



Product Specification

Tranquell Series Wall Mounted Surge Protective Device (SPD)

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 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** TVSS unit **including fuses** and all components that make up the TVSS system are expressed per **mode**.

Part Number	Mode L-L	Mode L-N	Mode N-G	Mode L-G	Phase (L-N + L-G)
THExxxx125*	125kA	125kA	125kA	125kA	250kA
THExxxx150*	150kA	150kA	150kA	150kA	300kA
THExxxx200*	200kA	200kA	200kA	200kA	400kA
THExxxx300*	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

500V/2kA, 10x1000 μ s

5,000 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 2 Installation Locations

UL-1449, 3rd Edition Voltage Protection Rating (VPR) – Models Without Disconnect Switch

Model Voltage Type	System Voltage	MCOV (L-N / L-G)	UL 1449 3rd Edition Voltage Protection Ratings (VPR)			
			L-N	L-G	N-G	L-L
THE120S	120/240	150	900	800	700	1200
THE120Y	120/208	150	900	800	700	1200
THE220Y	220/380	320	1500	1200	1200	2000
THE240D	240 Delta	270	n/a	1200	n/a	1800
THE240H	120/240 Hi-Leg	150/270HL	900 / 1200HL	800 / 1200HL	700	1200 / 2100HL
THE240Y	240/415	270	1500	1200	1200	2000
THE277Y	277/480	320	1500	1200	1200	2000
THE347Y	347/600	420	1500	1500	1500	2500
THE480D	480 Delta	550	n/a	1800	n/a	3000
THE600D	600 Delta	625	n/a	2000	n/a	4000

UL-1449, 3rd Edition Voltage Protection Rating (VPR) – Models With Disconnect Switch

Model Voltage Type	System Voltage	MCOV (L-N / L-G)	UL 1449 3rd Edition Voltage Protection Ratings (VPR)			
			L-N	L-G	N-G	L-L
THE120S	120/240	150	1000	1000	700	1200
THE120Y	120/208	150	1000	1000	700	1200
THE220Y	220/380	320	1500	1500	1000	2000
THE240D	240 Delta	270	n/a	1500	n/a	1800
THE240H	120/240 Hi-Leg	150/270HL	1000 / 1500HL	1000 / 1500HL	700	1200 / 2500HL
THE240Y	240/415	270	1500	1500	1000	2000
THE277Y	277/480	320	1500	1500	1000	2000
THE347Y	347/600	420	1800	1500	1500	2500
THE480D	480 Delta	550	n/a	2000	n/a	4000
THE600D	600 Delta	625	n/a	2000	n/a	4000

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

Model Voltage Type	System Voltage	MCOV (L-N / L-G)	UL 1449 2nd Edition Suppressed Voltage Rating (SVR)		
			L-N	L-G	N-G
THE120S	120/240	150	400	400	400
THE120Y	120/208	150	400	400	400
THE220Y	220/380	320	800	800	800
THE240D	240 Delta	270	n/a	800	n/a
THE240H	120/240 Hi-Leg	150/270HL	400 / 700HL	400 / 700HL	400
THE240Y	240/415	270	800	800	800
THE277Y	277/480	320	800	800	800
THE347Y	347/600	420	1000	1000	900
THE480D	480 Delta	550	n/a	1500	n/a
THE600D	600 Delta	625	n/a	1500	n/a

*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. A3 100kHz	Cat. B3/C1 6kV / 3kA	Cat. C2 10kV / 5kA	Cat. C3 20kV / 10kA
	L-N / L-G	L-N / L-G	L-N / L-G	L-N / L-G
THE120S	403	417 / 437**	445 / 487**	452/ 533**
THE120Y	403	417 / 437**	445 / 487**	452/ 533**
THE240Y	687	817/ 843**	857/ 875**	900/ 963**
THE277Y	687	817/ 843**	857/ 875**	900/ 963**

**Model Type tested with Surge Rated Disconnect

EMI -RFI Filtering / Noise Attenuation / Sinewave Tracking

The TVSS device 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 (50kHz - 100MHz) Max -44db attenuation.

Fusing

UL Recognized, 200kAIC Surge Rated Fuses (VSP100) in combination with **patented** thermal fuse technology (US patent number 6,282,073).

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

Mechanical Wire Lugs. Minimum 6 AWG / Maximum 2/0 wire required. A 60Ampere rated circuit breaker is required for connection to the power system.

Surge Rated Disconnect

Standard Equipped on WMN1 and WMN4 models.

Model Number Suffix Descriptions

Suffix	NEMA Rating	Description	Mounting	Disconnect	UL SPD Type
WMN1	Type 1	Painted Steel	Surface	Yes	Type 2
WMN 12S	Type 12	Painted Steel	Surface	No	Type 2
WMN 12F	Type 12	Painted Steel	Flush	No	Type 2
WMN 4	Type 4X	Fiberglass	Surface	Yes	Type 2
WMN 4S	Type 4	Painted Steel	Surface	No	Type 2
WMN 4X	Type 4X	Stainless Steel	Surface	No	Type 2

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

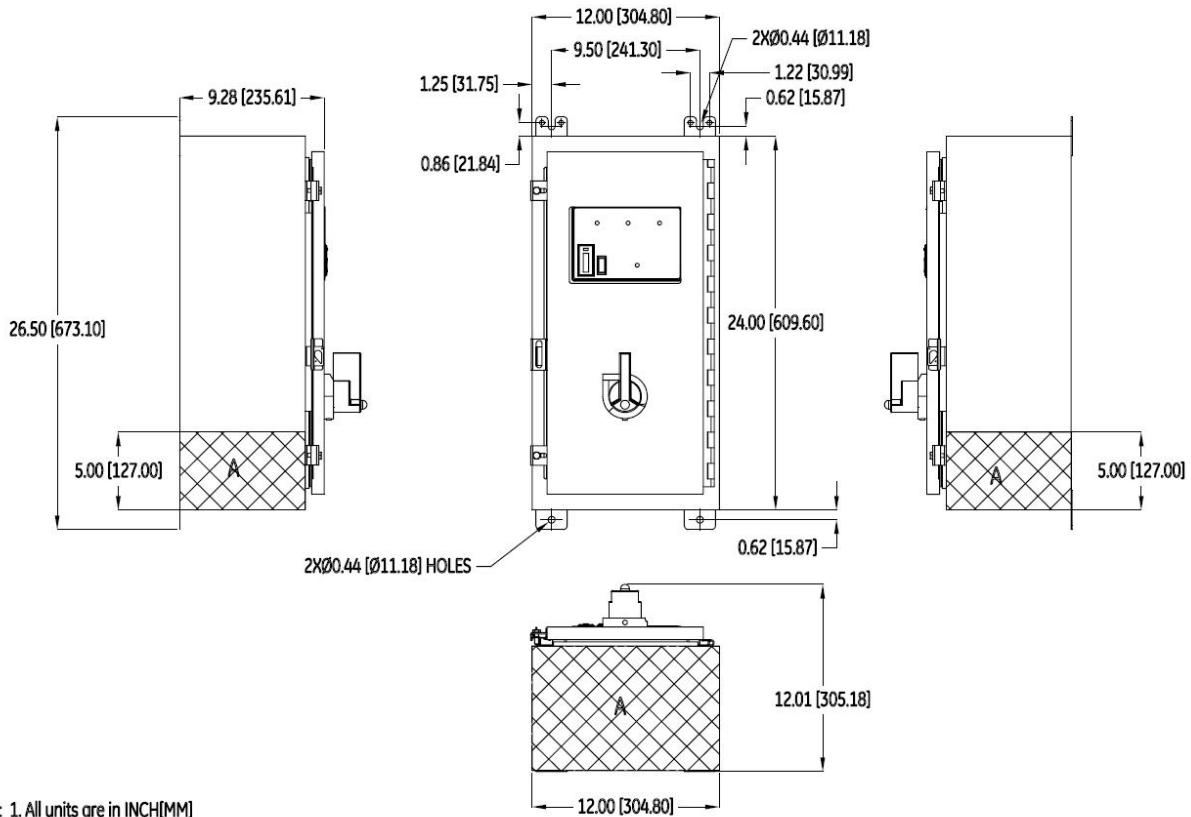
Warranty

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

DIMENSIONS

Model Suffix Types:

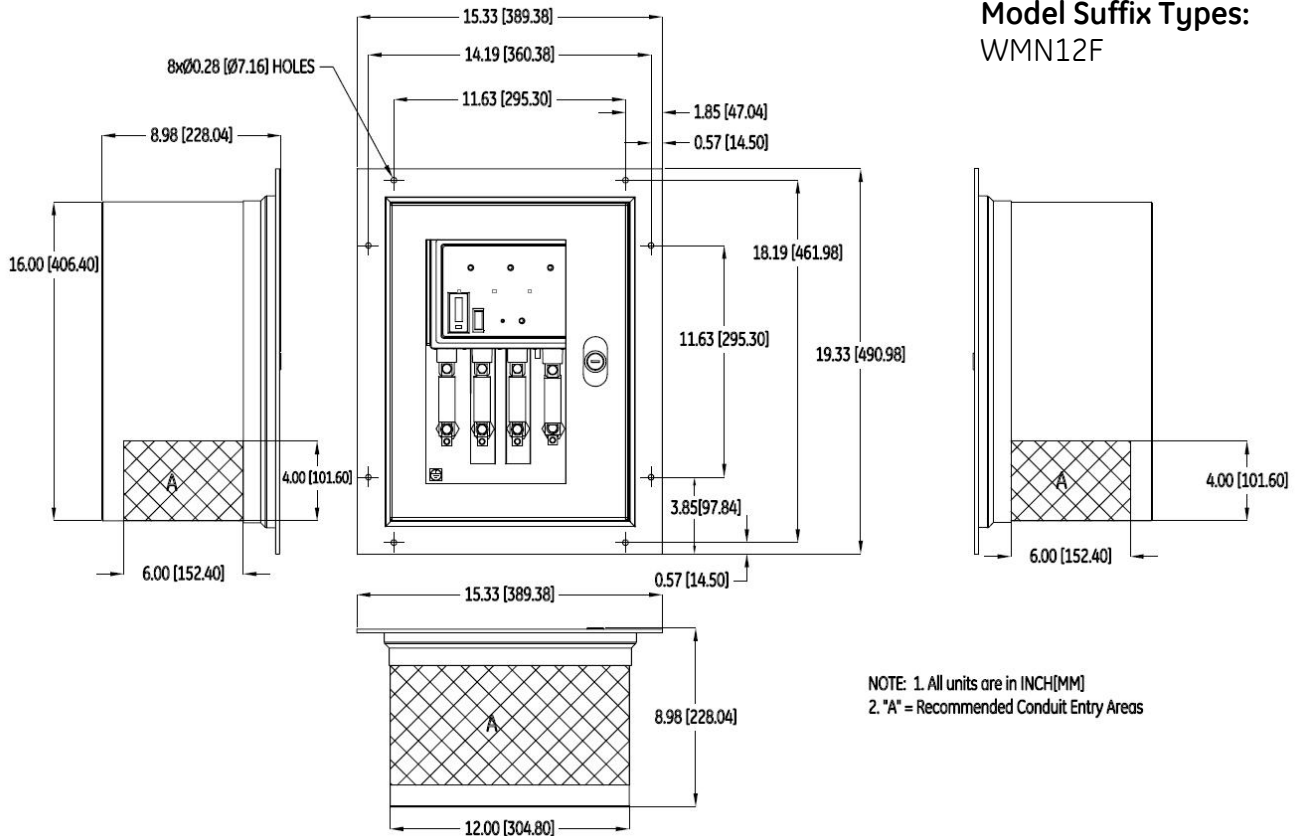
WMN1



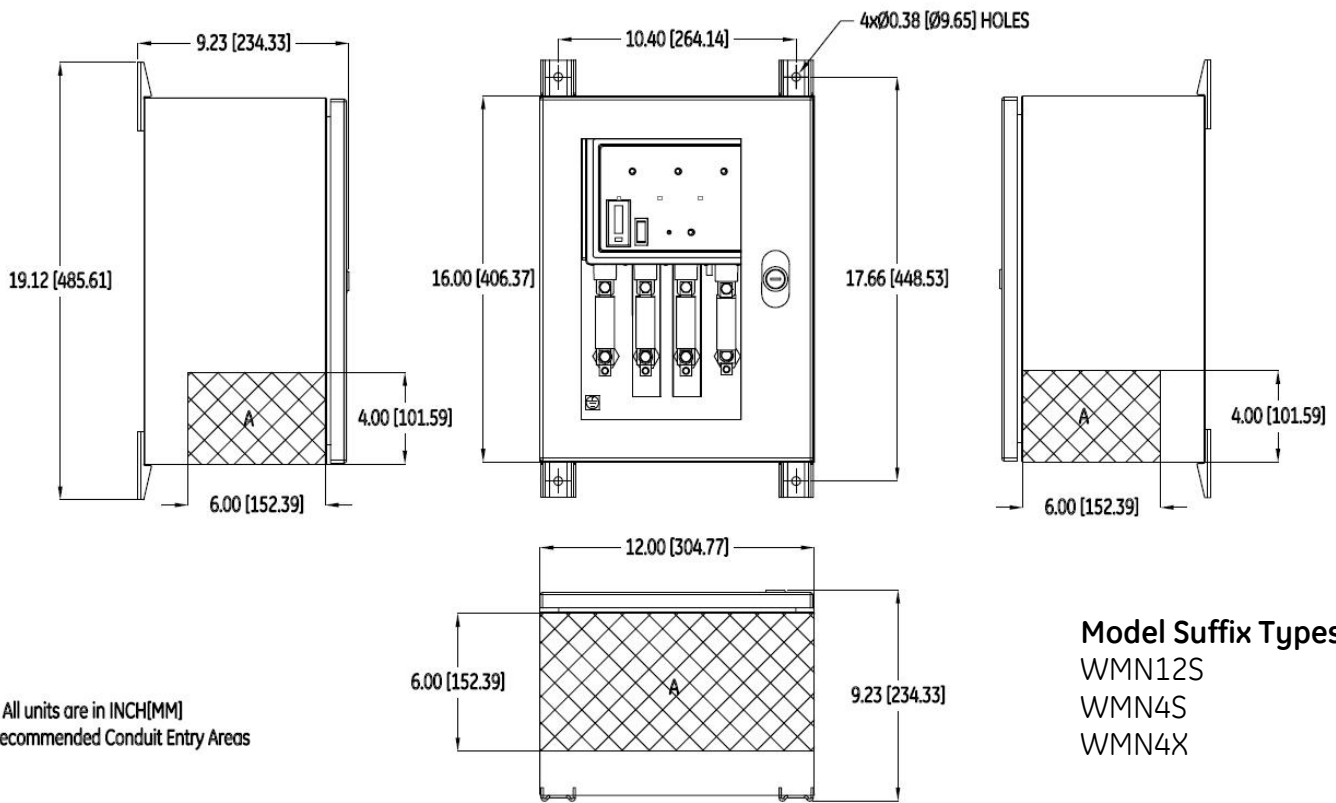
NOTE: 1. All units are in INCH[MM]
2. "A" = Recommended Conduit Entry Areas

Model Suffix Types:

WMN12F



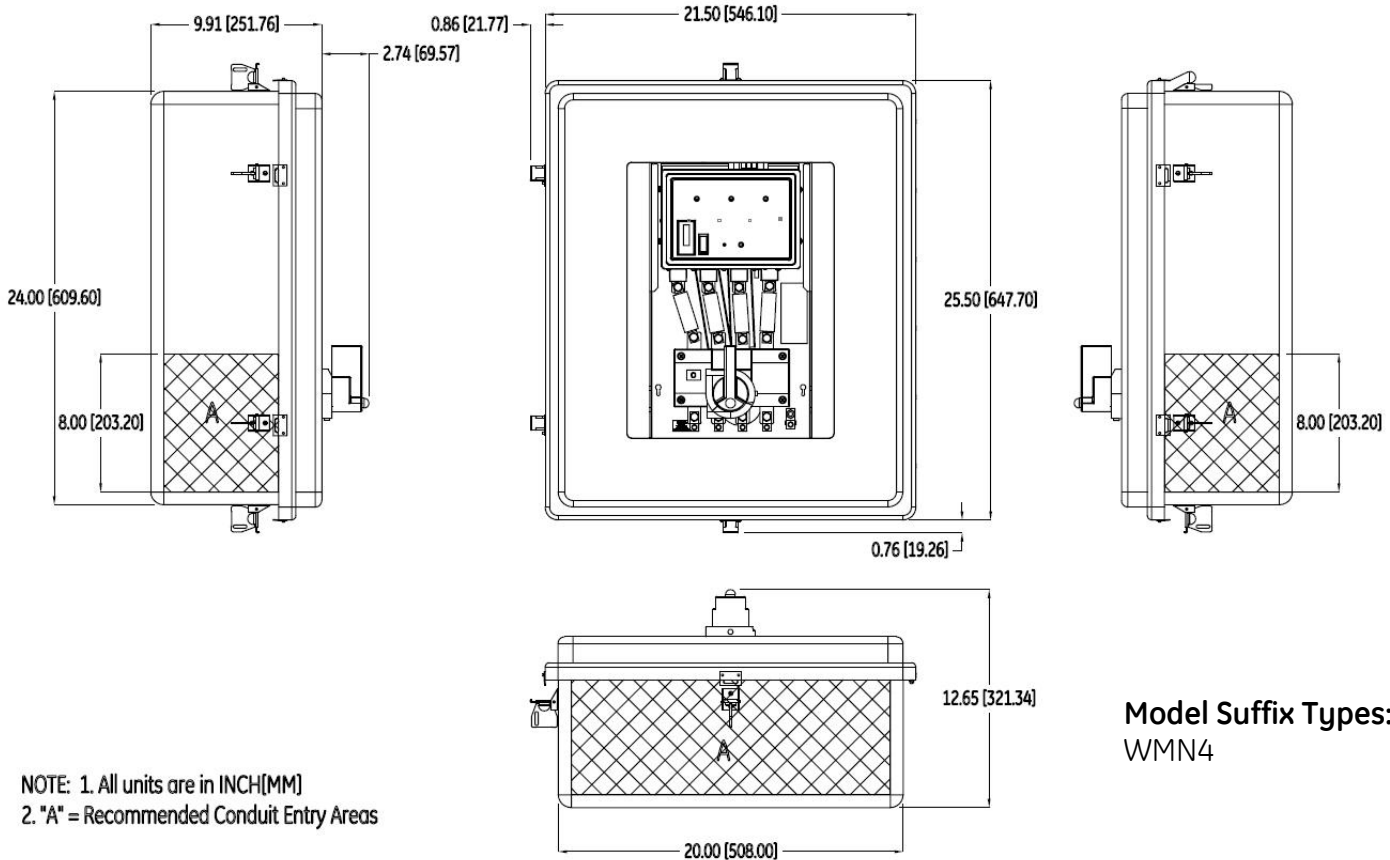
NOTE: 1. All units are in INCH[MM]
2. "A" = Recommended Conduit Entry Areas



NOTE: 1. All units are in INCH[MM]
 2. "A" = Recommended Conduit Entry Areas

Model Suffix Types:

WMN12S
 WMN4S
 WMN4X



NOTE: 1. All units are in INCH[MM]
 2. "A" = Recommended Conduit Entry Areas

Model Suffix Types:

WMN4



imagination at work

GE Digital Energy – Power Quality
 830 W 40th Street, Chicago, IL 60609 USA
 800 637 1738 www.gepowerquality.com
 Information subject to change without notice.
 Please verify all details with GE.

© 2009 General Electric Company All Rights Reserved