

STF Series – Active Tracking® Filters

Low voltage/high frequency noise is caused by everyday events such as turning on machinery, motors, or equipment. Although noise is less dramatic than high voltage transients, the long term effects of these frequent disturbances can be as damaging. Filtering systems such as SolaHD Active Tracking® Filters provide clean AC power by eliminating lower voltage noise.

The SolaHD STF Series offers the original active tracking technology to guard against commonly occurring but very damaging, lower energy transients. Offering excellent noise reduction, the filter continuously tracks the input AC power line and responds instantly upon detecting extraneous high frequency noise.

The STF Series eliminates low voltage/high frequency noise via a low-pass or L-C filter. These filters are used for low energy, high frequency noise reduction and consist of a series of inductors, capacitors and resistors. STFs are load dependent which means that the series inductors located on each phase and neutral conductors are sized to handle the maximum current draw on the line. These inductors together with the capacitors and resistors form a circuit capable of absorbing a large bandwidth of noise.

These devices are designed to meet UL 1283, and CSA C22.2 for Electromagnetic Interference Filters. STFs attenuate or reduce the amplitude of noise to a minimum of 40dB that occurs in a frequency range of 50 KHz to 50 MHz. They also provide the industry's best IEEE Category "A" protection, typically reducing normal mode transients to +/- 5 volts.

Built to meet your unique requirements, these filters are available in a multitude of voltage and phase configurations. They are hardwired and designed for years of trouble free operation requiring little or no operator intervention after installation.

Active Tracking® Filters are one part of a total power quality solution. They can be used alone or in conjunction with other SolaHD products to solve more complex power quality problems.

Applications

- Branch and Control Panels
- Factory Automation Installations
- Point of Use Industrial Service Equipment
- Dedicated Industrial and Machine Tools Equipment
- Telecommunications Equipment



Features

- Non degrading, series filter technology for total durability
- High Frequency Noise filter, RLC Low-Pass filter
- Single Phase applications up to 30 Amp
- Three Phase applications up to 200 Amp
- Attenuates noise to 40 dB in frequency range of 50 kHz to 50 MHz
- Operating Temperature from -40°C to +45°C.
- Hardwired connection
- MTBF greater than 100,000 Hours, Mil Std. 217F
- UL 1283 Listed or Recognized (Single Phase models), CSA
- 10 Year Limited Warranty

Related Products

- Single and Three Phase Power Conditioners
- Uninterruptible Power System
- Transient Voltage Surge Suppressors
- Power Supplies

Selection Table

| Catalog Number | Amps | Min. Wire Size (AWG Suggested) | Fuse/Circuit Breaker Ampacity | | Case Dim. (in) A x B x C | Mounting Flange Dim. (in) D x E x F | Weight lbs (kg) | Design Style |
|---|-------|--------------------------------|-------------------------------|--------|--------------------------|-------------------------------------|-----------------|--------------|
| | | | Suggest | Max | | | | |
| Single-Phase Models (120 Vac)* | | | | | | | | |
| STF0025-10N | 2.5 | 26 | 2.5A | 3.125A | 4.0 x 2.88 x 1.81 | 4.38 x 2.12 x 5.31 | 2.0 (.91) | 1 |
| STF0050-10N | 5.0 | 22 | 5A | 6.25A | 4.0 x 2.88 x 1.81 | 4.38 x 2.12 x 5.31 | 2.0 (.91) | 1 |
| STF0075-10N | 7.5 | 18 | 7.5A | 9.375A | 4.75 x 4.75 x 2.35 | 5.25 x 3.5 x 6.25 | 3.0 (1.36) | 1 |
| STF0150-10N | 15.0 | 14 | 15A | 18.75 | 6.25 x 4.75 x 2.35 | 6.75 x 3.5 x 7.75 | 5.0 (2.27) | 1 |
| STF0200-10N | 20.0 | 12 | 20A | 25A | 7.75 x 4.75 x 2.35 | 8.25 x 3.5 x 9.0 | 7.0 (3.17) | 1 |
| STF0300-10N | 30.0 | 10 | 30A | 37.5A | 7.75 x 4.75 x 2.35 | 8.25 x 3.5 x 9.0 | 8.0 (3.63) | 1 |
| Single-Phase Models (240 Vac)* | | | | | | | | |
| STF0025-24L | 2.5 | 26 | 2.5A | 3.125A | 4.0 x 2.88 x 1.81 | 4.38 x 2.12 x 5.31 | 2.0 (.91) | 1 |
| STF0050-24L | 5.0 | 22 | 5A | 6.25A | 4.0 x 2.88 x 1.81 | 4.38 x 2.12 x 5.31 | 2.0 (.91) | 1 |
| STF0075-24L | 7.5 | 18 | 7.5A | 9.375A | 4.75 x 4.75 x 2.35 | 5.25 x 3.5 x 6.25 | 3.0 (1.36) | 1 |
| STF0150-24L | 15.0 | 14 | 15A | 18.75 | 7.75 x 4.75 x 2.35 | 8.25 x 3.5 x 9.0 | 5.0 (2.27) | 1 |
| STF0200-24L | 20.0 | 12 | 20A | 25A | 7.75 x 4.75 x 2.35 | 8.25 x 3.5 x 9.0 | 7.0 (3.17) | 1 |
| STF0300-24L | 30.0 | 10 | 30A | 37.5A | 7.75 x 4.75 x 2.35 | 8.25 x 3.5 x 9.0 | 8.0 (3.63) | 1 |
| Three-Phase Models (120/208 Vac WYE)** | | | | | | | | |
| STF0150-10Y | 15.0 | 14 | 15A | 18.75A | 14 x 12 x 6 | 14.75 x 10.0 x 15.5 | 38.0 (17.24) | 4 |
| STF0300-10Y | 30.0 | 10 | 30A | 37.5A | 14 x 12 x 6 | 14.75 x 10.0 x 15.5 | 38.0 (17.24) | 4 |
| STF0500-10Y | 50.0 | 4 | 50A | 62.5A | 20 x 16 x 9 | 21.25 x 10.0 x 22.5 | 85.0 (38.55) | 2 |
| STF1000-10Y | 100.0 | 2 | 100A | 125A | 20 x 16 x 9 | 21.25 x 10.0 x 22.5 | 85.0 (38.55) | 2 |
| STF2000-10Y | 200.0 | 3/0 | 200A | 250A | 24 x 20 x 9 | 25.25 x 14.0 x 26.5 | 110.0 (49.89) | 2 |
| Three-Phase Models (240 Delta)** | | | | | | | | |
| STF0150-24D | 15.0 | 14 | 15A | 18.75A | 14 x 12 x 6 | 14.75 x 10.0 x 15.5 | 38.0 (17.24) | 4 |
| STF0300-24D | 30.0 | 10 | 30A | 37.5A | 14 x 12 x 6 | 14.75 x 10.0 x 15.5 | 38.0 (17.24) | 4 |
| STF0500-24D | 50.0 | 4 | 50A | 62.5A | 20 x 16 x 9 | 21.25 x 10.0 x 22.5 | 85.0 (38.55) | 2 |
| STF1000-24D | 100.0 | 2 | 100A | 125A | 20 x 16 x 9 | 21.25 x 10.0 x 22.5 | 85.0 (38.55) | 2 |
| STF2000-24D | 200.0 | 3/0 | 200A | 250A | 24 x 20 x 9 | 25.25 x 14.0 x 26.5 | 110.0 (49.89) | 2 |
| Three-Phase Models (277/480 V WYE)** | | | | | | | | |
| STF0150-27Y | 15.0 | 14 | 15A | 18.75A | 14 x 12 x 6 | 14.75 x 10.0 x 15.5 | 38.0 (17.24) | 4 |
| STF0300-27Y | 30.0 | 10 | 30A | 37.5A | 14 x 12 x 6 | 14.75 x 10.0 x 15.5 | 38.0 (17.24) | 4 |
| STF0500-27Y | 50.0 | 4 | 50A | 62.5A | 20 x 16 x 9 | 21.25 x 10.0 x 22.5 | 85.0 (38.55) | 2 |
| STF1000-27Y | 100.0 | 2 | 100A | 125A | 20 x 16 x 9 | 21.25 x 10.0 x 22.5 | 85.0 (38.55) | 2 |
| STF2000-27Y | 200.0 | 3/0 | 200A | 250A | 24 x 20 x 9 | 25.25 x 14.0 x 26.5 | 110.0 (49.89) | 2 |
| Three-Phase Models (480 V Delta)** | | | | | | | | |
| STF0150-48D | 15.0 | 14 | 15A | 18.75A | 10.0 x 8.0 x 6.0 | 10.75 x 6.0 x 11.5 | 38.0 (17.24) | 4 |
| STF0300-48D | 30.0 | 10 | 30A | 37.5A | 10.0 x 8.0 x 6.0 | 10.75 x 6.0 x 11.5 | 38.0 (17.24) | 4 |
| STF0500-48D | 50.0 | 4 | 50A | 62.5A | 14.0 x 12.0 x 6.0 | 14.75 x 10.0 x 15.5 | 85.0 (38.55) | 4 |
| STF1000-48D | 100.0 | 2 | 100A | 125A | 20.0 x 16.0 x 9.0 | 21.25 x 10.0 x 22.5 | 85.0 (38.55) | 2 |
| STF2000-48D | 200.0 | 3/0 | 200A | 250A | 24.0 x 20.0 x 9.0 | 25.25 x 14.0 x 26.5 | 110.0 (49.89) | 2 |

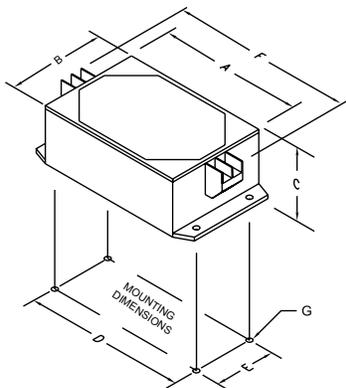
* With barrier strip at input and output

**Units are standard in NEMA 12 hinged enclosures

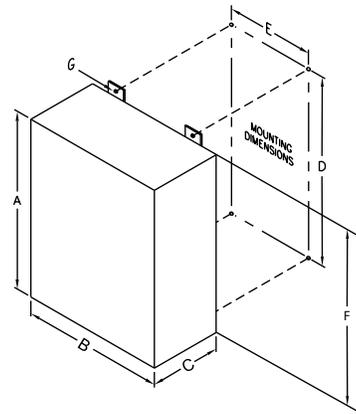
STF Specifications

| Description | 120 Vac Models | 240 Vac Models | 480 Vac Models |
|--|---|----------------|----------------|
| Input Voltage | 0-150 VRMS | 0-275 VRMS | 0-520 VRMS |
| Line Frequency | 50/60 Hz | | |
| Transient Attenuation Response Time | Instantaneous | | |
| Mean Time Between Failure (MTBF) | > 100,000 Hours (Mil Std. 217F) | | |
| Packaging | Single phase units through 30 Amps housed in black, high impact plastic case, Vacuum impregnated magnetics, epoxy encapsulated; single phase greater than 30 Amps, 480 Vac, and three phase units housed in NEMA 12 enclosures | | |
| Operating Temperature | -40°C to +45°C Derate Linearly to 60% at +70°C | | |
| Load Surge Current Rating | 10m sec : 5 x Nominal | | |
| | 1 sec : 3 x Nominal | | |
| | 5 sec : 2 x Nominal | | |
| Transient Reduction | Minimum of 40dB from 50 kHz through 50 MHz. Attenuation is greater than 50 dB to the surge withstand capability Ringwave test IEEE C62.41, Category "A" (IEEE Category A Ringwave 6 kV, 200A, 100 kHz) and "B" (IEEE Category B Ringwave 6 kV, 500 A, 100 kHz). | | |
| Safety | ANSI / UL1283, CAN/CSA C22.2 No 8. Listed or Recognized "Electromagnetic Interference Filters" | | |
| Warranty | 10 years | | |

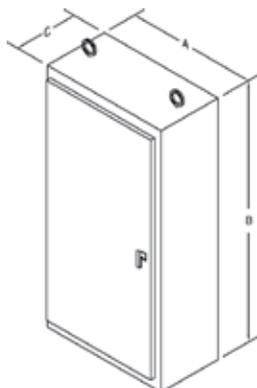
Dimensional Drawings



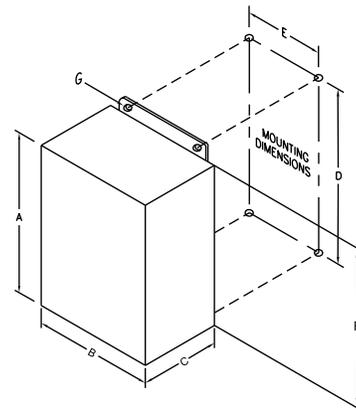
Design Style 1



Design Style 2



Design Style 3



Design Style 4