

## 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 Sola Active Tracking Filters provide clean AC power by eliminating lower voltage noise.

The Sola 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 50KHz to 50MHz. STFs 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 Sola/Hevi-Duty 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 40dB in frequency range of 50KHz to 50MHz
- Operating Temperature from -40°C to +45°C.
- Hardwired connection
- MTBF greater than 100,000 Hours, Mil 217F
- UL 1283 Listed or Recognized (Single Phase models), CSA
- 10 Year Warranty

### Related Product

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

## Specifications

Description	120 VAC Models	240 VAC Models	480 VAC Models
<b>Input Voltage</b>	0-150 VRMS	0-275 VRMS	0-520 VRMS
<b>Line Frequency</b>	50/60 Hz		
<b>Transient Attenuation Response Time</b>	Instantaneous		
<b>Meant Time Between Failure (MTBF)</b>	Greater Than 100,000 Hours (MIL 217F)		
<b>Packaging</b>	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		
<b>Operating Temperature</b>	-40°C to +45°C Derate Linearly to 60% at +70°C		
<b>Load Surge Current Rating</b>	10m Sec: 5 x Nominal		
	1 sec : 3 x Nominal		
	5 sec: 2 x Nominal		
<b>Transient Reduction</b>	Minimum of 40dB from 50kHz through 50MHz. Attenuation is greater than 50dB 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, 500A, 100 kHz).		
<b>Safety</b>	ANSI / UL1283, CAN/CSA C22.2 No 8. Listed or Recognized "Electromagnetic Interference Filters"		

## Design Styles

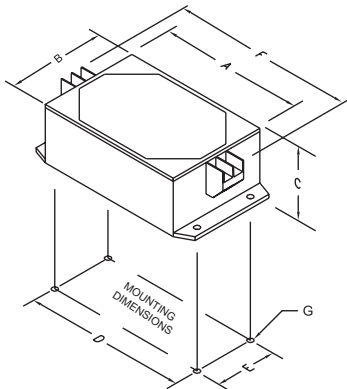


Figure 1

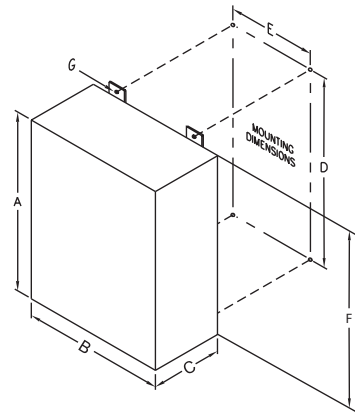


Figure 2

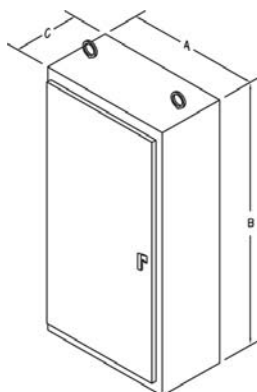


Figure 3

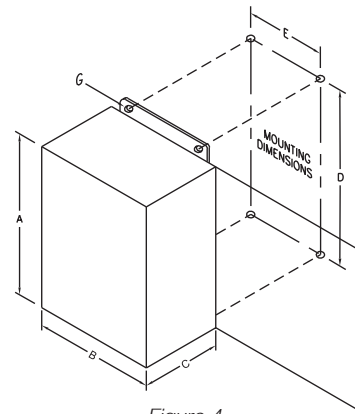


Figure 4

## Selection Table

Model Number	Amps	Min Wire Size (AWG Suggested)	Fuse/Circuit Breaker Ampacity		Case Dim. (in) A x B x C	Mounting Flange Dims (in) D x E x F	Weight (lbs)	Fig
			Suggest	Max				
<b>Single-Phase Models (120 VAC)* With barrier strip at input and output</b>								
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	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	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
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	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	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	1
<b>Single-Phase Models (240 VAC)* With barrier strip at input and output</b>								
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	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	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
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	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	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	1
<b>Three-Phase Models (120/208 V WYE)* Units are standard in NEMA 12 hinged enclosures</b>								
STF0150-10Y	15.0	14	15A	18.75A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0300-10Y	30.0	10	30A	37.5A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0500-10Y	50.0	4	50A	62.5A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF1000-10Y	100.0	2	100A	125A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF2000-10Y	200.0	3/0	200A	250A	24 x 20 x 9	25.25 x 14.0 x 26.5	110.0	2
<b>Three-Phase Models (240 Delta)* Units are standard in NEMA 12 hinged enclosures</b>								
STF0150-24D	15.0	14	15A	18.75A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0300-24D	30.0	10	30A	37.5A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0500-24D	50.0	4	50A	62.5A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF1000-24D	100.0	2	100A	125A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF2000-24D	200.0	3/0	200A	250A	24 x 20 x 9	25.25 x 14.0 x 26.5	110.0	2
<b>Three-Phase Models (277/480 V WYE)* Units are standard in NEMA 12 hinged enclosures</b>								
STF0150-27Y	15.0	14	15A	18.75A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0300-27Y	30.0	10	30A	37.5A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0500-27Y	50.0	4	50A	62.5A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF1000-27Y	100.0	2	100A	125A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF2000-27Y	200.0	3/0	200A	250A	24 x 20 x 9	25.25 x 14.0 x 26.5	110.0	2
<b>Three-Phase Models (480V Delta)* Units are standard in NEMA 12 hinged enclosures</b>								
STF0150-48D	15.0	14	15A	18.75A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0300-48D	30.0	10	30A	37.5A	14 x 12 x 6	14.75 x 10.0 x 15.5	38.0	4
STF0500-48D	50.0	4	50A	62.5A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF1000-48D	100.0	2	100A	125A	20 x 16 x 9	21.25 x 10.0 x 22.5	85.0	2
STF2000-48D	200.0	3/0	200A	250A	24 x 20 x 9	25.25 x 14.0 x 26.5	110.0	2