

# Specifications:



## TVSS Level 2 Series

For IEEE Cat.B Sub-Panels/  
Secondary Locations

Applications up to  
100KW Systems

Manufacturers Model No.	PP2-1120-3	PP2-1208-4	PP2-1240-3	PP2-1240-4	PP2-1480-3	PP2-1480-4
Common Electrical TVSS System Type:	1 Ø	3 Ø WYE	3 Ø Delta	3 Ø WYE or Delta	3 Ø Delta	3 Ø WYE or Delta
Nominal AC Line Voltage/ <b>MCOV</b> <sup>a</sup> (L-N & L-L):	130/250	130/130/210	250/250	130/210/250	510/510	300/300/510
Frequency Range-USA Std.:	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Paralleled <b>ME</b> * Technology 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 w/Optional 2"x1/2" offset:	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. <sup>A</sup>
Max. <b>Multi-Element (ME)</b> Surge Capacity Per Mode :	<b>40,000 Amps</b>	<b>40,000 Amps</b>	<b>40,000 Amps</b>	<b>40,000 Amps</b>	<b>40,000 Amps</b>	<b>40,000 Amps</b>
Max. Surge Current Per Phase:	<b>120,000 Amps</b>	<b>120,000 Amps</b>	<b>120,000 Amps</b>	<b>120,000 Amps</b>	<b>120,000 Amps</b>	<b>120,000 Amps</b>
Total Surge Capacity @ 8x20 µSec:	<b>180,000 Amps</b>	<b>360,000 Amps</b>	<b>180,000 Amps</b>	<b>360,000 Amps</b>	<b>180,000 Amps</b>	<b>360,000 Amps</b>
Maximum Constant Voltage (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	675	675
Max. Clamping Voltage - N-G:	330	390	N/A	390	390	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 <sup>1/2</sup> x2 <sup>3/4</sup> x2 <sup>1/4</sup> "	4.5x4.5x2.25"	4.5x4.5x2.25"	4.5x4.5x2.25"	4.5x4.5x2.25"	4.5x4.5x2.25"
Shipping Weight (Approx.):	1.8 Lbs.	2.6 Lbs.	2.6 Lbs.	2.6 Lbs.	3.2 Lbs.	3.5 Lbs.

**Level 2**  
Multi-Element TVSS Technology

# Specifications:



## TVSS Level 1 Series

IEEE Cat. C & B Main Panels/  
Primary Locations

Applications up to  
250KW Systems

Manufacturers Model No.	PP1-1120-3	PP1-1208-4	PP1-1240-3	PP1-1240-4	PP1-1480-3	PP1-1480-4	PP1-1600-3	PP1-1600-4
Common Electrical TVSS System Type:	1 Ø	3 Ø WYE	3 Ø Delta	3 Ø WYE or Delta	3 Ø Delta	3 Ø WYE or Delta	3Ø Delta	3Ø WYE
Nominal AC Line Voltage/ <b>MCOV</b> <sup>a</sup> (L-N & L-L):	130/250	130/130/210	250/250	130/210/250	510/510	300/300/510	600/600	347/600
Frequency Range-USA Std.:	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
<b>Single Element (SE)</b> * 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	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"	3/4"	3/4"
Leads: #10 AWG (for 30A Breaker):	3+ Gnd.	4+ Gnd.	3+ Gnd.	4+ Gnd.	3+Gnd.	3 or 4+ Gnd.	3+Gnd.	4+Gnd.
Max. Non-degrading <b>SE</b> * Surge Capacity:	<b>45,000Amps</b>	<b>45,000Amps</b>	<b>45,000Amps</b>	<b>45,000Amps</b>	<b>45,000Amps</b>	<b>45,000Amps</b>	<b>45,000Amps</b>	<b>45,000Amps</b>
Max. Surge Current Per Phase:	<b>90,000Amps</b>	<b>135,000Amps</b>	<b>135,000Amps</b>	<b>135,000Amps</b>	<b>135,000Amps</b>	<b>135,000Amps</b>	<b>135,000Amps</b>	<b>135,000Amps</b>
Total Surge Capacity @ 8x20 µSec:	<b>154,000Amps</b>	<b>335,000Amps</b>	<b>225,000Amps</b>	<b>335,000Amps</b>	<b>225,000Amps</b>	<b>335,000Amps</b>	<b>218,000Amps</b>	<b>335,000Amps</b>
Maximum Constant Voltage (L-N/L-L):	150/300	150/300	150/300	150/300	320/550	320/550	680	390/680
Max. Clamping Voltage - L-L:	520	520	520	520	1175	1175	1800	1800
Max. Clamping Voltage - L-N:	390	390	N/A	390	675	675	N/A	1120
Max. Clamping Voltage - N-G:	330	390	N/A	390	390	390	N/A	1120
Mfgr's. Full Replacement Warranty:	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Lifetime Repl. Module Guarantee:	YES	YES	YES	YES	YES	YES	Yes	Yes
Enclosure Size (HxWxD):	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "	3 <sup>1/8</sup> "x4 <sup>1/4</sup> "x6 <sup>1/4</sup> "
Shipping Weight (Approx.):	5.2 Lbs.	5.85 Lbs.	5.5 Lbs.	5.8 Lbs.	5.8 Lbs.	6.0 Lbs.	6.5 Lbs.	6.8 Lbs.

**Level 1**  
Non-Degrading TVSS  
Single-Element Technology

SE\* = Single Element, Non-degrading TVSS Technology ~ ME\* = Multi-element TVSS Technology ~ MCOV<sup>a</sup> = Maximum Continuous Operating Voltage Rating