



Product Specification

Tranquell Integrally Mounted Open Frame Surge Protective Device (SPD)

Enhanced Thermal Protection (ETP) Series

High Exposure - Rated 125kA to 300kA Per Mode

STANDARDS

UL 1449 3rd Edition

UL 1283

UL 96A

CSA C22.2 (cUL)

ANSI/IEEE C62.41.1-2002, C62.41.2-2002,

C62.45 - 2002

IEEE 1100-2005

IEEE C62.62

IEEE C62.72

NEMA LS-1 - 1992 (R2000)

MIL-STD-220B

ANSI/NFPA70, NEC (Article 285)

ELECTRICAL

Maximum Single Impulse Surge Current

The maximum surge current rating based on the 8/20 μ s test waveform is as follows. The rating is based on testing of a **complete** SPD unit and all components that make up the SPD system are expressed per **mode**.

Part Number	Mode L-L	Mode L-N	Mode N-G	Mode L-G	Phase (L-N + L-G)
TPHExxxx12*	125kA	125kA	125kA	125kA	250kA
TPHExxxx15*	150kA	150kA	150kA	150kA	300kA
TPHExxxx20*	200kA	200kA	200kA	200kA	400kA
TPHExxxx30*	300kA	300kA	300kA	300kA	600kA

* See Model Number Suffix Descriptions Table

Maximum Continuous Operating Voltage (MCOV)

115% of nominal system voltage or greater. 125% on 120 volt L-N/G models.

Minimum Repetitive Surge Current Capacity

The Tranquell HE Series 125kA - 300kA rated device is capable of surviving the following impulses, at one-minute intervals, without failure and with less than 10% change in protective characteristics.

IEEE C62.41 Category C3 (High) Exposure Level, 10kA / 8x20 μ s: 20,000 impulses

UL 1449 Nominal Discharge Current Rating (In)

20kA - Rated for use on UL 96A Lightning Protection Systems

UL Fault Current Withstand Rating / Short Circuit Current Rating (SCCR)

200,000A

SPD Type / Recommended Locations

Service Entrance Equipment, Primary Distribution Equipment - Rated for UL and NEC 2008 Type 1 and Type 2 Installation Locations

UL-1449, 3rd Edition Voltage Protection Rating (VPR)

UL 1449 3rd Edition Voltage Protection Ratings (VPR)				
Model Voltage Type	L-N	L-G	N-G	L-L
TPHE120S	900	800	700	1200
TPHE120Y	900	800	700	1200
TPHE220Y	1500	1200	1200	2000
TPHE240D	n/a	1200	n/a	1800
TPHE240H	1000 / 1200HL	800 / 1200HL	700	2000 / 2200HL
TPHE240Y	1500	1200	1200	2000
TPHE277Y	1500	1200	1200	2000
TPHE347Y	1500	1500	1500	2500
TPHE480D	n/a	1800	n/a	3000

UL-1449, 2nd Edition Suppression Voltage Rating (SVR)*

UL 1449 2nd Edition Suppressed Voltage Ratings (SVR)				
Model Voltage Type	L-N	L-G	N-G	L-L
TPHE120S	400	400	400	700
TPHE120Y	400	400	400	700
TPHE220Y	800	800	800	1500
TPHE240D	n/a	800	n/a	1500
TPHE240H	500 / 700HL	400 / 700HL	400	900
TPHE240Y	800	800	800	1500
TPHE277Y	800	800	800	1500
TPHE347Y	1200	1000	1000	2000
TPHE480D	n/a	1500	n/a	3000

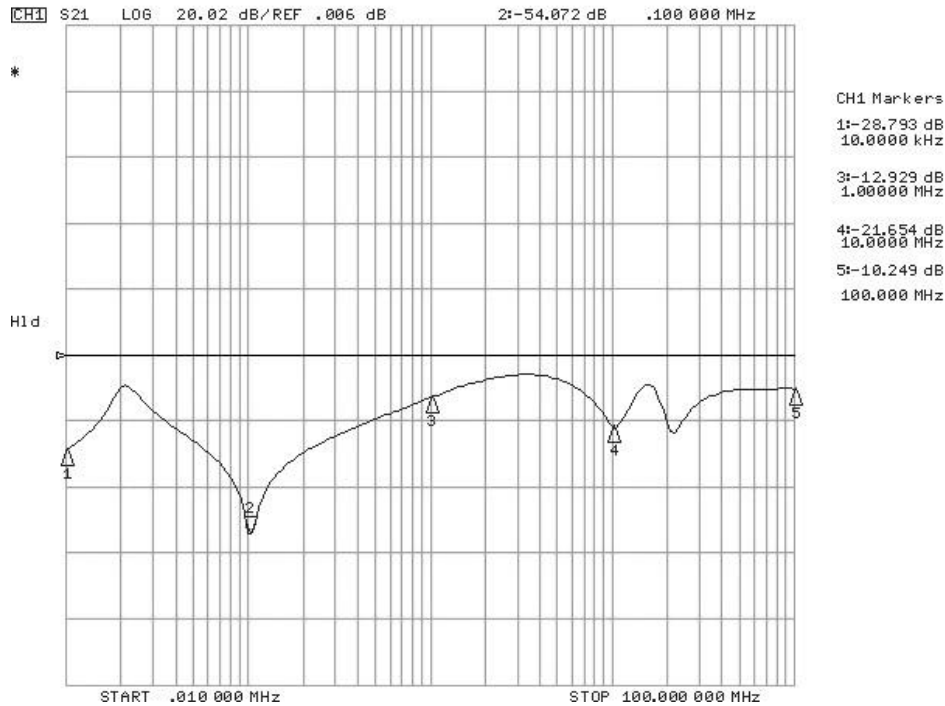
*SVR ratings are no longer assigned by UL and are provided for reference purposes only.
 VPR ratings now supersede SVR ratings per UL 1449 3rd Edition Standard, effective Sept. 29, 2009.

IEEE C62.41 Clamping Voltages

Model Type	Cat. B Ringwave 100kHz / 500A				Cat. B/C Low Combination Wave 8x20us 6kV / 3kA				Cat. C High Combination Wave 8x20us 10kV / 10kA			
	L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L
TPHE120S	470	463	452	752	600	485	476	844	793	670	680	1007
TPHE120Y	470	463	452	752	600	485	476	844	793	670	680	1007
TPHE220Y	763	836	828	1393	1053	893	880	1597	1170	1073	1180	1827
TPHE240D	n/a	750	n/a	1240	n/a	763	n/a	1453	n/a	890	n/a	1640
TPHE240H	465	466	476	1025	600	498	476	1025	775	670	680	1163
TPHE240Y	763	836	828	1393	1053	893	880	1597	1170	1073	1180	1827
TPHE277Y	763	836	828	1393	1053	893	880	1597	1170	1073	1180	1827
TPHE347Y	883	1000	1000	1723	1187	1113	1120	2020	1467	1240	1240	2220
TPHE480D	n/a	1223	n/a	1800	n/a	1407	n/a	2647	n/a	1607	n/a	2933

EMI -RFI Filtering / Noise Attenuation / Sinewave Tracking

The EMI-RFI noise rejection or attenuation value is measured in accordance with the procedures outlined in NEMA LS 1-1992/MIL -STD-220B. Noise Filter Capability: -50db minimum @ 100kHz.



Fusing

Individually fused Thermally Protected MOV Technology.

Standard Monitoring

The SPD is monitored with a green indicating light per each phase, and red service light.
 Audible alarm with silencer & test switch
 Contacts for remote monitoring (2 amp, 125VAC)-(1 AMP, 30 VDC)
 6 Digit LCD re-settable surge event counter

Connection

Direct Bus Connection. Mechanical Wire Lugs. Minimum 6 AWG / Maximum 2/0 wire required.

Surge Rated Disconnect

Standard Equipped on all models.

Model Number Suffix Descriptions

P/N Suffix	Description	Mounting	Disconnect	UL SPD Type
PP	Shaft Mounted Disconnect Handle	Integral	Yes	Type 2
ME	Panel Mounted Disconnect Handle	Integral	Yes	Type 2
SG	Panel Mounted Disconnect Handle	Integral w/ Remote Display	Yes	Type 2
NSBX	Without Surge Rated Disconnect	Integral	No	Type 2
PPT1	Shaft Mounted Disconnect Handle	Integral	Yes	Type 1
MET1	Panel Mounted Disconnect Handle	Integral	Yes	Type 1
SGT1	Panel Mounted Disconnect Handle	Integral w/ Remote Display	Yes	Type 1
NSBXT1	Without Surge Rated Disconnect	Integral	No	Type 1

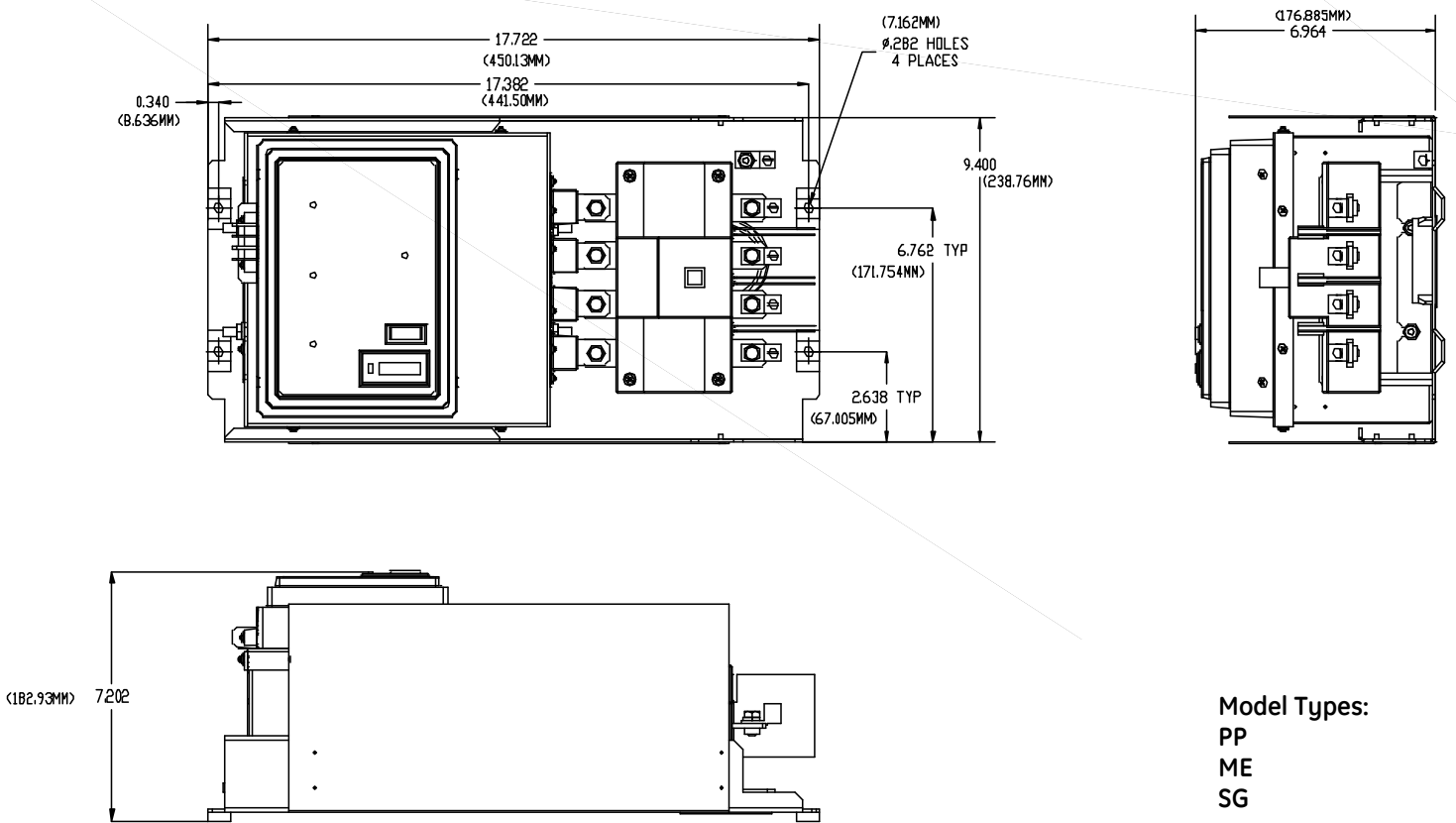
Environmental and External Conditions

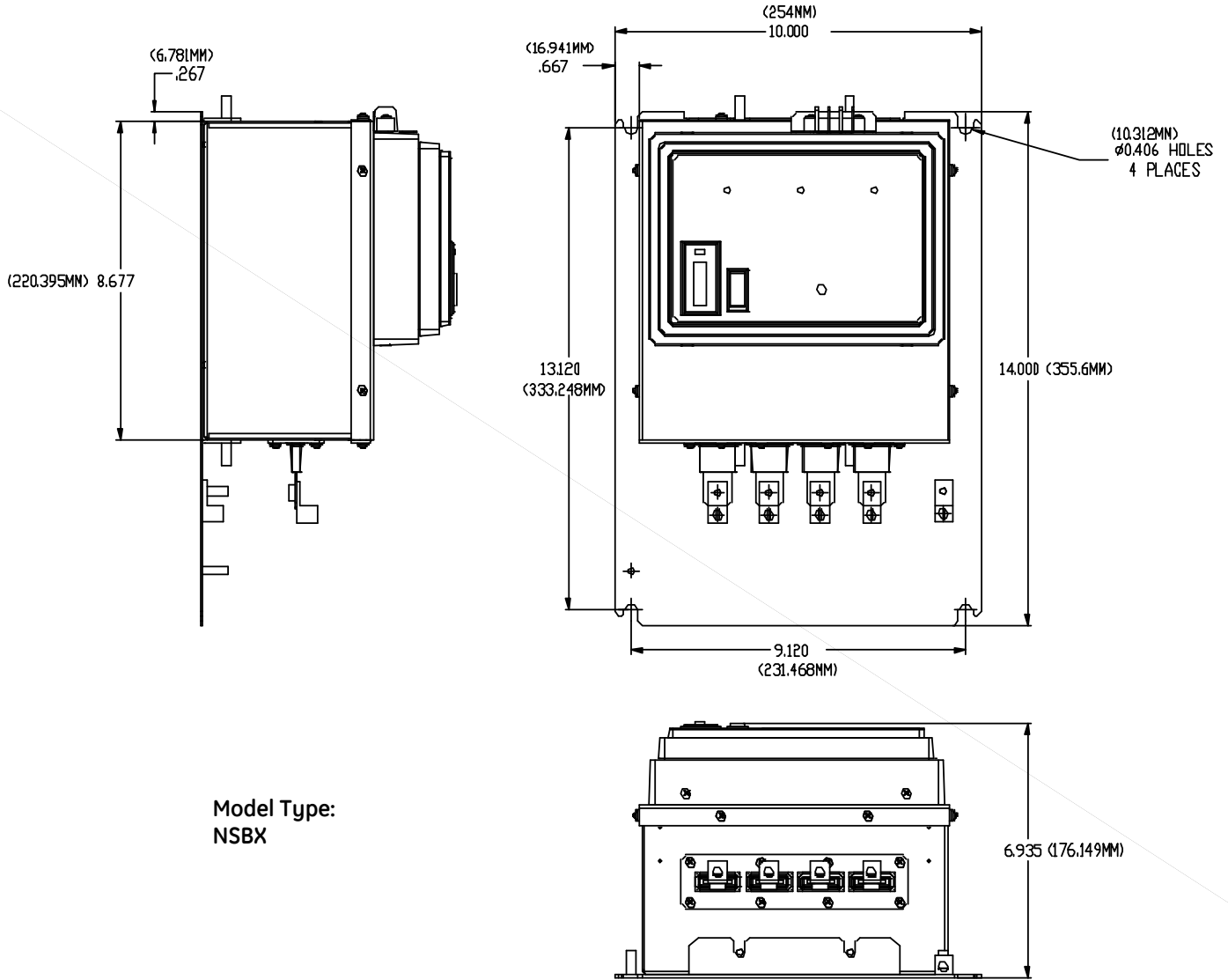
Temperature	-40°F (-40°C) to +149°F (+65°C)	Operating Altitude	0 - 12,000 ft (3.66 km)
Surface Temperature	Less than 131°F (55°C)	Humidity	0 -95% RH
Noise	No Audible Noise	Frequency	50/60 Hz

Warranty

Standard GE Terms and Conditions cover the GE SPD for a period of 5 years.

DIMENSIONS





Model Type:
NSBX



imagination at work

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