

# INDOOR VOLTAGE TRANSFORMER

Models PT7-1-150  
PT7-1-200  
ANSI Group 4A

REGULATORY AGENCY APPROVALS



## ACCURACY CLASS:

(Single secondary)  
0.3 WXYZ, 1.2ZZ at 115 or 67.08 volts with 120 or 69.3V rated ANSI burden respectively.  
0.3 WXY 1.2Z at 58% rated voltage with 69.3V ANSI burden.  
(Tap secondary)  
X1-X3 same as Single secondary  
X2-X3 0.3Y @ 100%V with 69.3V ANSI burdens.  
(Double secondary)  
0.3 WXY, 0.6 Z  
Both windings @ 100% rated voltage @ X1-X2 with 120V. ANSI burden @ Y1-Y2 with 69.3V ANSI burden  
**FREQUENCY:**  
60 Hz.

## MAXIMUM SYSTEM VOLTAGE:

Model PT7-1-150  
36.5kV, BIL 150kV full wave.  
Model PT7-1-200  
36.5kV, BIL 200kV full wave.

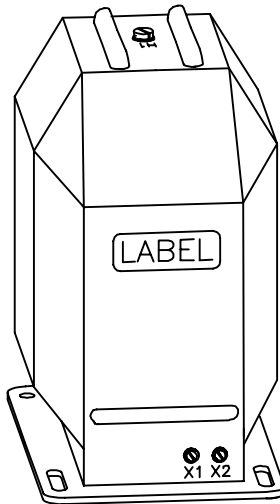
## THERMAL RATING:

(Single secondary) X1-X2, X1-X3  
1500 VA at 30°C. amb.  
1000 VA at 55°C. amb.  
(Double secondary)  
750 & 750VA 30°C. amb.  
500 & 500VA 55°C. amb.

## WEIGHT:

Approximately 140 lbs.

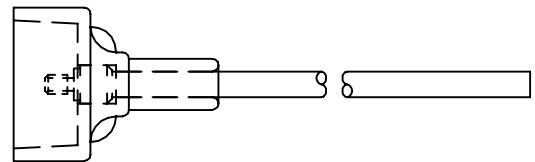
Approved for revenue metering in Canada by Industry Canada, Approval No. AE-0677



## ONE BUSHING

Transformer may be connected line-to-neutral on a system rated 34500 volts grounded wye.

- Primary terminals 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.
- The transformers are tested for partial discharge to Canadian Standards CAN 3-C13-M83. This test can also be carried out to IEC requirements if requested.
- Plated steel mounting base.
- 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.



- 200 kV BIL units are supplied with HV lead kit No. 0843A09154.

	PRIMARY (a) VOLTAGE	RATIO	SECONDARY VOLTAGE	150 kV BIL CATALOG NUMBER	200 kV BIL (b) CATALOG NUMBER	(c) R <sub>FR</sub>
	20125	175:1	115	PT7-1-150-2012-A	PT7-1-200-2012-A	84 ohms
	20125	300:1	67.08	PT7-1-150-2012-D	PT7-1-200-2012-D	29 ohms
	20125	175/300:1	115/67.08	PT7-1-150-2012-B	PT7-1-200-2012-B	84 ohms @ 115V tap 29 ohms @ 67.08V tap
	20125	175:1 & 300:1	115 & 67.08	PT7-1-150-2012-C	PT7-1-200-2012-C	84 ohms @ 115V tap 29 ohms @ 67.08V tap

(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) 200 kV BIL transformers are supplied with HV lead kits. Lead wire is 36 inches long, unless otherwise specified.

(c) See page 4, item 2 for ferroresonance considerations. Values in table are in ohms.

\* SEE PAGE 4, Primary Fuse Rating

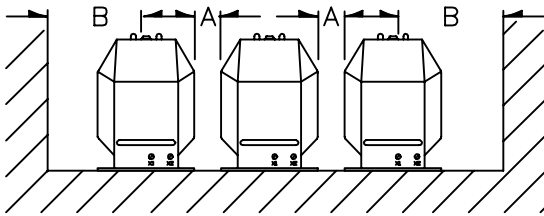
NOTE: Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta. It is recommended the line-to-line voltage not exceed the transformer maximum system voltage level.

# PT7-1-150 PT7-1-200

## RECOMMENDED SPACINGS

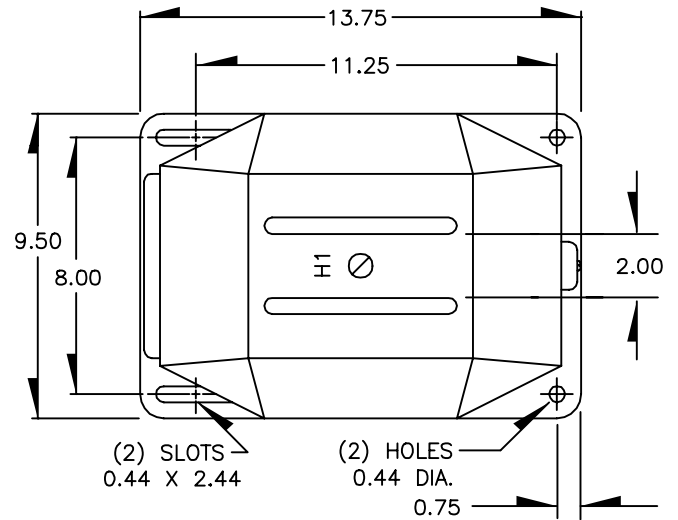
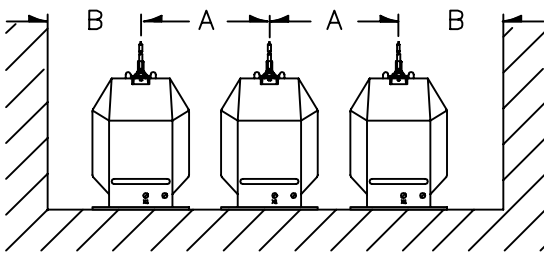
### PT7-1-150

A=UNIT TO UNIT =1.75" MIN.  
B=HV TO GROUND IN AIR=11.50" MIN.

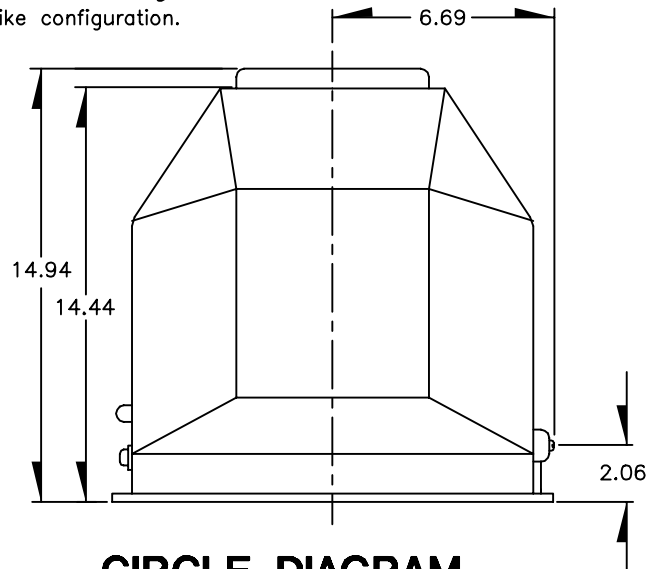
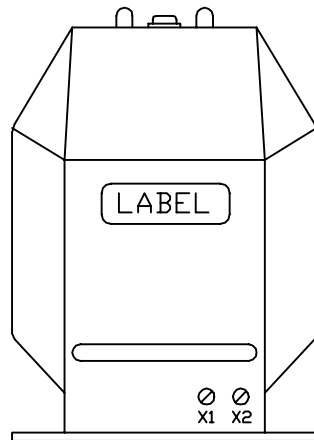


### PT7-1-200

A=LEAD TO LEAD =14.00" MIN.  
B=LEAD TO GROUND IN AIR=14.00" MIN.



Recommended spacings are 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.



## 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-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.

