Compact Circuit Protector (CCP)

UL Class CC, Midget and IEC 10x38 fuses

RoHS

The revolutionary Cooper Bussmann CCP is 1/3 the footprint of a molded case circuit breaker. The level of protection provided by the CCP is up to three times the Short-Circuit Current Rating (SCCR) at full voltage than a molded case circuit breaker while providing a disconnecting means.

Product Features and Benefits

- Extremely compact design at 17.5mm wide per pole
- High Short-Circuit Current Ratings up to 200kA (UL) and 120kA (IEC)
- Disconnect rated to provide means for load isolation
- Full voltage rated up to 600Vac or 80Vdc
- Class CC version is UL 98 Listed and horsepower rated, and suitable for branch circuit disconnect and branch circuit protection
- IEC 10x38 version complies with IEC 60947-3 and suitable for branch circuit disconnect and branch circuit protection
- Suitable for global installations, the units comply with UL, cULus, and IEC standards accepting UL Class CC, Midget or IEC aM and gG/gL fuses
- Open Fuse Indication
  - Local fuse indication lights* are standard.
  - Optional wired remote open fuse indication can be utilized to signal a PLC and open a contactor to de-energize all phases, if required.
- IP20 finger-safe with 10AWG (6mm²) or larger wire
- Built-in switch interlock capability prohibits removing the fuse under load
- Padlockable handle for lockout/tagout procedures
- Available in 1-, 2- and 3-pole versions
- Spade terminals, rated up to 30A, installed on the line side of the disconnect, make it easy to add NEC® 240.21 compliant taps for loads up to 80% of the spade terminal amp rating for devices that need to remain energized when the disconnect is in the OFF position

*Circuit must be closed with 90Vac/115Vdc minimum for indication light to illuminate

Specifications:

- Box lug and spade terminal suitable for line, load or accessory connection
- Box Lug Connection:
  - 18-6 AWG (1 to 16mm²) single or dual rated, solid or stranded – 75°C or higher - Cu only
  - 4 AWG (25mm²) single – 75°C or higher - Cu only
- Spade Terminal Connection:
  - Max. 30A with insulated flanged spade terminal wire size #12 - #10 AWG for stud size #8
- Torque:
  - 18-10 AWG 20 Lb-In (1-6mm²/3.4N•m)
  - 8-4 AWG 35 Lb-In (10-25mm²/5.8N•m)
- Lockout/tagout: 4mm shank lock or standard pin-out devices
- 35mm DIN-Rail mount
- Dimensionally compliant to DIN 43880
- Local indication minimum operating voltage:
  – 90Vac for AC version
  – 12Vdc for DC version

Agency Information:

UL Class CC fuse version

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

UL Midget fuse version

- UL 508 Listed
- cULus Certified 22.2 No. 14-05
- CE Compliant

10X38 IEC Class aM and gG/gL fuse version

- IEC 60947-3 AC23A
- IEC 60947-3 DC23A
- CE Compliant

Shipping Weight:

- 2.84 lbs (1.29kg) per carton

Carton Quantity:

- 12 Poles

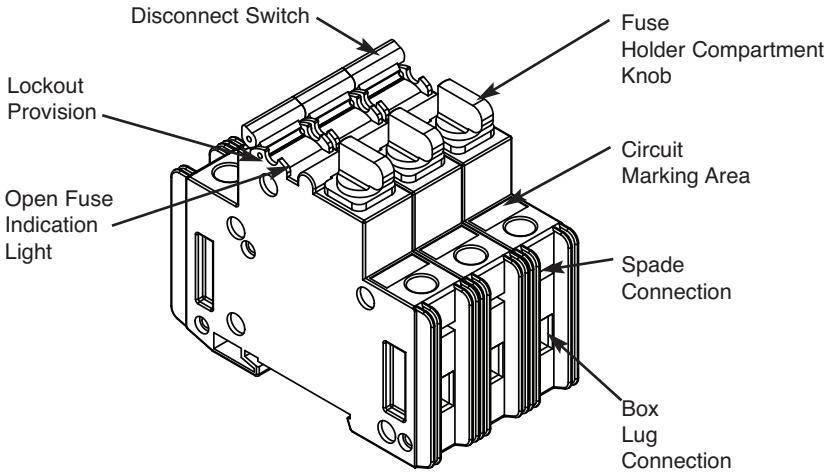
Environmental Data

- Storage and operating temperature: -20°C to 75°C**
- Flammability rating: UL 94V0

** For fuse performance under or above 25°C, consult fuse performance derating charts in the Cooper Bussmann publication titled Selecting Protective Devices (SPD) reorder #3002.

Compact Circuit Protector (CCP)

UL Class CC, Midget and IEC 10x38 fuses



Technical Ratings

Catalog Number	Poles	Amp Rating	Voltage Rating	Fuse Type	Max. Fuse Ampacity	SCCR	Agency Approvals	Hp ratings
CCP-1-30CC	1	30	600Vac	Class CC	30A	200kA	UL 98 Listed cULus 22.2 No. 4-04	0.5Hp@120V
CCP-2-30CC	2	30	600Vac	Class CC	30A	200kA	UL 98 Listed cULus 22.2 No. 4-04	2.0Hp@240V
CCP-3-30CC	3	30	600Vac	Class CC	30A	200kA	UL98 Listed cULus 22.2 No. 4-04	3Hp@240V 5Hp@480V 7.5Hp@600V
CCP-1-30M	1	30	240Vac* UL	UL Midget	30A	10kA*	UL 508 Listed cULus 22.2 No. 14-05	—
			400Vac* IEC	10x38 IEC	32A aM, 25A gG	120kA*	IEC 60947-3 AC23A	
CCP-2-30M	2	30	240Vac* UL	UL Midget	30A	10kA*	UL 508 Listed cULus 22.2 No. 14-05	—
			400Vac* IEC	10x38 IEC	32A aM, 25A gG	120kA*	IEC 60947-3 AC23A	
CCP-3-30M	3	30	240Vac* UL	UL Midget	30A	10kA*	UL 508 Listed cULus 22.2 No. 14-05	—
			400Vac* IEC	10x38 IEC	32A aM, 25A gG	120kA*	IEC 60947-3 AC23A	
CCP-1-DCC	1	30	80Vdc*	Class CC (DC rated)	30A	20kA*	UL 98 Listed CSA 22.2 No. 4-04	—
CCP-1-DCM	1	30	80Vdc*	UL Midget	30A	10kA*	UL 508 Listed cULus 22.2 No. 14-05	—
				10x38 IEC	32A aM, 25A gG		IEC 60947-3 DC23A	

*Rating may be lower depending on installed fuse. Refer to fuse data sheet.

Recommended UL Fuse Types

AC Voltage		DC Voltage	
Class CC	**Midget**	**Class CC**	**Midget**
LP-CC	KTK	LP-CC	KLM
KTK-R	FNM		
FNQ-R	FNQ		
	BAF		

Recommended IEC Fuse Types

10x38 IEC	
Part Number Family	IEC Class
C10G	gG/gL
C10M	aM

Compact Circuit Protector (CCP)

UL Class CC, Midget and IEC 10x38 fuses

Motor Sizing Chart

Voltage	Motor Size Hp	Motor FLA	Fuse	Amps		
				Min	Code Max	Heavy Start
115 Vac - 1 Phase	0.167	4.4	LP-CC	9	15	15
	0.25	5.8		12	20	20
	0.33	7.2		15	25	25
	0.50	9.8		30	30	30
230 Vac - 1 Phase	0.17	2.2	LP-CC	4.5	10	10
	0.25	2.9		6	10	10
	0.33	3.6		7	15	15
	0.50	4.9		10	15	15
	0.75	6.9		15	25	25
	1	8		25	25	30
	1.5	10		30	30	30
200 Vac - 3 Phase	0.50	2.5	LP-CC	5	10	10
	0.75	3.7		7.5	15	15
	1	4.8		10	15	15
	1.5	6.9		15	25	25
	2	7.8		25	25	30
208 Vac - 3 Phase	0.50	2.4	LP-CC	5	10	10
	0.75	3.5		7	15	15
	1	4.6		10	15	15
	1.5	6.6		15	20	25
	2	7.5		15	25	30
230 Vac - 3 Phase	0.50	2.2	LP-CC	4.5	10	10
	0.75	3.2		7	10	12
	1	4.2		9	15	15
	1.5	6		12	20	20
	2	6.8		15	25	25
	3	9.6		30	30	30
460 Vac - 3 Phase	0.50	1.1	LP-CC	2.25	6	6
	0.75	1.6		3.2	6	6.25
	1	2.1		4.5	10	10
	1.5	3		6	10	12
	2	3.4		7	15	15
	3.00	4.8		10	15	15
	5.00	7.6		25	25	30
575 Vac - 3 Phase	0.50	0.9	LP-CC	1.8	3	3.5
	0.75	1.3		2.8	6	6
	1	1.7		3.5	6	6.25
	1.5	2.4		5	10	10
	2	2.7		5.6	10	10
	3.00	3.9		8	15	15
	5.00	6.1		15	20	20
	7.50	9		30	30	30

Note: NEMA motors only (no IEC or Design B Energy Efficient). Minimum size if no more than 1 start/hour. Code max if low to moderate reverse/jog/plug applications. Heavy start permitted only if Code Max does not allow motor start-up. For high reverse/jog/plug applications or larger horsepower motors, Class J fuses are recommended. See CCP with CUBEFuse.

COOPER Bussmann

Compact Circuit Protector (CCP)

CUBEFuse

RoHS

The revolutionary Cooper Bussmann CCP is 1/3 the footprint of a circuit breaker. The level of protection provided by the CCP is up to three times the Short-Circuit Current Rating (SCCR) at full voltage than a molded case circuit breaker while providing disconnecting means.

Product Features and Benefits

- Uses Class CF finger-safe time-delay or fast-acting CUBEFuse with Class J electrical performance*.
- Extremely compact design at 25.4mm (1 inch) wide per pole
- High Short-Circuit Current Ratings at 200kA
- Disconnect rated to provide means for load isolation
- Full voltage rated at 600Vac for 30A, 60A and 100A versions
- Consult factory for DC ratings
- UL 98 Listed and suitable for branch circuit disconnect and branch circuit protection
- 1-, 2- and 3-pole versions are horsepower rated
- Complies with UL and CSA
- Open Fuse Indication:
  - Local fuse indication lights** are standard
  - Optional wired remote open fuse indication can be utilized to signal 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
- IP20 finger-safe construction with 10 AWG (6mm²) wire or larger
- Built-in switch interlock capability prohibits removing the fuse under load
- Padlockable handle for lockout/tagout procedures
- Spade terminals, rated up to 30A, installed on the line side of the disconnect, make it easy to add NEC® 240.21 compliant taps for loads up to 80% of the spade terminal amp rating for devices that need to remain energized when the disconnect is in the OFF position

*See data sheet 9000 for CUBEFuse specifications
**Circuit must be closed with minimum 90Vac/115Vdc for indication light to illuminate
***For fuse performance under or above 25°C, consult fuse performance derating charts in the Cooper Bussmann publication “Selecting Protective Devices” (SPD) reorder #3002.

Specifications:

- Box Lug and Spade Terminal suitable for line, load or accessory connection
- Box Lug Connection:

30-60A:

-18-6 AWG (1 to 16mm²) single or dual rated, solid or stranded – 75°C or higher - Cu only

- 4 AWG (25mm²) single – 75°C or higher - Cu only

100A:

- 18-1AWG (1-45mm²) single or dual rated, solid or stranded – 75ºC or higher - Cu only

- 6AWG (16mm²) single – 75ºC or higher - Cu only

- Spade Terminal Connection:
  Max. 30A with insulated flanged spade terminal wire size #12 - #10 AWG for stud size #8
- Torque:

30-60A:

- 18-10 AWG 20 Lb-In (1-6mm²/3.4N•m)
- 8-4 AWG 35 Lb-In (10-25mm²/5.8N•m)

100A:

- 18-10AWG 25 Lb-In (1-6mm²/2.82N•m

- 8-1AWG 40 LB-In (10-45mm²/4.52N•m)

- 6AWG 45Lb-In (16mm²/5.08N•m)

- Lockout/tagout: 4mm shank lock
- 35mm DIN-Rrail mount
- Local indication minimum operating voltage:
  - 90Vac/115Vdc

Agency Information:

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

Shipping Weight:

- 2.03 lbs (0.92kg) per carton

Carton Quantity:

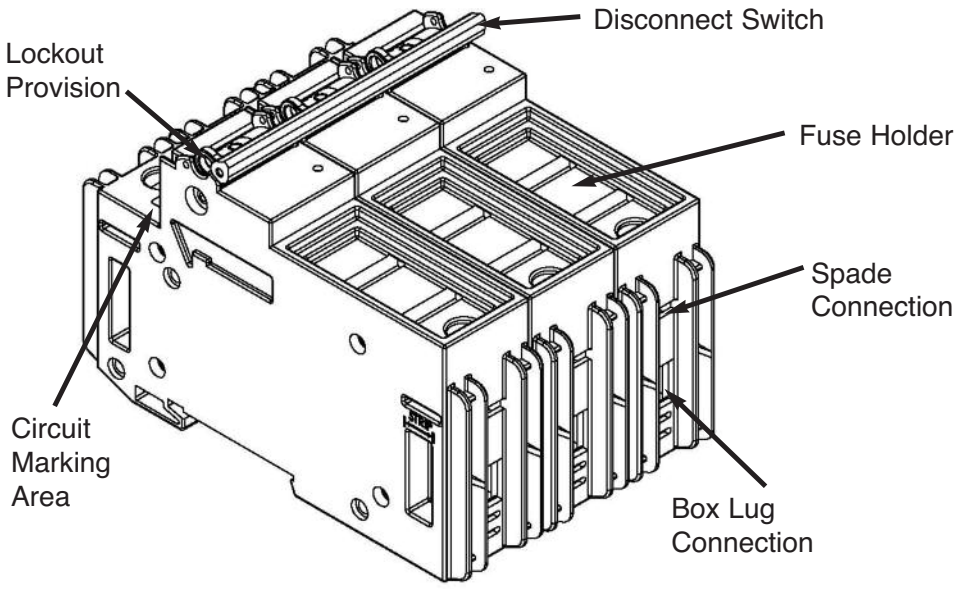
- 6 Poles

Environmental Data:

- Storage and operating temperature: -20°C to 75°C***
- Flammability rating: UL 94V0

Compact Circuit Protector (CCP)

CUBEFuse



Technical Ratings

CCP Part Numbers	Poles	Voltage Rating	CUBEFuse™ (Class J performance)			Max. Fuse** Ampacity	SCCR	Hp Ratings***
			Time-Delay Non-Indicating	Time-Delay Indicating*	Fast-Acting Non-Indicating			
CCP-1-30CF	1	600Vac	TCF1RN – TCF30RN	TCF6 – TCF30	FCF1RN – FCF30RN	30A	200kA	1.5Hp@120V
CCP-2-30CF	2							3Hp@240V
CCP-3-30CF	3							5Hp@240V 15Hp@480V 10Hp@600V
CCP-1-60CF	1	600Vac	TCF35RN – TCF60RN	TCF35 – TCF60	FCF35RN – FCF60RN	60A	200kA	3.0Hp@120V
CCP-2-60CF	2							7.5Hp@240V
CCP-3-60CF	3							7.5Hp@240V 20Hp@480V 15Hp@600V
CCP-1-100CF	1	600Vac	TCF70RN – TCF100RN	TCF70 – TCF100	FCF70RN – FCF100RN	100A	200kA	5.0Hp@120V
CCP-2-100CF	2							10Hp@240V
CCP-3-100CF	3							20Hp@240V 50Hp@480V 40Hp@600V

*1A and 3A indicating CUBEFuse not available. Correct fit with CCPB disconnect requires indicating CUBEFuse with date code R38 or later.
**Any fuse with an amp rating less than or equal to the max fuse rating may be used.Example: TCF15 maybe used with CCPB-1-20CF.
***Do not use UPS/Critical Application fast-acting CF with motors.

CUBEFuse Motor Sizing Table

Voltage	Motor Size (Hp)	Motor* FLA (Amps)	Low-Peak CUBEFuse Time-Delay (Amp Rating)		
			Optimal Protection	Code Max	Heavy Start
115Vac, 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
230Vac, 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
	7.5	40	60	N/A	N/A
	10**	50	80	90	N/A
200Vac, 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
208Vac, 3-Phase	0.5	2.4	6	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[1] FLA (Amps)	Low-Peak CUBEFuse Time-Delay (Amp Rating)		
			Optimal Protection	Code Max	Heavy Start
230Vac, 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
460Vac, 3-Phase	0.5	1.1	3	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
	20	27	40	50	60
	50**	65	100	N/A	N/A
575Vac, 3-Phase	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
	10	11	17.5	20	20
	40**	41	70	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.

*Based on motor FLA from NEC® tables 430.248 and 430.250.
**Max. Hp rating for the CCPB 100 Amp device at specified voltage.

Compact Circuit Protector (CCP) Accessories

UL Class CC, Midget and IEC 10x38 fuses, and CUBEFuse

Recommended Lockout Devices

CCP Version	Bradly Pin-Out P/N	Ideal P/N	Generic Brand
Class CC, Midget, IEC 10x38	90844	44-779	N/A
CUBEFuse	N/A	N/A	4mm Shank Lock

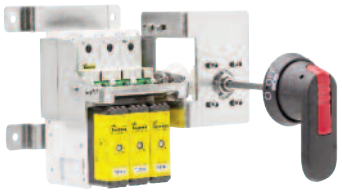
Accessories for use with Class CC, Midget, IEC 10x38 and CUBEFuse CCP

Catalog Number	Description	Configuration	Signal Output	Minimum Circuit Voltage	Agency Approvals
CCP-AUX*	Auxiliary Contacts NO+NC for Switch Status up to 60A	1 per CCP	5A/240Vac	–	UL 98 Recognized and cURus 22.2 No. 4-04, IEC 60947-5-1 AC15
CCP-PLC-IND*	Wired Remote Fuse Indication for PLC Applications up to 60A	1 per CCP	24Vdc	100Vac	UL 98 Recognized and cURus 22.2 No. 4-04
CCPHM-RXX**	Rotary Handle Mechanism	3-Pole CCP	–	–	UL 98 Recognized
CCPHM-FXX**	Flex Shaft Handle Mechanism	3-Pole CCP	–	–	UL 98 Recognized

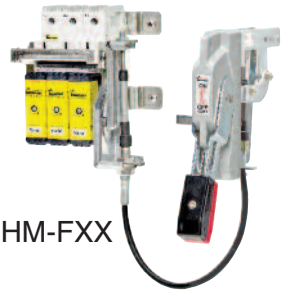
*Cannot be used with rotary or flange handle mechanism. (CLPHM-_XX)
**Refer to Product Profile #3178.

CCP-AUX

CCP-PLC-IND
(Includes spade terminals)



CCPHM-RXX

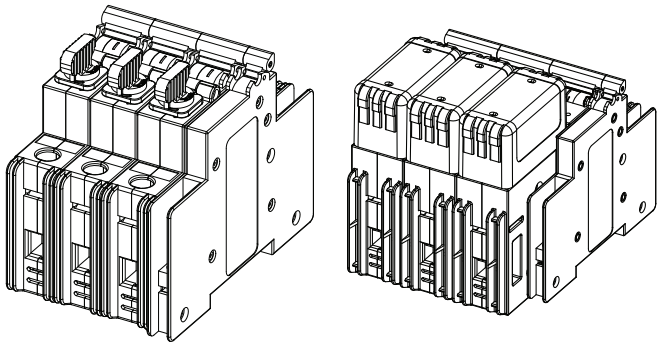


CCPHM-FXX

Auxiliary Contact

UL Class CC, Midget and IEC 10x38 fuses, and CUBEFuse

RoHS



CCP-AUX installed on a CCP-3-xx

Description

NO+NC contact output to indicate the status of the switching mechanism on the CCP

Specifications:

- Rated Ampacity: 5A
- Rated Voltage: 240Vac
- NC/NO contacts are closed/open when the CCP switch is in the “ON” position (closed)
- Flammability Rating: UL 94V0
- For use with up to and including 100A CCP

Agency Information:

- UL 98 File E155130, Guide WHTY2
- cULus to CSA Standard 22.2 No. 4-04
- IEC 60947-5-1

Wiring:

- 20-16 AWG (1 to 2.5mm^2) wire
- Torque 5 Lb-In (0.68N•m)
- For use with only 75°C Cu wire

Packaging:

- The CCP-AUX is packaged individually
- A single unit is capable of mounting to a 1-, 2-, or 3-pole CCP

Installation Technique:

- Mounts on the right side of the CCP, and mechanically interlocks with the CCP switch handle with hardware provided. Cannot be used with rotary or flange handle mechanism.

IP20 Rating: Yes

Environmental Data:

- Storage and Operating Temperature: -20°C to 75°C

Catalog Numbers:

- 1-60A: CCP-AUX
- 70-100A: CCP-AUX-100

De-energize all circuits before installing or removing any CCP-AUX devices and follow all prescribed safety procedures.

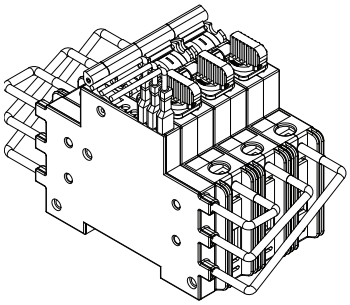
COOPER Bussmann

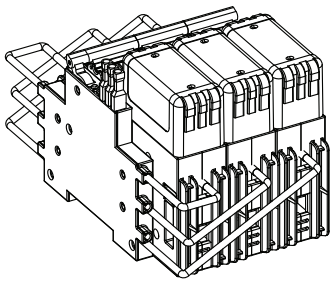
Remote Fuse Monitoring Accessory

UL Class CC, Midget and IEC 10x38 fuses, and CUBEFuse

RoHS

CCP-PLC-IND installed on a CCP-3-xx





Description

A resetable three-phase remote fuse monitor that integrates with a Programmable Logic Controller (PLC) or other monitoring and control equipment

Specifications:

- **Power Input**: 24Vdc, 8A
- **Output Signals**: Digital 0Vdc (Low), 24Vdc (High)
  - 0Vdc Low – Fuse is good
  - 24Vdc High – Fuse has opened

  When the fuse opens, the output signal is sent high and will remain high until the unit is reset
- **Rated Impulse Voltage**: 8kV
- **Local Indication**: Two distinct LEDs indicate unit power (green) and open fuse (red). Open fuse LED is resetable upon the replacement of the fuse and the actuation of the reset switch
- **Flammability Rating**: UL 94V0
- For use with up to and including 100A CCP

Wiring:

- For power, signal and ground connections use 22-24AWG ($0.25mm^2$) 300V rated wire

Emissions and Immunity Testing:

- Electrostatic Discharge IEC 61000-4-2
- Electrical Fast Transient/Burst IEC 6100-4-4
- Surge Immunity IEC61000-4-5

Packaging:

- The CCP-PLC-IND is packaged individually
- A single unit monitors up to three phases. Package includes 0.110" (2.8mm) quick connects for power, signal and ground connections

Minimum Circuit Voltage:

- Minimum circuit voltage required across the CCP is 100Vac for the remote indication device to operate

Installation Technique:

- Mounts on the left side of the CCP and mechanically interlocks with the CCP switch handle with hardware provided. Cannot be used with rotary or flange handle mechanism.

IP20 Rating: Yes

Environmental Data:

Storage and Operating Temperature: -20°C to 75°C

Agency Information:

- UL 98 File E155130, Guide WHTY2
- cULus to CSA Standard 22.2 No. 4-04

PLC Programming:

- The CCP-PLC-IND 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.

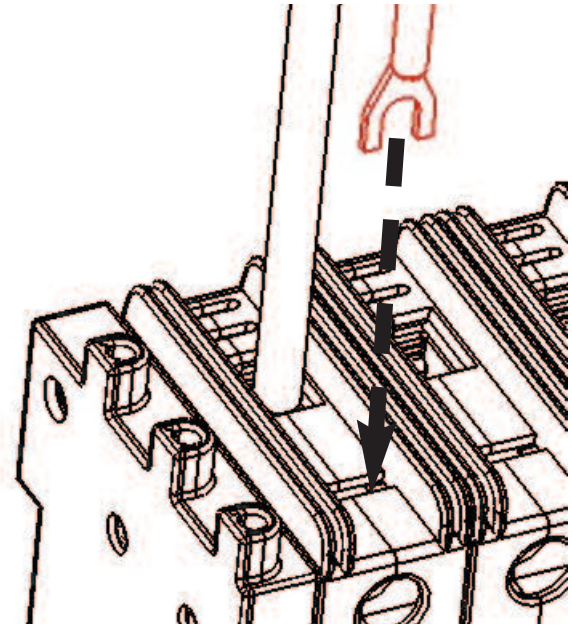
Catalog Numbers:

- 1-60A: CCP-PLC-IND
- 70-100A: CCP-PLC-100

De-energize all circuits before installing or removing any CCP-PLC-IND devices and follow all prescribed safety procedures.

Remote Fuse Monitoring Accessory – CCP-PLC-IND

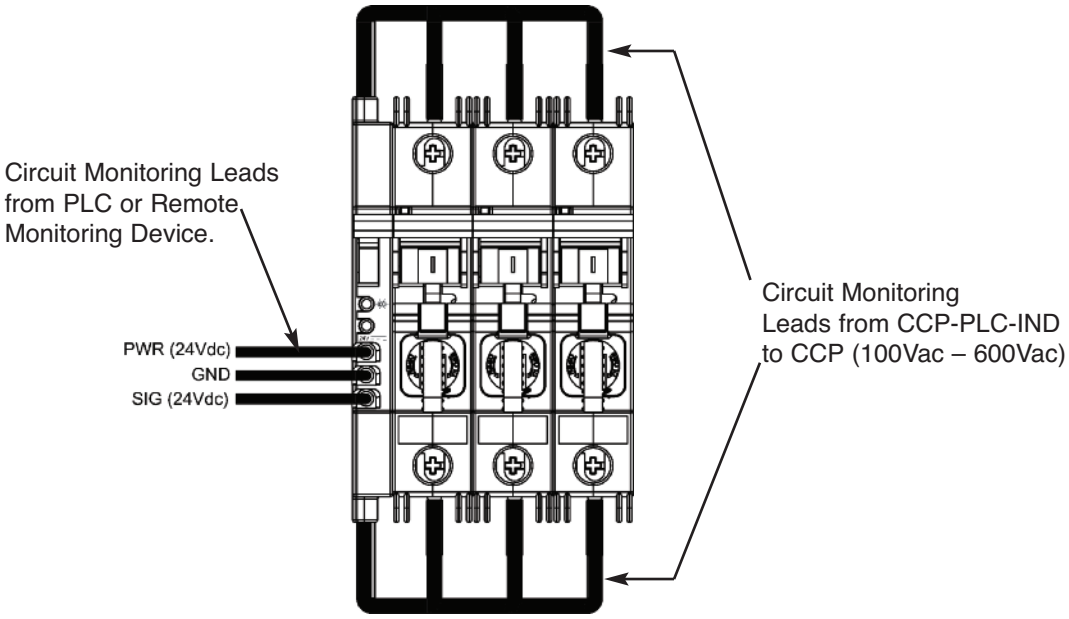
UL Class CC, Midget and IEC 10x38 fuses, and CUBEFuse



Connection from CCP-PLC-IND to CCP

Connect leads from CCP-PLC-IND to the terminals as shown. There is a dedicated terminal on the CCP to accept the spade connectors from the CCP-PLC-IND.

NOTE: When monitoring a 1-pole or 2-pole CCP, trim unused leads.

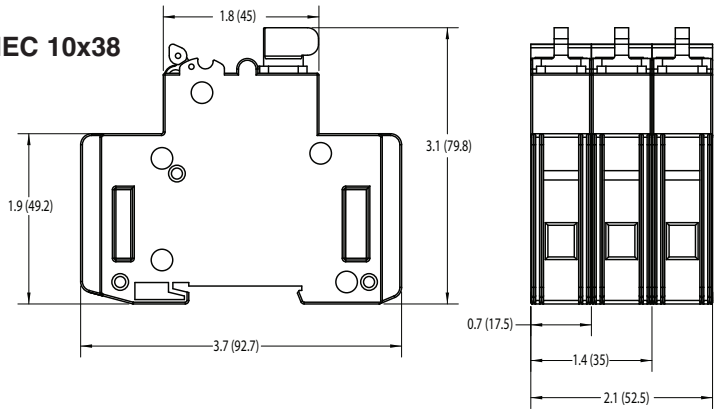


Connections for CCP-PLC-IND from a CCP-3 to a remote monitoring device

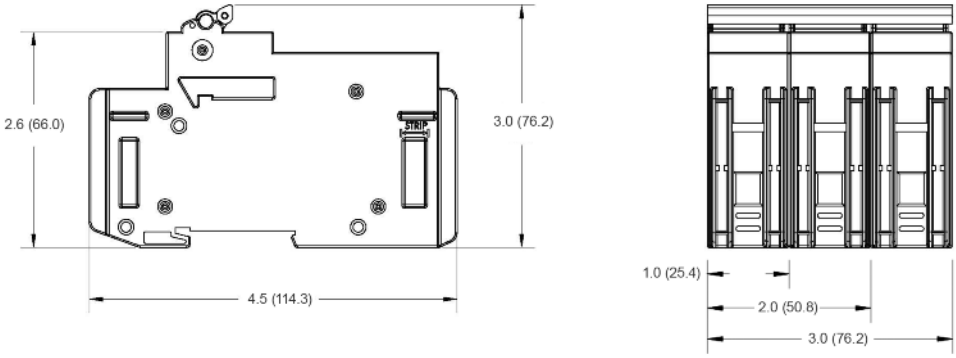
Compact Circuit Protector (CCP)

UL Class CC, Midget and IEC 10x38 fuses, and CUBEFuse

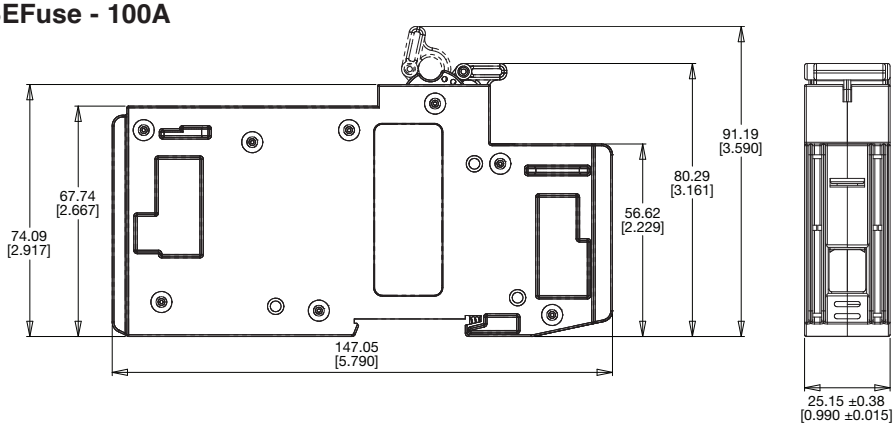
Dimensions - in (mm)
CCP for Class CC, Midget and IEC 10x38



CCP with CUBEFuse - 30 – 60A



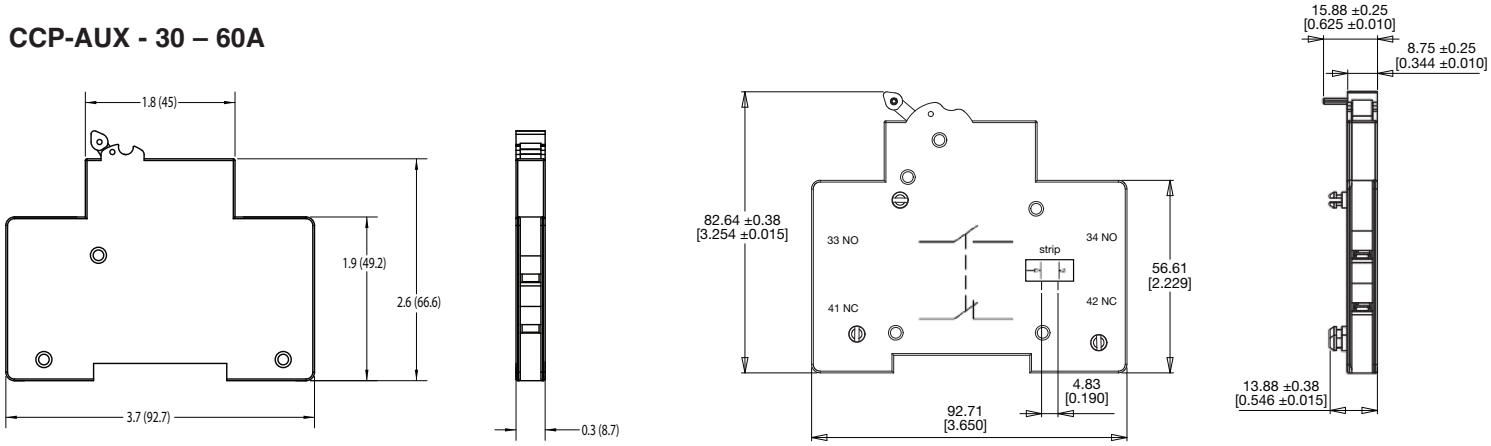
CCP with CUBEFuse - 100A



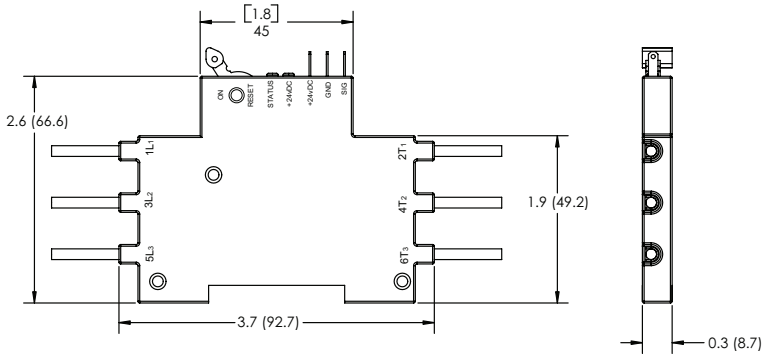
Compact Circuit Protector (CCP)

UL Class CC, Midget and IEC 10x38 fuses, and CUBEFuse

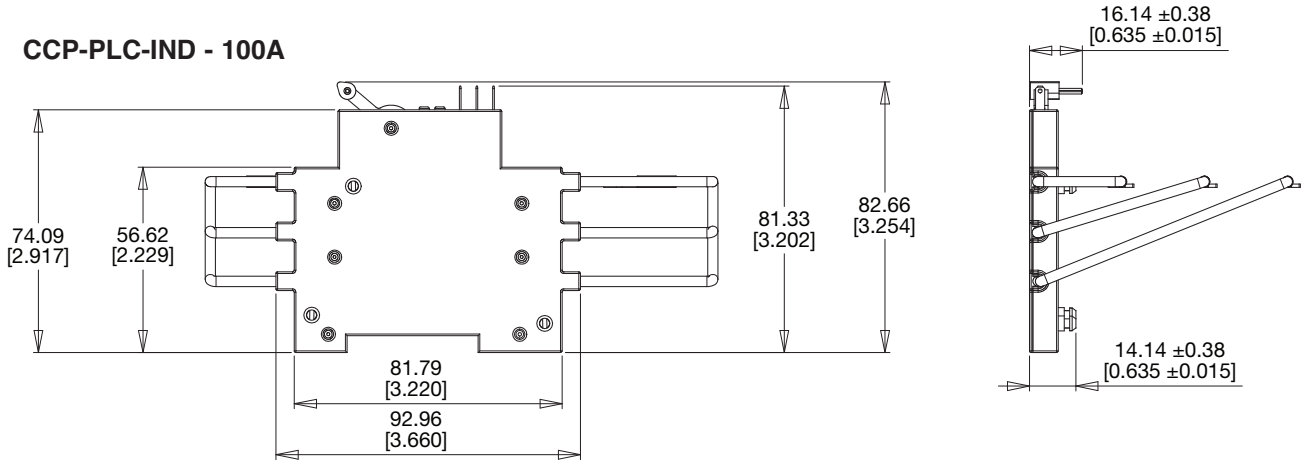
CCP-AUX - 30 – 60A



CCP-PLC-IND - 30 – 60A



CCP-PLC-IND - 100A



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Поставка электронных компонентов

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- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
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- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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