

Compact Circuit Disconnect

UL 98 non-fused 30, 60 and 100 A switches (cat. no. CCD2)



CCD2 switch

Contents

Description

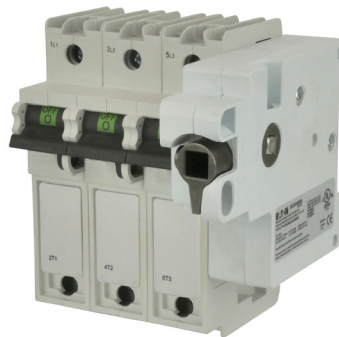
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CCD2 right front rotary switch



CCD2 left front rotary switch



CCD2 right side rotary switch



CCD2 left side rotary switch

Catalog symbols

Symbol	Description
CCD2-3-(30/60/100)	Switch only
CCD2R-3-(30/60/100)	Right front rotary, clockwise operated switch
CCD2RL-3-(30/60/100)	Left front rotary, clockwise operated switch
CCD2S-3-(30/60/100)	Right side rotary, clockwise operated switch
CCD2SL-3-(30/60/100)	Left side rotary, counterclockwise operated switch

Description

The revolutionary Bussmann™ series Compact Circuit Disconnect (CCD2) is a non-fused UL® 98 branch circuit disconnect switch.

The 35 mm DIN-Rail mount CCD2 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 additional wire ports on each pole for power distribution applications.

Another is the NO/NC auxiliary contacts accessory that easily integrates 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
 - 600 Vac
 - 125 Vdc*
- Amps
 - 30 A
 - 60 A
 - 100 A
- SCCR
 - 10 kA RMS Sym.
 - 200 kA when protected with upstream Bussmann series Class J fuses with equivalent amp rating

* Switch amp rating and load current dependent, see catalog number table for details.

Poles

- 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 302370
- RoHS compliant
- CE

Conductors/terminals

- 75°C Cu only, 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

Minimum enclosure size

- 30 and 60 A switches 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)

Mounting

- 35 mm DIN-Rail

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

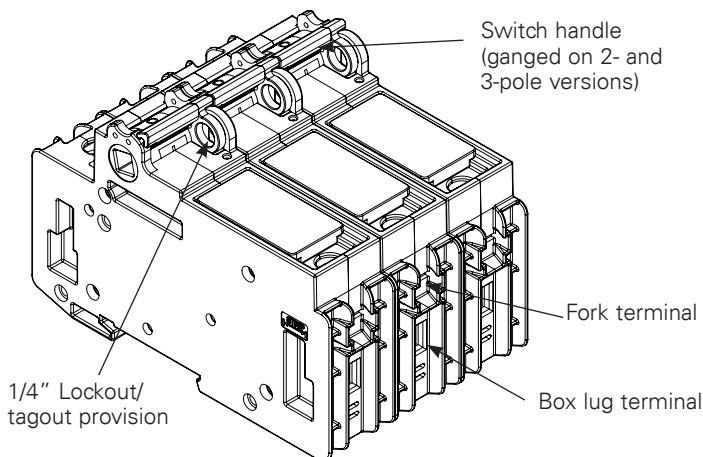
Carton quantity and shipping weight

Item	Poles	Weight lbs (kg)
Switch only	12	2.84 (1.29)
Switch with side rotary mechanism	3	1.12 (509)
Switch with front rotary mechanism	3	1.18 (0.537)

Features

- Same footprint as fusible CCP2-CF allows for design flexibility
- Extremely compact design at 25.4 mm (1 inch) wide per pole
- 10 kA short-circuit current rating that can be raised to 200 kA when protected by upstream Bussmann series Class J fuses of equivalent amp rating
- Disconnect rated to provide means for load isolation
- Full voltage rated at 600 Vac
- 125 Vdc* ratings to meet specialized applications
- UL 98 Listed and suitable for branch circuit disconnect
- Horsepower rated for motor applications
- Complies with UL 98 and Canadian Standard 22.2 No. 4-04, Guide WHTY7, File 302370 to cULus
- IP20 finger-safe construction with 10 AWG (6 mm²) wire or larger
- Padlockable for lockout/tagout procedures with 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 ports rated for single and dual wires (see lug kit in accessories for conductor and torque details).

* Switch amp rating and load current dependent, see catalog number table for details.



Rotary operating switch versions



Left front rotary switch

Clockwise operating handles



Right front rotary switch

Clockwise operating handles



Right side rotary switch

Clockwise operating handles



Left side rotary switch

Counterclockwise operating handles

Catalog numbers

Catalog no.	Poles	Description	Volts	SCCR	Max Hp rating (Vac)		
					240	480	600
30 amp switches							
CCD2-3-30		Switch only					
CCD2R-3-30		Right front rotary, clockwise operated switch					
CCD2RL-3-30	3	Left front rotary, clockwise operated switch	600 Vac/125 Vdc	10 kA AC	5	15	10
CCD2S-3-30		Right side rotary, clockwise operated switch					
CCD2SL-3-30		Left side rotary, counterclockwise operated switch					
60 amp switches							
CCD2-3-60		Switch only					
CCD2R-3-60		Right front rotary, clockwise operated switch					
CCD2RL-3-60	3	Left front rotary, clockwise operated switch	600 Vac/125 Vdc*	10 kA AC	7.5	20	10
CCD2S-3-60		Right side rotary, clockwise operated switch					
CCD2SL-3-60		Left side rotary, counterclockwise operated switch					
100 amp switches							
CCD2-3-100		Switch only					
CCD2R-3-100		Right front rotary, clockwise operated switch					
CCD2RL-3-100	3	Left front rotary, clockwise operated switch	600 Vac/125 Vdc**	10 kA AC	20	50	40
CCD2S-3-100		Right side rotary, clockwise operated switch					
CCD2SL-3-100		Left side rotary, counterclockwise operated switch					

* 125 Vdc for loads up to 40 A, 24 Vdc for loads from 41 to 60 A.

**125 Vdc for loads up to 80 A, 24 Vdc for loads from 81 to 100 A.

30 and 60 amp switch box lug terminal conductor data

Wire type	AWG range	Class	Quantity	Torque N·m (lb-in)
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
	10-18	Stranded, Class B to K	Single/dual	2.26 (20)
	10-18	Solid		2.26 (20)
	4-18	Stranded, UL ferrule, Class B/C	Twin†	3.39 (30)
				6-18
	4-18	Stranded, UL ferrule, Class K	Twin†	2.82 (25)
				6-18

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

100 amp switch box lug terminal conductor data

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

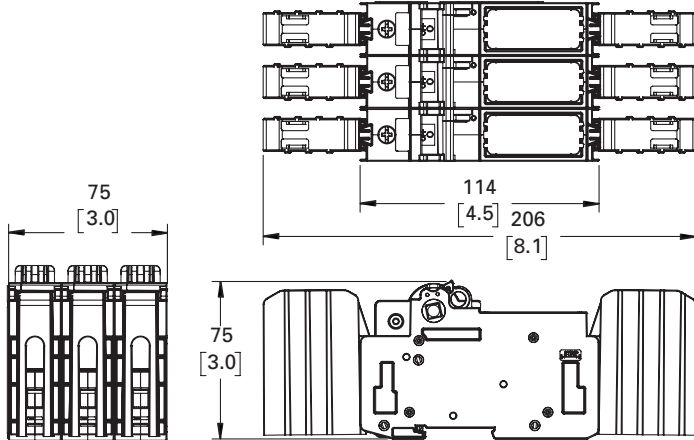
† Two stranded conductors placed in one UL Listed twin ferrule.

Lineside and loadside fork terminal

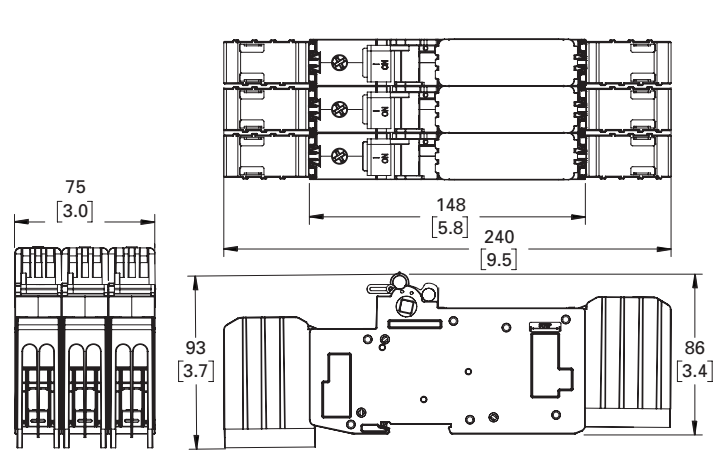
- Max 30 A suitable with #8-32 UNC screw

Dimensions – mm (in)

Switch (shown with optional terminal shrouds)

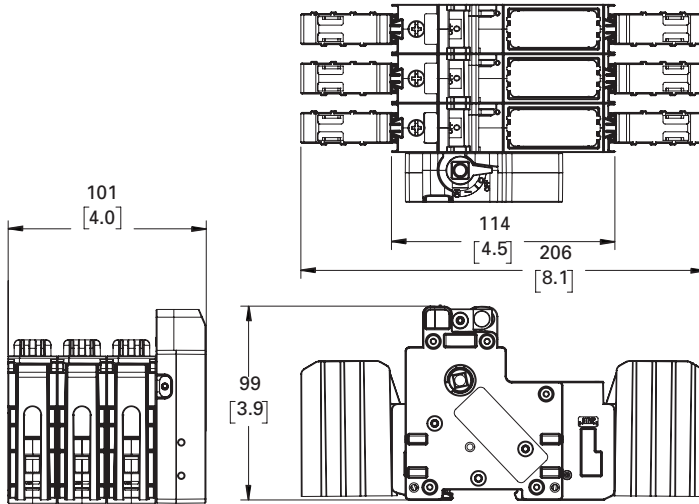


30 and 60 amp switches

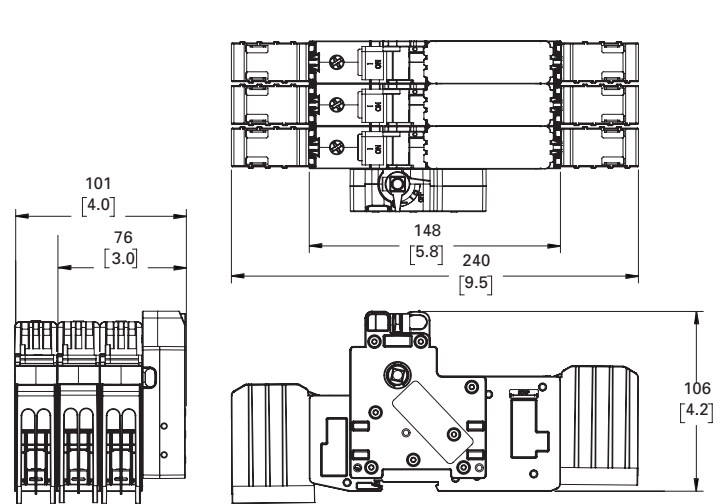


100 amp switch

Left front rotary switches (shown with optional terminal shrouds)

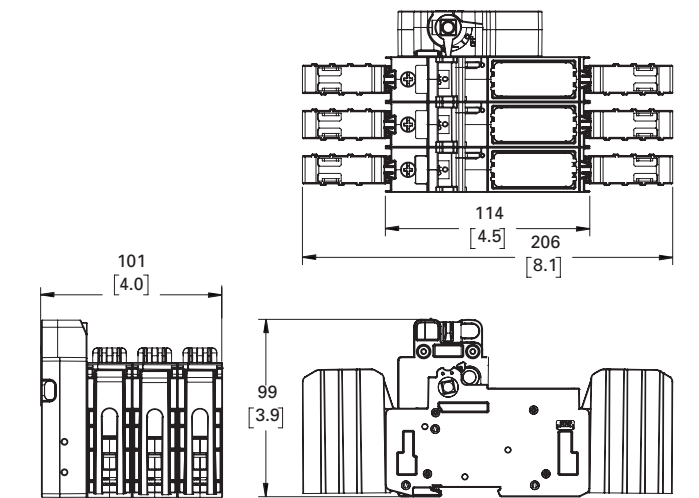


30 and 60 amp switches

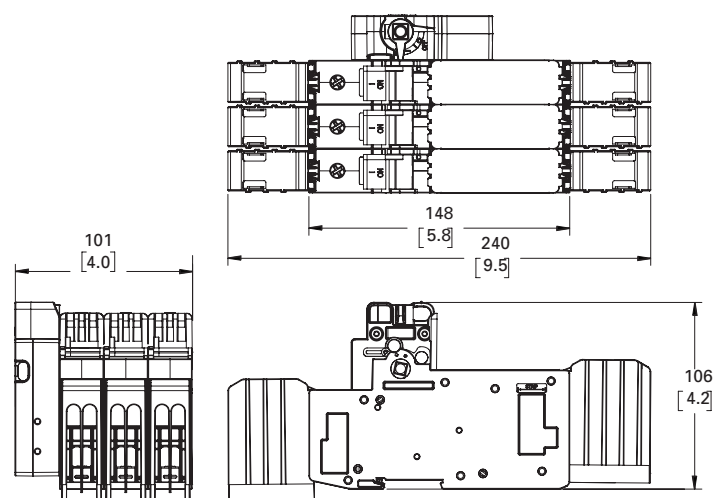


100 amp switch

Right front rotary switches (shown with optional terminal shrouds)

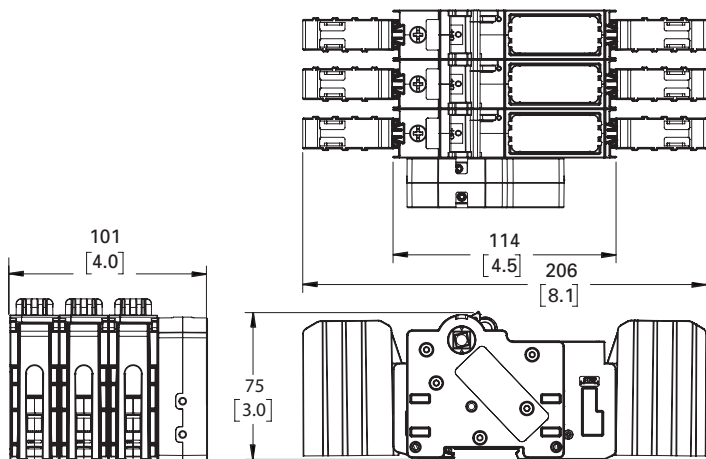


30 and 60 amp switches

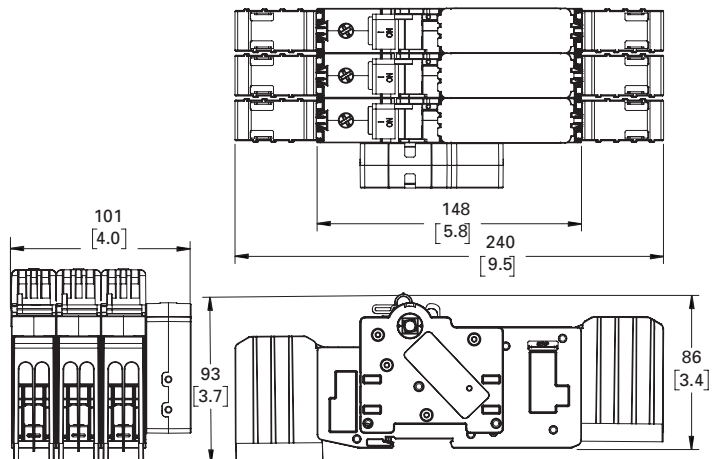


100 amp switch

Left side rotary switches (shown with optional terminal shrouds)

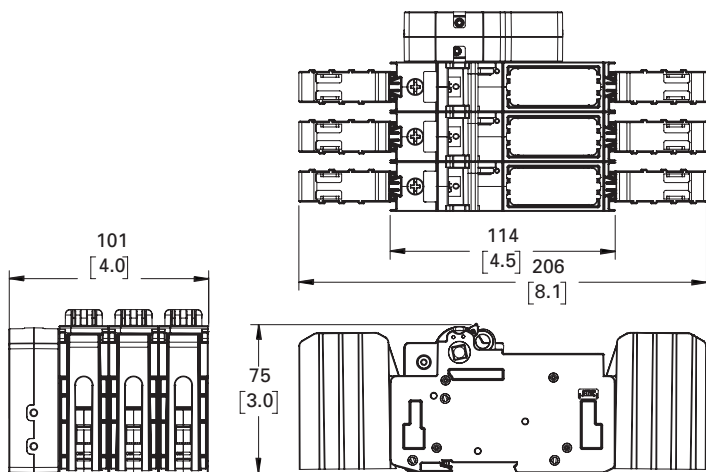


30 and 60 amp switches

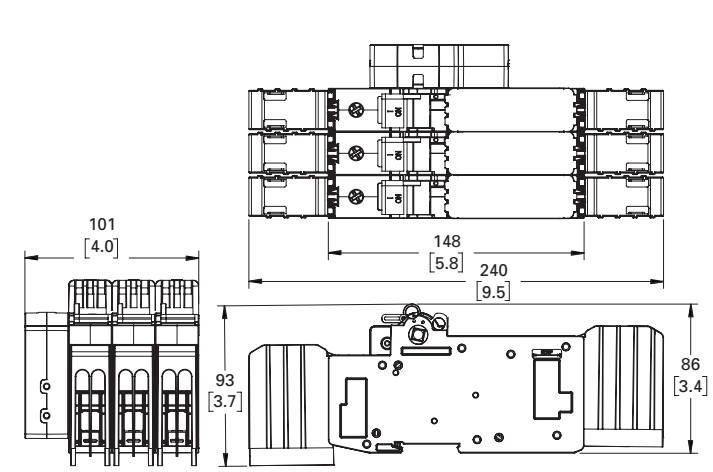


100 amp switch

Right side rotary switches (shown with optional terminal shrouds)



30 and 60 amp switches



100 amp switch

Multi-wire lug kits

Catalog numbers

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

CCD2 box lug torque for multi-wire lugs

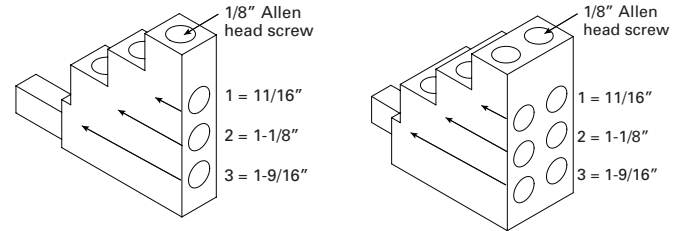
- 30/60 A lug, 4.52 N•m (40 lb-in)
- 100 A lug, 5.09 N•m (45 lb-in)

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)

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.

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

Selector and pistol handles

Catalog symbol

- CCP2-H4X-

Description

Selector and pistol handles for use with any 2- and 3-pole CCD2 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 CCD2 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" diameter shank 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 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



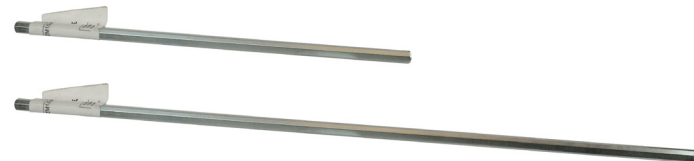
Clockwise

- 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
CCD2-3-30	Switch only		
CCD2-3-60			
CCD2-3-100			
CCD2R-3-30	Right front rotary, clockwise	• CCP2-H4X-B1 (selector, black/grey)	
CCD2R-3-60		• CCP2-H4X-R1(selector, red/yellow)	
CCD2RL-3-30		• CCP2-H4X-B2 (pistol, black/grey)	
CCD2RL-3-60	Left front rotary, clockwise	• CCP2-H4X-R2 (pistol, red/yellow)	• CCP2-SH1-290 (11.5"/290 mm)
CCD2RL-3-100			• CCP2-SH1-490 (19.3"/490 mm)
CCD2S-3-30	Right side rotary, clockwise		
CCD2S-3-60			
CCD2S-3-100			
CCD2SL-3-30	Left side rotary, counterclockwise	• CCP2-H4X-B1L (selector, black/grey)	
CCD2SL-3-60		• CCP2-H4X-R1L (selector, red/yellow)	
CCD2SL-3-100		• CCP2-H4X-B2L (pistol, black/grey)	
		• CCP2-H4X-R2L (pistol, red/yellow)	

Auxiliary contacts

Catalog numbers

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

Description

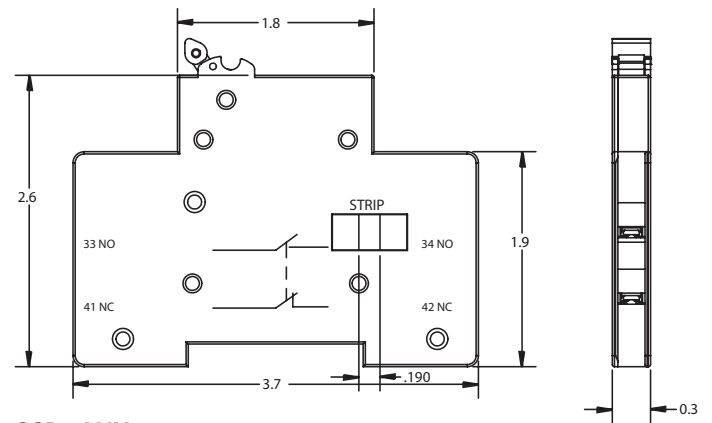
NO+NC contact output to indicate the switching mechanism status on the CCD2. A single unit can be mounted on the CCD2 switch and the left front/left side rotary operated switches.



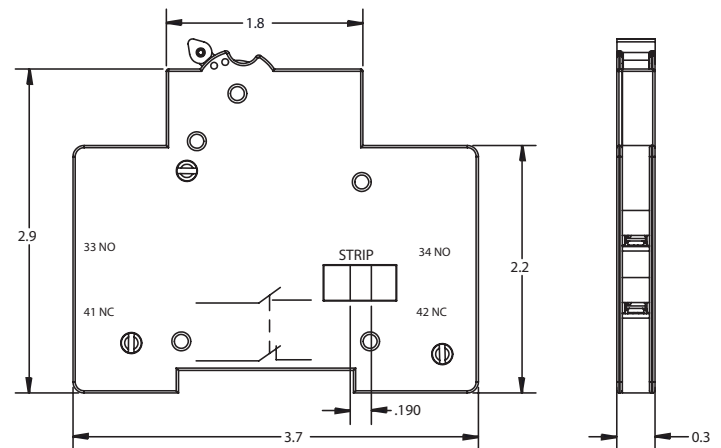
Ratings

- Amps up to 5 A
- Volts up to 240 Vac
- NC/NO contacts are closed/open when the CCD2 switch is in the "ON" position (closed)

Dimensions – in



CCP2-AUX



CCP2-AUX-100

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

Catalog no.	Switch	Description	Max per CCD2*	Signal output
CCP2-AUX	30/60 A only	Auxiliary contacts NO+NC for switch status	1 per CCD2	5 A / 240 Vac
CCP2-AUX-100	100 A only			

* The CCP2-AUX CANNOT be mounted on the right front and right 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 WHTY2, File E155130
- cURus to Canadian, Standard 22.2 No. 4-04
- IP20 finger-safe in installed state
- RoHS compliant
- CE

Wiring

- 16-20 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 CCD2's right side ONLY and mechanically interlocks with the CCD2 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.

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		

30 and 60 A CCD2 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)		
	CCD2-3-30	30	3
	CCD2-3-60	60	
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	






30 and 60 A CCD2 Counterclockwise switches



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

	Catalog no.			
	Switches	Amps	Poles	
	Left side rotary			
Required		CCD2SL-3-30	30	3
		CCD2SL-3-60	60	
	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, 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		
	CCP2-AUX	NO + NC, 5 A / 240 V		

30 and 60 A CCD2 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			
		CCD2R-3-30	30	3
		CCD2R-3-60	60	3
	Left front rotary			
		CCD2RL-3-30	30	3
		CCD2RL-3-60	60	
	Right side rotary			
		CCD2S-3-30	30	3
		CCD2S-3-60	60	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 only with CCD2RL-3-30 and CCP2RL-3-60 switches
		CCP2-AUX	NO + NC, 5 A / 240 V


100 A CCD2 Switch

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)		
	CCD2-3-100	100	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	



100 A CCD2 Counterclockwise switch



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

	Catalog no.				
	Switches	Amps	Poles		
	Left side rotary				
Required		CCD2SL-3-100	100	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 sight side		
	CCP2-AUX-100	NO + NC, 5 A / 240 V			

100 A CCD2 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			
		CCD2R-3-100	100	3
	Left front rotary			
		CCD2RL-3-100	100	3
	Right side rotary			
		CCD2S-3-100	100	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	Description
		CCP2-TS1-6	Pack of 3
		Auxiliary contacts	Description — use only with CCD2RL-3-100 switch
		CCP2-AUX-100	NO + NC, 5 A / 240 V

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