

Eaton SPD Series Sidemount Unit Mounted Externally to an Eaton Panelboard



### Contents

<i>Description</i>	<i>Page</i>
Introduction . . . . .	V3-T2-2
Product Overview . . . . .	V3-T2-5
SPD Series for Integration into Electrical Distribution Equipment . . . . .	V3-T2-7
SPD Series for Mounting External to Electrical Distribution Equipment	
Catalog Number Selection . . . . .	V3-T2-12
Technical Data and Specifications . . . . .	V3-T2-13
Dimensions . . . . .	V3-T2-14
SPV Surge Protective Device . . . . .	V3-T2-16
CVX050/100 . . . . .	V3-T2-18
SP1 Surge Protective Device . . . . .	V3-T2-21
SP2 Surge Protective Device . . . . .	V3-T2-23
AEGIS Powerline Filters . . . . .	V3-T2-25
Sag Ride-Through (SRT) . . . . .	V3-T2-30
Electronic Voltage Regulator (EVR) . . . . .	V3-T2-36

### SPD Series for Mounting External to Electrical Distribution Equipment

#### Product Description

Eaton's sidemount versions of the SPD Series surge protective devices are the latest and most advanced UL 1449 3rd Edition listed surge protectors. Application of SPD Series units throughout a facility will ensure that equipment is protected with the safest and most reliable surge protective devices available. 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.

#### Features, Benefits and Functions

- Uses self-protected metal oxide varistor (MOV) technology
- Three feature package options
- 15-year warranty

#### Standards and Certifications

- UL 1449 3rd Edition listed device
- Canadian Standards Association (CSA)
- UL 1283 (Type 2 SPDs only)



*All SPD Series sidemount units come prewired and include a factory-installed conduit interface, making installation very easy.*



*All SPD Series units are factory sealed, ensuring that the user/installer has no potential of coming into contact with harmful voltages present inside the unit.*

# 2.1

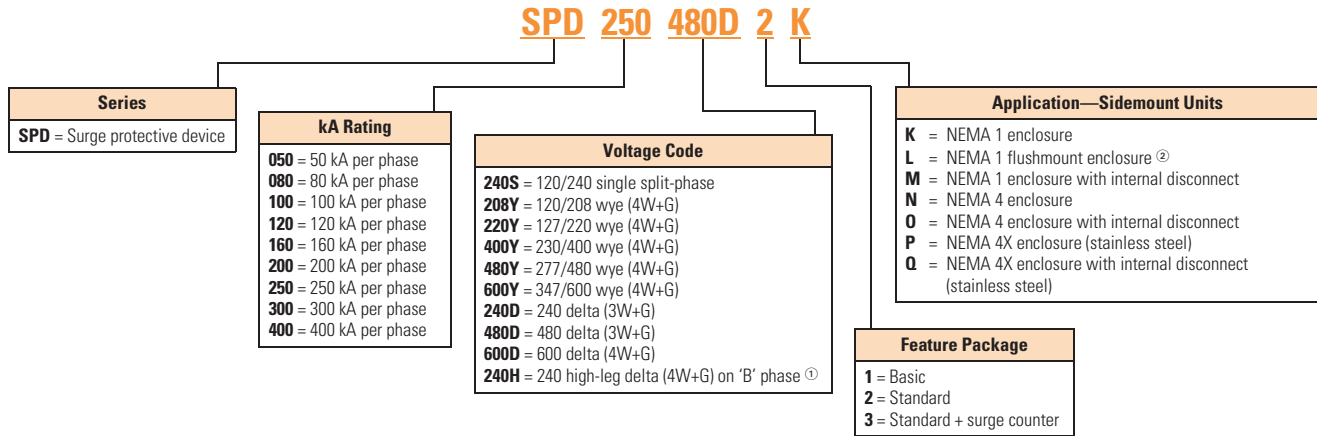
## SPD, Power Conditioning, PF Capacitors and Harmonic Filters

### Surge Protection and Power Conditioning

#### Catalog Number Selection

2

#### SPD Series Units for Mounting External to Electrical Distribution Equipment



#### Notes

① Please consult the factory for 240 high-leg delta (4W+G) applications with high leg on 'C' phase.

② NEMA 1 flushmount units are available in 50–200 kA ratings only.

Example: SPD250480D2K = SPD Series, 250 kA per phase, 480D voltage, standard feature package, housed in NEMA 1 enclosure.

## Technical Data and Specifications

### 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 (maximum rating assigned by UL)								
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, 127/220, 230/400, 277/480, 347/600								
Three-phase delta system voltages available	240, 480, 600								
Input power frequency	50/60 Hz								
Power consumption (basic units):									
208Y, 220Y, 240S, 240D and 240H voltage codes	0.5W								
400Y, 480Y and 480D voltage codes	1.1W								
600Y and 600D voltage codes	1.3W								
Power consumption (standard and standard with surge counter units):									
208Y, 220Y, 240S, 240D and 240H voltage codes	0.6W								
400Y, 480Y and 480D basic voltage codes	1.7W								
600Y and 600D voltage codes	2.1W								
Protection modes	<table border="0"> <tr> <td>Single split-phase</td> <td>L-N, L-G, N-G, L-L</td> </tr> <tr> <td>Three-phase wye</td> <td>L-N, L-G, N-G, L-L</td> </tr> <tr> <td>Three-phase delta</td> <td>L-G, L-L</td> </tr> <tr> <td>Three-phase high-leg delta</td> <td>L-N, L-G, N-G, L-L</td> </tr> </table>	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	Three-phase high-leg delta	L-N, L-G, N-G, L-L
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								
Three-phase high-leg delta	L-N, L-G, N-G, L-L								
Maximum continuous operating voltage (MCOV):									
240S, 208Y, 220Y and 240H MCOV	150 L-N, 150 L-G, 150 N-G, 300 L-L								
400Y and 480Y MCOV	320 L-N, 320 L-G, 320 N-G, 640 L-L								
600Y MCOV	420 L-N, 420 L-G, 420 N-G, 840 L-L								
240D MCOV	320 L-G, 320 L-L								
480D MCOV	640 L-G, 640 L-L								
600D MCOV	840 L-G, 840 L-L								
Ports	1								
Operating temperature	-40°F to 122°F (-40°C to 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 on <b>Pages V3-T2-14–V3-T2-15</b> 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								

# 2.1

## SPD, Power Conditioning, PF Capacitors and Harmonic Filters

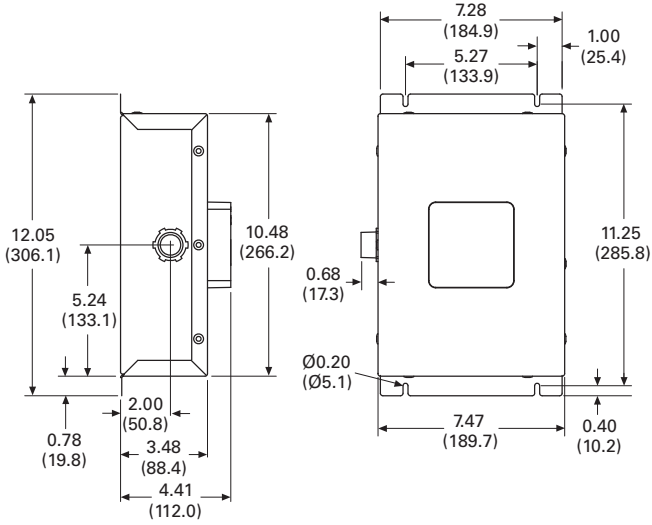
### Surge Protection and Power Conditioning

#### Dimensions

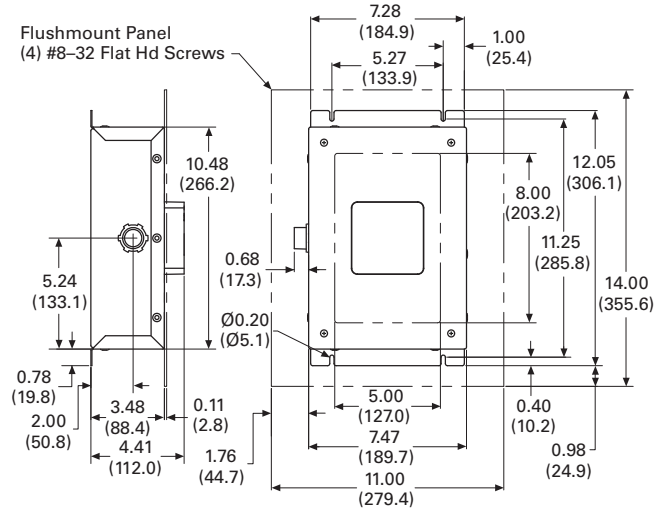
Approximate Dimensions in Inches (mm)

2

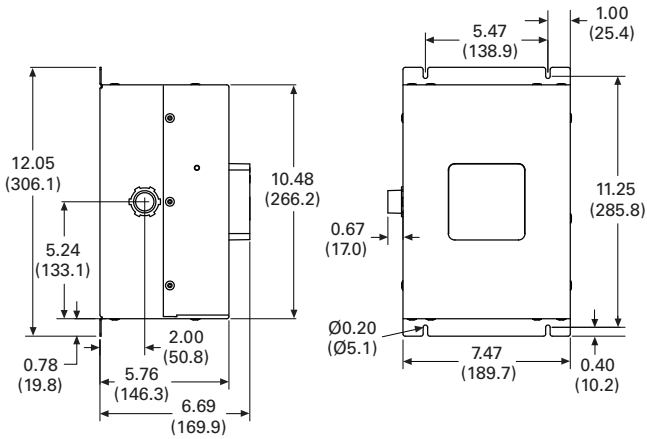
**50–200 kA Units in a NEMA 1 Rated Enclosure, Weight = 6.8 lbs**



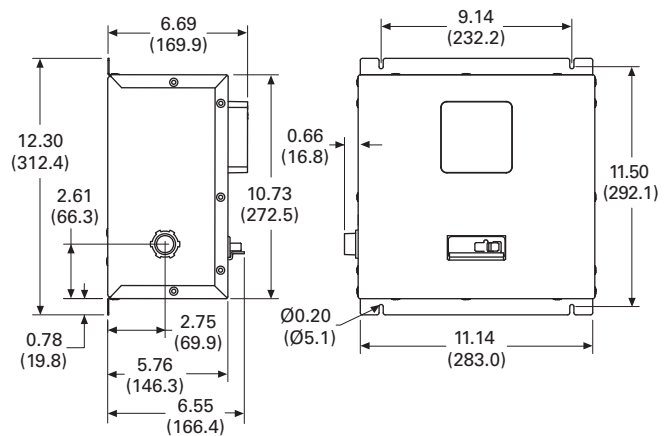
**50–200 kA Units in a NEMA 1 Rated Flushmount Enclosure, Weight = 6.8 lbs**



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

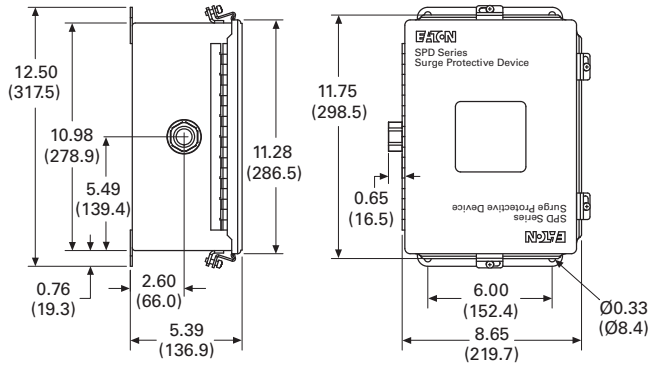


**50–400 kA Units in a NEMA 1 Rated Enclosure with Internal Disconnect, Weight = 14.7 lbs**

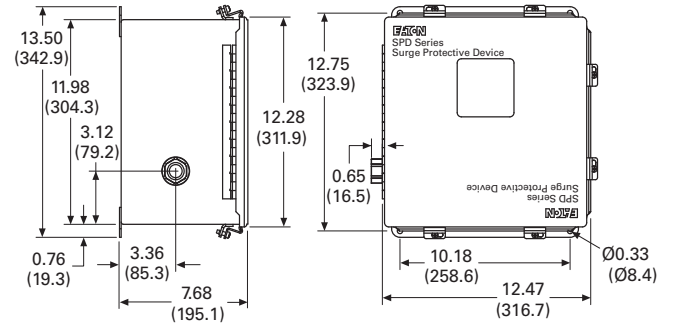


Approximate Dimensions in Inches (mm)

**50–200 kA Units in a NEMA 4 or 4X Rated Enclosure, Weight = 14.6 lbs**



**50–400 kA Units in a NEMA 4 or 4X Rated Enclosure with Internal Disconnect, Weight = 27.5 lbs**



**250–400 kA Units in a NEMA 4 or 4X Rated Enclosure, Weight = 14.6 lbs**

