Total Protection Solutions™

ServiceTrack® ST 400

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 all mode 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 component level fusing
Warranty: 30-Year Unlimited Free Replacement
Safety Listing: UL 1449 4th Ed., Type 1 for Type 1 & Type 2 locations 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.

Mechanical Specifications

Dimensions (approx.): 15.5"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 – #2 AWG (5.26 mm^2 – 26.7 mm^2)
Mounting: Multi-point mounting feet
Operating Environment: -40° C to 70° C (-40° F to 160° F) 5% to 95% non-condensing humidity
Weight: 48 lbs. (21 kg)

FREE REPLACEMENT ★30 YEAR★ WARRANTY ★30 YEAR★

c UL us LISTED UL 1449

Available Configurations

Model Number	Description
TK-ST400-1S240-L	120/240VAC, 1ø SPLIT-PHASE, 3-wire +grd
TK-ST400-3Y208-L	120/208VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y380-L	220/380VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y400-L	230/400VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y415-L	240/415VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y480-L	277/480VAC, 3ø WYE, 4-wire + grd
TK-ST400-3Y600-L	347/600VAC, 3ø WYE, 4-wire + grd
TK-ST400-3D240-L	120/240VAC, 3ø high-leg DELTA, 4-wire + grd (B phase must be 208V)
TK-ST400-240NN-L	240VAC, 3ø DELTA, 3-wire + grd
TK-ST400-380NN-L	380VAC, 3ø DELTA, 3 wire + grd
TK-ST400-480NN-L	480VAC, 3ø DELTA, 3-wire + grd
TK-ST400-600NN-L	600VAC, 3ø DELTA, 3-wire + grd

-L - All units come standard with component level fusing

Available Options

Order as a Suffix *Example: TK- ST400-3Y208-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)*

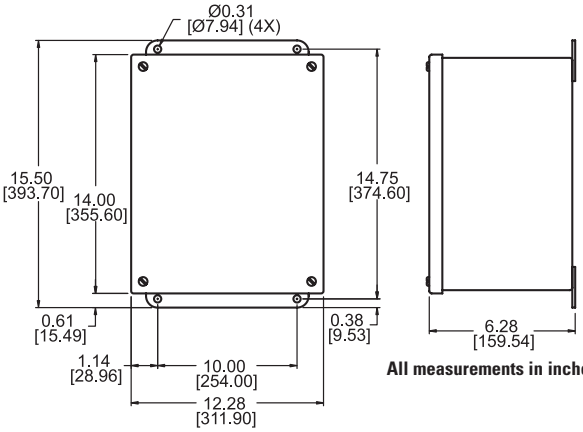
- Non-Fused Disconnect Switch:
  DN-200KAIC-60A-1.25 (for Nema 4 steel)
  DN-200KAIC-60A-XX-1.25 (for Nema 4 stainless steel)

EMI / RFI Filter Attenuation – Mil Standard 220B

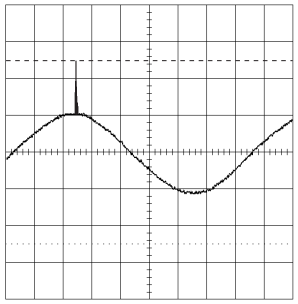
Frequency	Attenuation
1kHz	2 dB
10kHz	17 dB
100kHz	40 dB
1MHz	18 dB
10MHz	6 dB
100MHz	1 dB
Max. Attenuation Frequency	41 dB @ 106 kHz

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ServiceTrack® ST 400



All measurements in inches [mm]



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 Voltage Ratings
Model Number	System Voltage	System Configuration	Protection Mode	MCOV	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	UL 1449 2nd Edition/ UL1449 3rd & 4th Ed. Voltage Protection Ratings
TK-ST400-1S240-L	120/240V	1-Phase 3-wire+grnd	L-N	150V	40V	725V	907V	400/800
			L-G	150V	76V	726V	1173V	400/800
			L-L	300V	54V	1098V	1267V	800/1200
			N-G	150V	46V	728V	1090V	400/800
TK-ST400-3Y208-L	120/208V	3-Phase WYE 4-wire+grnd	L-N	150V	40V	725V	907V	400/800
			L-G	150V	76V	726V	1173V	400/800
			L-L	300V	54V	1098V	1267V	400/1200
			N-G	150V	46V	728V	1090V	400/800
TK-ST400-3Y380-L	220/380V	3-Phase WYE 4-wire+grnd	L-N	320V	44V	1075V	1187V	800/1200
			L-G	320V	77V	1077V	1540V	800/1200
			L-L	640V	54V	1718V	1950V	1500/1800
			N-G	320V	52V	1073V	1500V	800/1200
TK-ST400-3Y400-L TK-ST400-3Y415-L	230/400V 240/415V	3-Phase WYE 4-wire+grnd	L-N	320V	44V	1075V	1187V	800/1200
			L-G	320V	77V	1077V	1540V	800/1200
			L-L	640V	54V	1718V	1950V	1500/1800
			N-G	320V	52V	1073V	1500V	800/1200
TK-ST400-3Y480-L	277/480V	3-Phase WYE 4-wire+grnd	L-N	320V	44V	1075V	1187V	800/1200
			L-G	320V	77V	1077V	1540V	800/1200
			L-L	640V	54V	1718V	1950V	1500/1800
			N-G	320V	52V	1073V	1500V	800/1200
TK-ST400-3Y600-L	347/600V	3-Phase WYE 4-wire+grnd	L-N	420V	44V	1273V	1537V	1200/1500
			L-G	420V	77V	1281V	1707V	1200/1500
			L-L	840V	54V	2161V	2470V	2000/2500
			N-G	420V	52V	1295V	1800V	1200/1500
TK-ST400-3D240-L	120/240V	3-Phase high-leg DELTA 4-wire+grnd	L-N	150V	40V	749V	907V	400/800
			H-N	320V	44V	1078V	1187V	800/1200
			L-G	150V	76V	748V	1173V	400/800
			H-G	320V	77V	1075V	1540V	800/1200
			L-L	320V	54V	1085V	1267V	800/1200
			H-L	470V	47V	1389V	1640V	1500/1500
			N-G	150V	46V	748V	1090V	400/800
TK-ST400-240NN-L	240V	3-Phase DELTA 3-wire+grnd	L-G	320V	522V	1079V	1473V	800/1200
			L-L	320V	68V	1081V	1233V	800/1200
TK-ST400-380NN-L	380V	3-Phase DELTA 3-wire+grnd	L-G	550V	878V	1616V	1943V	1500/1800
			L-L	550V	103V	1616V	1750V	1500/1800
TK-ST400-480NN-L	480V	3-Phase DELTA 3-wire+grnd	L-G	550V	878V	1616V	1943V	1500/1800
			L-L	550V	103V	1616V	1750V	1500/1800
TK-ST400-600NN-L	600V	3-Phase DELTA 3-wire+grnd	L-G	750V	1080V	2095V	2420V	2000/2500
			L-L	750V	42V	2098V	2203V	2000/2500

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.

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