

## SYSTEM FEATURES



- Slimline design ensures minimum lead-length for maximum performance
- Fail-Safe Design
- Component Level Fusing (CLF), individually fused MOV's for added safety
- NEMA LS1 Compliance – Single pulse tested at independent 3rd party nationally recognized lab
- Form C dry relay contacts
- Audible alarm with silence button
- Hybrid suppression technologies – MOV and Enhanced Transient Filter (ETF)
- UL 1283 Tracking Filter
- Compact Footprint – Makes installation flexible while insuring peak performance
- 30-Year Unlimited Free Replacement Warranty

## PRODUCT SPECIFICATIONS

### GENERAL SPECIFICATIONS

**Maximum Rated Surge Current:** 80kA per phase; 40kA per mode  
**Application:** ANSI/IEEE C62.41 Location B & A. Ideal for flush mount in-wall and adjacent panelboards  
**Design:** Fusing for safety and hybrid suppression design provides lowest let-through voltage protection for mission critical loads  
**Warranty:** 30-Year Unlimited Free Replacement  
**Safety Listing:** UL 1449 2nd Edition 2005 Revision (effective 2/9/2007) UL 1283

### ELECTRICAL SPECIFICATIONS

**Mode of Protection:** All Mode. L-N, L-L, L-G, & N-G  
**Input Power Frequency:** 40-440Hz (47-64 Hz with enhanced filter option)  
**Response Time:** < 1 nanosecond  
**Standard Monitoring:** Status indicator lights (one per phase & one service LED); Form C dry contacts for suppressor status; Audible alarm with silence button  
**Short Circuit Current Rating:** 200 kAIC short circuit current rating. Component Level fusing (CLF) allows direct bus connection without the need for upstream over-current protection

### MECHANICAL SPECIFICATIONS

**Dimensions (approx.):** 12"H x 4"W x 4"D  
**Enclosure:** Compact NEMA 1 steel enclosure allows cable entry from top and both sides for flexible mounting to virtually any panelboard or disconnect application  
**Connection:** Pre-wired 24" #10 AWG strand copper conductor  
**Mounting:** Mounting feet top and bottom. Flush-mount cover plate and 3/4" Myers hub included  
**Operating Environment:** -40° C to 60° C (-40° F to 160° F), 5% to 95% non-condensing humidity  
**Weight:** 12 lbs. (5.4 kg)

### AVAILABLE CONFIGURATIONS

| Model Number     | Description  |
|------------------|--|
| TK-LP080-1S240-L | 120/240VAC, 1 $\phi$ SPLIT-Phase, 3-wire + grd                           |
| TK-LP080-3Y208-L | 120/208VAC, 3 $\phi$ WYE, 4-wire + grd                                   |
| TK-LP080-3Y480-L | 277/480VAC, 3 $\phi$ WYE, 4-wire + grd                                   |
| TK-LP080-3D240-L | 120/240VAC, 3 $\phi$ high-leg DELTA, 4-wire + grd (B phase must be 208V) |

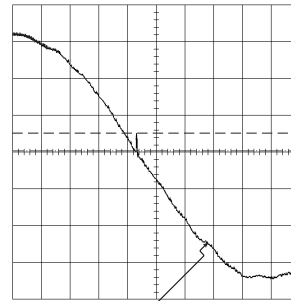
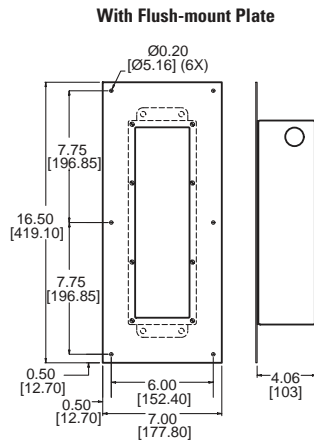
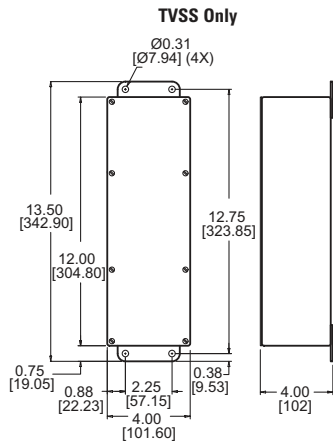
### AVAILABLE OPTION

- Enhanced Transient Filter: add suffix "-F"  
 Example: TK-LP080-3Y208-FL

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

| Frequency                  | Attenuation     |
|----------------------------|-----------------|
| 1kHz                       | 1 dB            |
| 10kHz                      | 14 dB           |
| 100kHz                     | 42 dB           |
| 1MHz                       | 22 dB           |
| 10MHz                      | 6 dB            |
| 100MHz                     | 2 dB            |
| Max. Attenuation Frequency | 57 dB @ 142 kHz |





Peak Let-Through Voltage Level - 29V

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  
500 Mega samples/sec  
55V/div Vertical

All measurements in inches [mm]

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 | ETF Models                                   | ETF Models                                    | All Models                                   | UL 1449 2nd Edition                               |
|------------------|----------------|--|-----------------|------|--|---|--|---|
|                  |                |  |                 |      | A1 Ring Wave<br>2kV, 67A<br>180° Phase Angle | A3 Ring Wave<br>6kV, 200A<br>180° Phase Angle | B3 Ring Wave<br>6kV, 500A<br>90° Phase Angle | 2005 Revision<br>Suppressed<br>Voltage<br>Ratings |
| TK-LP080-1S240-L | 120/240V       | 1-Phase<br>3-wire+grnd                   | L-N             | 150V | 29V  | 56V   | 437V   | 400V  |
|                  |                |  | L-G             | 150V | 46V  | 81V   | 592V   | 400V  |
|                  |                |  | L-L             | 300V | 39V  | 88V   | 612V   | 800V  |
|                  |                |  | N-G             | 150V | 40V  | 112V  | 324V   | 400V  |
| TK-LP080-3Y208-L | 120/208V       | 3-Phase<br>WYE<br>4-wire+grnd            | L-N             | 150V | 29V  | 56V   | 437V   | 400V  |
|                  |                |  | L-G             | 150V | 46V  | 81V   | 592V   | 400V  |
|                  |                |  | L-L             | 300V | 39V  | 88V   | 612V   | 800V  |
|                  |                |  | N-G             | 150V | 40V  | 112V  | 324V   | 400V  |
| TK-LP080-3Y480-L | 277/480V       | 3-Phase<br>WYE<br>4-wire+grnd            | L-N             | 320V | 27V  | 71V   | 670V   | 800V  |
|                  |                |  | L-G             | 320V | 52V  | 119V  | 785V   | 800V  |
|                  |                |  | L-L             | 640V | 39V  | 73V   | 1020V  | 1500V   |
|                  |                |  | N-G             | 320V | 48V  | 67V   | 324V   | 800V  |
| TK-LP080-3D240-L | 120/240V       | 3-Phase<br>high-leg DELTA<br>4-wire+grnd | L-N             | 150V | 27V  | 56V   | 437V   | 400V  |
|                  |                |  | H-N             | 320V | 52V  | 71V   | 670V   | 800V  |
|                  |                |  | L-G             | 150V | 52V  | 81V   | 592V   | 400V  |
|                  |                |  | H-G             | 320V | 52V  | 119V  | 785V   | 800V  |
|                  |                |  | L-L             | 300V | 39V  | 88V   | 612V   | 800V  |
|                  |                |  | H-L             | 470V | 39V  | 78V   | 1020V  | 1500V   |
| N-G              | 150V           | 40V                                      | 112V            | 325V | 400V   |   |  |   |

ETF = Enhanced Transient Filter (-F suffix). All tests performed with 6" 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  $\mu\text{s}/\text{div}$  display rate and 500 MS/s sampling rate.

Specifications subject to change without notice, see web site, [www.TPSSurge.com](http://www.TPSSurge.com) for latest revisions.