

## T45 Modular Surge Protective Device 400kA - 600kA per Phase

### 400kA/phase - 600kA/phase Models

#### Terminal Block Option



These units are the T45 Modular units in the 400kA - 600kA per Phase surge current capacity range. These T45 Modular Surge Protective Devices have a 16" x 16" x 6" NEMA 4 rated steel exterior enclosure. This unit houses two surge modules, each within their own NEMA 4X rated polycarbonate enclosure. This helps protect the surge modules during shipping, installation, and provides an extra level of personal safety.

These are modular units; in the event of a module failure or the need to upgrade capacity, that module may be removed and replaced without disturbing the mounted external enclosure or the unit's wiring connections. Due to the internal module being in a NEMA 4X enclosure, replacement and upgraded modules are quick and easy to install, with a greatly mitigated risk of damage from the installer. After disconnecting power, the installer must simply attach the encased module to the mount and connect the wires to the terminal block.

#### Rotary Disconnect Option



The two separate surge modules within this unit and the modular nature of this design allow for continued redundant protection in the event one of the modules fails. When the failed surge module is removed from the unit, the unit may be re-energized and continue to operate on the remaining module. This greatly reduces the downtime of protection while waiting for a replacement module and keeps your facility protected.

The modules use advanced Thermally Protected Metal Oxide Varistors. They come in a variety of voltage and phase configurations. Each module houses dual LED status lights, Form "C" dry contact relays, and an Audible Alarm with a silence switch. Module A is equipped with an externally viewable Surge Counter.

This unit utilizes a terminal block connection that allows for a connection range from #10AWG to 2/0. It is available with a rotary disconnect option.

#### Features:

- Modular Design - 400kA, 500kA, & 600kA/phase available
- Dual Module Protection
- UL 1449 Fourth Edition Listed
- Available in UL 1449 Type 1 or Type 2 Configurations
- Sine Wave Tracking: UL 1449 Type 2  
UL 1283 Listed
- Audible Alarm with a Disable Switch
- Per Phase Dual LED Status Indication
- Externally Viewable Surge Counter on Module A
- Form C Dry Contacts

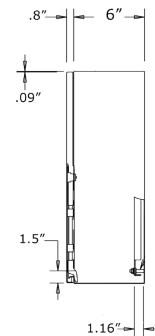
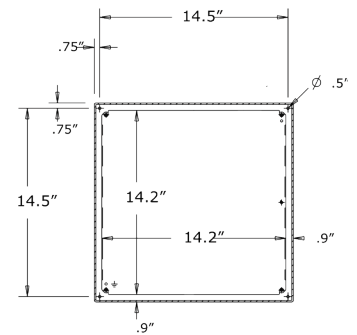
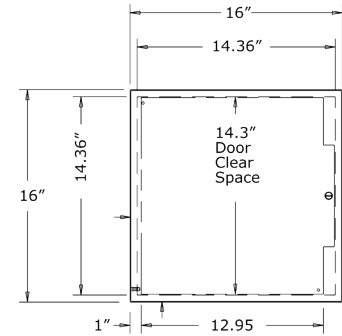
- NEMA 4 Steel Unit with NEMA 4X encased modules installed inside
- 20kA Inominal
- 200kA SCCR
- Lifecycle tested to 12,000 10kA Impulses
- All modes of protection
- Thermally Protected MOVs
- Multiple MOV technology featuring large and robust MOVs
- Equidistant and symmetrical surge pathways for a true surge capacity rating
- 10 Year Warranty

Rev 23.09.01-1.1



## T45 Modular Surge Protective Device 400kA - 600kA per Phase

General Technical Specifications	
Connection Type	Parallel, Terminal Lugs - #10AWG - 2/0 AWG Disconnect - #10AWG - 1/0
Voltage, Phase Configuration	120/208V Three Phase Wye, (4W+G)* (127/220V Three Phase Wye, (4W+G))* (220/380V Three Phase Wye, (4W+G))** 277/480V Three Phase Wye (4W+G)** 240V Three Phase Delta (3W+G) 480V Three Phase Delta, (3W+G)
Maximum Continuous Operating Voltage	120V, 150 VAC (125%); 127V, 150 VAC (118%); 220V, 320 VAC (145%); 240V, 320 VAC; 277V, 320 VAC; 480V, 550 VAC; All Others 115%
Surge Capacity	200 kA/Mode, 400kA/Phase 250 kA/Mode, 500kA/Phase 300 kA/Mode, 600kA/Phase
Short Circuit Current Rating (SCCR)	200kAIC
Protection Modes	All Modes: L-N, L-L, L-G, N-G
Operating Frequency Range	47 - 63 Hz
UL 1449 Location Type	Type 1 (SPDs intended for Line or Load Side of Main Disconnect) or Type 2 (Intended for Load Side of Main Disconnect)
UL 1449 Nominal Discharge Current (In)	20 kA
Standards	UL 1449 4th Edition, CSA, UL 96A Lightning Protection Master Label compliant
Status Indication	Dual Colored LEDs, Audible Alarm, Form C Relay, Surge Counter
Enclosure	NEMA 4, 12, & 13 Rated
Dimensions	16" x 16" x 6.8"
Weight	34.7 lbs
50 Ohm EMI/RFI Attenuation	-50 db max(Type 2), -45db max(Type 1); from 10 kHz to 100MHz. The system provides up to 120dB insertion loss from 100 kHz to 100 MHz when used in a coordinated facility system.
Response Time	<0.5 nanoseconds
Operating Temperature	-40°C to +75°C
Operating Humidity	0% to 95% non-condensing
Warranty	10 Years



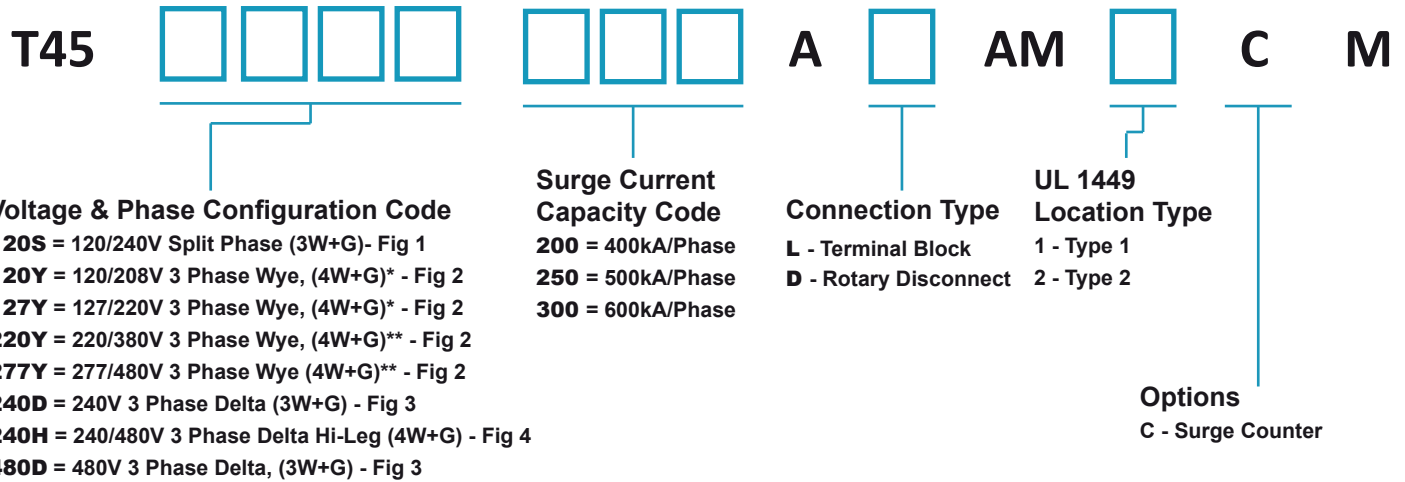
\*This is a 120/208V unit, and can be used in 127/220V applications

\*\*This is a 277/480V unit, and can be used in 220/380V applications

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## T45 Modular Surge Protective Device 400kA - 600kA per Phase



\*This is a 120/208V unit, and can be used in 127/220V applications

\*\*This is a 277/480V unit, and can be used in 220/380V applications

You may place the order as either part number.

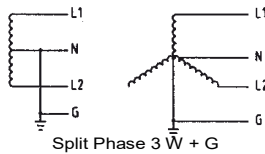
### Example Product number:

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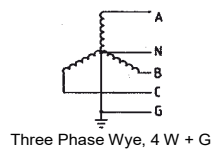
Complete:

T45 120Y 300 A L AM 1 C M = T45120Y300ALAM1CM

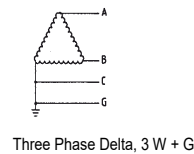
**Fig. 1**



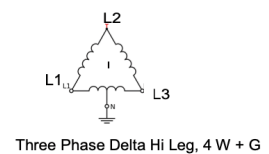
**Fig. 2**



**Fig. 3**



**Fig. 4**



### System Voltage Compatibility

Model Voltage/Phase Code	Nominal System Voltages	System Configuration	MCOV	I <sub>n</sub>	SCCR	UL 1449 Voltage Protection Rating			
						L-N	L-G	N-G	L-L
<b>120S</b>	120/240	Split Phs, 3W+G	150	20kA	200kA	700	700	700	1200
<b>120Y</b>	120/208; 127/220	3 Phs Wye, 4W+G	150	20kA	200kA	700	700	700	1200
<b>127Y</b>	120/208; 127/220	3 Phs Wye, 4W+G	150	20kA	200kA	700	700	700	1200
<b>220Y</b>	220/380; 240/415; 277/480	3 Phs Wye, 4W+G	320	20kA	200kA	1000	1000	1000	1800
<b>240L</b>	240	Single Phs, 2W+G	320	20kA	200kA		1200		1200
<b>240H</b>	240/480	3 Phs Delta Hi-leg, 4W+G	320/550	20kA	200kA	1200/1800	1200/1800	1200	2000/3000
<b>277Y</b>	220/380; 240/415; 277/480	3 Phs Wye, 4W+G	320	20kA	200kA	1000	1000	1000	1800
<b>240D</b>	220; 230; 240	3 Phs Delta, 3W+G	320	20kA	200kA		1200		1200
<b>480D</b>	380; 400; 415; 440; 460; 480	3 Phs Delta, 3W+G	550	20kA	200kA		1800		2000

