

**SF250
Technical
Specifications**

**High exposure protection - Compatible with all Current
Technology MasterPLAN® facility-wide suppression filter
system products**

FEATURES

Designed to offer the industry's best MOV-only protection for large ampacity service entrances, service entrances near utility substations or service entrances on grid with other large industrial users, top-performing SF250 models include the following standard features:

Seamless technology: Proprietary design concept integrates three key suppression and filtering components -- polypropylene capacitors, non-linear voltage dependent metal oxide varistors (MOVs) and precise component geometry -- for maximum performance and reliability.

Superior internal construction: All suppression filter components are bolted to corrosion-resistant tin-plated copper bus bar

Status indicators: Neon status indicators indicate suppression and overcurrent status

Test point: Diagnostic ten mode test point allows easy DTS-2 Diagnostic Test Set connection

Warranty: Five Year Product Warranty



INDUSTRY STANDARDS CERTIFICATION

standard	description
UL 1449	Underwriters Laboratories standard that establishes requirements for surge suppression safety and performance. Commonly recognized as a benchmark test for product comparison
UL 1283	Underwriters Laboratories standard dictating requirements for electromagnetic interference (EMI) filters installed on, or connected to, 600V or lower potential circuits installed in accordance with the National Electrical Code. Also covers filters used to attenuate unwanted high frequency signals generated from electromagnetic sources
CUL	Canadian version of Underwriters Laboratories

NEMA LS-1	The specification format guideline published by the National Electrical Manufacturers Association for specifiers and customers investigating Low Voltage Surge Protection Devices
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STANDARD MODEL NUMBERS

SF250-120/240-2G	SF250-120/240-3GHD
SF250-120/208-3GY	SF250-240-3D
SF250-277/480-3GY	SF250-480-3D

Contact factory for other voltages and configurations. Add option suffix(es) as required.

SINGLE PULSE SURGE CURRENT CAPACITY

Protection mode	Single pulse surge current capacity per mode
Line-to-Neutral	>250,000 amps
Line-to-Ground	>250,000 amps
Neutral-to-Ground	>250,000 amps
Line-to-Line	>250,000 amps
Per Phase	>500,000 amps

In compliance with NEMA LS 1-1992, paragraphs 2.2.7, 2.2.9 and 3.9, Current Technology suppression filter systems are single pulse surge current tested in all modes at currents up to 150% of the product design rating by an industry-recognized independent test laboratory. Single pulse surge current capacities of 200,000 amps or less are established by single-unit testing of all components within each mode. Due to present industry test equipment limitations, single pulse surge current capacities over 200,000 amps are established via testing of individual components or sub-assemblies within a mode.

REPETITIVE SURGE CURRENT CAPACITY

Protection mode	Minimum tested impulses per mode
Line-to-Neutral	>6,500
Line-to-Ground	>6,500
Neutral-to-Ground	>6,500
Line-to-Line	>6,500

Per ANSI/IEEE C62.41-1991 and ANSI/IEEE C62.45-1992, all Current Technology suppression filter systems are repetitive surge current capacity tested in every mode

utilizing a 1.2 X 50m sec 20KV open circuit voltage, 8 X 20 m sec 10 KA short circuit current Category C3 bi-wave at one minute intervals without suffering either performance degradation or more than 10% deviation of clamping voltage at a specified surge current.

EMI/RFI NOISE REDUCTION VALUES

Multiple unit installation	Frequency	Single unit installation
51 dB	100 KHz	34 dB
94 dB	1 MHz	51 dB
114 dB	10 MHz	54 dB
120 dB	100 MHz	48 dB

All Current Technology suppression filter systems EMI-RFI noise rejection or attenuation values are in compliance with test and evaluation procedures outlined in NEMA LS 1-1992, paragraphs 2.2.11 and 3.11.

MAXIMUM CONTINUOUS OPERATING VOLTAGE (MOV)

Voltage MCOV	Voltage MCOV
120V 150V	277V 320V
240V 275V	480V 600V

All Current Technology suppression filter systems maximum continuous operating voltages are in compliance with test and evaluation procedures outlined in NEMA L 1-1992, paragraphs 2.2.6 and 3.6.

TYPICAL VOLTAGE CLAMPING DATA

Voltage	Protection Mode	A3 Ringwave	B3 Ringwave	B3/C1 Comb. Wave	C3 Comb. Wave
120/208	L-N	210/250	260/310	370/410	450/775
120/208	L-G	340/360	360/430	360/410	440/775
120/208	N-G	240/240	290/290	390/390	550/550
120/208	L-L	360/450	460/550	680/750	750/1400
277/480	L-N	420/470	470/510	770/800	900/1200
277/480	L-G	720/750	750/800	740/800	860/1100
277/480	N-G	450/450	550/550	780/780	1000/1000
277/480	L-L	700/800	750/850	1440/1525	1620/2000

All Current Technology suppression filter systems clamping voltages are in compliance with test and evaluation procedures outlined in NEMA LS 1-1992, paragraphs 2.210 and 3.10. Values following slash (/) indicate clamping voltage data for models with integral fused disconnect (DF) option

MECHANICAL SPECIFICATIONS

Connection method	Parallel
Enclosure type/mount	NEMA 4X/surface
Temperature operating range	-40C to 60C
Humidity operating range	5% - 95% non-condensing
Dimensions without options	17.69"Hx14.40"Wx7.94"D
Dimensions with options	24.61"Hx20.20"Wx10.94"D
Weight without options	40 lbs.
Weight with options	74 lbs.

OPTIONS

Option	Order Suffix
Fused disconnect	-DF
Double form "C" dry contacts	-FCC
StatusWatch diagnostic monitoring	-SW
StatusWatch with display event counters	-SWC
DTS-2 Diagnostic Test Set	-DTS
Remote StatusWatch	-RSW
Remote StatusWatch with counters	-RSWC
Remote Alarm Panel (monitors 1 unit)	-RAP1
Remote Alarm Panel (monitors 1-5 units)	-RAP5
Remote Alarm Panel (monitors 1-12 units)	-RAP12

All StatusWatch diagnostic monitoring options include double form "C" dry contacts, audible alarm, alarm silence/test and status indicator lights.

[Ask an Engineer](#) if you have any questions



regarding this or other Current Technology products.

For more information about these or any other surge protection products or to speak with one of our sales reps, please contact us.

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