Total Protection Solutions™

# ServiceTrack® ST240

## System Features




- Providing the highest level of protection with the lowest let-through voltage in the industry
- Fail-Safe Design
- Component Level Fusing
- Single pulse tested at independent 3rd party lab
- 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
- Weatherproof Nema 4 steel enclosure

## 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 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.):** 15.50"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-#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)

### 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-ST240-3Y400-L | 230/400VAC, 3ø WYE, 4-wire + grd |
| TK-ST240-3Y415-L | 240/415VAC, 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 (for Nema 4 steel)
DN-200KAIC-60A-XX-1 (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 |

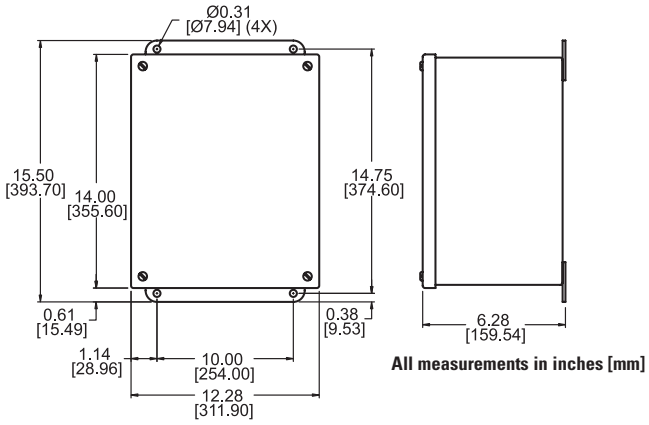
FREE REPLACEMENT ★30 YEAR★ WARRANTY ★30 YEAR★

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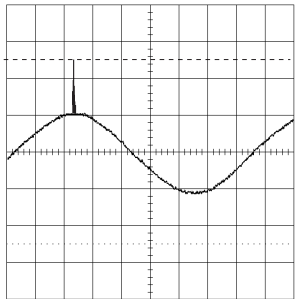
Made in U.S.A.

Total Protection Solutions

# ServiceTrack® ST240




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 |
|---|---|---|---|---|---|---|---|---|
| | | | | | ETF Models | All Models | All Models | UL 1449 2nd Edition/ |
| Model Number | System Voltage | System Configuration | Protection Mode | MCOV | 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 | UL1449 3rd & 4th Ed. Voltage Protection Ratings |
| TK-ST240-1S240-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-ST240-1S480-L | 240/480V | 1-Phase 3-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-ST240-3Y208-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-ST240-3Y380-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-ST240-3Y400-L<br>TK-ST240-3Y415-L | 230/400V<br>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-ST240-3Y480-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-ST240-3Y600-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-ST240-3D240-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-ST240-240NN-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-ST240-380NN-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-ST240-480NN-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-ST240-600NN-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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