

The  
**I.T. Protector®**  
 Surge Protective Devices

# PTE300 / PTX300



**T**he 300kA per phase, 150kA per mode PTE300 and PTX300 models of the Protector® are designed to safeguard **high priority systems** and load equipment in industrial environments and applications. These applications demand only the most effective and durable protection available. Installation of the PTE300/PTX300 assures damaging transients are intercepted before they reach critical loads. Effective in stand-alone applications or as part of **The I.T. System Shield®** integrated facility-wide protection plan\*, the PTE300/PTX300 models are the answer when downtime is not an option.

StatScan™ System Diagnostics

- N/O, N/C (Volt Free) Dry Relay Contacts
- LED indicators

S.M.A.R.T.™ Advanced Diagnostics Option

- Adds multi-function dual mode surge counter plus phase status indicator

Multi-point mounting feet and Threaded conduit fitting

NEMA 4 (IP66) Weatherproof Enclosure



Compact Size

- Application flexibility
- Close proximity mounting
- Short parallel lead length
- Optimal measured limiting voltage performance

Transient Control System™ (TCS)

- Total circuit component integration
- Symmetrical multi-mode current sharing
- Advanced Surge Path Technology™
- Optimal measured limiting voltage performance

Active Tracking Network (ATN®) Option

- Highest protection for critical loads
- EMI/RFI filter

Circuit Encapsulation

- Eliminates adverse environmental factors
- Extends component life
- High dielectric isolation

Unit Listings



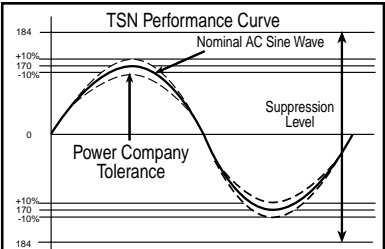
\* For more details visit our website at <http://www.itvss.com>

**IT® INNOVATIVE TECHNOLOGY, INC.**

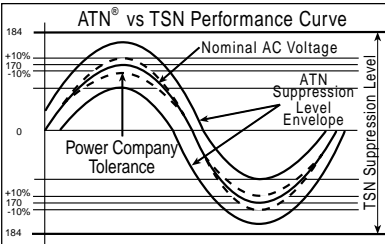
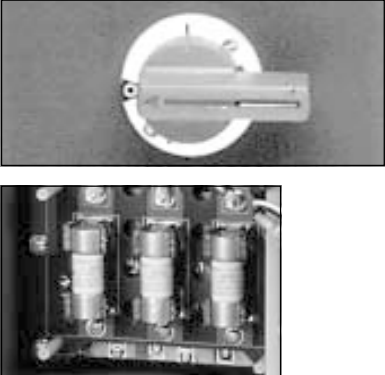

15470 Flight Path Dr., Brooksville, FL 34604, USA - <http://www.itvss.com>  
 TEL (800) 647-TVSS, (352) 799-0713 - FAX (352) 796-0316

EXCLUSIVE I.T. 20 YEAR **Best in the Industry**  
**WARRANTY**  
**FREE REPLACEMENT**  
**ISO 9001**

## Standard Features | Benefits

<p><b>Advanced Surge Path Technology™</b></p>	<p>All surge paths are peak surge current rated far in excess of highest known magnitude transients and are designed for ultra low impedance and conduction of high frequencies.</p>
<p><b>All Mode Protection</b></p>	<p>All possible transient paths to load equipment are covered. Highest level of protection.</p>
<p><b>Threshold Suppression Network™(TSN)</b></p> 	<p>Industry best suppression of high energy impulse generated transients and widest range of application compatibility. UL1283 listed EMI/RFI filter network. Standard on PTX models.</p>

## Optional Features | Benefits

<p><b>Active Tracking Network (ATN®)</b></p> 	<p>Multi-stage hybrid ATN provides the industry's best suppression of both switching generated ringing and high energy impulse generated transients. Highest level of protection for critical and sensitive loads. The ATN circuit's measured limiting voltage performance is independently tested and verified. UL1283 listed EMI/RFI filter network. Standard on PTE models. <b>ATN option is designated by an "E" in the model name (i.e. PTE300-3Y101). PTX300-3Y101 is without ATN.</b></p>
<p><b>Integral Disconnect Switch</b></p> 	<p>Allows unit to be taken off line with minimal impact to facility operation. Includes 200kAIC surge rated and listed internal fuses allowing unit to be installed without external circuit interrupt for maximum application flexibility. <b>Fused disconnect option is designated by "D" suffix after the model number (i.e. PTE300-3Y101D or PTX300-3Y101D)</b></p>
<p><b>Suppression Monitoring and Recording Technology™ S.M.A.R.T.™</b></p> 	<p>Comprehensive monitoring of critical system functions. Real-time audible and visual reporting of unit status, phase loss/protection loss and transient events (reset and alarm mute). Dual function surge counter provides non-volatile event history recording. Option carries a 10 yr. warranty separate from TVSS warranty. <b>S.M.A.R.T. diagnostics option is designated by a "-SD" suffix after the model number (i.e. PTE300-3Y101-SD or PTX300-3Y101-SD)</b></p>

## GENERAL SPECIFICATIONS

**Description:** Parallel configured, 300kA per phase, 150kA per mode **Multi-Circuit Transient Voltage Surge Suppressor (MCTVSS®)**, with remote alarm capability. Optional integral fused disconnect switch. Optional advanced S.M.A.R.T.™ diagnostics.

**Application:** Location Categories C and B - High Exposure Level, industrial applications including: large service entrances, large distribution panels and large individual equipment disconnects.

**Warranty:** Twenty Year Free Replacement

**Unit Listings:** UL1449 SECOND EDITION, cUL, UL1283 filter. Peak surge current capability conforms to NEMA LS-1 conventions.

**Manufacturer Qualifications:** ISO 9001:1994 Quality System Certification BSI FM 30833

## MECHANICAL SPECIFICATIONS

**Enclosure:** Steel, NEMA 4 (IP66) - weatherproof enclosure (meets and exceeds NEMA 12, 13 and 3R ratings).

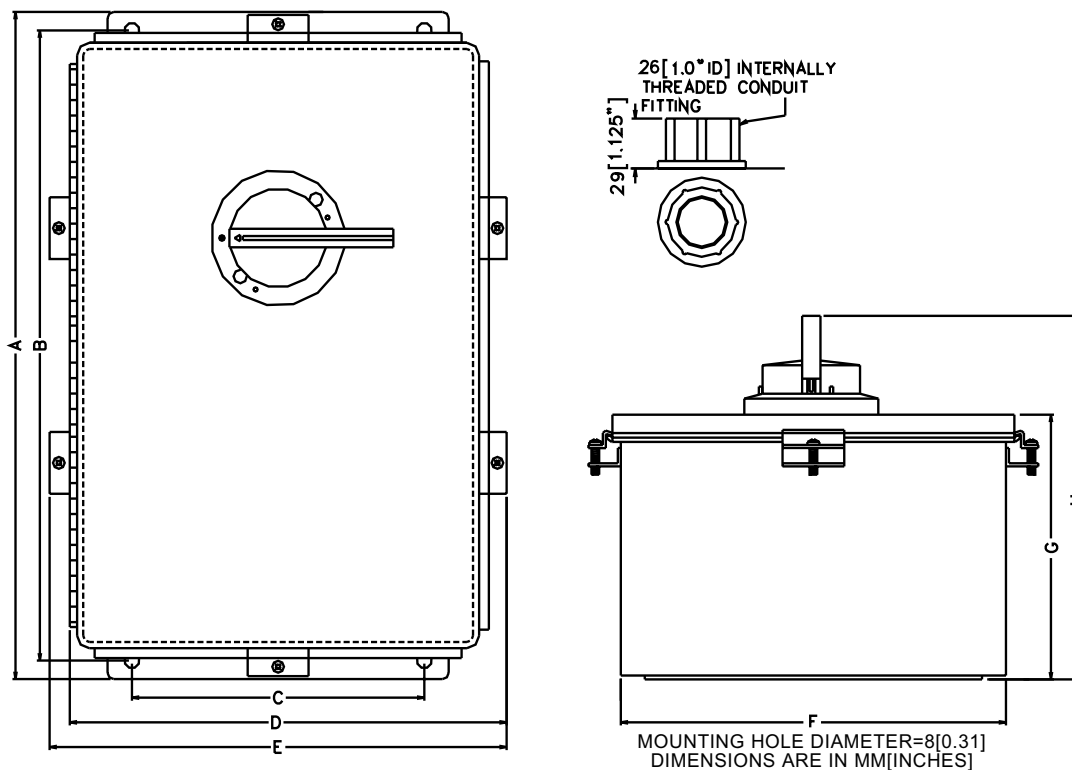
**Mounting:** Internally threaded conduit fitting (included) and multi-point mounting feet.

**Connection: Standard-** All connections-box terminal, #6-1/0 (13.3-53.5mm<sup>2</sup>) wire size.

**Fused Disconnect- Phases:** box terminal, #6-1 (13.3-42.4mm<sup>2</sup>) wire size.

**Neutral & Ground:** #10 stud #6-1/0 (13.3-53.5mm<sup>2</sup>) wire size.

**Shipping Weight:** ≈ 14 kg (30 lbs.)



Model Option	Dim A	Dim B	Dim C	Dim D	Dim E	Dim F	Dim G	Dim H
<b>Standard</b>	292[11.50]	273[10.75]	152[6.00]	n/a	238[9.38]	203[8.00]	178[7.00]	n/a
<b>Fused Disconnect</b>	343[13.50]	324[12.75]	152[6.00]	228[8.97]	n/a	203[8.00]	210[8.25]	260[10.25]

## ELECTRICAL/PERFORMANCE SPECIFICATIONS

**Circuit Design:** Parallel configured, Threshold Suppression Network™ (TSN) utilizing Transient Control System™ (TCS) design, circuit encapsulation and Advanced Surge Path Technology™.

PTE models add multi-stage hybrid Active Tracking Network (ATN®).

**Protection Modes:** All Mode: L-N, L-L (normal mode), L-G, N-G (common mode)

**Input Power Frequency:** 50-420Hz (50-60Hz with ATN option or S.M.A.R.T.™ option)

**Response Time:** PTE active <1 nanosecond, PTX ≤1 nanosecond

**EMI/RFI Attenuation:** Up to 40dB normal mode, up to 34dB common mode

**Capacitance:** Up to 15nf per mode (up to 10µF per mode with ATN option)

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

**StatScan™ Circuit Diagnostics:** LED indicators, 1 per phase, normally on. Remote Alarm Form C (Volt Free), N/O or N/C contacts, internal terminal strips and weatherproof fitting. Optional S.M.A.R.T.™ (surge counter and phase loss indicator).

**Circuit Interrupt:** *Standard:* Requires external circuit interrupt device.

*Fused Disconnect:* Equipped with integral fuses.

Model Selection Guide and Key Performance and Electrical Specifications					
Available Models	System Config	Nominal System Voltage (rms)	ANSI/IEEE C62.41-1991 Measured Limiting Voltage Tests* Test Category		
			PTE Models A1 Ring Wave 2,000V, 67A 180° Phase Angle	All Models B3/C1 Impulse Wave 6,000V, 3,000A 90° Phase Angle	All Models C3 Impulse Wave 20,000V, 10,000A 90° Phase Angle
PTE300-1P201 PTX300-1P201	1φ 2w+grnd	200, 208, 220, 230, 240	L-N 100 L-G 120, N-G 100	520 550, 900	930 1100, 1500
PTE300-1S101 PTX300-1S101	Split φ 3w+grnd	100/200, 110/220, 120/240, 127/254	L-N 50, L-L 70 L-G 100, N-G 90	320, 540 360, 500	730, 980 920, 1200
PTE300-3Y101 PTX300-3Y101	3φ Y/Star 4w+grnd	100/175, 110/190, 120/208, 127/220	L-N 50, L-L 70 L-G 100, N-G 90	320, 540 360, 500	730, 980 920, 1200
PTE300-3Y201 PTX300-3Y201	3φ Y/Star 4w+grnd	220/380, 230/400, 240/415, 277/480	L-N 70, L-L 110 L-G 120, N-G 90	500, 950 560, 900	890, 1600 980, 1500
PTE300-3Y300 PTX300-3Y300	3φ Y/Star 4w+grnd	305/525, 347/600	L-N 70, L-L 120 L-G 130, N-G 90	600, 1200 660, 1100	1000, 1700 1200, 1700
PTE300-3D101 PTX300-3D101	3φ Hi LegΔ 4w+grnd	120/240	L-N 50, L-L 70 L-G 100, N-G 90 HiL-N 100, HiL-G 100	320, 540 360, 500 520, 550	730, 980 920, 1200 930, 1100
PTE300-NN201 PTX300-NN201	3φ Δ 3w+grnd	200, 208, 220, 230, 240	L-L 100 L-G 530	520 550	930 1100
PTE300-NN400 PTX300-NN400	3φ Δ 3w+grnd	380, 400, 415, 440, 480	L-L 100 L-G 830	810 810	1400 1500
PTE300-NN501 PTX300-NN501	3φ Δ 3w+grnd	525, 600	L-L 100 L-G 1100	1100 1100	1700 1800

**Option Designators:** PTE-Active Tracking Network, PTX-Threshold Suppression Network;  
**D** suffix-integral fused disconnect switch. i.e. **PTE300-3Y101D**, **PTX300-3Y101D**;  
**SD** suffix-S.M.A.R.T. diagnostics. i.e. **PTE300-3Y101-SD**, **PTX300-3Y101D-SD**;

\*Measured Limiting (Let-Through) Voltage Test Environment: All modes tested dynamic except N-G, Positive polarity. All voltages are peak (±10%), Time base = 1ms. 180°phase angle voltages are measured from the zero crossing, 90° phase angle voltages from the positive peak of the sine wave to the positive peak of the surge. All tests performed with 6 inch (152.4mm) lead length, simulating actual installation. Options offered may result in performance variance.

