

SYSTEM FEATURES



- Providing the highest level of protection with the lowest let-through voltage in the industry
- Fail-Safe Design
- Optional Component Level Dual Fusing
- NEMA LS1 Compliance – single pulse tested at independent 3rd party lab (NEMA LS 1, 2.2-9 and 3-9)
- Form C dry relay contacts and audible alarm with silence button
- Two suppression technologies: MOV and Enhanced Transient Filter
- UL 1283 Tracking Filter
- Ultra, Compact Footprint – efficiency and performance
- 30-Year Unlimited Free Replacement Warranty

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS

Maximum Rated Surge Current: 400kA per phase; 200kA per mode

Application: ANSI/IEEE C62.41 Location C, B & A. Ideal for high-exposure service entrance

Design: Optimum performing parallel hybrid with dual component level fusing

Warranty: 30-Year Unlimited Free Replacement

Safety Listing: UL 1449 2nd Edition, cUL, UL 1283 Filter

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 & one service LED); Form C dry relay contacts for suppressor status; Audible alarm with silence button

Short Circuit Current Rating: 200 kAIC with CLF version
No upstream over-current protection required. (non-CLF version: 200kAIC using 100A max. Class J fuse)

MECHANICAL SPECIFICATIONS

Dimensions (approx.): 10"H x 8"W x 6"D

(261 mm H x 210 mm W x 160 mm D)

Enclosure: Steel. Weather-proof. NEMA 4 (IP 56)

Connection: Hardwired via internal lugs #10 AWG – #3 AWG
(5.26 mm² – 26.7 mm²)

Mounting: Multi-point mounting feet

Operating Environment: -40° C to 70° C (-40° F to 160° F)

5% to 95% non-condensing humidity

Weight: 32 lbs. (14.5 kg)

AVAILABLE CONFIGURATIONS

Model Number	Description
TK-ST400-1P120	120VAC, 1ø 2-wire + grd
TK-ST400-1P240	240VAC, 1ø 2-wire + grd
TK-ST400-1S240	120/240VAC, 1ø SPLIT-PHASE, 3-wire +grd
TK-ST400-3Y208	120/208VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y380	220/380VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y480	277/480VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y600	347/600VAC, 3ø WYE, 4-wire + grd
TK-ST400-3D240	120/240VAC, 3ø high-leg DELTA, 4-wire + grd (B phase must be 208V)
TK-ST400-240NN	240VAC, 3ø DELTA, 3-wire + grd
TK-ST400-380NN	380VAC, 3ø DELTA, 3 wire + grd
TK-ST400-480NN	480VAC, 3ø DELTA, 3-wire + grd
TK-ST400-600NN	600VAC, 3ø DELTA, 3-wire + grd

AVAILABLE OPTIONS

Order as a Suffix Example: TK- ST400-3Y208-FL

- Enhanced Transient Filter (ETF): add suffix "-F"
- Component Level Fusing (CLF): add suffix "-L"
- Surge Counter: add suffix "-B"
- NEMA 4X Stainless Steel Enclosure: add suffix "-XX"

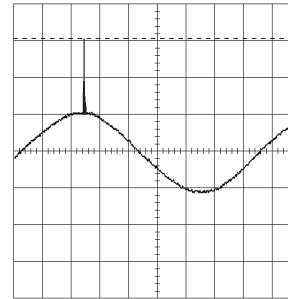
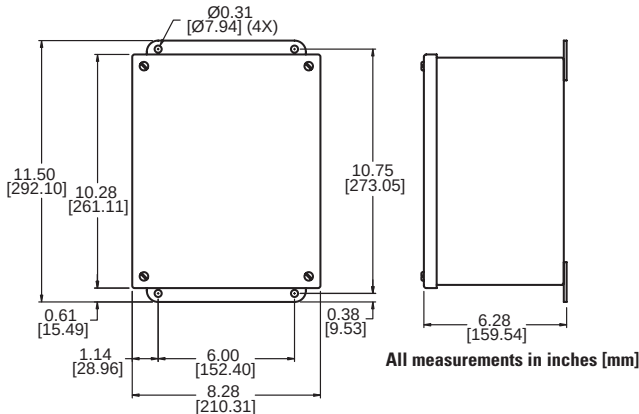
Order as a Separate Item (30 Year Warranty)

- Fused Disconnect Switch: DF-200KAIC-60A-1
- Non-Fused Disconnect Switch: DN-200KAIC-60A-1

EMI / RFI FILTER ATTENUATION – MIL STANDARD 220B

Frequency	Attenuation
1kHz	2 dB
10kHz	17 dB
100kHz	40 dB
1MHz	18 dB
10MHz	6 dB
100MHz	1 dB
Max. Attenuation Frequency	41 dB @ 106 kHz





Peak Let-Through Voltage Level - 502V

Reference Level Zero Crossing of AC Sine Wave

For 120/208V Configuration

ANSI/IEEE C62.41.1
Category B3/C1 Impulse Wave
6000V, 3000A Test Plot

L-N Mode, Dynamic,
90° Phase Angle,
6" Leads, Positive Polarity
2 msec/div Horizontal
500 Mega samples/sec
160V/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	ETF Models	All Models	All Models	UL 1449 2nd Edition
					A1 Ring Wave 2kV, 67A 180° Phase Angle	B3/C1 Impulse Wave 6kV, 3kA 90° Phase Angle	C3 Impulse Wave 20kV, 10kA 90° Phase Angle	Suppressed Voltage Ratings
TK-ST400-1P120	120V	1-Phase 2-wire+grnd	L-N	150V	40V	502V	907V	400V
			L-G	150V	76V	627V	1173V	400V
			N-G	150V	54V	568V	1090V	400V
TK-ST400-1P240	240V	1-Phase 2-wire+grnd	L-N	320V	44V	820V	1187V	800V
			L-G	320V	77V	996V	1540V	800V
			N-G	320V	52V	899V	1500V	800V
TK-ST400-1S240	120/240V	1-Phase 3-wire+grnd	L-N	150V	40V	502V	907V	400V
			L-G	150V	76V	627V	1173V	400V
			L-L	300V	54V	864V	1267V	800V
TK-ST400-3Y208	120/208V	3-Phase WYE 4-wire+grnd	N-G	150V	46V	568V	1090V	400V
			L-N	150V	40V	502V	907V	400V
			L-G	150V	76V	627V	1173V	400V
TK-ST400-3Y380	220/380V	3-Phase WYE 4-wire+grnd	L-L	300V	54V	864V	1267V	800V
			N-G	150V	46V	568V	1090V	400V
			L-N	320V	44V	820V	1187V	800V
TK-ST400-3Y480	277/480V	3-Phase WYE 4-wire+grnd	L-G	320V	77V	996V	1540V	800V
			L-L	640V	54V	1497V	1950V	1500V
			N-G	320V	52V	899V	1500V	800V
TK-ST400-3Y600	347/600V	3-Phase WYE 4-wire+grnd	L-N	320V	44V	820V	1187V	800V
			L-G	320V	77V	996V	1540V	800V
			L-L	640V	54V	1497V	1950V	1500V
TK-ST400-3D240	120/240V	3-Phase high-leg DELTA 4-wire+grnd	N-G	320V	52V	899V	1500V	800V
			L-N	420V	44V	1090V	1537V	1200V
			L-G	420V	77V	1144V	1707V	1200V
TK-ST400-240NN	240V	3-Phase DELTA 3-wire+grnd	L-L	840V	54V	2017V	2470V	2000V
			N-G	420V	52V	1155V	1800V	1200V
			L-N	150V	40V	502V	907V	400V
TK-ST400-380NN	380V	3-Phase DELTA 3-wire+grnd	H-N	320V	44V	820V	1187V	800V
			L-G	150V	76V	627V	1173V	400V
			L-L	320V	77V	996V	1540V	800V
TK-ST400-480NN	480V	3-Phase DELTA 3-wire+grnd	H-G	320V	77V	996V	1540V	800V
			L-L	320V	54V	864V	1267V	800V
			H-L	470V	47V	1250V	1640V	1500V
TK-ST400-600NN	600V	3-Phase DELTA 3-wire+grnd	N-G	150V	46V	568V	1090V	400V
			L-G	750V	1080V	1763V	2420V	2000V
			L-L	750V	42V	1737V	2203V	2000V

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.tpsjoslyn.com for latest revisions.