Facility-wide and local protection

In a business environment that calls for 24/7 uptime and reliability, Eaton CVX050 and CVX100 surge protective devices (SPDs) ensure that investments in equipment and processes are protected from the damaging effects of voltage transients. Designed for installation on service entrance, branch panels or equipment disconnects, the CVX050/100 provides enhanced surge protection for mission-critical applications.

Features

- Self-protected metal oxide varistor technology
- Rated 50 kA (CVX050) or 100 kA (CVX100) peak surge current
- Wide range of voltage applications from 100 to 600 Vac and 48 and 125 Vdc
- Wiring systems: single-phase, split-phase, three-phase wye, three-phase delta or direct current (DC)
- High-intensity LED phase status indicators
- NEMA® 4X (IP56) polycarbonate enclosure
- Space-saving design takes up less than 27 square inches of panel space
- #10 AWG (6 mm^2) stranded wire included
- 3/4-inch threaded conduit fitting included
- Optional external mounting feet
- Can be used for UL 96A compliance
- Can be used for NFPA 780 compliance
- Can be used for RoHS compliance

Surge protection from the inside out

The CVX series of SPDs are the first offered by Eaton to make use of self-protected metal oxide varistors (MOVs) that provide both high-energy capacity and fail-safe operation. This technology, which uses a special low-temperature solder on each individual MOV, can sustain high surge currents and provide the necessary interruption of high fault currents (kAIC). The low-temperature solder allows a failed MOV to be disconnected at its end of life or before the MOV exceeds an unsafe temperature during low-level fault current events. Low-level fault currents are most common during temporary over-voltage conditions (TOV) and are the main cause of SPD failure.

SPD products that promote fuses with excessive surge current ratings do not provide the proper system coordination. They sacrifice low-level fault protection and in most cases do not disconnect during low current fault events. This can result in catastrophic failure (fire) and eventual tripping of the upstream breaker or fuse. With the CVX050/100, you get both safety and system coordination.

Let-through voltage is a key performance measurement for SPDs. The most significant factor affecting let-through voltage is lead length. The CVX's small size allows the device to be installed as close as possible to the equipment being protected. By minimizing the lead length, let-through voltage is reduced and performance is enhanced.

Product application

The Eaton CVX series of SPDs are designed for medium and low exposure level applications that require cost-effective, high-quality system protection including:

- Residential/small business
- Light industrial
- Light commercial
- Service entrance and branch panel protection
- OEM applications

Installation recommendations

When installing an SPD, it is important to mount the unit as close to the electrical equipment as possible, keep the wiring (lead length) between the electrical equipment and the SPD as short as possible, and twist/tie the conductors together to reduce the wire's inductive effects.

EATON
Powering Business Worldwide

Specifications

Description	Specification
Peak surge current	
CVX050	50 kA peak per phase
CVX100 ❶	100 kA peak per phase
Nominal discharge current	20 kA ❷
Short-circuit current rating	100 kA
SPD type	Type 1
System voltages (Vac)	
Single-phase	200, 208, 220, 230, 240, 277, 480
Split-phase	100/200, 110/220, 120/240
Three-phase wye	100/175, 110/190, 120/208, 127/220, 220/380, 230/400, 240/415, 277/480, 305/525, 347/600
Three-phase delta	200, 208, 220, 230, 240, 380, 400, 415, 440, 480, 512, 600
Three-phase high leg delta	240
System voltages (Vdc)	
Direct current ❶	48, 125
Input power frequency	47 to 420 Hz (50/60 Hz typical)
Protection modes	
Single-phase	L-N, L-N, N-G
Split-phase	L-N, L-G, L-L, N-G
Three-phase wye	L-N, L-G, L-L, N-G
Three-phase delta	L-G, L-L
Direct current (DC) ❶	L-L, L-G
Connection	#10 AWG (6 mm^2)
Diagnostics	LED indicators, 1 per phase
Operating temperature	–13 °F to +140 °F (–25 °C to +60 °C)
Number of ports	1
Specific energy	100 kJ/ohm
Enclosure	NEMA 4X (IP56) polycarbonate
Mounting	Threaded 3/4-inch conduit fitting and multi-point mounting holes
Weight	≈2 lb (1.0 kg)
Vibration	Tested to IEC 60255-21-1 and IEC 60255-21-2

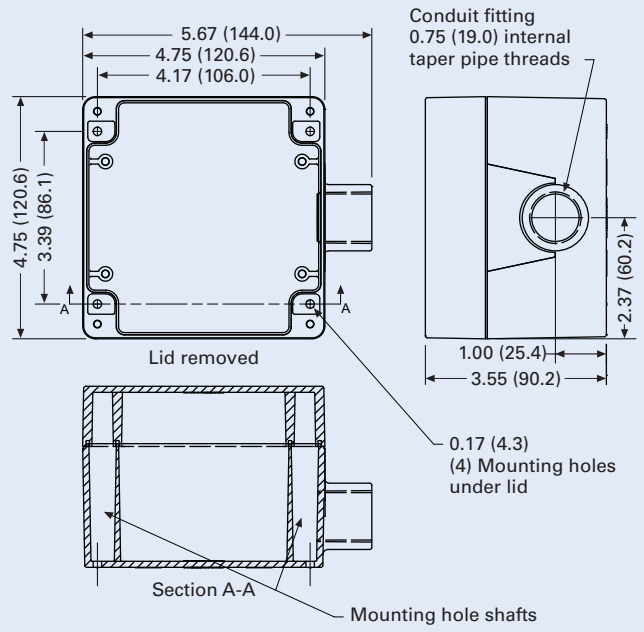
❶ DC models only available in 50 kA.

❷ 480L, 600D and 600Y units rated 10 kA I_n.

Standards, certifications and warranty

- UL 1449 4th Edition and UL 1283 7th Edition listed for surge suppression devices
- CE and CSA® marked
- CE, CSA and UL on AC unit only
- Five-year free replacement

Standard dimensions



Dimensions are in inches (mm)

Ordering guidelines

CVX 050 – 240S

Per phase peak surge current
050 = 50 kA
100 = 100 kA ❶

Configuration and voltage ranges
230L = Single-phase—200, 208, 220, 230, 240, 277 Vac
480L = Single-phase—480 Vac
240S = Split-phase—100/200, 110/220, 120/240 Vac
240H = Three-phase high leg delta—120/240 Vac
208Y = Three-phase wye (star)—100/174, 110/190, 120/208, 127/220 Vac
480Y = Three-phase wye (star)—220/380, 230/400, 240/415, 277/480 Vac
600Y = Three-phase wye (star)—305/525, 347/600 Vac
240D = Three-phase delta—200, 208, 220, 230, 240 Vac
480D = Three-phase delta—380, 400, 415, 440, 480 Vac
600D = Three-phase delta—525, 600 Vac (600D available in 50 kA only)
048DC = Direct current—48 Vdc ❶
125DC = Direct current—125 Vdc ❶

CVX050/100 accessories

Description	Catalog number
External mounting feet	**MNTGFTX**
Flush mount plate	**FLUSHMNTPLATE12**

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