

SPV surge protective devices

Introduction

The Eaton SPV is a commercial grade and light industrial surge protective device (SPD) that combines surge suppression components and EMI/RFI filtering to provide effective protection for sensitive electronic loads.

Table 1. Surge Current Capability per Phase (8X20 μ s L-L, L-G)

Model	Configuration	Per Phase (kA)
SPV050	Three-phase delta (3W+G)	50
SPV080	Three-phase delta (3W+G)	80
SPV100	Three-phase delta (3W+G)	100
SPV120	Three-phase delta (3W+G)	120
SPV160	Three-phase delta (3W+G)	160
SPV200	Three-phase delta (3W+G)	200

Table 2. Surge Current Capability per Phase and per Mode (8X20 μ s)

Model	Configuration	Per Phase (kA)	L-G (kA)	L-N (kA)	N-G (kA)
SPV050	Three-phase wye (4W+G), single-/split-phase (3W+G)	50	25	25	25
SPV080	Three-phase wye (4W+G), single-/split-phase (3W+G)	80	40	40	40
SPV100	Three-phase wye (4W+G), single-/split-phase (3W+G)	100	50	50	50
SPV120	Three-phase wye (4W+G), single-/split-phase (3W+G)	120	60	60	60
SPV160	Three-phase wye (4W+G), single-/split-phase (3W+G)	160	80	80	80
SPV200	Three-phase wye (4W+G), single-/split-phase (3W+G)	200	100	100	100

Table 3. Performance Data

UL 1449 Third Edition Voltage Protection Rating (VPR)

Nominal Voltage	L-N (V)	L-G (V)	N-G (V)	L-L (V)	MCOV
120/240V single-/split-phase (3W+G)	600	600	600	1000	150V L-N, L-G 300V L-L
208/120V three-phase wye (4W+G)	600	600	600	1000	150V L-N, L-G 300V L-L
480/277V and 400/280V three-phase wye (4W+G)	1000	1000	1000	1800	320V L-N, L-G 640V L-L
240V three-phase delta (3W+G)	—	1000	—	1000	320V L-G 300V L-L
400V and 480V three-phase delta (3W+G)	—	1800	—	2000	550V L-G 640V L-L



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Features and technical specifications

- EMI/RFI noise attenuation: 40 dB at 100 kHz
 - Filter bandwidth: 10 kHz to 100 MHz
 - Response time: <0.5 ns
 - Line frequency: 47 to 65 Hz
 - Line voltage: ±15% nominal
 - Temperature: 104° to 140°F (40° to 60°C)
 - Relative humidity: 0 to 95% noncondensing
 - Altitude: 0 to 2000 ft (0 to 610m)
 - Audible noise: none
 - Enclosure in inches (mm):
 - NEMA® 1—11.55 (293.4) x 5.00 (127.0) x 2.60 (66.0)
 - NEMA 3R—11.55 (283.4) x 5.00 (127.0) x 2.90 (73.7)
 - Diagnostics:
 - LED phase indicator lights
 - Audible alarm
 - Form C contacts
 - Independently tested
 - Warranty: 10-year product warranty
 - Agency listings: UL® 1449 Third Edition, UL 1283, CSA® 22.2, CE marked
 - Individually fused surge components
 - Highly reliable hybrid MOV filter system
 - Nominal discharge current (I_n): 20 kA ①
 - Short-circuit current rating (SCCR): 42 kA ②
 - ISO® 9001 Certified manufacturer
- ① 208Y, 240S, 240D, 400Y, and 480Y units rated 10 kA I_n.
- ② 5 kA SCCR for 400D and 480D.

Catalog numbering system

Table 4. SPV Ordering Guidelines

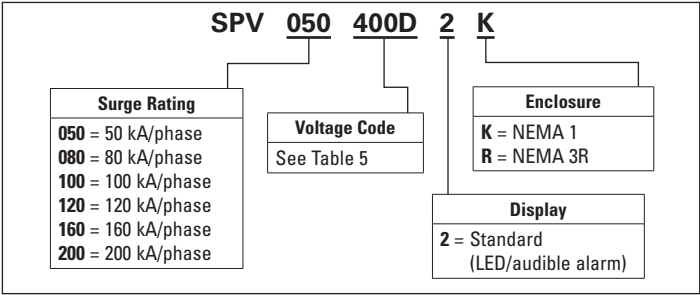


Table 5. Voltage Codes

Nominal Voltages (Use These Codes to Complete the Model Number)	Voltage Code		
	120/208 240V	230/400 499V ①	277/480 480V
120/240 single-/split-phase (3W+G)	240S	—	—
Three-phase wye (4W+G)	208Y	400Y	480Y
Three-phase delta (3W+G)	240D	400D	480D

① Contact factory for other configurations; applicable for 220/380 and 240/415 system voltages.

Dimensions

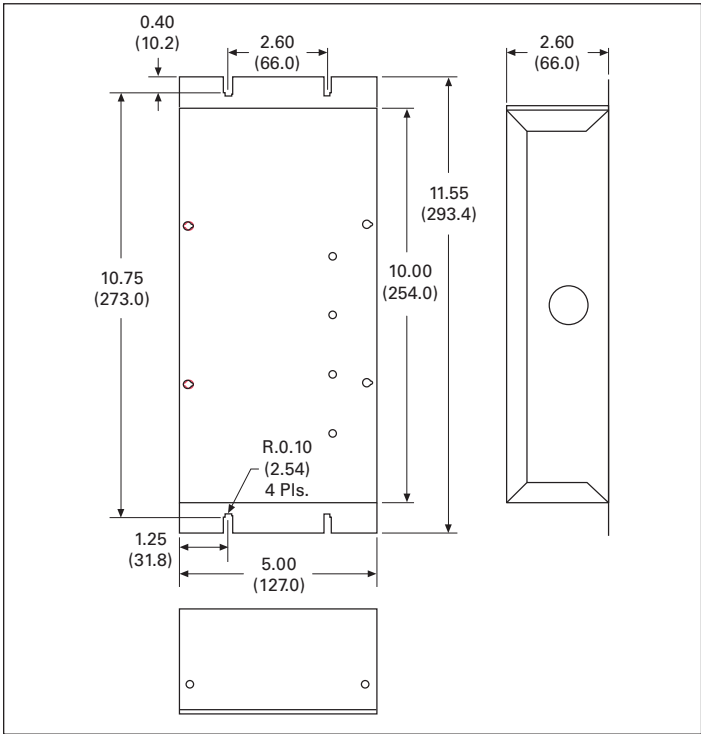


Figure 1. Dimensions for Standard CVL Suppressor (NEMA 1 Enclosure)

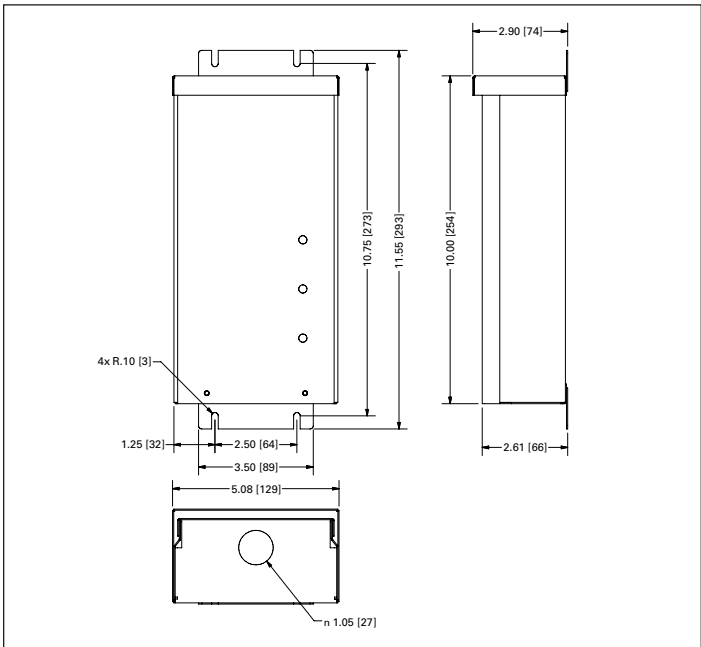


Figure 2. NEMA 3R Steel Enclosure Dimensions

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SPV080	Three-phase delta (3W+G)	80
SPV100	Three-phase delta (3W+G)	100
SPV120	Three-phase delta (3W+G)	120
SPV160	Three-phase delta (3W+G)	160
SPV200	Three-phase delta (3W+G)	200

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Model	Configuration	Per Phase (kA)	L-G (kA)	L-N (kA)	N-G (kA)
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SPV100	Three-phase wye (4W+G), single-/split-phase (3W+G)	100	50	50	50
SPV120	Three-phase wye (4W+G), single-/split-phase (3W+G)	120	60	60	60
SPV160	Three-phase wye (4W+G), single-/split-phase (3W+G)	160	80	80	80
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UL 1449 Third Edition Voltage Protection Rating (VPR)

Nominal Voltage	L-N (V)	L-G (V)	N-G (V)	L-L (V)	MCOV
120/240V single-/split-phase (3W+G)	600	600	600	1000	150V L-N, L-G 300V L-L
208/120V three-phase wye (4W+G)	600	600	600	1000	150V L-N, L-G 300V L-L
480/277V and 400/280V three-phase wye (4W+G)	1000	1000	1000	1800	320V L-N, L-G 640V L-L
240V three-phase delta (3W+G)	—	1000	—	1000	320V L-G 300V L-L
400V and 480V three-phase delta (3W+G)	—	1800	—	2000	550V L-G 640V L-L



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Features and technical specifications

- EMI/RFI noise attenuation: 40 dB at 100 kHz
 - Filter bandwidth: 10 kHz to 100 MHz
 - Response time: <0.5 ns
 - Line frequency: 47 to 65 Hz
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 - Temperature: 104° to 140°F (40° to 60°C)
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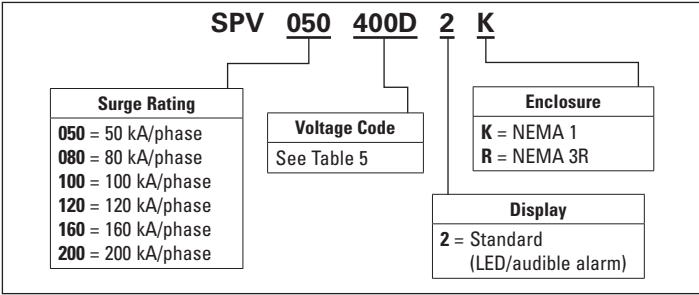


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Three-phase wye (4W+G)	208Y	400Y	480Y
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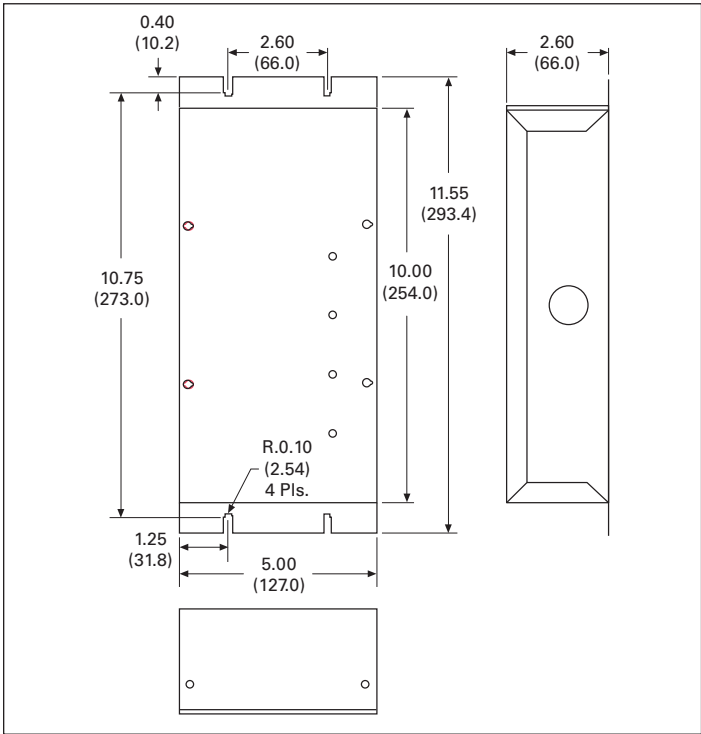


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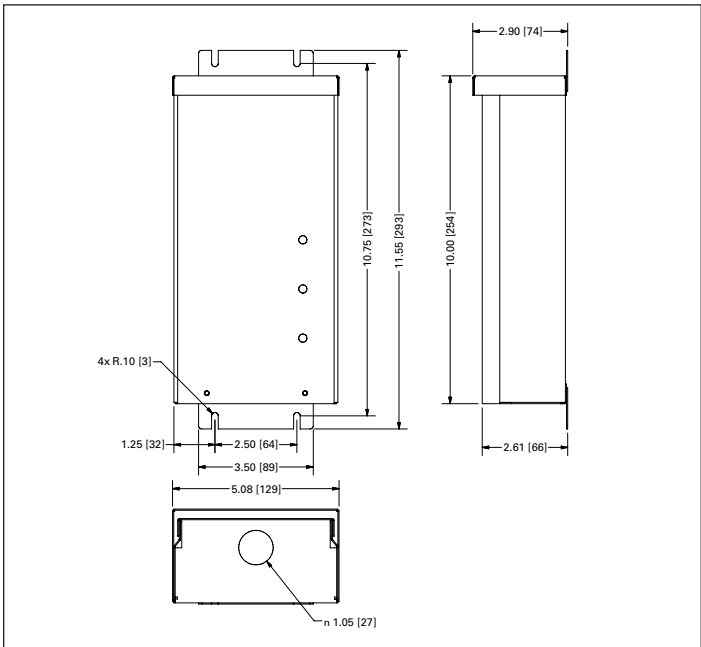


Figure 2. NEMA 3R Steel Enclosure Dimensions

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