TransTrack TTX Series

Surge Protective Device

TransTrack TTX Series: 65kA – 200kA per Phase Component-Level Fused

Standard – L-N Enhanced Transient Filtering (ETF)

Installation, Operation and Maintenance Manual

⚠ CAUTION **Read entire manual before attempting installation**



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BEFORE INSTALLATION

⚠ **WARNING:** HAZARDOUS VOLTAGES PRESENT. Improper installation or misapplication may result in serious personnel injury and/or damage to the electrical system. Read the complete installation instructions before proceeding with installation. Remove all power to the electrical panel before installing or servicing the surge protective device (SPD).

⚠ **WARNING:** Do not HIPOT a TransTrack TTX SPD or the electrical system that the SPD is connected to without disconnecting the SPD conductors including phases, neutral and ground. Any factory or on-site testing of power distribution equipment that exceeds normal operating voltage — such as high-potential insulation testing, or any other test where the suppression components would be subjected to voltage higher than their rated Maximum Continuous Operating Voltage (MCOV) — must be conducted with the SPD disconnected from the power source. For 4-wire systems, the neutral connection at the SPD must also be disconnected prior to performing high-potential testing. Failure to disconnect the SPD and associated components during elevated voltage testing will damage the SPD and will void the warranty.

⚠ **CAUTION:** Ungrounded systems and high-resistance grounded (HRG) WYE systems are inherently unstable and can produce excessively high line-to-ground voltages during certain fault conditions. During these fault conditions, any electrical equipment including an SPD may be subjected to voltages which exceed their designed ratings. **For ungrounded systems or HRG systems, call TPS Tech Support at 800-647-1911 to identify the best model option for the system's wiring.**

General Warnings and Safety Instructions

- Safety First — hazardous voltage and shock hazard.
- Only qualified, licensed electricians should install or service SPDs.
- Hazardous voltages exist within SPDs.
- SPDs should never be installed or serviced when energized.
- Use appropriate safety precautions, including Personal Protection Equipment.
- Failure to follow these instructions can result in death, serious injury, and/or equipment damage.
- This manual shall be read in its entirety prior to installing.

All work must be performed by licensed and qualified personnel. The electrical system must be properly grounded in accordance with the U.S. National Electrical Code (NEC®), state and local codes, or other applicable codes for this SPD to function properly. TransTrack TTX Series SPDs are suitable for installation where the available short circuit current is 200,000 rms symmetrical amperes at 600VAC or less.

Verify that the neutral conductor in the service entrance equipment is bonded to ground in accordance with the NEC® and all applicable codes. During installation into an electrical system, the SPD must not be energized until the electrical system is completely installed, inspected and tested. All conductors must be connected and functional, including the neutral (if required). The voltage rating of the SPD and the system must be verified before energizing the SPD. Failure to follow these guidelines can lead to abnormally high voltages at the SPD, which may cause the SPD to fail. The warranty is voided if the SPD is incorrectly installed and/or if the neutral conductor in the service entrance equipment or downstream of separately derived systems is not bonded to ground in accordance with the NEC®.

1. System Configuration Verification

Confirm that the voltage(s) and service configuration shown on the TransTrack TTX product label are consistent with the voltage and service configuration of the facility, and that the measured system voltages fall within the L-N and L-L voltage ranges listed below. A model number is located on the side of every TransTrack TTX unit. The model number identifies the surge current rating ("xxx"), the voltage/configuration code and any option suffixes, as shown in the table below.

Example of an SPD model number: TK-TTX100-3Y208-F (100kA per phase · 120/208VAC 3-phase WYE · standard L-N Enhanced Transient Filter). "xxx" = surge current rating per phase: 065, 100, 150 or 200 (see Section 9).

MODEL NUMBER	NOMINAL VOLTAGE	L-N VOLTAGE RANGE	L-L VOLTAGE RANGE	CONFIGURATION
TK-TTXxxx-1P120-F	120VAC	108–132	N/A	Single-Phase, 2-wire + ground
TK-TTXxxx-1P240-F	240VAC	216–264	N/A	Single-Phase, 2-wire + ground
TK-TTXxxx-1S240-F	120/240VAC	108–132	216–264	Split-Phase, 3-wire + ground
TK-TTXxxx-1S480-F	240/480VAC	216–264	432–528	Split-Phase, 3-wire + ground
TK-TTXxxx-3Y208-F	120/208VAC	108–132	187–229	Three-Phase WYE, 4-wire + ground
TK-TTXxxx-3Y380-F	220/380VAC	198–242	342–418	Three-Phase WYE, 4-wire + ground
TK-TTXxxx-3Y400-F	230/400VAC	207–253	360–440	Three-Phase WYE, 4-wire + ground
TK-TTXxxx-3Y415-F	240/415VAC	216–264	374–457	Three-Phase WYE, 4-wire + ground
TK-TTXxxx-3Y480-F	277/480VAC	249–305	432–528	Three-Phase WYE, 4-wire + ground
TK-TTXxxx-3Y525-F	300/525VAC	270–330	473–578	Three-Phase WYE, 4-wire + ground
TK-TTXxxx-3Y600-F	347/600VAC	312–382	540–660	Three-Phase WYE, 4-wire + ground
TK-TTXxxx-3D240-F	120/240VAC	108–132 (A & C phases); 187–229 (B phase)	216–264	Three-Phase high-leg DELTA, 4-wire + ground (B phase must be 208V)
TK-TTXxxx-240NN-F	240VAC	N/A	216–264	Three-Phase DELTA, 3-wire + ground
TK-TTXxxx-380NN-F	380VAC	N/A	342–418	Three-Phase DELTA, 3-wire + ground
TK-TTXxxx-400NN-F	400VAC	N/A	360–440	Three-Phase DELTA, 3-wire + ground
TK-TTXxxx-480NN-F	480VAC	N/A	432–528	Three-Phase DELTA, 3-wire + ground
TK-TTXxxx-600NN-F	600VAC	N/A	540–660	Three-Phase DELTA, 3-wire + ground
TK-TTXxxx-690NN-F	690VAC	N/A	621–759	Three-Phase DELTA, 3-wire + ground

L-N and L-L voltage ranges are the acceptable steady-state system voltages for each configuration (nominal ±10%). All TTX model numbers end in "-F", denoting the standard L-N Enhanced Transient Filter.

Option Suffixes

-M Audible alarm with mute button
-L NEMA 4 steel enclosure
-B Surge counter

Note: the L-N Enhanced Transient Filter is standard on every TTX unit and is not ordered as an option.

Ordered as separate items:

TTX-SM-FMP Flush-Mount Plate Kit
DN-200KAIC-60A-1" Non-Fused Disconnect Switch

Notes:

The power system operating frequency is 50–60 Hz. Confirm that the environmental conditions are consistent with the following ranges:

- Ambient Temperature: -40°C to 70°C (-40°F to 158°F)
- Relative Humidity: 5% to 95%, non-condensing

2. Wiring Connection Diagrams

Figures 1–5 show the electrical relationship between the TransTrack TTX Series and these five basic service configurations: Single-Phase, 2-wire; Split-Phase, 3-wire; Three-Phase, 4-wire WYE; Three-Phase, 3-wire DELTA; and Three-Phase, 4-wire high-leg DELTA.

⚠ **WARNING:** Check to ensure that a proper bond is installed between neutral and ground at the transformer upstream from all 3-phase WYE, 3-phase high-leg DELTA or split-phase TransTrack TTX SPDs (see NEC® Article 250). If the transformer is not accessible, check the main service disconnect/panel for the N-G bond. Lack of a proper bond will damage the TransTrack TTX SPD and void the warranty.

Fig. 1: Single-Phase, 2-Wire

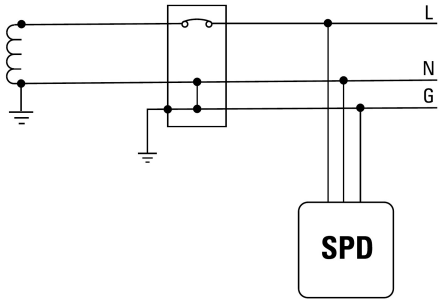


Fig. 2: Split-Phase, 3-Wire

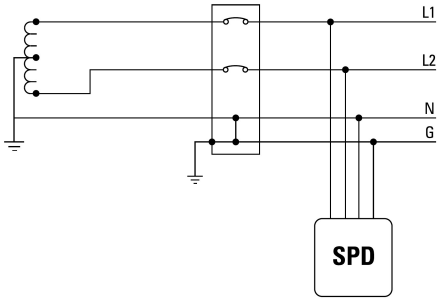


Fig. 3: 3-Phase, 4-Wire WYE

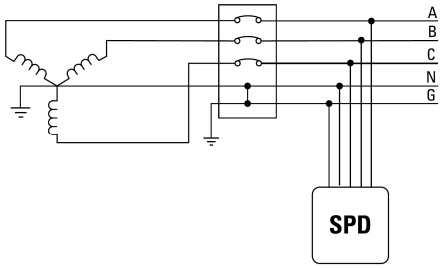


Fig. 4: 3-Phase, 3-Wire DELTA

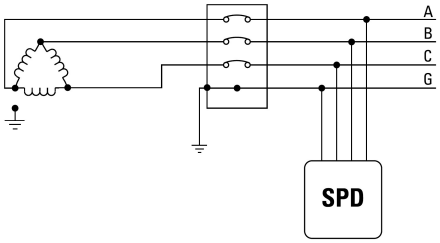
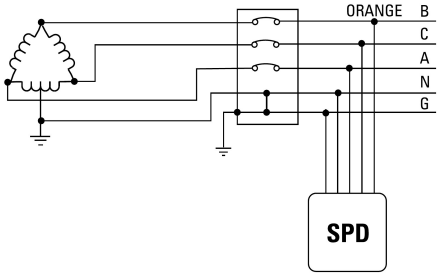


Fig. 5: 3-Phase, 4-Wire High-Leg DELTA



Connections to every TransTrack TTX model (TTX065 through TTX200) are made via the pre-wired pigtail leads supplied with the unit — 30” (762 mm) of #10 AWG conductor.

For 3-phase units, connect Phase A, Phase B and Phase C as marked. For split-phase units, connect Phase A and Phase B. For single-phase units, connect Phase A. Neutral (if applicable) and equipment ground are connected as marked.

3. Unpacking and Preliminary Inspection

Inspect the entire shipping container for damage or signs of mishandling. Remove the packing materials and further inspect the unit for any obvious shipping damage. If damage is found and is the result of shipping or handling, immediately file a claim with the shipping company and forward a copy to Total Protection Solutions at 800-647-1911.

4. Storage Environment

This SPD should be stored in a clean, dry environment. Storage temperature range is -40°C (-40°F) to +70°C (+158°F). Avoid exposure to high condensation.

5. Operating Environment

Every standard TransTrack TTX model uses a UL 94 V-0 rated, weatherproof, non-conductive polycarbonate NEMA 4X enclosure. A NEMA 4 steel enclosure is available with the "-L" suffix, and a flush-mount plate kit (TTX-SM-FMP) is available as an option. Before installing, ensure that your enclosure type and application are appropriate with regard to moisture, dirt, excessive dust, flammable materials or atmospheres, corrosive vapors, etc. Please consult the factory if the enclosure type needs to be changed.

TransTrack TTX Series SPDs are designed for an ambient temperature range of -40°C to 70°C (-40°F to 158°F) with a relative humidity of 5% to 95% (non-condensing). Excessive temperature may inadvertently operate internal thermal over-temperature protectors.

Audible Noise:

Any SPD background noise is negligible or non-existent and does not restrict the location of installation.

6. Line-Side versus Load-Side Installation

TransTrack TTX Series SPDs are listed to UL 1449 5th Edition as Type 1 SPDs, suitable for use in both Type 1 and Type 2 locations. This means they can be installed on the Line-Side or the Load-Side of the main service disconnect. TransTrack TTX SPDs are one-port devices and must be connected in parallel with the electrical system. As a generalization, it is more practical to install them as Type 2 devices on the Load-Side of the main overcurrent device for maintenance reasons.

7. Upstream Over-Current Protection Device

All TransTrack TTX units are supplied with component-level fusing and carry a 200kA Short Circuit Current Rating (SCCR) on all units. These units DO NOT require an upstream over-current protection device and are suitable for direct bus connection to the electrical distribution system.

When the unit is connected on the load side of the main disconnect, a dedicated disconnecting means is still recommended for maintenance purposes. Where a circuit breaker is used, a 30A–60A breaker is suggested; the circuit breaker serves as the intended disconnect switch and provides short circuit protection for the connecting conductors. A non-fused disconnect switch (DN-200KAIC-60A-1") is available as a separate item.

⚠ **CAUTION:** Do not splice TransTrack TTX conductors within the unit's enclosure or the Manufacturer's warranty will be void. TransTrack TTX performance will be limited severely if the conductors are (a) too long, (b) of too small a wire gauge, (c) have too many bends, or (d) have sharp bends.

8. Conductor Routing and Lead Lengths

SPDs must be located as close to the circuit as possible to minimize parasitic losses. **The selected mounting location should allow for the shortest and straightest possible conductor runs and a direct route with a minimum of bends.** If bends are required, they should be sweeping bends. Do not make sharp 90° bends for appearance purposes, because they will severely decrease the effectiveness of the SPD.

Pre-plan installations and ensure that the nearest breaker or connection positions are used. In new construction, adjust breaker locations as appropriate. When longer leads are unavoidable, braiding or twisting the conductors together using tie-wraps or electrical tape increases the protection performance of the device. **Use one or two twists or braids of all conductors per foot and securely tie-wrap when conductor lengths must exceed 12".**

9. Conductor Sizing

Every TransTrack TTX model, regardless of surge rating, is pre-wired at the factory with 30” (762 mm) of #10 AWG conductor for phase, neutral and ground connections. Leads should be shortened during installation to minimize conductor length, thereby maximizing SPD performance and protection.

PRODUCT LABEL DESIGNATION	SURGE CURRENT CAPABILITY	SUPPLIED CONDUCTOR	SUPPLIED LEAD LENGTH
TK-TTX065-xxxxx-F	65kA/phase; 32.5kA/mode	#10 AWG	30” (762 mm)
TK-TTX100-xxxxx-F	100kA/phase; 50kA/mode	#10 AWG	30” (762 mm)
TK-TTX150-xxxxx-F	150kA/phase; 75kA/mode	#10 AWG	30” (762 mm)
TK-TTX200-xxxxx-F	200kA/phase; 100kA/mode	#10 AWG	30” (762 mm)

Note: Leads should be shortened during installation to minimize conductor length. Should mounting conditions require extension of the supplied conductor(s), the installation electrician may use a butt-splice or parallel solder with shrink-tube installation outside the SPD enclosure. In no event shall the electrician use a wire nut to make the extension, as this will result in loss of suppressor performance.

10. System Grounding

An equipment grounding conductor must be used on all electrical circuits connected to the SPD. For best performance, use a single-point ground system where the service entrance grounding electrode system is connected to and bonded to all other available electrodes, building steel, metal water pipes, driven rods, etc. (for reference see IEEE Std 142-2007). For sensitive electronics and computer systems, we recommend that the ground impedance measurement be as low as possible.

When metallic raceway is used as an additional grounding conductor, an insulated grounding conductor should be run inside the raceway and sized per the NEC®. Adequate electrical continuity must be maintained at all raceway connections. Do not use isolating bushings to interrupt a metallic raceway run. A separate isolated ground for the SPD is NOT recommended. Proper equipment connections to the grounding system and ground grid continuity should be verified via inspections and testing on a regular basis as part of a comprehensive electrical maintenance program.

⚠ **WARNING:** On 4-wire power systems, neutral-to-ground bonding (Main Bonding Jumper) must be installed per the NEC®. Check to ensure that a proper bond is installed between neutral and ground at the transformer upstream from all 3-phase WYE, 3-phase high-leg DELTA or split-phase TransTrack TTX SPDs (see NEC® Article 250). If the transformer is not accessible, check the main service disconnect/panel for the N-G bond. Lack of a proper bond will damage the TransTrack TTX SPD and void the warranty. N-G bonding not in compliance with the NEC® is a leading cause of SPD failures.

11. Retro-fit Into Existing Panel with No Available Breaker Positions

Follow all applicable codes. Consider consolidating loads in a manner that might free a spare breaker position.

Where the panel ampacity is larger than the SPD leads can be connected to directly, the bus may be tapped under the ten-foot tap rule of NEC® 240.21(B)(1), provided all of its conditions are met — including, for field installations where the tap conductors leave the enclosure, that the rating of the feeder overcurrent device does not exceed ten times the ampacity of the tap conductors. Because tap conductors must terminate in an overcurrent device, run appropriately sized tap conductors to a fused safety switch or circuit breaker sized per Section 7, and mount the SPD immediately adjacent to it.

Note: All TTX SPDs are overcurrent protected internally and the SPD conductors may be direct bus connected, SPD conductors may be landed on a 30–60A breaker, or a surge rated, 200kAIC fault current rated non-fused disconnect may be used (TPS model DN-200KAIC-60A-1”).

12. Enclosure and Mounting Dimensions

All TransTrack TTX models (TTX065 through TTX200) share the same enclosure, use multi-point mounting feet and weigh less than 5 lbs (2.27 kg).

ENCLOSURE	HEIGHT	WIDTH	DEPTH	MOUNTING FOOTPRINT	WEIGHT
NEMA 4X Polycarbonate (all models)	8.74” (222.0 mm)	5.25” (133.35 mm)	3.30” (83.82 mm)	9.24” x 3.87”	< 5 lbs (2.27 kg)

Overall envelope including mounting feet and cover clearance: 10.23”. See Fig. 6 for complete dimensional detail and mounting hole locations.

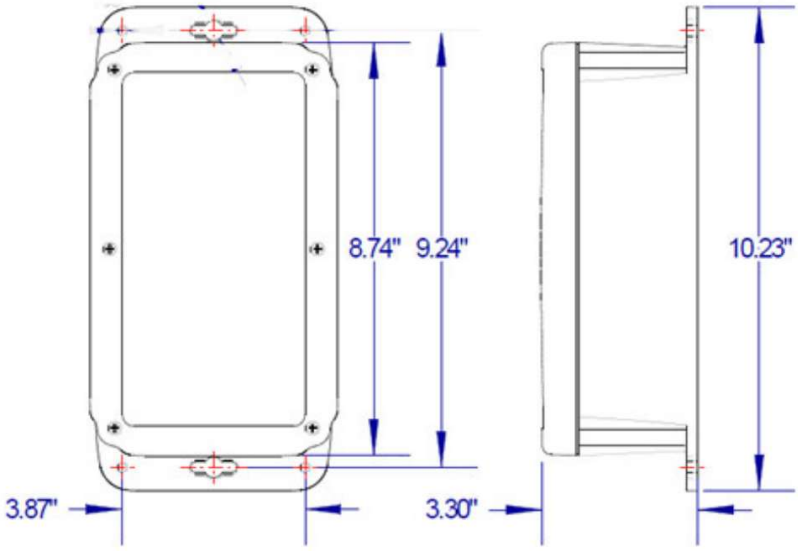


Fig. 6: Enclosure and Mounting Dimensions — all TransTrack TTX models (TTX065–TTX200)

13. Mounting

TransTrack TTX Series SPD

Use the construction methods and hardware appropriate for your site. The unit is supplied pre-wired with 30” of #10 AWG conductor and is mounted using its integral multi-point mounting feet. Install conductors according to Sections 8, 9 and 10 herein. Mount the SPD as close to the panel or equipment as possible to keep leads short.

TransTrack TTX Flush-Mount Plate Kit (TTX-SM-FMP)

See the instructions supplied with the TTX-SM-FMP Flush-Mount Plate Kit for the proper mounting methods.

TransTrack TTX Disconnect Switch Option

See the DN-200KAIC-60A-1” Disconnect Switch Installation and Operations Manual for the proper mounting methods.

**Recommend avoiding wire-pulling lubricant due to the potential for insulation deterioration, especially on such a short, small conductor installation.*

14. Indoor vs. Outdoor Installations

The standard NEMA 4X polycarbonate enclosure is suitable for indoor or outdoor use and is suitable for corrosive environments. For direct sunlight applications, it is suggested to shade the unit. All conduits and fittings must be rated and properly installed so that the final installation maintains the NEMA rating.

CONNECTION AND WIRING INSTRUCTIONS

1. Pre-Plan Your Installation

- Meet all National and Local codes. (NEC® Article 242 addresses SPDs.)
- Mount the SPD as close to the panel or equipment as possible to keep leads short.
- Ensure leads are as short and straight as possible, including neutral and ground.
- Consider a connection or breaker position that is closest to the SPD and to the panel's neutral and ground.
- Where a breaker is used as the disconnecting means, suggested breaker size is 30A–60A.
- Make sure the system is grounded per the NEC® and clear of faults before energizing the SPD.

2. Phase, Neutral and Ground Connections

Following all applicable National Electrical Code standards as well as state and local codes, connect phase, neutral* and ground to the TransTrack TTX SPD. Every TransTrack TTX model is supplied with 30" (762 mm) of #10 AWG conductors permanently attached via pigtail leads. If the suppressor is being installed on a breaker, the installation electrician should install the device directly adjacent to the breaker feeding the device to ensure conductor length is kept to a minimum.

On all high-leg delta systems, the high leg (color-coded orange according to the NEC®) must be connected to Phase B of the SPD. **Confirm the high leg with a voltmeter before connecting — do not rely on conductor color alone.** For the TK-TTXxxx-3D240 configuration, the B phase must be 208V.

** The 3-wire plus ground DELTA ("NN") TransTrack TTX models do not have a neutral conductor.*

⚠ **CAUTION:** Prior to installation, ensure the system configuration and voltage are equivalent to the voltage rating of the TransTrack TTX unit being installed. Do not splice TransTrack TTX conductors within the unit's enclosure or the Manufacturer's warranty will be void.

Conductor Identification

CONNECTION	CONDUCTOR	COLOR
Connect to Mains	Line(s) / Energized	Black
Connect to Mains	Neutral	White
Connect to Mains	Ground	Green
Connect to Mains	Hi-Leg (high-leg Delta units only — Phase B)	Orange
Connect to Alarming	NO (Normally Open)	Black
Connect to Alarming	NC (Normally Closed)	Brown
Connect to Alarming	Common	Yellow / White

Install the SPD directly adjacent to the point of termination to ensure conductor length is as short as possible for optimum performance and protection.

3. Installation Procedure

1. Use a voltmeter to check all voltages to ensure the correct SPD for the system (voltages must match the product label and fall within the L-N and L-L voltage ranges in Section 1).
2. If the SPD dry contacts are to be used, pre-plan their installation.
3. Remove power to the panel. Confirm the panel is de-energized.
4. Identify the connection/breaker location and the SPD mounting location.
5. Make sure leads will be as short and straight as possible.
6. Remove an appropriately sized knockout from the panel.

7. Mount the SPD. Connect to the equipment using an approved wiring method, including seals appropriate for the enclosure rating.
8. Connect conductors as appropriate — short and straight as possible. (Note that Hi-Legs are Phase B, orange — confirm with a voltmeter.)
9. Label or mark conductors as appropriate: Energized — black; Neutral — white; Ground — green; Hi-Leg (Delta units only) — orange.
10. Make sure the system is bonded per the NEC® and is clear of hazards or faults before energizing. (N-G bonding not in compliance with the NEC® will fail SPDs — a leading cause of SPD failures.)
11. Energize and confirm proper operation of indicators and/or options. On units with the audible alarm option ("-M" suffix), if the alarm cycles, de-energize immediately and contact Total Protection Solutions at 800-647-1911.

4. Connecting Form C Dry Contacts

All TransTrack TTX units come standard with one set of Form "C" dry relay contacts for SPD status. These contacts are for connection to a user-provided remote alarm and monitoring circuit. The relay contacts are rated 65VDC/150VAC, with a maximum switching power of 30W DC / 60VA AC. When input power is present on all phases, terminals "NO" and "COM" are an open circuit and terminals "NC" and "COM" are a closed circuit. The contacts change state when the unit has encountered a failure, or a loss of power, on one or more phases. Every TTX model comes standard with the dry relay contact conductors routed out through the installation nipple. If the dry relay contacts are not used for remote monitoring, cut the conductors back and insulate the end of each one with a wire nut or electrical tape.

- Dry contacts are designed for low voltage or control signals only.
- Higher energy applications require additional relay implementation outside the SPD.
- Yellow or White is Common, Black is Normally Open, and Brown is Normally Closed.

The installer must provide the appropriate raceway and wiring for the monitoring circuit, observing the restrictions and conduit openings described earlier in this manual.

5. Verification and Power Up

⚠ **WARNING:** Ensure the cover of the TransTrack TTX unit is installed and secured prior to applying power. Hazardous line voltage is present within the unit when power is applied.

Apply power to the TransTrack TTX SPD by closing the over-current protection device or switch feeding the suppressor. Verify that the green LED is on for each phase, confirming that power is applied to that phase or phases, and that the red service LED is not illuminated. On units with the "-M" audible alarm option, the alarm should not operate under normal conditions.

OPERATION

LED Operation

Every TransTrack TTX SPD contains one green power indicator LED per phase, shown in the appropriate voltage configuration, plus one red service LED. When the green LEDs are illuminated, power is present to the unit. Upon MOV stack failure, the red service LED will illuminate, indicating a fault/alarm condition.

Audible Alarm Option (“-M” Suffix)

For units ordered with the audible alarm option, the audible alarm will sound upon suppression element failure. The alarm can be muted by pressing the mute button on the front of the unit. The alarm may also be silenced by removing power to the SPD. Pressing the mute button again will re-enable the alarm.

Surge Counter Option (“-B” Suffix)

For units ordered with the surge counter option, the number of surges detected by the SPD is displayed on an LCD display on the front of the TransTrack TTX SPD. The LCD counter is battery backed to maintain the number of surges even during a power loss. Press the button on the counter to reset the surge count.

L-N Enhanced Transient Filter (Standard)

Every TransTrack TTX unit includes a line-to-neutral (L-N) Enhanced Transient Filter as standard to reduce lock-ups, glitches and premature failure of connected electronics. Surge protection is provided in all modes: L-N, L-G, L-L and N-G on 4-wire DELTA or WYE units, and L-G and L-L on 3-wire DELTA (“NN”) units. Contact Total Protection Solutions Technical Support at 800-647-1911 before modifying any factory connection.

MAINTENANCE

TransTrack TTX SPDs require minimal maintenance and do not require scheduled maintenance. The unit's heavy-duty construction is designed to provide years of uninterrupted service. The unit contains no serviceable parts.

Total Protection Solutions recommends periodic inspection of the diagnostic indicators to ensure proper operation and recommends keeping the SPD clean as appropriate.

TROUBLESHOOTING

INDICATION	PROCEDURE
One or more green power indicator LEDs are off (no power to that phase)	Verify that the input power feeding the TransTrack TTX SPD is energized using a voltage tester. If power is present and the green LED remains off, contact the factory for assistance: 800-647-1911.
The red service LED is illuminated (MOV failure), the audible alarm sounds ("-M" units), and/or the Form C alarm contacts have changed state	The SPD has experienced a suppression element (MOV) failure. Contact the factory at 800-647-1911 to obtain a Return Material Authorization number (see Returns and Warranty Procedures).
Audible alarm ("-M" units) cycles immediately upon energization	De-energize the unit immediately. Verify the system voltage and configuration match the unit's product label rating and verify the neutral-to-ground bond per NEC® Article 250. Contact the factory for assistance: 800-647-1911.

TECHNICAL ASSISTANCE

Our staff is ready to support you and answer any questions.

Monday through Friday, 8:00 a.m. to 5:00 p.m. (EST) at 800-647-1911

STANDARDS AND LISTINGS

- Listed by UL to UL 1449 5th Edition for Type 1 and Type 2 SPD applications, cUL, and UL 1283
- Nominal Discharge Surge Current (In): 20kA (all models)
- Short Circuit Current Rating (SCCR): 200kA (all models)
- Compliant to ANSI/IEEE C62.41.1, C62.41.2 and C62.45; suitable for ANSI/IEEE C62.41 Location Categories C, B and A
- EMI/RFI filter attenuation per MIL-STD-220B: 41 dB maximum at 106 kHz
- NFPA 70 [NEC®], Article 242
- Made in U.S.A.

RETURNS AND WARRANTY PROCEDURES

TransTrack TTX Series SPD products are warranted for a period of 25 years from the date of purchase. In the event that any module or subassembly within the SPD fails to perform as specified during the warranty period, call our Technical Support at 800-647-1911 to obtain a Return Material Authorization number. We will ship a replacement for the defective parts free of charge (installation labor and site preparation excluded). Return the defective parts within 30 days of receiving the replacement. Failure to return the defective parts will result in billing for the replacement parts. To help expedite the return procedures, please have the following information at hand when you contact Total Protection Solutions:

INFORMATION	EXAMPLE
Model Number	TK-TTX100-3Y208-F
Serial Number	15478-0113-001
Date of Purchase	January 2, 2026 (1st week)
Sales Order Number	15478
Description of Failure	Red service indicating light illuminated
Desired Action	Replace

TPS WARRANTY STATEMENT

During the applicable warranty period, any Total Protection Solutions® surge protector device which fails due to defect in materials, workmanship, or any transient surge event to include lightning, shall be repaired or replaced at the expense of the manufacturer.

Prior to shipment of any suspect or known defective product, a Return Material Authorization (RMA) number must be obtained. An official RMA number and shipping instructions can be obtained from the distributor where the product was originally purchased. Distributors can obtain the official RMA number by contacting the Total Protection Solutions Customer Service Department at 800-647-1911. Products arriving without an official RMA number will not be accepted and will be returned freight collect to the original point of shipment.

Products being returned with an official RMA number should be shipped by prepaid freight to the nominated point of return as shown on the RMA documentation.

Total Protection Solutions shall have no liability under this warranty for problems or defects directly or indirectly caused by misuse of the Product, alteration of the Product (including removal of any warning labels), accidents, improper installation, application, operation or improper repair of the Product.

THIS WARRANTY REPRESENTS THE ENTIRE WARRANTY OF TOTAL PROTECTION SOLUTIONS. ALL OTHER WARRANTIES EXPRESS OR IMPLIED, ORAL OR WRITTEN, INCLUDING, BUT NOT LIMITED TO, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. THE LIABILITY OF TOTAL PROTECTION SOLUTIONS, AT ITS SOLE OPTION, UNDER THIS WARRANTY IS EXPRESSLY LIMITED TO THE REPLACEMENT OR REPAIR OF THE DEFECTIVE PART THEREOF. IN NO EVENT SHALL TOTAL PROTECTION SOLUTIONS BE LIABLE OR RESPONSIBLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR CHARACTER, NOR SHALL ITS LIABILITY EVER EXCEED THE PURCHASE PRICE PAID FOR SUCH DEFECTIVE PRODUCT.

Warranty period begins from date of original owner purchase. This warranty is not transferable and may only be enforced by the original end user. Claims under this warranty must be submitted to Total Protection Solutions within thirty (30) days of discovery of any suspected product defect.

Warranty Period

TransTrack® TTX Series (TTX065–TTX200)	25-Year Unlimited Free Replacement Warranty

Total Protection Solutions

P.O. Box 340, Winter Park, FL 32790 USA | TEL: 800-647-1911 | www.TPSsurge.com

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Specifications subject to change without notice. See www.TPSsurge.com for latest revisions.