

Surge Free™ SF120M

Standard Class Branch Protector Ip=120kA

The SF120M is designed to protect automated areas such as computer rooms, UPS equipment, mobile broadcasting, medical and military vans. It is ideal for several rooms or the entire floor of a building.

The SF120M protector offers redundant, heavy duty, solid state protection. This means that in the event of a fault situation, you are never left unprotected.

The unit employs Micro-Z technology which significantly reduces the "let-through" voltage experienced by down line equipment (see pages 10-12).

The shunt-installed SF120M rapidly diverts excess transient surges to ground, away from your sensitive equipment. Bidirectional clamping eliminates coupling through a common panel into another room preventing additional surge damage.

Self-diagnostics offer at-a-glance protection status. In the event of a fault situation, protection modules are easily replaced in less than 5 minutes without special tools.



ANSI/IEEE
Category B

Features of the SF120M

- ✔ **Protection Redundancy**
Each phase employs independently-fused protection elements within a module to provide back-up protection for continued equipment survival despite a fault condition.
- ✔ **Micro-Z Concept / MOV Technology**
MCG's patented Micro-Z technology system significantly reduces let-through voltage across the board and connecting cabling. 40mm MOV's
- ✔ **Personnel Safety**
Integral disconnect with Lexan deadfront.
- ✔ **Ten Year Warranty**
And free replacement modules and fuses for life.
- ✔ **Self Diagnostics & Self Test**
Both front panel and internal LEDs offer continuous analysis of power and possible fault conditions. Self test ensures integrity of diagnostic components.
- ✔ **Audible Alarm & Remote Alarm**
Reduced protection triggers an audible alarm with mute capability. Monitor unit from a remote location.
- ✔ **Transient Event Counter**
Records the number of surges suppressed and is resettable.
- ✔ **Sinewave Filtering**
MIL STD 220A. No charge option.

SF120M Electrical Specifications

The SF120M Series of surge protectors meet or exceed ANSI/IEEE C62.41-1991 and UL 1449, 2nd Ed.

Model	Rated Voltage	Description	Energy Absorption (8/20µs) Joules Total	Typical Peak	UL1449
				6" Lead Length Suppression Voltage (8/20µs) 3kA	Surge Voltage (8/20µs) 500A
SF120M-120T	120/240VAC	1 phase, 3w+gnd	6,853	464V	500V
SF120M-120Y	120/208	3 phase, 4w+gnd wye	6,853	464	500
SF120M-220Y	220/380	3 phase, 4w+gnd, wye	18,480	700	700
SF120M-240Y	240/415	3 phase, 4w+gnd, wye	18,480	700	700
SF120M-240D	240	3 phase, 3w+gnd, delta	16,800	850	700
SF120M-240DCT	240/120/120*	3 phase, 4w+gnd, hi-leg	12,128	700/464	700/500
SF120M-277Y	277/480	3 phase, 4w+gnd, wye	19,800	920	900
SF120M-480D	480	3 phase, 3w+gnd, delta	30,000	1600	1500

* High-leg delta center tapped

Maximum Continuous Operating VAC: 115% rated line voltage

Response time: <5 nanoseconds

Modes of protection: L-N, L-G, L-L, N-G
(where applicable)

Surge current/phase (8/20µs) 1 event: 120kA

Surge life/phase (8/20µs) 10,000 impulses: 4kA

Filter attenuation MIL STD 220A (50 ohm):	120VAC	240VAC	277VAC
-30db	50kHz	50kHz	80kHz
-40db	130kHz	130kHz	180kHz
-50db	195kHz	195kHz	270kHz
-60db	230kHz	230kHz	300kHz

Protection present indicators: Green LED

Reduced protection indicator: Red LED

Additional status indicators: Audible alarm, event counter,
remote alarm, dry contacts

Operating altitude: 13,000 ft. (4000m)

Temperature (operating): -40° to +70°C

Enclosure: NEMA 4, 14 gauge steel

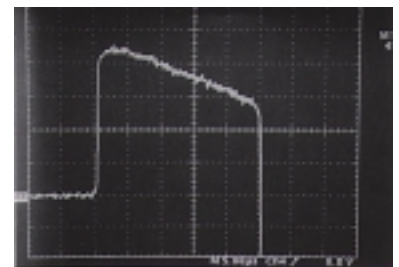
Optional enclosures available

Dimensions: 12" x 10" x 5"

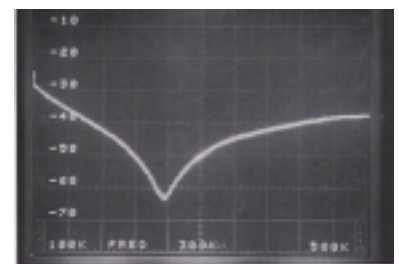
Mounting: 8.0" x 12.75" ID - 4 holes

Connection: Terminals

Shipping weight: 17 lbs.



Shown here is a typical clamp waveform: SF120M-120Y suppression voltage is 464V; peak at 3kA (8/20) short circuit.



Typical filter attenuation for SF120M-120YF -60db at 230kHz.

Ordering Information

Example: SF120M-120Y = 120/208 VAC, 3 phase, 4w+gnd, wye.

No charge filter option = SF120M-120YF.

Integral disconnect not available in delta.

MCG Surge Protection

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