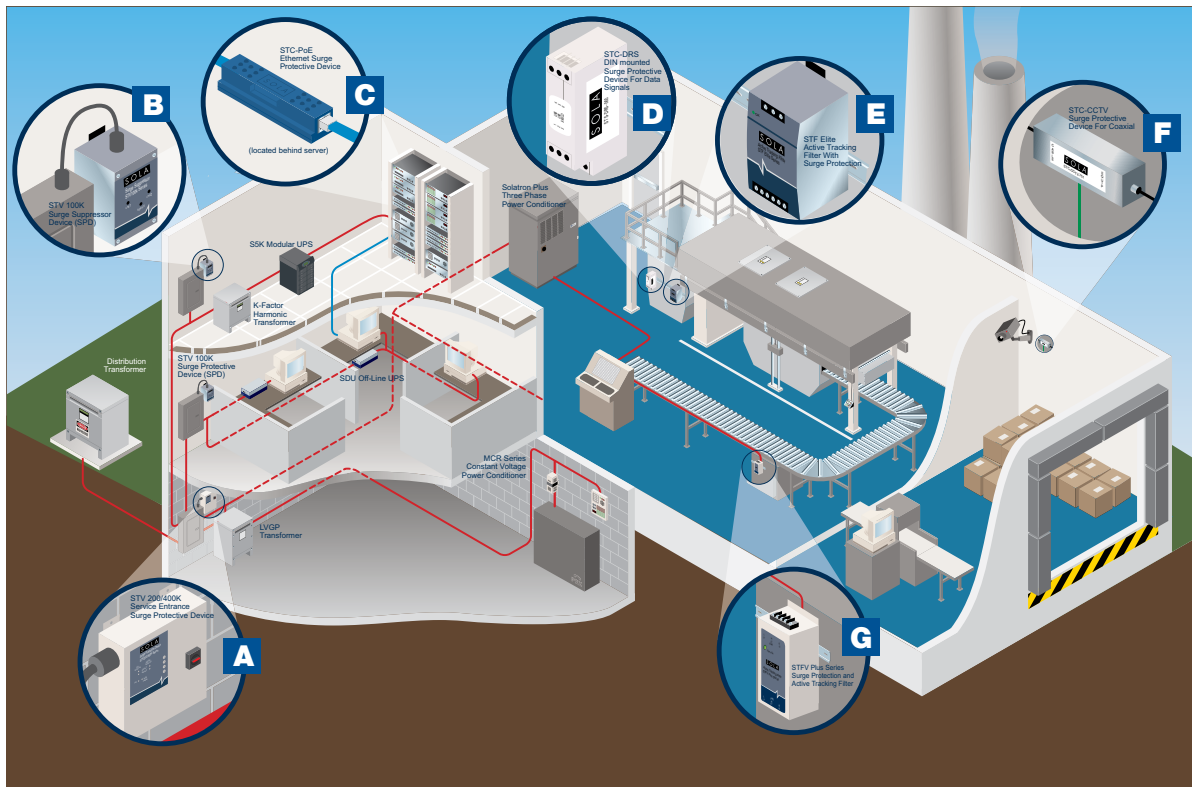




**DIN RAIL MOUNTED ACTIVE TRACKING® FILTERS WITH SURGE PROTECTION – PRODUCT GUIDE**

# FACILITY WIDE PROTECTION STRATEGY



## A STV200/400K

- Surge protective devices capable of handling the high-impulse, potentially damaging transients commonly found at the service entrance, distribution panels, and placement in the most severe exposure locations

## B STV100K

- Surge protective devices designed to protect sensitive equipment and microprocessor-based systems from transients on distribution and sub-distribution panels, or any medium exposure locations

## C STC-POE

- Surge protective devices designed to work on Power-over-Ethernet Category 5 PoE transmission lines as well as Category 6 applications

## D STC-DRS

- DIN rail mountable, single pair, low voltage data, surge protective devices. The hybrid design of these data/signal line suppressors allows them to respond quickly

## E STFE ELITE

- DIN rail mountable high-frequency noise filter/surge suppressors that offers the original active tracking technology with UL Approved transient protection to guard against commonly occurring, but very damaging transients, plus provides excellent noise reduction

## F STC-CCTV

- Surge protective devices tailored to protect CCTV, data, audio and cable applications

## G STFV

- High-frequency noise filter/surge suppressors that offers the original active tracking technology with transient protection to guard against commonly high voltage transients, plus provides excellent noise reduction

# STFE ELITE SERIES - ACTIVE TRACKING®

The SolaHD STFE Elite DIN Rail Mount Series combines Active Tracking® technology with UL Listed surge protection against the full spectrum of voltage transients and surges. It continuously tracks the input AC power line responding instantly into action upon detecting extraneous high frequency noise and high voltage transients caused by everyday events such as turning on machinery, motors, or equipment. They are designed for years of trouble free operation and require little or no operator intervention after installation.



## APPLICATIONS

- Control Panels
- Factory Automation Installations
- Point of Use Industrial Equipment
- Programmable Logic Controllers
- Dedicated Industrial and Machine Tools Equipment

## FEATURES

- Series connected DIN Rail mounted filter
- Durable metal mount clip
- UL Listed surge current capacity – 45,000 Amps
- Transient protection in all modes (L-N, L-G, and N-G)
- Single phase applications up to 20 Amp
- Operating temperature from -40 °C to +50 °C (-40 °F - +122 °F)
- Screw terminal connections
  - Reliable and convenient screw clamp connections
  - Accept 10-16 AWG wire
  - Meet IP20 specifications for ingress protection
- LED status indication
- Form C contact for remote monitoring
- Five year limited warranty

## CERTIFICATIONS AND COMPLIANCES

-  **UL** UL Recognized Component
  - UL 1449, Type 4 locations
  - UL 1283
  - CSA C22.2 No. 8
-  **CE** - EN 61643-11:2002
- RoHS Compliant



# STFE ELITE SERIES



## SELECTION TABLE

Catalog Number	Input Voltage	
STFE030-10N	120 V	Single Phase 2 Wire + Ground
STFE050-10N	120 V	Single Phase 2 Wire + Ground
STFE100-10N	120 V	Single Phase 2 Wire + Ground
STFE200-10N	120 V	Single Phase 2 Wire + Ground
STFE030-24L	240 V	Single Phase 2 Wire + Ground
STFE050-24L	240 V	Single Phase 2 Wire + Ground
STFE100-24L	240 V	Single Phase 2 Wire + Ground
STFE200-24L	240 V	Single Phase 2 Wire + Ground

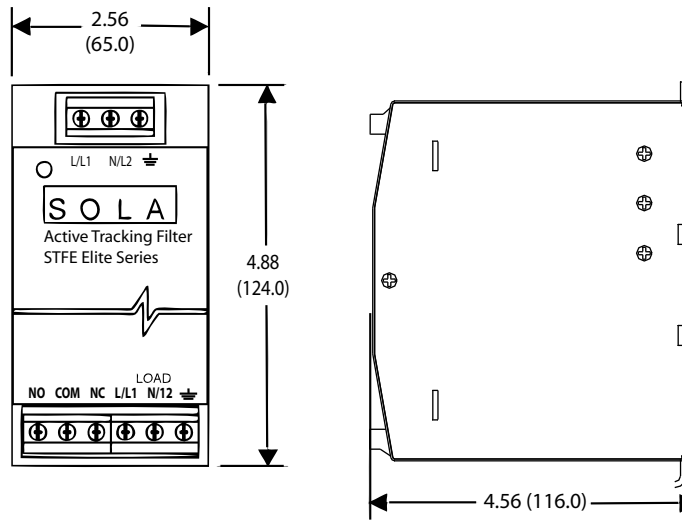
# WIDE INDUSTRIAL CONTROL APPLICATIONS

## SPECIFICATIONS

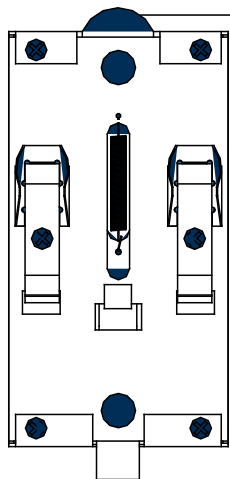
Catalog Number	STFEXXX-10N		STFEXXX-24L	
Input Voltage	120 V (0-150 VRMS)		240 V (0-275 VRMS)	
Line Frequency	47-63 Hz			
Response Time	< .5 ns normal mode, <5 ns common mode			
<b>PHYSICAL</b>				
Enclosure	Fully Enclosed Metal Housing			
Fusing	Reference Fuse/Circuit Breaker Chart			
Status Indication	Green LED "OK"/Form C Contact/ 10 Amps@ 250 Vac or 5 Amps@ 100 Vdc			
Connection/Mounting Type	DIN Rail Mount			
Weight lbs (kg)	1.7 lbs (0.70 kg)			
Dimensions in (mm) H x W x D	4.88 x 2.56 x 4.56 (124.0 x 65.0 x 116.0)			
<b>ENVIRONMENT</b>				
Operating Temperature	-40 °C to +50 °C (-40 °F to +122 °F) at full load Derate Linearly to 60% at +70°C (+158 °F)			
Operating Humidity	0% to 95% Non-condensing			
<b>SURGE PROTECTION</b>				
Peak Surge Current Capability	Per Phase		30,000 Amps	
	Line to Neutral		20,000 Amps	
	Line to Ground		10,000 Amps	
	Neutral to Ground		10,000 Amps	
Load Surge Current Rating	10m Sec		5 x Nominal	
	1 sec		3 x Nominal	
	10 sec		2 x Nominal	
<b>ACTIVE TRACKING PROTECTION</b>				
Frequency Response				
Normal Mode (Forward-Reverse)	100 kHz to 50 MHz		90 dB Max	
Common Mode (Forward-Reverse)	5 MHz to 50 MHz		60 dB Max	
Transient Reduction (IEEE C62.41)	Typical Category A Ringwave (6 kV, 200A, 100 kHz)		<60 V Peak	
	Typical Category B Ringwave (6 kV, 500A, 100 kHz)		<100 V Peak UL 1449	
<b>UL 1449 (2nd EDITION) SUPPRESSOR CLASSIFICATION</b>				
	120 V, 3-5A Models	120 V, 10-20A Models	240 V, 3-5A Models	240 V, 10-20A Models
L-N	330 V	330 V	N/A	N/A
L-L	N/A	N/A	600 V	600 V
L-G	500 V	400 V	1000 V	900 V
N-G	400 V	400 V	N/A	N/A
<b>GENERAL</b>				
Safety	UL 1449, UL1283, cUL Recognized Component, CE			
Warranty	5 Year Limited Warranty			

# ILLUSTRATED FEATURES

## DIMENSIONAL DIAGRAM - IN (MM)



## INTERNAL DIAGRAM



Rear View

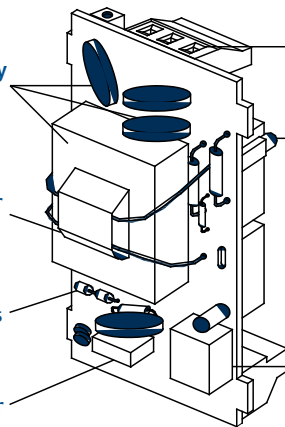
**DIN Connector**  
Strong all metal for horizontal or vertical mounting

**MOV Array**  
Provides high-energy all mode protection

**Series Blocking Inductor**  
Blocks voltage, smooths current

**Silicone Avalanche Diodes**  
Fast responding surge suppressor

**Pulse Capacitor**  
High-frequency noise absorption



**Screw Terminal Connections**

**Green LED Unit Status Indicator**

**Form C Relay Contacts**  
DC OK Signal

Internal View of Components

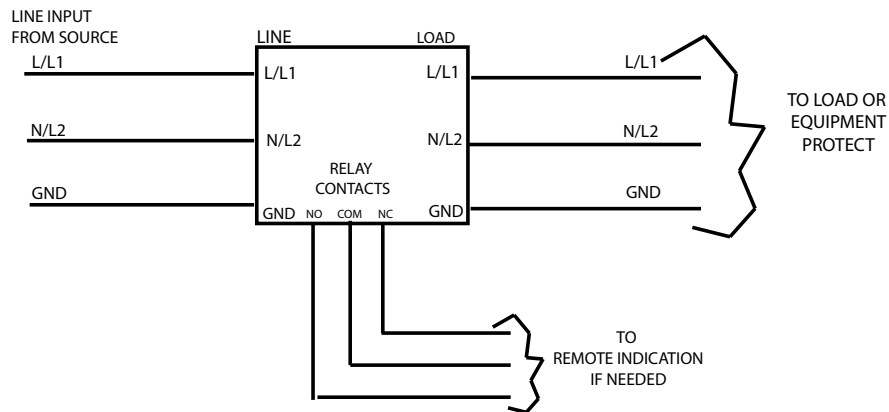
# WIRING INFORMATION

## WIRING SPECIFICATIONS

Catalog Number	Amps	Min Wire Size ① (AWG Suggested)	Fuse/Circuit Breaker Ampacity	
<b>Single-Phase Models (120 Vac)</b>				
STFE030-10N	3.0	24	3A	3.75A
STFE050-10N	5.0	22	5A	6.25A
STFE100-10N	10.0	20	10A	12.5A
STFE200-10N	20.0	12	20A	25A
<b>Single-Phase Models (240 Vac)</b>				
STFE030-24L	3.0	24	3A	3.75A
STFE050-24L	5.0	22	5A	6.25A
STFE100-24L	10.0	20	10A	12.5A
STFE200-24L	20.0	12	20A	25A

① 16 AWG wire or larger may be required by code dependent upon the application.

## CONNECTION DIAGRAM



Emerson brings integrated manufacturing solutions to diverse industries worldwide. Our comprehensive product line, extensive experience, world-class engineering and global presence enable us to implement solutions that give our customers the competitive edge. SolaHD is our premium line of power-conversion and power quality solutions products.

For over 150 years, our electrical product brands have been providing a rich tradition of long-term, practical, high quality solutions with applications ranging from the construction and safe operation of petrochemical and process plants to providing quality power that precisely controls automotive robotic production.

Engineers, distributors, contractors, electricians and site maintenance professionals around the world trust Emerson brands to make electrical installations safer, more productive and more reliable.

The Appleton Group business unit of Emerson is organized into three focused groups that provide distributors and end users expert knowledge and excellent service.

#### **Electrical Construction Materials**

This group is made up of the Appleton and O-Z/Gedney brands. They manufacture a broad range of electrical products including conduit and cable fittings, plugs and receptacles, enclosures and controls, conduit bodies and industrial and hazardous lighting. Whether the application is hazardous location, industrial or commercial, the electrical construction materials group has the products to meet your needs.

#### **Power Quality Solutions**

The SolaHD brand offers the broadest power quality line, including uninterruptible power supplies, power conditioners, voltage regulators, shielded transformers, surge protection devices and power supplies.

#### **Heating Cable Systems**

This group is made up of the EasyHeat and Nelson brands. They offer a broad range of electrical heating cable products for residential, commercial and industrial applications.

Asia/Pacific  
+ 65.6556.1100

Australia  
+ 61.3.9721.0348

Canada  
+ 1.888.765.2226

China  
+ 86.21.3338.7000

Europe  
+ 33.3.22.54.13.90

Mexico/Latin America  
+ 52.55.5809.5049

Middle East/Africa/India  
+ 971.4.881.8100

United States  
+ 1.800.621.1506

Appleton Group  
9377 W. Higgins Road  
Rosemont, IL 60018  
1.800.621.1506  
solahd.com

**SOLAHD**



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