

# 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.

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.

### The System Shield solution

System Shield<sup>™</sup> 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.



#### Eaton's Innovative Technology

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 design

The 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® 4X SPD available.

All units are UL<sup>®</sup> 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

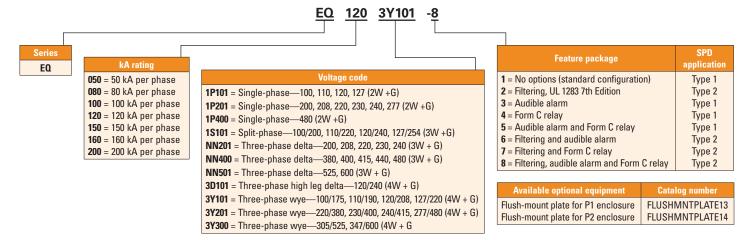
- 50–200 kA per phase peak surge current capacity ratings
- Thermally protected metal oxide varistor (MOV) technology
- Tri-colored LED protection status indicators
- 20 kA nominal discharge current (I<sub>n</sub>) rating
- Eight available custom feature combinations
- Corrosion-resistant NEMA 4X
  enclosure 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 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® C62.41 (20 kV, 10 kA) Category C Combination Waveform
Single -phase voltages available (2W + G)	120, 240, 277, 480
Split-phase voltages available (3W + G)	120/240
Three-phase wye system voltages available (4W + G)	120/280, 240/415, 277/480, 347/600
Three-phase delta system voltages available (3W + 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 (In)	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	2A at 30 Vdc or 250 Vac
Operating temperature	-40 °F to +140 °F (-40 °C to +60 °C)
Operating humidity	5% through 95%, noncondensing
Operating altitude	Up to 2000 m (6561 ft)
Enclosure rating	NEMA 4X enclosure 0
RoHS compliant	Yes
Warranty	10 years standard, 15 years with product registration at Eaton.com/itvss

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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