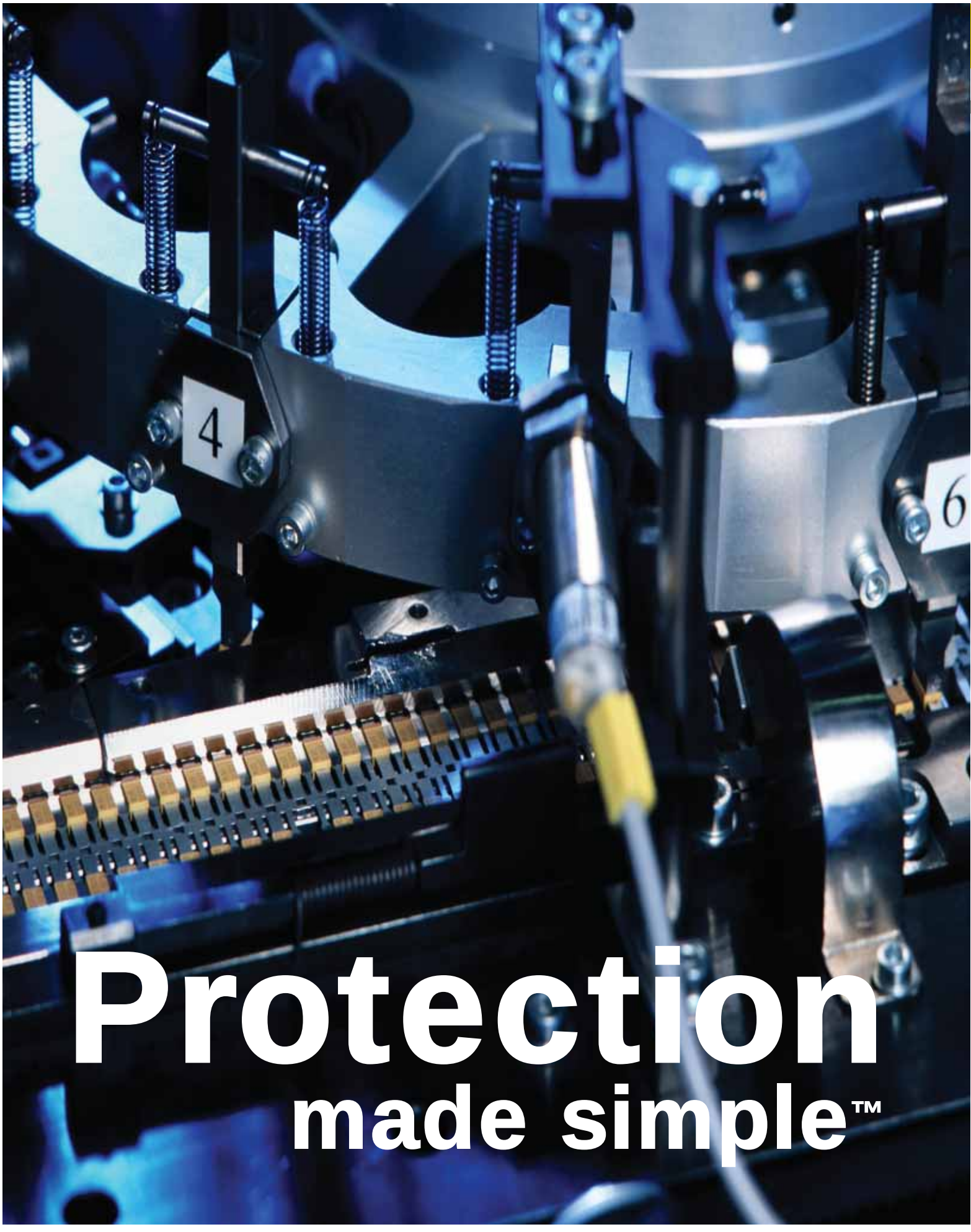
COOPER Bussmann

Compact Modular Fuse Holders With the Industry's Best Ratings

Products for PV, IEC and UL Applications

COOPER Bussmann



Protection
made simple™

Compact DIN-Rail Mountable Fuse Holders

COOPER Bussmann

Cooper Bussmann CH Series finger-safe modular fuse holders offer a set of advantages you can't find anywhere else.

Best Ratings

With a wide wire range and industry leading ratings - up to 32A, 1000V, 200kA SCCR – the new CH Series provides worldwide acceptance and easy specification – including the latest PV fuse holder standard (UL 4248-18)

Smallest Footprint

The CH Series conserves valuable panel space. Up to 10 percent smaller than the competition.

Ease of Use

Easy to identify and specify, product color coding shows PV, IEC and UL holders at a glance. Optional factory-installed neutral pole and open fuse indication speeds troubleshooting.

Accessories Provide Greater Flexibility

Save time and money by reducing wiring and components. Advanced comb-bus bar and PLC communication accessories expand design possibilities while delivering superior performance.

QuikShip™ Everyday Service

In stock for QuikShip Everyday Service - 90% of our orders ship within 24 hours. QuikShip Emergency Service ensures you're covered 24/7, 365 with "Next flight out" courier service.

Modular Fuse Holder Specifications and Selection Guide

Features and Benefits

RoHS

- High SCCR rated, UL Listed Class CC holder with indicator option for 600Vac/dc and 48Vdc.
- UL Recognized midget and 10 x 38 holders with factory assembled neutral pole option.
- Agency ratings up to 1000Vdc for use with solar PV fuses.
- Available remote PLC indication with the CH-PLC module.
- Rated for use with 75ºC or 90ºC wire, fine stranded wire, spade terminals and comb-bus bars. Use any higher temperature rated wire with appropriate derating.
- Complete range of UL Listed and high SCCR rated 1-phase and 3-phase finger-safe comb-bus bars and power feed lugs.

Specifications

Agency Information: UL File E14853
Guide IZLT Listed, IZLT2 Recognized
CSA: File 47235, CHPV and CHM - Class 6225-30, CHCC - Class 6225-01

Ratings:
600V/30A (UL)
690V/32A (IEC)

Wire Range:
#18 to #4 (0.8mm^2 to 21.1mm^2)

Torque Ratings:
30 Lb-In (3.4 N•m) maximum

Flammability Ratings:
UL 94V0, self-extinguishing

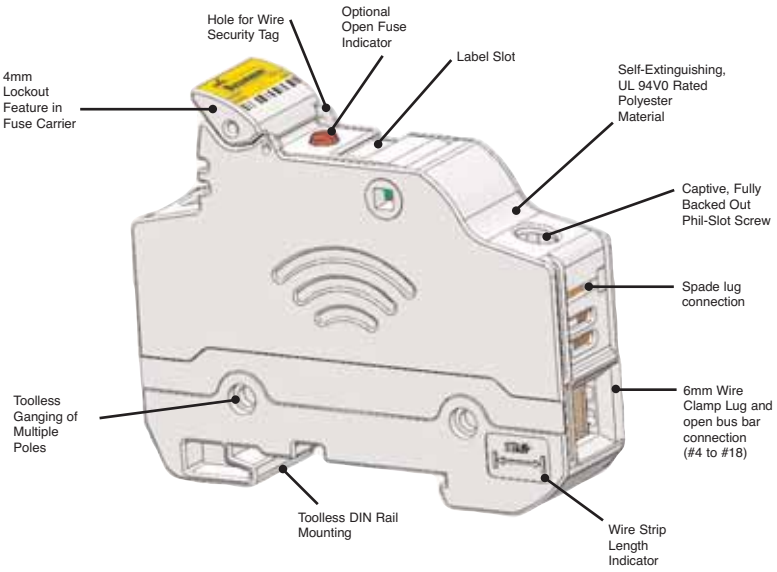
Storage & Operating Temperature Range:
-20ºC to +90ºC (indicating)
-20ºC to +120ºC (non-indicating)

Series & Size	Catalog Number		Voltage & Current	Agency Markings	Number of Poles	Terminal Rating	SCCR Rating	Cooper Bussmann Fuses
	With Indicator	Without Indicator						
CHM 10x38 and Midget	CHM1DIU	CHM1DU	UL 600V/30A; IEC 690V/32A	UR; IEC 60269-2; CSA; CCC	1	Solid, Stranded, Fine Stranded, Spade Lug, Comb Bus Bar; Single and Dual Wire; 75ºC and 90ºC Cu wire	200kA rms sym	FNQ, KLM, FNM, KTK, BAF, FWA, DCM, C10 SERIES, AGU, BAN, FWC
	CHM2DIU	CHM2DU			2			
	CHM3DIU	CHM3DU			3			
	CHM4DIU	CHM4DU			4			
	CHM1DNIU	CHM1DNU		IEC 60269-2	1 pole + 1 neutral			
	CHM3DNIU	CHM3DNU			3 poles + 1 neutral			
	CHM1DI-48U		UL 48Vdc/30A; IEC 48Vdc/32A	UR; IEC 60269-2; CSA; CCC	1			
		CHM1DNXU	IEC 690V/32A	IEC60269-2	1 neutral		n/a	n/a
CHPV	CHPV1IU	CHPV1U	UL & IEC; 1000Vdc/30A	UL; CSA; UL4248-18; IEC60269-1; CCC	1		33kA	Solar PV series
	CHPV2IU	CHPV2U			2			
CHCC Class CC	CHCC1DIU	CHCC1DU	UL 600V/30A	UL; CSA; CCC	1		200kA rms sym	LP-CC, FNQ-R, KTK-R
	CHCC2DIU	CHCC2DU			2			
	CHCC3DIU	CHCC3DU			3			
		CHCC1DI-48U	UL 48Vdc/30A		1			

Modular Fuse Holder Features and Installation Guide

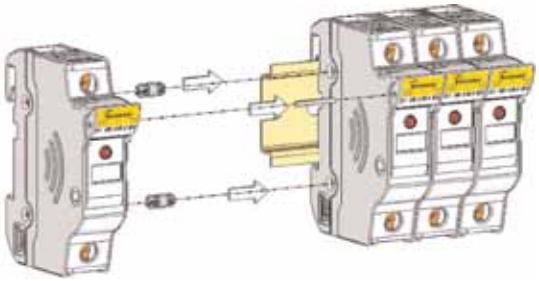
COOPER Bussmann

Features

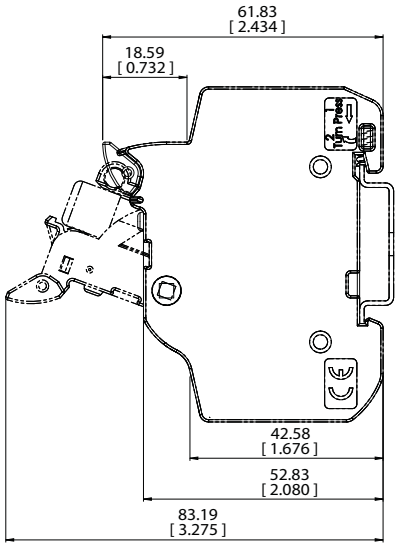


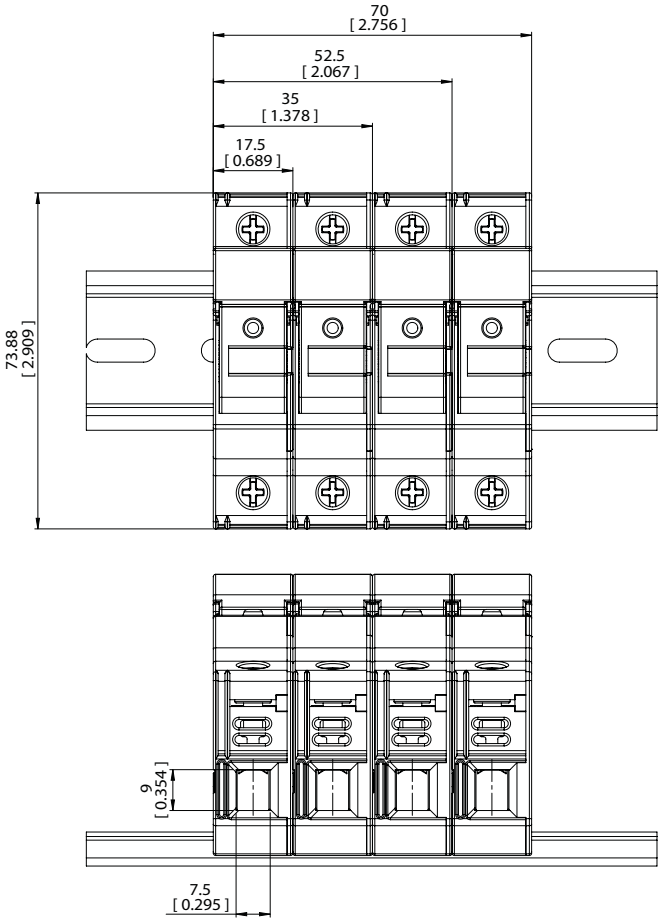
Multi-Pole Ganging

Use multi-pole connection kit part number JV-L to gang multiple poles together. One JV-L kit is sufficient to gang up to 4 poles.

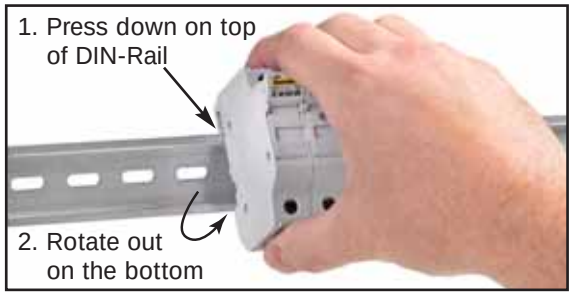


Dimensional Data - mm (in)



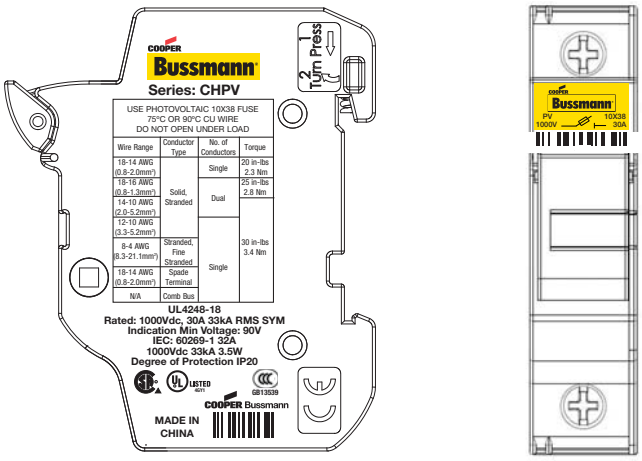


Removing Instructions

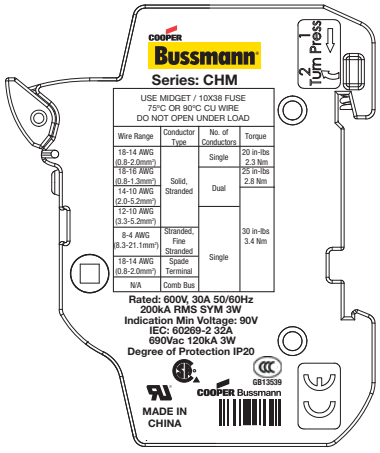


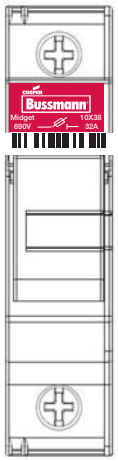
Product Design and Label Specifications

CHPV & CHPVI (PV Applications)

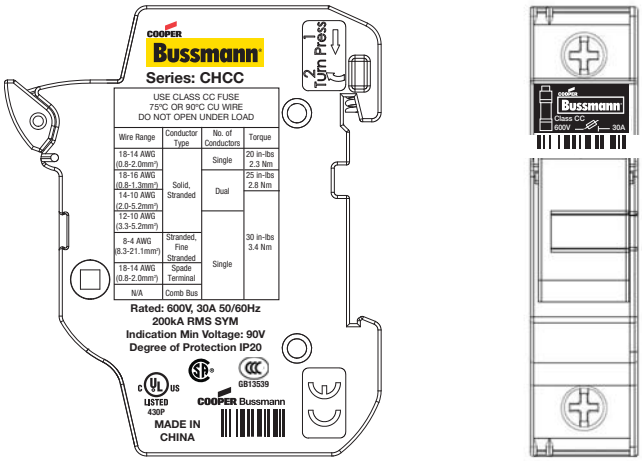


CHM & CHMI

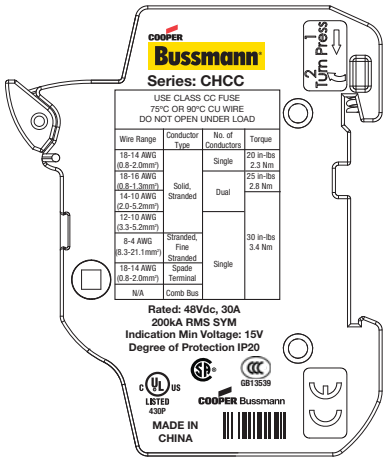




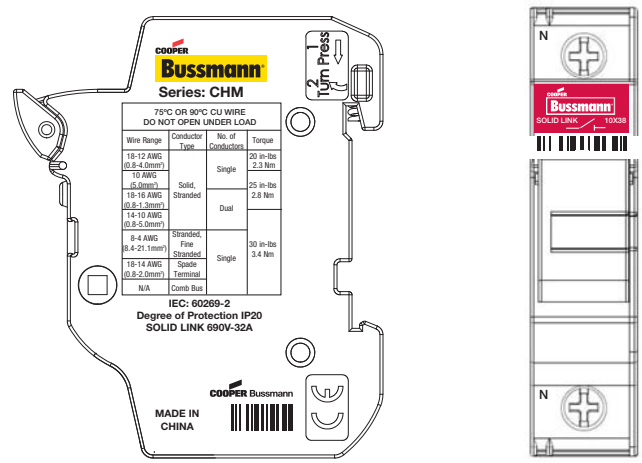
CHCC & CHCCI (UL Applications)



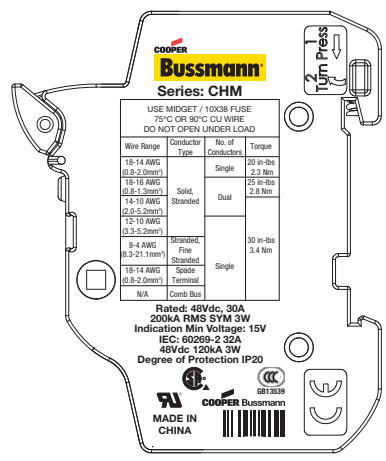
CHCCI-48

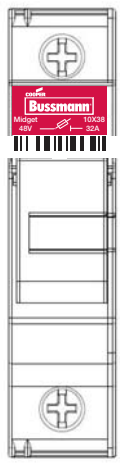


CHMDNX (IEC Applications)



CHMI-48

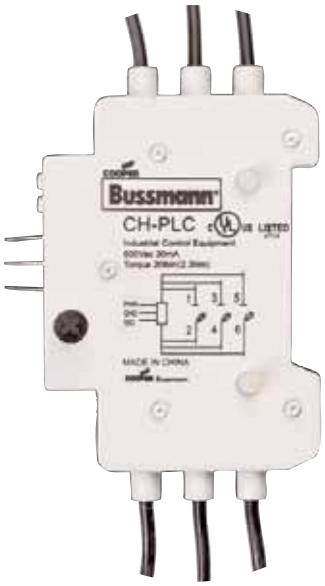




Remote Fuse Monitoring Accessory CH-PLC

COOPER Bussmann

Make it Simple **with Cooper Bussmann resettable three-phase remote fuse monitor that integrates with a Programmable Logic Controller (PLC) or other monitoring and control equipment.**



RoHS

Specifications:

- **Power Input**: 24Vdc / 5mA
- **Sensing Voltage**: 600V/30mA
- **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). Upon the replacement of the fuse, the actuation of the reset switch will reset the open fuse LED
- **Flammability Rating**: UL 94V0

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 CH-PLC is packaged individually
- A single unit monitors up to three phases
- Package includes 0.11” (2.8mm) quick connects for power, signal and ground connections

Minimum Circuit Voltage:

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

Installation Technique:

- Mounts on the left side of the fuse holder and mechanically interlocks with the fuse holder switch handle with hardware provided

IP20 Rating: Yes

Environmental Data:

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

Agency Information:

- UL 508
- cULus to CSA Standard 22.2 No.14

PLC Programming:

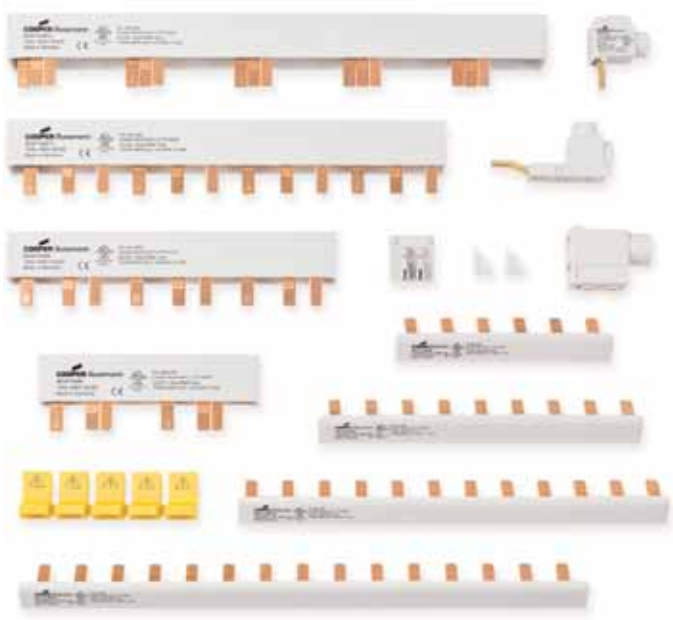
- The CH-PLC signal line is designed to provide a digital input to a PLC I/O card.
- Programmable Logic Control program must be written to properly interpret the input signal to the PLC.
- The PLC program should check for consecutive high signals before taking action on a critical process.

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

Comb-Bus Bar Specifications and Selection Guide

Features and Benefits

- Easily distribute power in single-phase or three-phase configurations
- Flexible cut-to-length solutions without compromising on the product's finger-safe features
- 100kA SCCR (Short Circuit Current Rating) when protected by a 200A Class J fuse
- Single-phase bus bars rated to 1000Vdc and 100A in end-fed configuration (200A for center-fed configuration)
- Three-phase bus bars rated to 600Vac/dc and 100A in end-fed configuration (200A for center-fed configuration)
- Power feed terminals for single-phase and three-phase service



RoHS

Specifications

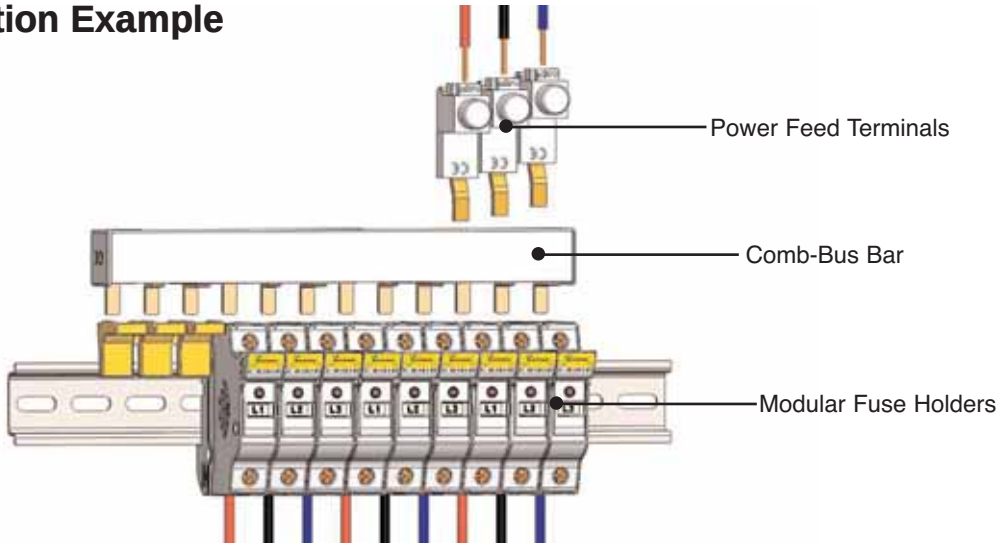
Agency Information: UL508, File E195399
Pitch: 17.8mm
SCCR: 10kA (default)
100kA (with upstream Class J 200A fuses)
Max Current: 100A (power feed from end;
200A (power feed from center)
Max Voltage: 600Vac/dc (three phase)
1000Vdc/600Vac (single phase)

Selection Guide

Part Number	Description
BB1P100M3	Single-phase 1000Vdc busbar, 100A, 3 pins, assembled endcap
BB1P100M6	Single-phase 1000Vdc busbar, 100A, 6 pins, assembled endcap
BB1P100M9	Single-phase 1000Vdc busbar, 100A, 9 pins, assembled endcap
BB1P100M12	Single-phase 1000Vdc busbar, 100A, 12 pins, assembled endcap
BB1P100M15	Single-phase 1000Vdc busbar, 100A, 15 pins, assembled endcap
BB1P100M57	Single-phase 1000Vdc cuttable busbar, 100A, 57 pins, without endcap
BB3P100M6	Three-phase 600V busbar, 100A, 6 pins, assembled endcap
BB3P100M9	Three-phase 600V busbar, 100A, 9 pins, assembled endcap
BB3P100M12	Three-phase 600V busbar, 100A, 12 pins, assembled endcap
BB3P100M15	Three-phase 600V busbar, 100A, 15 pins, assembled endcap
BB3P100M57	Three-phase 600V cuttable busbar, 100A, 57 pins, without endcap
ECAP1P	Single-phase busbar endcap
ECAPMP	Three-phase busbar endcap
PWR35MM	35mm² feeder terminal for three-phase busbar (115A, 1000Vac/dc)
FSCVR	Spare contact safety protection covers
PWR1PLP	Single-phase low-profile feeder terminal (115A, 1000Vac/dc)
PWR50MM	50mm² direct feed terminal (1000Vac/dc)

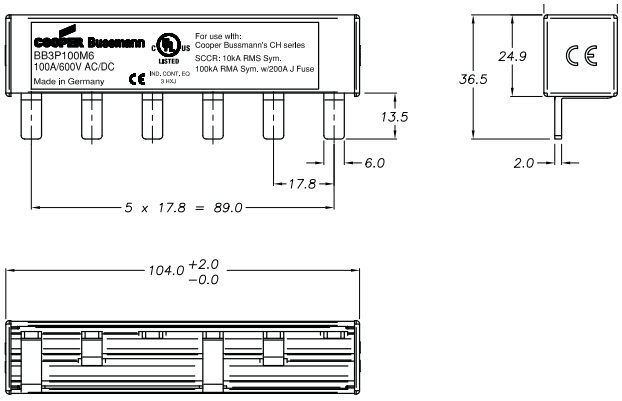
Comb-bus Bar Features and Installation Guide

Typical Installation Example

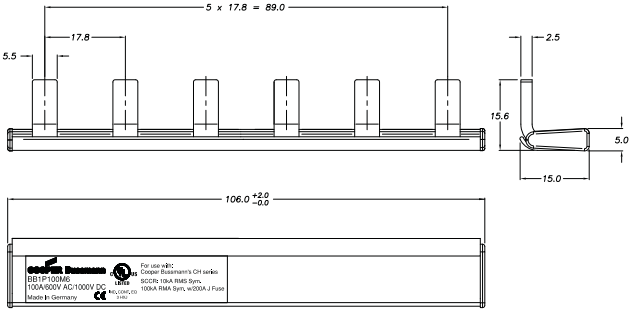


Typical Dimensional Data

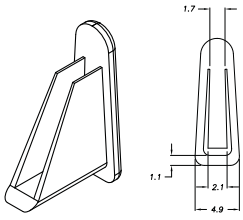
Three-phase



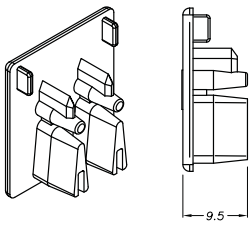
Single-phase



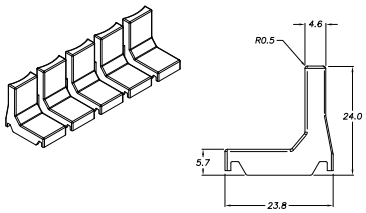
ECAP1P



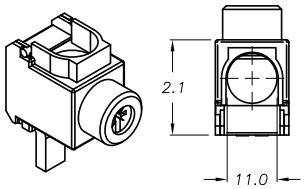
ECAPMP



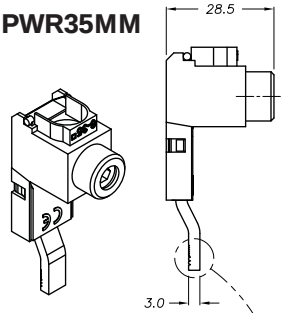
FSCVR



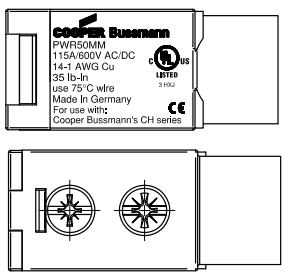
PWR1PLP

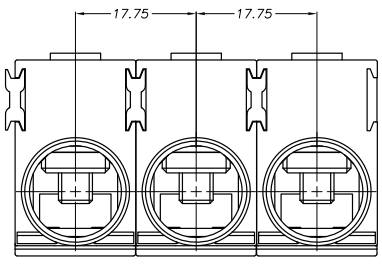


PWR35MM



PWR50MM





CH Series Modular Fuse Holder Specifications

PV

UL

IEC

Class J 30A

8x32 IEC

14x51 IEC

22x58 IEC

Catalog Numbers

Without Indication	With* Indication	Size	Max Voltage & Current	IEC	UL	Phase Configuration	No. of 17.5mm Modules	Wire Range	Maximum Torque
CH081D	CH081DI	CH08 8x32	IEC 400Vac 25A	•		1-pole	1	1-16mm² (18-8 AWG)	2.5 N•m (22LB-In)
CH081DNX	-			•		1 Neutral Pole	1		
CH081DNS	CH081DNSI			•		1-pole + Neutral	1	1-10mm² (18-8 AWG)	2.0 N•m (17.5LB-In)
CH081DN	CH081DNI			•		1-pole + Neutral	2		
CH082D	CH082DI			•		2-pole	2		
CH083D	CH083DI			•		3-pole	3	1-16mm² (18-8 AWG)	2.5 N•m (22LB-In)
CH083DNS	CH083DNSI			•		3-pole + Neutral	3		
CH083DN	CH083DNI			•		3-pole + Neutral	4		
CH084D	CH084DI			•		4-pole	4		
CHM1DU	CHM1DIU	CHM 10X38 and Midget	UL 600V/30A; IEC 690V/32A	•	*	1-pole	1		
CHM2DU	CHM2DIU			•	*	2-pole	2		
CHM3DU	CHM3DIU			•	*	3-pole	3		
CHM4DU	CHM4DIU			•	*	4-pole	4		
CHM1DNU	CHM1DNIU			•	*	1-pole + Neutral	2		
CHM3DNU	CHM3DNIU			•	*	3-pole + Neutral	4	1-21mm² (18-4 AWG)	3.4 N•m (30LB-In)
–	CHM1DI-48U		UL 48Vdc/30A; IEC 48Vdc/32A	•	*	1-pole	1		
CHM1DNXU	–		IEC 690V32A	•		1-pole + Neutral	2		
CHPV1U	CHPV1IU	CHPV	UL & IEC; 1000Vdc/30A	•	†††	1-pole	1		
CHPV2U	CHPV2IU			•	†††	2-pole	2		
CHCC1DU	CHCC1DIU	CHCC Class CC	UL 600V/30A		**	1-pole	1		
CHCC2DU	CHCC2DIU				**	2-pole	2	1-21mm² (18-4 AWG)	3.4 N•m (30LB-In)
CHCC3DU	CHCC3DIU				**	3-pole	3		
CHCC1DI-48U	–		UL 48Vdc/30A		**	1-pole	1		
CH141D	CH141DI	CH14 14x51	UL 600Vac/dc 40A (5 Watt) IEC 690Vac, 50A	•		1-pole	1.5		
CH141DMS	-			•		1-pole + Microswitch	1.5		
CH141DNX	-			•		1 Neutral Pole	1.5		
CH141DN	CH141DNI			•		1-pole + Neutral	3		
CH142D	CH142DI			•	†	2-pole	3	2.5-16mm² (14-6 AWG)	3.0 N•m (26LB-In)
CH143D	CH143DI			•	†	3-pole	4.5		
CH143DMS	-			•		3-pole + Microswitch	4.5		
CH143DN	CH143DNI			•		3-pole + Neutral	6		
CH143DNMS	-			•		3-pole + Neutral + Microswitch	6		
CH144D	CH144DI			•		4-pole	6		
CH221D	Not Available with local neon indication (remote microswitch only)	CH22 22x58	UL 600Vac/dc, 100A (9.5 Watt) IEC 690Vac, 125A	•	†	1-pole	2		
CH221DMS				•		1-pole + Microswitch	2		
CH221DNX				•		1 Neutral Pole	2		
CH221DN				•		1-pole + Neutral	4		
CH222D				•	†	2-pole	4	2.5-50mm² (14-1 AWG)	4.0 N•m (35LB-In)
CH223D				•	†	3-pole	6		
CH223DMS				•		3-pole + Microswitch	6		
CH223DN				•	†	3-pole + Neutral	8		
CH223DNMS				•		3-pole + Neutral + Microswitch	8		
CH224D				•		4-pole	8		
Class J *easy*ID™ Indication	Neon Indication								
CH30J1	CH30J1I	CH30J 30A Class J	UL/CSA 600Vac		††	1-pole	—	1-50mm² (18-1 AWG)	1-8 AWG 4.0 N•m (35LB-In)
CH30J2	CH30J2I				††	2-pole	—		10-18 AWG 2.7N•m (24LB-IN)
CH30J3	CH30J3I				††	3-pole	—		
CH60J1	CH60J1I	CH60J 60A Class J	UL/CSA 600Vac		††	1-pole	—	1-50mm² (18-1 AWG)	1-8 AWG 4.0 N•m (35LB-In)
CH60J2	CH60J2I				††	2-pole	—		10-18 AWG 2.7N•m (24LB-In)
CH60J3	CH60J3I				††	3-pole	—		

† UL Recognized (cURus) †† UL LIsted (cULus) ††† UL Recognized, Standard 4248-18, CSA * UL Recognized, CSA
For further details see Data Sheets 2053 (CH08, CHM, CHCC, CH14 AND CH22) and 2144 (CHJ Class J) ** UL Listed, CSA
*90V miminum required for illumination
***12V mininum required for illumination

Widest Range of Fuse Holders Available

COOPER Bussmann

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