

SYSTEM FEATURES



- Providing the highest level of protection with the lowest let-through voltage in the industry
- Fail-Safe Design
- Component Level 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: 240kA per phase; 120kA per mode

Application: ANSI/IEEE C62.41 Location C, B & A. Ideal for service entrance, motor control centers and distribution panels

Design: Optimum performing parallel hybrid with component level fusing

Warranty: 30-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 & one service LED); Form C dry relay contacts

for suppressor status; Audible alarm with silence button

Short Circuit Current Rating: 200 kAIC on all units.

No upstream over-current protection required on CLF unit.

MECHANICAL SPECIFICATIONS

Dimensions (approx.): 15.50”H x 12.28”W x 6.28”D

(393 mm H x 312 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: 24 lbs. (10.9 kg)

AVAILABLE CONFIGURATIONS

Model Number	Description
TK-ST240-1S240-L	120/240VAC, 1Ø SPLIT-PHASE, 3-wire + grd
TK-ST240-1S480-L	240/480VAC, 1Ø SPLIT-PHASE, 3-wire + grd
TK-ST240-3Y208-L	120/208VAC, 3Ø WYE, 4-wire + grd
TK-ST240-3Y380-L	220/380VAC, 3Ø WYE, 4-wire + grd
TK-ST240-3Y480-L	277/480VAC, 3Ø WYE, 4-wire + grd
TK-ST240-3Y600-L	347/600VAC, 3Ø WYE, 4-wire + grd
TK-ST240-3D240-L	120/240VAC, 3Ø high-leg DELTA, 4-wire + grd (B phase must be 208V)
TK-ST240-240NN-L	240VAC, 3Ø DELTA, 3-wire + grd
TK-ST240-380NN-L	380VAC, 3Ø DELTA, 3 wire + grd
TK-ST240-480NN-L	480VAC, 3Ø DELTA, 3-wire + grd
TK-ST240-600NN-L	600VAC, 3Ø DELTA, 3-wire + grd

-L - All units come standard with component level fusing

AVAILABLE OPTIONS

Order as a Suffix Example: TK- ST240-3Y208-FL

- Enhanced Transient Filter (ETF): add suffix “-F”
- Surge Counter: add suffix “-B”
- NEMA 4X Stainless Steel Enclosure: add suffix “-XX”

Order as a Separate Item (30 Year Warranty)

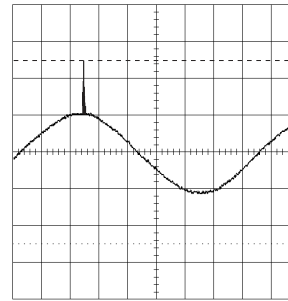
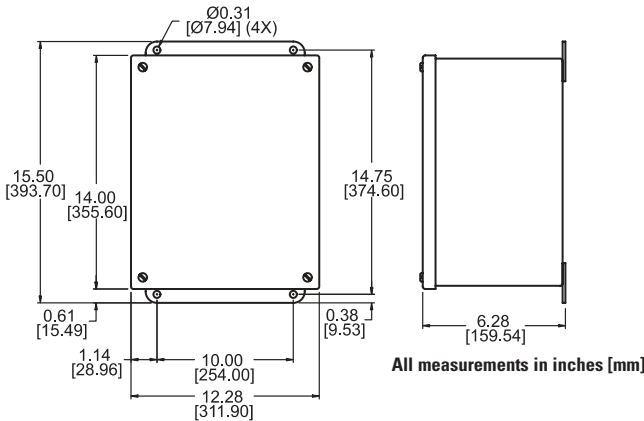
- **Non-Fused Disconnect Switch:** DN-200KAIC-60A-1

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



Made in U.S.A.



Peak Let-Through Voltage Level - 241V

Insertion Point Reference

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
160V/div Vertical

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

UL SVR

UL 1449 2nd Edition
2005 Revision
Suppressed
Voltage
Ratings

Model Number	System Voltage	System Configuration	Protection Mode	MCOV	ETF Models			UL SVR
					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-ST240-1S240-L	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
			N-G	150V	46V	568V	1090V	400V
TK-ST240-1S480-L	240/480V	1-Phase 2-wire+grnd	L-N	320V	44V	820V	1187V	800V
			L-G	320V	77V	996V	1540V	800V
			L-L	640V	54V	1497V	1950V	1500V
			N-G	320V	52V	899V	1500V	800V
TK-ST240-3Y208-L	120/208V	3-Phase WYE 4-wire+grnd	L-N	150V	40V	502V	907V	400V
			L-G	150V	76V	627V	1173V	400V
			L-L	300V	54V	864V	1267V	800V
			N-G	150V	46V	568V	1090V	400V
TK-ST240-3Y380-L	220/380V	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
			N-G	320V	52V	899V	1500V	800V
TK-ST240-3Y480-L	277/480V	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
			N-G	320V	52V	899V	1500V	800V
TK-ST240-3Y600-L	347/600V	3-Phase WYE 4-wire+grnd	L-N	420V	44V	1090V	1537V	1200V
			L-G	420V	77V	1144V	1707V	1200V
			L-L	840V	54V	2017V	2470V	2000V
			N-G	420V	52V	1155V	1800V	1200V
TK-ST240-3D240-L	120/240V	3-Phase high-leg DELTA 4-wire+grnd	L-N	150V	40V	502V	907V	400V
			H-N	320V	44V	820V	1187V	800V
			L-G	150V	76V	627V	1173V	400V
			H-G	320V	77V	996V	1540V	800V
			L-L	320V	54V	864V	1267V	800V
			H-L	470V	47V	1250V	1640V	1500V
			N-G	150V	46V	568V	1090V	400V
			L-L	320V	68V	877V	1233V	800V
TK-ST240-240NN-L	240V	3-Phase DELTA 3-wire+grnd	L-G	320V	522V	888V	1473V	800V
			L-L	320V	68V	877V	1233V	800V
TK-ST240-380NN-L	380V	3-Phase DELTA 3-wire+grnd	L-G	550V	878V	1315V	1943V	1500V
			L-L	550V	103V	1343V	1750V	1500V
TK-ST240-480NN-L	480V	3-Phase DELTA 3-wire+grnd	L-G	550V	878V	1315V	1943V	1500V
			L-L	550V	103V	1343V	1750V	1500V
TK-ST240-600NN-L	600V	3-Phase DELTA 3-wire+grnd	L-G	750V	1080V	1763V	2420V	2000V
			L-L	750V	42V	1737V	2203V	2000V

ETF = 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.