EAT-N WMZS Supplementary Protectors







Overview

The Eaton WMZS 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 DINrail mountable, utilizing 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).

Product Specification

The WMZS 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 63 amperes in three overcurrent characteristic curves, B, C and D.

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- Box Terminals accept #18 to #4 wire (1 to 25mm²) for one wire connection or #18 to #8 for two wire connection.
- Thermal magnetic overcurrent protection: three levels, categorized by B, C and D curves in direct relation to continuous rating of the device

B curve magnetic trip point: 3 to 5 times the rated current, typically used for computers and electronic equipment with very low inrush loads (PLC wiring).

C curve magnetic trip point: 5 to 10 times the rated current, typically used for small transformers, pilot devices, etc.

D curve magnetic trip point: 10 to 20 times the rated current, typically used for transformers or loads with very high inductive loads.

- Trip Free Design: Breaker cannot be defeated by holding the handle in the "ON" position.
- Color coded status indicator window Red = ON or Green = OFF
- IP20 finger protection
- 35 mm DIN-rail mountable, utilizing spring clip
- Reverse Feedable

Listings

- UL recognized under UL 1077 Category QVNU2 File E162396
- CSA 22.2, No. 235 File 245545
- CE File LVD 2006/95/EC
- IEC/EN 60898
- IEC/EN 60947-2

Applications

WMZS Supplementary protectors are recognized per UL 1077 and certified per CSA C22.2 No. 235 as a Supplementary Protector and can be fully utilized per the NEC and CEC Codes in that capacity. For international purposes, the entire WMZS family is CE marked and in full conformity with the applicable IEC standards for miniature circuit breakers, EN/IEC 60898 and IEC/EN 60947-2.

Outside North America, they can be used in both residential and industrial applications as feeder and branch circuit protective devices. In North America, most European Miniature Circuit Breakers are only UL recognized and CSA certified as "Supplementary Protectors", meaning they <u>cannot</u> be utilized as feeder or branch circuit protective devices per the local electrical codes (NEC 240.10 and CEC Part 1 C22.1). This commonly restricts their use to applications where "closer" protection is desired than that offered by a branch circuit protection device.

Eaton WMZS Supplementary Protectors 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

Automatio Direct

Company Information

Blocks

Terminal Blocks Power Distribution



What is a Supplementary Protector?



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.



FAT-N WMZS Series Selection Guide



Single-Pole

WMZS - Single-Pole Selection Guide							
Ampere Rating	B Curve Part Number	Price	C Curve Part Number	Price	D Curve Part Number	Price	
0.5			WMZS1C00		WMZS1D00		
1			WMZS1C01		WMZ\$1D01		
2	N//A	NI/A	WMZS1C02		WMZ\$1D02		
3	N/A	N/A	WMZS1C03		WMZS1D03		
4			WMZS1C04		WMZS1D04		
5			WMZS1C05		WMZS1D05		
6	WMZS1B06		WMZS1C06		WMZS1D06		
7	WMZS1B07		WMZS1C07		WMZS1D07		
8	WMZS1B08		WMZS1C08		WMZS1D08		
10	WMZS1B10		WMZS1C10		WMZS1D10		
13	WMZS1B13		WMZS1C13		WMZS1D13		
15	WMZS1B15		WMZS1C15		WMZS1D15		
16	WMZS1B16		WMZS1C16		WMZS1D16		
20	WMZS1B20		WMZS1C20		WMZS1D20		
25	WMZ\$1B25		WMZS1C25		WMZS1D25		
30	WMZS1B30		WMZS1C30		WMZS1D30		
32	WMZ\$1B32		WMZS1C32		WMZ\$1D32		
40	WMZS1B40		WMZS1C40		WMZS1D40		
50	WMZS1B50		WMZ\$1C50		N/A	N/A	
63	WMZS1B63		WMZS1C63		N/A	N/A	

 1 3 3591E
TEST-N
B6 10050 3 WMZS2806 2 4

Two-Pole

Note: Eaton parts available for sale to North America locations only.

WMZS - Two-Pole Selection Guide							
Ampere Rating	B Curve Part Number	Price	C Curve Part Number	Price	D Curve Part Number	Price	
0.5			WMZS2C00		WMZS2D00		
1			WMZS2C01		WMZS2D01		
2	N/A	N1/A	WMZS2C02		WMZS2D02		
3		IN/A	WMZS2C03		WMZS2D03		
4			WMZS2C04		WMZS2D04		
5			WMZS2C05		WMZS2D05		
6	WMZS2B06		WMZS2C06		WMZS2D06		
7	WMZS2B07		WMZS2C07		WMZS2D07		
8	WMZS2B08		WMZS2C08		WMZS2D08		
10	WMZS2B10		WMZS2C10		WMZS2D10		
13	WMZS2B13		WMZS2C13		WMZS2D13		
15	WMZS2B15		WMZS2C15		WMZS2D15		
16	WMZS2B16		WMZS2C16		WMZS2D16		
20	WMZS2B20		WMZS2C20		WMZS2D20		
25	WMZS2B25		WMZS2C25		WMZS2D25		
30	WMZS2B30		WMZS2C30		WMZS2D30		
32	WMZS2B32		WMZS2C32		WMZS2D32		
40	WMZS2B40		WMZS2C40		WMZS2D40		
50	WMZS2B50		WMZS2C50		NI /A	N1/A	
63	WMZS2B63		WMZS2C63		N/A	N/A	



ET-N WMZS Series Selection Guide

WMZS - 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	WMZS3C00		WMZS3D00			
1	N/A	N/A	WMZS3C01		WMZS3D01			
2	N/A	N/A	WMZS3C02		WMZS3D02			
3	N/A	N/A	WMZS3C03		WMZS3D03			
4	N/A	N/A	WMZS3C04]	WMZS3D04			
5	N/A	N/A	WMZS3C05		WMZS3D05			
6	WMZS3B06		WMZS3C06		WMZS3D06			
7	WMZS3B07		WMZS3C07		WMZS3D07			
8	WMZS3B08		WMZS3C08		WMZS3D08			
10	WMZS3B10		WMZS3C10		WMZS3D10			
13	WMZS3B13		WMZS3C13		WMZS3D13			
15	WMZS3B15		WMZS3C15		WMZS3D15			
16	WMZS3B16		WMZS3C16		WMZS3D16			
20	WMZS3B20		WMZS3C20		WMZS3D20			
25	WMZS3B25		WMZS3C25		WMZS3D25			
30	WMZS3B30]	WMZS3C30]	WMZS3D30			
32	WMZS3B32]	WMZS3C32		WMZS3D32			
40	WMZS3B40		WMZS3C40		WMZS3D40			
50	WMZS3B50]	WMZS3C50		N/A	N/A		
63	WMZS3B63		WMZS3C63		N/A	N/A		

B Curve | C Curve | D Curve

3 - 5 x In 5 - 10 x In 10 - 20 x In

0.5 - 63A

277 VAC

48 VDC

480Y / 277 VAC

125 VDC

480Y / 277 VAC

1.35 x In@40°C

1.45 x In@40°C

10 kA (5kA for 40 - 63A)

10 kA @ 125 VDC

0.5 - 40A

5kA

5kA @ 125

VDC



Miniature Circuit Breaker - IEC

1 pole

2 pole

3 pole

Single pole

Multi-pole

Short Circuit Trip Response

Interrupt Ratings (At Max Voltage)

Operational Switching Capacity

Rated impulse withstand - Uimp

Rated insulation voltage - Ui

Current Range

Ratings ·

Maximum Voltage

IEC/EN 60947-2

Thermal Tripping

Max. Back-up Fuse

Characteristics

B Curve

3 - 5 x *I* n

6 - 40A

C Curve

5 - 10 x *I* n

0.5 - 40A

240 VAC

48 VDC

240 / 415 VAC

> 1 hour @ 1.05 x *I* n

< 1 hour @ 1.3 x *I* n

15 kA

7.5 kA

125A gL/gG

4000 VAC

440 VAC

D Curve

10 - 20 x I n

6 - 25A

Flex Cable	[
Data Cables	

Flexible Cord

Company Information

Terminal Blocks Power Distribution Blocks

Wiring Accessories

ZIPLink Connection System

Multi-wire Connectors Sensor Cables and Connectors

M12 Junction Blocks Panel Interface Connectors Wiring Duct Cable Ties Wire

Wire Management Products

Power Supplies

Transformers and Filters

Circuit Protectic

Test

Tools

Equipment

Enclosures Enclosure

Climate Control

Safety: Electrical Components

Safety: Protective Wear

Terms and Conditions

Wire Size and Torque Setting - WMZS								
Ampere Rating		Cable Siz	Tighteniı	ng Torque				
0.5 62	One wire	0.75 to 25 mm ²	18 to 4 AWG	0.4 Nm	01.0 lb in			
0.5 - 63	Two wires	0.75 to 10 mm ²	18 to 8 AWG	Z.4 INIII	21.2 ID-IN			

Supplementary Protectors - UL / CSA

1 pole

2 pole

3 pole

1 pole

2 pole

3 pole

2 poles

in series

Single pole

Multi-pole

6 - 63A

Short Circuit Trip Response

Current Range

Maximum Voltage

Ratings - UL / CSA

Thermal Tripping

Short Circuit Ratings

(At Max. Voltage)

Characteristics

G	eneral Specif	ications - WMZS			
Selectivi	ity Class	3			
Lifespan		>10,000 (1 operation = ON/OFF)			
Operatin	g Temperature	+23 to +104 °F (-5 to +40 °C)			
Storage	Temperature	-40 to +185 °F (-40 to +85 °C)			
Shock (II	EC68-2-22)	10 g - 120 ms			
Housing	Material	Nylon			
Mounting	g Position	Vertical			
	One-Pole	0.28 lbs. (127 g)			
Weight	Two-Pole	0.54 lbs (245 g)			
	Three-Pole	0.84 lbs (381 g)			



F·T•**N** WMZS Series Selection Guide

Influe	nce o	f the	Ambi	ent T	empe	ratur	e on t	he Th	erma	ıl Trip	ping	Beha	vior
Rated		Ambient Temperature °C											
(Amps)	-25	-20	-10	0	10	20	30	35	40	45	50	55	60
0.5	0.61	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.48	0.47	0.46	0.45	0.44
1	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.99	0.97	0.95	0.93	0.90	0.89
2	2.4	2.4	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8
3	3.7	3.6	3.5	3.4	3.3	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7
4	4.9	4.8	4.7	4.5	4.3	4.2	4.0	3.9	3.9	3.8	3.7	3.6	3.5
5	6.1	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.4
6	7.3	7.2	7.0	6.7	6.5	6.3	6.0	5.9	5.8	5.7	5.6	5.4	5.3
7	8.6	8.4	8.1	7.9	7.6	7.4	7	6.9	6.8	6.7	6.6	6.4	6.3
8	9.8	9.6	9.3	9.0	8.7	8.4	8.0	7.9	7.7	7.6	7.4	7.2	7.1
10	12	12	12	11	11	10	10	9.9	9.7	9.5	9.3	9.0	8.9
13	16	16	15	15	14	14	13	13	13	12	12	12	12
15	18	18	17	17	16	16	15	15	15	14	14	14	13
16	20	19	19	18	17	17	16	16	15	15	15	14	14
20	24	24	23	22	22	21	20	20	19	19	19	18	18
25	31	30	29	28	27	26	25	25	24	24	23	23	22
32	39	38	37	36	35	33	32	32	31	30	30	29	28
40	49	48	47	45	43	42	40	39	39	38	37	36	35
50	61	60	58	56	54	52	50	49	48	47	46	45	44
63	77	76	73	71	68	66	63	62	61	60	58	57	56

Load Carrying Capacity of Adjoining Supplementary Protectors





WMZS Supplementary Protector Dimensions



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



and Filters

Tools

Circuit Protectio

FIT-N WMZS Series Accessories

Field Mountable Accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- No tools required for mounting





WMZSAUX Auxiliary Contact



t Shunt Trip

WMZS Accessories Selection Guide									
Part Number	Description	Contacts	Module Width	Module Weight	Price				
WMZSAUX	 1 NO / 1 NC Installs on left side of WMZS or Shunt Trip Maximum one per WMZS (1077) Device Switches when WMZS is tripped electrically or manually 	1 SPDT							
WMZSAUXTRIP	 Small selector screw changes mode Two Form C (One set Changeover) contacts Installs on left side of WMZS or shunt trip Auxilary contacts switch when WMZS is tripped electrically or manually. Trip indicating contact switches only when WMZS is tripped electrically. 	(2) Form C Contacts	0.35" (8.9mm)	0.15 lbs (68 g)					
Part Number	Description	Trip Voltage	Module Width	Module Weight	Price				
WMZSST415	Allows remote trip of WMZS	110 - 415 VAC 110 - 230 VDC	0.69"	0.28 lbs (127 g)					
WMZSST110	Installs on left side of WMZS	12 - 110 VAC 12 - 60 VDC	(17.5mm)						

	WMS Accessory Data								
Part Number	Circuit Diagram	Electrical Characteristics	Wird (Solid and	eSize I Stranded)	Tightening Torque				
			<i>mm</i> ₂	AWG	Nm	lb-in			
WMZSAUX		Rated for general use, 2A at 230 VAC / 0.5A at 24/110 VDC	(1) 0.5 to 2.5	(1) 18 to 14	0.8 - 1.0	71-80			
WMZSAUXTRIP	See WMZSAUXTRIP diagrams on next page	1 SPDT auxiliary contact and 1 SPDT alarm contact that can be configured and used as an auxiliary contact, rated for general use, 2 amps at 200 VAC / 0.5 amp at 24/110 VDC	(2) 1.5	(2) 16	0.0 - 1.0	7.1 0.5			
WMZSST415		110 - 415 VAC, 110 - 230 VDC operating range Max inrush current 2.1A (AC) / 1A (DC)	1 to 2.5	10 to 10	2.4	01.0			
WMZSST110	C2	12 - 110 VAC, 12 - 60 VDC operating range Maximum inrush current 15A (AC) / 21A (DC)	1 10 2.5	101012	2.4	21.2			

Allowable Combinations of Accessories







TRIP

Manual or

Electrical Trip

SEL

ON

1.14 4.12 4.14

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1.11

FIT-N WMZS Series Accessories

Accessories Dimensions



<u>WMZPLK</u>

Lockout Attachment

Additional WMZS Accessories Selection Guide						
Part Number	Description	Weight	Price			
WMZPLK	Lockout attachment for Eaton WMZS series supplementary protectors, suitable to prevent unauthorized activation of a de-energized circuit, accepts lock shackles up to 9/32 in. (7.1 mm) in diameter Qty: 5 pieces	0.10 lb (45 g)				





WMZSSTxxx

Multi-conductor Flex Cable Data Cables

Flexible Cord

Europare Cores

Company Information

Power Distribution

Blocks

Wiring

7IPI ink

Connection System

Multi-wire

Connectors

Sensor Cables

and Connectors

M12 Junction Blocks

Panel Interface Connectors

Wiring Duct

Cable Ties

Wire

Accessories

Terminal Blocks

Wire Management Products

Power Supplies

2.89

(73.4)

DC Converters

Transformers and Filters

Circuit Protecti

Tools

Test Equipment

Enclosures

Enclosure Climate Control

Safety: Electrical Components

Safety: Protective Wear

Terms and Conditions

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19" 28'

(5.0 - 7.1mm)

WMZPLK Installation