



**PTX640/PTE640 Protectors**

**Introduction**

Since 1980, Eaton’s Innovative Technology has provided Surge Protective Devices (SPDs) to power quality equipment users around the world. Whatever your electrical surge protection need may be, Eaton’s Innovative Technology has a Surge Protective Device to fill it!

**General Features**

- Peak Surge Current — 640 kA per phase
- ANSI/IEEE C62.41 Location Categories — C
- Application — Unlimited Exposure Level, largest industrial applications including: service entrances, distribution panels and individual equipment disconnects
- Warranty — 20-Year Free Replacement
- Unit Listings — UL® 1449 Second Edition, cUL®, UL® 1283 filter
- Manufacturer Qualifications — ISO® 9001:1994 Quality System Certification BSI FM 30833

**Mechanical and Electrical Features**

- Enclosure — Powder Coated Steel, weatherproof; NEMA® Type 4 (IP66), exceeds 12, 13 and 3R ratings
- Mounting — Multi-point mounting feet
- Connection — Standard: box terminal, #14-1/0 (2.5 – 50 mm<sup>2</sup>) wire size
- Weight — ≈ 60 lbs (27 kg)
- Operating Temperature — -40°F (-40°C) to +185°F (+85°C)

- Protection Modes — All Mode: L-N, L-L (normal mode), L-G, N-G (common mode)
- Input Power Frequency — 47 – 420 Hz (47 – 64 Hz with ATN® option)
- Response Time — PTX: ≤1 nanosecond; PTE Active: <1 nanosecond
- Capacitance — Up to 15 µf per mode (up to 10 µF per mode with ATN option)

**Note:** For applications where earth leakage current may be of concern, please utilize PTX models.

- Diagnostics — LED indicators, 1 green per phase, normally on. Remote Alarm Form C (Volt Free), NO or NC contacts
  - Contact rating 60 W or 125 VA, 125 Vac and 0.5 Amp or 30 Vdc and 1 Amp
  - Internal terminal strips and weatherproof fitting
  - Optional S.M.A.R.T. (surge counter and phase loss indicator with audible alarm)
- Short Circuit Current Rating — 200 kAIC using 100 Amp Class RK5 fuses (not provided)

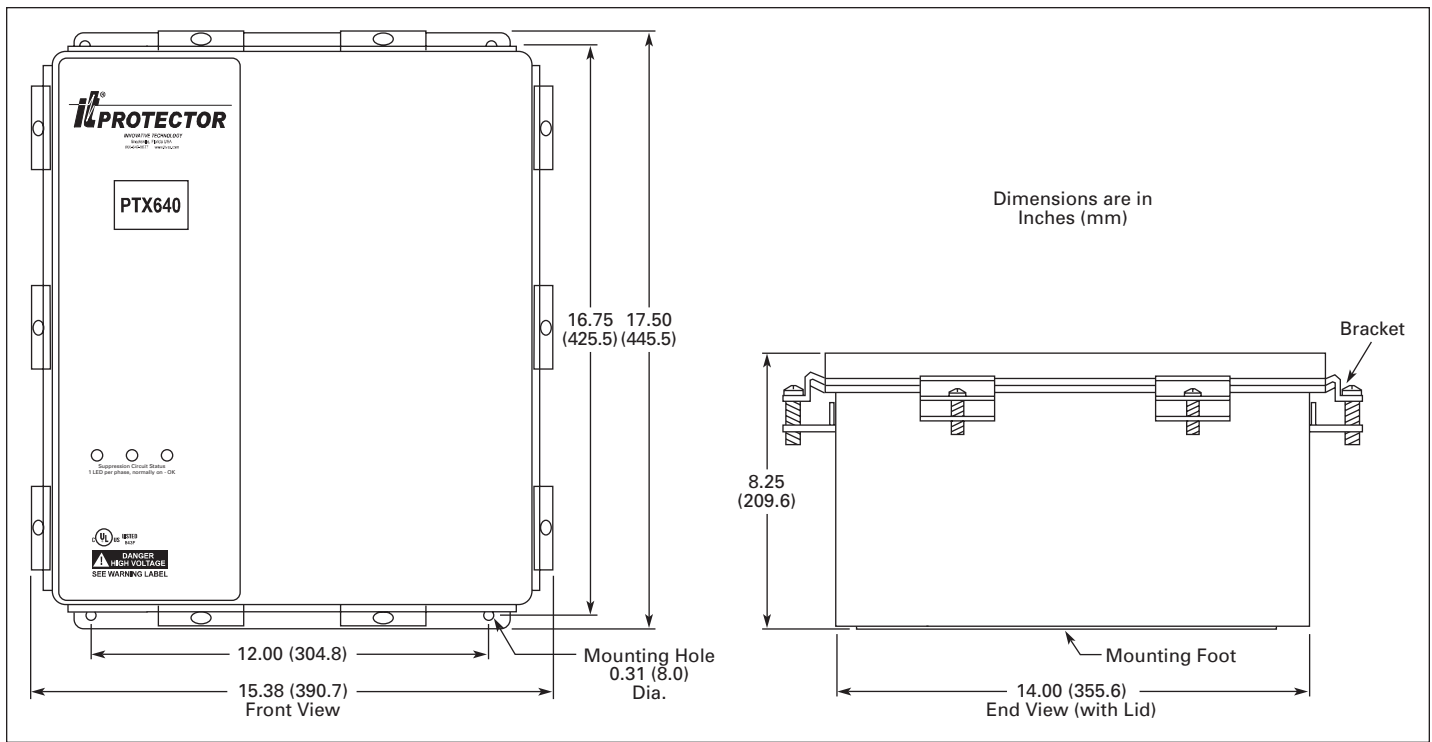
**Maximum EMI/RFI Attenuation — Mil-Std-220**

1 kHz	10 kHz	100 kHz	1 MHz	10 MHz	Maximum Attenuation Frequency
3 dB	21 dB	39 dB	17 dB	3.4 dB	40 dB @ 84 kHz

**Optional Features and Equipment**

- Active Tracking Network (ATN) — PTE models
- Audible Alarm, Surge Counter and Phase Loss Monitor (S.M.A.R.T.) — (-SD suffix)
- Stainless Steel, Type 4X enclosure — (-SS suffix) (contact factory, minimum quantities apply)
- Fused Disconnect — (-D suffix) (See web site for current field drawings)
- ARM-3 Remote Alarm Module

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### Performance Data

#### ANSI/IEEE C62.41-1991 Measured Limiting Voltage \*

#### UL SVR

PTX640 PTE640	System Config	Nominal System Voltage	MCOV	PTE Models A1 Ring Wave 2 kV, 67 A 180° Phase Angle				ALL Models B3/C1 Impulse 6 kV, 3 kA 90° Phase Angle		ALL Models C3 Impulse 20 kV, 10 kA 90° Phase Angle		UL 1449-2 Suppressed Voltage Ratings	
				L-N L-G HiL-N	L-L N-G HiL-G	L-N L-G HiL-N	L-L N-G HiL-G	L-N L-G HiL-N	L-L N-G HiL-G	L-N L-G HiL-N	L-L N-G HiL-N		
3Y101	3-Phase Y/Star 4w+grnd	100/175, 110/190, 120/208, 127/220	150/300	90 140	110 110	580 620	900 590	1130 1190	1410 1230	400 400	700 400		
3Y201	3-Phase Y/Star 4w+grnd	220/380, 230/400, 240/415, 277/480	320/640	90 110	130 50	980 1010	1600 980	1670 1610	2190 1590	700 700	1500 700		
3Y300	3-Phase Y/Star 4w+grnd	305/525, 347/600	460/920	110 140	180 60	1310 1330	2060 1300	1950 1930	2640 1930	1000 1000	1800 1000		
3D101	3-Phase Δ (Hi-Leg) 4w+grnd	120/240	150/300	60 90 60	80 60 90	570 610 870	930 590 980	1140 1200 1450	1560 1240 1640	400 400 700	1500 400 700		
NN201	3-Phase Δ 3w+grnd	200, 208, 220, 230, 240	320	— 540	80 —	— 900	1010 —	— 1380	1650 —	— 700	700 —		
NN400	3-Phase Δ 3w+grnd	380, 400, 415, 440, 480	580	— 890	70 —	— 1470	1570 —	— 2170	2320 —	— 1200	1200 —		
NN501	3-Phase Δ 3w+grnd	525, 600	750	— 1180	170 —	— 1850	1980 —	— 2410	2640 —	— 1800	1800 —		

\* Test environment: All tests performed with 6" lead length, positive polarity. Voltages are peak ±10%. Measurements are taken from zero reference per NEMA LS-1.



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