

SYSTEM FEATURES



- Protects facilities and equipment against the harmful effects of lightning strikes and internally generated electrical transients
- Individually fused MOV's provide superior protection and continuous operation
- 200 kAIC short circuit current rating allows direct bus connection without the need of an upstream over-current protection device
- Includes pre-wired pigtail conductors to stream line installation
- Low profile design has an optional flush-mount plate for most units for in-wall recessed panel applications
- UL 1283 EMI/RFI filter
- Ultra Compact Footprint – makes installation flexible
- Enhanced Transient Filter for better protection of electronic loads
- 25-Year Unlimited Free Replacement Warranty
- Status indicator lights (LED)

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS

Maximum Rated Surge Current: 65kA per phase (32.5kA/mode)
Repetitive Surge Current Rating: 3,000 impulses per mode based on actual test data (using ANSI/IEEE C62.41.1-2002 C3 combo wave)
Application: ANSI/IEEE C62.41 Location C, B & A. Ideal for distribution panels, branch panels and critical loads
Design: Hybrid parallel design with individual fused MOV's and UL 1283 EMI/RFI filter
Warranty: 25-Year Unlimited Free Replacement
Safety Listing: UL 1449 3rd Ed., Type 1 for Type 1 & Type 2 locations and UL 1283

ELECTRICAL SPECIFICATIONS

Modes of Protection: All modes: L-N, L-G, N-G & L-L
Input Power Frequency: 47-63Hz
Connection Method: Parallel to electrical distribution system
Response Time: Less than 1 nanosecond
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 for most units (160 mm H x 160 mm W x 102 mm D)
 For models 480NN, 600NN, and 3Y600, approx. dimensions are 8"H x 6"W x 6"D
Enclosure: Powder coated, impact-resistance steel, weather-proof NEMA 4 (IP56)
Connection: Pre-wired with 30" (915 mm) of #10 AWG (5.26 mm²) conductor
Mounting: Dual mounting flanges
Operating Environment: -40° C to 70° C (-40° F to 160° F)
 5% to 95% non-condensing humidity
Weight: 10 lbs. (4.5 kg)

AVAILABLE CONFIGURATIONS

| Model Number | Description |
|---------------------|--|
| TK-TT2-065-1P120-FL | 120VAC, Single-Phase 2-wire + grd |
| TK-TT2-065-1P240-FL | 240VAC, Single-Phase 2-wire + grd |
| TK-TT2-065-1S240-FL | 120/240VAC, Split-Phase, 3-wire + grd |
| TK-TT2-065-3Y208-FL | 120/208VAC, Three-Phase, 4-wire + grd |
| TK-TT2-065-3Y380-FL | 220/380VAC, Three-Phase, 4-wire + grd |
| TK-TT2-065-3Y480-FL | 277/480VAC, Three-Phase, 4-wire + grd |
| TK-TT2-065-3D240-FL | 120/240VAC, 3 ϕ high-leg DELTA, 4-wire + grd (B phase must be 208V) |
| TK-TT2-065-240NN-FL | 240VAC, Three-Phase, 3-wire + grd |
| TK-TT2-065-480NN-FL | 480VAC, Three-Phase, 3-wire + grd |
| TK-TT2-065-600NN-FL | 600VAC, Three-Phase, 3-wire + grd |
| TK-TT2-065-3Y600-FL | 347/600VAC, Three-Phase, 4-wire + grd |

AVAILABLE OPTIONS

- Monitoring package (Form C dry relay contacts + audible alarm with mute button) : add suffix "-M"

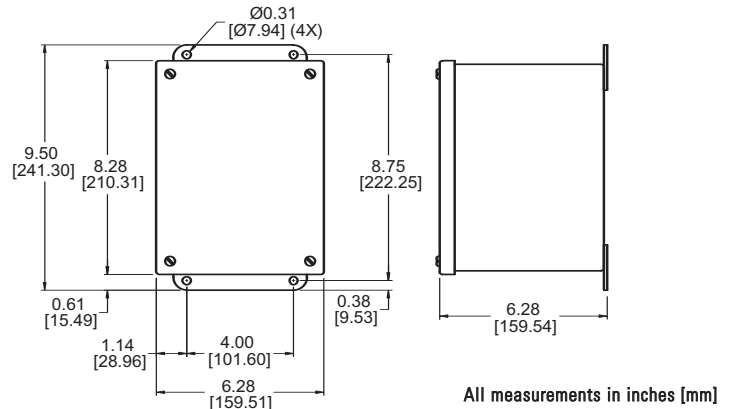
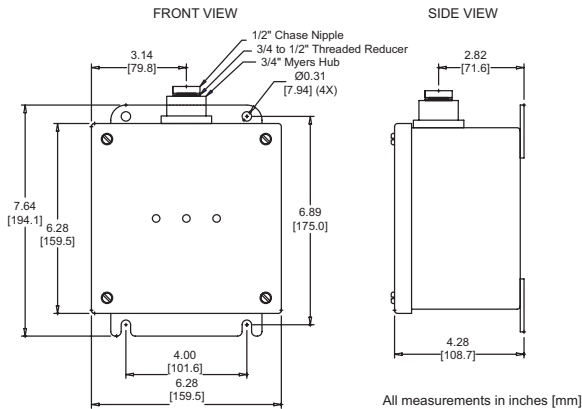
Stand-Alone Option (To Be Ordered as a separate Item)

- TT2-FMP Flush-Mount Plate Kit
(not available for 480 & 600 delta, and 347/600Y)

EMI / RFI FILTER ATTENUATION – MIL STANDARD 220B

Max. Attenuation Frequency
 40 dB @ 100 kHz





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

UL Voltage Ratings

| Model Number | System Voltage | System Configuration | Protection Mode | MCOV | A1 Ring Wave | B3/C1 Impulse Wave | C3 Impulse Wave | UL 1449 2nd Edition/ UL 1449 3rd Edition Voltage Protection Ratings |
|---------------------|----------------|--|-----------------|------|------------------------------|-----------------------------|-------------------------------|--|
| | | | | | 2kV, 67A 180° Phase Angle | 6kV, 3kA 90° Phase Angle | 20kV, 10kA 90° Phase Angle | |
| TK-TT2-065-P120-FL | 120V | 1-Phase 2-wire+grnd | L-N | 150V | 42V | 590V | 970V | 400/600 |
| | | | L-G | 150V | 541V | 1160V | 400/600 | |
| | | | N-G | 150V | 765V | 590V | 1100V | 400/600 |
| TK-TT2-065-1P240-FL | 240V | 1-Phase 2-wire+grnd | L-N | 320V | 42V | 1038V | 1660V | 800/1200 |
| | | | L-G | 320V | 541V | 1037V | 1690V | 800/1200 |
| | | | N-G | 320V | 765V | 1037V | 1510V | 800/1200 |
| TK-TT2-065-1S240-FL | 120/240V | Split-Phase 3-wire+grnd | L-N | 150V | 36V | 590V | 970V | 400/600 |
| | | | L-G | 150V | 283V | 597V | 1160V | 400/600 |
| | | | L-L | 300V | 56V | 980V | 1490V | 800/1000 |
| | | | N-G | 150V | 322V | 590V | 1100V | 400/600 |
| TK-TT2-065-3Y208-FL | 120/208V | 3-Phase WYE 4-wire+grnd | L-N | 150V | 36V | 590V | 970V | 400/600 |
| | | | L-G | 150V | 283V | 597V | 1160V | 400/600 |
| | | | L-L | 300V | 56V | 980V | 1490V | 800/1000 |
| | | | N-G | 150V | 322V | 590V | 1100V | 400/600 |
| TK-TT2-065-3Y380-FL | 220/380V | 3-Phase WYE 4-wire+grnd | L-N | 320V | 42V | 1040V | 1660V | 800/1200 |
| | | | L-G | 320V | 541V | 1037V | 1690V | 800/1200 |
| | | | L-L | 640V | 63V | 1860V | 2570V | 1500/2000 |
| | | | N-G | 320V | 765V | 1035V | 1510V | 800/1200 |
| TK-TT2-065-3Y480-FL | 277/480V | 3-Phase WYE 4-wire+grnd | L-N | 320V | 42V | 1040V | 1660V | 800/1200 |
| | | | L-G | 320V | 541V | 1037V | 1690V | 800/1200 |
| | | | L-L | 640V | 63V | 1860V | 2570V | 1500/2000 |
| | | | N-G | 320V | 765V | 1035V | 1510V | 800/1200 |
| TK-TT2-065-3D240-FL | 120/240V | 3-Phase high-leg DELTA 4-wire+grnd | L-N | 150V | 36V | 598V | 960V | 400/600 |
| | | | H-N | 320V | 39V | 1041V | 1326V | 800/1200 |
| | | | L-G | 150V | 283V | 595V | 1160V | 400/600 |
| | | | H-G | 320V | 735V | 1042V | 1495V | 800/1200 |
| | | | L-L | 320V | 31V | 988V | 1490V | 800/1000 |
| | | | H-L | 470V | 71V | 1394V | 1629V | 1500/1500 |
| TK-TT2-065-240NN-FL | 240V | 3-Phase DELTA 3-wire+grnd | L-G | 320V | 525V | 1039V | 1500V | 800/1200 |
| | | | L-L | 300V | 60V | 978V | 1300V | 800/1000 |
| TK-TT2-065-480NN-FL | 480V | 3-Phase DELTA 3-wire+grnd | L-G | 550V | 919V | 1591V | 1882V | 1500/1800 |
| | | | L-L | 550V | 50V | 1599V | 1960V | 1500/1800 |
| TK-TT2-065-600NN-FL | 600V | 3-Phase DELTA 3-wire+grnd | L-G | 750V | 1265V | 2223V | 2433V | 2000/2500 |
| | | | L-L | 750V | 50V | 2228V | 2421V | 2000/2500 |
| TK-TT2-065-3Y600-FL | 347/600V | 3-Phase WYE 4-wire+grnd | L-N | 420V | 58V | 1191V | 1722V | 1200/1200 |
| | | | L-G | 420V | 982V | 1170V | 1794V | 1200/1200 |
| | | | L-L | 720V | 88V | 2292V | 2898V | 2000/2500 |
| | | | N-G | 420V | 948V | 1197V | 1624V | 1200/1200 |

All tests performed with 6" (152 mm) lead length, positive polarity.
 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 Mega samples/sec sampling rate.
 Specifications subject to change without notice. See web site www.TPSSurge.com for latest revisions.