



TST Series

Commercial & Light Industrial Surge Protection Devices

The **TST Series** of SPDs (surge protection devices) are designed to **protect sensitive electronic equipment** from the harmful effects of transients.

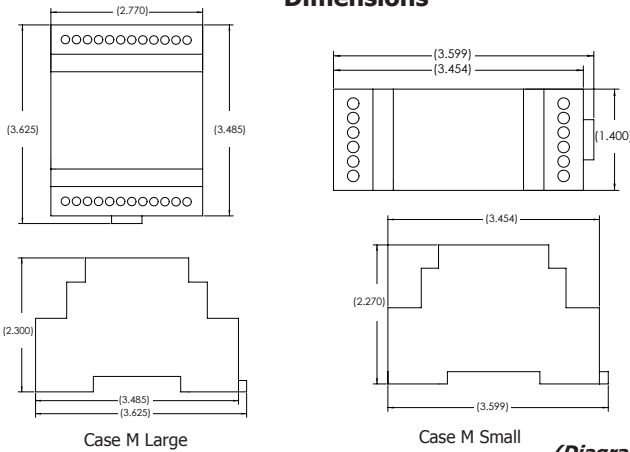
Models are configured for both parallel or series installation and can be either din rail or wall mounted. Units are rated as **Type 2 SPDs component assembly** making the TST Series the ideal choice for incorporation into control cabinets for sensitive microelectronic based equipment.

TST units are self-contained in rugged plastic enclosures and use twenty millimeter (**20mm**) **MOVs** as their key suppression elements. Units are not line load sensitive and interface with the incoming power cables via screw terminals (barrier strips):

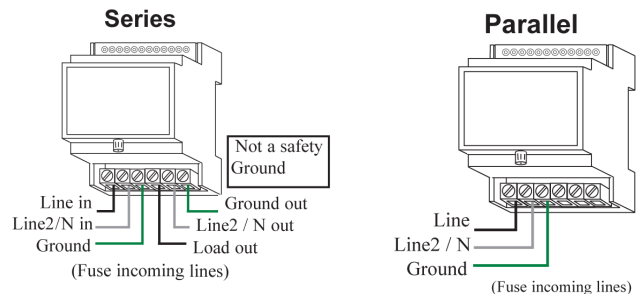
Small Terminals are capable of handling #14 to #30 AWG Wire.
Large Terminals are capable of handling #6 to #20 AWG Wire.



Dimensions



Typical Installations



(Diagrams not drawn to scale)

Product Specifications

I_n	3kA
Max Surge Current	10 - 40kA/Phase (depending on model)
Fusing	Internal (Thermal)
Short Circuit Current	5kA Symmetrical w/external breaker
Short Circuit Current	100kA Symmetrical w/external T Fuse
Diagnostics	LED

Mechanical/Environmental Specifications

Enclosure	Plastic (UL94-VO) Polycarbonate
Safety Standards (Type 2 SPD)	ANSI/UL 1449 (most current)
Operating Frequency	50/60 Hz
Max. Operatin Temp	-40° to +85° C

Model Number	Service Voltage	Current Rating	Surge Rating	Case Size	VPR		
					L1 - N	L1 - G	N - G
TST020/120-10-0-1/15A	120 Volts	15 Amp	20 kA	Small	600	600	600
TST020/250-10-0-1/30A	250 Volts	30 Amp	20 kA	Small	1000	1000	1000
TST020/120-10-0-1/30A	120 Volts	30 Amp	20 kA	Small	600	600	600
TST040/120-10-0-1/15A	120 Volts	15 Amp	40 kA	Large	500	500	600
TST040/220-10-0-1/15A	250 Volts	15 Amp	40 kA	Large	800	800	800
TST040/250-10-0-1/15A	250 Volts	15 Amp	40 kA	Large	800	800	800
TST040/120-10-0-1/30A	120 Volts	30 Amp	40 kA	Large	500	500	600
TST040/220-10-0-1/30A	250 Volts	30 Amp	40 kA	Large	800	800	800
TST040/250-10-0-1/30A	250 Volts	30 Amp	40 kA	Large	800	800	800
					L1-N	L2-G	L1-L2
TST010/024-2P-0-1/15A	24 Volts	15 Amp	10 kA	Small	200	200	200
TST010/048-2P-0-1/15A	48 Volts	15 Amp	10 kA	Small	200	200	200
TST020/024-2P-0-1/30A	24 Volts	30 Amp	20 kA	Large	200	200	200
TST020/048-2P-0-1/30A	48 Volts	30 Amp	40 kA	Large	200	200	200

ATL Listed 120V +
Low Voltage

All product dimensions provided are ± 0.125

Meter Treater Inc.: 1349 South Killian Drive • Lake Park, FL 33403

Email: sales@metertreater.com

Sales: 561.845.2007 Toll: Free: 800.638.3788 Fax: 561.848.2372

Website: www.metertreater.com

GENERAL

1. This document provides detailed information on how to install and operate the TST Series of Surge Protection Devices (SPD).
2. Incorrect installation may significantly impair the performance of the SPD. It is particularly important that all installation procedures and guidelines be followed exactly.
- 3. INSTALLATION OF THIS SPD SHOULD ONLY BE PERFORMED BY A QUALIFIED INSTALLER**
4. CHECK TO ENSURE THAT ALL CONNECTIONS ARE CORRECT AND SECURE BEFORE ENERGIZING.
5. KEEP THIS MANUAL IN A SAFE, DRY PLACE FOR FUTURE REFERENCE.

IMPORTANT SAFETY INSTRUCTIONS

NOTICE: All instructions and measurements must be completed by a qualified electrician in accordance with the National Electric Code and/or other applicable state and local codes. The U.S. National Electric Code and/or applicable state/local requirements supersede these instructions.

CAUTION: HAZARDOUS VOLTAGES PRESENT

Improper installation or misapplication of these SPD's may result in serious injury to the installer and/or damage to electrical system(s) or related equipment. Read and understand all instructions before commencing with the installation. Appropriate personal protective equipment should be worn during the installation process.

WARRANTY INFORMATION

Meter-Treater, Inc. (MTI) warrants all TST Series models to be free from defects, and will at our option repair or replace the product should it fail within fifteen (15) years from the first date of shipment. This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse or unauthorized modification. If this product fails or does not perform as specified, your sole recourse shall be repair or replacement as described above. Under no condition shall MTI be liable for any damages incurred by the use of this product. Damages include, but are not limited to, the following: lost profits, lost savings and incidental or consequential damages arising from the use of or inability to use this product. MTI specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

WARRANTY RETURNS

All warranty and non-warranty repairs must be returned freight prepaid and insured to MTI. All returns must have a Return Authorization (RA) number on the outside of the shipping container. This number may be obtained from MTI Warranty Department (800) 342-6890. Products returned without an RA number will not be accepted.

IF UNIT(S) ARE RECEIVED DAMAGED,
NOTIFY THE SHIPPING COMPANY
IMMEDIATELY. RETAIN ALL SHIPPING
CONTAINERS AND PACKING MATERIALS FOR
INSPECTION.

Please Note:
There are no user serviceable parts inside.



Meter-Treater, Inc.
1349 South Killian Drive • Lake Park, FL 33403
Phone: 561.845.2007 • Fax: 561.848.2372
Email: sales@metertreater.com
Website: www.metertreater.com

TST Series Surge Protection Device

USER MANUAL AND INSTALLATION GUIDE

RECOGNIZED
COMPONENT



Intertek



COMMERCIAL INSTALLATIONS

SURGE PROTECTION DEVICES FOR
SERIES/PARALLEL APPLICATIONS

INSTALLATION INSTRUCTIONS FOR:

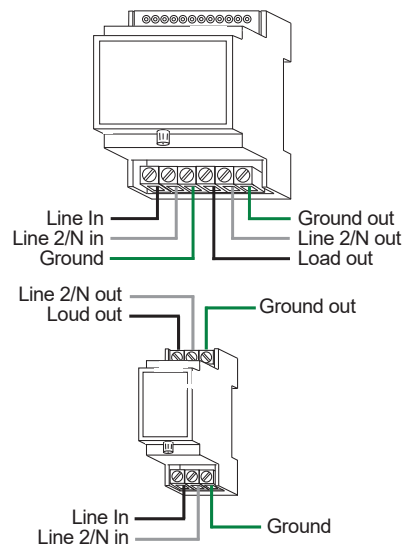
TST010/024-2P-F-1/15A	TST040/120-10-F-1/15A
TST010/048-2P-F-1/15A	TST040/250-10-F-1/15A
TST020/024-2P-F-1/30A	TST020/120-10-F-1/30A
TST020/048-2P-F-1/30A	TST040/120-10-F-1/30A
TST020/120-10-F-1/15A	TST040/250-10-F-1/30A
TST020/250-10-F-1/30A	

WIRING DIAGRAMS

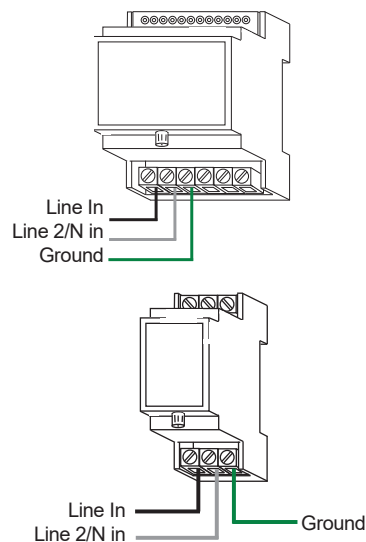
Note: Circuit Protection NOT required for neutral application. If two(2) hots are used, a second interrupt device is required.

15Amp Models are capable of handling #12 to #30AWG Wire
30Amp Models are capable of handling #6 to #20AWG Wire

Series Installation



Parallel Installation



NOTE

SPD's must be connected to the electrical service with appropriate ampacity Class T Fuse, rated 300V. Equipment Safety Grounds MUST be run separately - not through the traces of the Surge Protection Device.

WARNING

ANY ALTERATIONS, TAMPERING, MISUSE OR UNAUTHORIZED REPAIRS OF THIS SPD WILL VOID ITS ORIGINAL FACTORY WARRANTY.

INSTALLATION

1. This document provides detailed information on how to install and operate the TST Series of Surge Protection Devices (SPDs).
 2. SPD's should be installed per the information and illustrations provided herein.
 3. SPD's are installed/connected in either series or parallel with the line and the equipment to be protected.
 4. Identified or indicated Leads/Wires must be connected exactly with respect to the power feeding/supplying the SPD and equipment. Failure to do so may result in damage to the SPD, the equipment/system or pose a danger to personnel.
 5. Incorrect installation may significantly impair the performance of the SPD. It is particularly important that all installation procedures and guidelines be followed exactly.
 6. Prior to installation, verify service voltages (AC or DC) with a volt meter to ensure that the correct model has been selected for the supply voltage.
 7. DO NOT INSTALL THE SPD IF MEASURED VOLTAGE EXCEEDS UNIT RATINGS.
 8. The SPD MUST BE mounted in an enclosure to assure personnel safety from exposed terminals.
 9. **REMOVE POWER FROM ELECTRICAL SYSTEM PRIOR TO INSTALLATION.**
 10. The SPD should be positioned as the last device in the circuit prior to protected equipment.
 11. The SPD Line/Load designations are for orientation purposes only and do not effect the install.
 12. Mechanically mount the SPD utilizing the mounting tabs or attach the din rail.
 13. For Series (AC) Applications
 - A) Connect "LINE" Side:
 - * System Ground to the terminal labeled "G"
 - * Neutral or Line 2 wire to the terminal labeled "L2"
 - * HOT wire to the terminal labeled "L1"
 - B) Connect "LOAD" Side:
 - * System Ground to the terminal labeled "G" (connect safety ground directly to enclosure ground)
 - * Neutral or Line 2 wire to the terminal labeled "L2"
 - * HOT wire to the terminal labeled "L1"
 14. For parallel (AC) Applications, keeping lead as short as possible
 - * System Ground to the terminal labeled "G"
 - * Neutral or Line 2 wire to the terminal labeled "L2"
 - * HOT wire to the terminal labeled "L1"
- NOTE:** In parallel applications, SPD's are not current limited as they are in series applications. For parallel applications, unused output terminals are left empty, no plugs are provided.
15. ENSURE THAT ALL CONNECTIONS ARE CORRECT BEFORE ENERGIZING.
 16. Apply power (energize). LED indicator should illuminate. If light fails to illuminate, contact supplier. If LED is out, unit requires service.
 17. Keep this MANUAL in a safe dry place for future reference.