

## SYSTEM FEATURES



- Provides surge protection against harmful transient voltages that exceed the nominal operating voltage of AC and DC critical dedicated control loads
- Ideal for protecting the PLC's, Building management systems, OEM & systems integration controls and other microprocessor-based loads
- Compact, fail-safe design allows flexible installation into electrical/control panels
- Dual Component-Level Fusing (CLF) standard
- Enhanced Transient Filter (ETF) standard
- 15-year Unlimited Free Replacement Warranty
- Reduce lockups, glitches and reprogramming issues

## PRODUCT SPECIFICATIONS

### GENERAL SPECIFICATIONS

**Maximum Rated Surge Current:** 20kA per phase  
**Application:** ANSI.IEEE C62.41 Location C, B & A  
**Design:** Ultra compact, fail-safe design with dual component-level fusing  
**Warranty:** 15-Year Unlimited Free Replacement  
**Safety Listing:** ETL recognized component under UL 1449 3rd Edition as a type 4 SPD, cETL, and under UL 1283 as an electromagnetic filter.

### ELECTRICAL SPECIFICATIONS

**Input Power Frequency:** 47-64Hz  
**Maximum Continuous Operating Current:** 20 amps  
**Modes of Discrete Suppression Circuitry:**  
 All modes L-N, L-G & N-G  
**Response Time:** < 1 nanosecond  
**Standard Monitoring:** Status indicating light  
**Short Circuit Current Rating:** 100kAIC short circuit current rating with a 20 amp max Class T fuse

### MECHANICAL SPECIFICATIONS

**Dimensions:**  
 LT24, LT48, LT120: 3.94"H x 1.40"W x 2.28"D  
 LT250: 3.94"H x 2.80"W x 2.28"D  
**Enclosure:** ABS Plastic UL94-5VA  
**Connection Method:** Hard-wired via box terminals #16AWG - #8 AWG  
**Mounting Method:** Screw down or Din-Rail mounted.  
**Operating Temperature:** -40° C to 85° C (-40° F to 185° F)  
**Weight:** 1.00 lbs. (0.45 kg)

### LT PERFORMANCE SPECIFICATIONS

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

Model Number (Working Voltage)	Mode	A1 Ring Wave	A3 Ring Wave	B3/C1
		2kV, 67A 180° Phase Angle	6kV, 200A 180° Phase Angle	Impulse Wave 6kV, 3kA 90° Phase Angle
TK-LT24-20A-DIN2 (5-30 VAC) (5-38 VDC)	L-N	44V	83V	152V
	L-G	75V	91V	173V
	N-G	50V	85V	173V
TK-LT48-20A-DIN2 (25-50 VAC) (24-65 VDC)	L-N	44V	115V	197V
	L-G	97V	145V	225V
	N-G	49V	117V	193V
TK-LT120-20A-DIN2 (48-150 VAC) (48-200 VDC)	L-N	47V	127V	438V
	L-G	92V	239V	496V
	N-G	47V	128V	470V
TK-LT250-20A-DIN2 (120-275 VAC) (120-300 VDC)	L-N	49V	130V	851V
	L-G	90V	234V	955V
	N-G	48V	130V	960V

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

### EMI/RFI FILTER ATTENUATION—MIL STANDARD

Frequency	Attenuation
1kHz	1dB
10kHz	5dB
100kHz	29dB
1MHz	32dB
10MHz	8dB
20MHz	9dB

All measurements in inches [mm]

