

# Surge-Trap Series

## Surge Protection Devices



STXH240S05



STXR480Y05  
STXR480Y05A

**\$25,000 Connected  
Equipment Warranty**

**3 Year Limited Warranty**  
STXH240S05

**5 Year Limited Warranty**  
STXR480Y05  
STXR480Y05A



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## Description

Mersen® Surge-Trap® Series Surge Protection Devices (SPDs), distributed by Robertshaw®, safeguard residential air conditioning (A/C) units including mini-splits, furnaces and air handlers from costly voltage surge events, such as fluctuations in power often generated from inside a home or building, and from an outside source like lightning. Compact in size, the Surge-Trap Series provides Type 1 and Type 2 surge protection to help maintain safe, reliable A/C and furnace performance. The 120/240 dual-voltage single phase model STXH240S05 safeguards residential A/C and furnace equipment, and the 3-phase models STXR480Y05 and STXR480Y05A are used for Commercial and Industrial applications.

## Features and Benefits

- For use with ANSI/UL Type 1 or 2 Surge Protection Device (SPD) installations
- Designed with industry leading Mersen TPMOV® technology
- Compact footprint designed to align easily with AC disconnect switches
- Easy to read 180° LED status indicator: green - on, out - replace SPD
- NEMA 4X non-metallic enclosure for outdoor or indoor use
- Optional audible alarm and remote dry contacts (STXR480Y05A only)
- UL 1449 4th Edition
- NATE® accreditation training class available (2-HR CEH)

# Applications

- AC units / mini-splits / heat pumps
- Furnaces / air handlers
- Motors / ECM motors
- Controls boards / transformers / relays / sensors
- Refrigeration systems

# Specifications

Part numbers	STXH240S05	STXR480Y05	STXR480Y05A
Description	Surge Protection Device	Surge Protection Device	Surge Protection Device with optional audible alarm and remote dry contacts
Electrical rating	120/240 VAC, 50/60Hz	277/480 VAC, 50/60Hz	277/480 VAC, 50/60Hz
Phase	Single	3 Phase WYE	3 Phase WYE
Modes of protection	3	10	10
Surge capacity	50 kA	50 kA	50 kA
Nominal discharge current rating (In)	20 kA	20 kA	20 kA
Short circuit current rating (SCCR)	200 kA	200 kA	200 kA
Max. continuous operating voltage (MCOV)*	L-L 300, L-N 150	L-L 640, L-N 320, L-G 470, N-G 150	L-L 640, L-N 320, L-G 470, N-G 150
Voltage protection rating (VPR)*	L-L 1000, L-N 600	L-L 2000, L-N 1200, L-G 1800, N-G 700	L-L 2000, L-N 1200, L-G 1800, N-G 700
Flammability	UL94-5VA	UL94-5VA	UL94-5VA
End-of-life LED indicator	Yes (180° visual)	Yes (180° visual)	Yes (180° visual)
Wiring	Pre-wired 18” 10 AWG	Pre-wired 3’ (1m) 10 AWG	Pre-wired 3’ (1m) 10 AWG
Mounting type	1/2” – 14 threaded hub. Includes sealing locking washer, 1/2” knockouts with 18” leads	3/4” – 14 threaded hub includes locking washer, 3/4” knockouts with 3’ leads, Optional mounting bracket for surface mount applications	3/4” – 14 threaded hub includes locking washer, 3/4” knockouts with 3’ leads, Optional mounting bracket for surface mount applications
Operating temperature	-40°F to 185°F (-40°C to 85°C)	-40°F to 185°F (-40°C to 85°C)	-40°F to 185°F (-40°C to 85°C)

\*Note: L-N = Line to Neutral, L-L = Line to Line, L-G = Line to Ground, N-G = Neutral to Ground

# Replacement Information

STXH240S05	Intermatic: AG3000 Ditek: D50-CM, DTK-120/240CM+, DTK-120HW Mars: 83904, 83905, 83915 Supco: LBK10 5-2-1 (CPS): SPD60, SPD150 ICM: ICM515, ICM516, ICM517
STXR480Y05	Ditek: DTK-4803CMXPLUS Intermatic: AG4803C3
STXR480Y05A	Ditek: DTK-4803CMXPLUS Intermatic: AG4803C3

# Training

- Installation training provided by Robertshaw® sales representative. NATE®-Certified Technicians earn a 2-hour credit toward continued education requirements.



## Surge Protection Terms to Know

- **Surge** – The fluctuation in power that may cause damage to electrical equipment including HVAC equipment and appliances.
- **Metal Oxide Varistor (MOV)** – The most common SPD technology.
- **Thermally Protected Metal Oxide Varistor (TPMOV)** – Mersen’s patented SPD technology; rated the best performing, most reliable surge suppression technology on the market.
- **Maximum Continuous Operating Voltage (MCOV)** – The maximum steady state voltage the SPD can withstand without becoming a fire or safety hazard. Also known as surge capacity or surge rating.
- **Nominal Discharge Current (IN)** – UL’s test program term to measure peak current that can pass through a SPD and remains functional after 15 surges. The highest nominal discharge current rating by UL is 20kA.
- **UL1449 4th Edition** – Meets Underwriter’s Laboratory highest standard of testing for SPDs.
- **Short Circuit Current Rating (SCCR)** – The amount of “available” current the SPD can be subjected to and also safely disconnect from the power source under short circuit conditions.
- **Voltage Protection Rating (VPR)** – The voltage allowed through the SPD after protecting a surge event. Similar to a golf score, the lower the rating, the better.
- **Type 1 Surge Protection** – Protect sensitive electronics from the damaging effects of electrical surges; installed before the main device in the load center.
- **Type 2 Surge Protection** – Protect sensitive electronics from the damaging effects of electrical surges. Intended for the installation of AC power and cable at the point of entrance to the building.

