

Eaton's SPD Series



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Powering Business Worldwide

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Introduction

Eaton's SPD Series surge protective devices

Eaton's SPD Series surge protective devices are the latest and most advanced UL® 1449 3rd Edition certified surge protectors. Units are available in all common voltages and configurations and also in a variety of surge current capacity ratings from 50 through 400 kA. Three feature package options are also available to choose from. The breadth of the SPD Series' features, options and configurations ensures that the correct unit is available for all electrical applications. Application of SPD Series units throughout a facility will ensure that equipment is protected with the safest and most reliable surge protective devices available.

Features

- Uses thermally protected metal oxide varistor (MOV) technology
- 20 kA nominal discharge current (I_n) rating (maximum rating assigned by UL)
- 50 through 400 kA surge current capacity ratings
- Three feature package options
- 200 kA short-circuit current rating (SCCR)
- 10-year warranty

Pending standards and certifications



- UL 1449 3rd Edition listed device
- Canadian Standards Association (CSA)



SPD Series unit

Feature package options

The SPD Series provides users with the option of selecting between three feature packages. These feature packages are the basic, standard and standard with surge counter. The proper feature package can be selected based on the requirements of the application or specification.

Table 1. Feature Package Comparison

Feature	Basic	Standard	Standard with Surge Counter
Surge protection using thermally protected MOV technology	✓	✓	✓
Dual-colored protection status indicators for each phase	✓	✓	✓
Dual-colored protection status indicators for the neutral-ground protection mode	✓	✓	✓
Audible alarm with silence button		✓	✓
Form C relay contact		✓	✓
EMI/RFI filtering, providing up to 50 dB of noise attenuation from 10 kHz to 100 MHz		✓	✓
Surge counter with reset button			✓

Enclosure options, dimensions and weights

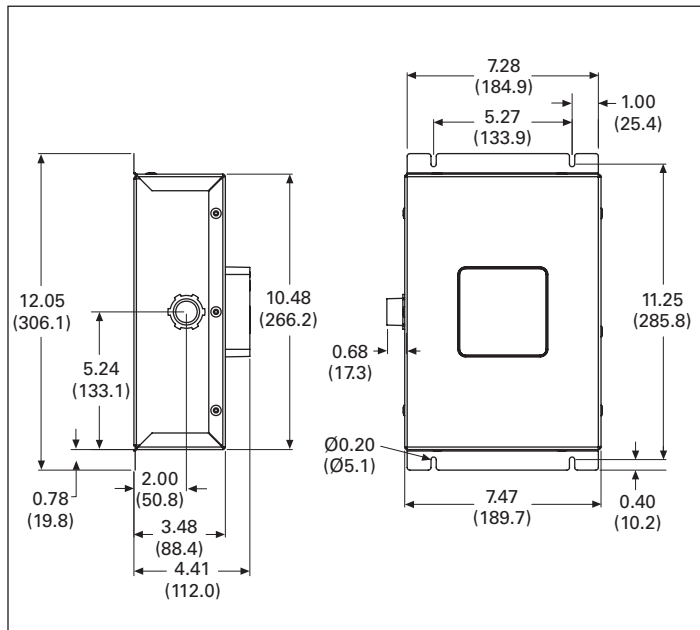


Figure 1. 50–200 kA Units in a NEMA 1 Rated Enclosure, Weight = 6.8 lbs

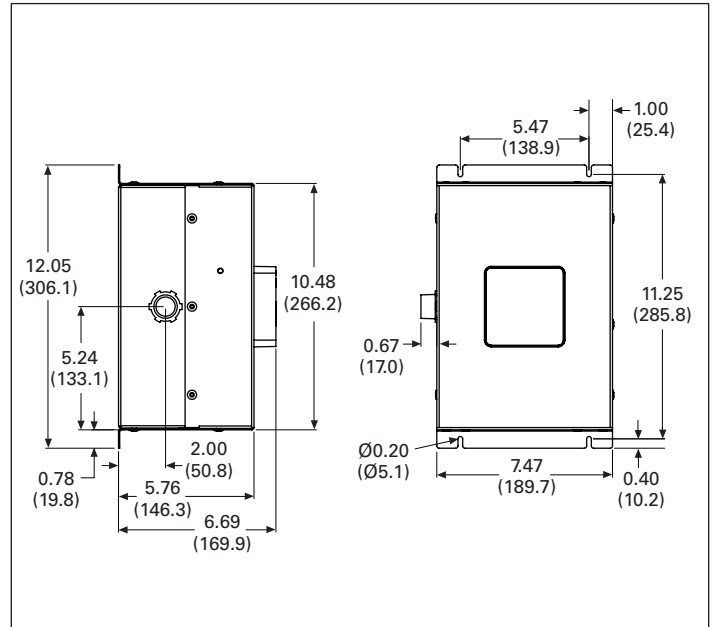


Figure 2. 250–400 kA Units in a NEMA 1 Rated Enclosure, Weight = 13.5 lbs

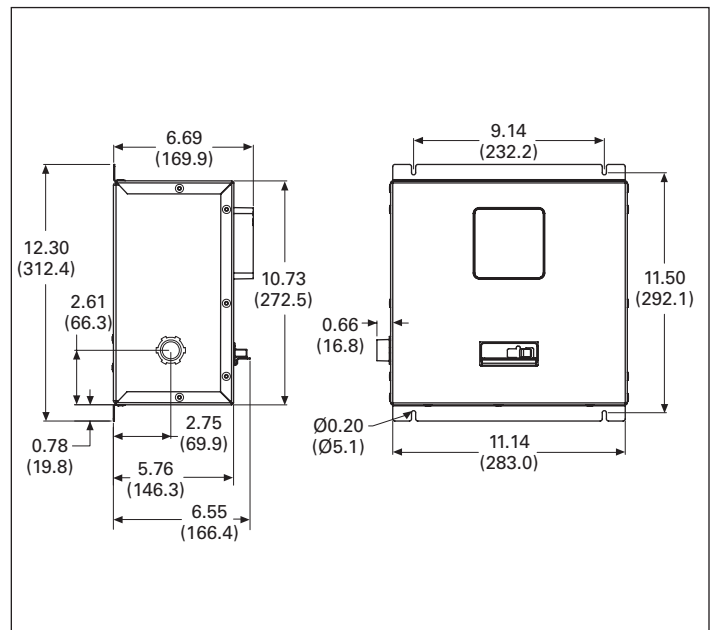


Figure 3. 50–400 kA Units in a NEMA 1 Rated Enclosure with Internal Disconnect, Weight = 14.7 lbs

Performance data

ANSI/UL 1449 3rd Edition voltage protection ratings

Voltage protection rating (VPR) data is included for units with and without an internal disconnect. The VPR values listed in Tables 2 through 6 are for units without an internal disconnect (catalog numbers ending with K). The VPR values listed in Tables 7 through 11 are for units with an internal disconnect (catalog numbers ending with M).

Table 2. 50 kA Unit VPR (No Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 7. 50 kA Unit VPR (With Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 3. 80–100 kA Unit VPR (No Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 8. 80–100 kA Unit VPR (With Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 4. 120–200 kA Unit VPR (No Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 9. 120–200 kA Unit VPR (With Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 5. 250–300 kA Unit VPR (No Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 10. 250–300 kA Unit VPR (With Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 6. 400 kA Unit VPR (No Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

Table 11. 400 kA Unit VPR (With Internal Disconnect)

Voltage Code	Protection Mode			
	L-N	L-G	N-G	L-L
240S	TBD	TBD	TBD	TBD
208Y	TBD	TBD	TBD	TBD
400Y and 480Y	TBD	TBD	TBD	TBD
240D	TBD	TBD	TBD	TBD
480D	TBD	TBD	TBD	TBD

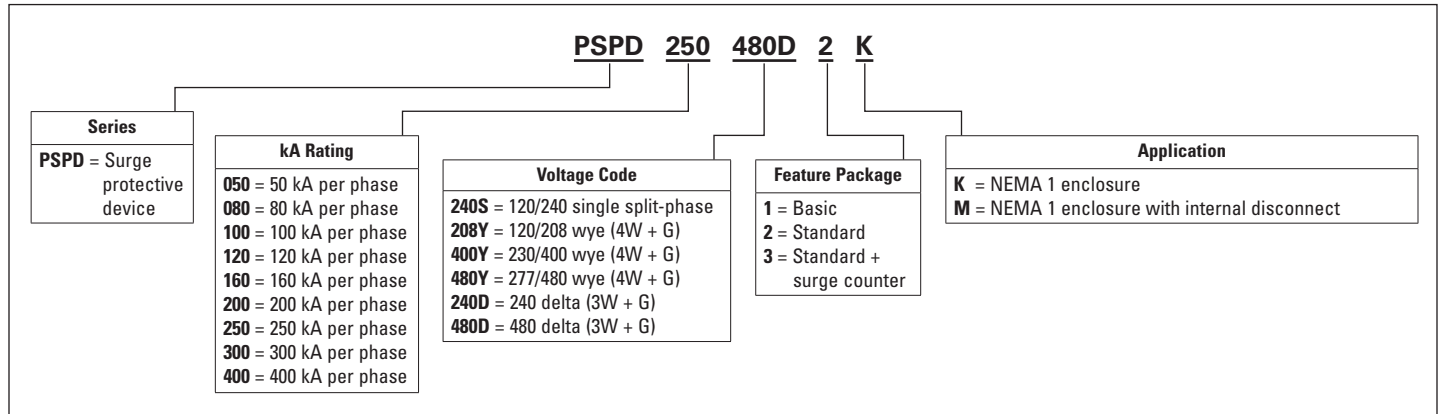
Specifications

Table 12. SPD Series Specifications

Description	Specification
Surge capacity ratings available	50, 80, 100, 120, 160, 200, 250, 300, 400 kA per phase
Nominal discharge current (I_n)	20 kA
Short circuit current rating (SCCR)	200 kA
SPD type	Basic feature package = Type 1 (can also be used in Type 2 applications) Standard and Standard with Surge Counter feature packages = Type 2
Single split phase voltages available	120/240
Three-phase wye system voltages available	120/208, 230/400, 277/480
Three-phase delta system voltages available	240, 480
Input power frequency	50/60 Hz
Power consumption (basic units): 208Y, 240S and 240D voltage codes 400Y, 480Y and 480D voltage codes	0.5W 1.1W
Power consumption (standard and standard with surge counter units): 208Y, 240S and 240D voltage codes 400Y, 480Y and 480D voltage codes	0.6W 1.7W
Protection modes	Single split phase L-N, L-G, N-G, L-L Three-phase wye L-N, L-G, N-G, L-L Three-phase delta L-G, L-L
Maximum continuous operating voltage (MCOV): 240S, 208Y and MCOV 400Y and 480Y MCOV 240D MCOV 480D MCOV	150 L-N, 150 L-G, 150 N-G, 300 L-L 320 L-N, 320 L-G, 320 N-G, 640 L-L 320 L-G, 320 L-L 640 L-G, 640 L-L
Ports	1
Operating temperature	-4°F through 122°F (-20°C through 50°C)
Operating humidity	5% through 95%, noncondensing
Operating altitude	Up to 16,000 ft (5000m)
Seismic withstand capability	Meets or exceeds the requirements specified in IBC® 2006, CBC 2007 and UBC® Zone 4
Enclosure dimensions and weights	Refer to Figures 1–3 for enclosure dimensions and weights
Form C relay contact ratings	150 Vdc or 125 Vac, 1A maximum
Form C relay contact logic	Power ON, normal state—NO contact = open, NC contact = closed Power OFF or fault state—NO contact = closed, NC contact = open
EMI/RFI filtering attenuation	Up to 50 dB from 10 kHz to 100 MHz
Pending agency certifications and approvals	UL 1449 3rd Edition listed device; CSA listed UL 1283 (Type 2 SPDs only)
Warranty	10 years

Catalog number selection

Table 13. Catalog Number Configuration



Example: PSPD250480D2K = SPD Series, 250 kA per phase, 480D voltage, standard feature package, housed in NEMA 1 enclosure

Notes

For Sales or Service please contact:

Power Pros, Inc.

888-330-2538

www.powerprosinc.com

