

SurgeFree™

MODELS

160 • 120

Branch Panel Protection

The Models 160/120 offer formidable surge protection for applications that don't require modular protection or extensive diagnostics. Elevators, motors, air-conditioners, generating equipment and other machinery will benefit from the protection supplied by these cost-effective protectors. High capability 40mm MOVs and redundant protection ensures reliable, rugged protection in harsh environments.

FEATURES

- Powerful surge handling capability:
Model 160: $I_p=160kA$, Model 120: $I_p=120kA$.
- Front panel LEDs for status indication.
- Fast clamp response - under 5 nanoseconds.
- Easy installation - 30 minutes or less.
- Connection cable included.
- Continues to protect even in the event of a power outage.
- All modes protected: L-L, L-N, L-G, N-G.
- Low profile enclosure.
- Filtering standard.

Surge Current/Phase (8/20 μ s): 1 Event - 160: 160kA. 120: 120kA.

Surge Life/Phase (8/20 μ s): 10,000 Events - 6kA/4.5kA

Status Indicators: Green LED Indicators

Modes of Protection: L-N, L-G, L-L, N-G

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

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

Enclosure: NEMA 1, 14 gauge steel

Dimensions for 160 & 120: 7.25" x 7.5" x 2.38" (184 x 191 x 60mm)

Mounting for 160 & 120: 6.5" x 6.5"/.313" ID - 4 holes

165mm x 165mm/7.9 ID - 4 holes

Cable Connection: #10 AWG Cable, 3ft. Provided

Weight (160): 7.5 lbs., (3.5kg)

Weight (120): 6.5 lbs., (3kg)

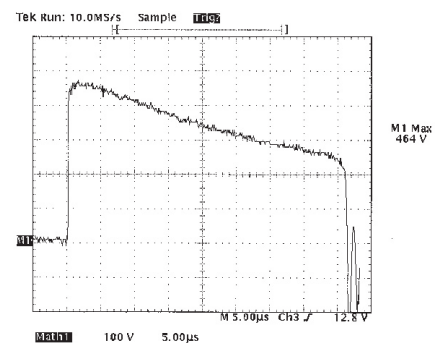


$I_{peak}=160,000A / 120,000A$

WARRANTY

20-Year Warranty

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



Shown here is a typical clamp waveform of the Model 160.

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Specifications

ANSI/IEEE C62.41-2002
IEC 61643-1-1998

Model 160

Model 160	Service	Higher Headroom MOV's		8kV, 1.2/50 μ s; 4kA, 8/20 μ s		
		VAC	SPD Clamp V	SPD+Cable		
				Let-Thru V 1.0 ft.	Let-Thru V 2.0 ft.	
-120Y-140V	120/208, 3 ϕ , 4W+Gnd, Wye	140	580	630	645	
-120T	120/240, 1 ϕ , 3W+Gnd	180	680	730	767	
-120Y	120/208, 3 ϕ , 4W+Gnd, Wye	180	680	730	767	
-220Y	220/380, 3 ϕ , 4W+Gnd, Wye	390	1290	1338	1374	
-240Y	240/415, 3 ϕ , 4W+Gnd, Wye	390	1290	1338	1374	
-240D	240, 3 ϕ , 3W+Gnd, Delta	390	1290	1338	1374	
-240DCT*	240/120/120, 3 ϕ , 4W+Gnd	390/180	1290/680	1338/730	1374/767	
-277Y	277/480, 3 ϕ , 4W+Gnd, Wye	390	1290	1338	1374	
-347Y	347/600, 3 ϕ , 4W+Gnd, Wye	460	1318	1365	1401	
-480D	480, 3 ϕ , 3W+Gnd, Delta	620	2040	2081	2111	
-600D	600, 3 ϕ , 3W+Gnd, Delta	750	2070	2108	2137	

* High-leg Delta Center Tapped

Energy Absorption (8/20 μ s) in joules: 7,360j - 43,200j

Model 120

Model 120	Service	Higher Headroom MOV's		6kV, 1.2/50 μ s; 3kA, 8/20 μ s		
		VAC	SPD Clamp V	SPD+Cable		
				Let-Thru V 1.0 ft.	Let-Thru V 2.0 ft.	
-120Y-140V	120/208, 3 ϕ , 4W+Gnd, Wye	140	560	588	605	
-120T	120/240, 1 ϕ , 3W+Gnd	180	624	659	685	
-120Y	120/208, 3 ϕ , 4W+Gnd, Wye	180	624	659	685	
-220Y	220/380, 3 ϕ , 4W+Gnd, Wye	390	1216	1247	1270	
-240Y	240/415, 3 ϕ , 4W+Gnd, Wye	390	1216	1247	1270	
-240D	240, 3 ϕ , 3W+Gnd, Delta	390	1216	1247	1270	
-240DCT*	240/120/120, 3 ϕ , 4W+Gnd	390/180	1216/624	1247/659	1270/685	
-277Y	277/480, 3 ϕ , 4W+Gnd, Wye	390	1216	1247	1270	
-347Y	347/600, 3 ϕ , 4W+Gnd, Wye	460	1230	1261	1284	
-480D	480, 3 ϕ , 3W+Gnd, Delta	620	1700	1728	1749	
-600D	600, 3 ϕ , 3W+Gnd, Delta	750	1860	1886	1906	

* High-leg Delta Center Tapped

Energy Absorption (8/20 μ s) in joules: 5,900j - 32,400j