

Surge Protective Device

Technical Documentation



The **ASCO Model 277** is a series-connected DIN or flange mounted high frequency noise filter and surge suppressor. Ideal applications include critical industrial loads drawing up to 20 Amps of continuous current including microprocessor based products, industrial PLCs, motion control systems, and OEM applications.

Key Specs

- **Voltage:** 120 - 240 Volt
- **Current:** 3A, 5A, 10A, 20A
- **Connection:** Terminal
- **Mounting:** DIN or Flange

*See Ordering Information for model number selection

General Technical Specifications

Maximum Continuous Operating Voltage (MCOV)	120 Volt Units = 150 VRMS 240 Volt Units = 300 VRMS
Inominal (I _n)	3kA
Line Frequency	47 - 63 Hz
Overcurrent Protection	25A Class CC Fuse
Wire Size Range	#24 AWG - #10 AWG
Torque	5.3 lb-in to 12.4 lb-in
Connection	Terminal
Mounting Type	DIN or Flange
Weight	< 3 lbs
Response Time	Normal Mode - < 0.5 ns Common Mode - < 5 ns
Operating Temperature	-40°C to +45°C, Derate Linearly to 60% at +70°C
Operating Humidity	0% to 95%

Performance Technical Specifications

Model	UL 1449 Measured Limiting Voltage (MLV)			
	L-N	L-G	N-G	L-L
277120NF003AN3N0 277120NF005AN3N0	320V	440V	420V	N/A
277120NF010AN3N0 277120NF020AN3N0	350V	460V	440V	N/A
277240LF003AN3N0 277240LF005AN3N0	N/A	900V	N/A	700V
277240LF010AN3N0 277240LF020AN3N0	N/A	940V	N/A	660V
Peak Surge Current Capability (8 x 20µs)	L - N: 15,000 Amps L - G: 15,000 Amps N - G: 15,000 Amps			
Frequency Response (Forward-Reverse)	Normal Mode: 100 kHz to 50 MHz - 90 dB Min Common Mode: 5 MHz to 50 MHz - 60 dB Min			
Typical Category A Ringwave (6 kV, 200 A, 100 kHz) Normal Mode/Common Mode	3 Amp: 1V / 300V 5 Amp: 0.7V / 292V 10 Amp: 0.7V / 300V 20 Amp: 0.7V / 300V			
Typical Category B Ringwave (6 kV, 500 A, 100 kHz) Normal Mode/Common Mode	3 Amp: 178V / 300V 5 Amp: 162V / 291V 10 Amp: 153V / 300V 20 Amp: 200V / 300V			

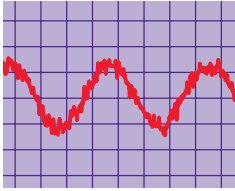
Features

- Multi-staged design, combining a unique hybrid clamping network with the Active Tracking Filter® technology of the ASCO family
- Surge current capacity — 15,000 Amps per mode
- Transient protection in all modes: line to neutral, line to ground, and neutral to ground
- LED status indication
- Form C contact for remote indication
- DIN clips included for vertical or horizontal DIN rail mounting
- ANSI/UL 1449 4th Edition Type 4 CA, 1283, CUL recognized, CE
- 5 year limited warranty

Using Active Tracking® Filtering To Control Low- And High-Amplitude Transients

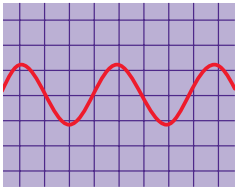
Low-Amplitude Transients

Before



Lower-amplitude transients (high-frequency noise) appearing on 120V, 60 Hz sine wave.

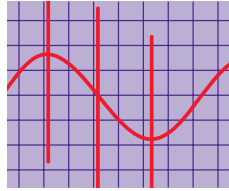
After



The Active Tracking Filter® reduces electrical noise, providing clean AC power.

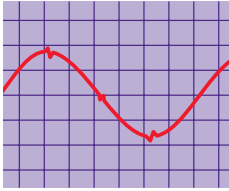
High-Amplitude Transients

Before



High-amplitude spikes appearing on 120V, 60 Hz sine wave.

After



The Active Tracking Filter® reduces high amplitude transients.

Ordering Information

MODEL <small>Former Model Name</small>	VOLTAGE	CONTINUOUS CURRENT
277120NF003AN3N0 <small>Islatrol® IE-103</small>	120V	3 Amps
277120NF005AN3N0 <small>Islatrol® IE-105</small>	120V	5 Amps
277120NF010AN3N0 <small>Islatrol® IE-110</small>	120V	10 Amps
277120NF020AN3N0 <small>Islatrol® IE-120</small>	120V	20 Amps
277240LF003AN3N0 <small>Islatrol® IE-203</small>	240V	3 Amps
277240LF005AN3N0 <small>Islatrol® IE-205</small>	240V	5 Amps
277240LF010AN3N0 <small>Islatrol® IE-210</small>	240V	10 Amps
277240LF020AN3N0 <small>Islatrol® IE-220</small>	240V	20 Amps

(All voltage configurations are single phase - 2 wire + gnd.)

Dimensions (in. / mm.)

