



## SYSTEM FEATURES



- Protects commercial and residential equipment against the harmful effects of lightning strikes and internally generated electrical transients
- Individually fused MOV's provide superior protection and continuous operation
- 200kAIC short circuit current rating allows direct bus connection without the need of an upstream over-current protection device
- Enhanced Transient Filter
- Includes pre-wired pigtail conductors to streamline installation
- Low profile design includes flush-mount plate for in-wall recess panel applications
- UL 1283 Listed standard EMI/RFI filter
- Ultra Compact Footprint – makes installation flexible
- Weatherproof steel enclosure allows for outdoor installations

## PRODUCT SPECIFICATIONS

### GENERAL SPECIFICATIONS

**Maximum Rated Surge Current:** 100kA per phase; 50kA per mode

**Application:** ANSI/IEEE C62.41 Location C, B & A. Ideal for service entrance panels, branch panels and critical loads.

**Design:** Hybrid parallel design with individual fused MOV's and UL 1283 listed EMI/RFI filter.

**Warranty:** Lifetime Unlimited Free Replacement for Residential, 25 yr. for Commercial. Original Owner Only.

**Safety Listing:** UL 1449 3rd Ed., Type 1 for Type 1 & Type 2 Locations and UL 1283

### ELECTRICAL SPECIFICATIONS

**Modes of Protection:** Discrete Protection (L-N, L-G, N-G & L-L)

**Input Power Frequency:** 47-63Hz

**Connection Method:** Parallel to electrical distribution system

**Response Time:** Less than 0.5 nanoseconds

**Standard Monitoring:** Status indicator lights (one per phase)

**Short Circuit Current Rating:** 200 kAIC – no upstream over-current protection device (breaker or fuse) required.

### MECHANICAL SPECIFICATIONS

**Dimensions (approx.):** 6"H x 6"W x 4"D

(160 mm H x 160 mm W x 102 mm D)

**Enclosure:** Power coated, impact-resistance steel, weather-proof NEMA 4 (IP56)

**Connection:** Pre-wired with 36" (915 mm) of #10 AWG (5.26 mm<sup>2</sup>) conductor

**Mounting:** Dual mounting flanges. Flush-mounting trim plate included.

**Operating Environment:** -40° C to 70° C (-40° F to 160° F)

5% to 95% non-condensing humidity

**Weight:** Approx. 11 lbs. (5 kg)

### AVAILABLE CONFIGURATIONS

Model Number	Description
TK-TTLP-1S240-FL	120/240VAC, 1ø SPLIT-PHASE, 3-wire + grd
TK-TTLP-1P120-FL	120VAC, SINGLE-PHASE, 2-wire + grd
TK-TTLP-1P240-FL	240VAC, SINGLE-PHASE, 2-wire + grd
TK-TTLP-3Y208-FL	120/208VAC, THREE-PHASE, 4-wire + grd
TK-TTLP-3Y480-FL	277/480VAC, THREE-PHASE, 4-wire + grd

### EMI / RFI FILTER ATTENUATION – MIL STANDARD 220B

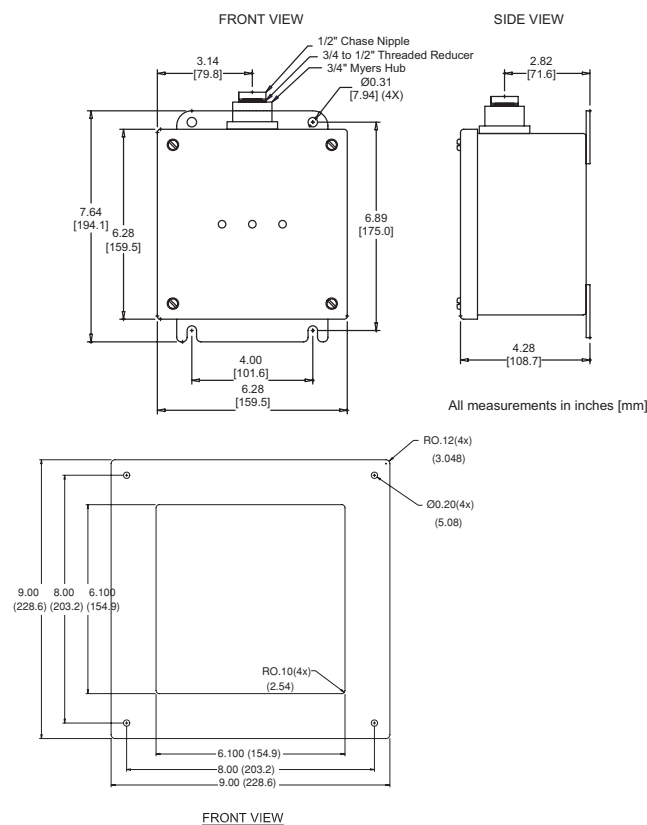
Max. Attenuation Freq.

41 dB @ 106kHz

### AVAILABLE OPTION

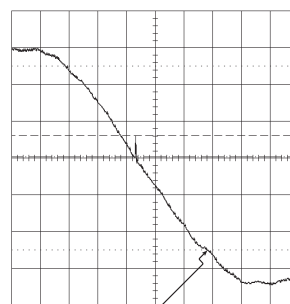
- Advanced monitoring package - includes dry relay contacts for remote monitoring of status of unit, and audible alarm with silence switch on cover of unit: add suffix "-M"





- NOTES:
1. DRAWING TO BE INTERPRETED PER ANSI STANDARD Y14.5.
  2. ALL DIMENSIONS ARE IN INCHES.
  3. DEBURR ALL SHARP EDGES AND CORNERS, SAND SMOOTH.
  4. RADII TO BE .07 MAX.

All measurements in inches (mm)



- Peak Let-Through Voltage Level - 36V
- Reference Level Zero Crossing of AC Sine Wave

For 120/208V Configuration

ANSI/IEEE C62.41.1  
Category A1 Ring Wave  
2000V, 67A Test Plot

L-N Mode, Dynamic,  
180 Phase Angle,  
6" Leads, Positive Polarity  
1 msec/div Horizontal  
45V/div Vertical

Model Number					ANSI/IEEE C62.41.1-2002, C62.41.2-2002, & C62.45-2002			
					Measured Limited Voltage			UL Voltage Ratings
					ETF Models A1 Ring Wave 2kV, 67A 180° Phase Angle	All Models B3/C1 Impulse Wave 6kV, 3kA 90° Phase Angle	All Models C3 Impulse Wave 20kV, 10kA 90° Phase Angle	
System Voltage	System Configuration	Protection Mode	MCOV					UL 1449 2nd Edition/ UL 1449 2nd Edition Voltage Protection Ratings
TK-TTLP-1S240-FL	120V/240V	2-Phase 3-wire+grnd	L-N	150V	36V	587V	970V	400/600
TK-TTLP-1P120-FL	120V	1-Phase 2-wire+grnd	L-N	150V	36V	587V	970V	400/600
TK-TTLP-1P240-FL	240V	1-Phase 2-wire+grnd	L-N	320V	42V	1040V	1660V	800/1200
TK-TTLP-3Y208-FL	120V/208V	3-Phase WYE 4-wire+grnd	L-N	150V	36V	587V	970V	400/600
TK-TTLP-3Y480-FL	277V/480V	3-Phase WYE 4-wire+grnd	L-N	320V	41V	1043V	1655V	800/1200

All tests performed with 6" (152 mm) lead length, positive polarity.

All voltages are peak values ( $\pm 10\%$ ) measured from the zero reference point at the phase angles referenced above using a 10  $\mu$ s/div display rate and 500 Mega samples/sec sampling rate. Specifications subject to change without notice. See web site [www.TPSsurge.com](http://www.TPSsurge.com) for latest revisions.