

SYSTEM FEATURES



- **25-Year Unlimited Free Replacement Warranty**
- Providing the highest level of protection with the lowest let-through voltage in the industry
- Fail-Safe Design
- Component Level Fusing
- Form C dry relay contacts
- Quick Return on Investment
- Two suppression technologies: MOV and all mode Enhanced Transient Filter
- UL 1283 Tracking Filter
- Ultra, Compact Footprint – efficiency and performance
- Weatherproof Nema 4X Polycarbonate
- **Enhanced Transient Filter to Reduce Lock-ups, Glitches & Premature Failure of Electronics**

SPD 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: Optimum performing parallel hybrid with component level fusing

Warranty: 25-Year Unlimited Free Replacement

Safety Listing: UL1449 5th Ed., Type 1 and Type 2 for Type 1 & Type 2 Locations, and UL 1283

Nominal Discharge Surge Current I_n : 20kA

ELECTRICAL SPECIFICATIONS

Modes of Protection: All Modes. L-N, L-L, L-G, & N-G

Input Power Frequency: 50-60Hz

Response Time: < 1 nanosecond

Standard Monitoring: Green power indicator lights (one per phase) & one red service LED; Form C dry relay contacts for suppressor status.

Short Circuit Current Rating: 200 kA on all units. No upstream over-current protection required - suitable for direct bus connection.

MECHANICAL SPECIFICATIONS

Dimensions (approx.): 8.74"H x 5.25"W x 3.30"D
(222 mm H x 133.35 mm W x 83.82 mm D)

Enclosure: UL94V-0 weather-proof, NEMA 4X Polycarbonate non-conductive

Connection: Pre-wired with 30"(762 mm) of #10 AWG conductor

Mounting: Multi-point mounting feet

Operating Environment: -40° C to 70° C (-40° F to 158° F)

5% to 95% non-condensing humidity

Weight: Less than 5 lbs/2.27 kg

AVAILABLE CONFIGURATIONS

Model Number	Description
TK-TTX100-1P120-F	120VAC, 1 ϕ , 2-wire + grd
TK-TTX100-1P240-F	240VAC, 1 ϕ , 2-wire + grd
TK-TTX100-1S240-F	120/240VAC, 1 ϕ , SPLIT-PHASE, 3-wire + grd
TK-TTX100-1S480-F	277/480VAC, 1 ϕ , 3-wire + grd
TK-TTX100-3Y208-F	120/208VAC, 3 ϕ , WYE, 4-wire + grd
TK-TTX100-3Y380-F	220/380VAC, 3 ϕ , WYE, 4-wire + grd
TK-TTX100-3Y400-F	230/400VAC, 3 ϕ , WYE, 4-wire + grd
TK-TTX100-3Y415-F	240/415VAC, 3 ϕ , WYE, 4-wire + grd
TK-TTX100-3Y480-F	277/480VAC, 3 ϕ , WYE, 4-wire + grd
TK-TTX100-3Y600-F	347/600VAC, 3 ϕ , WYE, 4-wire + grd
TK-TTX100-3D240-F	120/240VAC, 3 ϕ , high-leg DELTA, 4-wire + grd (B phase must be 208V)
TK-TTX100-240NN-F	240VAC, 3 ϕ , DELTA, 3 wire + grd
TK-TTX100-380NN-F	380VAC, 3 ϕ , DELTA, 3 wire + grd
TK-TTX100-480NN-F	480VAC, 3 ϕ , DELTA, 3-wire + grd
TK-TTX100-600NN-F	600VAC, 3 ϕ , DELTA, 3-wire + grd
TK-TTX100-690NN-F	690VAC, 3 ϕ , DELTA, 3-wire + grd

AVAILABLE OPTIONS Order as a Suffix Example: TK-STX080-3Y208-F

- Audible Alarm with Mute Button: add suffix "-M"
- Nema 4 Steel Enclosure: add suffix "-L"
- Surge Counter: add suffix "-B"

Order as a Separate Item

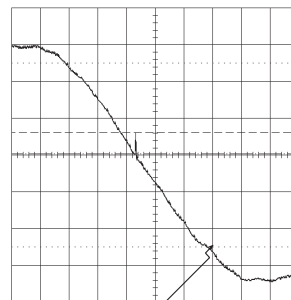
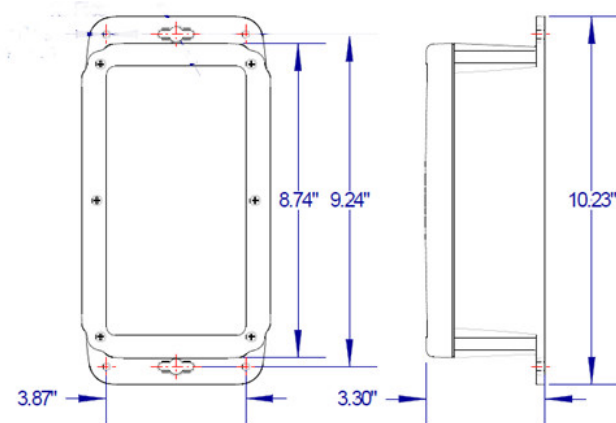
TTX-SM-FMP (for Flush-Mount Plate Kit)

- Non-Fused Disconnect Switch:
Order Part No. DN-200KAIC-60A-3/4

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





AC Sine Wave

ANSI/IEEE C62.41 & C62.45
Let-Through Voltage Test Results

• **Peak Let-Through
Voltage Level - 40V**
• **Reference Level Zero
Crossing of AC Sine Wave**
For 120/208V Configuration

ANSI/IEEE C62.41.1
Category A1 Ring Wave
2000V, 67A Test Plot
L-N Mode, Dynamic, 180°
Phase Angle,
6" Leads, Positive Polarity

Model	System Voltage	System Configuration	MCOV	Mode	A1 2kV, 67A 180° Phase Angle	A3 6kV, 200A 180° Phase Angle	Cat B3/C1 (6 kV, 3 kA) 90° Phase Angle	UL Voltage Ratings UL 1449 5th Ed. Voltage Protection Ratings
TK-TTX100-1P120-F	120V	1-Phase 2-wire+grnd	150V	L-N	40	110	335	700
			150V	L-G	470	534	415	800
			150V	N-G	470	565	545	700
TK-TTX100-1P240-F	240V	1-Phase 2-wire+grnd	320V	L-N	55	92	560	1000
			320V	L-G	650	750	610	1200
			320V	N-G	668	762	740	1000
TK-TTX100-1S240-F	120/240V	Split Phase 3-wire+grnd	150V	L-N	40	110	335	700
			150V	L-G	470	534	415	800
			300V	L-L	55	132	730	1000
			150V	N-G	470	565	545	700
TK-TTX100-3Y208-F	120/208V	3-Phase WYE 4-wire+grnd	150V	L-N	40	110	335	700
			150V	L-G	470	534	415	800
			300V	L-L	55	132	730	1000
			150V	N-G	470	565	545	700
TK-TTX100-3Y380-F	220/380V	3-Phase WYE 4-wire+grnd	320V	L-N	50	120	560	1000
			320V	L-G	650	749	610	1200
			550V	L-L	65	142	1140	1800
			320V	N-G	660	760	740	1000
TK-TTX100-3Y480-F TK-TTX100-3Y400-F TK-TTX100-3Y415-F	277/480V 230/400V 240/415V	3-Phase WYE 4-wire+grnd	320V	L-N	50	120	560	1200
			320V	L-G	650	749	610	1200
			550V	L-L	65	142	1140	1800
			320V	N-G	660	760	740	1000
TK-TTX100-3Y600-F TK-TTX100-3Y525-F	347/600V 300/525V	3-Phase WYE 4-wire+grnd	420V	L-N	40	92	595	1200
			420V	L-G	705	835	645	2500
			840V	L-L	50	120	1340	2500
			420V	N-G	725	845	900	1200
TK-TTX100-3D240-F	120/240V	3-Phase High-Leg DELTA 4-wire+grnd	150V	L-N	45	110	560	700
			320V	HL-N	50	120	560	1200
			150V	L-G	470	534	610	800
			320V	HL-G	655	655	610	1200
			320V	L-L	55	749	565	1200
			320V	HL-L	60	850	740	1800
			150V	N-G	470	565	740	700
TK-TTX100-240NN-F	240V	3-Phase DELTA 3-wire+grnd	320V	L-L	55	150	565	1000
			320V	L-G	780	910	605	1000
TK-TTX100-380NN-F	380V	3-Phase DELTA 3-wire+grnd	550V	L-L	55	120	705	1800
			550V	L-G	1130	1315	775	1800
TK-TTX100-480NN-F	480V	3-Phase DELTA 3-wire+grnd	550V	L-L	55	120	705	1800
TK-TTX100-400NN-F	400V	3-wire+grnd	550V	L-G	1130	1315	775	1800
TK-TTX100-600NN-F TK-TTX100-690NN-F	600V 690V	3-Phase DELTA 3-wire+grnd	840V	L-L	65	140	925	2500
			840V	L-G	1660	2660	975	2500

ETF = Enhanced Transient Filter. All tests performed with 6" (152 mm) lead length, positive polarity.

All voltages are peak values ($\pm 10\%$) measured from the zero reference point at the phase angles referenced above using a 1 $\mu\text{s}/\text{div}$ display rate and 100 Mega samples/sec sampling rate. Specifications subject to change without notice. See web site www.TPSSurge.com for latest revisions.