

POTENTIAL TRANSFORMERS
Models PT7-1-150 & PT7-1-200
ANSI Groups 4A & 4B

REGULATORY AGENCY APPROVALS



E93779 LR89403
Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-1



One Bushing

ACCURACY CLASS:

0.3 WXYZ 1.2ZZ at 100% rated voltage with 120V rated ANSI burden.

0.3 WXY, 1.2Z at 58% rated voltage with 69.3V based ANSI burden.

FREQUENCY:

60 Hz.

MAXIMUM SYSTEM VOLTAGE:

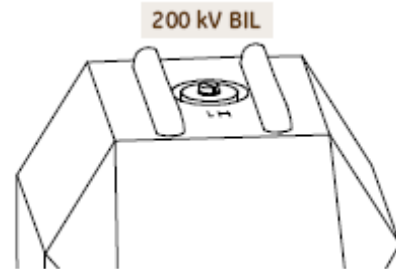
Model PT7-1-150
36.5kV, BIL 150kV.

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

THERMAL RATING:

1500 VA at 30°C amb.
1000 VA at 55°C amb.

Approximate weight 140 lbs.



** Consult factory for 200kV BIL catalog numbers.

| | GROUP | PRIMARY VOLTAGE (a) | RATIO | SECONDARY VOLTAGE | ** 150kV BIL CATALOG NUMBERS | R FR (b) |
|--|-------|---------------------|-------|-------------------|------------------------------|----------|
| | 4A | 15240 | 127:1 | 120 | PT7-1-150-SD01967 | 86 ohms |
| | 4A | 15600 | 130:1 | 120 | PT7-1-150-SD03259 | 86 ohms |
| | 4A | *16800 | 140:1 | 120 | PT7-1-150-SD02381 | 86 ohms |
| | 4A | 19920 | 166:1 | 120 | PT7-1-150-SD01620 | 86 ohms |
| | 4A | *20125 | 175:1 | 115 | PT7-1-150-2012A | 86 ohms |
| | 4B | 24000 | 200:1 | 120 | PT7-1-150-SD03289 | 48 ohms |
| | 4B | 26400 | 220:1 | 120 | PT7-1-150-SD02085 | 48 ohms |
| | 4B | 27000 | 225:1 | 120 | PT7-1-150-SD03158 | 48 ohms |
| | 4B | 27600 | 240:1 | 115 | PT7-1-150-SD03449 | 48 ohms |
| | 4B | 34500 | 300:1 | 115 | PT7-1-150-SD01617 | 48 ohms |

NOTE: All primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by industry Canada, Approval No. AE-0677 Rev1

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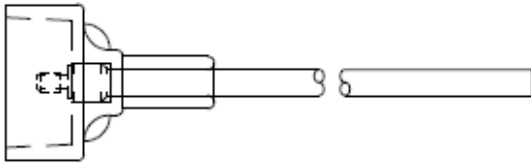
(a) Also available are other ratios and frequencies, double secondaries and units meeting IEC 44-2 rated voltage factors of 1.50 or 1.90.

(b) Voltage transformer 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.
- Lead wire is 36 inches long, unless otherwise specified.



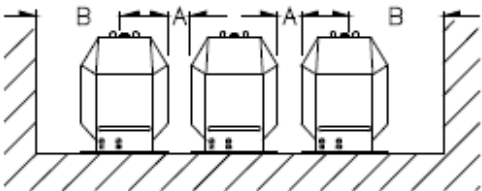
- 200 kV BIL units are supplied with HV lead kit No. 0843A09154.

RECOMMENDED MINIMUM SPACINGS

PT7-1-150

A = Unit to Unit = 1.75" minimum.

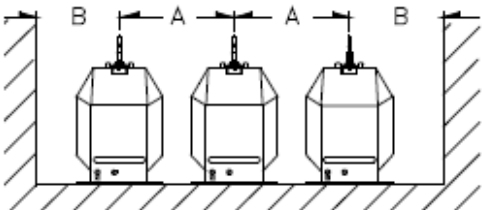
B = HV to Ground in Air = 11.50" minimum.



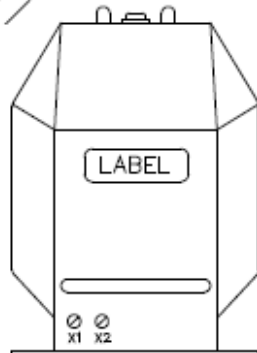
PT7-1-200

A = Lead to Lead = 14.00" minimum.

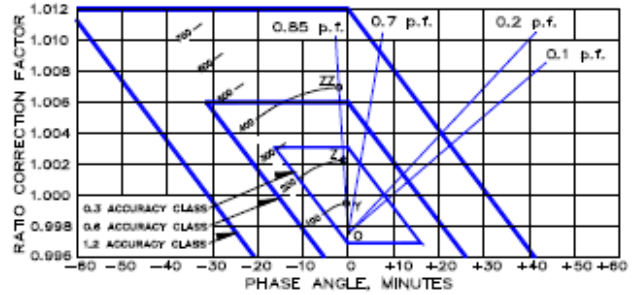
B = Lead to Ground in Air = 14.00" minimum.



Recommended spacing 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-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.

