

CH Modular, IP20 finger-safe DIN-Rail holders for Class CC, midget and PV fuses

RoHS

**Catalog symbol:**

- CHCC_ (Class CC)
- CHM_ (UL® midget/IEC® 10x38)
- CHPV_ (13/32 x 1-1/2 and 10x38 photovoltaic)

Description:

Eaton's Bussmann® series CH DIN-Rail fuse holders are for UL Class CC and midget fuses, and IEC 10x38 fuses. They are available with and without indication in 1-, 2- and 3-pole IP20 finger-safe versions. A variety of accessories extends their application flexibility and they may be ganged together to meet specific application requirements.

For other Bussmann series CH fuse holders, please see the following data sheets.

Fuse class	Fuse size	Data sheet No.
Class J	30 and 60A	2141
	8x32mm	720147
IEC	14x51mm	10080
	22x58mm	10015

Specifications:**Ratings**

- Volts
 - 600V (or less) UL
 - 690V (or less) IEC
 - 1000Vdc (or less) photovoltaic (PV)
- Amps
 - 30A UL
 - 32A IEC
- Short-Circuit Current Rating (SCCR)
 - 33kA photovoltaic
 - 200kA RMS Sym. (CHCC, CHM*)

* CHM SCCR is fuse interrupting rating dependent.

Agency information

- UL Listed File E14853, Guide IZLT, Recognized IZLT2
- UL Listed to E348242 and Guide IZMR (CHPV)
- CSA® File 47235, CHPV and CHM - Class 6225-30, CHCC - Class 6225-01
- IEC 60269-2 (CHM, CHPV)
- CCC
- RoHS compliant

Mounting

- 35mm DIN-Rail

Wire range

- 75°C and 90°C Cu
- #18 to #4 (0.8mm² to 21.1mm²)
 - Solid
 - Stranded
 - Fine stranded

Terminals

- Single or dual conductors
- Comb busbar
- Torque 30 Lb-In (3.4 N•m) maximum

Flammability

- UL 94V0, self-extinguishing

Storage and operating temperature

- -4°F (-20°C) to 194°F (90°C) indicating
- -4°F (-20°C) to 248°F (120°C) non-indicating

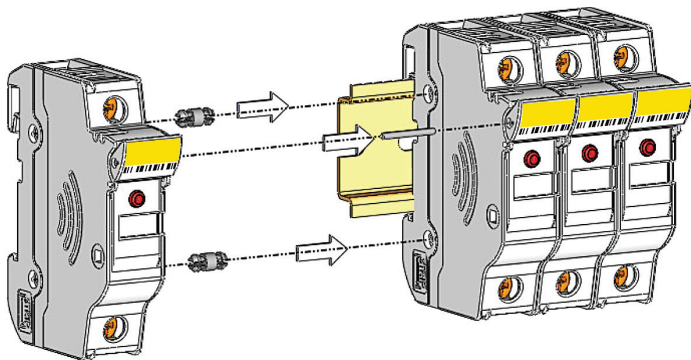
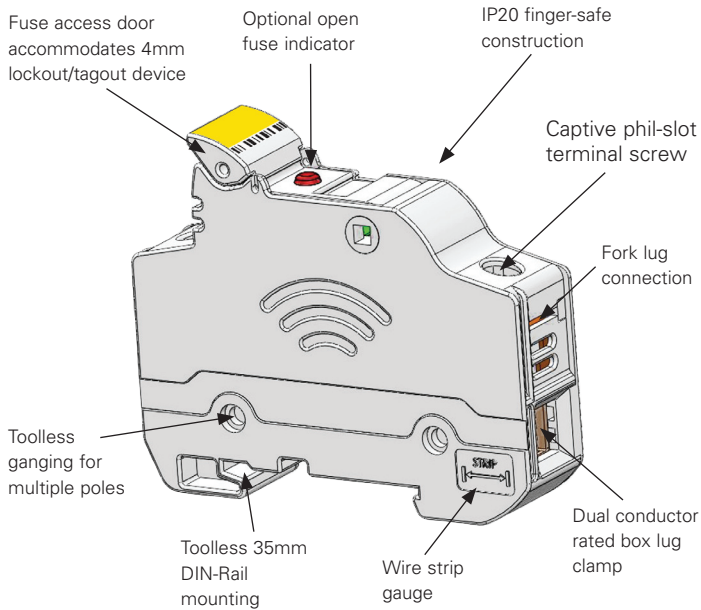
EATON

Powering Business Worldwide

Features and benefits:

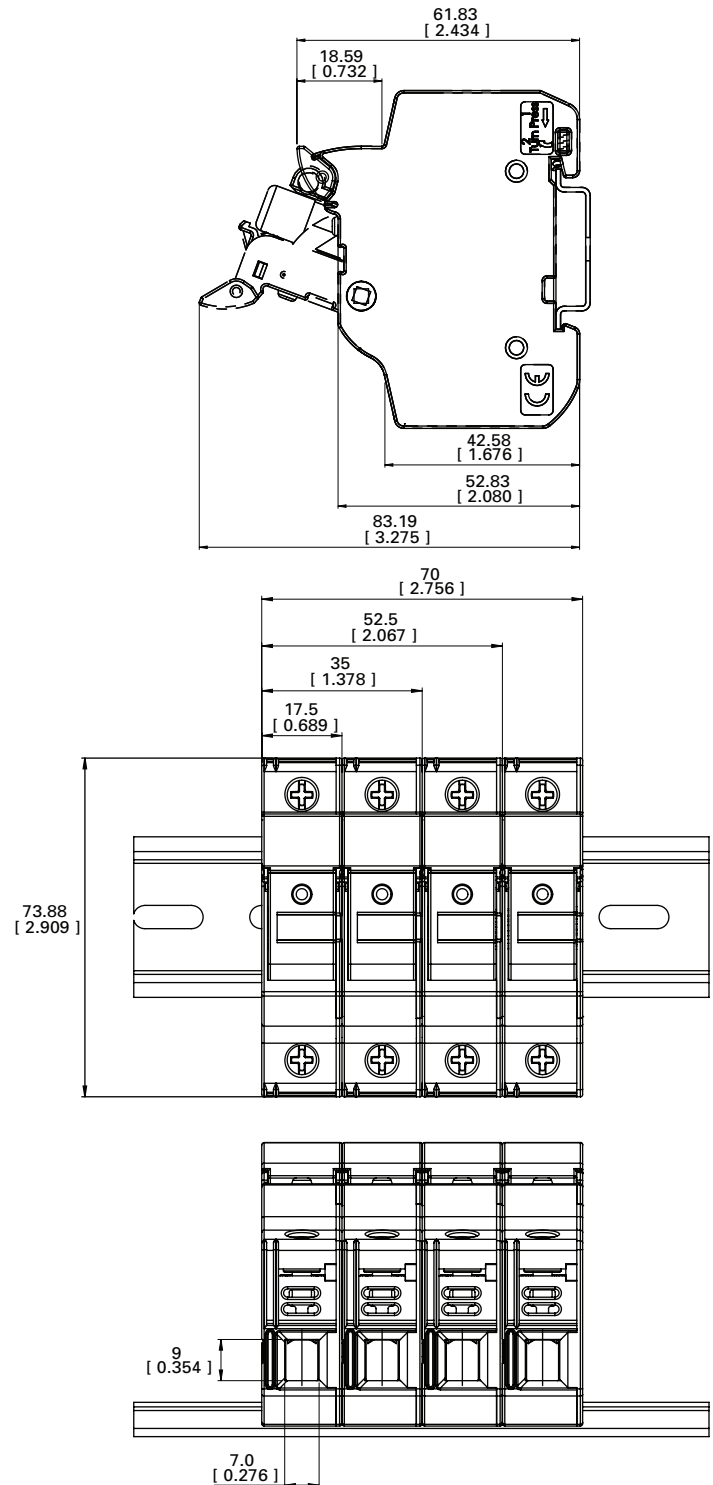
- High SCCR rated, UL Listed Class CC holder with optional open fuse indication for 600Vac/dc and 48Vdc (see catalog number table for details).
- Enhanced safety with IP20 finger-safe construction.
- UL Recognized midget and IEC 10x38 holders with factory assembled neutral pole option.
- Agency ratings up to 1000Vdc for use with PV fuses.
- Available remote PLC indication module.
- Wiring flexibility with terminals rated for use with 75°C or 90°C solid, stranded and fine stranded wire, and spade terminals and comb-bus bars. (Use any higher temperature insulations at the 90°C ampacity.)
- Complete range of UL Listed and high SCCR rated one- and three-phase finger-safe comb-bus bars and power feed lugs.

Features:



Gang multiple poles to meet application requirements using kit catalog number JV-L (gangs up to four poles).

Dimensions - mm (in):





UL midget and IEC 10x38 CHM holder catalog numbers

Catalog number		Volts and amps		Agency marks	Poles	SCCR	Recommended Bussmann series fuses
With indication*	Without indication	UL	IEC				
CHM1DIU	CHM1DU	600V/30A	690V/32A	UR, CSA, IEC 60269-2, CCC	1	200kA** RMS Sym.	BAF, BAN, FNM, FNQ, FWA, FWC, KLM, KTK, AGU, C10G_, C10M_
CHM2DIU	CHM2DU				2		
CHM3DIU	CHM3DU				3		
CHM4DIU	CHM4DU				4		
CHM1DNIU	CHM1DNU				1 + neutral		
CHM3DNIU	CHM3DNU			IEC 60269-2	3 + neutral		
CHM1DI-48U	—	48Vdc/30A	48Vdc/32A	UR, CSA, IEC 60269-2, CCC	1	N/A	N/A
—	CHM1DNXU		690V/32A	IEC 60269-2			
CHM1DCIU	CHM1DCU	600Vac, 1000Vdc, 30A	690V, 32A	UR, CSA, IEC 60269-2	1	200kA** RMS Sym., 33kA DC	600/690V BAF, BAN, FNM, FNQ, FWA, FWC, KLM, KTK, AGU, C10G_, C10M_, 1000Vdc PV-(amp)A10F, PV10M-(amp)
CHM2DCIU	CHM2DCU				2		
CHM3DCIU	CHM3DCU				3		
CHM4DCIU	CHM4DCU				4		

* All models require 90V minimum for illumination, except CHM1DI-48U that requires 15V minimum.

** SCCR is limited to the interrupting rating of the installed fuse or 200kA, which ever is less.



UL Class CC CHCC holder catalog numbers

Catalog number		Volts / amps	Agency marks	Poles	SCCR	Recommended Bussmann series fuses
With indication*	Without indication					
CHCC1DIU	CHCC1DU	600V/30A	UL, CSA, CCC	1	200kA RMS Sym.	LP-CC, FNQ-R, KTK-R
CHCC2DIU	CHCC2DU			2		
CHCC3DIU	CHCC3DU			3		
CHCC1DI-48U	—	48Vdc/30A		1	33kA DC	

* All models require 90V minimum for illumination, except CHCC1DI-48U that requires 15V minimum.



UL and IEC photovoltaic CHPV holder catalog numbers

Catalog number		Volts / amps	Agency marks	Poles	SCCR	Recommended Bussmann series fuses
With indication	Without indication					
CHPV1IU	CHPV1U	1000Vdc/30A	UL, CSA, , UL 4248-18, IEC 60269-1, CCC	1	33kA DC	PV-(amp)A10F, PV10M-(amp)
CHPV2IU	CHPV2U			2		

* All models require 90V minimum for illumination.

Accessories:

Bussmann series CH modular fuse holders can be applied using a variety of accessories that facilitate or simplify installation.

35mm DIN-Rails

- Constructed of high strength stainless steel
- Sold in 1 meter lengths
- Available in high- or low-profile versions

Catalog numbers	Profile	Height
DRL35MMLO	Low	7.5mm
DRL35MMHI	High	15mm

Comb busbars



- Easily distribute power in single-or three-phase systems
- Flexible cut-to-length busbars do not compromise the finger-safe protection (requires using endcaps)
- 100kA SCCR when protected by a max 200A Class J fuse
- Single-phase busbars rated to 1000Vdc and 100A
- Three-phase busbars rated to 600Vac/dc and 100A
- Power feed terminals for single-and three-phase systems

Specifications:

Agency information

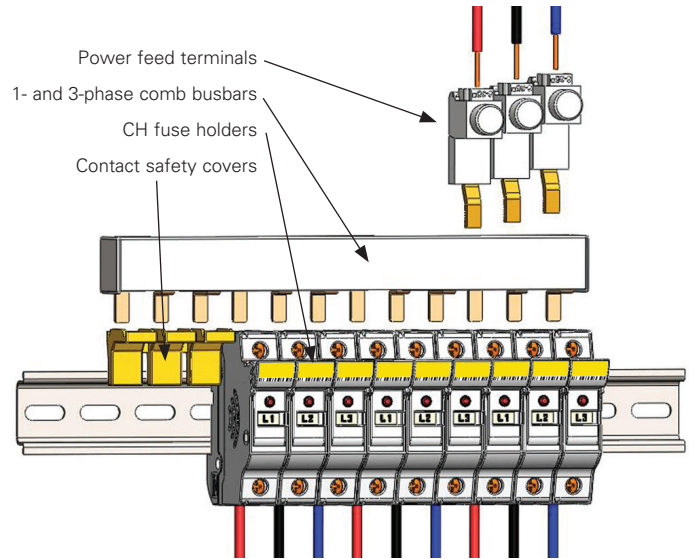
- UL 508, File E195399

Pitch

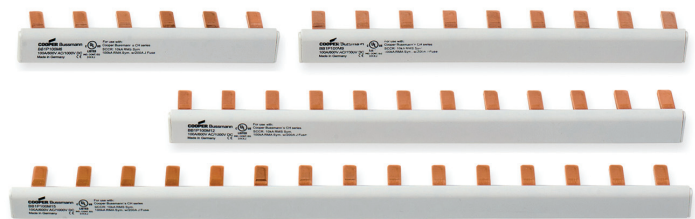
- 17.8mm

Ratings

- Volts
 - 600Vac/dc max. (three-phase)
 - 1000Vdc/600Vac max. (single-phase)
- Amps 100A max.
- SCCR
 - 10kA (default)
 - 100kA (with upstream Class J max 200A fuses)

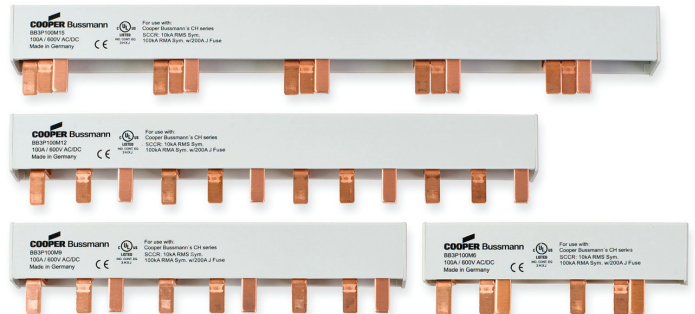


Single-phase comb busbars



Available in 3, 6, 9, 12, 15 and 57 pin constructions.

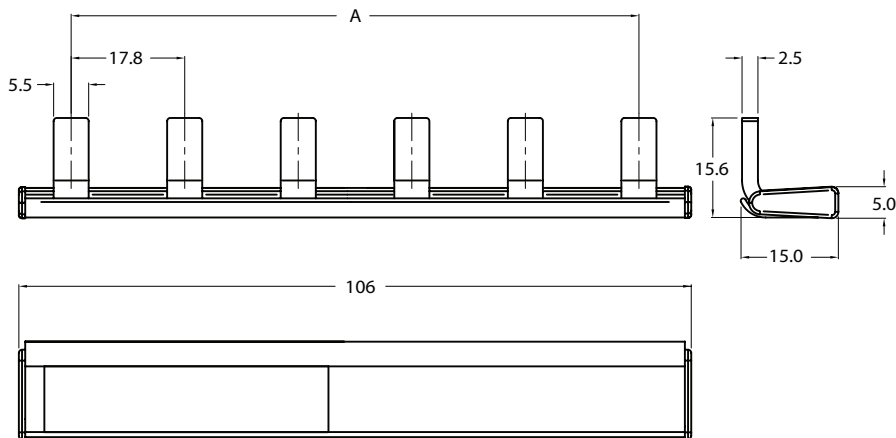
Three-phase comb busbars



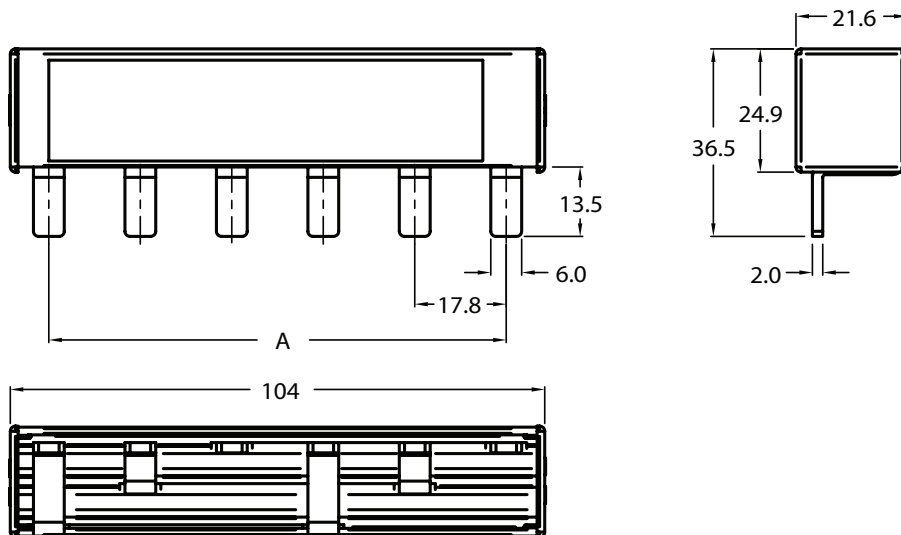
Available in 6, 9, 12, 15 and 57 pin constructions.

Comb busbar dimensions - mm:

Single-phase



Three-phase



Single- and three-phase A dimensions

Poles	A - mm
3	35.6
6	89.0
9	142.4
12	195.8
15	249.2
57	996.8

All 15-pole or fewer comb busbars come with endcaps installed. If a comb busbar will be cut-to-length, order additional endcaps to maintain electrical protection.

End caps are sold in carton quantities of 50. Order ECAP1P for single-phase and ECAPMP for three phase.

Comb busbar catalog numbers:

Catalog number	Phase	Voltage	Amps	Number of pins	Endcaps
BB1P100M3	Single-phase	1000Vdc	100A	3	With endcaps assembled. If cut to length, order additional endcaps separately.
BB1P100M6				6	
BB1P100M9				9	
BB1P100M12				12	
BB1P100M15				15	Without endcaps (order separately)
BB1P100M57	Three-phase	600V	100A	57 pin cuttable	
BB3P100M6				6	With endcaps assembled. If cut to length, order additional endcaps separately.
BB3P100M9				9	
BB3P100M12				12	
BB3P100M15				15	Without endcaps (order separately)
BB3P100M57				57 pin cuttable	

Power feed terminals:

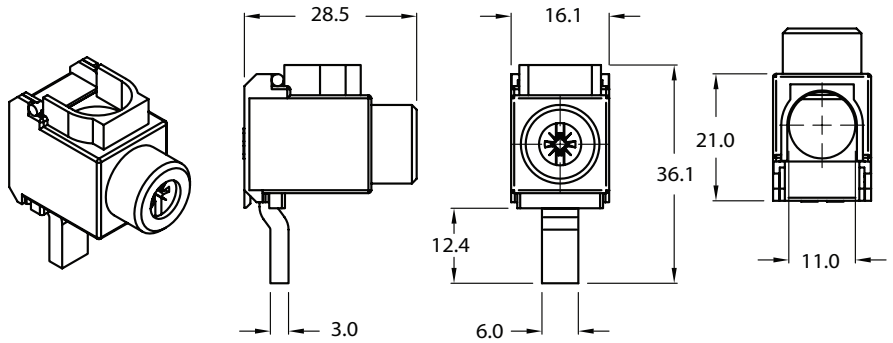
PWR1PLP



Single-phase, low profile power feed terminal

Ratings

- Volts 1000Vac/dc
- Amps 115A
- Wire range 1/0-10AWG Cu, max torque 50 lb-in (5.6 N•m)
- Wire temp. rating 60°C*



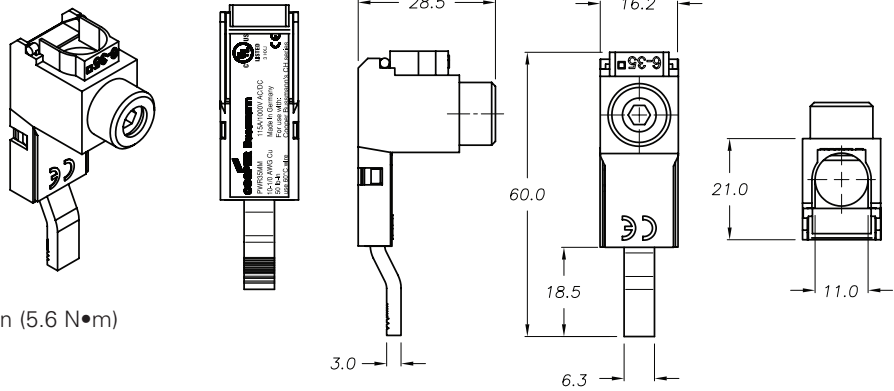
PWR35MM



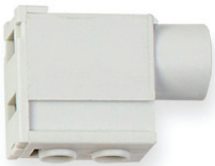
35mm² three-phase power feed terminal
for three-phase busbars

Ratings

- Volts 1000Vac/dc
- Amps 115A
- Wire range 1/0-10AWG Cu, max torque 50 lb-in (5.6 N•m)
- Wire temp. rating 60°C*



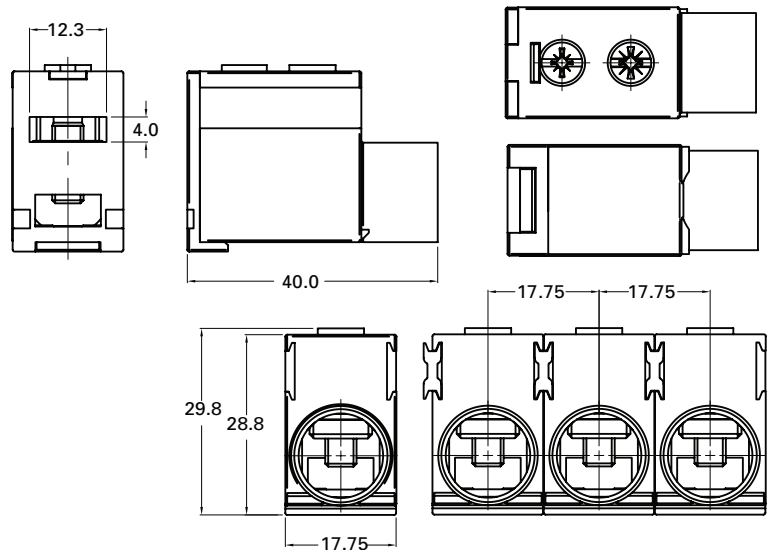
PWR50MM



50mm² direct feed power terminal

Ratings

- Volts 1000Vac/dc
- Amps 115A
- Wire range 1-14AWG Cu, max torque 35 lb-in (3.9 N•m)
- Wire temp. rating 75°C*



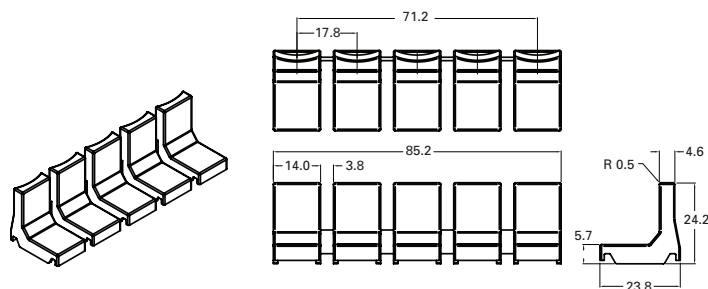
* Higher temperature rated wire may be used with appropriate derating.

Comb busbar safety covers and end caps:

FSCVR



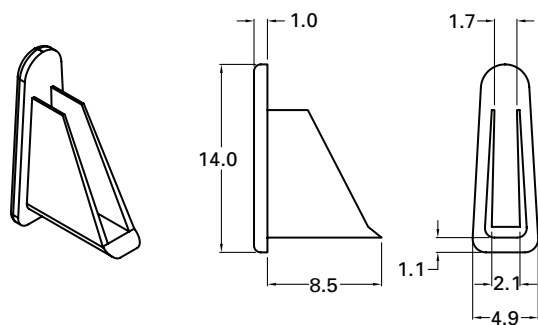
Spare comb busbar pin safety protection covers (used to cover exposed pins on comb busbars). Sold in quantity of ten strips of five covers each. (FSCVR comes with five covers on a strip. Minimum order is 10 strips or 50 safety covers total.)



ECAP1P



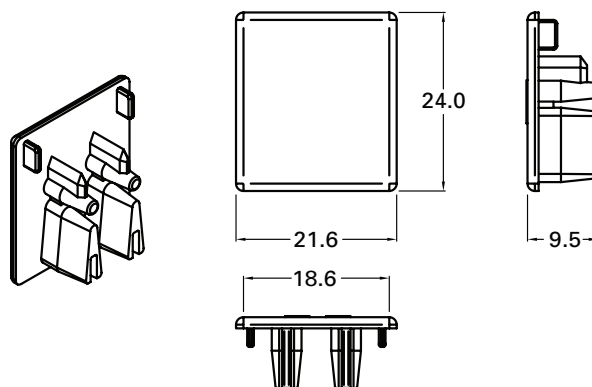
End cap for single-phase comb busbars. Sold in quantity of fifty.



ECAPMP



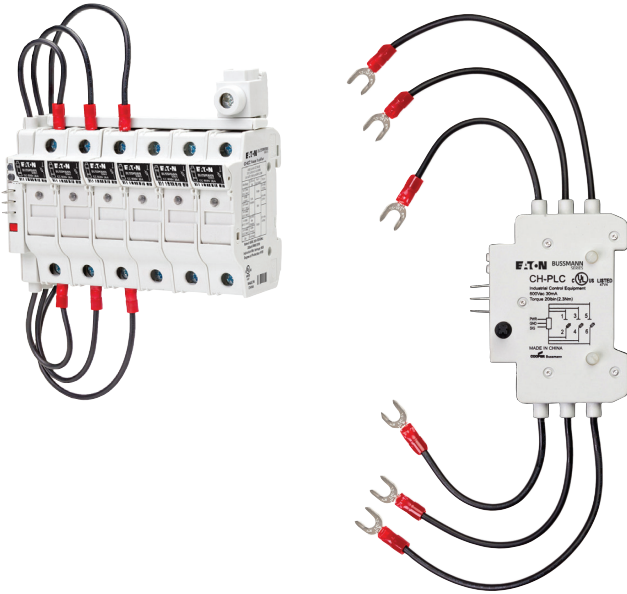
End cap for three-phase comb busbars. Sold in quantity of fifty.



Accessory catalog numbers

Catalog number	Description	Carton quantity
PWR1PLP	Single-phase low-profile power feed terminal (115A, 1000Vac/dc)	10
PWR35MM	35mm ² power feed terminal for three-phase busbar (115A, 1000Vac/dc)	10
PWR50MM	50mm ² direct power feed terminal (1000Vac/dc)	10
ECAP1P	Single-phase busbar endcap	50
ECAPMP	Three-phase comb busbar end cap	50
FSCVR	Spare comb busbar pin safety protection covers	10 strips of five covers each, total 50 individual covers

PLC remote fuse monitor



The Bussmann series resettable remote fuse monitor permits easy integration with a Programmable Logic Controller (PLC) or other monitoring and control equipment. Signals up to three-phases.

Specifications:

- Power input: 24Vdc / 5mA
- Sensing voltage: 600V/30mA
- Digital output signals
 - 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 fuse replacement, the actuation of the reset switch will reset the open fuse LED
- Flammability rating
 - UL 94V0

Wiring

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

Emissions and immunity testing

- Electrostatic discharge IEC 61000-4-2
- Electrical fast transient/burst IEC 6100-4-4
- Surge immunity IEC 61000-4-5

Minimum circuit voltage

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

Installation

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

Degree of protection

- Finger-safe IP20

Storage and operating temperature

- -4°F (-20°C) to 167°F (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

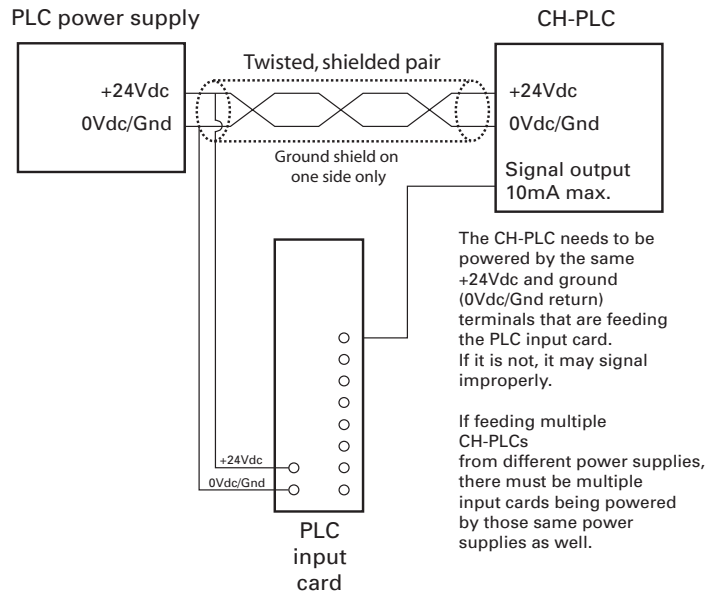
Packaging

- 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

To order

- Specify catalog number CH-PLC

PLC wiring schematic



The only controlled copy of this data sheet is the electronic read-only version located on the Eaton network drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
Eaton.com

Bussmann Division
114 Old State Road
Ellisville, MO 63021
United States
Eaton.com/bussmannseries

© 2016 Eaton
All Rights Reserved
Printed in USA
Publication No. 10430 — BU-MC15033
February 2016

Eaton and Bussmann are valuable trademarks of Eaton in the US and other countries. You are not permitted to use the Eaton trademarks without prior written consent of Eaton.

CSA is a registered trademark of the Canadian Standards Group.
IEC is a registered trademark of the International Electrotechnical Commission.
UL is a registered trademark of the Underwriters Laboratories, Inc.

For Eaton's Bussmann series
product information,
call **1-855-287-7626** or visit:
Eaton.com/bussmannseries