Critical Power Products

Surge Protection Devices (SPD)
Critical Power Products
Introduction

General Electric has been a leader in lightning and surge protection for commercial, industrial and utility applications for decades. The GE Surge Protection Device product line utilizes the combined strengths of GE engineering capabilities and surge suppression technology.

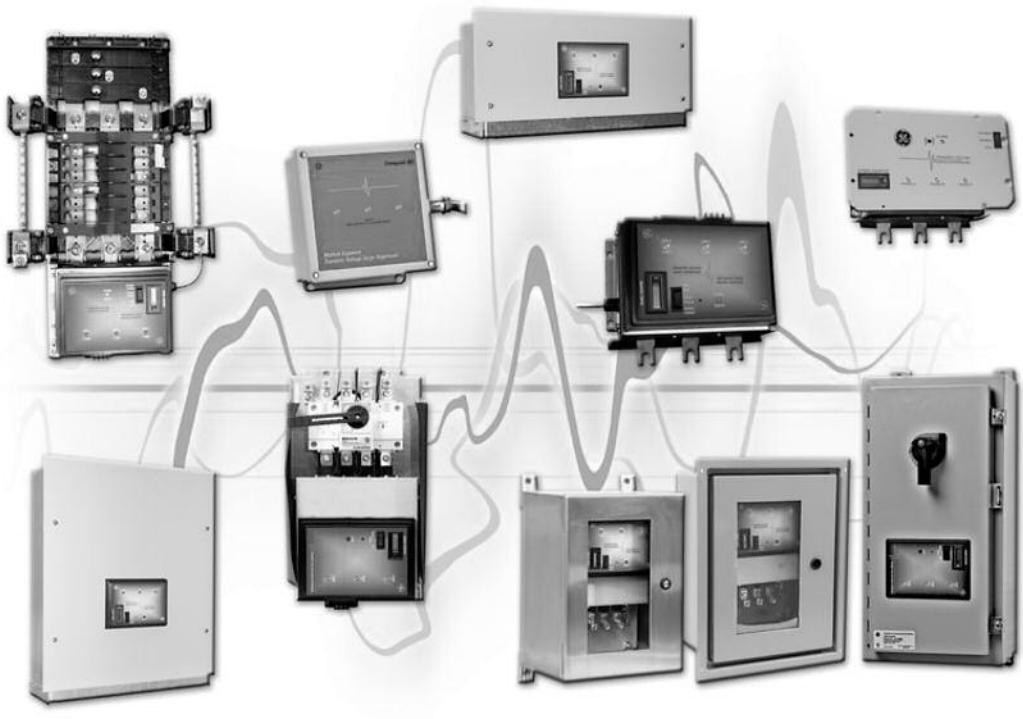
GE SPD products use quality materials and innovative designs to achieve the best possible performance while maintaining competitive prices. All units are 3rd party tested to the NEMA LS-1 standards, are rated in accordance with NEC Article 285 and comply with UL1449, 3rd Edition. We have a full line of SPD products available, integral to GE Distribution Equipment, or wall mounted.

GE has a strong commitment to customer service. We offer a level of service and engineering support unmatched by our competition. Many of our products are designed to suit specific customer applications. Our application engineering team is ready to provide solutions for your surge suppression needs.

Contact your local GE sales office for additional information.

References

Integrated SPD	DEA-390, DEA-391, DEA-393, DEA-394
Wall Mounted	DEA-300, DEA-320, DEA-391, DEA-392

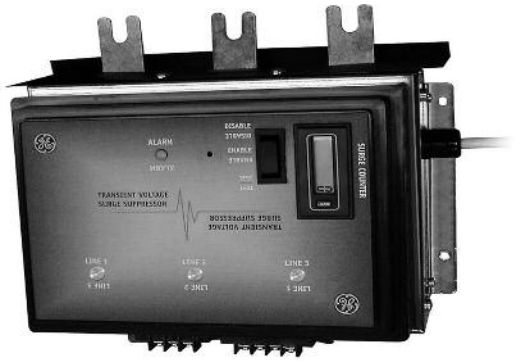


Surge Protection Devices (SPD)
Critical Power Products
Integrated Tranquell™ ME
Designed to Connect within GE "A Series™" Panelboards

This SPD model connects directly to the A Series™ Panelboard bus bars without adding width or depth to the panel enclosure. These devices have been tested to surge current ratings per NEMA LS-1, including the fuses in the surge path. Since these surge protection units are mounted to the bus bars, a breaker feeder is not required or used. This design allows for maximum protection. Ratings are available from 65kA per mode to 100kA per mode.

All mode protection is provided with surge components (MOVs) connected on the phase to neutral, phase to ground, and neutral to ground paths as appropriate for the voltage configuration.

Integrated Tranquell™ ME products are engineered for reliability, flexibility and long life in the most extreme surge environment. The true maximum surge current rating, unlimited by fusing, has been proven successful in 3rd party tests.

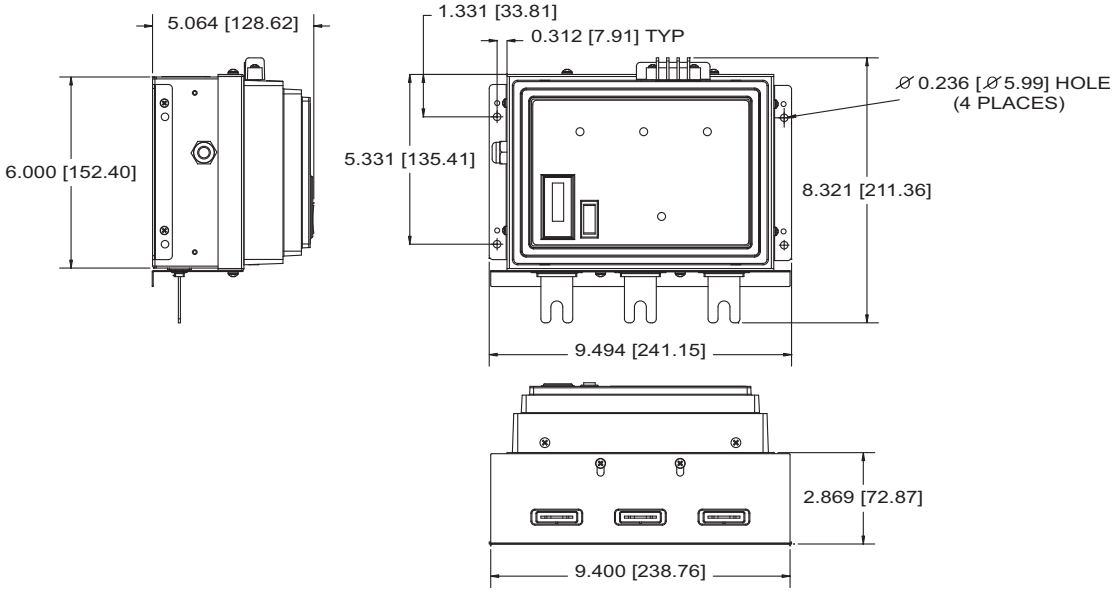


Features and Benefits

—UL1449, 3rd Edition CUL
—Optional UL1283 Noise Filters
—UL Tested to 65,000 Amperes Symmetrical Withstand
—Tranquell™ ME Device is Capable of Surviving a minimum of 5,000 Category C3 Impulses (10kA, 20kV) per mode
—Form C Dry Contacts for Remote Monitoring
—Green Status Indicating Lights, Red Service Light
—Audible Alarm with Test/Disable Feature
—Standard Surge Counter on AS
—Factory installed in GE "A Series™" Panels
—Standard 5 year limited warranty, Optional 20 year warranty

Specifications

Operating Frequency:	50/60 Hz
Connection:	Direct Bus Connection, Parallel Connected
Operating Temperature:	-40°C to +65°C
Operating Humidity:	0% to 95% Non-Condensing
Weight:	13 lbs.



Surge Protection Devices (SPD)
Critical Power Products
Integrated Tranquell™ ME
Designed to Connect within GE "A Series™" Panelboards

For GE "A" Series Panelboards - 65 kA Symmetrical Fault Withstand

Panelboard, Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Product Number
65kA per mode / 130kA per phase	TPME120S06AS
65kA per mode / 130kA per phase	TPME120Y06AS
65kA per mode / 130kA per phase	TPME220Y06AS
65kA per mode / 130kA per phase	TPME277Y06AS
65kA per mode / 130kA per phase	TPME480D06AS
65kA per mode / 130kA per phase	TPME347Y06AS
65kA per mode / 130kA per phase	TPME240H06AS
65kA per mode / 130kA per phase	TPME240D06AS
65kA per mode / 130kA per phase	TPME240Y06AS
65kA per mode / 130kA per phase	TME600D065AS
80kA per mode / 160kA per phase	TPME120S08AS
80kA per mode / 160kA per phase	TPME120Y08AS
80kA per mode / 130kA per phase	TPME220Y08AS
80kA per mode / 160kA per phase	TPME277Y08AS
80kA per mode / 160kA per phase	TPME480D08AS
80kA per mode / 160kA per phase	TPME347Y08AS
80kA per mode / 160kA per phase	TPME240H08AS
80kA per mode / 160kA per phase	TPME240D08AS
80kA per mode / 160kA per phase	TPME240Y08AS
80kA per mode / 160kA per phase	TME600D080AS
100kA per mode / 200kA per phase	TPME120S10AS
100kA per mode / 200kA per phase	TPME120Y10AS
100kA per mode / 200kA per phase	TPME220Y10AS
100kA per mode / 200kA per phase	TPME277Y10AS
100kA per mode / 200kA per phase	TPME480D10AS
100kA per mode / 200kA per phase	TPME347Y10AS
100kA per mode / 200kA per phase	TPME240H10AS
100kA per mode / 200kA per phase	TPME240D10AS
100kA per mode / 200kA per phase	TPME240Y10AS
100kA per mode / 200kA per phase	TME600D100AS

Product # T P M E ___ ___ ___ ___ ___ ___ *

* **AS** = Full featured, with UL 1283 noise filtering and surge counter
ASNF = without UL 1283 noise filtering (Available 100kA per Mode) only
ASNC = without UL 1283 noise filtering, without surge counter (Available 100kA per Mode) only

	Nominal Voltage (Volts RMS)	System Voltage Configuration	Voltage Protection Rating (VPR) UL 1449, 3rd Edition September 2009 Revision						MCOV % Max. Continuous Operating Voltage
			L-N	HL-N	L-G	HL-G	N-G	L-L	
120S	120/240	1 Ph, 3 W + G	700	—	600	—	600	1200	125%
120Y	120Y/208	3 Ph, 4 W + G	700	—	600	—	600	1200	125%
240D	240 Delta	3 Ph, 3 W	—	—	900	—	—	1800	115%
240H	120/240 Delta HL	3 Ph, 4 W + G	700	1200	600	1000	600	1200	115%
240Y	240Y/415	3 Ph, 4 W + G	1200	—	1000	—	1000	2000	130%
277Y	277Y/480	3 Ph, 4 W + G	1200	—	1000	—	1000	2000	115%
220Y	220Y/380	3 Ph, 4 W + G	1200	—	1000	—	1000	2000	145%
347Y	347Y/600	3 Ph, 4 W + G	1500	—	1500	—	1500	3000	115%
480D	480 Delta	3 Ph, 3 W	—	—	1500	—	—	3000	170%

Also available in 600D configurations. For details, please contact GE Power Quality Customer Service at 800 637 1738.

	Maximum Surge Current Capacity	
	Per Mode	Per Phase
06	65kA	130kA
08	80kA	160kA
10	100kA	200kA

Phase Rating = (L-N + L-G)

Product # Example

TPME277Y10AS

—277Y/480 V, 3 Ph, 4 W + G
—100kA per mode
—Full featured, with UL 1283 noise filtering and surge counter

Surge Protection Device (SPD)
Critical Power Products
Integrated Tranquell™ HE and ME
Designed for GE Distribution Equipment

This SPD model connects to the panelboard or switchboard bus bars without adding width or depth to the panel enclosure, and only occupying 7X of vertical bus space. These units have been tested to surge current ratings per NEMA LS-1, up to 200 kA per mode, including the fuses in the surge path. Standard features include a surge counter, audible alarm, indicating lights, dry contacts, and an integral surge rated disconnect. Rating options range from 65 kA per mode to 300 kA per mode.

All mode protection is provided with surge components (MOVs) connected on the phase to neutral, phase to ground, and neutral to ground paths as appropriate for the voltage configuration.

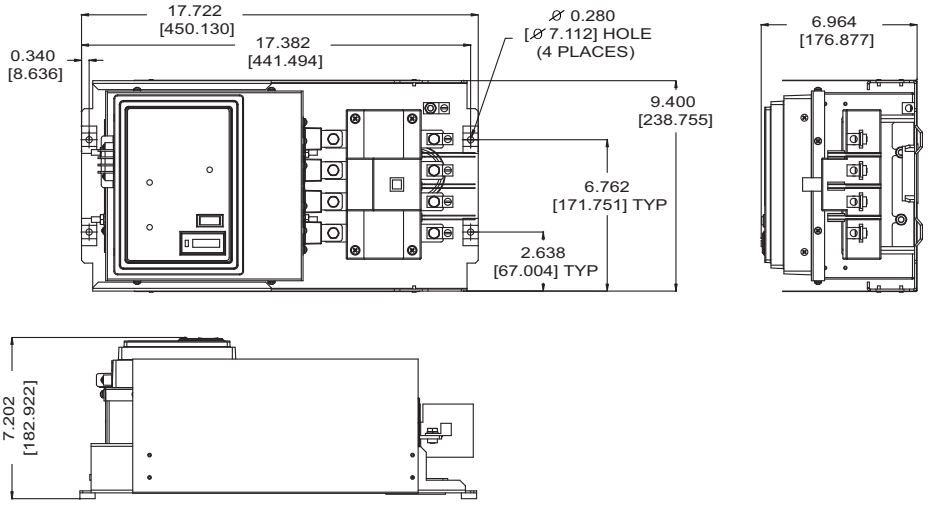
Integrated Tranquell™ HE and ME products are engineered for reliability, flexibility and long life in the most extreme surge environment. The true maximum surge current rating, unlimited by fusing, has been proven successful in 3rd party tests.

Features and Benefits

—UL1449, 3rd Edition CUL, UL1283
—UL Tested to 200,000 Amperes Symmetrical Withstand
—Integral Surge Rated Disconnect
—Factory installed in Spectra™ Series Panels and Switchboards (7X Mounting Space), or Switchgear
—Tranquell™ ME Device is Capable of Surviving a minimum of 5,000 Category C3 Impulses (10kA, 20kV) per mode.
—Tranquell™ HE Device is Capable of Surviving a minimum of 20,000 Category C3 Impulses (10kA, 20kV) per mode.
—Device Capable of Surviving a minimum of 5,000 Longwave (10x1000ms) Impulses per mode.
—Enhanced Thermal Protection Technology
—Form C Dry Contacts for Remote Monitoring
—Green Status Indicating Lights, Red Service Light
—Audible Alarm with Test/Disable Feature
—Standard Surge Counter
—Standard 5 year limited warranty, Optional 20 year warranty

Specifications

Operating Frequency:	50/60 Hz
Connection:	6 to 2/0 Conductors, Parallel Connected
Operating Temperature:	-40°C to +65°C
Operating Humidity:	0% to 95% Non-Condensing
Weight:	24 lbs.



Integrated Tranquell™ HE and ME

Designed for GE Distribution Equipment

For GE MCC Distribution Equipment

200 kA Symmetrical Fault Withstand
Panelboard, Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Product Number
65kA per mode / 130kA per phase	TPME120S06ME
65kA per mode / 130kA per phase	TPME120Y06ME
65kA per mode / 130kA per phase	TPME220Y06ME
65kA per mode / 130kA per phase	TPME277Y06ME
65kA per mode / 130kA per phase	TPME480D06ME
65kA per mode / 130kA per phase	TPME347Y06ME
65kA per mode / 130kA per phase	TPME240H06ME
65kA per mode / 130kA per phase	TPME240D06ME
65kA per mode / 130kA per phase	TPME240Y06ME
80kA per mode / 160kA per phase	TPME120S08ME
80kA per mode / 160kA per phase	TPME120Y08ME
80kA per mode / 130kA per phase	TPME220Y08ME
80kA per mode / 160kA per phase	TPME277Y08ME
80kA per mode / 160kA per phase	TPME480D08ME
80kA per mode / 160kA per phase	TPME347Y08ME
80kA per mode / 160kA per phase	TPME240H08ME
80kA per mode / 160kA per phase	TPME240D08ME
80kA per mode / 160kA per phase	TPME240Y08ME
100kA per mode / 200kA per phase	TPHE120S10ME
100kA per mode / 200kA per phase	TPHE120Y10ME
100kA per mode / 200kA per phase	TPHE220Y10ME
100kA per mode / 200kA per phase	TPHE277Y10ME
100kA per mode / 200kA per phase	TPHE480D10ME
100kA per mode / 200kA per phase	TPHE347Y10ME
100kA per mode / 200kA per phase	TPHE240H10ME
100kA per mode / 200kA per phase	TPHE240D10ME
100kA per mode / 200kA per phase	TPHE240Y10ME
150kA per mode / 300kA per phase	TPHE120S15ME
150kA per mode / 300kA per phase	TPHE120Y15ME
150kA per mode / 300kA per phase	TPHE220Y15ME
150kA per mode / 300kA per phase	TPHE277Y15ME
150kA per mode / 300kA per phase	TPHE480D15ME
150kA per mode / 300kA per phase	TPHE347Y15ME
150kA per mode / 300kA per phase	TPHE240H15ME
150kA per mode / 300kA per phase	TPHE240D15ME
150kA per mode / 300kA per phase	TPHE240Y15ME
200kA per mode / 400kA per phase	TPHE120S20ME
200kA per mode / 400kA per phase	TPHE120Y20ME
200kA per mode / 400kA per phase	TPHE220Y20ME
200kA per mode / 400kA per phase	TPHE277Y20ME
200kA per mode / 400kA per phase	TPHE480D20ME
200kA per mode / 400kA per phase	TPHE347Y20ME
200kA per mode / 400kA per phase	TPHE240H20ME
200kA per mode / 400kA per phase	TPHE240D20ME
200kA per mode / 400kA per phase	TPHE240Y20ME
300kA per mode / 600kA per phase	TPHE120S30ME
300kA per mode / 600kA per phase	TPHE120Y30ME
300kA per mode / 600kA per phase	TPHE220Y30ME
300kA per mode / 600kA per phase	TPHE277Y30ME
300kA per mode / 600kA per phase	TPHE480D30ME
300kA per mode / 600kA per phase	TPHE347Y30ME
300kA per mode / 600kA per phase	TPHE240H30ME
300kA per mode / 600kA per phase	TPHE240D30ME
300kA per mode / 600kA per phase	TPHE240Y30ME

For GE Spectra™ Panel or Switch Board Distribution Equipment -

200 kA Symmetrical Fault Withstand
Panelboard, Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Product Number
65kA per mode / 130kA per phase	TPME120S06PP
65kA per mode / 130kA per phase	TPME120Y06PP
65kA per mode / 130kA per phase	TPME220Y06PP
65kA per mode / 130kA per phase	TPME277Y06PP
65kA per mode / 130kA per phase	TPME480D06PP
65kA per mode / 130kA per phase	TPME347Y06PP
65kA per mode / 130kA per phase	TPME240H06PP
65kA per mode / 130kA per phase	TPME240D06PP
65kA per mode / 130kA per phase	TPME240Y06PP
80kA per mode / 160kA per phase	TPME120S08PP
80kA per mode / 160kA per phase	TPME120Y08PP
80kA per mode / 130kA per phase	TPME220Y08PP
80kA per mode / 160kA per phase	TPME277Y08PP
80kA per mode / 160kA per phase	TPME480D08PP
80kA per mode / 160kA per phase	TPME347Y08PP
80kA per mode / 160kA per phase	TPME240H08PP
80kA per mode / 160kA per phase	TPME240D08PP
80kA per mode / 160kA per phase	TPME240Y08PP
100kA per mode / 200kA per phase	TPHE120S10PP
100kA per mode / 200kA per phase	TPHE120Y10PP
100kA per mode / 200kA per phase	TPHE220Y10PP
100kA per mode / 200kA per phase	TPHE277Y10PP
100kA per mode / 200kA per phase	TPHE480D10PP
100kA per mode / 200kA per phase	TPHE347Y10PP
100kA per mode / 200kA per phase	TPHE240H10PP
100kA per mode / 200kA per phase	TPHE240D10PP
100kA per mode / 200kA per phase	TPHE240Y10PP
150kA per mode / 300kA per phase	TPHE120S15PP
150kA per mode / 300kA per phase	TPHE120Y15PP
150kA per mode / 300kA per phase	TPHE220Y15PP
150kA per mode / 300kA per phase	TPHE277Y15PP
150kA per mode / 300kA per phase	TPHE480D15PP
150kA per mode / 300kA per phase	TPHE347Y15PP
150kA per mode / 300kA per phase	TPHE240H15PP
150kA per mode / 300kA per phase	TPHE240D15PP
150kA per mode / 300kA per phase	TPHE240Y15PP
200kA per mode / 400kA per phase	TPHE120S20PP
200kA per mode / 400kA per phase	TPHE120Y20PP
200kA per mode / 400kA per phase	TPHE220Y20PP
200kA per mode / 400kA per phase	TPHE277Y20PP
200kA per mode / 400kA per phase	TPHE480D20PP
200kA per mode / 400kA per phase	TPHE347Y20PP
200kA per mode / 400kA per phase	TPHE240H20PP
200kA per mode / 400kA per phase	TPHE240D20PP
200kA per mode / 400kA per phase	TPHE240Y20PP
300kA per mode / 600kA per phase	TPHE120S30PP
300kA per mode / 600kA per phase	TPHE120Y30PP
300kA per mode / 600kA per phase	TPHE220Y30PP
300kA per mode / 600kA per phase	TPHE277Y30PP
300kA per mode / 600kA per phase	TPHE480D30PP
300kA per mode / 600kA per phase	TPHE347Y30PP
300kA per mode / 600kA per phase	TPHE240H30PP
300kA per mode / 600kA per phase	TPHE240D30PP
300kA per mode / 600kA per phase	TPHE240Y30PP

Surge Protection Device (SPD)
Critical Power Products
Integrated Tranquell™ HE and ME
Designed for GE Distribution Equipment

For GE Switch Gear Distribution Equipment

200 kA Symmetrical Fault Withstand
Panelboard, Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Product Number
100kA per mode / 200kA per phase	TPHE120S10SG
100kA per mode / 200kA per phase	TPHE120Y10SG
100kA per mode / 200kA per phase	TPHE220Y10SG
100kA per mode / 200kA per phase	TPHE277Y10SG
100kA per mode / 200kA per phase	TPHE480D10SG
100kA per mode / 200kA per phase	TPHE347Y10SG
100kA per mode / 200kA per phase	TPHE240H10SG
100kA per mode / 200kA per phase	TPHE240D10SG
100kA per mode / 200kA per phase	TPHE240Y10SG
150kA per mode / 300kA per phase	TPHE120S15SG
150kA per mode / 300kA per phase	TPHE120Y15SG
150kA per mode / 300kA per phase	TPHE220Y15SG
150kA per mode / 300kA per phase	TPHE277Y15SG
150kA per mode / 300kA per phase	TPHE480D15SG
150kA per mode / 300kA per phase	TPHE347Y15SG
150kA per mode / 300kA per phase	TPHE240H15SG
150kA per mode / 300kA per phase	TPHE240D15SG
150kA per mode / 300kA per phase	TPHE240Y15SG
200kA per mode / 400kA per phase	TPHE120S20SG
200kA per mode / 400kA per phase	TPHE120Y20SG
200kA per mode / 400kA per phase	TPHE220Y20SG
200kA per mode / 400kA per phase	TPHE277Y20SG
200kA per mode / 400kA per phase	TPHE480D20SG
200kA per mode / 400kA per phase	TPHE347Y20SG
200kA per mode / 400kA per phase	TPHE240H20SG
200kA per mode / 400kA per phase	TPHE240D20SG
200kA per mode / 400kA per phase	TPHE240Y20SG
300kA per mode / 600kA per phase	TPHE120S30SG
300kA per mode / 600kA per phase	TPHE120Y30SG
300kA per mode / 600kA per phase	TPHE220Y30SG
300kA per mode / 600kA per phase	TPHE277Y30SG
300kA per mode / 600kA per phase	TPHE480D30SG
300kA per mode / 600kA per phase	TPHE347Y30SG
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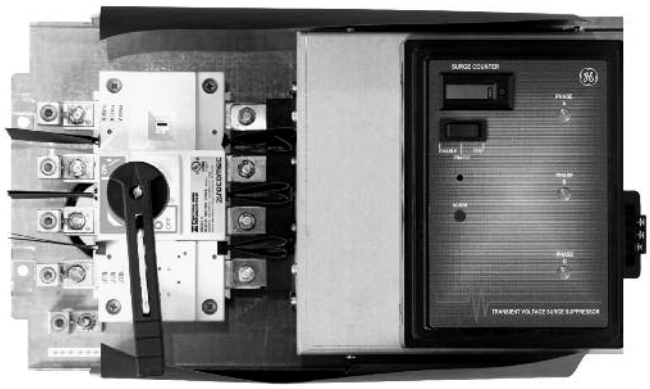
300kA per mode / 600kA per phase	TPHE240D30SG
300kA per mode / 600kA per phase	TPHE240Y30SG



Product # ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ *

* **PP** suffix available for all kA ratings (integral to Spectra™ panel or switchboard)
SG suffix for all THE devices (100kA - 300kA) integral to switchgear
ME suffix available for all kA ratings (integral to MCC)

		Nominal Voltage (Volts RMS)	System Voltage Configuration	Voltage Protection Rating (VPR) UL 1449, 3rd Edition September 2009 Revision						MCOV % Max. Continuous Operating Voltage
				L-N	HL-N	L-G	HL-G	N-G	L-L	
TPHE	120S	120/240	1 Ph, 3 W + G	900	—	800	—	700	1200	125%
TPME	120Y	120Y/208	3 Ph, 4 W + G	900	—	800	—	700	1200	125%
	220Y	220Y/380	3 Ph, 4 W + G	1500	—	1200	—	1200	2000	145%
	240D	240 Delta	3 Ph, 3 W + G	—	—	1200	—	—	1800	196%
	240H	120/240 Delta HL	3 Ph, 4 W + G	1000	1200	800	1200	700	2000	115%
	240Y	240Y/415	3 Ph, 4 W + G	1500	—	1200	—	1200	2000	130%
	277Y	277Y/480	3 Ph, 4 W + G	1500	—	1200	—	1200	2000	115%
	347Y	347Y/600	3 Ph, 4 W + G	1500	—	1500	—	1500	2500	115%
	480D	480 Delta	3 Ph, 3 W + G	—	—	1800	—	—	3000	198%

Also available in 600D configurations. For details, please contact GE Power Quality Customer Service at 800 637-1738.

		Maximum Surge Current Capacity		
		Exposure Level	Per Mode	Per Phase
06	TPME		65kA	130kA
08	TPME		80KA	160KA
10	TPME		100kA	200kA
12	TPHE		125kA	250kA
15	TPHE		150kA	300kA
20	TPHE		200kA	400kA
25	TPHE		250kA	500kA
30	TPHE		200kA	400kA

NOTE: For TVSS field installation kit, add the prefix "A" and replace "PP" suffix with "K" suffix

Product # Example

TPHE277Y15PP (factory installed)
ATHE277Y15K (field installation)

Surge Protection Devices (SPD)
Critical Power Products
Tranquell™ 9X and 24X
Box Extensions Designed for GE "A Series™" Distribution Equipment

This SPD model is installed in an extended box and connects to the "A Series™" Panelboard without adding width or depth to the panel enclosure and is ideal for aftermarket installations. These units have been tested to surge current ratings per NEMA LS-1, up to 200 kA per mode, including the fuses in the surge path. Standard features include a surge counter, audible alarm, indicating lights, dry contacts. Rating options range from 65 kA per mode to 300 kA per mode.

All mode protection is provided with surge components (MOVs) connected on the phase-to-neutral, phase-to-ground, and neutral-to-ground paths as appropriate for the voltage configuration.

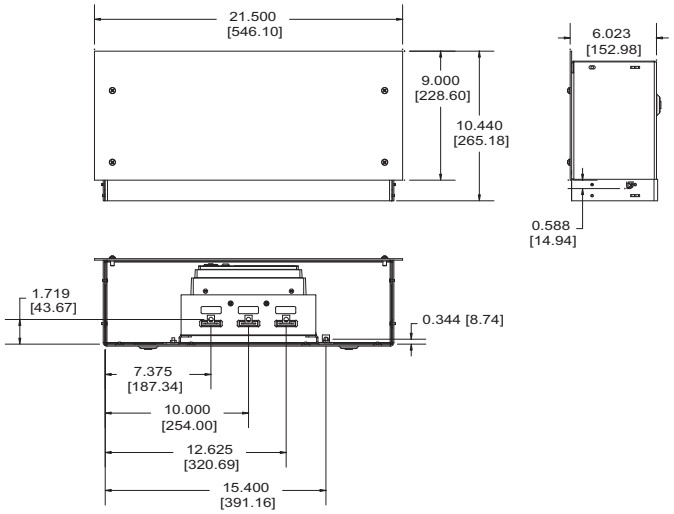
Tranquell™ 9X and 24X products are engineered for reliability, flexibility and long life in the most extreme surge environments. The true maximum surge current rating, unlimited by fusing, has been proven successful in 3rd party tests.

Features and Benefits

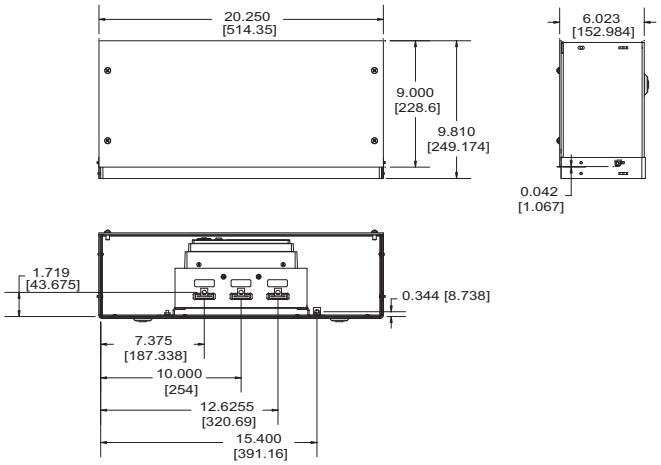
—UL1449, 3rd Edition
—UL Tested to 200,000 Amperes Symmetrical Withstand for 24X
—UL Tested to 65,000 Amperes Symmetrical Withstand for 9X
—Field Installed with "A Series™" panels
—Tranquell™ ME Device is Capable of Surviving a minimum of 5,000 Category C3 Impulses (10kA, 20kV) per mode.
—Tranquell™ HE Device is Capable of Surviving a minimum of 20,000 Category C3 Impulses (10kA, 20kV) per mode.
—Device Capable of Surviving a minimum of 5,000 Longwave (10x1000µs) Impulses per mode.
—Form C Dry Contacts for Remote Monitoring
—Green Status Indicating Lights, Red Service Light
—Audible Alarm with Test/Disable Feature
—Surge Counter
—Standard 5 year limited warranty, Optional 20 year warranty

Specifications

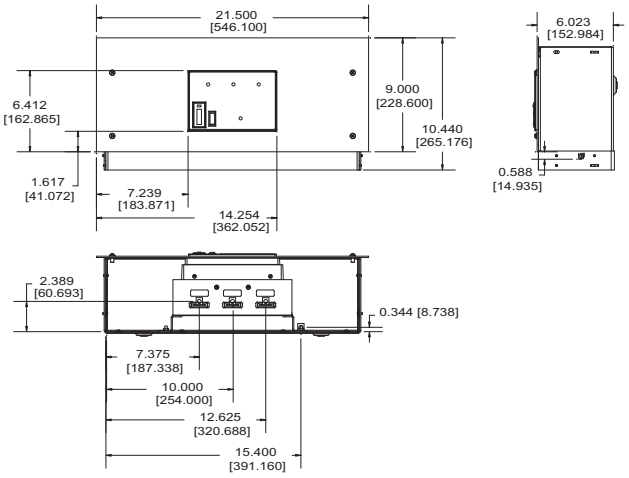
Operating Frequency:	50/60 Hz
Connection:	6 to 2/0 Conductors, Parallel Connected
Operating Temperature:	-40°C to +65°C
Operating Humidity:	0% to 95% Non-Condensing
Weight:	9X - 30 lbs., 12X - 52 lbs.



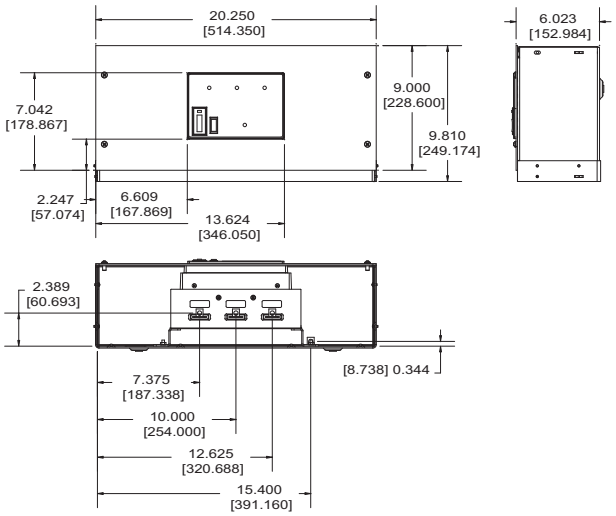
BX9F Dimensions



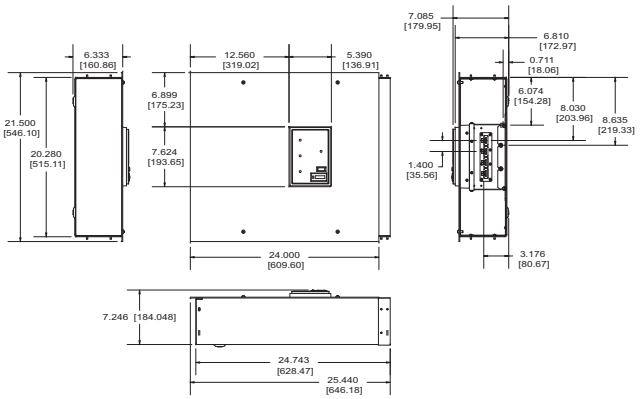
BX9S Dimensions



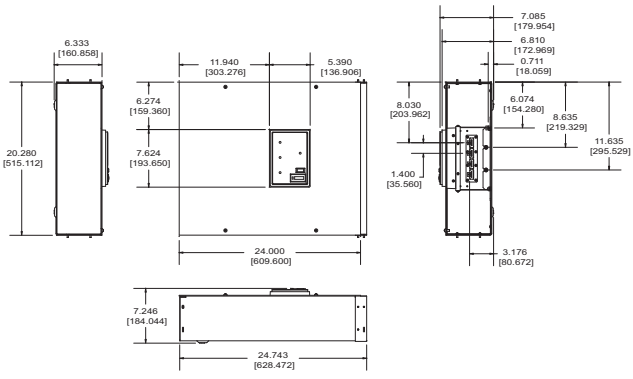
BX9WF Dimensions



BX9WS Dimensions



BX24WF Dimensions



BX24WS Dimensions

Tranquell™ 9X Box Extensions - 65 kA Symmetrical Fault Withstand

Maximum Surge Current	Enclosure Type	Description	Product Number
65kA per mode / 130kA per phase	A Series™ Extension Flush Mount	9" Box Ext,Flush Mount, Lights, Alarm, Counter, Contacts	TPMEXXXX06BX9F
80kA per mode / 160kA per phase	A Series™ Extension Flush Mount	9" Box Ext,Flush Mount, Lights, Alarm, Counter, Contacts	TPMEXXXX08BX9F
100kA per mode / 200kA per phase	A Series™ Extension Flush Mount	9" Box Ext,Flush Mount, Lights, Alarm, Counter, Contacts	TPMEXXXX10BX9F
65kA per mode / 130kA per phase	A Series™ Extension Flush Mount	9" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX06BX9WF
80kA per mode / 160kA per phase	A Series™ Extension Flush Mount	9" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX08BX9WF
100kA per mode / 200kA per phase	A Series™ Extension Flush Mount	9" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX10BX9WF
65kA per mode / 130kA per phase	A Series™ Extension Surface Mount	9" Box Ext,Surface Mount, Lights, Alarm, Counter, Contacts	TPMEXXXX06BX9S
80kA per mode / 160kA per phase	A Series™ Extension Surface Mount	9" Box Ext,Surface Mount, Lights, Alarm, Counter, Contacts	TPMEXXXX08BX9S
100kA per mode / 200kA per phase	A Series™ Extension Surface Mount	9" Box Ext,Surface Mount, Lights, Alarm, Counter, Contacts	TPMEXXXX10BX9S
65kA per mode / 130kA per phase	A Series™ Extension Surface Mount	9" Box Ext,Surface Mount, Access Display, Lights, Alarm, Counter, Contacts	TPMEXXXX06BX9WS
80kA per mode / 160kA per phase	A Series™ Extension Surface Mount	9" Box Ext,Surface Mount, Access Display, Lights, Alarm, Counter, Contacts	TPMEXXXX08BX9WS
100kA per mode / 200kA per phase	A Series™ Extension Surface Mount	9" Box Ext,Surface Mount, Access Display, Lights, Alarm, Counter, Contacts	TPMEXXXX10BX9WS

Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

Tranquell™ 24X Box Extensions - 65kA Symmetrical Fault Withstand

Maximum Surge Current	Enclosure Type	Description	Product Number
65kA per mode / 130kA per phase	A Series™ Extension Flush Mount	24" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX06BX24WF
80kA per mode / 160kA per phase	A Series™ Extension Flush Mount	24" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX08BX24WF
100kA per mode / 200kA per phase	A Series™ Extension Flush Mount	24" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX10BX24WF
65kA per mode / 130kA per phase	A Series™ Extension Surface Mount	24" Box Ext,Surface Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX06BX24WS
80kA per mode / 160kA per phase	A Series™ Extension Surface Mount	24" Box Ext,Surface Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX08BX24WS
100kA per mode / 200kA per phase	A Series™ Extension Surface Mount	24" Box Ext,Surface Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPMEXXXX10BX24WS

Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

Tranquell™ 24X Box Extensions - 200kA Symmetrical Fault Withstand

Maximum Surge Current	Enclosure Type	Description	Product Number
100kA per mode / 200kA per phase	A Series™ Extension Surface Mount	24" Box Ext,Surface Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX10BX24WS
150kA per mode / 300kA per phase	A Series™ Extension Surface Mount	24" Box Ext,Surface Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX15BX24WS
200kA per mode / 400kA per phase	A Series™ Extension Surface Mount	24" Box Ext,Surface Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX20BX24WS
300kA per mode / 600kA per phase	A Series™ Extension Surface Mount	24" Box Ext,Surface Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX30BX24WS
100kA per mode / 200kA per phase	A Series™ Extension Flush Mount	24" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX10BX24WF
150kA per mode / 300kA per phase	A Series™ Extension Flush Mount	24" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX15BX24WF
200kA per mode / 400kA per phase	A Series™ Extension Flush Mount	24" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX20BX24WF
300kA per mode / 600kA per phase	A Series™ Extension Flush Mount	24" Box Ext,Flush Mount, DisplayAccess, Lights, Alarm, Counter, Contacts	TPHEXXXX30BX24WF

Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

ME – Medium Exposure Level

* 9S - Surface mounted, no display
9WS - Surface mounted, display access
9F - Flush mounted , no display
9WF - Flush mounted, display access

ME – Medium Exposure & HE – High Exposure Level

* 24WS - Surface mounted, display access
24WF - Flush mounted, display access

Product # T P ___ ___ ___ ___ ___ ___ ___ B X *

		Nominal Voltage (Volts RMS)	System Voltage Configuration	MCOV % Max. Continuous Operating Voltage
ME	120S	120/240	1 Ph, 3 W + G	125%
HE	120Y	120Y/208	3 Ph, 4 W + G	125%
	220Y	220Y/380	3 Ph, 4 W + G	145%
	240D	240 Delta	3 Ph, 3 W + G	115%
	240H	120/240 Delta HL	3 Ph, 4 W + G	115%
	240Y	240Y/415	3 Ph, 4 W + G	130%
	277Y	277Y/480	3 Ph, 4 W + G	115%
	347Y	347Y/600	3 Ph, 4 W + G	115%
	480D	480 Delta	3 Ph, 3 W + G	170%

Also available in 600D configurations. For details, please contact GE Power Quality Customer Service at 800 637 1738.

	Maximum Surge Current Capacity		
	Exposure Level	Per Mode	Per Phase
06	ME	65kA	130kA
08	ME	80kA	160kA
10	ME	100kA	200kA
12	HE	125kA	250kA
15	HE	150kA	300kA
20	HE	200kA	400kA
25	HE	250kA	500kA
30	HE	300kA	600kA

Phase Rating = (L-N + L-G)

Product # Example

TPHE277Y15BX24WF
—277Y/480 V, 3 Ph, 4 W + G
—150kA per mode
—Flush mounted, display access

Voltage Protection Rating (VPR)
UL 1449, 3rd Edition — September 2009 Revision

	B x 9						B x 24					
	L-N	HL-N	L-G	HL-G	N-G	L-L	L-N	HL-N	L-G	HL-G	N-G	L-L
120S	1500	—	1500	—	900	1800	1500	—	1500	—	1000	1800
120Y	1500	—	1500	—	900	1800	1500	—	1500	—	1000	1800
220Y	1800	—	2000	—	1500	2500	1800	—	1800	—	1500	2500
240D	—	—	1800	—	—	2500	—	—	1800	—	—	2500
240H	1500	1800	1500	2000	900	1800	1500	1800	1500	1800	1000	1800
240Y	1800	—	2000	—	1500	2500	1800	—	1800	—	1500	2500
277Y	1800	—	2000	—	1500	2500	1800	—	1800	—	1500	2500
347Y	2000	—	2000	—	1800	3000	3000	—	2500	—	1800	3000
480D	—	—	2500	—	—	4000	—	—	2500	—	—	4000

Surge Protection Devices (SPD)
Critical Power Products
Tranquell™ HE and ME
Wall Mount

These devices are available in a standard NEMA 12 enclosure. Optional enclosure types include NEMA 12 and 4X, flushmount, surface mount and stainless steel. These units have been tested to surge current ratings per NEMA LS-1, up to 200kA per mode, including the fuses in the surge path. Standard features include a surge counter, audible alarm, indicating lights, dry contacts, and an integral surge rated disconnect (WMN1 and WMN4 only). Rating options range from 65kA per mode to 300 kA per mode.

All mode protection is provided with surge components (MOVs) connected on the phase to neutral, phase to ground, and neutral to ground paths as appropriate for the voltage configuration.

Tranquell™ HE and ME products are engineered for reliability, flexibility and long life in the most extreme surge environment. The true maximum surge current rating, unlimited by fusing, has been proven successful in 3rd party tests.

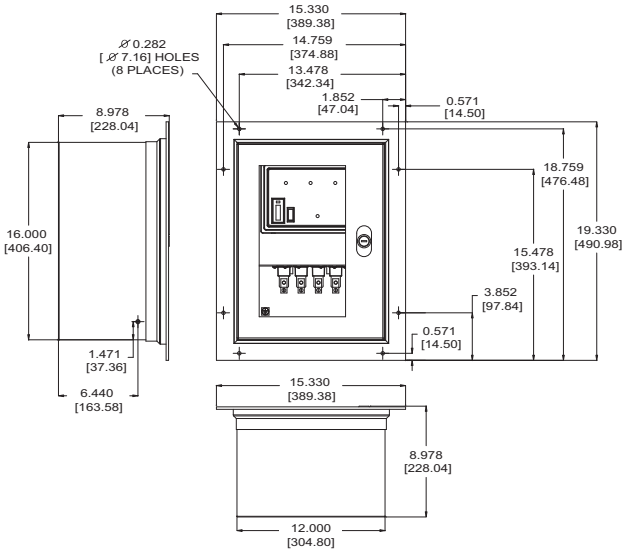
Features and Benefits

—UL1449, 3rd Edition CUL, UL1283
—UL Tested to 200,000 Amperes Symmetrical Withstand
—Integral Surge Rated Disconnect
—Tranquell™ ME Device is Capable of Surviving a minimum of 5,000 Category C3 Impulses (10kA, 20kV) per mode.
—Tranquell™ HE Device is Capable of Surviving a minimum of 20,000 Category C3 Impulses (10kA, 20kV) per mode.
—Device Capable of Surviving a minimum of 5,000 Longwave (10x1000µs) Impulses per mode.
—Patented Thermal Fuse Technology in Combination with Surge Rated Fuses
—Form C Dry Contacts for Remote Monitoring
—Green Status Indicating Lights, Red Service Light
—Audible Alarm with Test/Disable Feature
—Surge Counter
—Standard 10 year limited warranty, Optional 20 year warranty

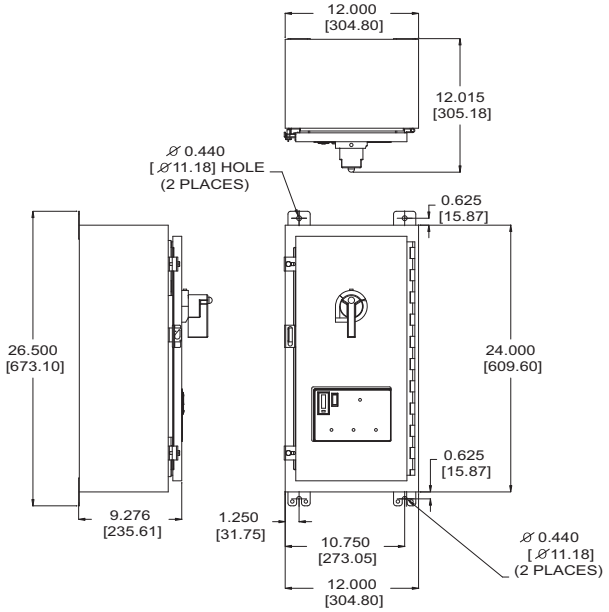
Specifications

Operating Frequency:	50/60 Hz
Connection:	6 to 2/0 Conductors, Parallel Connected
Operating Temperature:	-40°C to +65°C
Operating Humidity:	0% to 95% Non-Condensing
Weight:	50 lbs.: (THE), 32 lbs. (TME)

*Must be installed downstream from breaker 60 Amp or less.



WMN12F Dimensions



WMN1 Dimensions

Wall Mount Tranquell™ ME - 200kA Symmetrical Fault Withstand – Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Enclosure Type	Product Number
65kA per mode / 130kA per phase	NEMA 12 Flush	TMEXXXX065WMN12F
80kA per mode / 160kA per phase	NEMA 12 Flush	TMEXXXX080WMN12F
100kA per mode / 200kA per phase	NEMA 12 Flush	TMEXXXX100WMN12F
65kA per mode / 130kA per phase	NEMA 1, Integral Disconnect	TMEXXXX065WMN1
80kA per mode / 160kA per phase	NEMA 1, Integral Disconnect	TMEXXXX080WMN1
100kA per mode / 200kA per phase	NEMA 1, Integral Disconnect	TMEXXXX100WMN1
65kA per mode / 130kA per phase	NEMA 12 Surface	TMEXXXX065WMN12S
80kA per mode / 160kA per phase	NEMA 12 Surface	TMEXXXX080WMN12S
100kA per mode / 200kA per phase	NEMA 12 Surface	TMEXXXX100WMN12S
65kA per mode / 130kA per phase	NEMA 4 Painted Steel Surface	TMEXXXX065WMN4S
80kA per mode / 160kA per phase	NEMA 4 Painted Steel Surface	TMEXXXX080WMN4S
100kA per mode / 200kA per phase	NEMA 4 Painted Steel Surface	TMEXXXX100WMN4S
65kA per mode / 130kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TMEXXXX065WMN4
80kA per mode / 160kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TMEXXXX080WMN4
100kA per mode / 200kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TMEXXXX100WMN4
65kA per mode / 130kA per phase	NEMA 4X Stainless Steel	TMEXXXX065WMN4X
80kA per mode / 160kA per phase	NEMA 4X Stainless Steel	TMEXXXX080WMN4X
100kA per mode / 200kA per phase	NEMA 4X Stainless Steel	TMEXXXX100WMN4X

Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

Wall Mount Tranquell™ HE - 200kA Symmetrical Fault Withstand – Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Enclosure Type	Product Number
100kA per mode / 200kA per phase	NEMA 12 Flush	THEXXXX100WMN12F
150kA per mode / 300kA per phase	NEMA 12 Flush	THEXXXX150WMN12F
200kA per mode / 400kA per phase	NEMA 12 Flush	THEXXXX200WMN12F
300kA per mode / 600kA per phase	NEMA 12 Flush	THEXXXX300WMN12F
100kA per mode / 200kA per phase	NEMA 1, Integral Disconnect	THEXXXX100WMN1
150kA per mode / 300kA per phase	NEMA 1, Integral Disconnect	THEXXXX150WMN1
200kA per mode / 400kA per phase	NEMA 1, Integral Disconnect	THEXXXX200WMN1
300kA per mode / 600kA per phase	NEMA 1, Integral Disconnect	THEXXXX300WMN1
100kA per mode / 200kA per phase	NEMA 12 Surface	THEXXXX100WMN12S
150kA per mode / 300kA per phase	NEMA 12 Surface	THEXXXX150WMN12S
200kA per mode / 400kA per phase	NEMA 12 Surface	THEXXXX200WMN12S
300kA per mode / 600kA per phase	NEMA 12 Surface	THEXXXX300WMN12S
100kA per mode / 200kA per phase	NEMA 4 Painted Steel Surface	THEXXXX100WMN4S
150kA per mode / 300kA per phase	NEMA 4 Painted Steel Surface	THEXXXX150WMN4S
200kA per mode / 400kA per phase	NEMA 4 Painted Steel Surface	THEXXXX200WMN4S
300kA per mode / 600kA per phase	NEMA 4 Painted Steel Surface	THEXXXX300WMN4S
100kA per mode / 200kA per phase	NEMA 4X Fiberglass, Integral Disconnect	THEXXXX100WMN4
150kA per mode / 300kA per phase	NEMA 4X Fiberglass, Integral Disconnect	THEXXXX150WMN4
200kA per mode / 400kA per phase	NEMA 4X Fiberglass, Integral Disconnect	THEXXXX200WMN4
300kA per mode / 600kA per phase	NEMA 4X Fiberglass, Integral Disconnect	THEXXXX300WMN4
100kA per mode / 200kA per phase	NEMA 4X Stainless Steel	THEXXXX100WMN4X
150kA per mode / 300kA per phase	NEMA 4X Stainless Steel	THEXXXX150WMN4X
200kA per mode / 400kA per phase	NEMA 4X Stainless Steel	THEXXXX200WMN4X
300kA per mode / 600kA per phase	NEMA 4X Stainless Steel	THEXXXX300WMN4X

Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

Critical Power Products

Tranquell™ HE and ME

Wall Mount

Product # ___ ___ ___ ___ ___ ___ ___ ___ ___ **W M N** ___ ___ ___

		Nominal Voltage (Volts RMS)	System Voltage Configuration	Voltage Protection Rating (VPR) UL 1449, 3rd Edition September 2009 Revision							MCOV % Max. Continuous Operating Voltage
				L–N	HL–N	L–G	HL–G	N–G	L–L	HL–L	
THE	**120S**	120/240	1 Ph, 3W + G	1000	—	1000	—	700	1200	-—	125%
TME	**120Y**	120Y/208	3 Ph, 4W + G	1000	—	1000	-—	700	1200	—	125%
	220Y	220Y/380	3 Ph, 4W + G	1500	—	1500	—	1000	2000	—	145%
	240D	240 Delta	3 Ph, 4W	—	—	1500	—	—	1800	—	196%
	240H	120/240 Delta HL	3 Ph, 4W + G	1000	1500	1000	1500	700	1200	2500	115%
	240Y	240Y/415	3 Ph, 4W + G	1500	—	1500	—	1000	2000	—	130%
	277Y	277Y/480	3 Ph, 4W + G	1500	—	1500	—	1000	2000	—	115%
	347Y	347Y/600	3 Ph, 4W + G	1800	—	1500	—	1500	2500	—	115%
	480D	480 Delta	3 Ph, 4W	—	—	2000	—	—	4000	—	198%

Maximum Surge Current Capacity			
	Exposure Level	Per Mode	Per Phase
065	**ME**	65kA	130kA
080	**ME**	80kA	160kA
100	**ME**	100kA	200kA
125	**HE**	125kA	250kA
150	**HE**	150kA	300kA
200	**HE**	200kA	400kA
250	**HE**	250kA	500kA
300	**HE**	300kA	600kA

Suffix	Description	NEMA Enclosure	Mounting	Disconnect
1	Painted Steel	1	Surface	Yes
12S	Painted Steel	12	Surface	No
12F	Painted Steel	12	Flush	No
4	Fiberglass	4X	Surface	Yes
4S	Painted Steel	4	Surface	No
4X	Stainless Steel	4X	Surface	No

Product # Example

THE277Y150WMN12S

Surge Protection Device (SPD)
Critical Power Products
Tranquell™ HE and ME
Wall Mount, with Enhanced Thermal Protection

Introduction

Recommended installation locations are primary and secondary distribution and point of use levels. Designed for distribution and point of use locations, but rated for service entrance, the Tranquell™ HE and ME with enhanced thermal protection has been third-party tested to ANSI/IEEE C3 10kA 8x20µs impulses. The entire Tranquell™ HE and ME line-up has been engineered to the highest standards and is designed for rigorous duty and long life, as evidenced in our outstanding minimum repetitive surge current capacity test results.

These devices are available in a standard NEMA 12 enclosure. Optional enclosure types from NEMA 12 – NEMA 4x include flush mount, surface mount, fiberglass and stainless steel.

These units have been tested to surge current ratings per NEMA LS-1, up to 200kA per mode, 400kA per phase. Standard features include a surge counter, audible alarm, indicating lights, dry contacts, and an integral surge rated disconnect. Rating options range from 65kA – 300kA per mode, 130kA – 600kA per phase.

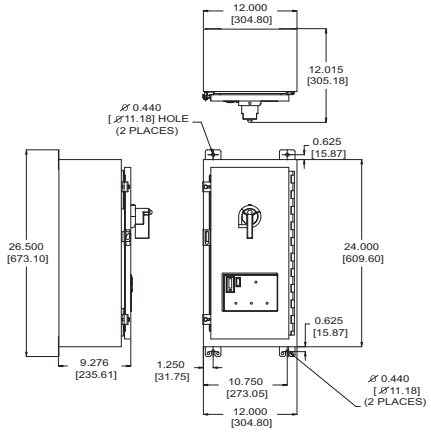
GE engineers design and build transient voltage surge suppressors in our state-of-the-art lab and production facilities. Extensive testing is performed at GE and third-party test labs across North America. Production is carried out at our factory in Bonham, Texas utilizing Six Sigma, ISO 9001 methodologies and lean manufacturing processes.

Specifications

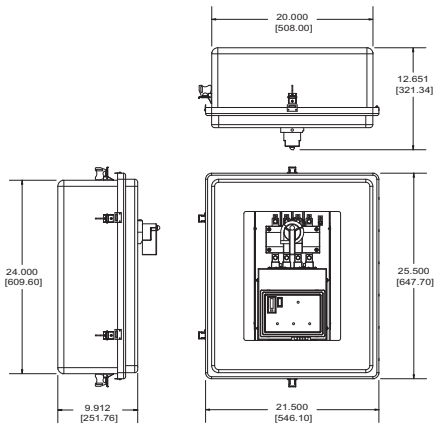
Operating Frequency	50/60 Hz	
Connection	6 to 2/0 Conductors, Parallel Connected	
Operating Temperature	-40° F to 140° F (-40° C to +65° C)	
Operating Humidity	0% to 95% Non-Condensing	
Weight	NEMA Enclosure Suffix:	
	1	63 lbs. (28.5 kg)
	4	56 lbs. (25.4 kg)
	4S, 12S, 12F	44 lbs. (20.0 kg)
	4X	50 lbs. (22.7 kg)

Features and Benefits

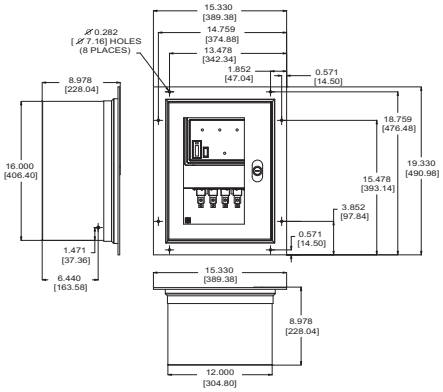
—UL 1449 3rd Edition, September 2009, cUL
—UL 1283 noise filtering. The TVSS device EMI-RFI noise rejection or attenuation value is measured in accordance with the procedures outlined in NEMA LS 1-1992 (R2000)/MIL–STD-220B. Attenuation is -50db minimum @ 100kHz.
—UL tested to 200,000 amperes symmetrical withstand
—Integral surge rated disconnect
—Tranquell™ ME device is capable of surviving a minimum of 5,000 category C3 impulses (10kA, 20kV) per mode
—Tranquell™ HE device is capable of surviving a minimum of 20,000 category C3 impulses (10kA, 20kV) per mode
—Thermally protected MOVS eliminate the need for additional upstream fuses
—NO/NC Form C dry type contacts for remote monitoring
—Green status indicating lights, red service light
—Audible alarm with test/disable feature
—Standard LCD surge counter
—10 year limited warranty (standard), 20 year limited warranty (optional)



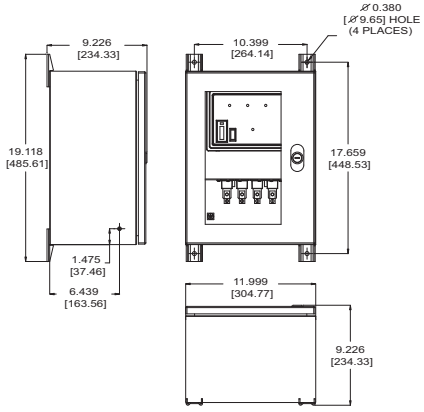
WMN1 Dimensions



WMN4 Dimensions



WMN12F Dimensions



WMN12S, WMN4S, WMN4X Dimensions

Wall Mount Tranquell™ ME - 200kA Symmetrical Fault Withstand – Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Enclosure Type	Product Number
65kA per mode / 130kA per phase	NEMA 12 Flush	TPMEXXXX06WMN12F
80kA per mode / 160kA per phase	NEMA 12 Flush	TPMEXXXX08WMN12F
100kA per mode / 200kA per phase	NEMA 12 Flush	TPMEXXXX10WMN12F
65kA per mode / 130kA per phase	NEMA 12 Surface, Integral Disconnect	TPMEXXXX06WMN1
80kA per mode / 160kA per phase	NEMA 12 Surface, Integral Disconnect	TPMEXXXX08WMN1
100kA per mode / 200kA per phase	NEMA 12 Surface, Integral Disconnect	TPMEXXXX10WMN1
65kA per mode / 130kA per phase	NEMA 12 Surface	TPMEXXXX06WMN12S
80kA per mode / 160kA per phase	NEMA 12 Surface	TPMEXXXX08WMN12S
100kA per mode / 200kA per phase	NEMA 12 Surface	TPMEXXXX10WMN12S
65kA per mode / 130kA per phase	NEMA 4 Painted Steel Surface	TPMEXXXX06WMN4S
80kA per mode / 160kA per phase	NEMA 4 Painted Steel Surface	TPMEXXXX08WMN4S
100kA per mode / 200kA per phase	NEMA 4 Painted Steel Surface	TPMEXXXX10WMN4S
65kA per mode / 130kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TPMEXXXX06WMN4
80kA per mode / 160kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TPMEXXXX08WMN4
100kA per mode / 200kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TPMEXXXX10WMN4
65kA per mode / 130kA per phase	NEMA 4X Stainless Steel	TPMEXXXX06WMN4X
80kA per mode / 160kA per phase	NEMA 4X Stainless Steel	TPMEXXXX08WMN4X
100kA per mode / 200kA per phase	NEMA 4X Stainless Steel	TPMEXXXX10WMN4X

Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

Surge Protection Device (SPD)
Critical Power Products
Tranquell™ HE and ME
Wall Mount, with Enhanced Thermal Protection

Wall Mount Tranquell™ HE - 200kA Symmetrical Fault Withstand – Lights, Alarm, Surge Counter, Form C Contacts

Maximum Surge Current	Enclosure Type	Product Number
100kA per mode / 200kA per phase	NEMA 12 Flush	TPHEXXXX10WMN12F
150kA per mode / 300kA per phase	NEMA 12 Flush	TPHEXXXX15WMN12F
200kA per mode / 400kA per phase	NEMA 12 Flush	TPHEXXXX20WMN12F
300kA per mode / 600kA per phase	NEMA 12 Flush	TPHEXXXX30WMN12F
100kA per mode / 200kA per phase	NEMA 12 Surface, Integral Disconnect	TPHEXXXX10WMN1
150kA per mode / 300kA per phase	NEMA 12 Surface, Integral Disconnect	TPHEXXXX15WMN1
200kA per mode / 400kA per phase	NEMA 12 Surface, Integral Disconnect	TPHEXXXX20WMN1
300kA per mode / 600kA per phase	NEMA 12 Surface, Integral Disconnect	TPHEXXXX30WMN1
100kA per mode / 200kA per phase	NEMA 12 Surface	TPHEXXXX10WMN12S
150kA per mode / 300kA per phase	NEMA 12 Surface	TPHEXXXX15WMN12S
200kA per mode / 400kA per phase	NEMA 12 Surface	TPHEXXXX20WMN12S
300kA per mode / 600kA per phase	NEMA 12 Surface	TPHEXXXX30WMN12S
100kA per mode / 200kA per phase	NEMA 4 Painted Steel Surface	TPHEXXXX10WMN4S
150kA per mode / 300kA per phase	NEMA 4 Painted Steel Surface	TPHEXXXX15WMN4S
200kA per mode / 400kA per phase	NEMA 4 Painted Steel Surface	TPHEXXXX20WMN4S
300kA per mode / 600kA per phase	NEMA 4 Painted Steel Surface	TPHEXXXX30WMN4S
100kA per mode / 200kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TPHEXXXX10WMN4
150kA per mode / 300kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TPHEXXXX15WMN4
200kA per mode / 400kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TPHEXXXX20WMN4
300kA per mode / 600kA per phase	NEMA 4X Fiberglass, Integral Disconnect	TPHEXXXX30WMN4
100kA per mode / 200kA per phase	NEMA 4X Stainless Steel	TPHEXXXX10WMN4X
150kA per mode / 300kA per phase	NEMA 4X Stainless Steel	TPHEXXXX15WMN4X
200kA per mode / 400kA per phase	NEMA 4X Stainless Steel	TPHEXXXX20WMN4X
300kA per mode / 600kA per phase	NEMA 4X Stainless Steel	TPHEXXXX30WMN4X

Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

Product # T P _ _ _ _ _ _ _ _ _ _ W M N _ _ _

		Nominal Voltage (Volts RMS)	System Voltage Configuration	Voltage Protection Rating (VPR) UL 1449, 3rd Edition September 2009							MCOV % Max. Continuous Operating Voltage
				L–N	HL–N	L–G	HL–G	N–G	L–L	HL–L	
ME	120S	120/240	1 Ph, 3W + G	900	—	800	—	700	1200	—	125%
HE	120Y	120Y/208	3 Ph, 4W + G	900	—	800	—	700	1200	—	125%
	220Y	220Y/380	3 Ph, 4W + G	1500	—	1200	—	1200	2000	—	145%
	240D	240 Delta	3 Ph, 4W	—	—	1200	—	—	1800	—	196%
	240H	120/240 Delta HL	3 Ph, 4W + G	1000	1200	800	1200	700	2000	2200	115%
	240Y	240Y/415	3 Ph, 4W + G	1500	—	1200	—	1200	2000	—	130%
	277Y	277Y/480	3 Ph, 4W + G	1500	—	1200	—	1200	2000	—	115%
	347Y	347Y/600	3 Ph, 4W + G	1500	----	1500	----	1500	2500	----	115%
	480D	480 Delta	3 Ph, 4W	----	----	1800	----	----	3000	----	198%

Also available in 600D configurations. For details, please contact GE Power Quality Customer Service at 800 637 1738.

Maximum Surge Current Capacity			
Exposure	Level	Per Mode	Per Phase
06	ME	65kA	130kA
08	ME	80kA	160kA
10	ME	100kA	200kA
12	HE	125kA	250kA
15	HE	150kA	300kA
20	HE	200kA	400kA
25	HE	250kA	500kA
30	HE	300kA	600kA

Phase Rating = (L-N + L-G)

Product # Example

TPHE277Y15WMN12S
—277Y/480 V, 3 Ph, 4 W + G
—150kA per mode
—Surface mount enclosure without disconnect
—Painted steel

Suffix	Description	NEMA Enclosure	Mounting	Disconnect
1	Painted Steel	1	Surface	Yes
12S	Painted Steel	12	Surface	No
12F	Painted Steel	12	Flush	No
4	Fiberglass	4X	Surface	Yes
4S	Painted Steel	4	Surface	No
4X	Stainless Steel	4X	Surface	No

Tranquell™ ME and LE

Wall Mount

The Tranquell™ ME and LE feature compact, economical, universal designs for use at medium exposure, distribution or branch panels and are available in a standard NEMA 12 enclosure. These devices have been tested to surge current ratings per NEMA LS-1, including the fuses in the surge path. These units come standard with indicating lights and dry contacts. Ratings are available from 25kA per mode to 100kA per mode.

These surge protection devices provide all mode protection, with surge components (MOVs) connected on the phase- to-neutral, phase-to-ground, and neutral-to-ground paths as appropriate for the voltage configuration.

Features and Benefits

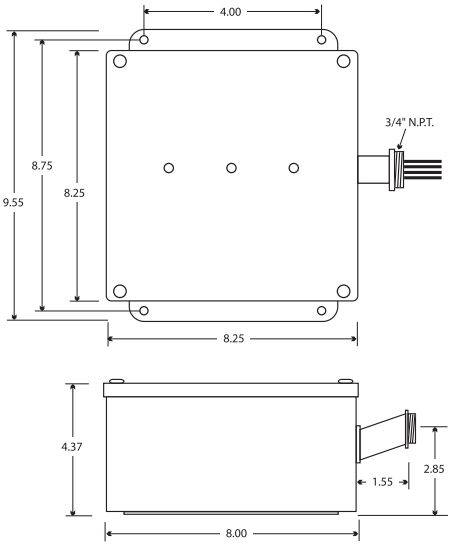
—Universal design allows for easy retrofit installation
—UL1449, 3rd Edition cUL
—Tranquell™ ME devices with UL1283 Noise Filters
—UL Tested to 65,000 Amperes Symmetrical Withstand
—Tranquell™ ME Device is Capable of Surviving a minimum of 5,000 Category C3 Impulses (10kA, 20kV) per mode
—Tranquell™ ME Device Capable of Surviving a minimum of 5,000 Longwave (10x1000ms) Impulses per mode
—Tranquell™ LE Device is Capable of Surviving a minimum of 3,500 Category C3 Impulses (10kA, 20kV) per mode
—Form C Dry Contacts for Remote Monitoring
—Green Status Indicating Light(s)
—Standard 10 year limited warranty, Optional 20 year warranty

Specifications

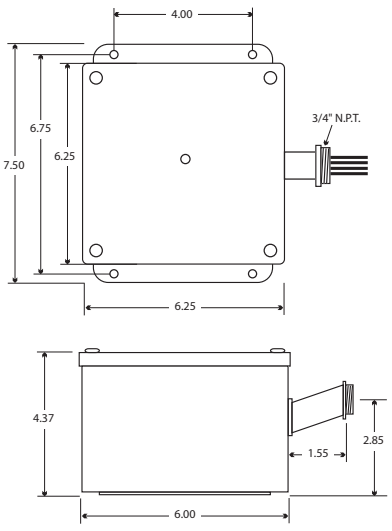
Operating Frequency:	50/60 Hz
Connection:	10 AWG Conductors, Parallel Connected
Operating Temperature:	-40°C to +65°C
Operating Humidity:	0% to 95% Non-Condensing
Weight:	(TME) 19 lbs., (TLE) 11.4 lbs.

*Must be installed downstream from 60 Amp breaker or less.

TME



TLE



Wall Mount Tranquell™ ME and LE - 65 kA Symmetrical Fault Withstand

Maximum Surge Current	Enclosure Type	Description	Product Number
25 kA per mode / 50 kA per phase	NEMA 12	Lights, Form C Contacts	TLEXXXX025WM
50 kA per mode / 100 kA per phase	NEMA 12	Lights, Form C Contacts	TLEXXXX050WM
65 kA per mode / 130 kA per phase	NEMA 12	Lights, Form C Contacts	TMEXXXX065WM
80 kA per mode / 160 kA per phase	NEMA 12	Lights, Form C Contacts	TMEXXXX080WM
100 kA per mode / 200 kA per phase	NEMA 12	Lights, Form C Contacts	TMEXXXX100WM

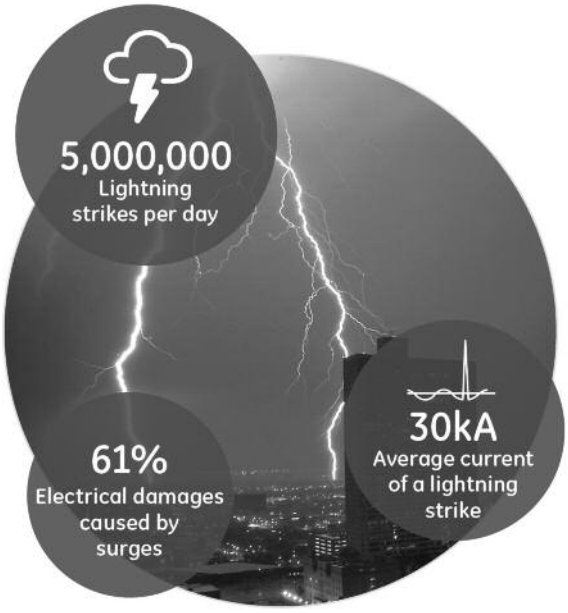
Note: Replace XXXX in Product Number with nomenclature for Nominal Voltage (Volts RMS).

* Voltage Protection Rating, UL1449, 3rd Edition
** Maximum Continuous Operating Voltage

Product # ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ **WM**

		Nominal Voltage (Volts RMS)	System Voltage Configuration	TLE Voltage Protection Rating (VPR) UL 1449, 3rd Edition September 2009							MCOV % Max. Continuous Operating Voltage
				L–N	HL–N	L–G	HL–G	N–G	L–L	HL–L	
TLE	**120S**	120/240	1 Ph, 3W + G	600	—	600	—	600	1000	—	125%
TME	**120Y**	120Y/208	3 Ph, 4W + G	600	—	600	—	600	1000	—	125%
	220Y	220Y/380	3 Ph, 4W + G	1200	—	1000	—	1200	1800	—	145%
	240D	240 Delta	3 Ph, 4W	—	—	900	—	—	1800	—	196%
	240H	120/240 Delta HL	3 Ph, 4W + G	600	1200	600	1000	600	1000	1800	115%
	240Y	240Y/415	3 Ph, 4W + G	1200	—	1000	—	1200	1800	—	130%
	277Y	277Y/480	3 Ph, 4W + G	1200	—	1000	—	1200	1800	—	115%
	480D	480 Delta	3 Ph, 4W	—	—	1800	—	—	4000	—	198%

025	25kA per mode	50 kA per phase	(TLE)
050	50kA per mode	100 kA per phase	(TLE)
065	65 kA per mode	130 kA per phase	(TME)
080	80 kA per mode	160 kA per phas e	(TME)
100	100 kA per mode	200 kA per phase	(TME)



Risk of Electrical Surges

Lightning and surge protection electrical and electronic equipment is indispensable in the daily activities of today's businesses and individuals.

Such devices are connected to the electricity grid, often exchanging data and signals through communication lines and are usually sensitive to disturbances.

These interconnecting networks provide a propagation path for overvoltages.

Protection against lightning and overvoltages not only ensures the safety of people, goods and equipment, but also ensures continuity of installation services and meets criteria of energy efficiency.

Overvoltage protection extends the life of the equipment by more than 20%, which significantly reduces the volume of electronic waste. It also reduces the power consumption of the installations, all of which translates into cost savings and environmental sustainability.

Transient Voltage Surges in LV Power Lines

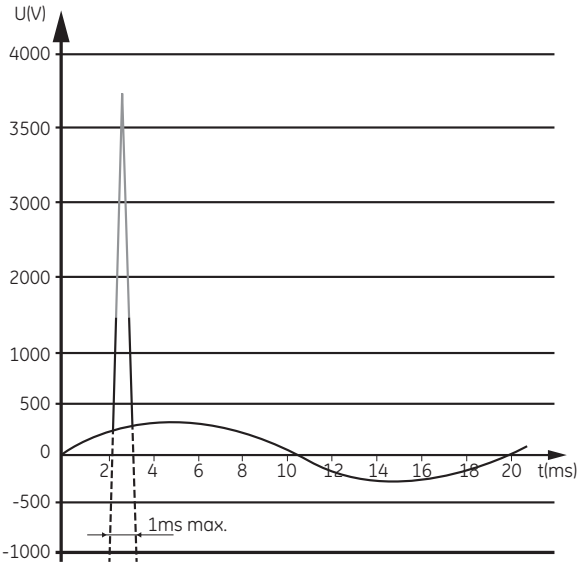
Transient overvoltages are voltage surges that can reach tens of kilovolts with a duration in the order of microseconds.

Despite their short duration, the high energy content can cause serious problems to equipment connected to the line, from premature aging to destruction, causing disruptions to service and financial loss.

This type of surge can have various different causes, including atmospheric lightning directly striking the external protection (lightning rods) on a building or transmission line, or the associated induction of electromagnetic fields on metallic conductors. Outdoor and longer lines are the most exposed to these fields, which often receive high levels of induction.

It is also common for non-weather phenomena such as transformer center switching or the disconnection of motors or other inductive loads to cause voltage spikes in adjacent lines.

The protector will discharge excess energy to earth, thus limiting the peak voltage to a value acceptable for the electrical equipment connected.



When the peak voltage reaches a value higher than the equipment can withstand, it causes its destruction.

Imax

Maximum Discharge Capacity
Maximum peak current, per phase, in 8/20 µs wave that the protection device is able to withstand.

VPR

Voltage Protection Rating
This indicates the maximum residual voltage between the terminals of the protection device during application of an In peak current.

In

Nominal Discharge Current Rating
Peak current in 8/20 µs wave that the protection device can withstand on 15 occasions without reaching the end of its service life.

MCOV

Maximum Continuous Operating Voltage
This indicates the maximum effective or direct current voltage that can be permanently applied to the terminals of the protection device.

TYPE

Type 1
Permanently connected SPDs intended for installation between the secondary of the service transformer and the line side of the service equipment (main panel) overcurrent device, as well as the load side, including watt-hour meter socket enclosures and intended to be installed without an external overcurrent protective device.

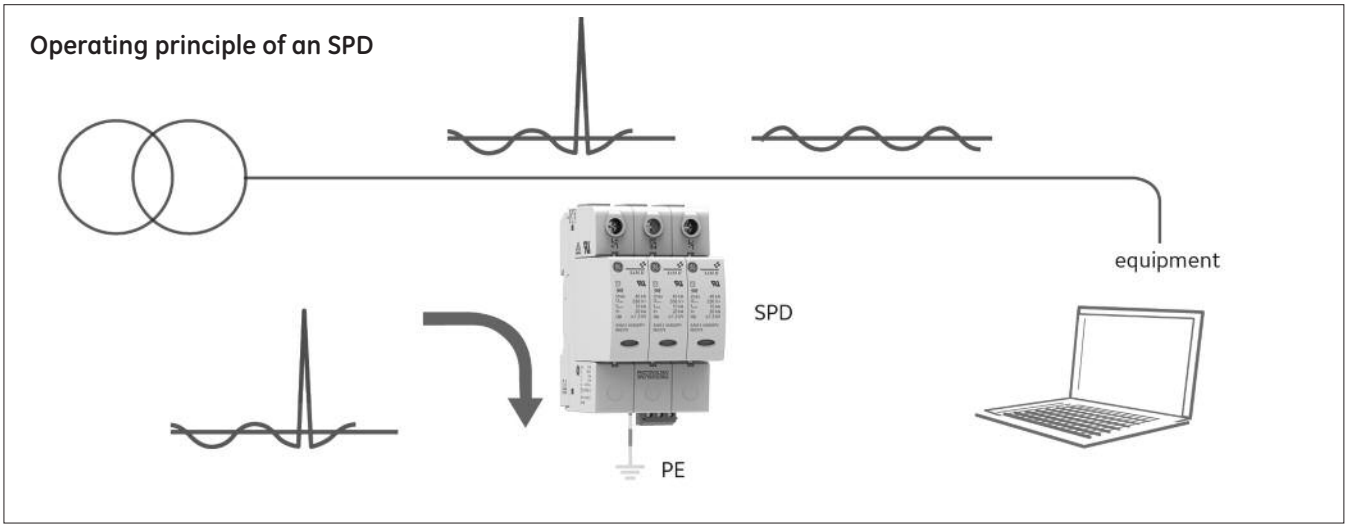
Type 2
Permanently connected SPDs intended for installation on the load side of the service equipment (main panel) overcurrent device; including SPDs located at the branch panel.

Type 3
Point of utilization SPDs, installed at a minimum conductor length of 30 feet (10 meters) from the electrical service panel to the point of utilization. For example cord connected, direct plug-in, receptacle type and SPDs installed at the utilization equipment being protected. The distance 30 feet (10 meters) is exclusive of conductors provided with or used to attach SPDs that the protection device is able to withstand.

The Importance of the Ground Connection

A ground in proper conditions is therefore an aspect not to overlook when it comes to effective surge protection.

Operating principle of an SPD



UL1449 3rd edition, DIN-rail SPDs for Distribution Panels

Standards - UL1449 3rd edition

The objective of UL1449 has always been to increase safety in terms of surge protection. Thus, major changes have recently been made to the surge protection standard. The latest edition, known as UL1449 3rd edition, was published on September 29, 2006 and took effect September 2009, and is now also an ANSI standard. A revision was made on February 8, 2011.

The key updates are:

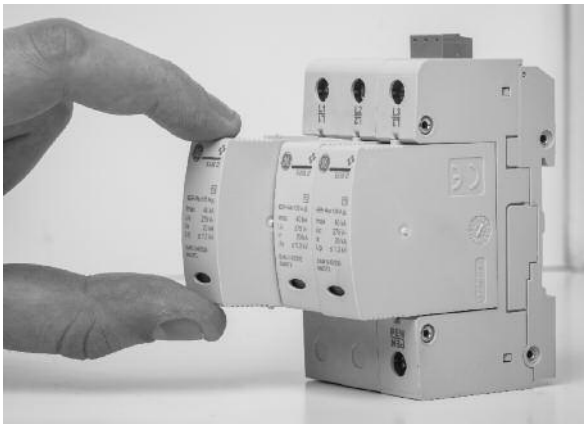
—Change in the standard's name
—The nominal discharge current

Approvals

—cURus

Change in the standard's name: from TVSS to SPDs

Prior to UL1449 3rd edition taking effect, the devices this standard covers were known as transient voltage surge suppressors standard covers were known as transient voltage surge suppressors (TVSS), operating on power circuits not exceeding 600V. With the inception of the 3rd edition, these devices are now known as surge protective devices (SPDs), and may operate on power circuits not exceeding 1000V. This new designation moves the UL standard closer to the International designation and to IEC standards. The new edition is now renamed UL standard for safety for surge protective devices, UL1449.



The nominal discharge current, known as rated current test is new to UL1449, coming from the IEC Standard.

During the test, the SPD is subjected to 15 impulses at the selected nominal discharge current. In order to pass, the SPD cannot create a shock or fire hazard during the test, and nothing in the surge path can open during or after the test.

The nominal discharge current values, with a 8/20 µs wave shape, are selected by the manufacturer as follows:

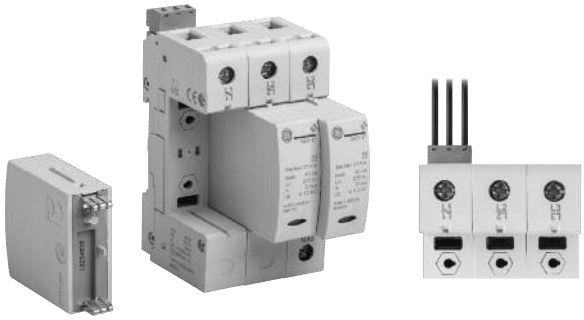
—Type 1: 10 or 20kA
—Type 2: 3, 5, 10 or 20kA
—Type 1, Type 2 and Type 4 SPDs (intended for Type 1 or Type 2 applications) are subjected to this test.
—Sources: Underwriters Laboratories Inc., standard for safety, surge protective devices (UL1449 Third Edition, 2011)

UL1449 3rd edition, DIN-rail SPDs for Distribution Panels

Standards - UL1449 3rd edition

Wiring Diagrams According to ANSI C84.1

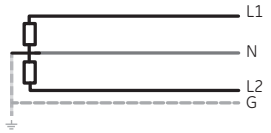
The majority of modern installations in both the US and Canada feature the following kind of power distribution system.



Single Phase System

Single Phase
2 Wires 120/240/277V

Split Phase
3 Wires 240/120V, 480/240V



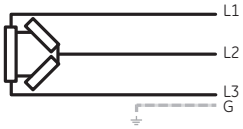
Residential Buildings

i.e. Single phase 240 (Ph-Ph)/120V (to GRND) Grounded midpoint

For example:
120V are used on the wall receptacle and 240V for ovens, ranges, air conditioning and laundry dryers.

Three Phase / Three Wire System

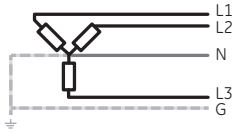
Delta 240/480/600V



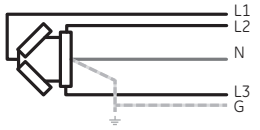
Industrial and Commercial Buildings

Three Phase / Four Wire System

Grounded Wye
208Y/120V, 480Y/277V, 600Y/347V



High-Leg Delta
240/120V HLD



Industrial and Commercial Buildings

* Y describes the solidly grounded circuit. The value "Y" indicates the voltage between phases. The value behind the slash indicates the voltage between phase and the grounding or neutral conductor.

UL1449 3rd edition, DIN-rail SPDs for Distribution Panels

Features & Benefits

—The SAP DIN-rail SPDs utilize fast acting metal oxide varistor (MOV) technology to limit overvoltage to values compatible with the sensitive equipment connected to the network.

End of life indicator
—This feature is standard on all SAP range pluggable DIN-rail surge protectors.
—Each cartridge is equipped with a mechanical indicator which is green when the SPD is operational and protecting the system, and turns red when it has reached end of life. When this occurs, the cartridge must be replaced to guarantee protection.

Remote indication
—Dry contacts, optional in all ranges, for remote indication of protector end of life.

New, optimized disconnection system
—GE has developed an optimized disconnection system for end of life.
—Complies with the disconnection tests of the standards for protectors for photovoltaic applications.

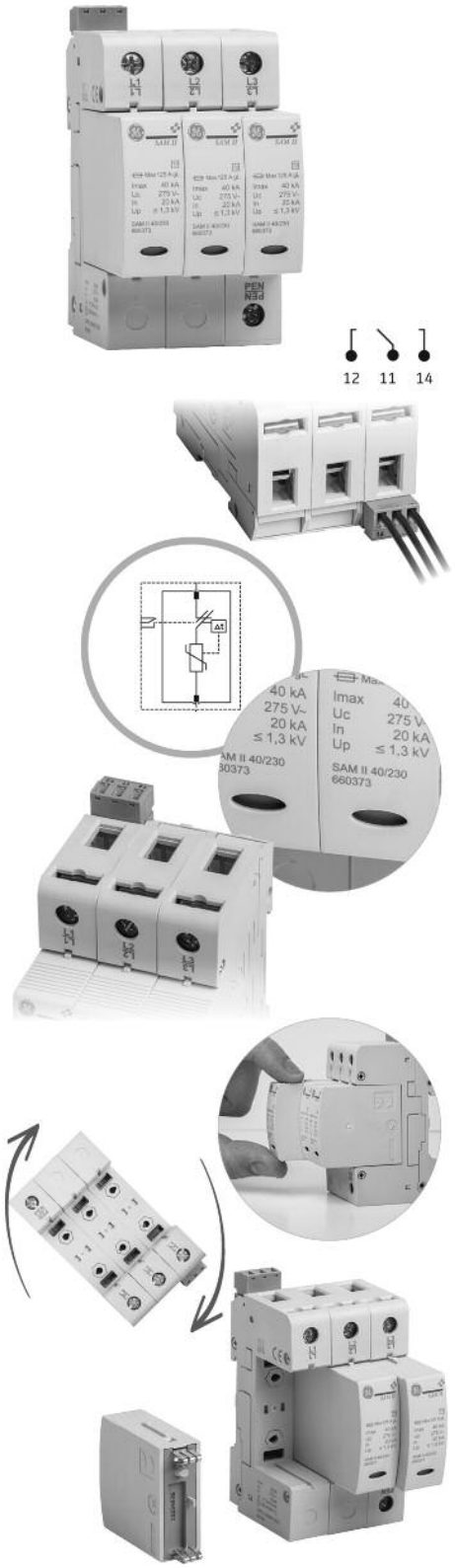
Protector lifetime
—Status indication
—Clear display of protection
—End of life

Biconnect connection
—Two types of terminals: for rigid or flexible cable and for fork type comb busbar.

Cartridge security system
—Vibration-proof insertion “click” effect.

Reversible installation
—Reversible chassis to allow cable entry from above or below.

Mechanical cartridge coding
—Safety system to avoid possible cartridge replacement errors.



UL1449 3rd edition, DIN-rail SPDs for Distribution Panels

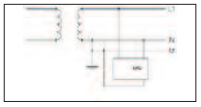
Surge arresters - Class II- SAP Line UL1449 3rd Edition

1P devices

In (A)	Imax	Service voltage	MCOV Uc	Auxiliary contact	No. of modules[1]	Product Number	Pack.
20	40	120V	175	no	1	SAP1II40175[2]	1
		240V	275	no	1	SAP1II40275	1
		277V	320	no	1	SAP1II40320	1
		120V	175	yes	1	SAP1II40175C[2]	1
		240V	275	yes	1	SAP1II40275C	1
		277V	320	yes	1	SAP1II40320C	1

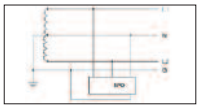
Single Phase System

In (A)	Imax	Service voltage	MCOV Uc	Auxiliary contact	No. of modules[1]	Product Number	Pack.
20	40	120V single phase	175	no	2	SAP2II40175[2]	1
		240V single phase	320	no	2	SAP2II40320	1
		277V single phase	320	no	2	SAP2II40320	1
		120V single phase	175	yes	2	SAP2II40175C[2]	1
		240V single phase	320	yes	2	SAP2II40320C	1
		277V single phase	320	yes	2	SAP2II40320C	1



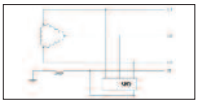
Split Phase System

In (A)	Imax	Service voltage	MCOV Uc	Auxiliary contact	No. of modules[1]	Product Number	Pack.
20	40	240V/120V split phase	175	no	3	SAP3II40175[2]	1
		480V/240V split phase	320	no	3	SAP3II40320	1
		240V/120V split phase	175	yes	3	SAP3II40175C[2]	1
		480V/240V split phase	320	yes	3	SAP3II40320C	1



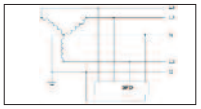
Delta System

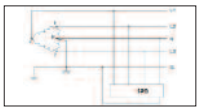
In (A)	Imax	Service voltage	MCOV Uc	Auxiliary contact	No. of modules[1]	Product Number	Pack.
20	40	240V Delta	320	no	3	SAP3II40320	1
10	30	600V Delta	750	yes	3	SAP3II30750	1
20	40	240V Delta	320	yes	3	SAP3II40320C	1
10	30	600V Delta	750	yes	3	SAP3II30750C	1



HLD System Wye System

In (A)	Imax	Service voltage	MCOV Uc	Auxiliary contact	No. of modules[1]	Product Number	Pack.
20	40	240V/120V High Leg Delta	320	no	4	SAP4II40320	1
		240V/120V High Leg Delta	320	yes	4	SAP4II40320C	1
		480Y/277V Wye system	320	no	4	SAP4II40320	1
		480Y/277V Wye system	320	yes	4	SAP4II40320C	1
		208Y/120V Wye System	175	no	4	SAP4II40175[2]	1
		208Y/120V Wye System	175	yes	4	SAP4II40175C[2]	1





Pluggable Cartridges

In (A)	Imax	MCOV Uc	Cartridges replacement In	Product Number	Pack.
20	40	175	SAP1II40175 SAP1II40175C SAP2II40175 SAP2II40175C SAP3II40175 SAP3II40175C SAP4II40175 SAP4II40175C	SAMII40175[2]	1
		275	SAP1II40275 SAP1II40275C	SAMII40275	1
		320	SAP1II40320 SAP1II40320C SAP2II40320 SAP2II40320C SAP3II40320 SAP3II40320C SAP4II40320	SAMII40320	1
10	30	750	SAP3II30750 SAP3II30750C	SAMII30750	1

[1]1 mod. = 0.71in.(18mm)
[2]Ask for availability. Under Type approval.

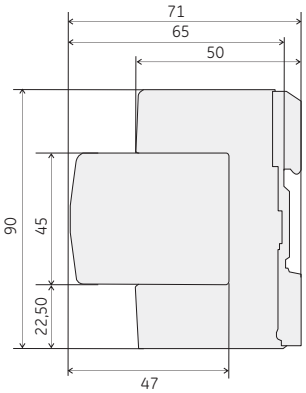
Technical Features

Product Number		SAP1II40/175	SAP1II40/275	SAP1II40/320
Communication Models Product Number		**SAP1II40/175C**	**175C SAP1II40/275C**	**SAP1II40/320C**
UL File		-	E468805	E468805
Designation according UL 1449 4th Edition		SPD Type 2CA	SPD Type 2CA	SPD Type 2CA
Maximum continuous operating voltage	MCOV (V)	175	275	320
Nominal discharge current (8/20 µ)	I_n (kA)	20	20	20
Voltage protection rating	VPR (V)	700	900	1000
Short circuit current rating	SCCR (kA)	100	85	100
Designation according to EN 61643-11/IEC 61643-1		Type 2/Class II	Type 2/Class II	Type 2/Class II
Nominal voltage AC 50-60Hz	U_n (V)	120	230	277
Max. continuous operating voltage	U_C (V)	175	275	320
Max. discharge current (8/20 µs)	I_{max} (kA)	40	40	40
Voltage protection level	U_p (kV)	≤1	≤1.3	≤1.4
Response time	t_A (ns)	≤25	≤25	≤25
Max. mains-side overcurrent protection	(A gL/gG)	125	125	125
Short-circuit withstand capability for max. mains-side overcurrent protection	Icc (kA)	25	25	25
Temporary overvoltage (TOV)	U_T (V)	337/5sec.	337/5sec.	337/5sec.
TOV characteristics		withstand	withstand	withstand
Operating temperature range (parallel)/(series)	T_U °F(°C)	-40°...185°(-40°...+85°)		
Operating state/fault indication		green/red		
Number of ports		1		
Cross-sectional area (min.)		6mm² solid/flexible		
Cross-sectional area (max.)		35mm² stranded/25mm² flexible		
For mounting on		36mm DIN-rail acc. to EN 60715		
Enclosure material		PA+FG UL94 V-0		
Location category		indoor		
Degree of protection		IP 20		
Capacity		1 mod/phase DIN 43880		
Approvals, Certifications		UL, CE		
Type of remote signalling contact		changeover contact (C models)		
Switching capacity a.c. (Pollution degree = 2)		250V/1A (C models)		
Switching capacity a.c. (Pollution degree = 3)		125V/3A (C models)		
Cross-sectional area for remote signaling terminals		max 1.5mm² solid/flexible		

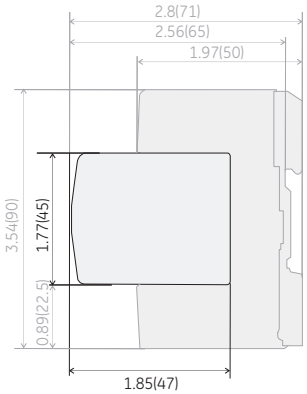
Dimensional Drawings in.(mm)

Surge Protection Devices (SPDs) - SAP, SAPV, SAM

PLUG-IN types



Replacement modules

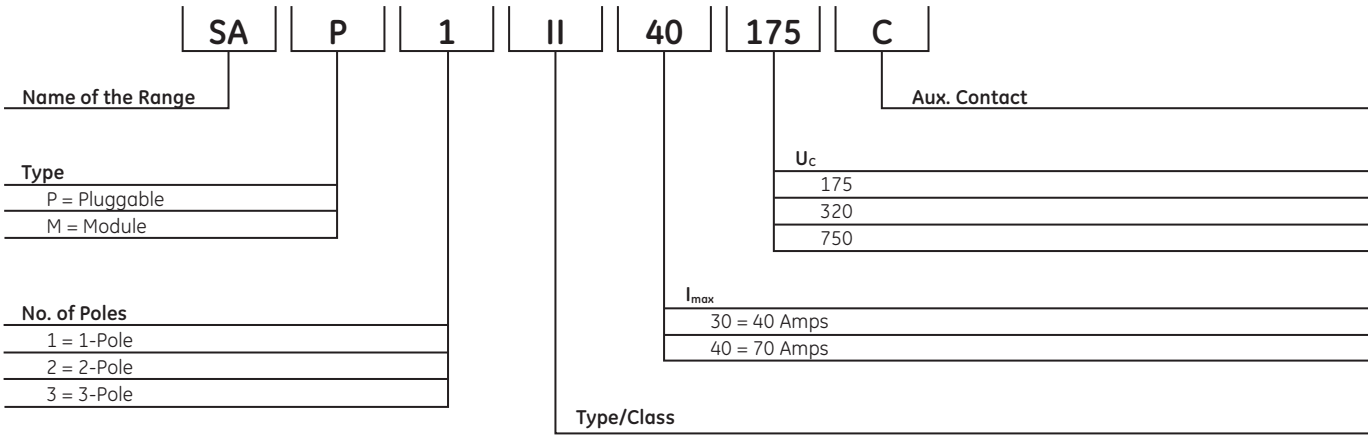


UL1449 3rd edition, DIN-rail SPDs for Distribution Panels

Technical Features

SAP2II40/175 SAP2II40/175C	SAP2II40/320 SAP2II40/320C	SAP3II40/175 SAP3II40/175C	SAP3II40/320 SAP3II40/320C	SAP3II30/750 SAP3II30/750C	SAP4II40/175 SAP4II40/175C	SAP4II40/320 SAP4II40/320C
-	E468805	-	E468805	E468805	-	E468805
SPD Type 2CA	SPD Type 2CA	SPD Type 2CA	SPD Type 2CA	SPD Type 2CA	SPD Type 2CA	SPD Type 2CA
175	320	175	320	750	175	320
20	20	20	20	10	20	20
700	1000	700	1000	2500	700	1000
100	100	100	100	50	100	100
Type 2/Class	Type 2/Class II	Type 2/Class II	Type 2/Class II	Type 2/Class II	Type 2/Class II	Type 2/Class II
120	277	120	277	600	120	277
175	320	175	320	750	175	320
40	40	40	40	30	40	40
≤1	≤1,4	≤1	≤1,4	≤3	≤1	≤1,4
≤25	≤25	≤25	≤25	≤25	≤25	≤25
125	125	125	125	63	125	125
25	25	25	25	25	25	25
337/5sec. withstand	337/5sec. withstand	337/5sec. withstand	337/5sec. withstand	337/5sec. withstand	337/5sec. withstand	337/5sec. withstand
-40°...185°(-40°...+85°)						
green/red						
1						
6mm² solid/flexible						
35mm² stranded/25mm² flexible						
36mm DIN-rail acc. to EN 60715						
PA+FG UL94 V-0						
indoor						
IP 20						
1 mod/phase DIN 43880						
UL, CE						
changeover contact (C models)						
250V/1A (C models)						
125V/3A (C models)						
max 1.5mm² solid/flexible						

Product Number Guide for Surge Protection Devices



Examples

SA	P	1	II	40	175	-
SA	P	2	II	40	320	-
SA	P	3	II	40	320	-
SA	P	3	II	30	750	-
SA	P	1	II	40	175	C
SA	P	2	II	40	320	C
SA	P	3	II	40	320	C
SA	P	3	II	30	750	C

UL1449 3rd edition, DIN-rail SPDs for Photovoltaic Application

SPDs for Photovoltaic Application

SAPV is the series of devices that provide advanced overvoltage protection to photovoltaic systems by utilizing GE's optimized dynamic thermal disconnection system, which does not require additional overcurrent protection (back-up fuse) due to its high short-circuit withstand rating.

These surge protective devices are suitable for all PV applications: large-scale, rooftop and self-consumption (off-grid) DC installations.

Ratings and Features

—Maximum discharge current (8/20µs): 40kA
—Nominal discharge current (8/20µs): 20kA (10kA for 1500V DC)
—Ucpv: 660, 1060 Vdc and 1500V DC
—Iscpv: 10kA (EN-50539-11), no back-up fuse required
—SCCR: 50kA, 65kA, 100kA (UL1449 3rd edition)
—DIN-rail mountable, plug-in format
—Visual and remote end of life indicators

Surge Arresters - Class II - SAPV Line UL1449 3rd Edition

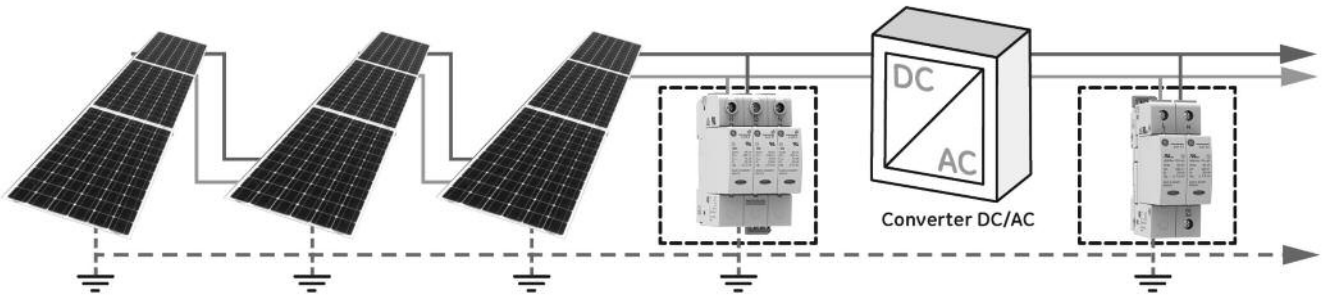
In (kA)	Imax	Service voltage AC/DC/DC PV	MCOV Uc	Up (Ures)	Auxiliary contact	No. of modules[1]	Product Number	Pack.
20	40	600 DC PV	600	2600	no	3	SAPVII40/600	1
		600 DC PV	600	2600	yes	3	SAPVII40/600C	1
		1000 DC PV	1000	4000	no	3	SAPVII40/1000	1
		1000 DC PV	1000	4000	yes	3	SAPVII40/1000C	1
		1500 DC PV	1500	5000	no	3	SAPVII40/1500	1
		1500 DC PV	1500	5000	yes	3	SAPVII40/1500C	1

[1]1 module = 0.71 in. (18mm)

Pluggable Cartridges

In (kA)	kA) Imax	Service voltage AC/DC/DC PV	To be replaced in		Product Number	Pack.
20	40	600 DC PV	SAPVII40/600	SAPVII40/600C	SAMII40/600PV	1
20	40	1000 DC PV	SAPVII40/1000	SAPVII40/1000C	SAMII40/1000PV	1
10	40	1500 DC PV	SAPVII40/1500	SAPVII40/1500C	SAMII40/1500PV	1

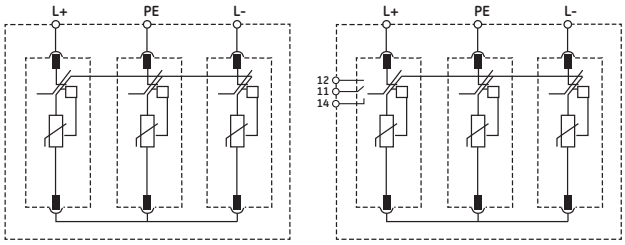
Installation of SAP SPDs on Photovoltaic Networks



UL1449 3rd edition, DIN-rail SPDs for Photovoltaic Application

Three Pole Transient Surge Protector

Internal Configuration



Technical Features

Product Number		SAP3II40/600	SAP3II40/1000	SAP3II40/1500
Communication Models Product Number		**SAP3II40/600C**	**SAP3II40/1000C**	**SAP3II40/1500C**
UL File		E468805	E468805	E468805
Designation according UL 1449 3rd Edition		PV SPD Type 2CA	PV SPD Type 2CA	PV SPD Type 2CA
Maximum continuous operating voltage	MCOV (V)	600	1000	1500
Nominal discharge current (8/20 µs)	I_n (kA)	20	20	10
Voltage protection rating	VPR (V)	1800	3000	4000
Short circuit current rating	SCCR (kA)	100	50	65
Designation according to EN 50539-11		Type 2	Type 2	Type 2
Maximum continuous operating voltage DC	U_{CVP} (V)	660	1060	1500
Max. Discharge current (8/20 µs)	I_{max} (kA)	40	40	20
Short-circuit withstand capability for max. mains-side overcurrent protection	I_{SCVP} (kA)	10	10	10
Voltage protection level	U_P (kV)	≤ 2.6	≤ 4	≤ 5
Response time	t_A (ns)	≤ 25	≤ 25	≤ 25
Operating temperature range (parallel)/(series)	T_U °F(°C)	-40°...185°(-40°...+85°)		
Operating state/fault indication		green/red		
Number of ports		1		
Cross-sectional area (min.)		6mm² solid/flexible		
Cross-sectional area (max.)		35mm² stranded/25mm² flexible		
For mounting on		36mm DIN rail acc. To EN 60715		
Enclosure material		PA+FG UL94 V-0		
Location category		indoor		
Degree of protection		IP 20		
Capacity		1 mod/phase DIN 4388		
Approvals, Certifications		UL, CE		
Type of remote signaling contact		changeover contact (C models)		
Switching capacity a.c.		250V / 1A (C models)		
Switching capacity d.c.		125V / 0.2A (C models)		
Cross-sectional area for remote signaling terminals		max 1.5 mm² solid / flexible (C models)		

Accessories: Replacement Modules

Product Number	SAMII40/600PV	SAMII40/1000PV	SAMII40/1500PV
		Protection module phase-neutral for	
	SAPVII40/600	SAPVII40/1000	SAPVII40/1500
	SAPVII40/600C	SAPVII40/1000C	SAPVII40/1500C

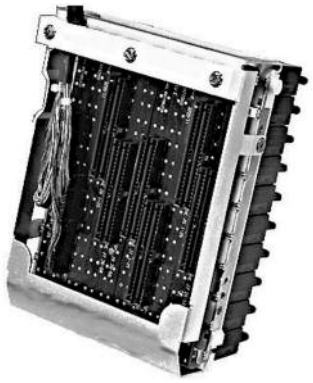
Protection Block Assembly–Surge Protection Device

Introduction

The GE 427 patented 5 Pin Protection Block Assembly is equipped with a multi-layered printed circuit board, providing a connectorized interface for cable assemblies. It accommodates 25, 50 or 100 pair cable. It is used in many applications, including: central offices, remote switching sites, customer premises and building entrances, to protect telephone and voice/data lines.

When wiring cabinets with conventional wire wrap blocks each block becomes a different part number and causes difficulty for OEMs who have to inventory parts.

The same GE 427 Protection Block Assembly is used in every position of a cabinet or mainframe. The cables are now treated as less expensive parts and are stocked by length and mating connector type. Manual labor, in running cables and making wire wrap connections, is reduced significantly by employing GE Connectorized Block Assemblies.



Protection Block Assembly

Performance Features

—Gold pins and sockets ensure proper electrical connections
—Self-locking aluminum hood (optional) provides protection to connectors and printed circuit board and serves as the cable strain relief tie point
—Multi-layered printed circuit board
—Handle heavy transient current surges
—U.S. Patent No. 5,457,593

Benefits

—Provides maximum reliability by eliminating all wire wraps
—Provides the high quality installation of a protection block
—Provides additional flexibility for equipment installations
—Easily serviceable in the field
—Eliminates the need for wire wrapping
—Allows connectorization into many different applications and greatly reduces installation, labor and repair costs
—All cables connected to this unit can be removed, permitting specific cable change out or change out of the entire protection block assembly. This allows the protected equipment to quickly be put back into service.
—Covered by a two year limited product warranty

Specifications

Voltage Class:	600 V
BIL rating:	10 kV
Primary Currents:	10 to 5000 amps

Protection Block Assembly–Surge Protection Device

Pair	Block Type	Hood	Product Number
50	Marconi Block	YES	427-050-202
100	Avaya Block	YES	427-100-102
100	Marconi Block	YES	427-100-202
100	Corning Block	YES	427-100-302