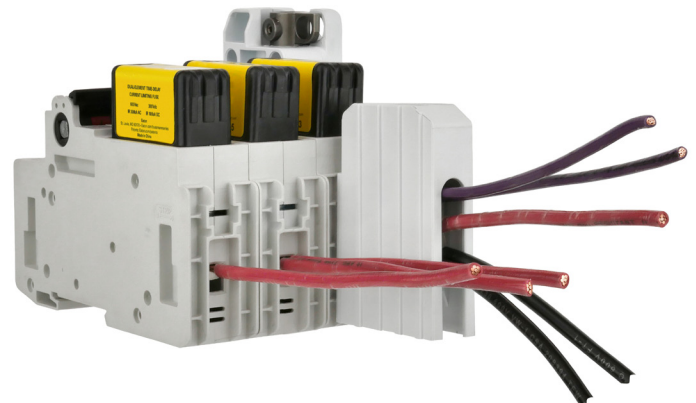
Multi-wire lugs mount in switch box lug terminals to provide three or six additional wire ports per pole. Lugs can be mounted on the switch lineside or loadside. Each multi-wire lug kit comes with three lugs and three shrouds.

Wire insulation strip lengths



Strip back wire insulation to the lengths as indicated in the illustration above and the table below.

Lug port	Strip wire insulation back (inch)
1	11/16
2	1-1/8
3	1-9/16



Wiring versatility is provided by single/dual rated box lug terminals on the switch, or by the three-port or six-port multi-wire lug kits that are also single/dual wire rated.

Auxiliary contacts

Catalog numbers

- CCP2-AUX (30 and 60 A switches)
- CCP2-AUX-100 (100 A switches)

Description

NO+NC contact output to indicate the switching mechanism status on the CCP2. A single unit can be mounted on any 1-, 2- or 3-pole CUBEFuse CCP2 switch and the right front/right side rotary operated switches.



Ratings

- Amps up to 5 A
- Volts up to 240 Vac
- NC/NO contacts are closed/open when the CCP2 switch is in the "ON" position (closed)

Installed on a CCP2-3-xx

Note: CCP2-AUX and CCP2-AUX-100 **CANNOT** be mounted on the left front and left side rotary operated versions.



Catalog no.	Switch	Description	Max per CCP2*	Signal output
CCP2-AUX	30/60 A only	Auxiliary contacts NO+NC for switch status	1 per CCP2 (1-, 2- or 3-pole)	5 A / 240 Vac
CCP2-AUX-100	100 A only			

* The CCP2-AUX CANNOT be mounted on the left front and left side rotary operated versions.
De-energize all circuits and follow all prescribed safety procedures before installing or removing the auxiliary contact device.

Agency information

- UL 98 Recognized, Guide WHY2, File E155130
- cURus to Canadian Standard 22.2 No. 4-04
- IEC 60947-5-1 AC-15 (catalog no. CCP2-AUX)
- IP20 finger-safe in installed state
- RoHS compliant
- CE

Wiring

- 20-16 AWG (0.5 to 1.5 mm²) wire
- Torque 0.56 N•m (5 lb-in)
- Use only 75°C Cu wire

Packaging

- CCP2-AUX and CCP2-AUX-100 are packaged individually

Installation technique

- Mounts on the CCP2's right side **ONLY** and mechanically interlocks with the CCP2 switch handle with provided hardware. The CCP2-AUX and CCP2-AUX-100 **CANNOT** be mounted on the left front and left side rotary operated versions.

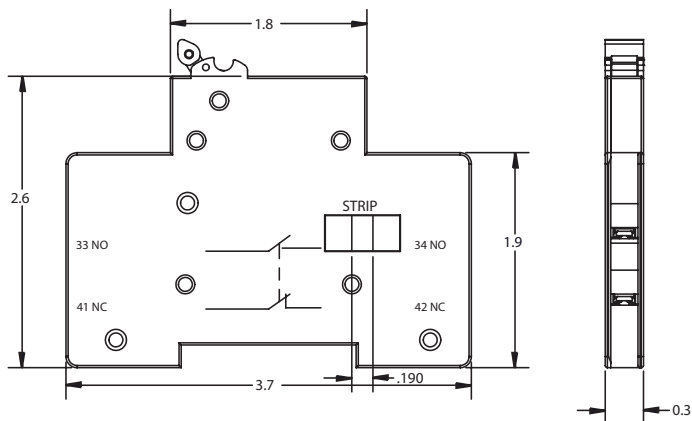
Storage and operating temperature

- -20°C to 75°C (-4°F to 167°F)

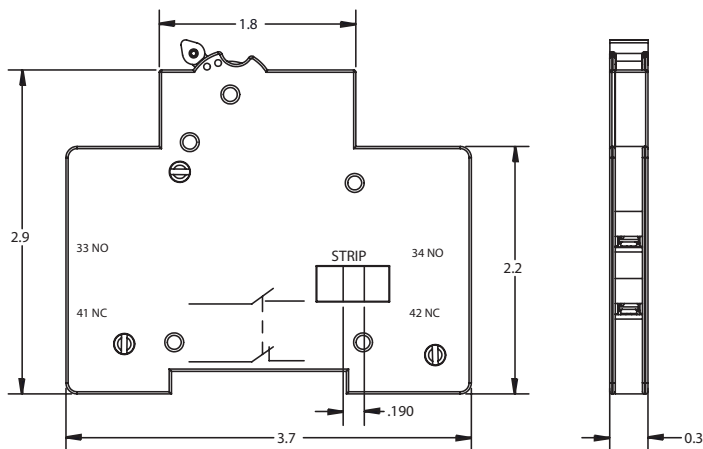
Carton quantity and shipping weight

Catalog no.	Application	Qty.	Weight lbs (kg)
CCP2-AUX	For 30 and 60 A switches only	1	0.14 (0.063)
CCP2-AUX-100	For 100 A switches only		

Dimensions — in



CCP2-AUX



CCP2-AUX-100

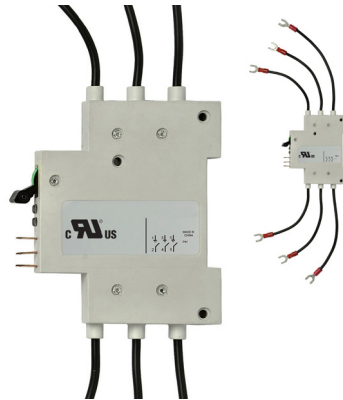
PLC fuse monitor

Catalog numbers

- CCP2-PLC-IND (30/60 A switches)
- CCP2-PLC-100 (100 A switches)

Description

A resettable three-phase fuse monitor that integrates with the I/O card in a Programmable Logic Controller (PLC). A single unit can be mounted on any 1-, 2- or 3-pole 30 and 60 amp CUBEFuse CCP2 switch and the left front/ left side rotary operated switches. A single unit monitors up to three phases. When used on 1- and 2-pole switches unused conductor(s) are removed after installation. The CCP2-PLC-IND **CANNOT** be mounted on the right front/right side rotary operated versions or if the multi-wire lug kit is installed.



Ratings

- Signal output to PLC*
 - +24 Vdc, 10 mA max
- Output signals
 - Digital 0 Vdc (low), 24 Vdc max (high)
 - 0 Vdc Low – fuse is good
 - 24 Vdc High – fuse has opened

* When the fuse opens, the output signal is sent high and will remain high until the unit is reset.

Emissions and immunity testing

- IEC 60947-1: Voltage Switchgear and Control Gear
- IEC 61000-6-2: Electromagnetic Compatibility (EMC)
 - IEC 61000-4-2: Electrostatic Discharge Immunity - Test at level 3 (6 kV-Contact Discharge) and level 2 (4 kV-Air Discharge)
 - IEC 61000-4-3: Electromagnetic Compatibility - Radiated, Radio-frequency, Electromagnetic Field Immunity test at level x (20 V/m)
 - IEC 61000-4-4: Electromagnetic Compatibility - Testing and Measurement Techniques at level 3 (± 2 kV - Power Port and ± 1 kV - I/O Ports)
 - IEC 61000-4-5: Electromagnetic Compatibility - Surge Immunity test at level 4 (± 4 kV)
 - IEC 61000-4-6: Immunity to Conducted Disturbances at level 3 (10 V)

Catalog no.	Switch	Description	Max per CCP2**	Signal output to PLC	Min. circuit volts
CCP2-PLC-IND	30/60 A only	Wired remote fuse indication for PLC applications	1 per CCP2 (1, 2- or 3-pole)	24 Vdc/ 10 mA	100 Vac
CCP2-PLC-100	100 A only				

**The CCP2-PLC-IND and CCP2-PLC-100 CANNOT be mounted on the right front/ right side rotary operated versions or if the multi-wire lug kit is installed.

De-energize all circuits and follow all prescribed safety procedures before installing or removing the CCP2-PLC-IND or CCP2-PLC-100.

Agency information

- UL 98 Recognized, Guide WHTY2, File E155130
- cURus to Canadian Standard 22.2 No. 4-04

Local indication

- Two distinct LEDs indicate unit power (green) and open fuse (red). Open fuse LED is resettable upon fuse replacement and the actuating the reset switch

Wiring

- For power, signal and ground connections use shielded twisted pair 22-24 AWG (0.34-0.25 mm²) 300 V rated wire

Packaging

Catalog no.*	Application	Qty.	Weight lbs (kg)
CCP2-PLC-IND	30 and 60 A switches only	1	0.17 (0.077)
CCP2-PLC-100	100 A switches only		

* Includes 0.110" (2.8 mm) quick connects for power, signal and ground connections.

Installation technique

- Mounts on the left side ONLY of the CCP2 and mechanically interlocks with the CCP2 switch handle with hardware provided. The CCP2-PLC-IND and CCP2-PLC-100 **CANNOT** be mounted on the right front/right side rotary operated versions or if the multi-wire lug kit is installed.

IP20 rating – yes

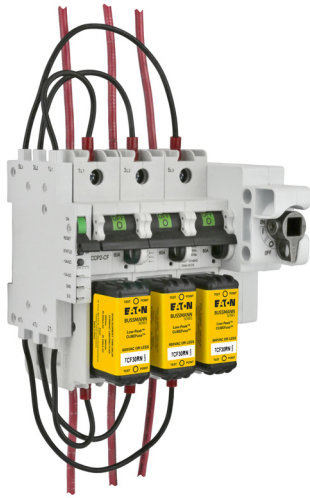
Storage and operating temperature

- -20°C to 75°C (-4°F to 167°F)

PLC programming

- The CCP2-PLC-IND or CCP2-PLC-100 signal line is designed to provide a digital input to a PLC I/O card. In this case, a Programmable Logic Control program must be written to properly interpret the input signal to the PLC. The PLC program should check for consecutive high signals before taking action on a critical process.

Installed on a CCP2-3-xx



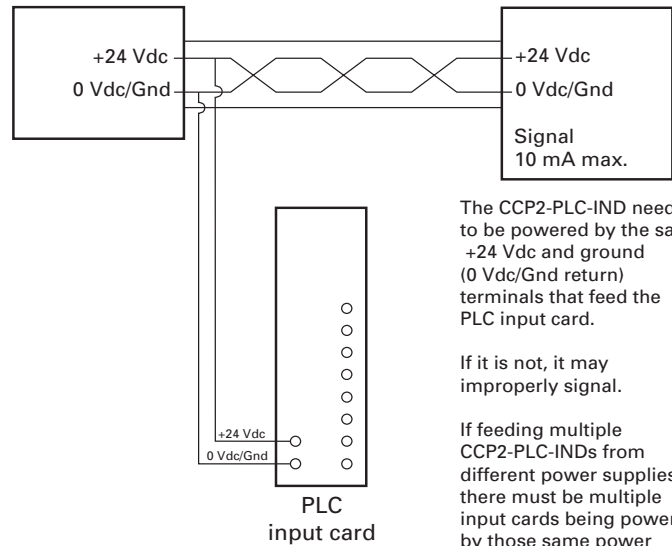
CCP2-PLC-IND mounted on a 3-pole switch and using the fork terminals. When mounted on a 2- or 1-pole switch, remove unused leads.

Note: the CCP2-PLC-IND **CANNOT** be mounted on the right front/right side rotary operated versions or if the multi-wire lug kit is installed.

PLC wiring schematic

PLC power supply

CCP2-PLC-IND

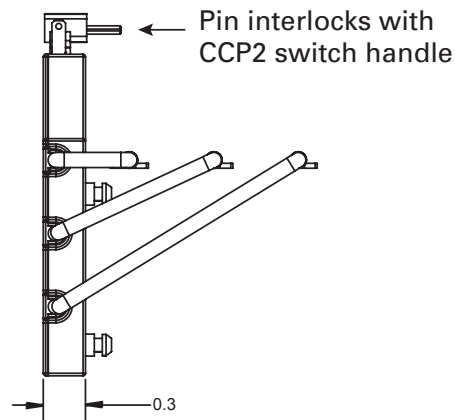
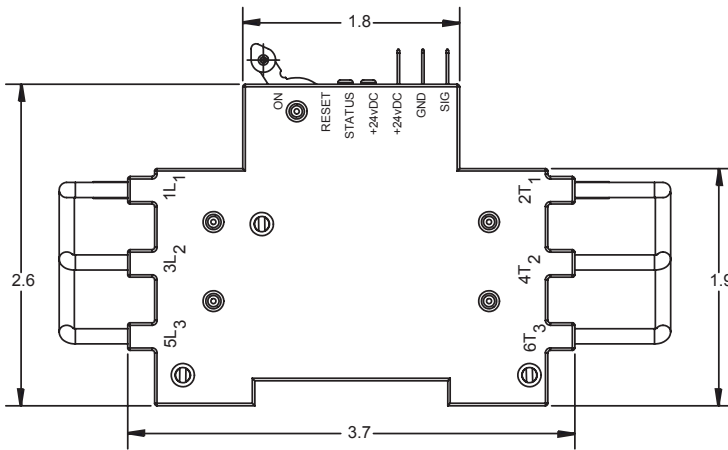


The CCP2-PLC-IND needs to be powered by the same +24 Vdc and ground (0 Vdc/Gnd) terminals that feed the PLC input card.

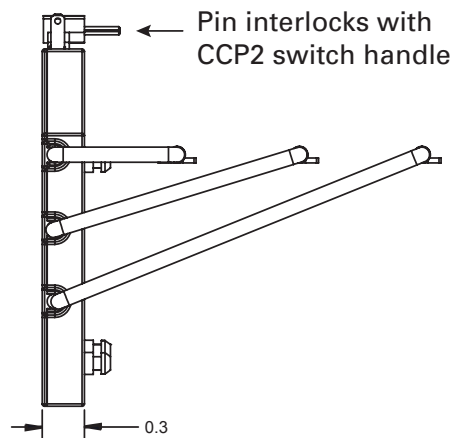
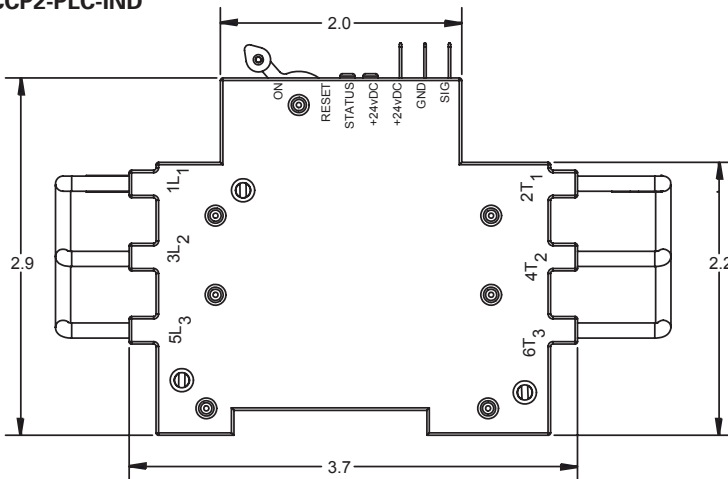
If it is not, it may improperly signal.

If feeding multiple CCP2-PLC-INDs from different power supplies, there must be multiple input cards being powered by those same power supplies as well.

Dimensions – in







CCP2-PLC-IND



CCP2-PLC-100







30 and 60 A CCP2 Switches




For a complete assembly, select from the following required and optional components and accessories.

Required		Catalog no.		
		Switches	Amps	Poles
		Switch (used alone or with flange cable or flange rod handles)		
		CCP2-1-30CF	30	1
CCP2-2-30CF	2			
CCP2-3-30CF	3			
CCP2-1-60CF	60	1		
CCP2-2-60CF		2		
CCP2-3-60CF		3		
And				
Optional		Lug kits	Description	
		CCP2-MW1-3	3-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shields, pack of 3	
And				
Accessories		Terminal shrouds	Description	
		CCP2-TS1-3	Pack of 3	
		Auxiliary contacts	Description — mounts on right side, cannot be used with flange rod handle	
		CCP2-AUX	NO + NC, 5 A / 240 V	
	PLC fuse monitor	Description — mounts on left side, cannot be used with flange rod handle		
	CCP2-PLC-IND	Signal output 24 Vdc / 10 mA		

30 and 60 A CCP2 Clockwise rotary switches

For a complete assembly, select from the following required and optional components and accessories.

Required	Catalog no.			
	Switches	Amps	Poles	
	Right front rotary			
		CCP2R-2-30CF	30	2
		CCP2R-3-30CF		3
		CCP2R-2-60CF	60	2
		CCP2R-3-60CF		3
	Left front rotary			
		CCP2RL-2-30CF	30	2
		CCP2RL-3-30CF		3
		CCP2RL-2-60CF	60	2
		CCP2RL-3-60CF		3
	Right side rotary			
		CCP2S-2-30CF	30	2
		CCP2S-3-30CF		3
		CCP2S-2-60CF	60	2
		CCP2S-3-60CF		3
	And			
	Rotary handles	Description	NEMA rating	
	CCP2-H4X-B1	Selector handle — black/grey	4X	
	CCP2-H4X-R1	Selector handle — red/yellow		
	CCP2-H4X-B2	Pistol handle — black/grey		
	CCP2-H4X-R2	Pistol handle — red/yellow		
And				
	Shafts (8 mm)	Length		
	CCP2-SH1-290	290 mm		
	CCP2-SH1-490	490 mm		
And				
Optional		Lug kits	Description	
	CCP2-MW1-3	3-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shields, pack of 3		

And			
Accessories		Terminal shrouds	Description
		CCP2-TS1-3	Pack of 3
		Auxiliary contacts	Description — use with CCP2RL-(poles)-30/60CF switches
		CCP2-AUX	NO + NC, 5 A / 240 V
		PLC fuse monitor	Description — use with CCP2R-(poles)-30/60CF and CCP2S-(poles)-30/60CF switches
		CCP2-PLC-IND	Signal output 24 Vdc / 10 mA





30 and 60 A CCP2 Counterclockwise switches

For a complete assembly, select from the following required and optional components and accessories.

Required	Catalog no.			
	Switches	Amps	Poles	
	Left side rotary			
		CCP2SL-2-30CF	30	2
		CCP2SL-3-30CF		3
		CCP2SL-2-60CF	60	2
		CCP2SL-2-60CF		2
	And			
		Rotary handles	Description	NEMA rating
		CCP2-H4X-B1L	Selector handle — black/grey	4X
CCP2-H4X-R1L		Selector handle — red/yellow		
CCP2-H4X-B2L		Pistol handle — black/grey		
CCP2-H4X-R2L		Pistol handle — red/yellow		
And				
	Shafts (8 mm)	Length		
	CCP2-SH1-290	290 mm		
	CCP2-SH1-490	490 mm		
And				
Optional		Lug kits	Description	
		CCP2-MW1-3	3-port multi-wire, 75°C Cu/Al, 14-6, includes terminal shields, pack of 3	
And				
Accessories		Terminal shrouds	Description	
		CCP2-TS1-3	Pack of 3	
		Auxiliary contacts	Description — mounts on right side	
CCP2-AUX		NO + NC, 5 A / 240 V		






100 A CCP2 Switches




For a complete assembly, select from the following required and optional components and accessories.

Required	Catalog no.		
	Switches	Amps	Poles
	Switch (used alone or with flange cable or flange rod handles)		
		CCP2-1-100CF	100
CCP2-2-100CF		2	
CCP2-3-100CF		3	
And			
Optional	Lug kits	Description	
		CCP2-MW1-6	6-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shields, pack of 3
And			
Accessories	Terminal shrouds	Description	
		CCP2-TS1-6	Pack of 3
	Auxiliary contacts	Description — mounts on right side, cannot be used with flange rod handle	
	CCP2-AUX-100	NO + NC, 5 A / 240 V	
	PLC fuse monitor	Description — mounts on left side, cannot be used with flange rod handle	
	CCP2-PLC-100	Signal output 24 Vdc / 10 mA	

100 A CCP2 Clockwise rotary switches







For a complete assembly, select from the following required and optional components and accessories.

Required	Catalog no.			
	Switches	Amps	Poles	
	Right front rotary			
		CCP2R-2-100CF	100	2
		CCP2R-3-100CF		3
	Left front rotary			
		CCP2RL-2-100CF	100	2
		CCP2RL-3-100CF		3
	Right side rotary			
		CCP2S-2-100CF	100	2
		CCP2S-3-100CF		3
	And			
		Rotary handles	Description	NEMA rating
		CCP2-H4X-B1	Selector handle — black/grey	4X
		CCP2-H4X-R1	Selector handle — red/yellow	
	CCP2-H4X-B2	Pistol handle — black/grey		
	CCP2-H4X-R2	Pistol handle — red/yellow		
And				
	Shafts (8 mm)	Length		
	CCP2-SH1-290	290 mm		
	CCP2-SH1-490	490 mm		
And				
Optional		Lug kits	Description	
		CCP2-MW1-6	6-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shields, pack of 3	

And		
Accessories		Terminal shrouds
	CCP2-TS1-6	Description
		Pack of 3
	Auxiliary contacts	Description — use with CCP2RL-(poles)-100CF switches
	CCP2-AUX-100	NO + NC, 5 A / 240 V
	PLC fuse monitor	Description — use with CCP2R-(poles)-100CF and CCP2S-(poles)-100CF switches
	CCP2-PLC-100	Signal output 24 Vdc / 10 mA

100 A CCP2 Counterclockwise switches

For a complete assembly, select from the following required and optional components and accessories.

Required	Catalog no.			
	Switches	Amps	Poles	
	Left side rotary			
		CCP2SL-2-100CF	100	2
		CCP2SL-3-100CF		3
	And			
		Rotary handles	Description	NEMA rating
		CCP2-H4X-B1L	Selector handle — black/grey	4X
		CCP2-H4X-R1L	Selector handle — red/yellow	
		CCP2-H4X-B2L	Pistol handle — black/grey	
CCP2-H4X-R2L		Pistol handle — red/yellow		
And				
	Shafts (8 mm)	Length		
	CCP2-SH1-290	290 mm		
	CCP2-SH1-490	490 mm		
And				
Optional		Lug kits	Description	
		CCP2-MW1-6	6-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shields, pack of 3	
And				
Accessories		Terminal shrouds	Description	
		CCP2-TS1-6	Pack of 3	
		Auxiliary contacts	Description — mounts on right side	
CCP2-AUX-100		NO + NC, 5 A / 240 V		

Motor sizing table:

Low-Peak™ TCF_ and TCF_RN time-delay Class CF fuses

Voltage	Motor size (Hp)	Motor FLA (amps)	Optimal protection (amps)	Code max (amps)	Heavy start* (amps)
115 Vac, 1-phase	0.167	4.4	10	10	10
	0.25	5.8	10	15	15
	0.333	7.2	15	15	15
	0.5	9.8	15	20	20
	0.75	13.8	25	25	30
	1	16	25	30	35
	1.5	20	30	35	45
	2	24	40	45	50
	3	34	50	60	N/A
	5**	56	90	100	N/A
230 Vac, 1-phase	0.167	2.2	6	6	6
	0.25	2.9	6	6	6
	0.333	3.6	6	10	10
	0.5	4.9	10	10	10
	0.75	6.9	15	15	15
	1	8	15	15	17.5
	1.5	10	15	20	20
	2	12	20	25	25
	3	17	25	30	35
	5	28	45	50	60
200 Vac, 3-phase	0.5	2.5	6	6	6
	0.75	3.7	6	10	10
	1	4.8	10	10	10
	1.5	6.9	15	15	15
	2	7.8	15	15	17.5
	3	11	17.5	20	20
	5	17.5	30	35	35
	7.5	25.3	40	45	50
	20**	62.1	100	N/A	N/A
	208 Vac, 3-phase	0.5	2.4	6	6
0.75		3.5	6	10	10
1		4.6	10	10	10
1.5		6.6	10	15	15
2		7.5	15	15	15
3		10.6	17.5	20	20
5		16.7	25	30	35
7.5		24.2	40	45	50
20**		59.4	90	N/A	N/A

Voltage	Motor size (Hp)	Motor FLA (amps)	Optimal protection (amps)	Code max (amps)	Heavy start* (amps)
230 Vac, 3-phase	0.5	2.2	6	6	6
	0.75	3.2	6	6	6
	1	4.2	10	10	10
	1.5	6	10	15	15
	2	6.8	15	15	15
	3	9.6	15	20	20
	5	15.2	25	30	30
	7.5	22	35	40	45
	20**	54	90	100	N/A
	460 Vac, 3-phase	0.5	1.1	3	3
0.75		1.6	3	3	3
1		2.1	6	6	6
1.5		3	6	6	6
2		3.4	6	6	6
3		4.8	10	10	10
5		7.6	15	15	15
7.5		11	17.5	20	20
10		14	25	25	30
15		21	35	40	45
575 Vac, 3-phase	20	27	40	50	60
	50**	65	100	N/A	N/A
	0.5	0.9	3	3	3
	0.75	1.3	3	3	3
	1	1.7	3	3	3
	1.5	2.4	6	6	6
	2	2.7	6	6	6
	3	3.9	6	10	10
	5	6.1	10	15	15
	7.5	9	15	20	20
40**	10	11	17.5	20	20
	41	70	80	80	80

Note: Use Code max column for low to moderate reverse/jog/plug applications.

* Heavy Start permitted only if Code Max does not allow motor start-up.

**If equipment terminations are rated for 60°C conductors only, the 60°C conductor ampacities must be utilized and therefore larger conductor sizes or conduit sizes may be required.

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