

2.1

Surge Protection

Surge Protection Devices and Lightning Arresters

Surge Protection Devices

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Product Description

Due to the evolution of electronics and microprocessors in the home, there is a continuous challenge to provide quality (clean) power for electronic loads such as appliances, computers/home office and entertainment systems. Surges caused by lightning, utility grid switching and other sources travel on current carrying conductors throughout the home, which can affect and destroy sensitive electronic loads.

Eaton offers a comprehensive family of surge products for use at service entrances. These products can help protect sensitive electronics against the damaging effects of surges.

Application Description

Two-Stage Protection

Two stages of surge suppression are recommended to provide the best protection for electronic equipment. Two-stage surge suppression should be provided for all cables entering a home, including power, Internet and coaxial.

Service Entrance Surge Protection

Eaton's service entrance surge protection units provide premier surge protection for AC power at the service entrance. These products provide protection for residential electrical equipment by reducing power surges to an acceptable level for surge strips to handle at the point of use.

UL 1449 3rd Edition Type 1 and Type 2 Surge Protection

- **Type 1 Surge Protective Device (SPD)**— Permanently connected Type 1 SPDs are intended for installation between the secondary of the service transformer and the line side of the service equipment overcurrent device, as well as the load side, including watt-hour meter socket enclosures, and are intended to be

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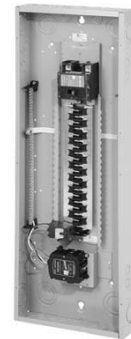
Description

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installed without an external overcurrent protective device. Type 1 devices are dual-rated for Type 2 applications as well, providing the highest ratings available for installation at the service entrance

- Eaton's CHSPT1 products provide Type 1 surge protection in accordance with UL® 1449 3rd Edition. These units can be universally mounted outside any manufacturer's primary service equipment
- **Type 2 Surge Protective Device**—Permanently connected Type 2 SPDs are intended for installation on the load side of the service equipment overcurrent device, including SPDs located at the branch panel
- CHSPT2 products provide Type 2 surge protection in accordance with UL 1449 3rd Edition. These units can be mounted outside of any manufacturer's loadcenter or inside an Eaton Surge/Surge Ready loadcenter. Eaton also offers accessories to the CHSPT2 line for cable protection

- **Factory-Installed Surge Protection**—Eaton's loadcenters with factory-installed surge protection include a CHSPT2ULTRA and a two-pole 50 A circuit breaker. These loadcenters increase the effectiveness of surge protection due to reduced lead length. A modified deadfront allows for easy viewing of indicating lights for status indication



Surge Panel

- **Surge Ready Loadcenter**—The Surge Ready loadcenter provides a mounting provision for the CHSPT2ULTRA. This loadcenter has a modified deadfront to allow for viewing of indicating lights






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Accessories for CHSP Type 2 Service Entrance Protection

Catalog Number	Description	Installation	Surge Current Capacity	DC Breakdown Voltage	Voltage
CHSPCABLE 	CHSPCABLE Quick Connect design—add additional telephone and AC protection modules; protects two quad shield cables; bi-directional	Indoor installation; or rain-tight when used with recommended enclosure	10 kA per line	145 V	
CHSPT2PACK 	CHSPT2PACK 2-Pack: CHSPT2ULTRA + CHSPCABLE; Surge protection for AC power and cable—see individual product features		See individual product ratings		
CHSP3RTELCABLE 	CHSP3RTELCABLE Raintight enclosure for CHSPTELE and CHSPCABLE; top or bottom feed; enclosure only, surge not included; accommodates up to two devices				
CHSPFMKIT 	CHSPFMKIT Flushmount kit for: CHSPT2ULTRA, CHSPT2MAX, CHSPT2SURGE, CHSPCABLE				
MSEGR2 	MSEGR2 Outdoor communication grounding device; meets 2008 NEC requirements for intersystem bonding termination				

Note

For warranty details, go to www.eaton.com/surgetrap.