



Overview

The Cutler-Hammer WMS Supplementary Protectors are used to provide overcurrent protection where branch protection (For example, UL 489 MCCB) is already provided or not required. The units can be installed as a component within, or as a part of an appliance or a piece of electrical equipment. Supplementary Protectors are ideal replacements for fuses that are applied as a supplementary protector, i.e. in addition to branch protection (if required). They are 35 mm DIN-rail mountable, utilizing metallic “extra strength” spring clips. These are standard protectors, recognized by UL and CSA under UL 1077 and CSA 22.2. They are CE marked in accordance with Low Voltage Directive (LVD) (73/23/EEC).

Applications

Cutler-Hammer WMS Supplementary Protectors by Eaton Corporation are ideal for providing protection in many applications, including:

- Control power transformers
- Relays
- Contactor coils
- PLC I/O points
- Lighting circuits
- Power supplies
- Computers
- Electronic equipment

Features and Benefits

- Current limiting design provides fast short circuit interruption that reduces the let-through energy which can damage the control circuit or load.
- Thermal magnetic overcurrent protection. Three levels, categorized by B, C and D curves in direct relation to continuous rating of device

B curve magnetic trip point:

3 to 5 times the rated current and typically used for computers and electronic equipment with very low inrush loads.

C curve magnetic trip point:

5 to 10 times the rated current and typically used for small transformers, pilot devices, etc.

D curve magnetic trip point:

10 to 20 times the rated current and typically used for transformers or loads with very high inductive loads.

- Color coded status indicator window – Red = ON or Green = OFF
- IP20 finger protection
- Provision for dual connection – line and load:
 - Cable direct into terminal
 - Cable utilizing Ring Tung connector
- 35 mm DIN-rail mountable, utilizing “extra strength” spring clip

Listings

- UL recognized under UL 1077 Category QVNU2 File E162396
- CSA 22.2, No. 235 File LR105508-2
- CE File LVD 73/23/ECC
- IEC 898
- IEC 60947-2

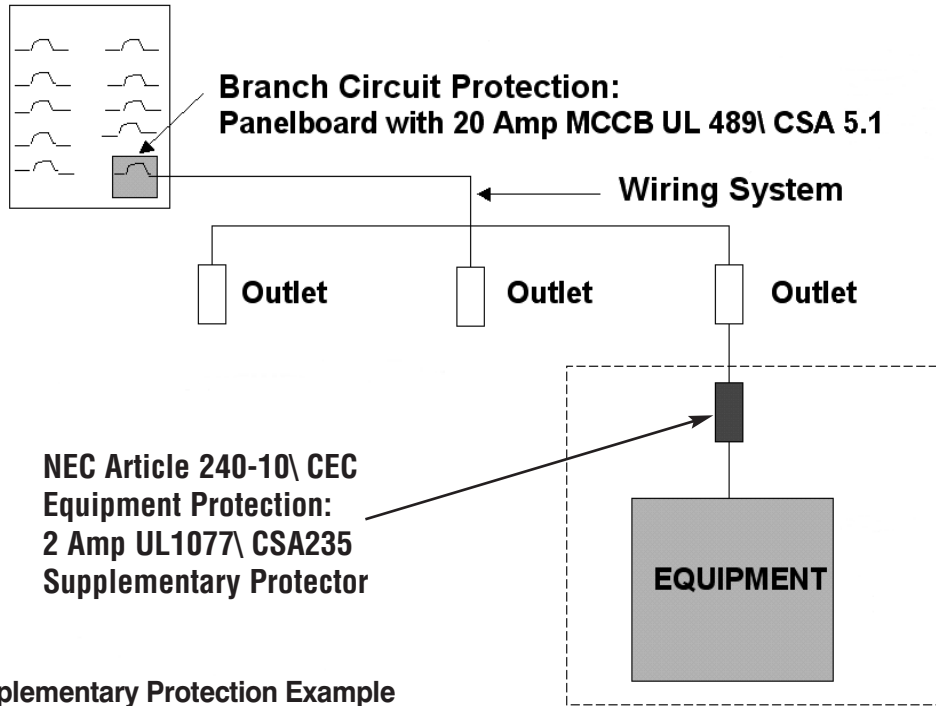
Product Specification

The WMS Supplementary Protector is a dual-rated product for both AC and DC supplies, in accordance with UL 1077 and CSA 22.2 standards and is marked with CE in accordance with the Low Voltage Directive. With this dual standard product, you can include it in your design, knowing that in most cases wherever your equipment is used, the product will conform to the local UL, CSA or IEC (European) requirements.

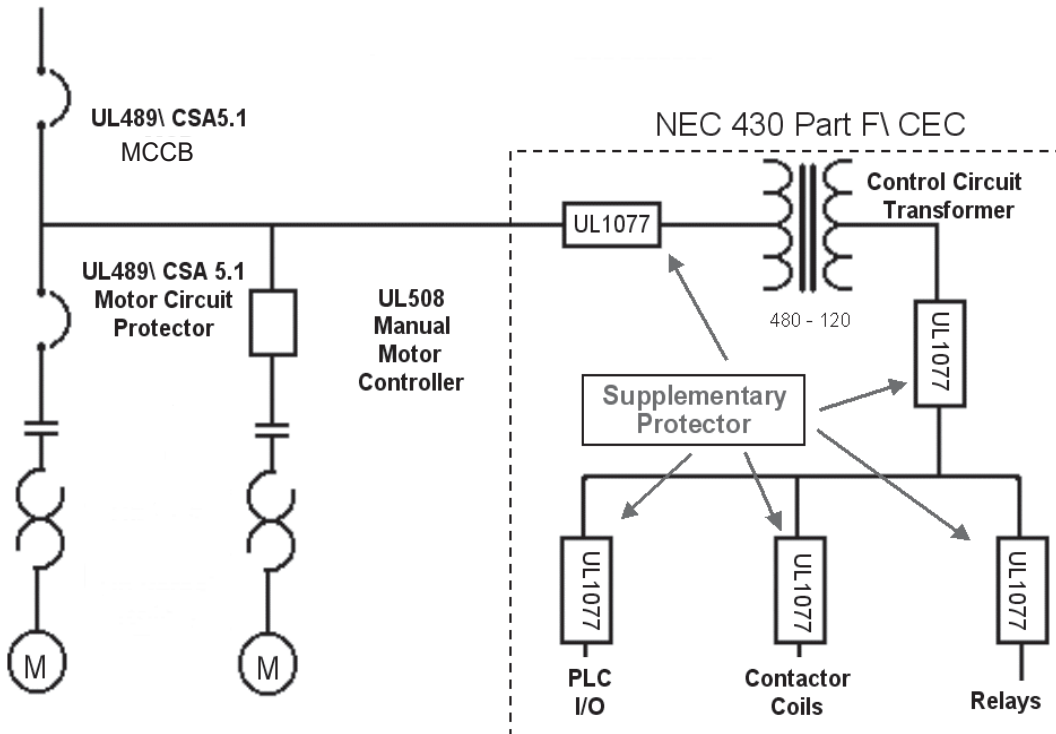
The Supplementary Protector is designed to be applied in conjunction with a branch circuit protector (if branch protection is required) and can be a replacement for similarly applied fuses. Its advantage over fuses is that it is resettable and the device’s status is easily and clearly identified by the position of the handle and the flag indicator.

In addition, you can select a device that provides maximum reliability and accuracy to fit various applications due to the availability of a wide range of current ratings from 0.5 to 60 amperes and three overcurrent characteristic curves, B, C and D. With 35 mm DIN-rail mounting and “Quick 3 Step” field mountable accessories, it is easy for you to select and apply Supplementary Protectors.

What is a Supplementary Protector?



Supplementary Protection Example



Supplementary protectors are not to be used in feeder circuits or motor circuits. Use them only in applications where branch protection is already provided or is not required.

WMS Series Selection Guide



Single-Pole

| WMS - Single-Pole Selection Guide | | | | | | |
|-----------------------------------|---------------------|-------|---------------------|---------|---------------------|-------|
| Ampere Rating | B Curve Part Number | Price | C Curve Part Number | Price | D Curve Part Number | Price |
| 0.5 | N/A | N/A | WMS1C00 | | WMS1D00 | |
| 1 | | | WMS1C01 | | WMS1D01 | |
| 2 | | | WMS1C02 | | WMS1D02 | |
| 3 | | | WMS1C03 | | WMS1D03 | |
| 4 | | | WMS1C04 | | WMS1D04 | |
| 5 | | | WMS1C05 | | WMS1D05 | |
| 6 | WMS1B06 | <---> | WMS1C06 | <---> | WMS1D06 | <---> |
| 7 | WMS1B07 | | WMS1C07 | | WMS1D07 | |
| 8 | WMS1B08 | | WMS1C08 | | WMS1D08 | |
| 10 | WMS1B10 | | WMS1C10 | | WMS1D10 | |
| 13 | WMS1B13 | | WMS1C13 | | WMS1D13 | |
| 15 | WMS1B15 | | WMS1C15 | | WMS1D15 | |
| 16 | WMS1B16 | | WMS1C16 | | WMS1D16 | |
| 20 | WMS1B20 | | WMS1C20 | | WMS1D20 | |
| 25 | WMS1B25 | | WMS1C25 | | WMS1D25 | |
| 30 | WMS1B30 | | WMS1C30 | | WMS1D30 | |
| 32 | WMS1B32 | | WMS1C32 | WMS1D32 | | |
| 40 | WMS1B40 | | WMS1C40 | WMS1D40 | | |
| 50 | WMS1B50 | | WMS1C50 | | N/A | N/A |
| 60 | WMS1B60 | | WMS1C60 | | N/A | N/A |



Two-Pole

| WMS - Two-Pole Selection Guide | | | | | | |
|--------------------------------|---------------------|---------|---------------------|-------|---------------------|-------|
| Ampere Rating | B Curve Part Number | Price | C Curve Part Number | Price | D Curve Part Number | Price |
| 0.5 | N/A | N/A | WMS2C00 | | WMS2D00 | |
| 1 | | | WMS2C01 | | WMS2D01 | |
| 2 | | | WMS2C02 | | WMS2D02 | |
| 3 | | | WMS2C03 | | WMS2D03 | |
| 4 | | | WMS2C04 | | WMS2D04 | |
| 5 | | | WMS2C05 | | WMS2D05 | |
| 6 | WMS2B06 | <---> | WMS2C06 | <---> | WMS2D06 | <---> |
| 7 | WMS2B07 | | WMS2C07 | | WMS2D07 | |
| 8 | WMS2B08 | | WMS2C08 | | WMS2D08 | |
| 10 | WMS2B10 | | WMS2C10 | | WMS2D10 | |
| 13 | WMS2B13 | | WMS2C13 | | WMS2D13 | |
| 15 | WMS2B15 | | WMS2C15 | | WMS2D15 | |
| 16 | WMS2B16 | | WMS2C16 | | WMS2D16 | |
| 20 | WMS2B20 | | WMS2C20 | | WMS2D20 | |
| 25 | WMS2B25 | | WMS2C25 | | WMS2D25 | |
| 30 | WMS2B30 | | WMS2C30 | | WMS2D30 | |
| 32 | WMS2B32 | WMS2C32 | WMS2D32 | | | |
| 40 | WMS2B40 | WMS2C40 | WMS2D40 | | | |
| 50 | WMS2B50 | WMS2C50 | | N/A | N/A | |
| 60 | WMS2B60 | WMS2C60 | | N/A | N/A | |

Note: Cutler-Hammer parts available for sale to North America locations only.

| WMS - Three-Pole Selection Guide | | | | | | |
|----------------------------------|---------------------|-------|---------------------|-------|---------------------|-------|
| Ampere Rating | B Curve Part Number | Price | C Curve Part Number | Price | D Curve Part Number | Price |
| 0.5 | N/A | N/A | WMS3C00 | | WMS3D00 | |
| 1 | N/A | N/A | WMS3C01 | | WMS3D01 | |
| 2 | N/A | N/A | WMS3C02 | | WMS3D02 | |
| 3 | N/A | N/A | WMS3C03 | | WMS3D03 | |
| 4 | N/A | N/A | WMS3C04 | | WMS3D04 | |
| 5 | N/A | N/A | WMS3C05 | | WMS3D05 | |
| 6 | WMS3B06 | | WMS3C06 | | WMS3D06 | |
| 7 | WMS3B07 | | WMS3C07 | | WMS3D07 | |
| 8 | WMS3B08 | | WMS3C08 | | WMS3D08 | |
| 10 | WMS3B10 | | WMS3C10 | | WMS3D10 | |
| 13 | WMS3B13 | | WMS3C13 | | WMS3D13 | |
| 15 | WMS3B15 | | WMS3C15 | | WMS3D15 | |
| 16 | WMS3B16 | | WMS3C16 | | WMS3D16 | |
| 20 | WMS3B20 | | WMS3C20 | | WMS3D20 | |
| 25 | WMS3B25 | | WMS3C25 | | WMS3D25 | |
| 30 | WMS3B30 | | WMS3C30 | | WMS3D30 | |
| 32 | WMS3B32 | | WMS3C32 | | WMS3D32 | |
| 40 | WMS3B40 | | WMS3C40 | | WMS3D40 | |
| 50 | WMS3B50 | | WMS3C50 | | N/A | N/A |
| 60 | WMS3B60 | | WMS3C60 | | N/A | N/A |



Three-Pole

| UL/CSA Ratings | | | | | |
|----------------|-------|-------|-------------------|----------------------------|---------|
| Ampere Rating | Poles | Curve | Voltage (Maximum) | Short Circuit Capacity (A) | |
| | | | | UL 1077 | CSA 235 |
| 6 - 60 | 1 | B | 120VAC | 10,000 | 10,000 |
| 0.5 - 60 | 1 | C | | | |
| 0.5 - 40 | 1 | D | 240VAC | 10,000 | 10,000 |
| 6 - 60 | 2, 3 | B | | | |
| 0.5 - 60 | 1 | C | 277VAC | 6,000 | 6,000 |
| 0.5 - 40 | 2, 3 | D | | | |
| 6 - 60 | 1 | B | 480VAC* | 5,000 | 5,000 |
| 0.5 - 60 | 1 | C | | | |
| 0.5 - 40 | 2, 3 | D | 65VDC | 10,000 | 10,000 |
| 6 - 60 | 2, 3 | B | | | |
| 0.5 - 60 | 1 | C | 130VDC | 10,000 | 10,000 |
| 0.5 - 40 | 1 | D | | | |
| 6 - 60 | 2 | B | 130VDC | 10,000 | 10,000 |
| 0.5 - 60 | 2 | C | | | |
| 0.5 - 40 | 2 | D | | | |

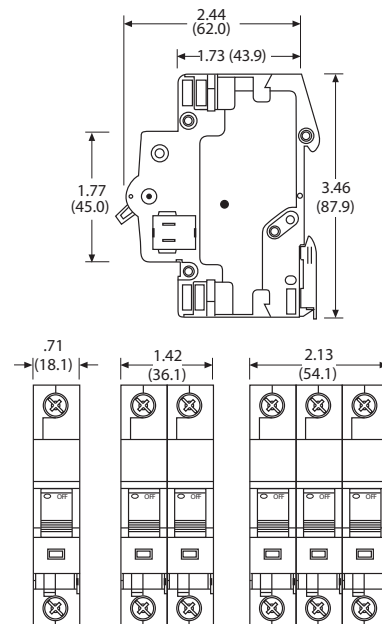
*Note: Maximum voltage per pole is 277 VAC.

| IEC Ratings | | | | |
|---------------|---------|-----------|----------------------------|-----------|
| Ampere Rating | Curve | Volts AC | Short Circuit Capacity (A) | |
| | | | IEC 898 | IEC 947-2 |
| 0.5 - 5 | C, D | 240/415** | 10,000 | 10,000 |
| 6 - 40 | B, C, D | | | |
| 50 - 60 | B, C | | | |

*Note: Maximum voltage per pole is 277 VAC.

| Cable Size and Torque Setting - WMS | | | | |
|-------------------------------------|-----------------|---------|-------------------|-------|
| Ampere Rating | Cable Size | | Tightening Torque | |
| | mm ² | AWG | Nm | lb-in |
| 0.5 - 60 | 1 to 25 | 14 to 6 | 2.8 | 24.8 |

WMS Supplementary Protector Dimensions



Dimensions are approximate, inches (mm) - Not for construction purposes

PLC Overview

DL05/06 PLC

DL105 PLC

DL205 PLC

DL305 PLC

DL405 PLC

Field I/O

Software

C-more HMIs

Other HMI

AC Drives

Motors

Steppers/Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pushbuttons/Lights

Process

Relays/Timers

Comm.

TB's & Wiring

Power

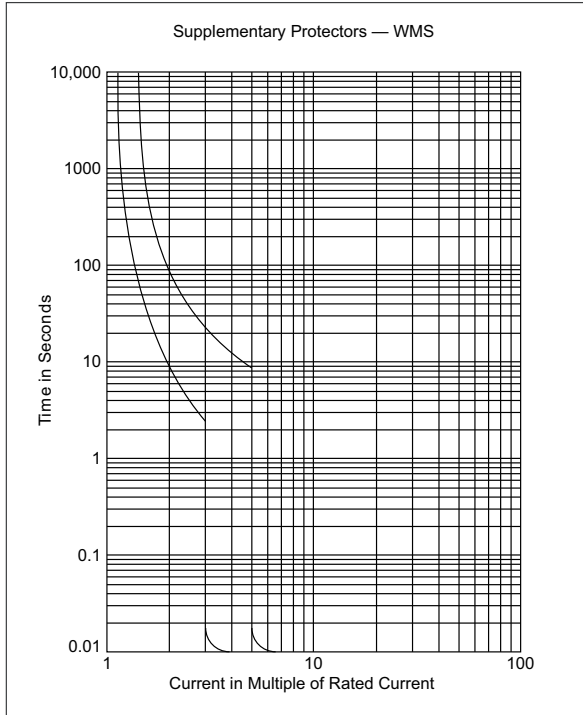
Circuit Protection

Enclosures

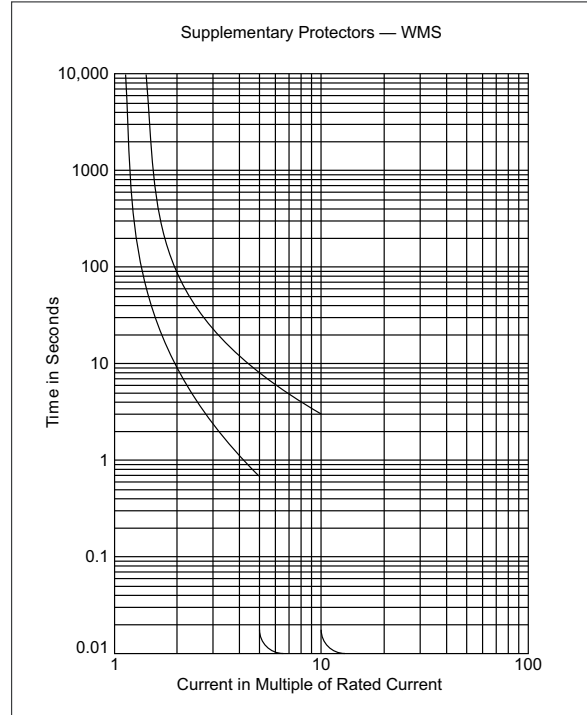
Appendix

Part Index

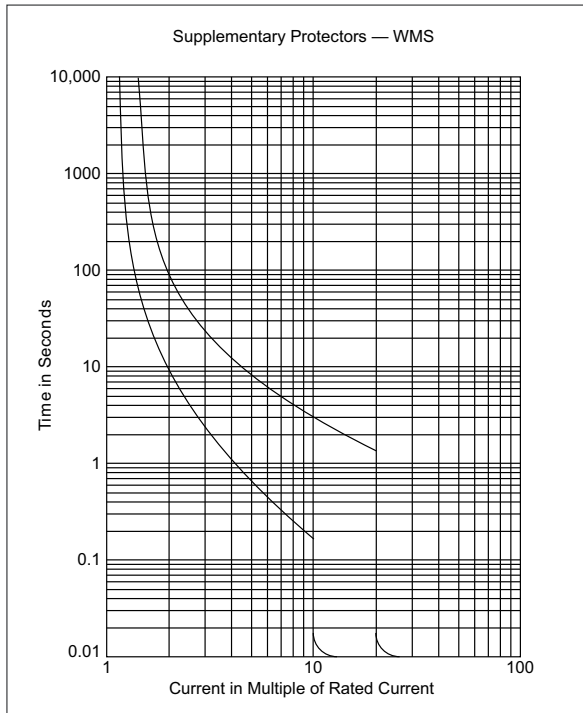
Trip Curves



B Curve Time/Current Characteristic



C Curve Time/Current Characteristic



D Curve Time/Current Characteristic

Field Mountable Accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- Quick 3-step process for mounting
- no tools required



WAL1A1B
Alarm Switch



WAX1A1B
Auxiliary Switch



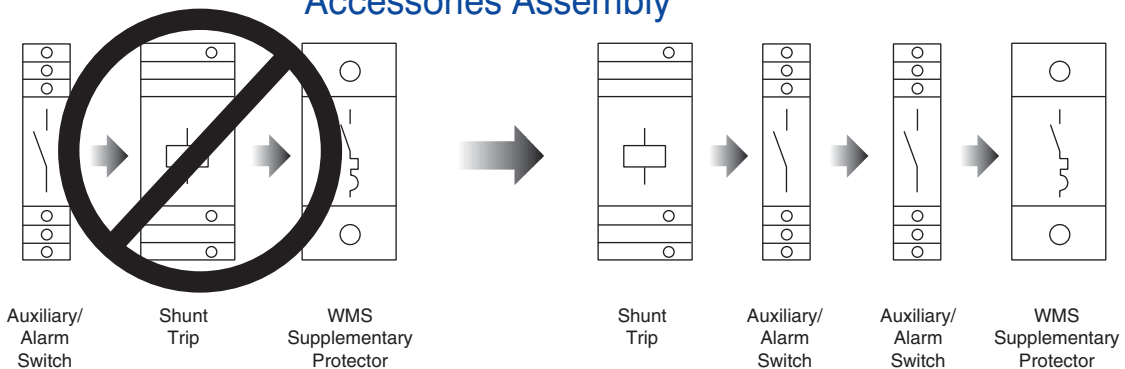
WSTxxxx
Shunt Trip

| WMS Accessories Selection Guide | | | | |
|---------------------------------|--|--------------------|--------------|-------|
| Part Number | Description | Number of Contacts | Module Width | Price |
| WAL1A1B | Alarm Switch Attach to the WMS supplementary protector. The unit will change state whenever the supplementary protector is tripped by an overload or a short circuit. | 1 N.O./1 N.C. | 1/2" | <---> |
| WAX1A1B | Auxiliary Switch Attach to the WMS supplementary protector. The unit will change state whenever the supplementary protector changes state. | 1 N.O./1 N.C. | 1/2" | <---> |
| Part Number | Description | Trip Voltage | Module Width | Price |
| WST220A | Shunt Trip Attach to the WMS supplementary protector. The unit allows remote tripping of the supplementary protector by applying the appropriate voltage to its coil. | 110-220VAC | 1 " | <---> |
| WST415A | | 240-415VAC | | |
| WST48D | | 12-48VDC | | |

NOTE: An unlimited number of units can be attached to a WMS.

| WMS Accessory Data | | | | | | | | |
|--------------------|------------------|------------------------|------------|--------------------------------------|-----------------|----------|-------------------|-------|
| Part Number | Auxiliary Switch | Auxiliary Alarm Switch | Shunt Trip | Electrical Characteristics | Cable Size | | Tightening Torque | |
| | | | | | mm ² | AWG | Nm | lb-in |
| WAL1A1B | --- | • | --- | 2 Changeover Contact 240 VAC, 6 A | 0.5 to 4 | 18 to 12 | 0.8 | 7.1 |
| WAX1A1B | • | --- | --- | 2 Changeover Contact 240 VAC, 6 A | | | | |
| WST415A | --- | --- | • | 240-415 VAC | | | | |
| WST48D | --- | --- | • | 12-48 VDC | | | | |
| WST220A | --- | --- | • | 110-220 VAC | | | | |

Accessories Assembly



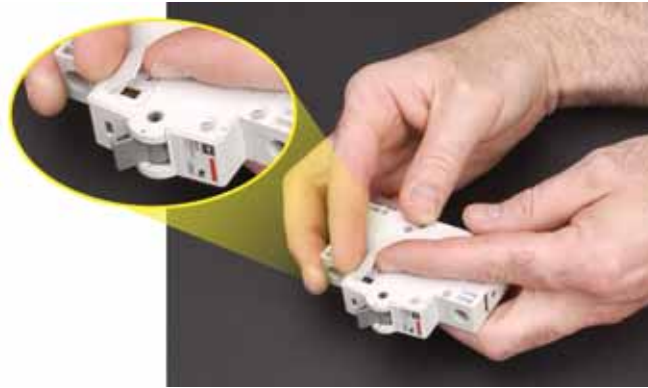
WMS Series Accessories

“Quick 3-Step” Field Mounting

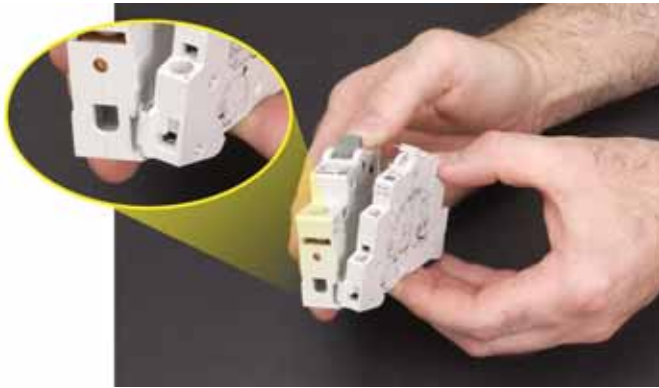
Follow these three steps to fitting any of the mounted accessories, with no tools required.

Before you do this, you should make sure the device is in the OFF position - check the handle position and flag indicator.

Step One - Remove left-hand “accessory window”



Step Two - Place the accessory's clip into the device's positioning groove



Step Three - Push the blue pivot clip up, and snap into place



Additional WMS Accessories



WIDL

Identification Labels



WPKEY

Lockout Padlock



WPLK

Lockout Attachment

| Additional WMS Accessories Selection Guide | | |
|--|--|-------|
| Part Number | Description | Price |
| WIDL | Identification Labels - 120/package For use with the supplementary protectors only. | <---> |
| WPKEY | Lockout Padlock with 3 Keys ¹ Use with lockout attachment. | <---> |
| WPLK | Lockout Attachment for all WMS supplementary protectors. | <---> |

¹ Additional keys are not available for this lock.