

Specifications: SurgePure MACH 1 TVSS Series

For IEEE Cat. B Sub-Panels/
Secondary Locations

Applications up to
100KW Systems

Manufacturers Model No.	M1-1120-3	M1-1208-4	M1-1240-3	M1-1240-4	M1-1480-3	M1-1480-4
Common Electrical System Type:	1 Ø	3 Ø WYE	3 Ø Delta	3 Ø Hi-leg	3 Ø Delta	3 Ø WYE
Nominal AC Line Voltage (L-N & L-L)	120/240	120/120/208	240/240	120/208/240	480/480	277/277/480
Frequency Range-USA Std.:	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Paralleled Multi-element "ME" Protection Modes:	L-N; L-L	L-N; L-L & N-G	L-L	L-N; L-L & N-G	L-L	L-N; L-L & N-G
Knock Out Size for Mounting:	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Leads: #12 AWG (for 20A Breaker):	3+ Gnd.	4+ Gnd.	3+ Gnd.	4+ Gnd. Hi-Leg	3+ Gnd	3 Or 4+ Gnd. ^A
Max. Multi-Element "ME" Per Mode Surg'Capacity:	40,000 Amps	40,000 Amps	40,000 Amps	40,000 Amps	40,000 Amps	40,000 Amps
Max. Surge Current Per Phase:	80,000 Amps	80,000 Amps	80,000 Amps	80,000 Amps	80,000 Amps	80,000 Amps
Total Surge Capacity @ 8x20 µSec	120,000 Amps	240,000 Amps	150,000 Amps	240,000 Amps	150,000 Amps	240,000 Amps
Maximum Continuous Operating Voltage ^a (L-N/L-L):	130/320	130/320	320	130/320	550	320/550
Max. Clamping Voltage - L-L:*	520	520	520	520	1175	1175
Max. Clamping Voltage - L-N:*	390	390	N/A	390	N/A	675
Max. Clamping Voltage - N-G:*	390	390	N/A	390	N/A	390
Mfgr's. Full Replacement Warranty:	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Lifetime Repl. Module Guarantee:	YES	YES	YES	YES	YES	YES
Enclosure Size (HxWxD):	4.5x2.75x4.5"	4.5x2.75x4.5"	4.5x2.75x4.5"	4.5x2.75x4.5"	4.5x2.75x4.5"	4.5x2.75x4.5"
Shipping Weight (Approx.):	3.0 Lbs.	3.6 Lbs.	3.2 Lbs.	3.6 Lbs.	3.2 Lbs	3.8 Lbs.

Multi-Element Technology

Specifications: SurgePure MACH 2 TVSS Series

For IEEE Cat. C & B Main Panels/
Primary Locations

Applications up to
250KW Systems

Manufacturers Model No.	M2-1120-3	M2-1208-4	M2-1240-3	M2-1240-4	M2-1480-3	M2-1480-4
Common Electrical System Type:	1 Ø	3 Ø WYE	3 Ø Delta	3 Ø Hi-leg	3 Ø Delta	3 Ø WYE
Nominal AC Line Voltage (L-N & L-L)	120/240	120/120/208	240/240	120/208/240	480/480	277/277/480
Frequency Range-USA Std.:	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Single Element "SE+" Protection Modes:	L-N; L-L	L-N; L-L & N-G	L-L	L-N; L-L & N-G	L-L	L-N; L-L & N-G
Knock Out Size for Mounting:	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Leads: #10 AWG (for 30A Breaker):	3+ Gnd.	4+ Gnd.	3+ Gnd.	4+ Gnd.	3+Gnd.	3 or 4+ Gnd.
Max. Non-degrading "SE+" Surg'Capacity:	45,000 Amps	45,000 Amps	45,000 Amps	45,000 Amps	45,000 Amps	45,000 Amps
Max. Surge Current Per Phase:	90,000 Amps	135,000 Amps	135,000 Amps	135,000 Amps	135,000 Amps	135,000 Amps
Total Surge Capacity @ 8x20 µSec	154,000 Amps	335,000 Amps	218,000 Amps	335,000 Amps	218,000 Amps	335,000 Amps
Maximum Continuous Operating Voltage ^a (L-N/L-L):	150/300	150/300	150/300	150/300	320/550	320/550
Max. Clamping Voltage - L-L:*	520	520	520	520	1175	1175
Max. Clamping Voltage - L-N:*	390	390	N/A	390	N/A	675
Max. Clamping Voltage - N-G:*	330	390	N/A	390	N/A	390
Mfgr's. Full Replacement Warranty:	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime
Lifetime Repl. Module Guarantee:	YES	YES	YES	YES	YES	YES
Enclosure Size (HxWxD):	3 1/8" x 4 1/4" x 6 1/4"	3 1/8" x 4 1/4" x 6 1/4"	3 1/8" x 4 1/4" x 6 1/4"	3 1/8" x 4 1/4" x 6 1/4"	3 1/8" x 4 1/4" x 6 1/4"	3 1/8" x 4 1/4" x 6 1/4"
Shipping Weight (Approx.):	5.2 Lbs.	5.85 Lbs.	5.5 Lbs.	5.85 Lbs.	5.8 Lbs.	6.0 Lbs.

Non-Degrading Single-Element Technology

ME** = Multi-element TVSS Technology ~ SE* = Single Element, Non-degrading TVSS Technology ~ MCOV* = Maximum Continuous Operating Voltage Rating