



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

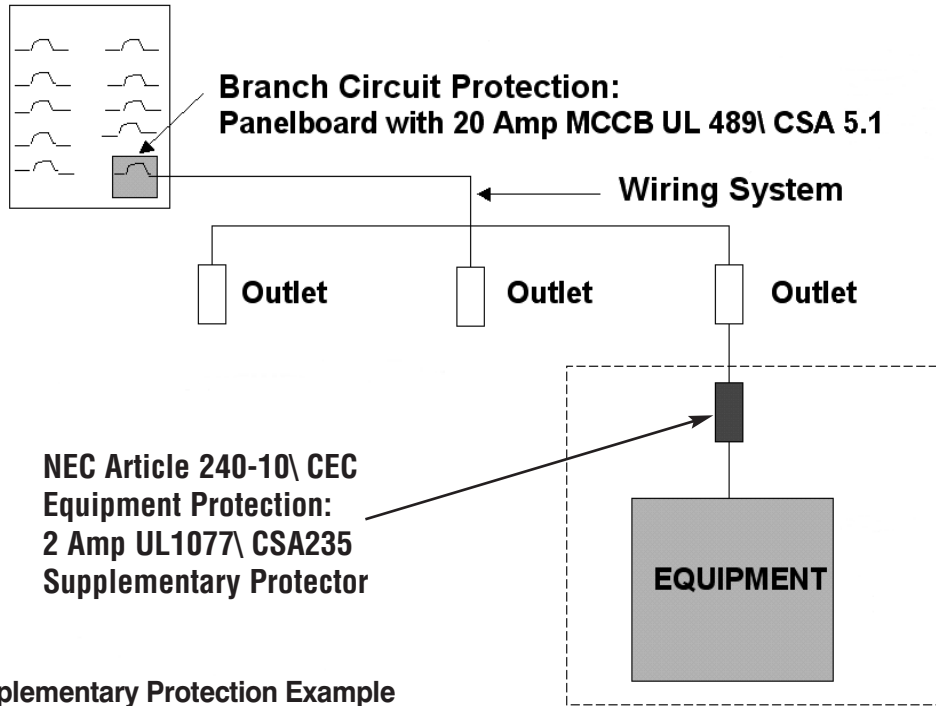
Product Specification

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.

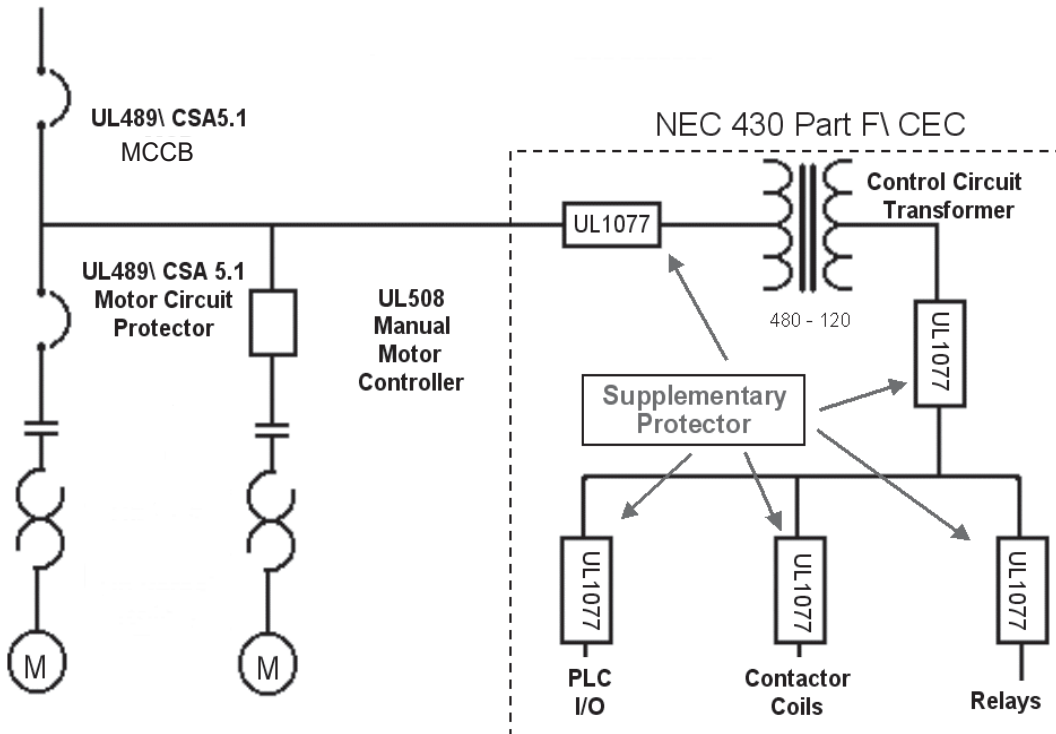
The Supplementary Protector is designed to be applied in conjunction with a branch circuit protector (if branch protection is required) and can be a replacement for similarly applied fuses. Its advantage over fuses is that it is resettable and the device’s status is easily and clearly identified by the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

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

WMS Series Selection Guide

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			

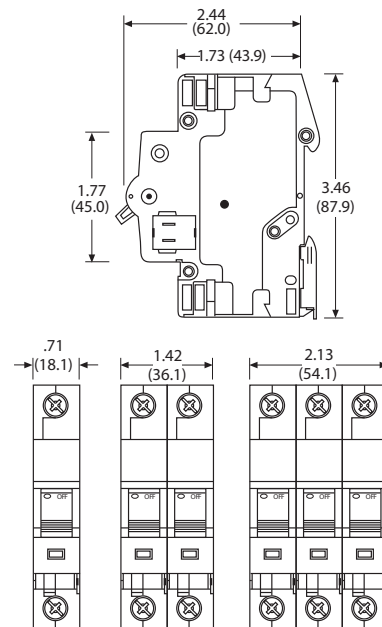
*Note: Maximum voltage per pole is 277 VAC.

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

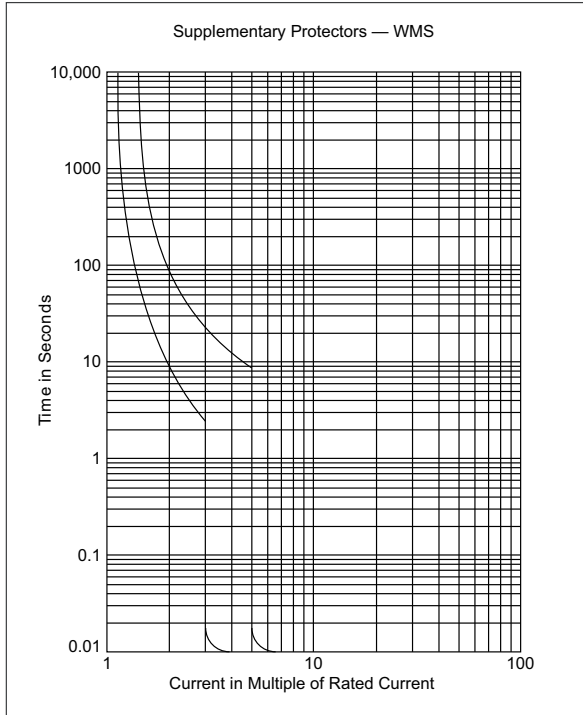
Circuit Protection

Enclosures

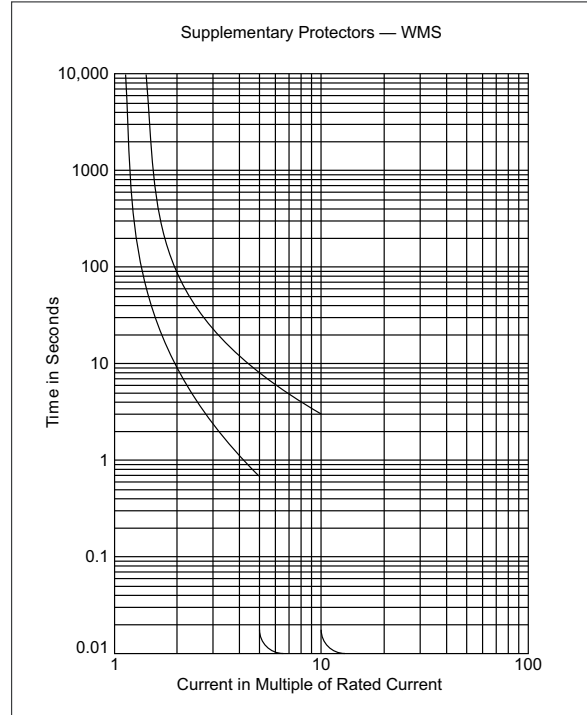
Appendix

Part Index

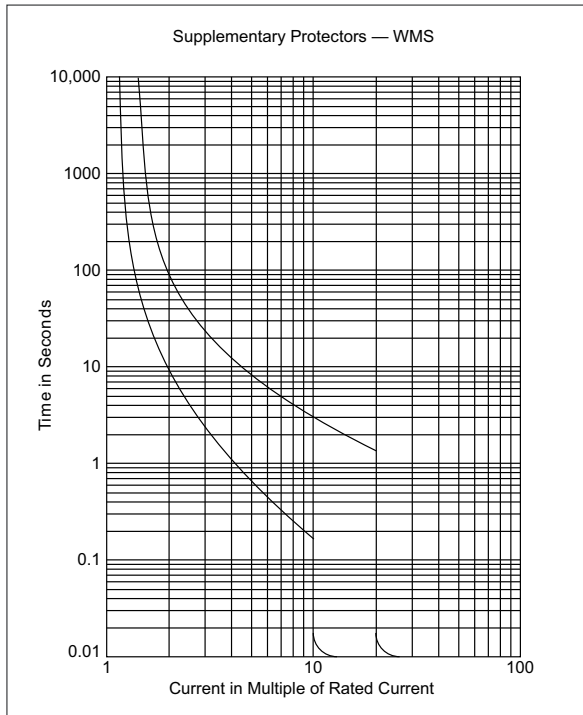
Trip Curves



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



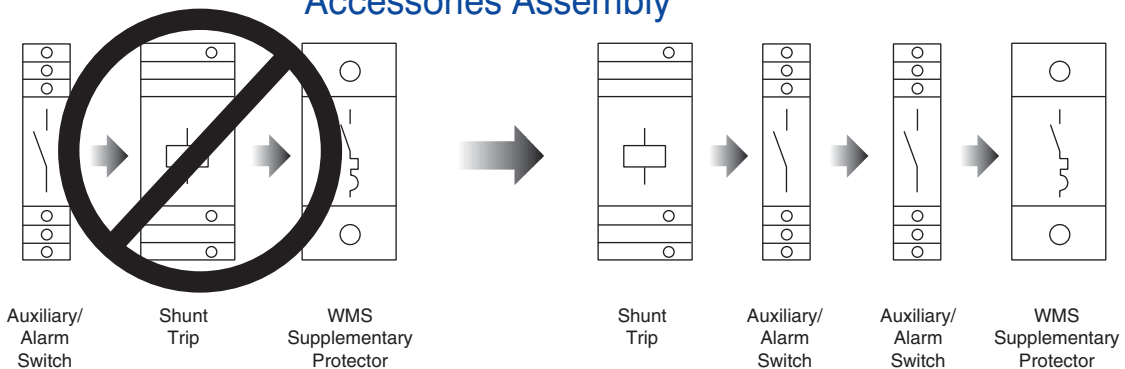
WSTxxxx
Shunt Trip

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



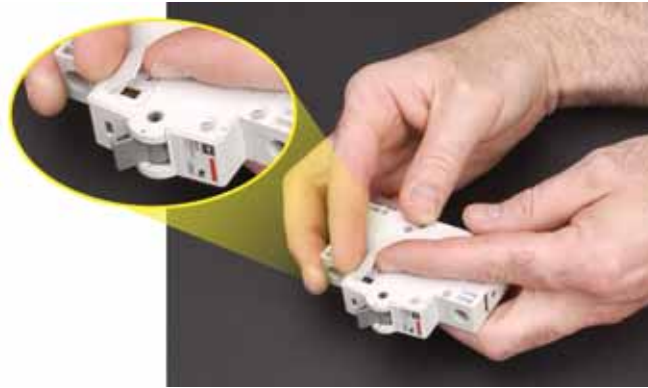
WMS Series Accessories

“Quick 3-Step” Field Mounting

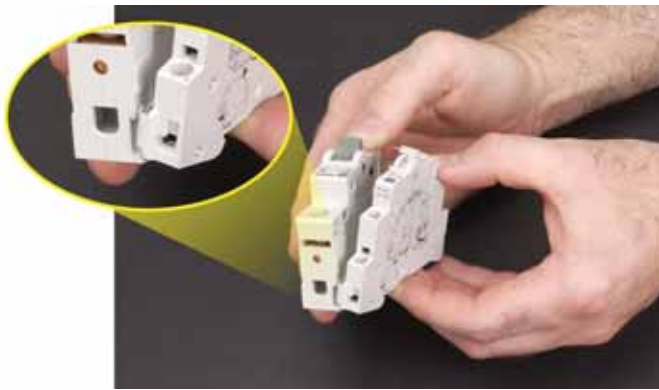
Follow these three steps to fitting any of the mounted accessories, with no tools required.

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.