## 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.

## 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 Total Protection Solutions.

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.

The Company 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 THE COMPANY. 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 THE COMPANY, AT ITS SOLE OPTION, UNDER THIS WARRANTY IS EXPRESSLY LIMITED TO THE REPLACEMENT OR REPAIR OF THE DEFECTIVE PART THEREOF. IN NO EVENT SHALL THE COMPANY 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 the date of original owner purchase. This warranty is not transferable and may only be enforced by the original purchaser. Claims under this warranty must be submitted to Total Protection Solutions within thirty (30) days of discovery of any suspected product defect.

**Warranty Period**

| | |
|---|---|
| PanelTrack® | 10 Years |

FREE REPLACEMENT
10 YEAR WARRANTY 10 YEAR WARRANTY

Total Protection Solutions®

P.O. Box 3760
Winter Park, FL 32790 USA
1-800-647-1911
www.TPSsurge.com


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Total Protection Solutions®

# PanelTrack®

## Type 1 SPD

## Surge Protective Device

## PanelTrack SlimLine Series:

**TK-PK040S-1P120-L**
**120Vac, 1ø, 2 Wire + Ground**

**TK-PK040S-1S240-L**
**120/240Vac, 1ø, 3 Wire + Ground**

**TK-PK080S-1S240-L**
**120/240Vac, 1ø, 3 Wire + Ground**

**TK-PK040S-3Y208-L**
**120/208Vac, 3ø, 4 Wire + Ground**

- Add "-A" suffix for form C dry relay contacts for remote monitoring.
- Add "-DIN" suffix for din-rail mounting bracket.
  *For example: TK-PK040S-3Y208-LA-DIN*
- A flush-mount plate (part number: PKS-FMP) is also available – must be ordered as a separate item.
- All units come with 18 inches of #14 AWG leads.

# Installation Operation and Maintenance Manual

## INTRODUCTION

**WARNING – Hazardous voltages can cause severe personal injury or death and/or property damage. Remove all power to the electrical panel before installing or servicing this Surge Protective Device (SPD).**

## IMPORTANT SAFETY INFORMATION

- All work must be performed by qualified electrical personnel.
- The electrical system must be properly grounded in accordance with applicable codes for this unit to work correctly.
- All TK-PK0X0S-XXX are Type 1, 100kAIC with no breaker required.
- Confirm that the voltage(s) and service configuration shown on the PanelTrack product label are consistent with the voltage and service configuration of the electrical panel. See Figure 1-3 for electrical relationship between PanelTrack and three basic configurations: single-phase, 2-wire; split-phase, 3-wire; 3-phase, and 4-wire WYE.
- Read complete installation instructions before beginning installation.

**Fig. 1: Single Phase, 2-Wire**

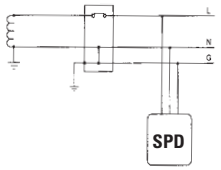



**Fig. 2: Split Phase, 3-Wire**

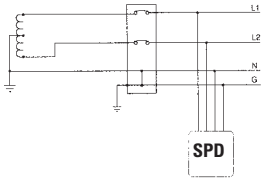



**Fig. 3: 3-Phase, 4-Wire WYE**

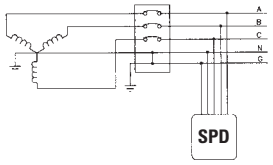



**TABLE 1**

| Model | kAIC Rating | Upstream Breaker or OCPD |
|---|---|---|
| TK-PK040S-1P120-L | 100 | NB |
| TK-PK040S-1P120-TNS-L | 100 | NB |
| TK-PK040S-1S240-L | 100 | NB |
| TK-PK040S-3Y208-L | 100 | NB |
| TK-PK080S-1P120-L | 100 | NB |
| TK-PK080S-1S240-L | 100 | NB |

### INSTALLATION

An upstream overcurrent protection device is recommended. The suppressor may be installed on the line or load side of the main service disconnect. The unit must be installed in parallel to the electrical distribution system. Use a 3-pole breaker for 3-phase units, 2-pole breaker for split-phase units or single-pole breaker for single-phase units. The advantage of using a dedicated breaker for the SPD is that it allows the suppressor to be de-energized during service without disturbing
the electrical system to the rest of the facility. The SPD can also be wall mounted using a L-shaped bracket shipped with the device. See attached drawing for detailed mounting instructions. A careful consideration must be made in selecting the breaker and knockout location.



PanelTrack's performance will be limited severely if the conductors are (a) too long, (b) have too many bends or (c) have sharp bends. The factors listed above should be addressed during the design of an installation to reserve a suitable place for PanelTrack next to its point of connection to the electrical system. The selected mounting location should allow for the shortest 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 90º bends for appearance purposes because they will severely decrease the effectiveness of PanelTrack. Binding or twisting conductors together using tie-wraps or electrical tape increases the protection performance of the device.

1. Disconnect all power supplying the electrical panel.
2. Remove the panel cover screws and cover. Retain these parts for re-installation.
3. Remove the selected 0.5 in. (13 mm) knockout from the panel to install the SPD.
4. Remove lock washer from the protector's threaded nipple. Carefully feed the wires through the panel knockout to avoid cutting wire insulation from sharp knockout edges. Slide lock washer over the wires to anchor the threaded nipple inside the panel. Tighten lock washer to secure the protector to the panel enclosure.
5. The SPD can also be wall mounted using a L-shaped bracket shipped with the device. See enclosed drawing for detailed mounting instructions.
6. The Din units (models with "-DIN" suffix) can be mounted to a din-rail. See enclosed drawing for detailed mounting instructions.
7. Locate the neutral bar inside the electrical panel. Connect the white wire (or blue) to the neutral bar and tighten the terminals to torque specified on the panel. Keep conductor as short as possible while avoiding sharp bends.
8. Locate the ground bar inside the electrical panel. Connect the green (or green/yellow) wire to the ground bar and tighten the terminals to torque specified on the panel. Keep conductor as short as possible while avoiding sharp bends.
9. Connect black (or brown) wires to the load side of branch breaker. For 120/240V, high-leg Delta services, the orange wire (color-coded by NEC) of the SPD must be connected to phase B (the high-leg). Keep conductors as short as possible while avoiding sharp bends.
10. Re-install the panel cover.

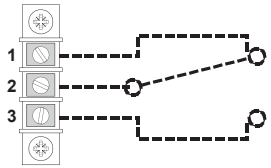
## OPERATION

1. Apply power to the panel. If the electrical and grounding wirings are done properly, the green function status LED indicator on the SPD will be on. If the light is not on, remove the power and review all of the previous installation procedures.
2. If, after a known heavy lightning strike, the breaker is found tripped, reset the breaker. If the function status light is lit, then the SPD is fine. If the light is out or you cannot reset the breaker, the unit must be replaced.

   *This unit contains no serviceable parts.

## REMOTE RELAY CONTACTS (MODELS END WITH "-A" SUFFIX ONLY)

For "Fail-safe" form A monitoring, connect the alarm leads to terminals 2 and 3. Terminals 2 and 3 will be closed during normal (Power ON) operation and the SPD is functioning properly. If the suppressor should fail contacts 2 and 3 will open and contacts 1 and 2 will close. Relay contacts are rated at 5A at 250VAC or 30VDC maximum, 50mVA minimum.




Relay contacts shown in the relaxed position (suppressor alarm or loss of power).

***Note:***
Maximum torque on terminals is 10 in-lb