

CVX050/100



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CVX050/100

Product Description

With over two decades of experience in the surge suppression industry and extensive R&D initiatives, Eaton is considered a world leader in surge protective device (SPD) manufacturing. All of Eaton's products are manufactured in an ISO[®] 9001:2000 and ISO 14001 certified facility.

Eaton's CVX050/100 models are rugged, cost-effective, high-quality SPDs that feature self-protected MOVs that eliminate the failure characteristics of standard metal oxide varistors. This technology results in a fail-safe device that monitors the status of the metal oxide disk and disconnects itself from the power system when the disk is approaching breakdown.

The CVX050/100 is easy to install adjacent or even internal to electrical equipment. When installing an SPD in a retrofit environment, it is important to mount the device as close to the electrical equipment as possible. Keep the wiring (lead length) between the electrical equipment and SPD as short as possible, and twist or wire tie the conductors together to reduce the wire's impedance factor.

Application Description

Eaton's CVX050 and CVX100 SPDs protect electronic equipment from damaging transients. These units are suitable for medium and low exposure level applications that require cost-effective, high quality system protection including:

- Residential/small business
- Light industrial
- Light commercial
- Branch panel protection
- OEM applications

Features, Benefits and Functions

- Advanced surge path technology for high fault current capacity, low impedance, high frequency design
- Rugged NEMA[®] 4X (IP65) enclosure
- Large diameter, self-protected metal oxide varistors provide long life and fail-safe operation
- LED monitoring of each phase
- Wide range of voltage applications from 100 to 600 Vac and 48 and 125 Vdc
- 5-year free replacement warranty

Optional Features

- External mounting feet

Standards and Certifications

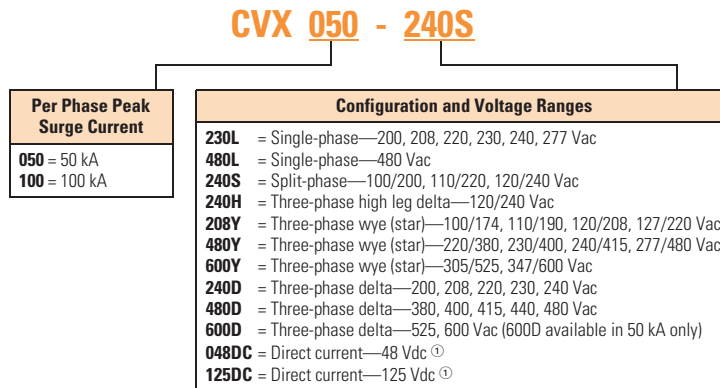
- UL 1449 3rd Edition for surge protective devices
- CE marked
- Vibration tested IEC 60255-21-1 and -2



Note: CE, CSA and UL on AC unit only.

Catalog Number Selection

CVX050/100



Technical Data and Specifications

CVX050/100 Model Specifications

Description	Specification
Peak kA per phase	50, 100
Peak kA per mode	50
Nominal discharge current	20 kA ^①
Short-circuit current rating	100 kA
Single-phase voltages	200, 208, 220, 230, 240, 277, 380, 400, 440, 460, 480 Vac
Split-phase voltages	100/200, 110/220/ 120/240 Vac
High leg delta voltages	240 Vac
Wye system voltages	100/175, 110/190, 120/208, 127/220, 220/380, 230/400, 240/415, 277/480, 305/525, 347/600 Vac
Delta system voltages	200, 208, 220, 230, 240, 380, 400, 415, 440, 480, 525, 600 Vac
Direct current Voltage ^②	48 Vdc, 125 Vdc
Input power frequency	47–420 Hz (50/60 Hz typical)
Protection modes	Single-phase: L-N, N-G, L-G Split-phase: L-N, N-G, L-G, L-L High leg delta: L-N, N-G, L-G, L-L, H-N, H-G, H-L Wye: L-N, N-G, L-G, L-L Delta: L-G, L-L Direct current ^① (DC): L-L, L-G
Number of ports	1
Specific energy	100 kJ/Ohm
Weight	≈2.0 lbs (1.0 kg)
Operating temperature	–13°F (–25°C) to +140°F (+60°C)
Vibration tested	IEC 60255-21-1 and IEC 60255-21-2

Notes

- ① 480L, 600D and 600Y units rated 10 kA I_n.
- ② DC models only available in 50 kA.

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SPD, Power Conditioning, PF Capacitors and Harmonic Filters

Surge Protection and Power Conditioning

CVX050/100 Voltage Ratings

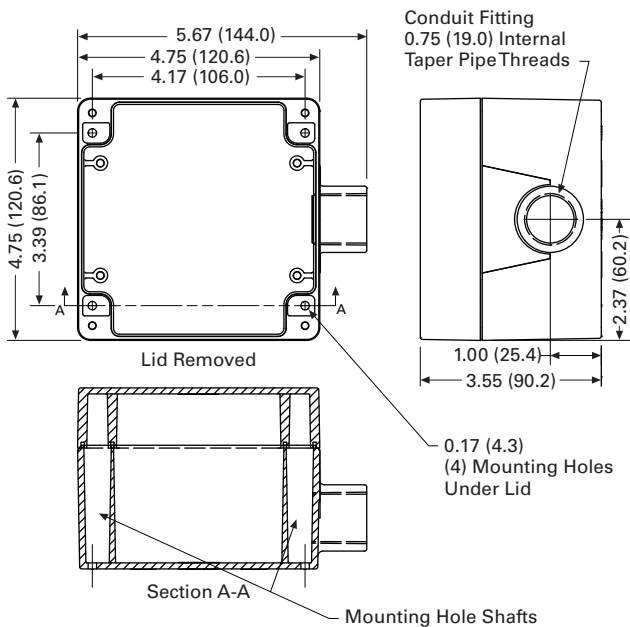
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Model	System Configuration	Nominal System Voltage	MCOV				UL 1449-3 VPR ^①			
			L-L	L-N	L-G	N-G	L-L	L-N	L-G	N-G
CVX050										
230L	Single-phase two-wire + ground	200, 208, 220, 230, 240, 277	—	320	640	320	—	1200	1200	1200
480L	Single-phase two-wire + ground	380, 400, 440, 460, 480	—	550	1100	550	—	1800	4000	1800
240S	Split-phase three-wire + ground	100/200, 110/220, 120/240	300	150	300	150	1200	700	1200	800
208Y	Three-phase wye (star) four-wire + ground	100/175, 110/190, 120/208, 127/220	300	150	300	150	1200	700	1200	800
480Y	Three-phase wye (star) four-wire + ground	220/380, 230/400, 240/415, 277/480	640	320	640	320	2500	1200	2000	1200
600Y	Three-phase wye (star) four-wire + ground	305/525, 347/600	840	420	840	420	2500	1500	2500	1500
240D	Three-phase delta three-wire + ground	200, 208, 220, 230, 240	640	—	320	—	2000	—	1200	—
240H	Three-phase high leg delta	240	300	150	150	640	1500	700	1200	700
480D	Three-phase delta three-wire + ground	380, 400, 415, 440, 480	1100	—	550	—	3000	—	1800	—
600D	Three-phase delta three-wire + ground	525, 600	1100	—	700	—	3000	—	2500	—
048DC	Direct current	48 Vdc ^②	130	—	65	—	—	—	—	—
125DC	Direct current	125 Vdc ^②	288	—	144	—	—	—	—	—
CVX100										
230L	Single-phase two-wire + ground	200, 208, 220, 230, 240, 277	—	320	320	320	—	1200	1200	1200
480L	Single-phase two-wire + ground	380, 400, 440, 460, 480	—	550	550	550	—	1800	1800	1800
240S	Split-phase three-wire + ground	100/200, 110/220, 120/240	300	150	150	150	1200	700	800	700
208Y	Three-phase wye (star) four-wire + ground	100/175, 110/190, 120/208, 127/220	300	150	150	150	1000	600	700	700
480Y	Three-phase wye (star) four-wire + ground	220/380, 230/400, 240/415, 277/480	640	320	320	320	1800	1200	1200	1200
600Y	Three-phase wye (star) four-wire + ground	305/525, 347/600	840	420	420	420	2500	1500	1500	1500
240D	Three-phase delta three-wire + ground	200, 208, 220, 230, 240	640	—	320	—	1800	—	1200	—
240H	Three-phase high leg delta	240	300	150	150	150	1200	700	700	700
480D	Three-phase delta three-wire + ground	380, 400, 415, 440, 480	1100	—	550	—	3000	—	1800	—

Dimensions

Approximate Dimensions in Inches (mm)

CVX050/100 Standard Dimensions



Dimensions are in Inches (mm)

Notes

- ① UL 1449 3rd Edition VPR (voltage protection rating) test environment: All tests performed with 6-inch lead length, positive polarity.
- ② DC units available in 50 kA only. Voltages shown are the maximum suggested operating voltages and are not UL certified.