

# Industrial and commercial surge protection Critical component of the System Shield 

## Surges are high-energy, short-duration voltage events. Also referred to as transients, impulses or spikes, these electrical disturbances can damage or destroy sensitive microprocessor-based equipment. The most common source is internal devices such as motors, transformers, photocopiers, fluorescent lighting ballasts, light dimmers, variable frequency drives and more-powering on and off. Surges can also be generated externally by events like lightning, grid switching or electrical equipment in adjacent buildings. <br> Having a strategy to protect against the damage caused by surges is not a luxury-it's a necessity. While seemingly innocent, these events can wreak serious havoc on facilities that are not adequately protected. Because of this, choosing a surge suppression manufacturer with a reputation for quality products and services is vital in safeguarding your investments. <br> The System Shield solution <br> System ShieldT" is a proven, effective method for total facility protection. This layered approach protects all electrical and electronic equipment-from powerful motors to sophisticated lighting controls and sensitive computer-based controllers-from damage caused by electrical surges. <br> Eaton's Innovative Technology <br> 

Equalizer 2 Series surge protective device is a key component to your System Shield protection strategy. It's compact, flexible and configurable to protect most electrical applications, including secondary service entrances, distribution panelboards and point-of-use applications.

## Equalizer 2-Advanced

 protection with a durable designThe Equalizer 2 is an industrial and commercial grade surge protective device (SPD) that combines thermally protected surge suppression components with options such as the Active Tracking Network (ATN), Form C contacts and an audible alarm to provide effective protection for electrical and electronic loads.

Installing Equalizer 2 units as part of a System Shield protection solution ensures equipment is protected with the safest, most reliable NEMA® ${ }^{\text {4 }}$ SPD available.

All units are UL® 1449
4th Edition listed and are available in all common voltages, as well as a variety of surge current capacity ratings.

## Standards and certifications

- UL 1449 4th Edition Type 1 and Type 2
- UL 1283 7th Edition (Feature packages: 2, 6, 7 and 8)
- Can be used for UL 96A compliance
- Can be used for NFPA 780 compliance
- Canadian Standards Association (CSA®) Type 1 and Type 2


## Features

- 50-200 kA per phase peak surge current capacity ratings
- Thermally protected metal oxide varistor (MOV) technology
- Tri-colored LED protection status indicators
- 20 kA nominal discharge current ( $\mathrm{I}_{n}$ ) rating
- Eight available custom feature combinations
- Corrosion-resistant NEMA 4X enclosure with mounting feet
- 200 kA short-circuit current rating (SCCR)
- Factory pre-wired with 36 inches of 10 AWG wire
- No user-serviceable parts or items requiring periodic maintenance
- Ten-year warranty that can be extended to 15 years with product registration at Eaton.com/itvss

Specifications

| Description | Specification |
| :---: | :---: |
| Peak surge current capacity ratings available | $50,80,100,120,150,160,200 \mathrm{kA}$ per phase |
| Agency certification/listing | UL 1449 4th Edition, UL 1283 7th Edition, CSA C22.2 No. 269.1-14 for Type 1 SPD, CSA C22.2 No. 269.2-13 for Type 2 SPD, CSA C22.2 No. 8-13 for EMI Filter |
| Surge protective device type | UL 1449 4th Edition and CSA Type 1 and Type 2 (dependent on feature options) |
| Durability repetitive strike test | 12,000 strikes to ANSI/IEEE® ${ }^{\text {® }}$ C62.41 (20 kV, 10 kA ) Category C Combination Waveform |
| Single -phase voltages available ( $2 \mathrm{~W}+\mathrm{G}$ ) | 120, 240, 277, 480 |
| Split-phase voltages available ( $3 \mathrm{~W}+\mathrm{G}$ ) | 120/240 |
| Three-phase wye system voltages available ( $4 \mathrm{~W}+\mathrm{G}$ ) | 120/280, 240/415, 277/480, 347/600 |
| Three-phase delta system voltages available ( $3 \mathrm{~W}+\mathrm{G}$ ) | 240, 480, 600 |
| Three-phase high leg delta system voltage available (4W + G) | 240 |
| Input power frequency | 50/60 Hz |
| Short-circuit current rating (SCCR) | 200 kA |
| Nominal discharge current rating ( 1 l ) | 20 kA |
| Protection modes | Single-phase L-N, N-G, L-G Split-phase L-N, N-G, L-G, L-L Wye L-N, N-G, L-G, L-L Delta L-G, L-L |
| Active Tracking Network (ATN) | Up to 40 dB from 10 kHz to 100 MHz |
| Form C relay contact ratings | 2 A at 30 Vdc or 250 Vac |
| Operating temperature | $-40^{\circ} \mathrm{F}$ to $+140^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.+60^{\circ} \mathrm{C}\right)$ |
| Operating humidity | 5\% through 95\%, noncondensing |
| Operating altitude | Up to 2000 m (6561 ft) |
| Enclosure rating | NEMA 4X enclosure © |
| RoHS compliant | Yes |
| Warranty | 10 years standard, 15 years with product registration at Eaton.com/itvss |

(1) Mounting feet required to achieve NEMA 4X rating

## Equalizer 2 catalog number configuration



For questions or additional information, please contact your local Innovative Technology Master Distributor or the Eaton Technical Resource Center at 1-800-647-8877. spd@eaton.com Eaton.com/itvss

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