

SYSTEM FEATURES



- Protects facilities and equipment against the harmful effects of lightning strikes and internally generated electrical transients
- Includes pre-wired pigtail conductors to streamline installation
- Internal copper bus conduction path to minimize system impedances, reducing let-through voltage and increasing reliability
- Status indicating lights and Form "C" dry relay contacts for remote monitoring
- NEMA LS1 Compliance – single pulse tested at independent 3rd party lab (NEMA LS 1, 2.2-9 and 3-9)
- Hybrid design using MOV and Tracking Filter
- UL 1283 Tracking Filter
- CE Compliant
- Small, Compact Footprint – makes installation flexible
- 25-Year Unlimited Free Replacement Warranty

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 distribution panels, branch panels and critical loads
Design: Compact design for easy installation
Warranty: 25-Year Unlimited Free Replacement
Safety Listing: UL 1449 2nd Edition 2005 Revision (effective 2/9/2007) and UL 1283

ELECTRICAL SPECIFICATIONS

Modes of Protection: All Modes. 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); Form C dry relay contacts for suppressor status
Short Circuit Current Rating: 25 kAIC using 20A breaker or fuse (not provided) EXCEPT: 277/480 and 480 models, 18 kAIC using 20A breaker or fuse (not provided)

MECHANICAL SPECIFICATIONS

Dimensions (approx.): 7" H x 7" W x 5" D (186 mm H x 186 mm W x 125 mm D)
Enclosure: High-impact non-metallic, NEMA 4X (IP 56)
Connection: Pre-wired with 24" (610 mm) #10 AWG conductor (5.26 mm²) (for use with maximum 200 amp breaker or fuse)
Mounting: Multi-point mounting feet
Operating Environment: -40° C to 70° C (-40° F to 160° F)
 5% to 95% non-condensing humidity
Weight: 12.7 lbs. (5.8 kg)

AVAILABLE CONFIGURATIONS

Model Number	Description
TK-TT100-1P240*	240VAC, 1 ϕ , 2-wire + grd
TK-TT100-1P240-TT*	240VAC, 1 ϕ , 2-wire + TT grd
TK-TT100-1S240	120/240VAC, 1 ϕ SPLIT-PHASE, 3-wire + grd
TK-TT100-3Y208	120/208VAC, 3 ϕ WYE, 4-wire + grd
TK-TT100-3Y380*	220/380VAC, 3 ϕ WYE, 4-wire + grd
TK-TT100-3Y380-TT*	220/380VAC, 3 ϕ WYE, 4-wire + TT grd
TK-TT100-3Y415*	240/415VAC, 3 ϕ WYE, 4-wire + grd
TK-TT100-3Y480	277/480VAC, 3 ϕ WYE, 4-wire + grd
TK-TT100-3D240	120/240VAC, 3 ϕ high-leg DELTA, 4-wire + grd (B phase must be 208V)
TK-TT100-240NN	240VAC, 3 ϕ DELTA, 3-wire + grd
TK-TT100-380NN	380VAC, 3 ϕ DELTA, 3 wire + grd
TK-TT100-480NN	480VAC, 3 ϕ DELTA, 3-wire + grd

*CE approved models

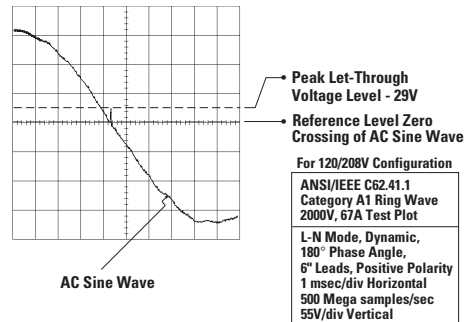
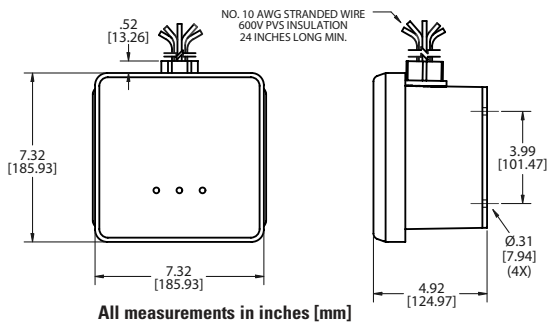
AVAILABLE OPTIONS

- Enhanced Transient Filter (ETF): add suffix "-F" to the standard part number: Example: TK-TT100-3Y208-F

EMI / RFI FILTER ATTENUATION – MIL STANDARD 220B

Frequency	Attenuation
1kHz	1 dB
10kHz	14 dB
100kHz	23 dB
1MHz	18 dB
10MHz	3 dB
100MHz	2 dB
Max. Attenuation Frequency	57 dB @ 153 kHz





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

Measured Limited Voltage

Model Number	System Voltage	System Configuration	Protection Mode	MCOV	Measured Limited Voltage			UL SVR UL 1449 2nd Edition Suppressed 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	
TK-TT100-1P240	240V	1-Phase 2-wire+grnd	L-N	320V	31V	1020V	1290V	900V
			L-G	320V	747V	1010V	1310V	900V
			N-G	320V	767V	1010V	1305V	900V
TK-TT100-1P240-TT	240V TT Ground	1-Phase 2-wire+grnd	L-N	320V	31V	1010V	1280V	900V
			L-G	420V	760V	980V	1570V	1000V
			N-G	420V	765V	1015V	1605V	1000V
TK-TT100-1S240	120/240V	1-Phase 3-wire+grnd	L-N	150V	29V	522V	770V	400V
			L-G	150V	311V	537V	993V	400V
			L-L	300V	31V	888V	1230V	700V
			N-G	150V	303V	560V	990V	400V
TK-TT100-3Y208	120/208V	3-Phase WYE 4-wire+grnd	L-N	150V	29V	522V	770V	400V
			L-G	150V	311V	537V	993V	400V
			L-L	300V	31V	888V	1230V	700V
			N-G	150V	303V	560V	990V	400V
TK-TT100-3Y380	220/380V	3-Phase WYE 4-wire+grnd	L-N	320V	31V	1024V	1293V	900V
			L-G	420V	747V	995V	1369V	900V
			L-L	640V	37V	1830V	2377V	1800V
			N-G	420V	769V	1005V	1650V	800V
TK-TT100-3Y380-TT	220/380V TT Ground	3-Phase WYE 4-wire+grnd	L-N	320V	31V	1024V	1290V	900V
			L-G	420V	747V	995V	1370V	900V
			L-L	640V	37V	1830V	2300V	1800V
			N-G	420V	35V	1005V	1550V	900V
TK-TT100-3Y415	240/415V	3-Phase WYE 4-wire+grnd	L-N	320V	31V	1024V	1293V	900V
			L-G	420V	747V	995V	1369V	900V
			L-L	640V	37V	1830V	2377V	1800V
			N-G	420V	769V	1005V	1650V	800V
TK-TT100-3Y480	277/480V	3-Phase WYE 4-wire+grnd	L-N	320V	31V	1024V	1293V	900V
			L-G	320V	747V	995V	1369V	900V
			L-L	640V	37V	1830V	2377V	1800V
			N-G	320V	769V	1005V	1650V	800V
TK-TT100-3D240	120/240V	3-Phase High-Leg DELTA 4-wire+grnd	L-N	150V	29V	522V	770V	400V
			H-N	275V	31V	1024V	1293V	800V
			L-G	150V	311V	537V	993V	400V
			H-G	275V	747V	995V	1369V	800V
			L-L	300V	31V	888V	1230V	700V
			H-L	425V	63V	1250V	1640V	1500V
TK-TT100-240NN	240V	3-Phase DELTA 3-wire+grnd	L-G	275V	582V	822V	1237V	800V
			L-L	300V	34V	948V	1403V	800V
TK-TT100-380NN	380V	3-Phase DELTA 3-wire+grnd	L-G	420V	1184V	1513V	1937V	1200V
			L-L	550V	34V	1993V	2473V	1500V
TK-TT100-480NN	480V	3-Phase DELTA 3-wire+grnd	L-G	550V	1184V	1513V	1937V	1500V
			L-L	640V	34V	1993V	2473V	1800V

EFT = Enhanced Transient Filter (-F suffix). 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.