

# **Compact Circuit Protector**

UL 98 Class CF disconnect switches up to 200 A (cat. no. CCP2)







CCP2 switch up to 100 A



200 A CCP2 switch

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	200 A switches



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# Compact Circuit Protector (CCP2) UL 98 Class CF disconnect switches up to 200 A

## Catalog symbols for 30, 60 and 100 A switches

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

## Description

The revolutionary, next generation Bussmann™ series Compact Circuit Protector (cat. no. CCP2) is a fused UL® 98 branch circuit disconnect switch utilizing the UL Class CF time-delay or fast-acting CUBEFuse™ with Class J electrical performance. With up to a 51 percent smaller footprint than a traditional fusible solution, these switches provide a high 200 kA SCCR to help improve panel and assembly SCCR.

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.

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.

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 integrate into various 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 E302370
- · 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 kits 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 per UL 98\*

- 30 and 60 A switch 10"x 8"x 6"(254 x 203 x 152 mm)
- 100 A switch, 12" x 10" x 6" (305 x 254 x 152 mm)
- \* Smaller enclosures may be used at the discretion of the user, with adherence to NEC minimum wire bend radius requirements.

## Mounting\*\*

- 35 mm DIN-Rail
- \*\*Switch is panel mount with flange handle cable operator.

### Local open fuse indication minimum voltage

 90 Vac, requires an open fuse to be in the CCP2 and the switch in the ON position

## Accessories

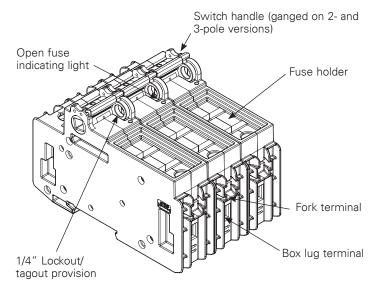
- Multi-wire lug kits with terminal shrouds
- Selector and pistol handles for use with rotary operated switches
- 8 mm shafts for use with selector and pistol handles
- · Auxiliary contacts
- PLC fuse monitor
- NFPA 79 compliant handle
- Flange handle rod and cable operators

## Carton quantity and shipping weight

Item	Poles	Qty.	Weight lb (kg)
30 and 60 amp switches			
Switch only	1-pole	12	3.8 (1.7)
Switch with side rotary mechanism -	2-pole	1	1.3 (0.6)
	3-pole	1	1.6 (0.7)
Switch with front retary mechanism -	2-pole	1	1.3 (0.6)
Switch with front rotary mechanism -	3-pole	1	1.6 (0.7)
100 amp switches			
Switch only	1-pole	6	3.1 (1.4)
Cyvitab with aids retary machanism	2-pole	1	1.7 (0.8)
Switch with side rotary mechanism -	3-pole	1	2.3 (1.0)
Chaitab with front retary machanism	2-pole	1	1.7 (0.8)
Switch with front rotary mechanism -	3-pole	1	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 rejection 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 with installed fuses
- · Horsepower rated
- · Open fuse indication:
  - · Local open fuse indication light standard on each pole
  - Optional PLC fuse monitor for wired remote open fuse indication by signaling a PLC and opening a contactor to de-energize all phases, if required
- Additional open fuse indication can be provided by the indicating time-delay CUBEFuse (6 to 100 A)
- Finger-safe construction with 10 AWG (6 mm²) wire or larger
- Built-in switch interlock prohibits removing or installing the fuse while in the ON position
- 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 or left front operation
  - Right or left side operation
- Optional selector and pistol handles, and shafts available for use with rotary operated versions
- Multi-wire lug kits with terminal shrouds allow 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 kits in accessories for 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 versions**



**Left front**Uses clockwise handles



**Right front**Uses clockwise handles



**Left side**Uses counterclockwise handles



**Right side**Uses clockwise handles

# 30, 60 and 100 A switch catalog numbers

					Ma	x Hp ra	ating (\	/ac)
Catalog no.	Poles	Description/switch operation	Volts	SCCR	120	240	480	600
30 amp switches								
CCP2-1-30CF	1		347 Vac/125 Vdc		1-1/2	_	_	_
CCP2-2-30CF	2	Switch only	600 Vac/125 Vdc	-	_	3	_	_
CCP2-3-30CF	3	_	600 Vac	-	_	5	15	10
CCP2R-2-30CF	2	Dight front retery electrics	600 Vac/125 Vdc	_	_	3	_	_
CCP2R-3-30CF	3	- Right front rotary, clockwise	600 Vac	- - 200 kA AC	_	5	15	10
CCP2RL-2-30CF	2	- Loft front retary alaskyvias	600 Vac/125 Vdc		_	3	_	_
CCP2RL-3-30CF	3	- Left front rotary, clockwise	600 Vac	- 100 kA DC	_	5	15	10
CCP2S-2-30CF	2	- Right side rotary, clockwise	600 Vac/125 Vdc	_	_	3	_	_
CCP2S-3-30CF	3	- Night side rotary, clockwise	600 Vac		_	5	15	10
CCP2SL-2-30CF	2	Left side retery counterplackwise	600 Vac/125 Vdc	_	_	3	_	_
CCP2SL-3-30CF	3	- Left side rotary, counterclockwise	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*		_	7-1/2	_	_
CCP2-3-60CF	3	_	600 Vac	-	_	7-1/2	20	10
CCP2R-2-60CF	2	- Right front rotary, clockwise	600 Vac/125 Vdc*	- 200 kA AC - 100 kA DC	_	7-1/2	_	_
CCP2R-3-60CF	3	- Aight from rotary, clockwise	600 Vac		_	7-1/2	20	10
CCP2RL-2-60CF	2	- Left front rotary, clockwise	600 Vac/125 Vdc*		_	7-1/2	_	_
CCP2RL-3-60CF	3	- Left Horit Fotally, Clockwise	600 Vac		_	7-1/2	20	10
CCP2S-2-60CF	2	- Pight side retery electronics	600 Vac/125 Vdc*		_	7-1/2	_	_
CCP2S-3-60CF	3	- Right side rotary, clockwise	600 Vac		_	7-1/2	20	10
CCP2SL-2-60CF	2	- Left side retery counterplackwise	600 Vac/125 Vdc*	•		7-1/2	_	_
CCP2SL-3-60CF	3	– Left side rotary, counterclockwise	600 Vac		_	7-1/2	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	600 Vac/125 Vdc**		_	10	_	_
CCP2R-3-100CF	3	- Night Horit rotary, clockwise	600 Vac	- 200 kA AC		20	50	40
CCP2RL-2-100CF	2	- Left front rotory, clockwine	600 Vac/125 Vdc**			10	_	
CCP2RL-3-100CF	3	– Left front rotary, clockwise	600 Vac	- 100 kA DC		20	50	40
CCP2S-2-100CF	2	- Pight aide retery electronice	600 Vac/125 Vdc**	_		10	_	_
CCP2S-3-100CF	3	– Right side rotary, clockwise	600 Vac	_		20	50	40
CCP2SL-2-100CF	2	- Loft side retary counterclockwise	600 Vac/125 Vdc**	_		10	_	
CCP2SL-3-100CF	3	– Left side rotary, counterclockwise	600 Vac			20	50	40

<sup>\* 125</sup> 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 6	0 A swit	ches			
	4-6	Stranded, Class B	Single	3.95 (35)	
	8-18	to K	Sirigle	2.26 (20)	
	6-8	Stranded, Class B/C	_	3.39 (30)	
		Stranded, Class K	_ Dual		
75°C Cu	10-18	Stranded, Class B to K		2.26 (20)	
	10-18	Solid	Single/dual	2.26 (20)	
	4-18	Stranded, UL ferrule,	Single	3.39 (30)	
	6-18	Class B/C	Twin <sup>†</sup>	3.39 (30)	
	4-18	Stranded, UL ferrule,	Single	2.82 (25)	
	6-18	Class K	Twin <sup>†</sup>	2.02 (25)	
100 A switches					
_	12-18	_		2.26 (20)	
	10	_	Single	2.82 (25)	
	8	- Strandad Class B/C		4.52 (40	
	4-6	Stranded, Class B/C		5.08 (45)	
	1-3	_		6.21 (55)	
	4-12		Dual	5.08 (45)	
	12-18			2.26 (20)	
	10		Single	3.95 (35)	
75°C Cu	1-8	Stranded, UL ferrule, Class B/C		4.52 (40)	
75°C Cu	10-18		Twint	2.26 (20)	
	6-9	-	IVVIIII	2.82 (25)	
	10-18	Solid	Single/Dual	2.26 (20)	
	8-18		Cinala	2.26 (20)	
	1-7	Class K	Single	3.39 (30)	
	3-10	-	Dual	5.08 (45)	
	8-18		Circ sile	2.26 (20)	
	1-7	Class K, UL ferrule	Single	3.39 (30)	
	6-18 Twin		Twin	2.26 (20)	

<sup>†</sup> Two stranded conductors placed in one UL Listed twin ferrule.

# Lineside and loadside fork terminal

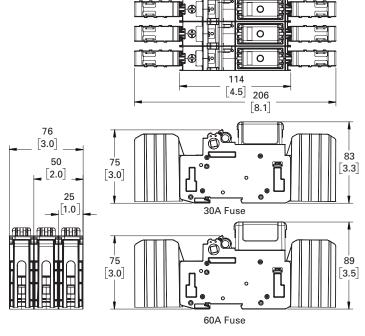
- Fork terminal suitable for line, load or accessory connection, max. 30 A suitable for use with:
  - 10-24 screw for 30 and 60 A switches
  - 1/4-28 screw for 100 A switches

## **Available Bussmann series fuses**

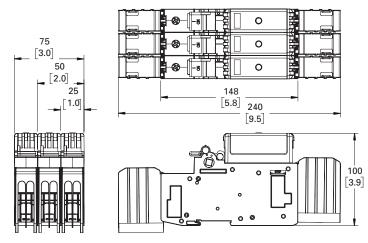
UL fuse class	Type/description	Volts	Data sheet no.
	Indicating time-delay, Low-Peak™ CUBEFuse (6-100 A)	600 Vac/	9000
CF	Non-indicating time-delay, Low-Peak CUBEFuse (1-100 A)	300 Vdc	9000
	Non-indicating fast-acting CUBEFuse (1-100 A)	600 Vac/dc	2147

## Dimensions - mm (in)

Switch (shown with optional terminal shrouds)



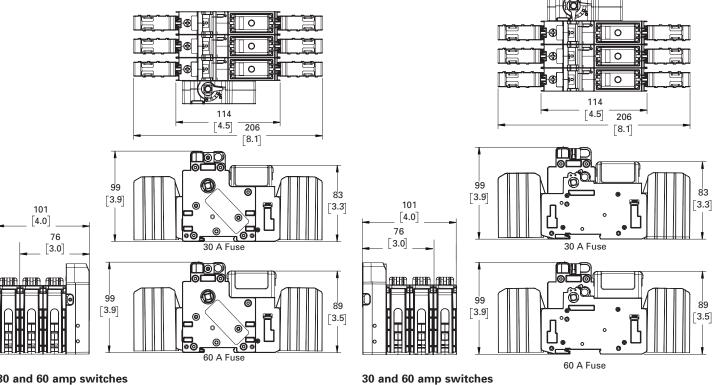
30 and 60 amp switches



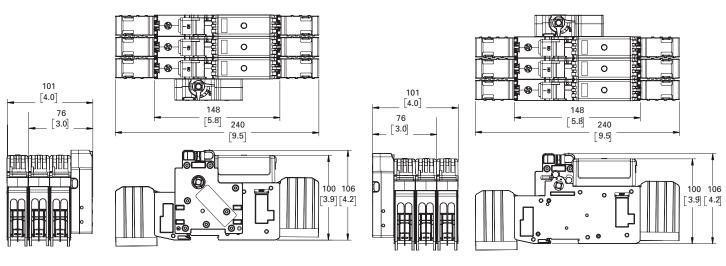
100 amp switches

Left front rotary switches (shown with optional terminal shrouds)

Right front rotary switches (shown with optional terminal shrouds)



30 and 60 amp switches

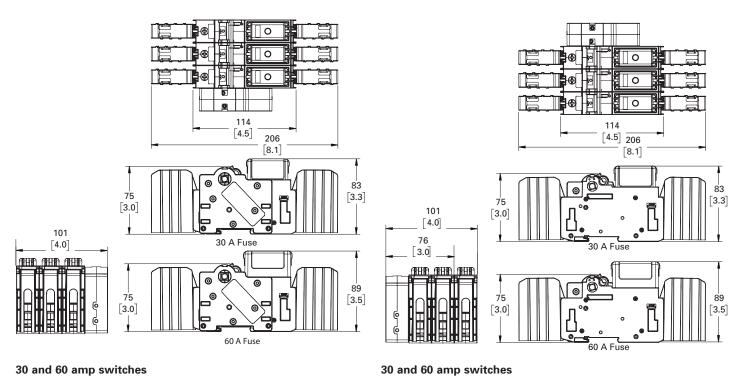


100 amp switches

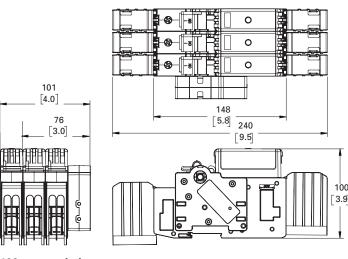
100 amp switches

Left side rotary switches (shown with optional terminal shrouds)

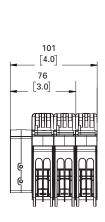
Right side rotary switches (shown with optional terminal shrouds)



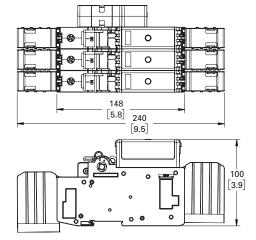
30 and 60 amp switches



100 amp switches



100 amp switches



## Technical Data 10801

Effective April 2019

## 200 A switches







With front rotary accessory

With side rotary accessory

Catalog no.	Poles	Amps	Description
CCP2-1-200CF	1		
CCP2-2-200CF	2	200	Switch only
CCP2-3-200CF	3	-	

#### Description

The Bussmann series 200 A Compact Circuit Protector (CCP2) fused disconnect switches utilize the finger-safe UL Class CF time-delay CUBEFuse with Class J electrical performance. With up to a 69 percent smaller footprint than a traditional fusible solution, these switches provide a high 200 kA SCCR to help improve panel and assembly SCCR.

The panel mount 200 A CCP2 switches are available with a variety of accessories to meet many application needs including rotary and flange handle operation.

Rotary operators are available for front or side (right or left) operation. Front rotary operators are for three-pole switches only while the side operator may be applied to the right or left side of 1-, 2- and 3-pole units.

Other accessories include lugs, terminal shrouds, rotary pistol handles, flange rod and cable operating mechanisms, NO/NC auxiliary contacts that easily integrate into various monitoring systems and a handle extension.

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) 600 Vac (2- and 3-pole)
- Amps
  - 200 A
- SCCR
  - 200 kA RMS Sym.

# Compact Circuit Protector (CCP2) UL 98 Class CF disconnect switches up to 200 A

#### **Poles**

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

#### **Agency information**

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

## Conductors/terminals

• See available lug table for size, type and torque information

# 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 using 1/4" lock

- · Integral with switch handle
- · Front rotary operating mechanism
- Rotary pistol handles
- · Flange rod and cable operators

#### Minimum enclosure size

• 200 A switch 16 x 12 x 6" (405 x 305 x 150 mm)

## Mounting

· Panel mount

## Local open fuse indication minimum voltage

 90 Vac, requires an open fuse to be in the CCP2 and the switch in the ON position

## **Accessories**

- Lugs and lug kits with terminal shrouds
- Pistol handles for use with rotary operated switches
- NFPA 79 compliant handle
- 12 mm shafts for use with selector and pistol handles
- Auxiliary contacts
- Flange handle rod and cable operators

# **Carton quantity**

Item	Poles	Qty.
	1	1
200 amp switches	2	1
	3	1

#### **Features**

- Uses UL Class CF time-delay CUBEFuse with Class J electrical performance
- Amp rating rejection feature will not accept a CUBEFuse amp ratings greater than switch rating
- · High 200 kA short-circuit current rating
- Disconnect rated to provide means for load isolation
- Full voltage rated at 600 Vac
- UL 98 Listed and suitable for branch circuit disconnect and branch circuit protection with installed fuses
- Horsepower rated (see table below)

Catalog numbers and horsepower ratings

## Standard local open fuse indication light on each pole speeds troubleshooting

- Built-in switch interlock prevents inserting or removing fuse while in the ON position
- Padlockable for lockout/tagout procedures with a 1/4" lock
- Front and side rotary operator accessories provide for throughthe-door and through-the-side operation flexibility and enhanced safety
- Optional pistol handles and shafts available for use with rotary operator accessories
- Multi-wire lug kits with terminal shrouds allow for power distribution to multiple loads.

					ľ	/lax Hp rating (Vac	e)
Catalog no.	Poles	Description	Volts AC	SCCR	240	480	600
200 amp switches							
CCP2-1-200CF	1		347		_	_	_
CCP2-2-200CF	2	Switch only		200 kA	10	_	_
CCP2-3-200CF	3		600	•	50	100	150

## Available lugs, conductor ratings and terminal torques

Catalog no. 200 A switche	Description s	Lugs per cat. no.	Wire range AWG (mm²)	Wire type/ temp.	Conductor torque N•m (lb-in)	Lug mounting screw torque N·m (lb-in)
CCP2-L2-1	Stainless steel lug	1	350-4 (185-25)	Cu 75°C	20.3 (180)	0.9 (8)
CCP2-L2-1A	Aluminum lug*	1	350-4 (185-25)	Cu/Al 75°C	28.2 (250)	13.5 (120)
CCP2-MW2-3	3-port multi-wire terminal with shroud*	3	2-14 (35-2.5)	Cu/Al 75°C	7.9 (70)	10.8 (95)
CCP2-MW2-6	6-port multi-wire terminal with shroud*	3	6-14 (16-2.5)	Cu/Al 75°C	2.8 (25)	10.8 (95)

## \*These lugs also accept 1/4" quick connect control wire terminals. Order catalog number CCP2-CWK2 (package of 12 terminals).

# **Carton quantity**

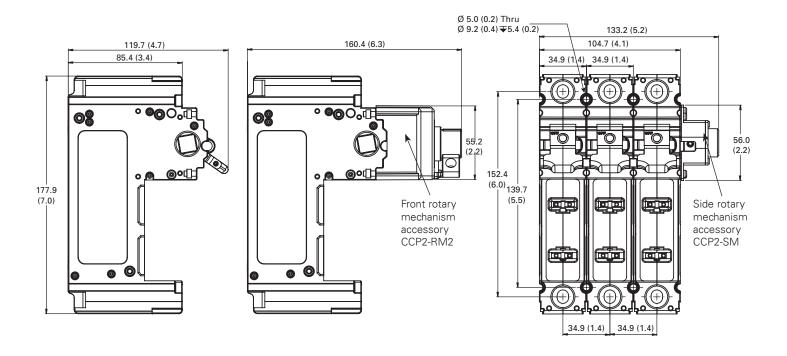
Catalog no.	Description	Qty.
CCP2-L2-1	Stainless steel lug	1
CCP2-L2-1A	Aluminum lug	1
CCP2-MW2-3	3-port multi-wire terminal with shroud	3
CCP2-MW2-6	6-port multi-wire terminal with shroud	3
CCP2-CWK2	1/4" quick connect control wire terminals	12

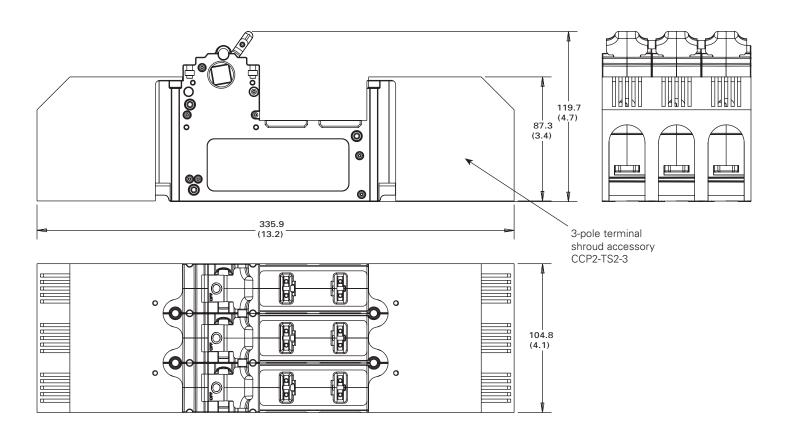
# Accessories

Catalog no.	Switch amps	Description
CCP2-TS2-3		3-pole terminal shroud
CCP2-PB2	200	Phase barriers (pack of 2)
CCP2-RM2	200	Front rotary operator* (3-pole switch only)
CCP2-SM		Side rotary operator* (1-, 2- or 3-pole switches)

<sup>\*</sup> Complete installation requires pistol handle and shaft, order separately.

## 200 amp switch dimensions - mm (in)





Effective April 2019

# 30, 60 and 100 A switch multi-wire lug kits

## Catalog numbers

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

## Description

The multi-wire lug kits permit 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

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, Guide WHTY2, File E302370
- · 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

Туре	AWG range	Class	Quantity	Torque N•m (lb-in)
Cu/AI	4-6	Ctranded Class P/C	Single	3.95 (35)
Cu/Al	8	Stranded, Class B/C	Sirigle	2.82 (25)
Cu	10-14	Stranded, Class B/C	Single/dual*	2.26 (20)
	10-14	Solid	Single	2.26 (20)
	8	III formula Class B to K	1 Ol D. K O' 1 / ' †	2.82 (25)
	10-14	- UL ferrule, Class B to K	Single/twin <sup>†</sup>	2.26 (20)

Dual wire to be same size and type.

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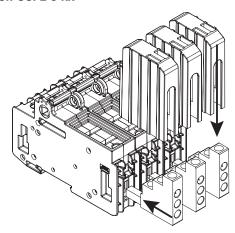
### CCP2 box lug torque for multi-wire lugs

- 30/60 A switch lug, 4.52 N•m (40 lb-in)
- 100 A switch lug, 5.09 N•m (45 lb-in)

## **Carton quantity**

Catalog no.	Application	Qty.
CCP2-MW1-3	For 30/60 A switches only	3 lugs and 3
CCP2-MW1-6	For 100 A switches only	shrouds

### Installed on CCP2-3-xx



Multi-wire lugs mount in switch box lug terminals to provide three 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.

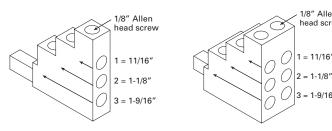
1/8" Allen

1 = 11/16"

3 = 1-9/16'

head screw

## 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.

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<sup>†</sup> Two stranded conductors placed in one UL Listed twin ferrule.

# 200 A switch multi-wire lug kits

## **Catalog numbers**

- CCP2-MW2-3 ( 3-port, 200 A switches only)
- CCP2-MW2-6 (6-port, 200 A switches only)

#### **Description**

The multi-wire lug kits permit expanding the terminal on the switch into a three-port (200 A switches) or six-port (200 A switches) terminal for power distribution applications.

Each multi-wire lug kit comes with three lugs and a 3-pole terminal shroud. The shroud provides finger-safe protection when properly installed

Lugs can only be mounted on loadside to meet 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
  - 225 A max (CCP2-MW2-3 and CCP2-MW2-6)
- SCCR 200 kA

## **Agency information**

- UL Recognized, Guide WHTY2, File E302370
- · RoHS compliant

## Storage and operating temperature

• -20°C to 75°C (-4°F to 167°F)

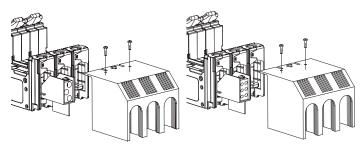
## Multi-wire lug conductor information

- 75°C Cu/AL
- · AWG size and quantity per port

## **Carton quantity**

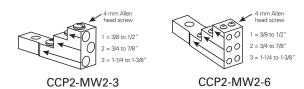
Catalog no.	Application	Qty.
CCP2-MW2-3	- For 200 A quitaboo anly	3 lugs and 1 3-pole
CCP2-MW2-6	- For 200 A switches only	shroud

## Installed on CCP2-3-xx



## 3- and 6-port multi-wire lugs mounted on 200 A switches

#### Wire insulation strip lengths



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

	Wire insulation strip length (inch)			
Lug kit	Lug port 1	Lug port 2	Lug port 3	
CCP2-MW2-3	2/0 += 1/2	2/4 + 2 7/0	1 1/4 +0 1 2/0	
CCP2-MW2-6	- 3/8 to 1/2	3/4 to 7/8	1-1/4 to 1-3/8	

# Compact Circuit Protector (CCP2) UL 98 Class CF disconnect switches up to 200 A

# Selector and pistol handles

## Catalog symbol

- CCP2-H4X-\_1 (selector handle for 30, 60 and 100 A switches)
- CCP2-H4X-\_2 (pistol handle for 30, 60 and 100 A switches)
- CCP2-H4X-\_3 (short pistol handle for 200 A switches)
- CCP2-H4X-\_4 (long pistol handle for 200 A switches)

#### Description

Selector and pistol handles are used with rotary operated switches. Pistol handles for 200 A switches come in short and long versions. All handles are available in black/gray and red/yellow colors, and clockwise/counterclockwise operating modes. Front and right side operated switches use clockwise handles while left side operated switches use counterclockwise handles.

Installation requires an 8 mm shaft for 30, 60 and 100 A switches and a 12 mm shaft for 200 A switches (ordered separately).

Each handle is rated Type 1, 4X and 12, and accepts up to three (3) 1/4" diameter shank locks for lockout/tagout in the OFF position. They can also be field configured for lock-on and are defeatable.

Only the clockwise operating handles in combination with front rotary operating switches provide a door interlock means to ensure the enclosure door remains shut during lockout/tagout or lock-on. Rotary handles 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.

## Selector handles

### Pistol handles -short and long









## **Agency information**

- UL Listed, Guide DIHS/DIHS7, File E140305
- Type 1, 4X and 12
- · RoHS compliant
- CE

# Storage and operating temperature

• -20°C to 75°C (-4°F to 167°F)

## **Carton quantity**

Catalog no.	Description	Qty.
CCP2-H4X1	30/60/100 A selector handles	1
CCP2-H4X2	30/60/100 A pistol handles	1
CCP2-H4X3	200 A short pistol handles	1
CCP2-H4X4	200 A long pistol handles	1

## Handles and shafts for 30, 60 and 100 A switches

For catalog no.	Description/operation	Order handle cat. no.	Order either 8 mm shaft cat. no.
CCP2R-(pole)-30CF			
CCP2R-(pole)-60CF	Right front rotary, clockwise		
CCP2R-(pole)-100CF		— CCP2-H4X-B1 (selector, black/grey)	
CCP2RL-(pole)-30CF		,	
CCP2RL-(pole)-60CF	Left front rotary, clockwise	CCP2-H4X-R1(selector, red/yellow)	
CCP2RL-(pole)-100CF		CCP2-H4X-B2 (pistol, black/grey)	CCP2-SH1-290 (11.5"/290 mm) CCP2-SH1-490 (19.3"/490 mm)
CCP2S-(pole)-30CF		CCP2-H4X-R2 (pistol, red/yellow)	
CCP2S-(pole)-60CF	Right side rotary, clockwise		
CCP2S-(pole)-100CF			
CCP2SL-(pole)-30CF		CCP2-H4X-B1L (selector, black/grey)	
CCD2CL (male) 60CF	Left side rotary,	CCP2-H4X-R1L (selector, red/yellow)	
CCP2SL-(pole)-60CF	counterclockwise	CCP2-H4X-B2L (pistol, black/grey)	
CCP2SL-(pole)-100CF		CCP2-H4X-R2L (pistol, red/yellow)	

# Handles and shafts for 200 A switches

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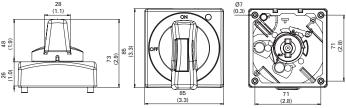
For catalog no.	Order front rotary mechanism cat. no.	Order right/ left side rotary mechanism cat. no.		Order left side counterclockwise handles (use only with CCP2-SM) cat. no.	Order either 12 mm shaft cat. no.
CCD2 (nalas) 200CF	CCD2 D1/42*	CCP2-SM	CCP2-H4X-B3 (short - black/grey)	CCP2-H4X-B3L (short - black/grey)	CCP2-SH2-225
CCP2-(poles)-200CF	CCP2-RM2*	CCP2-SIVI	CCP2-H4X-R3 (short - red/yellow)	CCP2-H4X-R3L (short - red/yellow)	(8.9"/225 mm)

<sup>\*</sup> For three-pole switches only.

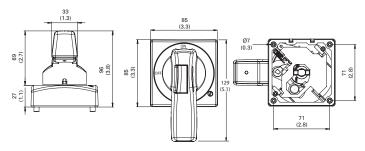
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# Handle dimensions - mm (in)

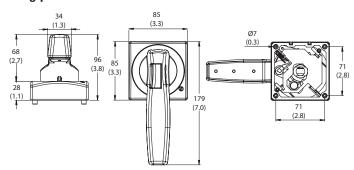
#### Selector for 8 mm shafts



## Short pistol for 8 mm and 12 mm shafts



## Long pistol for 12 mm shafts



# NFPA 79 compliant handles

# **Catalog numbers**

- CCP2-NFPA-1 (8 mm shafts for 30-100 A switches)
- CCP2-NFPA-2 (12 mm shafts for 200 and 400 A switches)

## Description

NFPA 79 handles mount on the shaft of front rotary operated switch installations and provide a lockout means independent of the door position.

## **Carton quantity**



## Handle shafts

#### 8 mm shafts



#### 12 mm shafts



## Catalog numbers

- CCP2-SH1-290 (8 mm, 290 mm long)
- CCP2-SH1-490 (8 mm, 490 mm long)
- CCP2-SH2-225 (12 mm, 225 mm long)
- CCP2-SH2-425 (12 mm, 425 mm long)

## Description

Square shafts available in:

- 8 mm square by 290 and 490 mm lengths for 30, 60 and 100 A switches
- 12 mm square by 225 and 425 mm lengths for 200 A switches

All shafts are indexed to ensure handle/switch orientation for correct operation. Shafts are to be cut to length when installed.

## **Carton quantity**

Catalog no.	Size	Length	Qty.
CCP2-SH1-290	0	290 mm	1
CCP2-SH1-490	– 8 mm	490 mm	1
CCP2-SH2-225	– 12 mm	225 mm	1
CCP2-SH2-425	— 12 mm	425 mm	1

# Flange handle rod and cable operators

Catalog no.	Description	Rating		
30, 60 and 100 amp switches				
CCP2-FLR1*	Rod operator with painted handle	Type 1, 3R, 12		
CCP2-FLR1X*	Rod operator with chrome handle	Type 4X		
CCP2-FLC1-36	36" Cable with painted handle	Type 1, 3R, 12		
CCP2-FLC1-36X	36" Cable with chrome handle	Type 4X		
CCP2-FLC1-60	60" Cable with painted handle	Type 1, 3R, 12		
CCP2-FLC1-60X	60" Cable with chrome handle	Type 4X		
CCP2-FLC1-120	120" Cable with painted handle	Type 1, 3R, 12		
CCP2-FLC1-120X	120" Cable with chrome handle	Type 4X		
200 amp switche	s			
CCP2-FLR2	Rod operator with painted handle	Type 1, 3R, 12		
CCP2-FLR2X	Rod operator with chrome handle	Type 4X		
CCP2-FLC2-36	36" Cable with painted handle	Type 1, 3R, 12		
CCP2-FLC2-36X	36" Cable with chrome handle	Type 4X		
CCP2-FLC2-60	60" Cable with painted handle	1, 3R, 12		
CCP2-FLC2-60X	60" Cable with chrome handle	Type 4X		
CCP2-FLC2-120	120" Cable with painted handle	Type 1, 3R, 12		
CCP2-FLC2-120X	120" Cable with chrome handle	Type 4X		

Installing these flange handle rod operators prohibits also installing a PLC fuse monitor or auxiliary contact.

# Description

Flange rod and cable operators for use on 2- and 3-pole CCP2 switches (cannot be used with 2- or 3-pole 30, 60 or 100 amp switches already having a front or side rotary operating mechanism).

Handles are available in painted versions with Type 1, 3R and 12 ratings or chrome versions with a Type 4X rating.

Cable operators are available with 36, 60 and 120 inch cable lengths.

# **Agency information**

- Type 1, 4X and 12
- · RoHS compliant

## Storage and operating temperature

• -20°C to 75°C (-4°F to 167°F)

## **Packaging**

• Each handle is packaged individually as a kit

## **Carton quantities**

Catalog no.	Switch amps/description	Qty.
CCP2-FLR1_	30/60/100 A rod operator	1
CCP2-FLR2_	200 A rod operator	1
CCP2-FLC1-36_	30/60/100 A 36" cable operator	1
CCP2-FLC2-36_	200 A 36" cable operator	1
CCP2-FLC1-60_	30/60/100 A 60" cable operator	1
CCP2-FLC2-60_	200 A 60" cable operator	1
CCP2-FLC1-120_	30/60/100 A 120" cable operator	1
CCP2-FLC2-120_	200 A 120" cable operator	1
	The state of the s	

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Flange rod operator kit for 30, 60 and 100 A switches.



Flange rod operator kit for 200 A switches.



Flange cable operator kit for 30, 60 and 100 A switches.



Flange cable operator kit for 200 A switches.

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## Front rotary mechanisms for 200 A switches





#### Catalog numbers

• CCP2-RM2 (3-pole 200 A switches)

#### Description

Front rotary mechanisms for through-the-door operation and install on the front of 3-pole switches only. These units provide at-switch lockout/tagout capability for enhanced safety. Complete installation requires installing pistol handle (short or long) and 12 mm shaft.

Packaged individually.

## Side rotary mechanism for 200 A switches





## Catalog number

• CCP2-SM (1-, 2- or 3-pole 200 A switches)

#### Description

Side rotary mechanism for through-the-side operation and installs on the left or right side (right side installation recommended) of any 1-, 2- or 3-pole 200 A switch. The side rotary mechanism does not provide for door interlock nor local lockout/tagout capability. Complete installation requires installing pistol handle (short or long) and 12 mm shaft.

Packaged individually.

### **Terminal shrouds**

Catalog numbers

• CCP2-TS2-3 (3-pole 200 A switches)

## Description

3-pole shroud kit with shields for isolating the lugs on 3-pole 200 A switches.

Packaged individually.



#### **Phase barriers**

Catalog numbers

• CCP2-PB2 (3-pole 200 A switches)

## Description

Phase barrier kit with two phase barriers for isolation between the lugs on 3-pole 200 A switches.

Packaged individually.



#### Handle extension



## Catalog number

• CCP2-HEX (1-, 2- and 3-pole 200 A switches)

#### Description

A handle extension to provide additional leverage for operating the switch in installations that do not have rotary mechanisms or flange operators installed. Does not mount on switch, provision for tether provided

Packaged individually.

# Compact Circuit Protector (CCP2) UL 98 Class CF disconnect switches up to 200 A

# Auxiliary contacts for 30, 60 and 100 A switches

# **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 left front/left side rotary operated switches.



## **Ratings**

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

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

\* The CCP2-AUX CANNOT be mounted on the right front and right side rotary operated versions, nor installed with the flange handle rod or cable operator. De-energize all circuits and follow all prescribed safety procedures before installing or removing the auxiliary contact device.

#### Agency information

- UL 98 Recognized, Guide WHTY2, File E155130
- cURus to Canadian Standard 22.2 No. 4-04
- · Finger-safe in installed state
- · RoHS compliant
- CE

## Wiring

- 16-20 AWG (1.5 to 0.5 mm²) single and dual stranded wire
- 20 AWG (1.5 mm²) single and dual solid 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 right front and right side rotary operated versions, or installed with the flange handle rod or cable operator.

## Storage and operating temperature

• -20°C to 75°C (-4°F to 167°F)

## Carton quantity and shipping weight

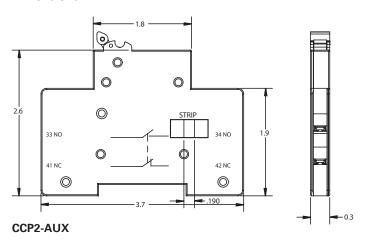
Catalog no.	Application	Qty.	Weight Ib (kg)
CCP2-AUX	For 30 and 60 A switches only	1	0.14 (0.063)
CCP2-AUX-100	For 100 A switches only	1	0.14 (0.003)

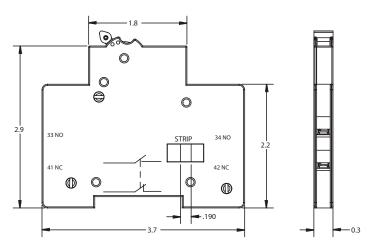
#### Installed on a CCP2-3-xx

**Note:** CCP2-AUX and CCP2-AUX-100 **CANNOT** be mounted on the right front and right side rotary operated versions, nor if a flange handle rod or cable operator is installed.



#### Dimensions - in





CCP2-AUX-100

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## Auxiliary contacts for 200 A switches

## Catalog number

• CCP2-AUX-S (200 A switches)

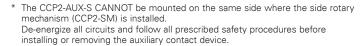
## Description

NO+NC contact output to indicate the switching mechanism status on the CCP2. A single unit can be mounted on either side of any 1-, 2- or 3-pole switch (cannot be mounted on the same side as the CCP2-SM side rotary mechanism or the right side if a flange handle rod or cable operator is installed).

# Ratings

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

Catalog no.	Switch	Description	Max per CCP2*	Ratings
CCP2-AUX-S	200 A	Auxiliary contacts NO+NC for switch status	1 per CCP2 (1-, 2- or 3-pole)	5 A / 240 Vac



## **Agency information**

- UL 98 Recognized, Guide WHTY2, File E155130
- cURus to Canadian Standard 22.2 No. 4-04
- · Finger-safe in installed state
- RoHS compliant

# Wiring

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

## Installation technique

 Mounts on either side of the 200 A switches and mechanically interlocks with the switch's handle with provided hardware. The CCP2-AUX-S CANNOT be mounted on the same side with an installed CCP2-SM side rotary mechanism, or the flange cable/rod operating mechanisms.

# Storage and operating temperature

• -20°C to 75°C (-4°F to 167°F)

# **Packaging**

· Packaged individually.



## Installed on a CCP2-3-xx

**Note:** CCP2-AUX-S **CANNOT** be mounted on the same side as the side rotary mechanism CCP2-SM or the right side if a flange handle rod or cable operator is installed.



# Compact Circuit Protector (CCP2) UL 98 Class CF disconnect switches up to 200 A

# PLC fuse monitor for 30, 60 and 100 A switches

## **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 CUBEFuse CCP2 switch up to 100 A 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 and CCP2-PLC-100 **CANNOT** be mounted on the left front/left side rotary operated versions or if a multi-wire lug kit is installed, or if the flange handle rod operator 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, Radiofrequency, Electromagnetic Field Immunity test at level x (20 V/m)
  - IEC 61000-4-4: Electromagnetic Compatibility Testing and Measurement Techniques at level 3 (± 2kV - 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	1 per CCP2 (1, 2- or	24 Vdc/ 10 mA	100 Vac
CCP2-PLC-100	100 A	for PLC applications	3-pole)	10 IIIA	

<sup>\*\*</sup>The CCP2-PLC-IND and CCP2-PLC-100 CANNOT be mounted on the left front/ left side rotary operated versions, or if a multi-wire lug kit is installed or if the flange handle rod operator is installed.

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

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## **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

## Carton quantity and shipping weight

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

 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 left front/left side rotary operated versions, or if a multi-wire lug kit is installed or if the flange handle rod operator 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.

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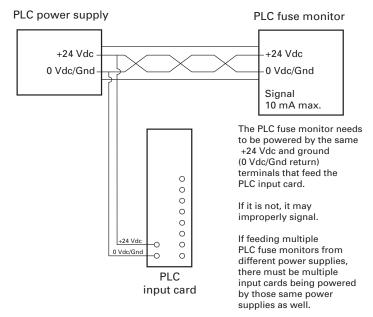
## Installed on a CCP2-3-xx



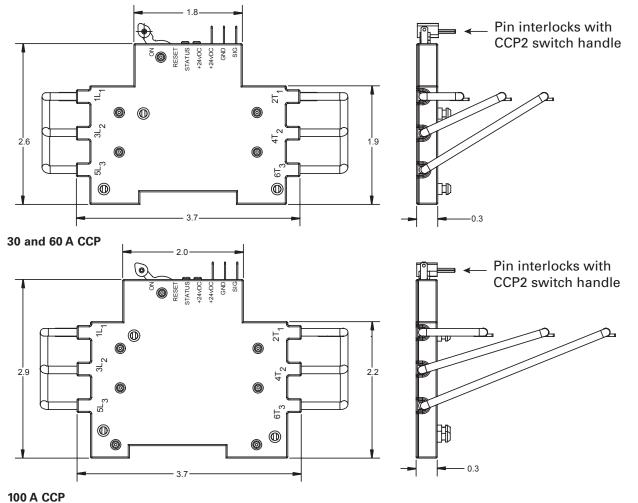
CCP2-PLC-IND mounted on a 3-pole switch and using the fork terminals. When mounted on a 2- or 1-pole switch, remove unused leads

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

## **PLC** wiring schematic



# ${\bf Dimensions-in}$



# 30 and 60 A CCP2 clockwise rotary switches

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

		Catalog no.		
		Switches	Amps	Poles
		Right front rotary		
	Magada	CCP2R-2-30CF		2
		CCP2R-3-30CF	30	3
		CCP2R-2-60CF		2
		CCP2R-3-60CF	- 60	3
		Left front rotary		-
	11	CCP2RL-2-30CF		2
	10	CCP2RL-3-30CF	30	3
		CCP2RL-2-60CF		2
		CCP2RL-3-60CF	60	3
	The state of the s	Right side rotary		
		CCP2S-2-30CF	20	2
		CCP2S-3-30CF	- 30	3
		CCP2S-2-60CF	- 60	2
pe.	10 6 P	CCP2S-3-60CF	60	3
Required	E.TN		And	
Re		Rotary handles	Description	Rating
		CCP2-H4X-B1	Selector handle — black/grey	
	F.G.	CCP2-H4X-R1	Selector handle — red/yellow	Type 1, 4X, 12
		CCP2-H4X-B2	Pistol handle — black/grey	1,60 1, 50, 12
		CCP2-H4X-R2	Pistol handle — red/yellow	
	*		And	
		Shafts (8 mm)	Length	
		CCP2-SH1-290	290 mm	
		CCP2-SH1-490	490 mm	
		NFPA 79 compliant handle	Color	
		CCP2-NFPA-1	Red	
			And	
		Multi-wire lug kits	Description	
Optional		CCP2-MW1-3	3-port multi-wire, 75°C Cu/Al, 6-14, includ	les terminal shrouds, pack of 3
	I	emanneorios	1	

			And
		Terminal shrouds	Description
Accessories		CCP2-TS1-3	Pack of 3
		Auxiliary contacts	Description — use with CCP2RL-(poles)-30/60CF switches
	PNIII PROPERTY	CCP2-AUX	NO/NC, 5 A / 240 V
	111	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 switches

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

		Catalog no.			
		Switches	Amps	Poles	
Required		Switch (used alone of	or with flange cable or flange rod handles)		
nbe		CCP2-1-30CF		1	
Ä		CCP2-2-30CF	30	2	
		CCP2-3-30CF		3	
		CCP2-1-60CF		1	
		CCP2-2-60CF	60	2	
	nealmeatmen	CCP2-3-60CF		3	
			And		
	= 4	Flange handle rod operator	Description — 3-pole switches only	Rating	
	CA FOR	CCP2-FLR1-21	Red/black painted handle	1, 3R and 12	
		CCP2-FLR1-21X	Chrome handle	4X	
			Or		
		Flange handle cable operator	Description - 3-pole switches only, cannot be used with side or front rotary mechanisms	Rating	
		CCP2-FLC1-36	36" cable, red/black painted handle	Type 1, 3R, 12	
nal		CCP2-FLC1-36X	36" cable, chrome handle	Type 4X	
Optional		CCP2-FLC1-60	60" cable, red/black painted handle	Type 1, 3R, 12	
ō		CCP2-FLC1-60X	60" cable, chrome handle	Type 4X	
		CCP2-FLC1-120	120" cable, red/black painted handle	Type 1, 3R, 12	
		CCP2-FLC1-120X	120" cable, chrome handle	Type 4X	
		Multi-wire lug kits	Description		
		CCP2-MW1-3	3-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shrouds, pack of 3		
			And		
		Terminal shrouds	Description		
		CCP2-TS1-3	Pack of 3		
es	•	Auxiliary contacts	Description — mounts on right side, cannot be used with flancable operator	ge handle rod or	
Accessories	CALL NOW	CCP2-AUX	NO/NC, 5 A / 240 V		
	))]	PLC fuse monitor	Description — mounts on left side, cannot be used with flange operator	e handle rod	
		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.

		Catalog no.				
		Switches	Amps	Poles		
		Left side rotary	-			
	M - 134	CCP2SL-2-30CF	30	2		
		CCP2SL-3-30CF	30	3		
		CCP2SL-2-60CF	- 60	2		
		CCP2SL-3-60CF	00	3		
	EAN BAN		And			
		Rotary handles	Description	Rating		
-		CCP2-H4X-B1L	Selector handle — black/grey			
Required	F.54	CCP2-H4X-R1L	Selector handle — red/yellow	Type 1, 4X, 12		
		CCP2-H4X-B2L	Pistol handle — black/grey	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		CCP2-H4X-R2L	Pistol handle — red/yellow			
	4	And				
		Shafts (8 mm)	Length			
		CCP2-SH1-290	290 mm			
		CCP2-SH1-490	490 mm			
		NFPA 79 compliant handle	Color			
		CCP2-NFPA-1	Red			
			And			
		Multi-wire lug kits	Description			
Optional		CCP2-MW1-3	3-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shro	ouds, pack of 3		
			And			
		Terminal shrouds	Description			
Accessories		CCP2-TS1-3	Pack of 3			
ess		Auxiliary contacts	Description —mounts on right side			
Acc	C SNL STATE OF THE	CCP2-AUX	NO/NC, 5 A / 240 V			

# 100 A CCP2 clockwise rotary switches

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

		Catalog no.				
		Switches	Amps	Poles		
		Right front rotary				
	0	CCP2R-2-100CF	100	2		
		CCP2R-3-100CF	100	3		
	The state of the s	Left front rotary				
	0	CCP2RL-2-100CF	100	2		
		CCP2RL-3-100CF		3		
	Made and Ma	Right side rotary				
		CCP2S-2-100CF	100	2		
red		CCP2S-3-100CF		3		
Required			And			
Re		Rotary handles	Description	Rating		
		CCP2-H4X-B1	Selector handle — black/grey			
		CCP2-H4X-R1	Selector handle — red/yellow	Type 1, 4X, 12		
		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  NFPA 79 compliant	490 mm			
		handle	Color			
		CCP2-NFPA-1	Red			
			And			
		Multi-wire lug kits	Description			
Optional		CCP2-MW1-6	6-port multi-wire, 75°C Cu/Al, 6-14, includ	les terminal shrouds, pack of 3		

			And
		Terminal shrouds	Description
Accessories		CCP2-TS1-6	Pack of 3
cce		Auxiliary contacts	Description — cannot be used on right front or right side operated switches
Ф	O O O O O O O O O O O O O O O O O O O	CCP2-AUX-100	NO/NC, 5 A / 240 V
	711	PLC fuse monitor	Description — Cannot be used on left front or left side operated switches
	called the	CCP2-PLC-100	Signal output 24 Vdc / 10 mA

# 100 A CCP2 switches

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

FOI 8	complete assembly, se	elect from the following	required and optional components, and accessories.				
		Catalog no.					
		Switches	Amps	Poles			
b		Switch (used alone of	or with flange cable or flange rod handles)				
Required		CCP2-1-100CF		1			
R	69 69	CCP2-2-100CF	100	2			
		CCP2-3-100CF		3			
			And				
	al Am	Flange handle rod operator	Description — 3-pole switches only	Rating			
	THE THE PARTY OF T	CCP2-FLR1-21	Red/black painted handle	1, 3R and 12			
		CCP2-FLR1-21X	Chrome handle	4X			
			Or				
		Flange handle cable operator	Description - 3-pole switches only, cannot be used with side or front rotary mechanisms	Rating			
		CCP2-FLC1-36	36" cable, red/black painted handle	Type 1, 3R, 12			
Optional		CCP2-FLC1-36X	36" cable, chrome handle	Type 4X			
ptio		CCP2-FLC1-60	60" cable, red/black painted handle	Type 1, 3R, 12			
ō		CCP2-FLC1-60X	60" cable, chrome handle	Type 4X			
		CCP2-FLC1-120	120" cable, red/black painted handle	Type 1, 3R, 12			
		CCP2-FLC1-120X	120" cable, chrome handle	Type 4X			
		Multi-wire lug kits	Description				
		CCP2-MW1-6	6-port multi-wire, 75°C Cu/Al, 6-14, includes terminal shrouds, pack	< of 3			
			And				
		Terminal shrouds	Description				
		CCP2-TS1-6	Pack of 3				
10		Auxiliary contacts	Description — mounts on right side, cannot be used with flan cable operator	ge handle rod or			
Accessories		CCP2-AUX-100	NO/NC, 5 A / 240 V				
	111	PLC fuse monitor	Description — mounts on left side, cannot be used with flange operator	e handle rod			
		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.

		Catalog no.			
		Switches	Amps	Poles	
		Left side rotary			
		CCP2SL-2-100CF	100	2	
		CCP2SL-3-100CF		3	
	EA-N EA-N		And		
		Rotary handles	Description	Rating	
T		CCP2-H4X-B1L	Selector handle — black/grey		
Required	FACE	CCP2-H4X-R1L	Selector handle — red/yellow	Type 1, 4X, 12	
-		CCP2-H4X-B2L	Pistol handle — black/grey	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		CCP2-H4X-R2L	Pistol handle — red/yellow		
	· Marie		And		
		Shafts (8 mm)	Length		
		CCP2-SH1-290	290 mm		
		CCP2-SH1-490	490 mm		
		NFPA 79 compliant handle	Color		
		CCP2-NFPA-1	Red		
			And		
		Multi-wire lug kits	Description		
Optional		CCP2-MW1-6	6-port multi-wire, 75°C Cu/Al, 6-14, includ	es terminal shrouds, pack of 3	
			And		
		Terminal shrouds	Description		
Accessories		CCP2-TS1-6	Pack of 3		
ces		Auxiliary contacts	Description — mounts on right side		
Ac	W. W. W.	CCP2-AUX-100	NO/NC, 5 A / 240 V		

# 200 A CCP2 switches

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

		Catalog no.					
		Switches	Amps	Poles			
red		CCP2-1-200CF		1			
		CCP2-2-200CF	200	2			
		CCP2-3-200CF		3			
Required		And					
Re		Lug kits	Description				
		CCP2-L2-1	Stainless steel lug, 75° Cu only, 350 kcmil-4, 1 per pack				
		CCP2-L2-1A	Aluminum lug, 75°C Cu/Al, 350 kcmil-4, 1 per pack				
	0.2	CCP2-MW2-3	3-port multi-wire lug, 75°C Cu/Al, 2-14, 3 per pack, includes terminal shroud				
		CCP2-MW2-6	CCP2-MW2-6 6-port multi-wire lug, 75°C Cu/Al, 6-14, 3 per pack, includes terminal shroud				
			And				
		Rotary mechanisms					
		mechanisms	Description				
		CCP2-SM	Side rotary mechanism - mounts on left or right side of 1-, 2- and 3-pole switches				
	F.T.N	CCP2-RM2	Front rotary mechanism - mounts only on 3-pole switches, requires clockwise rotating handle				
		And					
		Rotary handles	Description	Rotation - must match switch rotation	Rating		
		CCP2-H4X-B3	Short pistol handle — black/grey	Clockwise	Tuno 1 4V 19		
		CCP2-H4X-R3	Short pistol handle — red/yellow	For use with front rotary			
Optional		CCP2-H4X-B4	Long pistol handle — black/grey	mechanism or side rotary mechanism CCP2-SM on			
ptic		CCP2-H4X-R4	Long pistol handle — red/yellow	the switch's right side			
0		CCP2-H4X-B3L	Short pistol handle — black/grey	Counterclockwise	Type 1, 4X, 12		
		CCP2-H4X-R3L	Short pistol handle — red/yellow	Use <b>only</b> if installing side			
		CCP2-H4X-B4L	Long pistol handle — black/grey	rotary mechanism CCP2- SM on the switch's left			
		CCP2-H4X-R4L	Long pistol handle — red/yellow	side			
			And				
		Shafts (12 mm)	Length				
		CCP2-SH2-225	225 mm				
		CCP2-SH2-425	425 mm				
		NFPA 79 compliant handle	Color				
		CCP2-NFPA-2	Red				

		Or				
	CA A MA	Flange handle rod operator  Description — 3-pole switches only, cannot be used with side or front rotary mechanisms		Rating		
	111 100	CCP2-FLR2-21	Red/black, painted handle	Type 1, 3R and 12		
		CCP2-FLR2-21X	Chrome handle	Type 4X		
_		Or				
Optional	E A	Flange handle cable operator	Description - 3-pole switches only, cannot be used with side or front rotary mechanisms	Rating		
		CCP2-FLC2-36	36" cable, red/black painted handle	Type 1, 3R and 12		
	and the second	CCP2-FLC2-36X	36" cable, chrome handle	Type 4X		
		CCP2-FLC2-60	60" cable, red/black painted handle	Type 1, 3R and 12		
		CCP2-FLC2-60X	60" cable, chrome handle	Type 4X		
		CCP2-FLC2-120	120" cable, red/black painted handle	Type 1, 3R and 12		
		CCP2-FLC2-120X	120" cable, chrome handle	Type 4X		
			And			
		Terminal shrouds	Des	scription		
		CCP2-TS2-3	3-pole terminal shroud with phase shields, 1 per pack			
		Phase barriers	Description			
		CCP2-PB2	Phase barriers, 2 per pack			
			And			
		Control wire terminals	Description			
Accessories		CCP2-CWK2	1/4" quick-connect control wire terminals - mounts on installed lug (cannot be used with lug CCP2-L2-1), 12 per pack			
Acc	*	<b>Auxiliary contacts</b>	Description			
		CCP2-AUX-S	NO/NC, 5 A, 240 V - Can be mounted on right or left side			
		Handle extension	Description			
		CCP2-HEX	Handle extension to facilitate operating when side or front rotary mechanisms cinstalled.	1-, 2 and 3-pole switches. Cannot be used or flange handle rod or cable operators are		

# Motor sizing table (from NEC Tables 430.248 and 430.250) Bussmann series TCF Low-Peak time-delay Class CF fuses

Voltage	Motor size (Hp)	Motor FLA (amps)	Min (amps)	NEC code max (amps)	Heavy start* (amps)
	1/6	4.4	10	10	10
	1/4	5.8	10	15	15
	1/3	7.2	15	15	15
	1/2	9.8	15	20	20
	3/4	13.8	25	25	30
115 Vac,	1	16	25	30	35
1-phase	1-1/2	20	30	35	45
	2	24	40	45	50
	3	34	50	60	70
	5**	56	90	100	125
	7-1/2	80	125	150	175
	10	100	150	175	225
	1/6	2.2	6	6	6
	1/4	2.9	6	6	6
	1/3	3.6	6	10	10
	1/2	4.9	10	10	10
	3/4	6.9	15	15	15
230 Vac,	1	8	15	15	17.5
1-phase	1-1/2	10	15	20	20
	2	12	20	25	25
	3	17	25	30	35
	5	28	45	50	60
	7-1/2	40	60	70	90
	10**	50	80	90	110
	1/2	2.5	6	6	6
	3/4	3.7	6	10	10
	1	4.8	10	10	10
	1-1/2	6.9	15	15	15
	2	7.8	15	15	17.5
200 Vac,	3	11	17.5	20	20
3-phase	5	17.5	30	35	35
	7-1/2	25.3	40	45	50
	20**	62.1	100	110	125
	25	78.2	125	150	175
	30	92	150	175	200

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

<sup>\*</sup> Heavy Start permitted only if NEC 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.

	Motor size	Motor FLA	Min	NEC code max	Heavy start*
Voltage	(Hp)	(amps)	(amps)	(amps)	(amps)
	1/2	2.4	6	6	6
	3/4	3.5	6	10	10
	1	4.6	10	10	10
	1-1/2	6.6	10	15	15
	2	7.5	15	15	15
208 Vac,	3	10.6	17.5	20	20
3-phase	5	16.7	25	30	35
	7-1/2	24.2	40	45	50
	20**	59.4	90	110	125
	25	74.8	125	150	150
	30	88	150	175	175
	40	114	175	200	250
	1/2	2.2	6	6	6
	3/4	3.2	6	6	6
	1	4.2	10	10	10
	1-1/2	6	10	15	15
	2	6.8	15	15	15
230 Vac,	3	9.6	15	20	20
3-phase	5	15.2	25	30	30
	7-1/2	22	35	40	45
	20**	54	90	100	110
	25	68	110	125	150
	30	80	125	150	175
	40	104	175	200	225
	1/2	1.1	3	3	3
	3/4	1.6	3	3	3
	1	2.1	6	6	6
	1-1/2	3	6	6	6
	2	3.4	6	6	6
	3	4.8	10	10	10
460 Vac,	5	7.6	15	15	15
3-phase	7-1/2	11	17.5	20	20
	10	14	25	25	30
	15	21	35	40	45
	20	27	40	50	60
	50**	65	100	125	125
	60	77	125	150	150
	75	96	150	175	200
Moto: Hoo		nax column t			

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

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<sup>\*</sup> Heavy Start permitted only if NEC code max does not allow motor start-up.

<sup>\*\*</sup>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.

# Motor sizing table (from NEC Tables 430.248 and 430.250) Bussmann series TCF Low-Peak time-delay Class CF fuses

Voltage	Motor size (Hp)	Motor FLA (amps)	Min (amps)	NEC code max (amps)	Heavy start* (amps)
	1/2	0.9	3	3	3
	3/4	1.3	3	3	3
	1	1.7	3	3	3
	1-1/2	2.4	6	6	6
	2	2.7	6	6	6
	3	3.9	6	10	10
575 Vac,	5	6.1	10	15	15
3-phase	7-1/2	9	15	20	20
	10	11	17.5	20	20
	40**	41	70	80	80
	50	52	80	100	110
	60	62	100	110	125
	75	77	125	150	150
	100	99	150	175	200

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

Heavy Start permitted only if NEC 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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