



# Indoor Voltage Transformer

**Models PT7-1-150  
PT7-1-200 rev 011121**

**ACCURACY CLASS:**

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

**FREQUENCY:**

60 Hz.

**MAXIMUM SYSTEM VOLTAGE:**

Model PT7-1-150: 36.5kV, BIL 150 kV

Model PT7-1-200: 36.5kV, BIL 200kV

**THERMAL RATING:**

1,500 VA AT 30°C amb.

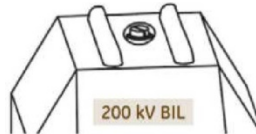
1,000 VA at 55°C. amb.

**APPROXIMATE WEIGHT:**

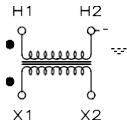
140 lbx.



**CERTIFICATIONS:**



*Terminal Designed to Accept  
Primary Terminal Lead Assembly*



Group	Primary Voltage (a) V	Ratio	Secondary Voltage V	**150 kV BIL Catalog Numbers	R <sub>FR</sub> (b) Ω
4A	15,240	127:1	120	PT7-1-150-SD01967	80
4A	15,600	130:1	120	PT7-1-150-SD03259	80
4A	*16,800	140:1	120	PT7-1-150-SD02381	80
4A	19,920	166:1	120	PT7-1-150-SD01620	80
4A	*20,125	175:1	115	PT7-1-150-2012A	80
4B	24,000	200:1	120	PT7-1-150-SD03289	50
4B	26,400	220:1	120	PT7-1-150-SD02085	50
4B	27,000	225:1	120	PT7-1-150-SD03158	50
4B	27,600	240:1	115	PT7-1-150-SD03449	50
4B	34,500	300:1	115	PT7-1-150-SD01617	50

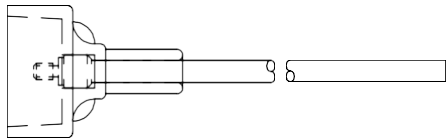
NOTE: All primary voltages marked with an asterisk (\*) are approved for revenue metering in Canada by industry Canada, Approval No. AE-0676 Rev.2

\*\* Consult factory for 200 kV BIL catalog numbers.

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

### Primary Terminal Lead Assembly

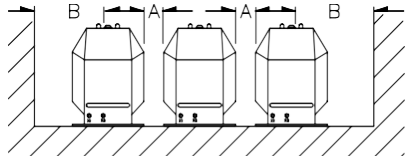
- Supplied with 200 kV BIL units only (Not available for 150 kV BIL units)
- 10-32 threaded connector, insulating boot, and lead wire included
- Lead wire is No. 10 AWG rated 600 volt only
- Lead clearances shown below for PT7-1-200 must be maintained
- 36 inches long unless specified otherwise



#### RECOMMENDED MINIMUM SPACINGS

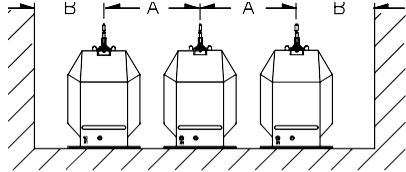
**PT7-1-150** (Customer supplied leads must be directed away from the transformer)

- A** = Unit to Unit = 1.75" minimum
- B** = HV to Ground in Air = 11.50" minimum



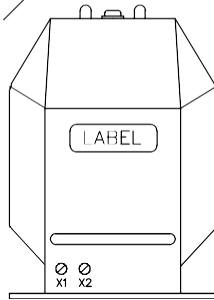
**PT7-1-200** (Leads must be directed away from the transformer)

- A** = Lead to Lead = 14.00" minimum
- B** = Lead to Ground in Air = 14.00" minimum



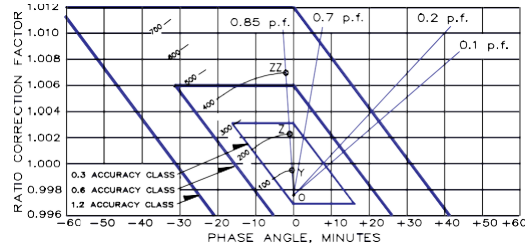
- (a) Also available are other ratios and frequencies, double secondaries and units meeting IEC 44-2 rated voltage factors of 1.50 or 1.90.
- (b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta. Transformers may be connected line-to-neutral on a system rated 25,000 volts ground wye.
- (c) See page 32, item 1 for ferroresonance considerations.

Note: It is recommended that the system line-to-line voltage not exceed transformer maximum system voltage level.



- Primary terminals for 150kV BIL units are 3/8-16 brass screws with one flatwasher and lockwasher.
- Secondary terminals are 1/4-20 brass screws with one flatwasher and lockwasher.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- A primary fuse is not supplied, but is recommended. Use a 34.5 kV, 0.5E rated fuse.
- A test card is provided with each unit.

### Circle Diagram



The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-ampere 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.

