

# SurgeFree™



## MODELS

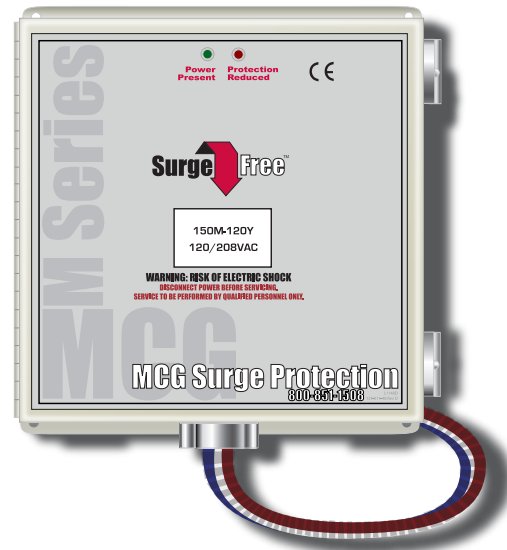
**150M • 125M • 90M**

## Branch Panel Protection

The Surge Free 150M, 125M & 90M offer powerful modular protection at the branch panel. It is ideal when extensive diagnostics are not required but brute force is a #1 priority. These heavy-duty protectors are used when a room full of electronics or an entire floor of a facility is subject to damage, errors or downtime resulting from external, natural or man-made overvoltages. Twenty-year, no-nonsense warranty.

## FEATURES

- I<sub>peak</sub>: 160,000A/Phase (150M)  
120,000A/Phase (125M)  
80,000A/Phase (90M)
- Two times redundant surge paths per phase
- Field-replaceable modules
- Front panel LEDs for status indication
- Audible fault alarm with mute switch. (Optional)
- Easy installation - 30 minutes or less
- Surge protected remote relay contacts
- All modes protected: L-G, L-N, L-L, N-G
- NEMA 1, Powder Coated Steel Enclosure
- Optional outdoor non-metallic enclosure kit - NEMA 4X



**I<sub>peak</sub>=160,000A / 120,000A / 80,000A**

**UL 1449, 3rd Ed. Listed**

**20-Year Warranty  
Lifetime Module Replacement**

### Filter Attenuation

MIL STD 220A (50 Ohm):	120VAC	240VAC	277VAC	480VAC
-30db	100kHz	25kHz	80kHz	80kHz
-40db	200kHz	100kHz	180kHz	180kHz
-50db	280kHz	180kHz	210kHz	250kHz
-60db	310kHz	200kHz	390kHz	390kHz

SPD Type: Type 2

I<sub>n</sub>: 10kA

Maximum Continuous Operating VAC (MCOV): 115% Rated Line Voltage

Varistor MCOV: 125% Rated Line Voltage Minimum

SCCR: 100kA AIC

Surge Current/Phase (8/20μs): 1 Event - 150M: 160kA; 125M: 120kA; 90M: 80kA.

Surge Life/Phase (8/20μs): 10,000 Events - 150M: 6kA, 125M: 4kA, 90M: 2kA

Surge Current/Mode (8/20μs), 150M: L-N: 160kA; L-G: 80kA; N-G: 80kA; L-L: 160kA

Surge Current/Mode (8/20μs), 125M: L-N: 120kA; L-G: 80kA; N-G: 80kA; L-L: 120kA

Surge Current/Mode (8/20μs), 90M: L-N: 80kA; L-G: 80kA; N-G: 80kA; L-L: 80kA

Response Time: <5 ns

Status Indicators: LED Status Indicators, Protected Dry Contacts

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

Temp. (Operating/Storage): -40° to +70°C/-40° to +85°C

Enclosure: NEMA 1, 14 gauge steel, powder coated

Dimensions: 8" x 8" x 4" (203mm x 203mm x 120mm)

Mounting: 8.75" x 6"/.313" ID - 4 holes, 222mm x 152mm/7.9mm ID - 4 holes

Cable Connection: #10 AWG Cable

Weight: 150M: 11 lbs., (5kg); 125M: 10 lbs., (4.58kg), 90M: 9 lbs., (4.1kg)

UL File Number: E322161

UL Certification: UL Listed to 1449 3<sup>rd</sup> Edition

ARRA Certification: Complies with ARRA 1605 requirements



# Specifications

- ANSI/IEEE C62.41-2002
- IEC 61643-1-1998
- UL 1449, 3rd Ed.

## Model 150M

Model 150M	Service	VPR L-N	VPR L-G	VPR N-G	VPR L-L	16kV, 1.2/50µs 8kA, 8/20µs**
-120Y	120/208VAC, 3φ, 4W+Gnd	700	1200	700	1200	584
-120T	120/240VAC, 1φ, 3W+Gnd	700	1200	700	1200	584
-120S	120VAC, 1φ, 2W+Gnd	700	1200	700	n/a	584
-220Y	220/380VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	1096
-220S	220VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	1096
-240Y	240/415VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	1096
-240S	240VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	1096
-240DCT*	240/120/120VAC, 3φ, 4W+Gnd	700/1200	1200/2500	700	1200/1800	1096/584
-277Y	277/480VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	1096
-277S	277VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	1096

\* High-leg Delta Center Tapped

\*\*Actual Measurements w/ 6" Lead Length

**Energy Absorption (8/20µs) in joules:** 9,780J - 33,160J

## Model 125M

Model 125M	Service	VPR L-N	VPR L-G	VPR N-G	VPR L-L	10kV, 1.2/50µs 5kA, 8/20µs**
-120Y	120/208VAC, 3φ, 4W+Gnd	700	1500	700	1200	490
-120T	120/240VAC, 1φ, 3W+Gnd	700	1500	700	1200	490
-120S	120VAC, 1φ, 2W+Gnd	700	1500	700	n/a	490
-220Y	220/380VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	1050
-220S	220VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	1050
-240Y	240/415VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	1050
-240S	240VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	1050
-240DCT*	240/120/120VAC, 3φ, 4W+Gnd	700/1200	1500/2500	700	1200/1800	1050/490
-277Y	277/480VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	1050
-277S	277VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	1050

\* High-leg Delta Center Tapped

\*\*Actual Measurements w/ 6" Lead Length

**Energy Absorption (8/20µs) in joules:** 7,570J- 25,430J

## Model 90M

Model 90M	Service	VPR L-N	VPR L-G	VPR N-G	VPR L-L	6kV, 1.2/50µs 3kA, 8/20µs**
-120Y	120/208VAC, 3φ, 4W+Gnd	700	1500	800	1200	520
-120T	120/240VAC, 1φ, 3W+Gnd	700	1500	800	1200	520
-120S	120VAC, 1φ, 2W+Gnd	700	1500	800	n/a	520
-220Y	220/380VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	920
-220S	220VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	920
-240Y	240/415VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	920
-240S	240VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	920
-240DCT*	240/120/120VAC, 3φ, 4W+Gnd	700/1200	1500/2500	800	1200/1800	520/920
-277Y	277/480VAC, 3φ, 4W+Gnd	1200	2500	1200	2500	920
-277S	277VAC, 1φ, 2W+Gnd	1200	2500	1200	n/a	920

\* High-leg Delta Center Tapped

\*\*Actual Measurements w/ 6" Lead Length

**Energy Absorption (8/20µs) in joules:** 5,370J- 17,700J