

Retrofit FD frame, surge protective device



FD frame

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Introduction

Eaton's retrofit surge protective (RSP) series consists of UL® 1449 4th Edition-listed surge protective devices (SPD) that provide a reliable, cost-effective, aftermarket solution for surge protection. Designed for easy installation, this Type 1 or Type 2 SPD is approved for field installation and is capable of easy installation directly into a panelboard or switchboard without any modifications. The RSPF is available in multiple configurations that are specifically designed for Eaton panelboards and switchboards, allowing for installation on systems utilizing most common voltages. Easy mounting options coupled with a compact footprint enable quick installation of the RSPF in panelboards and switchboards in less than 10 minutes.



Applications

The Eaton RSPF series SPD protects critical electrical and electronic equipment from damage caused by voltage transients and surges when properly installed. This is done by shunting high-energy lightning surges (and other transient disturbances) away from the equipment being protected. It does this in nanoseconds by providing a low impedance surge path to ground through thermally protected metal oxide varistors while supporting power frequency voltage.

The Eaton RSPF series SPD was designed solely for aftermarket applications and developed to fit in the space of an Eaton FD-frame molded case circuit breaker. The RSPF is intended for retrofit into existing panelboards or switchboards with space or provisions for the FD frame size.

Features

- Voltage ratings from 208 Vac to 600 Vac
- Uses thermally protected metal oxide varistor (MOV) technology
- LED protection status indicators
- 20 kA nominal discharge current (I_n) rating (maximum rating in the UL 1449 4th Edition standard)
- FD-frame molded case circuit breaker footprint for ease of installation
- Compact footprint—6.00 L x 4.13 W x 3.69 D inches
- Direct bus mounting
- 2-year warranty
- 50 kA and 100 kA per phase surge current capacity
- No user-serviceable parts or items requiring periodic maintenance

Standards and certifications

- UL 1449 4th Edition Type 1 and Type 2
- Tested to UL 1283 7th Edition

Designed and tested in accordance with the latest versions of these standards:

- IEEE® C62.41.1
- IEEE C62.41.2
- IEEE C62.43
- IEEE C62.45
- IEEE C62.48
- IEEE C62.62

VPR performance data

Table 1. Voltage protection ratings

Model	Application	Voltage	VPR	
			L-G / L-N	L-L
RSPF240	MA	120/208Y	900	900
		127/220Y	900	900
		240D	900	900
	SA	120/208Y	1200	1000
		127/220Y	1200	1000
		240D	1200	1000
	SB	120/208Y	900	900
		127/220Y	900	900
		240D	900	900
RSPF480	MA	480D	1800	1800
		380/220	1800	1800
		400/230	1800	1800
		415/240	1800	1800
		480/277	1800	1800
	SA	480D	2000	2000
		380/220	2000	2000
		400/230	2000	2000
		415/240	2000	2000
		480/277	2000	2000
	SB	480D	1800	1800
		380/220	1800	1800
		400/230	1800	1800
		415/240	1800	1800
		480/277	1800	1800
RSPF600	MA	600D	2500	2500
		600/347	2500	2500
	SA	600D	2500	2500
		600/347	2500	2500
	SB	600D	2500	2500
		600/347	2500	2500

Dimensions in inches (mm)

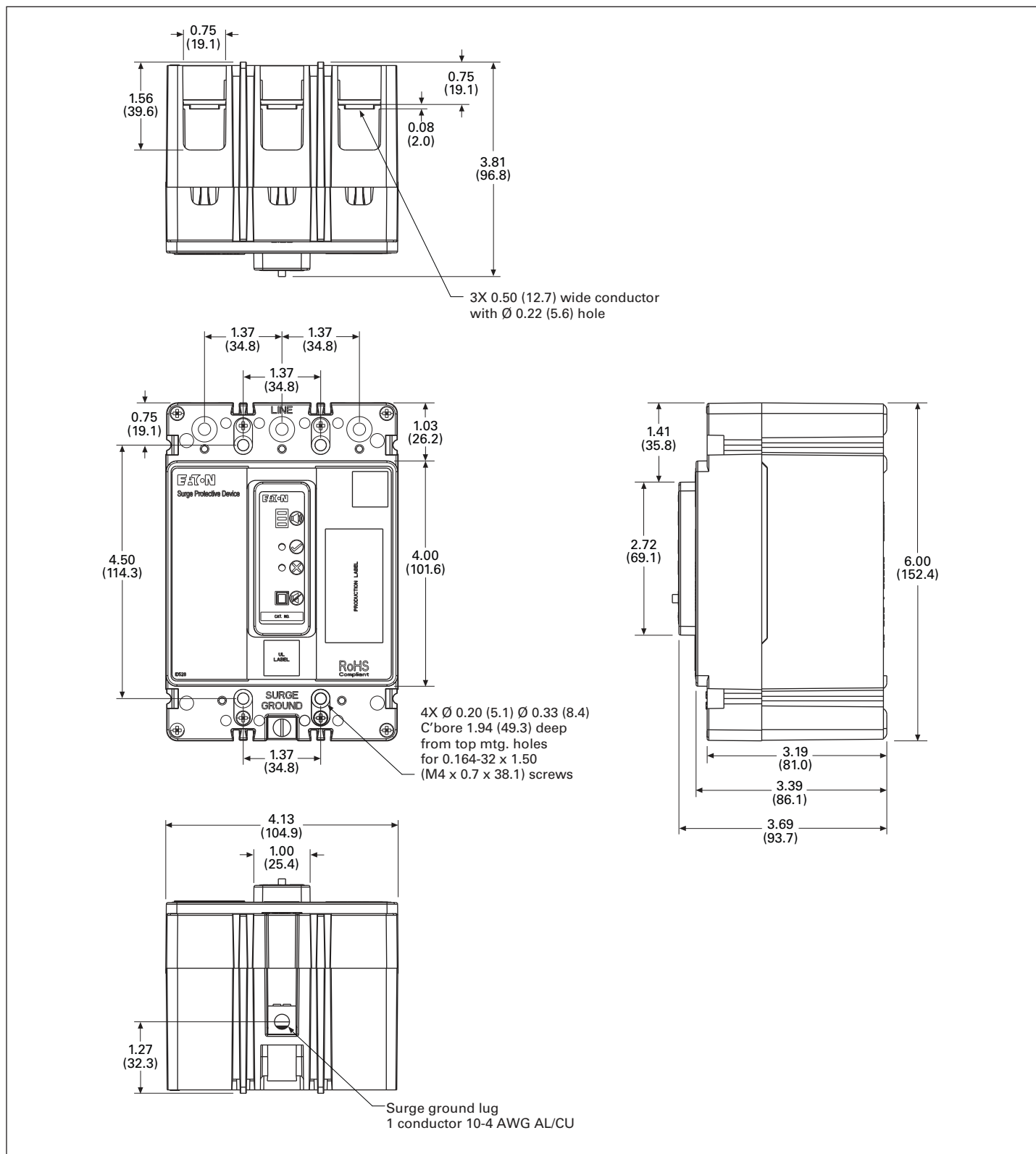
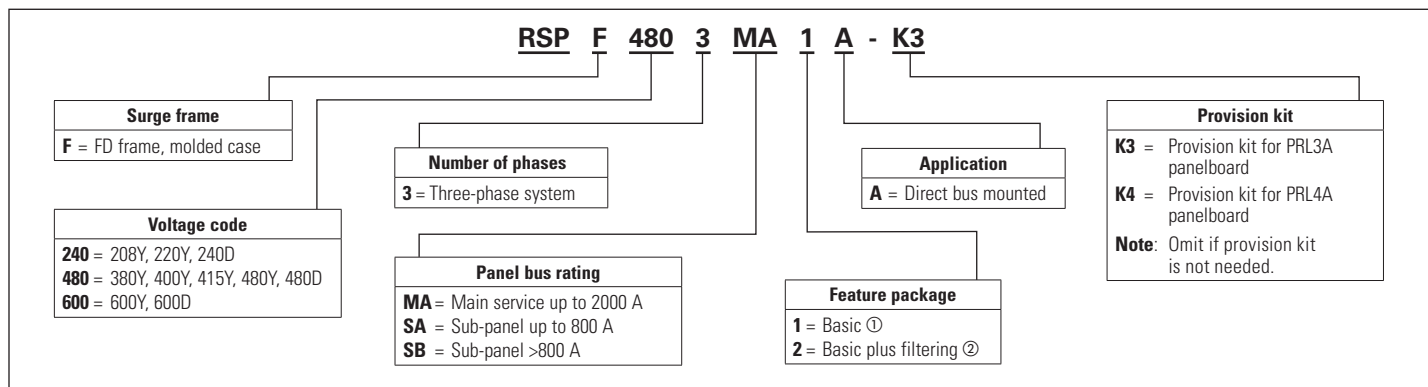


Figure 1. RSPF dimensions

RSP configuration guide



① Available only with SB and MA options.

② Available only with SA option.

Specifications

Table 2. Specifications

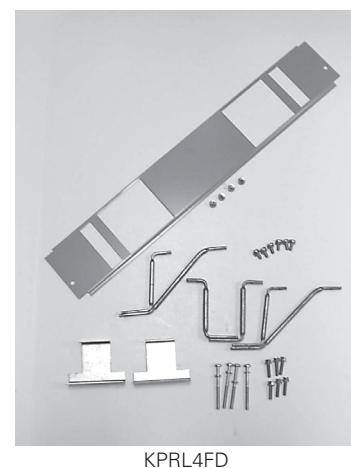
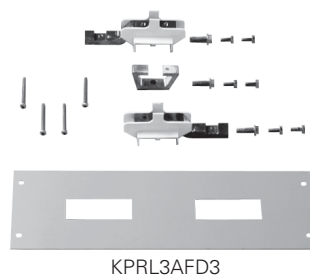
Description	Rated
kA per phase	50 (on units with filtering), 100
Nominal discharge current	20 kA
System voltages	240 V rated models: 208Y, 220Y, 240D 480 V rated models: 380Y, 400Y, 415Y, 480Y, 480D 600 V rated models: 600Y, 600D
Input power frequency	50/60 Hz
Protection modes	Wye L-N or L-G, L-L Delta L-G, L-L
Operating temperature	-40 °C to +60 °C
Relative humidity	5%–95%, noncondensing
Maximum altitude	2000 m
Weight	3.0 lb
Certification/listing	UL 1449 4th Edition, CSA® 269.1-14, 269.2-15, C22.2 No. 8-13 EMI filter ① Tested to 1283 7th Edition
SPD type	Type 1 and Type 2
RoHS compliant	Yes
Enclosure rating	Type 1 enclosure, IP40
Maximum continuous operating voltage (MCOV) ②	
300 L-L, L-G—240 V	RSPF2403MA1A, RSPF2403SA2A, RSPF2403SB1A
640 L-L, L-G—480 V	RSPF4803MA1A, RSPF4803SA2A, RSPF4803SB1A
840 L-L, L-G—600 V	RSPF6003MA1A, RSPF6003SA2A, RSPF6003SB1A

① Available only with SA option.

② MCOV ratings are the same for units with or without a provision kit selected.

Mounting provisions

Kit contains A, B, and C phase connectors, hardware, and instruction to mount three-pole RSPF surge devices.



Technical support information

For questions or additional information, please contact the Eaton Technical Resource Center at

1-800-809-2772, option 4, option 2.

You may submit inquiries via email to spd@eaton.com

and find more information at Eaton.com/rsp

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