



**PTX065/PTE065 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 — 65 kA per phase; 32 kA per mode
- ANSI/IEEE C62.41 Location Categories — A and B
- Application — Medium to Low Exposure Level, sensitive, mission critical load applications including: distribution panels, branch panels and critical load centers.
- 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), meets or exceeds Type 1, 12, 13 & 3R
- Mounting — Internally threaded fittings and mounting flanges
  - PTX & <240 V PTE: 3/4" (19 mm) pre-mounted hub, flush mount plate available
  - ≥240 V PTE: 3/4" (19 mm) installer placed hub

- Connection — #10 (6 mm<sup>2</sup>) stranded wire
- Weight —
  - PTX & <240 V PTE: ≈ 7 lbs (3 kg)
  - PTE ≥240 V: ≈ 12 lbs (5.5 kg)
- Operating Temperature — -40°F (-40°C) to +140°F (+60°C)
- Protection Modes — Discrete All Mode (10 modes 3-Phase Y/Star units): L-N, L-L (normal mode), L-G, N-G (common mode)
- Input Power Frequency — PTE & all SD optioned units: 47 – 64 Hz, PTX: 47 – 420 Hz
- Response Time — PTX: ≤1 nanosecond, PTE active: <1 nanosecond
- Capacitance — PTE: Up to 6.6 µF per mode

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

- Diagnostics — LED indicators, 1 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 30 Amp Class RK5 fuse (not provided)

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

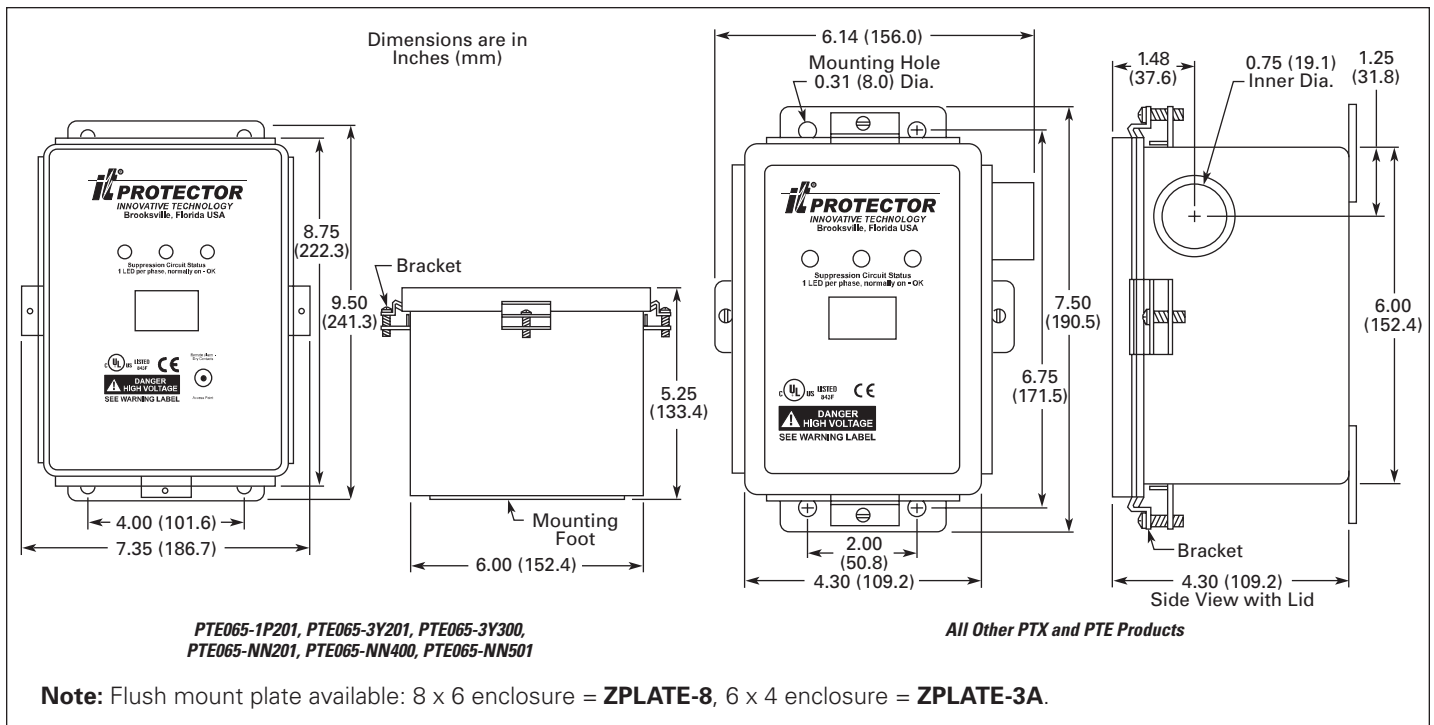
| 1 kHz | 10 kHz | 100 kHz | 1 MHz | 10 MHz | Maximum Attenuation Frequency |
|-------|--------|---------|-------|--------|-------------------------------|
| 3 dB  | 20 dB  | 40 dB   | 23 dB | 7 dB   | 40 dB @ 115 kHz               |

**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 — (-L suffix) (See web site for current field drawings)
- Fused Disconnect — (-D suffix) (See web site for current field drawings)
- ARM-3 Remote Alarm Module

Innovative Technology is a registered service mark of Eaton Corporation. UL and cUL are federally registered trademarks of Underwriters Laboratories Inc. ISO is the registered trademark and sole property of the International Organization for Standardization.

Active Tracking Network (ATN) is a registered trademark of Eaton Corporation. NEMA is the registered trademark and service mark of the National Electrical Manufacturers Association.



### Performance Data

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

UL SVR

| PTX065<br>PTE065 | System<br>Config                 | Nominal<br>System<br>Voltage          | MCOV    | ANSI/IEEE C62.41-1991 Measured Limiting Voltage *            |                     |   |                     |  |                     | UL SVR  |                      |  |                     |
|------------------|----------------------------------|---------------------------------------|---------|--|---------------------|---|---------------------|--|---------------------|---|----------------------|--|---------------------|
|                  |                                  |                                       |         | PTE Models<br>A1 Ring Wave<br>2 kV, 67 A<br>180° Phase Angle |                     | PTE Models<br>A1 Ring Wave<br>2 kV, 67 A<br>90° Phase Angle |                     | ALL Models<br>B3/C1 Impulse<br>6 kV, 3 kA<br>90° Phase Angle |                     | ALL Models<br>C3 Impulse<br>20 kV, 10 kA<br>90° Phase Angle |                      | UL 1449-2<br>Suppressed<br>Voltage Ratings |                     |
|                  |                                  |                                       |         | L-N<br>L-G<br>HiL-N  | L-L<br>N-G<br>HiL-G | L-N<br>L-G<br>HiL-N   | L-L<br>N-G<br>HiL-G | L-N<br>L-G<br>HiL-N  | L-L<br>N-G<br>HiL-G | L-N<br>L-G<br>HiL-N   | L-L<br>N-G<br>HiL-G  | L-N<br>L-G<br>HiL-N                        | L-L<br>N-G<br>HiL-G |
| 1P101            | Single-Phase<br>2w+grnd          | 100, 110, 120, 127                    | 150     | 60<br>100  | —<br>90             | 220<br>260  | —<br>80             | 520<br>520   | —<br>520            | 830<br>1000   | —<br>890             | 400<br>400                                 | —<br>400            |
| 1P201            | Single-Phase<br>2w+grnd          | 200, 208, 220, 230,<br>240, 277       | 320     | 90<br>90   | —<br>90             | 460<br>510  | —<br>90             | 980<br>1050  | —<br>940            | 1370<br>1580  | —<br>1370            | 800<br>800                                 | —<br>800            |
| 1S101            | Split-Phase<br>3w+grnd           | 100/200, 110/220,<br>120/240, 127/254 | 150/300 | 60<br>100  | 90<br>60            | 220<br>260  | 380<br>80           | 520<br>550   | 900<br>520          | 830<br>1000   | 1240<br>890          | 400<br>400                                 | 700<br>400          |
| 3Y101            | 3-Phase Y/Star<br>4w+grnd        | 100/175, 110/190,<br>120/208, 127/220 | 150/300 | 60<br>100  | 90<br>60            | 220<br>260  | 380<br>80           | 520<br>550   | 900<br>520          | 830<br>1000   | 1240<br>890          | 400<br>400                                 | 700<br>400          |
| 3Y201            | 3-Phase Y/Star<br>4w+grnd        | 220/380, 230/400,<br>240/415, 277/480 | 320/640 | 70<br>120  | 100<br>70           | 460<br>510  | 850<br>90           | 980<br>1050  | 1640<br>940         | 1370<br>1580  | 2060<br>1370         | 800<br>800                                 | 1500<br>800         |
| 3Y300            | 3-Phase Y/Star<br>4w+grnd        | 305/525, 347/600                      | 460/920 | 70<br>120  | 90<br>70            | 550<br>610  | 1000<br>70          | 1250<br>1320   | 2110<br>1210        | 1680<br>1880  | 2570<br>1700         | 1000<br>1000                               | 2000<br>1000        |
| 3D101            | 3-Phase Δ<br>(Hi-Leg)<br>4w+grnd | 120/240                               | 150/300 | 50<br>90<br>50   | 70<br>70<br>90      | 210<br>260<br>380   | 410<br>70<br>420    | 520<br>1000<br>980   | 950<br>970<br>1020  | 1030<br>1480<br>1430  | 1400<br>1360<br>1590 | 400<br>400<br>800                          | 1500<br>400<br>800  |
| NN201            | 3-Phase Δ<br>3w+grnd             | 200, 208, 220, 230,<br>240            | 320     | —<br>590   | 70<br>—             | —<br>760  | 390<br>—            | 860<br>850   | —<br>—              | 1420<br>—   | 1260<br>—            | 800<br>—                                   | —<br>800            |
| NN400            | 3-Phase Δ<br>3w+grnd             | 380, 400, 415, 440,<br>480            | 580     | —<br>1100  | 60<br>—             | —<br>1220   | 770<br>—            | 1990<br>1840   | —<br>—              | 2120<br>2130  | —<br>—               | 1500<br>—                                  | 1500<br>—           |
| NN501            | 3-Phase Δ<br>3w+grnd             | 525, 600                              | 680     | —<br>1100  | 40<br>—             | —<br>1470   | 950<br>—            | 2090<br>2040   | —<br>—              | 2670<br>2640  | —<br>—               | 1800<br>—                                  | 1800<br>—           |

\* 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.

EXCLUSIVE  
I.T. 20 YEAR

WARRANTY  
FREE  
REPLACEMENT



©2004 Eaton Corporation  
All Rights Reserved  
Printed in USA  
Form No. PS01006007E / Z2990  
December 2004