



**Current Transformer  
Technologies LTD**



# Indoor Voltage Transformer

**Models PTW5-1-110  
PTW5-2-110  
Rev 04012026**

Manufactured to meet the requirements of ANSI/IEEE C57.13

**ACCURACY CLASS:**

0.3 WXYZ, 1.2ZZ at 100% rated voltage with 120V based ANSI burden; 0.3 WXY, 1.2Z at 58% rated voltage with 69.3V based ANSI burden

**FREQUENCY:**

60 Hz.

**MAXIMUM SYSTEM VOLTAGE:**

15.5kV, BIL 110kV full wave

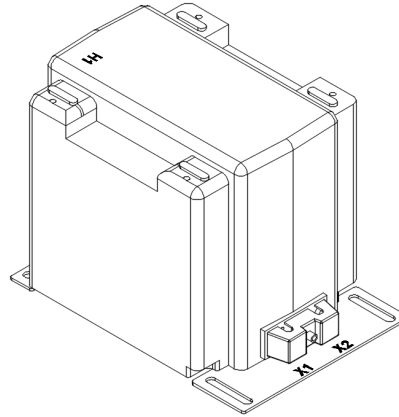
**THERMAL RATING:**

1500 VA at 30°C. amb.

1000 VA at 55°C. amb.

**APPROXIMATE WEIGHT:**

85 lbs., unfused

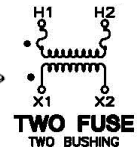
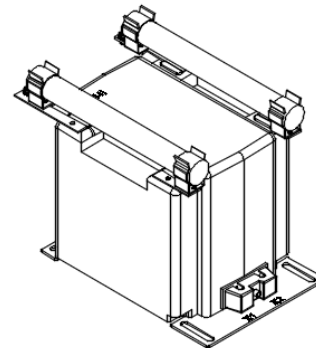
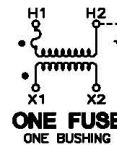
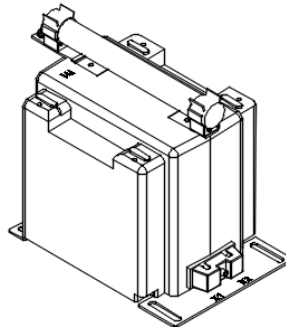
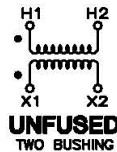
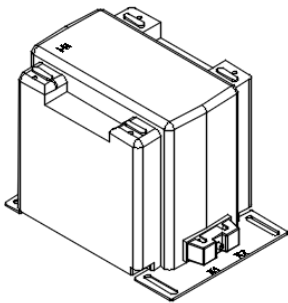


**CERTIFICATIONS:**



- Primary terminals that are unfused are ¼ - 20 brass screws with one flat washer and lockwasher, unless otherwise specified.
- Primary terminals that are fused are ¼ - 20 brass screws with one flat washer, lockwasher and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.

- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 1.63" Dia Caps and 11.50" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.



**ONE BUSHING (b)**

**CATALOG NUMBERS**

| GROUP | PRIMARY VOLTAGE | RATIO | SECONDARY VOLTAGE | RFR FR (c) | UNFUSED         | FUSES            | FUSE CLIPS ONLY  | SWITCHGEAR STYLE  |
|-------|-----------------|-------|-------------------|------------|-----------------|------------------|------------------|-------------------|
| 4A    | 8400            | 60:1  | 120               | 65         | PTW5-1-110-722  | PTW5-1-110-722F  | PTW5-1-110-722C  | PTW5-1-110-722SS  |
| 4A    | 8400            | 70:1  | 120               | 65         | PTW5-1-110-842  | PTW5-1-110-842F  | PTW5-1-110-842C  | PTW5-1-110-842SS  |
| 4B    | 11000           | 100:1 | 110-50Hz          | 65         | PTW5-1-110-113  | PTW5-1-110-113F  | PTW5-1-110-113C  | PTW5-1-110-113SS  |
| 4B    | 12000           | 100:1 | 120               | 65         | PTW5-1-110-123  | PTW5-1-110-123F  | PTW5-1-110-123C  | PTW5-1-110-123SS  |
| 4B    | 13200           | 110:1 | 120               | 65         | PTW5-1-110-1322 | PTW5-1-110-1322F | PTW5-1-110-1322C | PTW5-1-110-1322SS |
| 4B    | 13800           | 115:1 | 120               | 65         | PTW5-1-110-1382 | PTW5-1-110-1382F | PTW5-1-110-1382C | PTW5-1-110-1382SS |
| 4B    | 14400           | 120:1 | 120               | 65         | PTW5-1-110-1442 | PTW5-1-110-1442F | PTW5-1-110-1442C | PTW5-1-110-1442SS |

**TWO BUSHING (a)**

**CATALOG NUMBERS**

| GROUP | PRIMARY VOLTAGE | RATIO | SECONDARY VOLTAGE | UNFUSED         | FUSES             | FUSE CLIPS ONLY   | SWITCHGEAR STYLE  |
|-------|-----------------|-------|-------------------|-----------------|-------------------|-------------------|-------------------|
| 1     | 7200            | 60:1  | 120               | PTW5-2-110-722  | PTW5-2-110-722FF  | PTW5-2-110-722CC  | PTW5-2-110-722SS  |
| 1     | 8400            | 70:1  | 120               | PTW5-2-110-842  | PTW5-2-110-842FF  | PTW5-2-110-842CC  | PTW5-2-110-842SS  |
| 2     | 11000           | 100:1 | 110-50Hz          | PTW5-2-110-113  | PTW5-2-110-113FF  | PTW5-2-110-113CC  | PTW5-2-110-113SS  |
| 2     | 12000           | 100:1 | 120               | PTW5-2-110-123  | PTW5-2-110-123FF  | PTW5-2-110-123CC  | PTW5-2-110-123SS  |
| 2     | 13200           | 110:1 | 120               | PTW5-2-110-1322 | PTW5-2-110-1322FF | PTW5-2-110-1322CC | PTW5-2-110-1322SS |
| 2     | 14400           | 120:1 | 120               | PTW5-2-110-1442 | PTW5-2-110-1442FF | PTW5-2-110-1442CC | PTW5-2-110-1442SS |

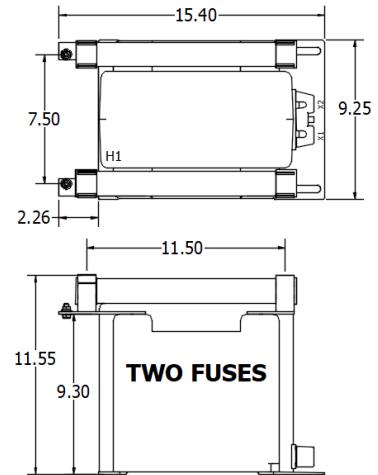
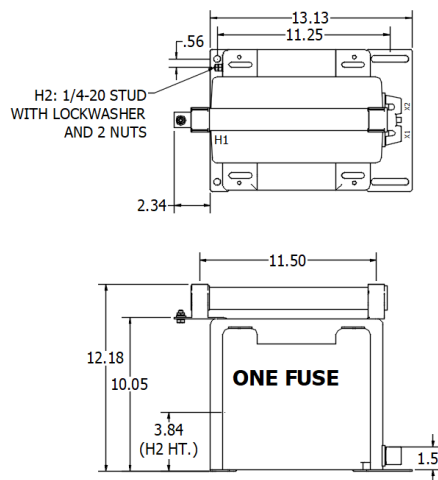
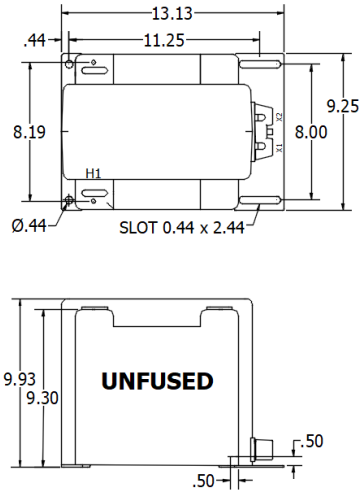
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA



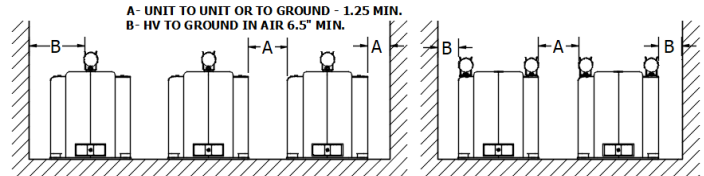
- (a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection, a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 100% of rated value.
- (b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.
- (c) Possibility of ferroresonance should be considered.

PTW5-1-110

PTW5-2-110



Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



| FUSE FOR MODEL PTW5 TRANSFORMER | RATING VOLTS | INTERRUPTING AMPERES (SYM) | SUGGESTED RATING * CONTINUOUS AMPERES | CAP DIA. INCHES | LENGTH INCHES | CLIP CENTERS INCHES |
|---------------------------------|--------------|----------------------------|---------------------------------------|-----------------|---------------|---------------------|
| 7200:120V                       | 15.5kV       | 80,000                     | 1.0E                                  | 1.63            | 13            | 11.50               |
| 8400:120V                       | 15.5kV       | 80,000                     | 1.0E                                  | 1.63            | 13            | 11.50               |
| 11000:110V                      | 15.5kV       | 80,000                     | 0.5E                                  | 1.63            | 13            | 11.50               |
| 12000:120V                      | 15.5kV       | 80,000                     | 0.5E                                  | 1.63            | 13            | 11.50               |
| 13200:120V                      | 15.5kV       | 80,000                     | 0.5E                                  | 1.63            | 13            | 11.50               |
| 14400:120V                      | 15.5kV       | 80,000                     | 0.5E                                  | 1.63            | 13            | 11.50               |

The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.

