

## SYSTEM FEATURES



- Provides surge protection against harmful transient voltages that exceed the nominal operating voltage of AC critical dedicated control loads and telephone line applications
- Ideal for protecting the PLCs, fire alarm panels, ATM, electronic access readers, POS, building management systems and other mission critical loads
- Compact, fail-safe design allows flexible installation into electrical/control panels
- Dual Component-Level Fusing (CLF) standard
- Enhanced Transient Filter (ETF) standard
- NEMA LS1 compliance (NEMA LS1 2.2-9 and 3-9)
- Form C dry relay contacts for remote monitoring
- Recognized under UL 1449 2nd Edition as TVSS, UL 1283 as Electromagnetic Filter, UL 497A as Secondary Telephone Protector and cUL
- 15-Year Unlimited Free Replacement Warranty

## PRODUCT SPECIFICATIONS

### GENERAL SPECIFICATIONS

**Maximum Rated Surge Current:** 70kA per phase  
**Application:** ANSI/IEEE C62.41 Location C, B & A  
**Design:** Fail-safe design with dual component-level fusing (secondary over-current and thermal protection)  
**Warranty:** 15-Year Unlimited Free Replacement  
**Safety Listing:** Recognized under UL 1449 2nd Edition TVSS, cUL, UL 1283 Filter, UL 497A Secondary Telephone Protector

### ELECTRICAL SPECIFICATIONS

**Modes of Protection:** All modes. L-N, L-G, & N-G (for AC); Tip-to-Ring, Tip-to-Ground and Ring-to-Ground (for telecom)  
**Input Power Frequency:** 47-64 Hz (for AC); 10MHz (for telecom)  
**Maximum Continuous Operating Current:** 30 amps or 60 amps  
**Response Time:** < 1 nanosecond  
**Standard Monitoring:** Includes ultra bright LED status indicating light and Form C dry relay contacts for remote monitoring  
**Short Circuit Current Rating:** 100kAIC short circuit current rating with a 30 amp or 60 amp max Class T fuse (based on current rating of device)

### MECHANICAL SPECIFICATIONS

**Dimensions:** 4.73"H x 6.23"W x 2.37"D (30 amp models); 4.72"H x 7.29"W x 3.68"D (60 amp models)  
**Enclosure:** ABS Plastic UL94-5VA  
**Connection:** (For Telecom) RJ14 modular jacks (For AC) Hard-wired via box terminals on 30 amp models; Stud-lugs on 60 amp models  
**Mounting:** Multi-point mounting feet  
**Operating Environment:** -40° C to 70° C (-40° F to 160° F); 5% to 95% non-condensing humidity  
**Weight:** 30 amp models 1 lbs (0.45 kg); 60 amp models 2 lbs (0.9 kg)

### AVAILABLE CONFIGURATIONS

Model Number	Configuration	Protection	Connection
TK-LTE120-30A-RJ	120V, 1 $\phi$ 2-wire + grd 30 amps	AC & Telecom	Wire Terminals & RJ14
TK-LTE250-30A-RJ	250V, 1 $\phi$ 2-wire + grd 30 amps	AC & Telecom	Wire Terminals & RJ14
TK-LTE120-30A	120V, 1 $\phi$ 2-wire + grd 30 amps	AC only	Wire Terminals
TK-LTE250-30A	250V, 1 $\phi$ 2-wire + grd 30 amps	AC only	Wire Terminals
TK-LTE120-60A	120V, 1 $\phi$ 2-wire + grd 60 amps	AC only	Stud-lugs
TK-LTE250-60A	250V, 1 $\phi$ 2-wire + grd 60 amps	AC only	Stud-lugs

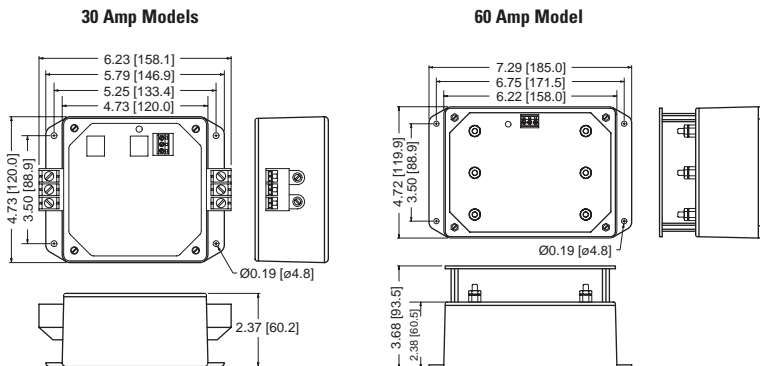
### AVAILABLE OPTION

- Din-rail mounting clips: add suffix "-DIN"  
 Example: TK-LTE120-30A-RJ-DIN

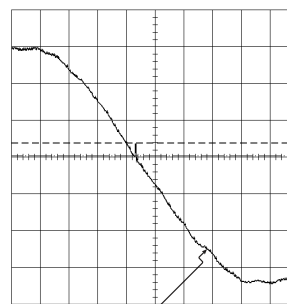
### EMI / RFI FILTER ATTENUATION – MIL STANDARD 220B

Frequency	Attenuation
1kHz	3 dB
10kHz	20 dB
100kHz	34 dB
1MHz	32 dB
10MHz	28 dB
20MHz	19 dB
Max. attenuation	35 dB @ 272kHz





All measurements in inches [mm]



AC Sine Wave

Peak Let-Through Voltage Level - 20V  
Reference Level Zero Crossing of AC Sine Wave

For 120V Configuration

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

L-N Mode, Dynamic,  
180° Phase Angle,  
Positive Polarity  
1 msec/div Horizontal  
500 Mega samples/sec  
55V/div Vertical

ANSI/IEEE C62.41.1-2002, C62.41.2-2002, & C62.45-2002

Measured Limited Voltage

UL SVR

Model Number	System Voltage	System Configuration	Protection Mode	MCOV	Measured Limited Voltage			UL SVR
					All Models A1 Ring Wave 2kV, 67A 180° Phase Angle	All Models A3 Ring Wave 6kV, 200A 180° Phase Angle	All Models B3/C1 Impulse Wave 6kV, 3kA 90° Phase Angle	UL 1449 2nd Edition Suppressed Voltage Ratings
TK-LTE120-30A	120V	1-Phase 2-wire+ground	L-N	150V	20V	60V	413V	400V
			L-G	150V	23V	56V	417V	400V
			N-G	150V	23V	59V	442V	400V
TK-LTE250-30A	250V	1-Phase 2-wire+ground	L-N	275V	20V	63V	839V	800V
			L-G	275V	21V	61V	855V	800V
			N-G	275V	23V	62V	884V	800V
TK-LTE120-30A-RJ	120V	1-Phase 2-wire+ground	L-N	150V	21V	61V	412V	400V
			L-G	150V	23V	62V	424V	400V
			N-G	150V	23V	61V	448V	400V
TK-LTE250-30A-RJ	250V	1-Phase 2-wire+ground	L-N	275V	20V	62V	832V	800V
			L-G	275V	23V	61V	863V	800V
			N-G	275V	24V	64V	870V	800V
TK-LTE120-60A	120V	1-Phase 2-wire+ground	L-N	150V	21V	59V	400V	400V
			L-G	150V	23V	63V	415V	400V
			N-G	150V	24V	65V	415V	400V
TK-LTE250-60A	250V	1-Phase 2-wire+ground	L-N	275V	21V	63V	816V	800V
			L-G	275V	23V	64V	832V	800V
			N-G	275V	23V	65V	832V	800V

All voltages are peak values (±10%) measured from the zero reference point at the phase angles referenced above using a 10 μs/div display rate and 500 MS/s sampling rate. Specifications subject to change without notice, see web site, www.TPSSurge.com for latest revisions.

## TELECOM PERFORMANCE SPECIFICATIONS

**Application:** Standard voice grade dial-up telephone lines (POTS) up to 2 pairs

**Design:** Multi-stage hybrid

**Maximum Rated Surge Current:** 2kA per pair

**Modes of Protection:** All modes. Tip-to-Ring, Tip-to-Ground & Ring-to-Ground

**Safety Listing:** Recognized under UL 497A as Secondary Telephone Protector

**Maximum Operating Frequency:** 10MHz

**Maximum Data Rate:** 2Mbps

**Maximum Continuous Operating Voltage:** 240V peak

**Response Time:** < 1 nanosecond

**Measured Limited Voltage (IEC 10x700 μsec Impulse, 2kV/80A):** 260V

**Connection:** Modula Jack RJ14 (accepts RJ11)



For Technical Support

TEL: (800) 604-9980 www.TPSSurge.com