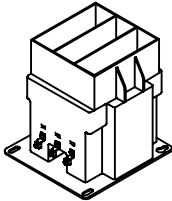
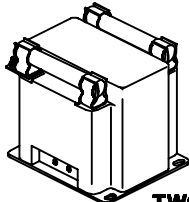
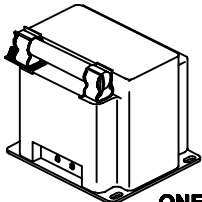
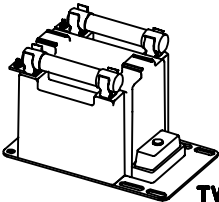
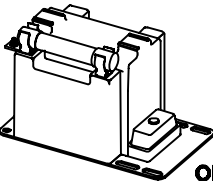
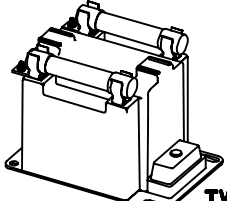
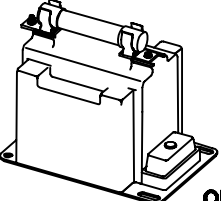
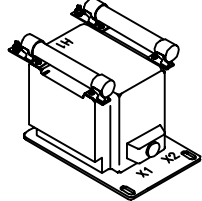
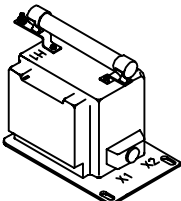
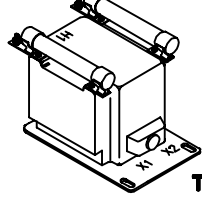
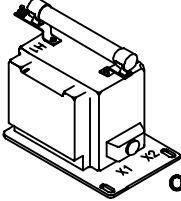
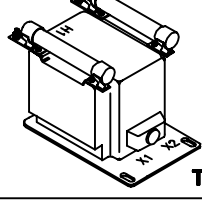
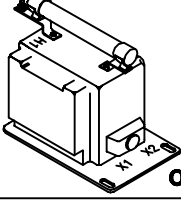
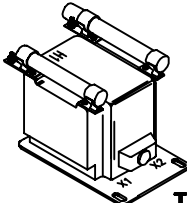
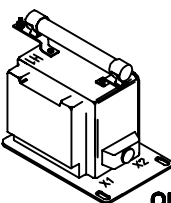
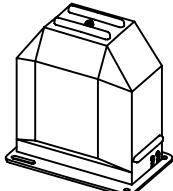
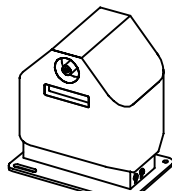
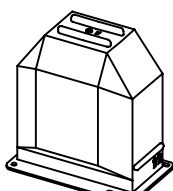
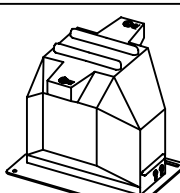
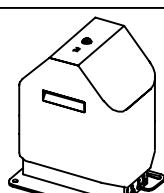
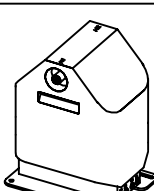
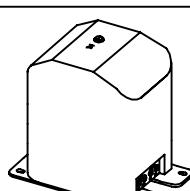


VOLTAGE TRANSFORMERS

MEDIUM VOLTAGE
FROM 5kV TO 34.5kV

VOLTAGE TRANSFORMER GROUPS					3
APPLICATION NOTES					4
		MODEL 3PT3-60	OVERALL SIZE W8.94 H9.50 D8.50	VOLTAGE CLASS 5kV	PAGE 5
		MODELS PT3-1-45 PT3-2-45	OVERALL SIZE W6.82 H6.03 D5.63	VOLTAGE CLASS 5kV	PAGE 6
		MODELS PTG3-1-60 PTG3-2-60	OVERALL SIZE W10.85 H7.07 D6.38	VOLTAGE CLASS 5kV	PAGE 8
		MODELS PTW3-1-60 PTW3-2-60	OVERALL SIZE W9.31 H8.00 D6.38	VOLTAGE CLASS 5kV	PAGE 10
		MODELS PTG4-1-75 PTG4-2-75	OVERALL SIZE W13.13 H13.06 D10.63	VOLTAGE CLASS 8.7kV	PAGE 12
		MODELS PTW4-1-75 PTW4-2-75	OVERALL SIZE W15.50 H12.17 D9.25	VOLTAGE CLASS 8.7kV	PAGE 14
		MODELS PTG5-1-110 PTG5-2-110	OVERALL SIZE W13.69 H13.06 D10.63	VOLTAGE CLASS 15kV	PAGE 16

		MODELS PTW5-1-110 PTW5-2-110	OVERALL SIZE W15.50 H12.17 D9.25	VOLTAGE CLASS 15kV	PAGE 18
TWO FUSE		ONE FUSE			
		MODEL PT6-1-125	OVERALL SIZE W13.75 H13.44 D9.50	VOLTAGE CLASS 25kV	PAGE 20
ONE BUSHING					
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TWO BUSHING					
		MODEL PT7-1-150 PT7-1-200	OVERALL SIZE W13.75 H14.94 D9.50	VOLTAGE CLASS 34.5kV	PAGE 24
ONE BUSHING					
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ONE BUSHING					
		MODELS PT7A-1-150	OVERALL SIZE W18.75 H22.00 D16.00	VOLTAGE CLASS 34.5kV	PAGE 29
TWO BUSHING					
		MODELS PT8-1-250	OVERALL SIZE W18.00 H21.00 D14.00	VOLTAGE CLASS 34.5kV	PAGE 30
ONE BUSHING					

VOLTAGE TRANSFORMER GROUPS

GROUP 1. Transformers for application with 100% of rated primary voltage connected to the primary terminals either line-to-line or line-to-ground. These transformers are capable of operating at 125% of rated volts in emergency conditions, but cannot have their thermal burden rating exceed 65% of rated volt-amperes and 105°C Ave. winding temperature. This will result in a reduced life expectancy. Consult the factory for details. Continuous operation at 110% of rated voltage is permissible, provided that the thermal burden rated volt-amperes is not exceeded.

RATED PRIMARY VOLTAGE FOR RATED SYSTEM VOLTAGE LINE-TO-LINE	TURNS RATIO	BASIC IMPULSE INSULATION LEVEL(kV CREST)
840 for 1455Y*	7:1	45*
1200 for 2078Y*	10:1	45*
2400 for 4160Y	20:1	60 or 45*
4200 for 7280Y	35:1	75
4800 for 8320Y	40:1	75

RATED PRIMARY VOLTAGE FOR RATED SYSTEM VOLTAGE LINE-TO-LINE	TURNS RATIO	BASIC IMPULSE INSULATION LEVEL(kV CREST)
7200 for 12470Y	60:1	95 OR 110
8400 for 14560Y	70:1	95 OR 110
12000 for 20785Y	100:1	125 or 150
14400 for 24940Y	120:1	125 or 150

GROUP 2. Transformers are for line-to-line connection, but may be connected line-to-neutral at a voltage of the rated line volts divided by the square root of three. Continuous operation at 110% of rated voltage is permissible, provided that the thermal burden rated volt-amperes is not exceeded.

RATED PRIMARY VOLTAGE FOR RATED SYSTEM VOLTAGE LINE-TO-LINE	TURNS RATIO	BASIC IMPULSE INSULATION LEVEL(kV CREST)
2400 for 2400Y	20:1	45
3300 for 3300Y*	30:1	60 or 45*
4200 for 4200Y*	35:1	60 or 45*
4800 for 4800Y	40:1	60 or 45*
7200 for 7200Y	60:1	75 or 110*
8400 for 8400Y*	70:1	75 or 110*
11000 for 11000Y	100:1	95 or 110

RATED PRIMARY VOLTAGE FOR RATED SYSTEM VOLTAGE LINE-TO-LINE	TURNS RATIO	BASIC IMPULSE INSULATION LEVEL(kV CREST)
12000 for 12000Y	100:1	95 or 110
13200 for 13200Y	110:1	95 or 110
14400 for 14400Y	120:1	95 or 110
18000 for 18000Y*	150:1	125*
21000 for 21000Y*	175:1	125*
24000 for 24000Y	200:1	125 or 150
27600 for 27600Y*	240:1	150 or 200
34500 for 34500Y	300:1	150 or 200

GROUP 4. Transformers are for line-to-ground connection, indoors only. The neutral terminal is insulated to withstand a test voltage of 10kV. They may be continuously operated at 110% of rated voltage, provided that the thermal burden rated volt-amperes is not exceeded. Group 4A transformers may be operated at 125% of rated primary voltage, under emergency conditions, provided that the burden does not exceed 65% of the rated thermal burden, with a limit of 75°C. temperature rise. This will result in a reduced life expectancy. Consult the factory for details.

Group 4A for Operation at 100% Rated Voltage		
RATED PRIMARY VOLTAGE FOR RATED SYSTEM VOLTAGE LINE-TO-LINE	TURNS RATIO	BASIC IMPULSE INSULATION LEVEL(kV CREST)
2400 for 4160 GND Y	20:1	60 or 45*
4200 for 7200 GND Y	35:1	75
4800 for 8320 GND Y	40:1	75
7200 for 12470 GND Y	60:1	110
8400 for 14560 GND Y	70:1	110

*Not recognized in ANSI/IEEE C57.13.

Group 4B for Operation at 58% Rated Voltage		
RATED PRIMARY VOLTAGE FOR RATED SYSTEM VOLTAGE LINE-TO-LINE	TURNS RATIO	BASIC IMPULSE INSULATION LEVEL(kV CREST)
4200 for 4160 GND Y	35:1	60 or 45
4800 for 4800 GND Y	40:1	60 or 45
7200 for 7200 GND Y	60:1	75
8400 for 8400 GND Y	70:1	75
11000 for 11000 GND Y	100:1	110
12000 for 12000 GND Y	100:1	110
13200 for 13200 GND Y	110:1	110
14400 for 14400 GND Y	120:1	110

NOTE: Voltage transformers connected line-to-ground on an ungrounded system 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. For further details see ANSI/IEEE C57.13

APPLICATION NOTES:

1. Delta Connected Supply Systems

When applying voltage transformers to ungrounded delta connected supply systems, the transformer must not be connected in wye with the wye-point connected to neutral ground, or ungrounded. The advent of zero sequence currents caused by a ground fault in the system will cause damage, and eventual destruction of the transformer if the fault is not removed quickly.

2. Ferroresonance.

Most voltage transformers are lightly loaded, particularly when associated with watthour metering and relaying schemes. If the voltage transformer has one primary lead grounded, and during an abnormal condition creating a large overvoltage, the transformer may saturate, and its impedance may cause a resonance with the system capacitance. This resonance, or oscillation, may be sustained and could destroy the voltage transformer. If, however, the secondaries are connected in delta, with a broken corner, and a suitable power resistor is connected across the broken corner, then ferroresonance can be damped. Our recommendation for the resistive value is shown on the catalog sheet where it applies. The power rating is determined by the user.

3. Secondary Circuit Check

Immediately prior to connecting the burden and leads to the transformer, a check of the impedance of that circuit should be made. This will avoid a possible short-circuit connection to the transformer. If a short-circuit is applied to the transformer, it can be withstood for one second. Note: Only secondary circuit fuses can adequately protect the transformer from such a short circuit.

4. Primary Fuse Rating

Values shown are suggested for normal installations, in order to protect the system from a voltage transformer failure. Higher ratings at users option, may be used to avoid unusual clearing due to conditions resulting from magnetizing in-rush.

ROUTINE FACTORY TESTS

VOLTAGE CLASS	NO. OF BUSHINGS	CONNECTION	LV 1 MIN 60Hz	H2 1 MIN 60Hz	HV 1 MIN 60Hz	INDUCED 18 SEC, 400Hz
5kV	1	L-GND N	2.5kV	10kV	NA	15kV OR 19kV
	2	L-L	2.5kV	NA	15kV OR 19kV	DOUBLE VOLTAGE
8.7kV	1	L-GND N	2.5kV	10kV	NA	26kV
	2	L-L	2.5kV	NA	26kV	DOUBLE VOLTAGE
15kV	1	L-GND N	2.5kV	10kV	NA	34kV
	2	L-L	2.5kV	NA	34kV OR 36kV	DOUBLE VOLTAGE
25kV	1	L-GND N	2.5kV	10kV	NA	50kV
	2	L-L	2.5kV	NA	50kV	DOUBLE VOLTAGE
34.5kV	1	L-GND N	2.5kV	10kV	NA	70kV
	2	L-L	2.5kV	NA	70kV OR 80kV	DOUBLE VOLTAGE

Routine Factory Tests include: Polarity, accuracy, and partial discharge per CANADIAN STANDARDS (CAN3-C13-M83) (Partial discharge tests can also be carried out to IEC requirements on request)

ANSI BURDEN DATA

BURDEN	VA	POWER FACTOR	ANGLE
W	12.5	0.10	84.3°
X	25	0.70	45.6°
M	35	0.20	78.5°
Y	75	0.85	31.8°
Z	200	0.85	31.8°
ZZ	400	0.85	31.8°

INDOOR VOLTAGE TRANSFORMER

Model 3PT3-60

REGULATORY AGENCY APPROVALS



Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

ACCURACY CLASS:

0.3 WX, 0.6M, 1.2Y at 100% rated voltage
with 120V based ANSI burden.

FREQUENCY:

60 Hz.

THERMAL RATING:

700 VA total, 350 VA per phase,
at 30°C. amb.

450 VA total, 225 VA per phase,
at 55°C. amb.

STANDARD SECONDARY

VOLTAGE:

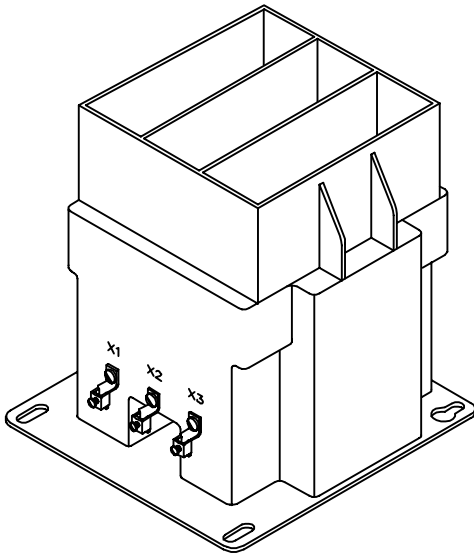
120 volts.

MAXIMUM SYSTEM VOLTAGE:

5.6kV, BIL 60kV full wave.

WEIGHT:

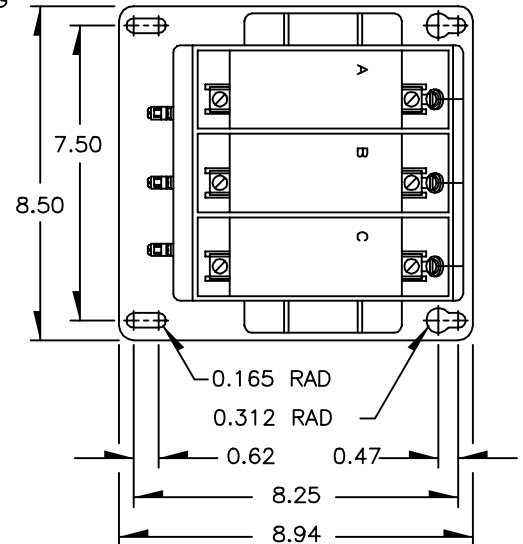
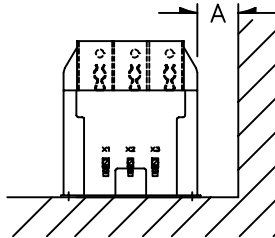
Approximately 38 lbs.



- Primary terminals are No.10-32 brass screws with one flatwasher and lockwasher.
- The core and coil assembly is encased in a plastic enclosure and 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.
- Recommended Spacing is for guidance only. The user needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude.

RECOMMENDED SPACING

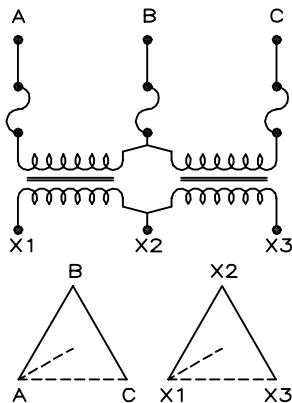
A=CASE TO GROUND=1.50" MIN.



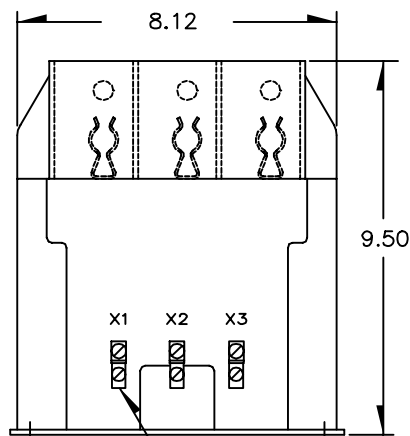
GROUP	CATALOG NO. FUSES	CATALOG NO. FUSE CLIPS ONLY	RATED PRIMARY VOLTAGE	RATIO	SUGGESTED FUSE RATING**
1	3PT3-60-841FFF	3PT3-60-841CCC	840	7:1	1.0E
1	3PT3-60-122FFF	3PT3-60-122CCC	1200	10:1	1.0E
1	3PT3-60-242FFF	3PT3-60-242CCC	2400	20:1	0.5E
2	*3PT3-60-332FFF	*3PT3-60-332CCC	3300	30:1	0.5E
2	3PT3-60-422FFF	3PT3-60-422CCC	4200	35:1	0.5E
2	3PT3-60-482FFF	3PT3-60-482CCC	4800	40:1	0.5E

*RATED 50/60Hz, 0.3W, 500 VA TOTAL @ 30°C, 350 VA TOTAL @ 55°C.

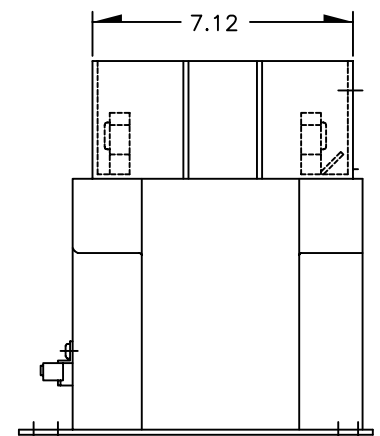
** SEE PAGE 4, Primary Fuse Rating
Fuse is 0.81" Diameter, 5.62" long.



CONNECTION DIAGRAM



SINGLE HOLE SOLDERLESS
LUGS FOR #6 THRU #14 WIRE



INDOOR VOLTAGE TRANSFORMER

Models PT3-1-45
PT3-2-45

ACCURACY CLASS:

0.3 WX, 0.6MY, 1.2Z at 100% rated voltage with 120V based ANSI burden.
0.6 WX, 1.2MY at 58% rated voltage with 69.3V based ANSI burden.

FREQUENCY:

60 Hz.

MAXIMUM SYSTEM VOLTAGE:

5.6kV, BIL 45kV full wave.

THERMAL RATING:

600 VA at 30°C. amb.
400 VA at 55°C. amb.

WEIGHT:

Approximately 20 lbs., unfused.

REGULATORY AGENCY APPROVALS



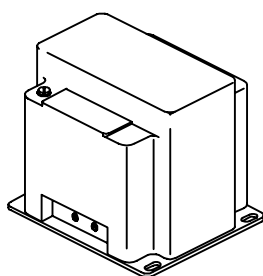
E145172



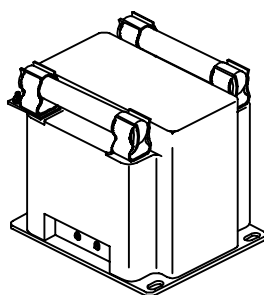
LR89403

Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

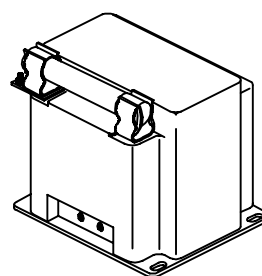
- Primary terminals that are unfused are No.10-32 brass screws with one flatwasher and lockwasher.
- Primary terminals that are fused are No.10-32 brass screws with one flatwasher and lockwasher and two nuts.
- Secondary terminals are No.10-32 screws, with one lockwasher and flatwasher.
- The core and coil assembly is encased in a plastic enclosure and 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.
- Fuses have 1" Dia Caps and 5" clip centers. 0.81" Dia clips are available.
- Switchgear style is similar to fused style. No fuse or fuse clips are provided, but inserts for fuse clips are supplied.



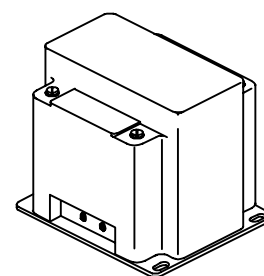
H1 H2
X1 X2
UNFUSED
TWO BUSHING



H1 H2
X1 X2
TWO FUSE
TWO BUSHING



H1 H2
X1 X2
ONE FUSE
ONE BUSHING



SWITCHGEAR STYLE
TWO BUSHING

TWO BUSHING (a)				CATALOG NUMBERS			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
1	840	7:1	120	PT3-2-45-841	PT3-2-45-841FF	PT3-2-45-841CC	PT3-2-45-841SS
1	1200	10:1	120	PT3-2-45-122	PT3-2-45-122FF	PT3-2-45-122CC	PT3-2-45-122SS
1	2400	20:1	120	PT3-2-45-242	PT3-2-45-242FF	PT3-2-45-242CC	PT3-2-45-242SS
2	3300	30:1	110-50Hz	PT3-2-45-332	PT3-2-45-332FF	PT3-2-45-332CC	PT3-2-45-332SS
2	4200	35:1	120	PT3-2-45-422	PT3-2-45-422FF	PT3-2-45-422CC	PT3-2-45-422SS
2	4800	40:1	120	PT3-2-45-482	PT3-2-45-482FF	PT3-2-45-482CC	PT3-2-45-482SS

ONE BUSHING (b)				R _{FR} (c)	CATALOG NUMBERS			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE			FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
4A	2400	20:1	120	190		PT3-1-45-242F	PT3-1-45-242C	PT3-1-45-242S
4B	4200	35:1	120	190		PT3-1-45-422F	PT3-1-45-422C	PT3-1-45-422S
4B	4800	40:1	120	190		PT3-1-45-482F	PT3-1-45-482C	PT3-1-45-482S

(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 110% of rated value.

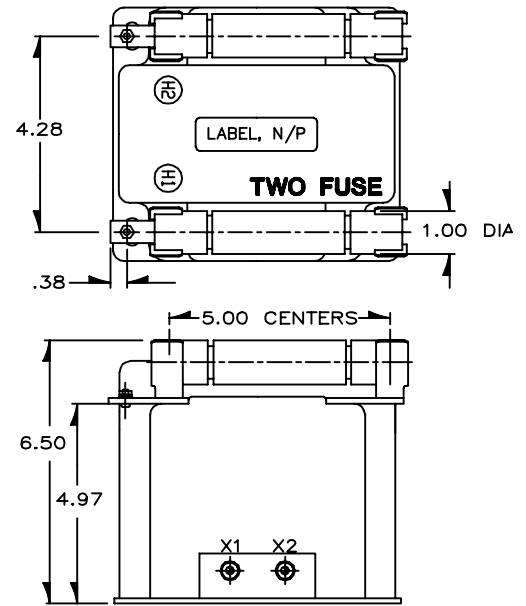
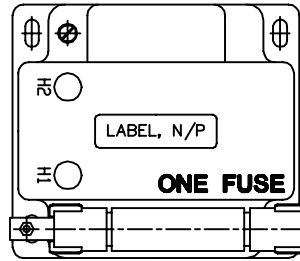
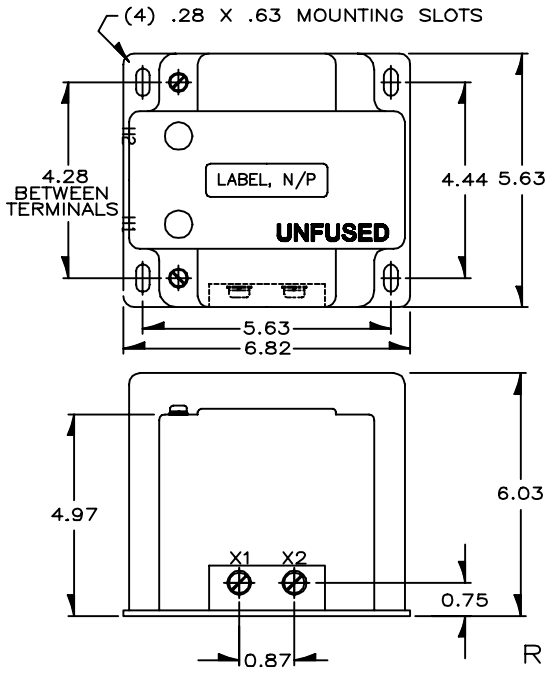
(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

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

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

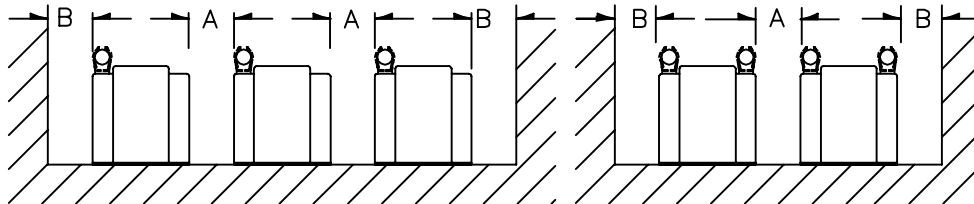
(d) Fuse clips with suffix "CC" or "C" accept fuses with 1.0 in. dia. caps and 5 in. clip centers. Fuse clips with suffix "CCS" or "CS" accept fuses with 0.81 in. dia. caps and 5 in. clip centers.

PT3-1-45 PT3-2-45



RECOMMENDED SPACINGS

A=UNIT TO UNIT =0.75" MIN.
B=HV TO GROUND IN AIR=3.0" MIN.



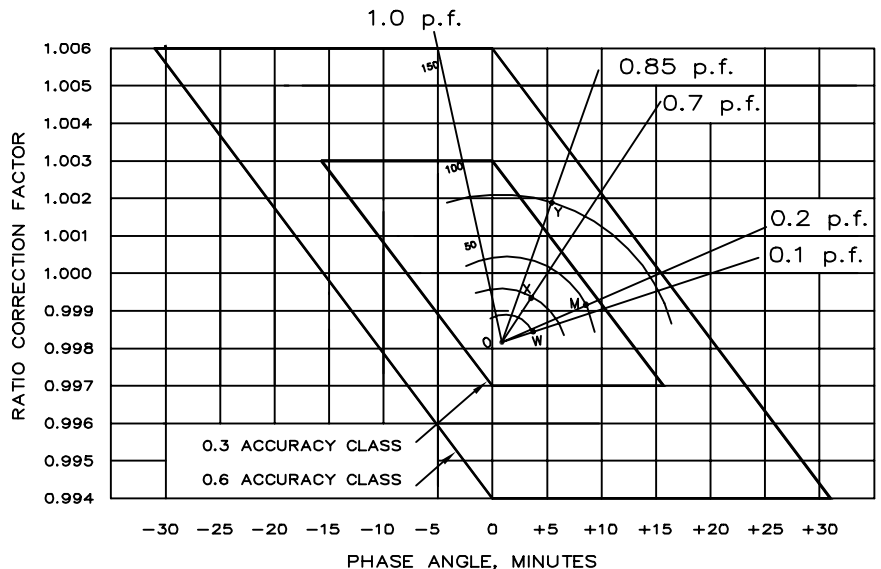
Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.

FUSE FOR MODEL PT3 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES(SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
2400:120V	5.5kV	45,000	2.0E	1.0	5.63	5.00
3300:110V	5.5kV	45,000	2.0E	1.0	5.63	5.00
4200:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00
4800:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00

* SEE PAGE 4, Primary Fuse Rating.

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.



INDOOR VOLTAGE TRANSFORMER

Models PTG3-1-60
PTG3-2-60

ACCURACY CLASS:

0.3 WXYM, 1.2Z at 100% rated voltage with 120V based ANSI burden.
0.3 WX, 0.6 M, 1.2 Y at 58% rated voltage with 69.3V based ANSI burden.

FREQUENCY:

60 Hz.

MAXIMUM SYSTEM VOLTAGE:

5.6kV, BIL 60kV full wave.

THERMAL RATING:

750 VA at 30°C. amb.
500 VA at 55°C. amb.

WEIGHT:

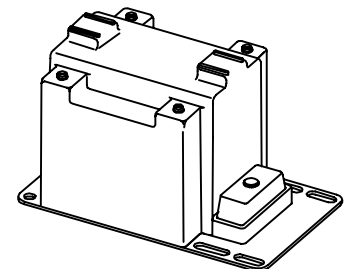
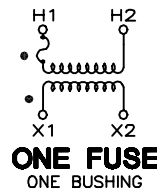
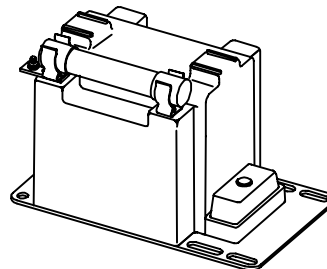
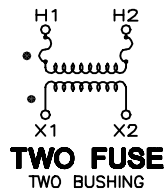
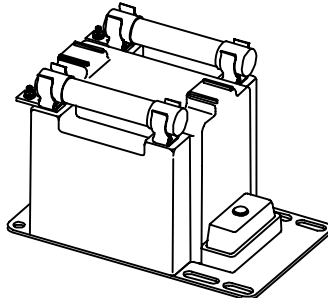
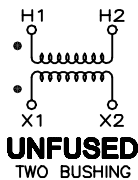
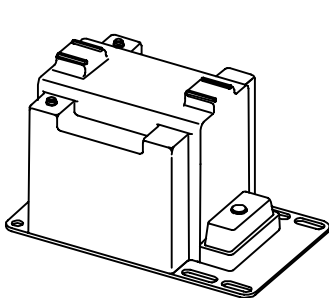
Approximately 34 lbs., unfused.

REGULATORY AGENCY APPROVALS

UL E145172 **CS LR89403**
Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

- Primary terminals that are unfused are 1/4-20 brass screws with one flatwasher and lockwasher.
- Primary terminals that are fused are 1/4-20 brass screws with one flatwasher and lockwasher and two nuts.
- Secondary terminals are No.10-32 brass screws with one flatwasher and lockwasher.
- 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.
- The core and coil assembly is encased in a plastic enclosure and vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries.
- Plated steel mounting base.
- Fuses have 1" Dia Caps and 5" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.

NOTE: All primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by Industry Canada, Approval No.T-215 Rev. 02



SWITCHGEAR STYLE
TWO BUSHING
ONE BUSHING NOT SHOWN

GROUP	TWO BUSHING (a)			CATALOG NUMBERS			
	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
1	*2400	20:1	120	PTG3-2-60-242	PTG3-2-60-242FF	PTG3-2-60-242CCSorCCL	PTG3-2-60-242SS
2	3300	30:1	110-50Hz	PTG3-2-60-332	PTG3-2-60-332FF	PTG3-2-60-332CCSorCCL	PTG3-2-60-332SS
2	*4200	35:1	120	PTG3-2-60-422	PTG3-2-60-422FF	PTG3-2-60-422CCSorCCL	PTG3-2-60-422SS
2	*4800	40:1	120	PTG3-2-60-482	PTG3-2-60-482FF	PTG3-2-60-482CCSorCCL	PTG3-2-60-482SS

GROUP	ONE BUSHING (b)				CATALOG NUMBERS		
	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	R _{FR} (c)	FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
4A	*2400	20:1	120	230	PTG3-1-60-242F	PTG3-1-60-242CSorCL	PTG3-1-60-242S
4B	*4200	35:1	120	230	PTG3-1-60-422F	PTG3-1-60-422CSorCL	PTG3-1-60-422S
4B	*4800	40:1	120	230	PTG3-1-60-482F	PTG3-1-60-482CSorCL	PTG3-1-60-482S

(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 110% of rated value.

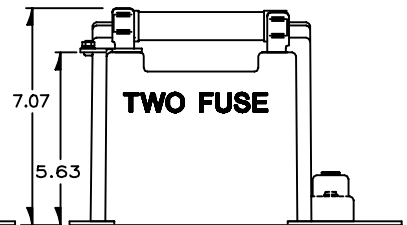
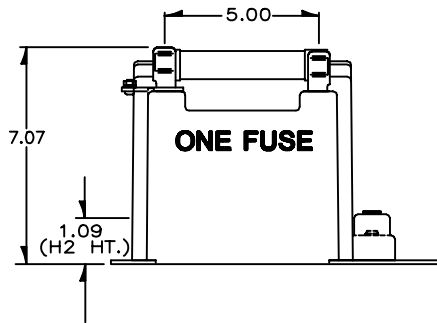
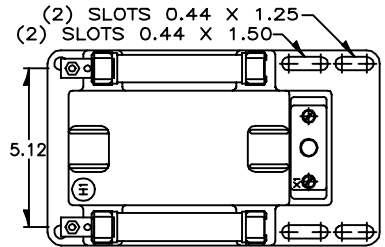
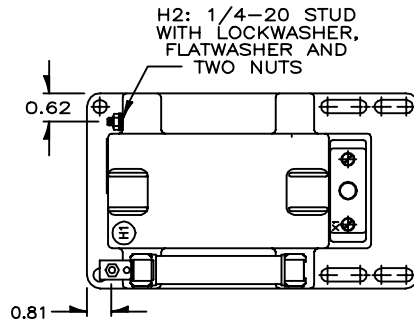
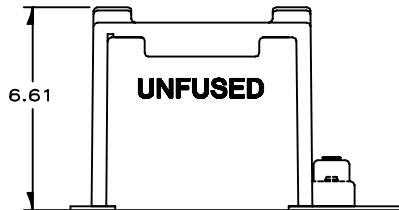
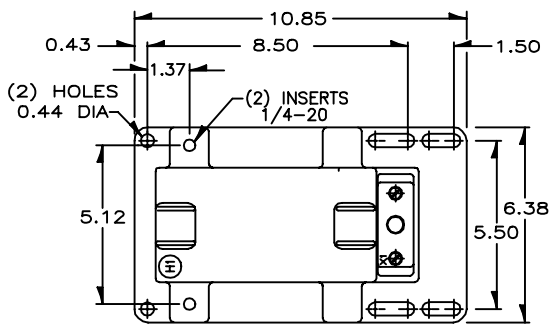
(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

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

(d) Fuse clips noted as "CCS" or "CS" accept fuses with 1" Dia. caps and 5" clip centers. Fuse clips noted as "CCL" or "CL" accept fuses with 1.63" Dia. caps and 5.88" clip centers.

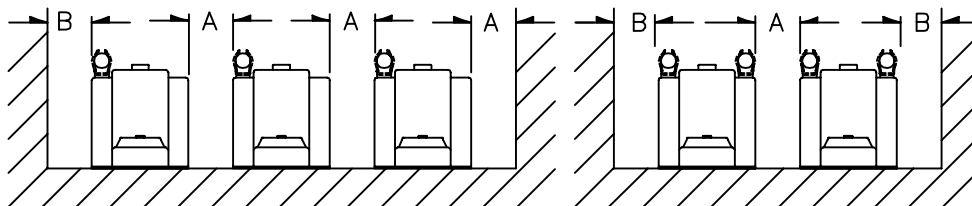
NOTE: It is recommended the system line-to-line voltage not exceed the transformer maximum system voltage level.

PTG3-1-60 PTG3-2-60



RECOMMENDED SPACINGS

A=UNIT TO UNIT =0.75" MIN.
B=HV TO GROUND IN AIR=3.0" MIN.



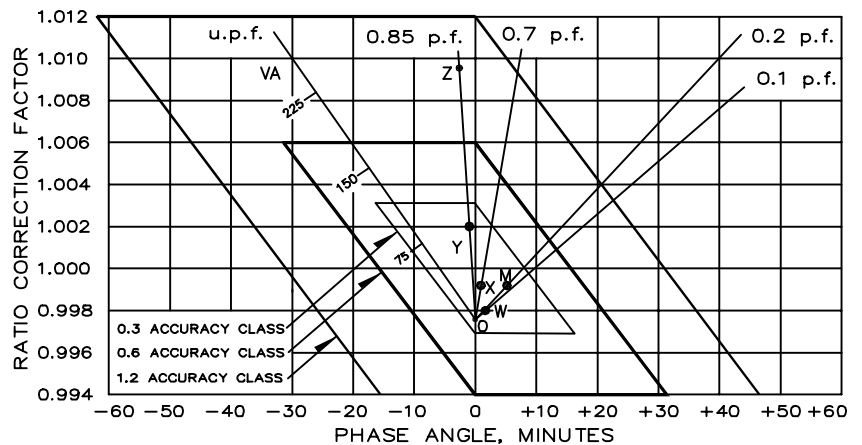
Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.

FUSE FOR MODEL PTG3 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES(SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
2400:120V	5.5kV	45,000	2.0E	1.0	5.63	5.00
3300:110V	5.5kV	45,000	2.0E	1.0	5.63	5.00
4200:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00
4800:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00

* SEE PAGE 4, Primary Fuse Rating.

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.



INDOOR VOLTAGE TRANSFORMER

Models PTW3-1-60
PTW3-2-60

ACCURACY CLASS:

0.3 WXY, 1.2Z at 100% rated voltage with 120V based ANSI burden.
0.6 WX, 1.2 MY at 58% rated voltage with 69.3V based ANSI burden.

FREQUENCY:

60 Hz.

MAXIMUM SYSTEM VOLTAGE:

5.6 kV, BIL 60kV full wave.

THERMAL RATING:

750 VA at 30°C. amb.
500 VA at 55°C. amb.

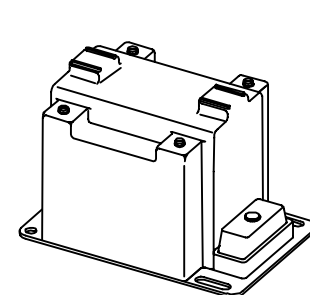
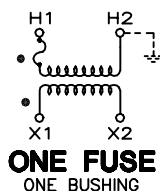
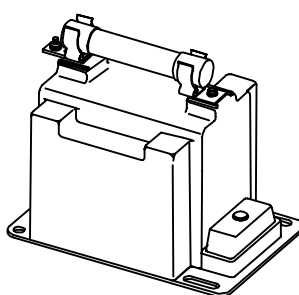
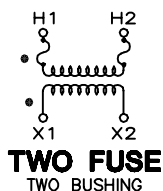
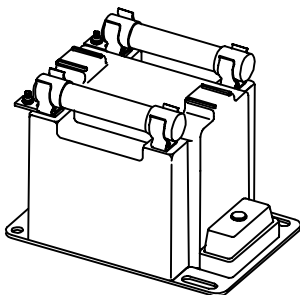
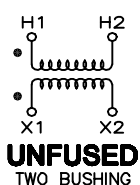
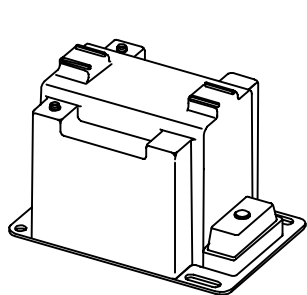
WEIGHT:

Approximately 34 lbs., unfused.

REGULATORY AGENCY APPROVALS
UL E145172 **CS LR89403**
Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

- Primary terminals that are unfused are 1/4-20 brass screws with one flatwasher and lockwasher.
- Primary terminals that are fused are 1/4-20 brass screws with one flatwasher and lockwasher and two nuts.
- Secondary terminals are No.10-32 brass screws with one flatwasher and lockwasher.
- 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.
- The core and coil assembly is encased in a plastic enclosure and vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries.
- Plated steel mounting base.
- Fuses have 1" Dia Caps and 5" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.

NOTE: All primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by Industry Canada, Approval No.T-215 Rev. 02



SWITCHGEAR STYLE
TWO BUSHING
ONE BUSHING NOT SHOWN

TWO BUSHING (a)				CATALOG NUMBERS			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
1	*2400	20:1	120	PTW3-2-60-242	PTW3-2-60-242FF	PTW3-2-60-242CCSorCCL	PTW3-2-60-242SS
2	3300	30:1	110-50Hz	PTW3-2-60-332	PTW3-2-60-332FF	PTW3-2-60-332CCSorCCL	PTW3-2-60-332SS
2	*4200	35:1	120	PTW3-2-60-422	PTW3-2-60-422FF	PTW3-2-60-422CCSorCCL	PTW3-2-60-422SS
2	*4800	40:1	120	PTW3-2-60-482	PTW3-2-60-482FF	PTW3-2-60-482CCSorCCL	PTW3-2-60-482SS

ONE BUSHING (b)				R _{FR} (c)	CATALOG NUMBERS		
					FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
4A	*2400	20:1	120	230	PTW3-1-60-242F	PTW3-1-60-242CSorCL	PTW3-1-60-242S
4B	*4200	35:1	120	230	PTW3-1-60-422F	PTW3-1-60-422CSorCL	PTW3-1-60-422S
4B	*4800	40:1	120	230	PTW3-1-60-482F	PTW3-1-60-482CSorCL	PTW3-1-60-482S

(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 110% 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.

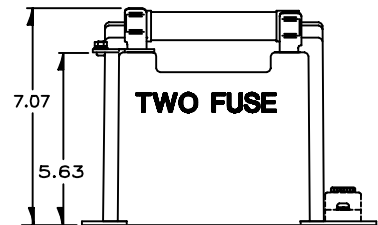
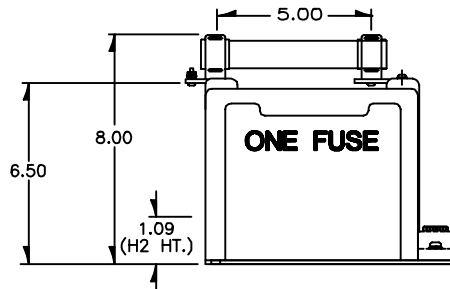
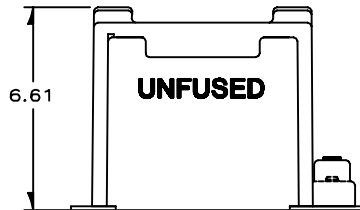
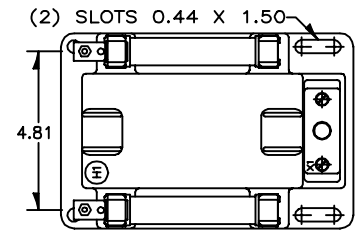
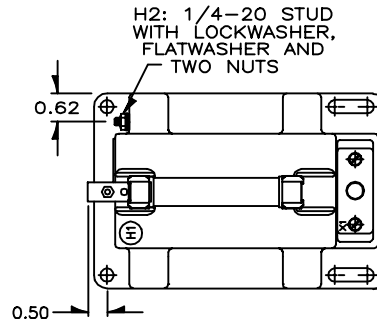
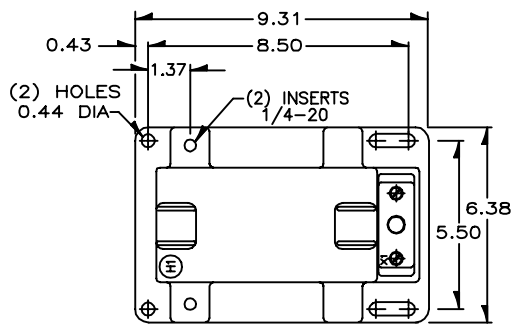
(c) See page 4, item 2 for ferroresonance considerations. Values in table are in ohms.

(d) Fuse clips noted as "CCS" or "CS" accept fuses with 1" Dia. caps and 5" clip centers. Fuse clips noted as "CCL" or "CL" accept fuses with 1.63" Dia. caps and 5.88" clip centers.

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

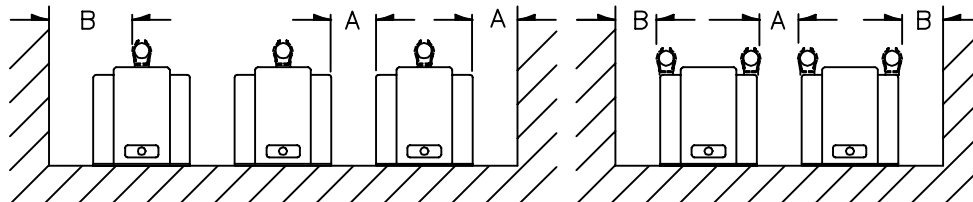
PTW3-1-60

PTW3-2-60



RECOMMENDED SPACINGS

A=UNIT TO UNIT OR TO GROUND=1.0" MIN.
B=HV TO GROUND IN AIR=3.0" MIN.



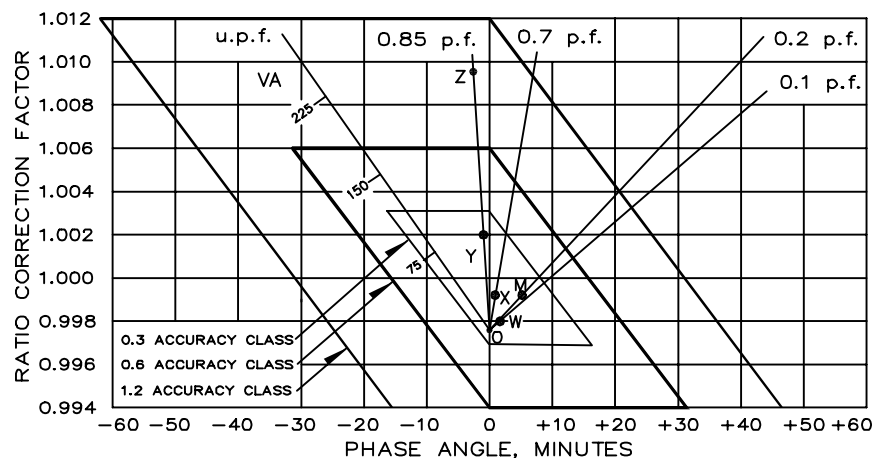
Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.

FUSE FOR MODEL PTW3 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES(SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
2400:120V	5.5kV	45,000	2.0E	1.0	5.63	5.00
3300:110V	5.5kV	45,000	2.0E	1.0	5.63	5.00
4200:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00
4800:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00

* SEE PAGE 4, Primary Fuse Rating.

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.



INDOOR VOLTAGE TRANSFORMER

Models PTG4-1-75
PTG4-2-75

ACCURACY CLASS:

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

FREQUENCY:

60 Hz.

REGULATORY AGENCY APPROVALS



E145172



LR89403

Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

MAXIMUM SYSTEM VOLTAGE:

9.52kV, BIL 75kV full wave.

THERMAL RATING:

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

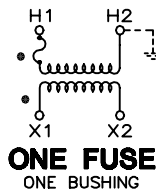
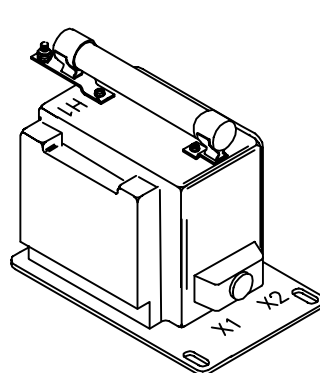
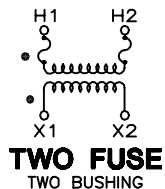
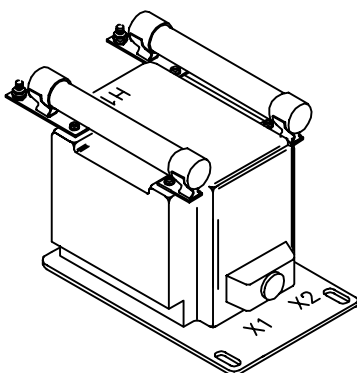
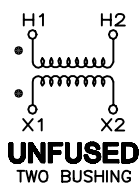
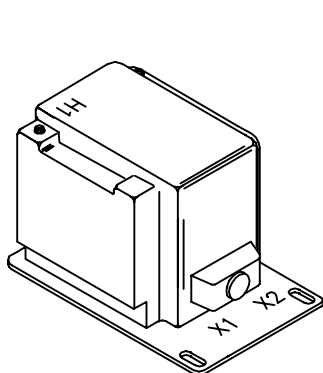
WEIGHT:

Approximately 85 lbs. unfused.

- Primary terminals that are unfused are 1/4-20 brass screws with one lockwasher and flatwasher.
- Primary terminals that are fused are 1/4-20 brass screws with one flatwasher, lockwasher and two nuts.
- Secondary terminals are No.10-32 brass screws with one flatwasher and lockwasher.
- 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.

- 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.
- A test card is provided with each unit.

NOTE: All primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by Industry Canada, Approval No. AE-0429



SWITCHGEAR STYLE

TWO BUSHING
ONE BUSHING NOT SHOWN

TWO BUSHING (a)				CATALOG NUMBERS			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	*4200	35:1	120	PTG4-2-75-422	PTG4-2-75-422FF	PTG4-2-75-422CC	PTG4-2-75-422SS
1	*4800	40:1	120	PTG4-2-75-482	PTG4-2-75-482FF	PTG4-2-75-482CC	PTG4-2-75-482SS
2	6600	60:1	110-50Hz	PTG4-2-75-662	PTG4-2-75-662FF	PTG4-2-75-662CC	PTG4-2-75-662SS
2	*7200	60:1	120	PTG4-2-75-722	PTG4-2-75-722FF	PTG4-2-75-722CC	PTG4-2-75-722SS
2	8400	70:1	120	PTG4-2-75-842	PTG4-2-75-842FF	PTG4-2-75-842CC	PTG4-2-75-842SS

GROUP	ONE BUSHING (b)				CATALOG NUMBERS			
					FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE	R _{FR} (c)
4A	*4200	35:1	120	65	PTG4-1-75-422F	PTG4-1-75-422C	PTG4-1-75-422S	
4A	*4800	40:1	120	65	PTG4-1-75-482F	PTG4-1-75-482C	PTG4-1-75-482S	
4B	6600	60:1	110-50Hz	65	PTG4-1-75-662F	PTG4-1-75-662C	PTG4-1-75-662S	
4B	*7200	60:1	120	65	PTG4-1-75-722F	PTG4-1-75-722C	PTG4-1-75-722S	
4B	8400	70:1	120	65	PTG4-1-75-842F	PTG4-1-75-842C	PTG4-1-75-842S	

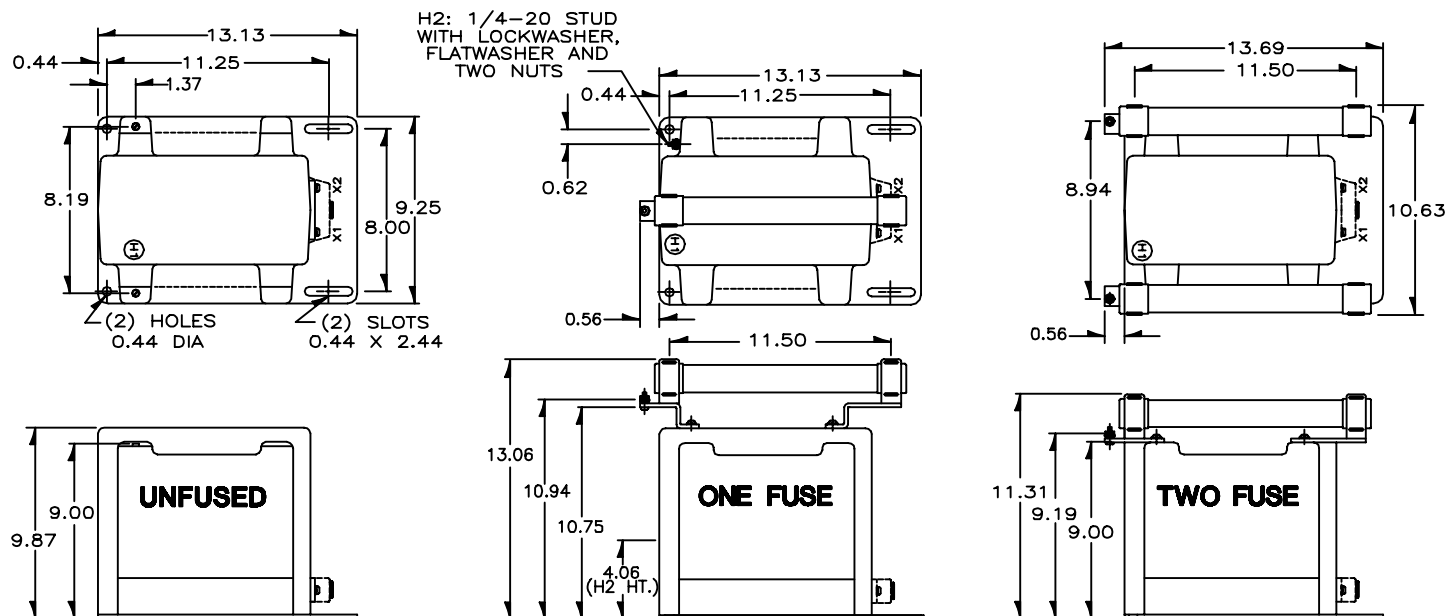
(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal, using a fuse in the line side of the primary only. By using this connection a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation the transformer primary voltage should not exceed 110% 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) See page 4, item 2 for ferroresonance considerations. Values in table are in ohms.

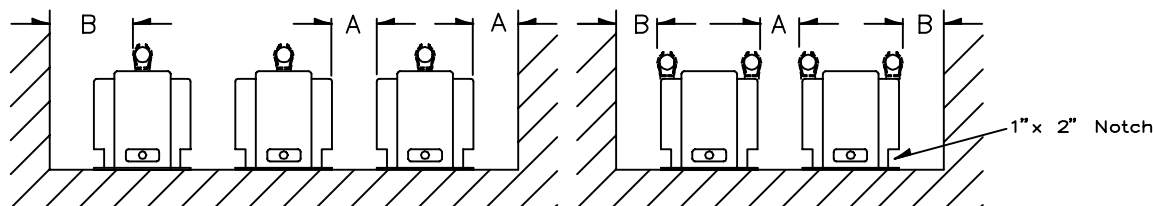
NOTE: It is recommended the system line-to-line voltage not exceed the transformer maximum system voltage level.

PTG4-1-75 PTG4-2-75



RECOMMENDED SPACINGS

A=UNIT TO UNIT OR TO GROUND=1.0" MIN.
B=HV TO GROUND IN AIR=4.5" MIN.



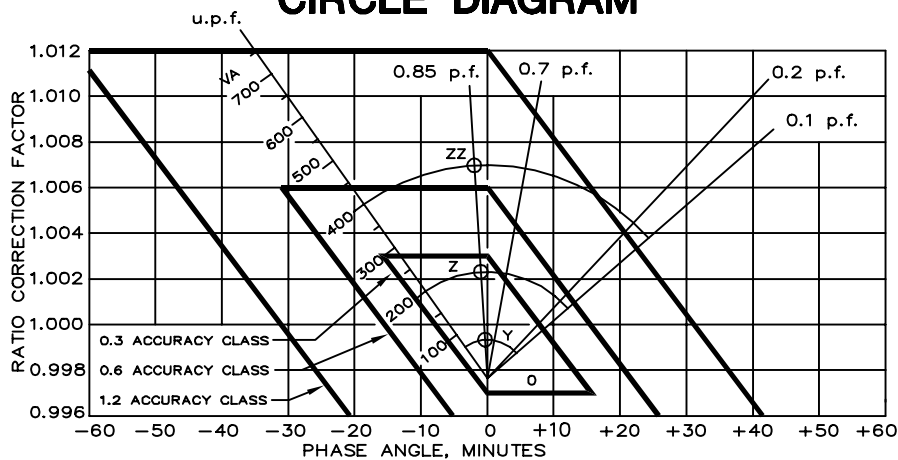
Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.

FUSE FOR MODEL PTG4 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES(SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
4200:120V	15.5kV	80,000	2.0E	1.63	13	11.50
4800:120V	15.5kV	80,000	2.0E	1.63	13	11.50
6600:110V	15.5kV	80,000	1.0E	1.63	13	11.50
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

* SEE PAGE 4, Primary Fuse Rating.

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.



INDOOR VOLTAGE TRANSFORMER

Models PTW4-1-75
PTW4-2-75

ACCURACY CLASS:

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

FREQUENCY:

60 Hz.

REGULATORY AGENCY APPROVALS

UL E145172 **SP LR89403**
Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

MAXIMUM SYSTEM VOLTAGE:

9.52kV, BIL 75kV full wave.

THERMAL RATING:

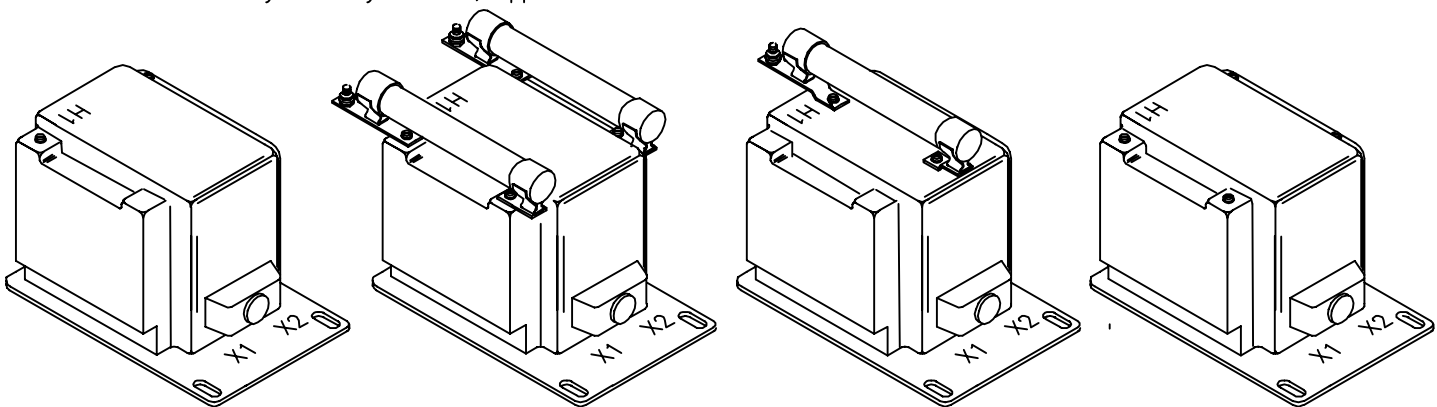
1500 VA at 30°C. amb.
1000 VA at 55°C. amb.

WEIGHT:

Approximately 85 lbs. unfused.

- Primary terminals that are unfused are 1/4-20 brass screws with one lockwasher and flatwasher.
- Primary terminals that are fused are 1/4-20 brass studs with one flatwasher, lockwasher and two nuts.
- Secondary terminals are No.10-32 brass screws with one flatwasher and lockwasher.
- 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.
- 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.
- A test card is provided with each unit.

NOTE: All primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by Industry Canada, Approval No. AE-0429



H1 H2
X1 X2
UNFUSED
TWO BUSHING

H1 H2
X1 X2
TWO FUSE
TWO BUSHING

H1 H2
X1 X2
ONE FUSE
ONE BUSHING

SWITCHGEAR STYLE
TWO BUSHING
ONE BUSHING NOT SHOWN

TWO BUSHING (a)				CATALOG NUMBERS			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	*4200	35:1	120	PTW4-2-75-422	PTW4-2-75-422FF	PTW4-2-75-422CC	PTW4-2-75-422SS
1	*4800	40:1	120	PTW4-2-75-482	PTW4-2-75-482FF	PTW4-2-75-482CC	PTW4-2-75-482SS
2	6600	60:1	110-50Hz	PTW4-2-75-662	PTW4-2-75-662FF	PTW4-2-75-662CC	PTW4-2-75-662SS
2	*7200	60:1	120	PTW4-2-75-722	PTW4-2-75-722FF	PTW4-2-75-722CC	PTW4-2-75-722SS
2	8400	70:1	120	PTW4-2-75-842	PTW4-2-75-842FF	PTW4-2-75-842CC	PTW4-2-75-842SS

GROUP	ONE BUSHING (b)			R _{FR} (c)	CATALOG NUMBERS		
					FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	*4200	35:1	120	65	PTW4-1-75-422F	PTW4-1-75-422C	PTW4-1-75-422S
4A	*4800	40:1	120	65	PTW4-1-75-482F	PTW4-1-75-482C	PTW4-1-75-482S
4B	6600	60:1	110-50Hz	65	PTW4-1-75-662F	PTW4-1-75-662C	PTW4-1-75-662S
4B	*7200	60:1	120	65	PTW4-1-75-722F	PTW4-1-75-722C	PTW4-1-75-722S
4B	8400	70:1	120	65	PTW4-1-75-842F	PTW4-1-75-842C	PTW4-1-75-842S

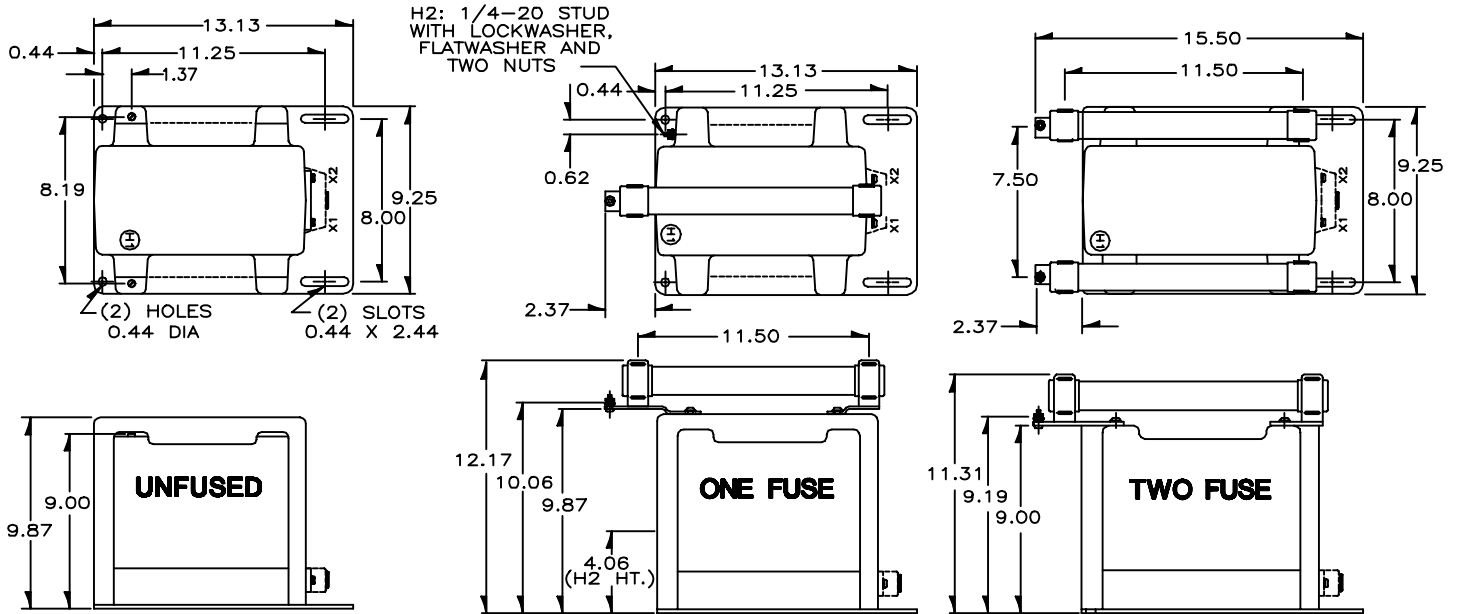
(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal, using a fuse in the line side of the primary only. By using this connection a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation the transformer primary voltage should not exceed 110% 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) See page 4, item 2 for ferroresonance considerations. Values in table are in ohms.

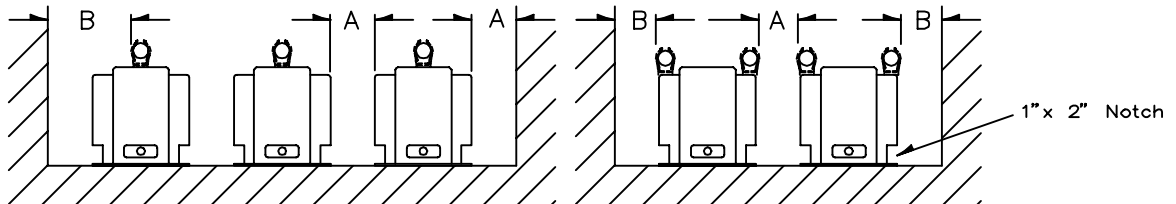
NOTE: It is recommended the system line-to-line voltage not exceed the transformer maximum system voltage level.

PTW4-1-75 PTW4-2-75



RECOMMENDED SPACINGS

A=UNIT TO UNIT OR TO GROUND=1.0" MIN.
B=HV TO GROUND IN AIR=4.5" MIN.

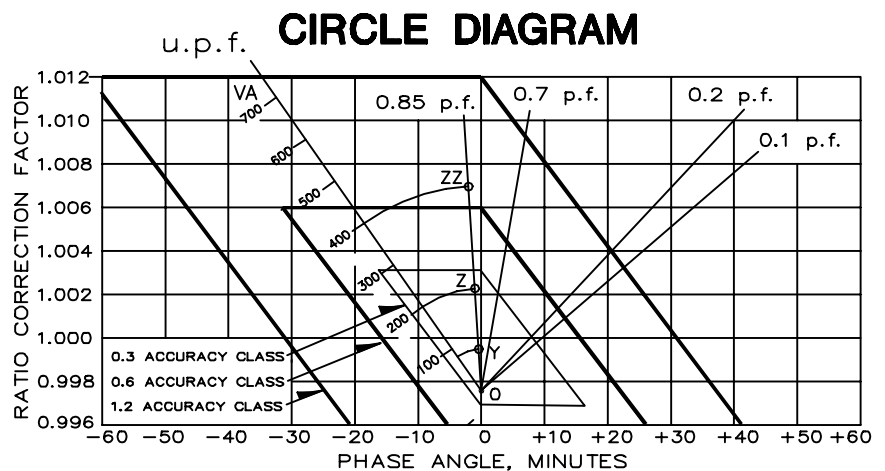


Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.

FUSE FOR MODEL PTW4 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES(SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
4200:120V	15.5kV	80,000	2.0E	1.63	13	11.50
4800:120V	15.5kV	80,000	2.0E	1.63	13	11.50
6600:110V	15.5kV	80,000	1.0E	1.63	13	11.50
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

* SEE PAGE 4, Primary Fuse Rating.

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.



INDOOR VOLTAGE TRANSFORMER

Models **PTG5-1-110**
PTG5-2-110

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.

REGULATORY AGENCY APPROVALS



Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

MAXIMUM SYSTEM VOLTAGE:

15.5kV, BIL 110kV full wave.

THERMAL RATING:

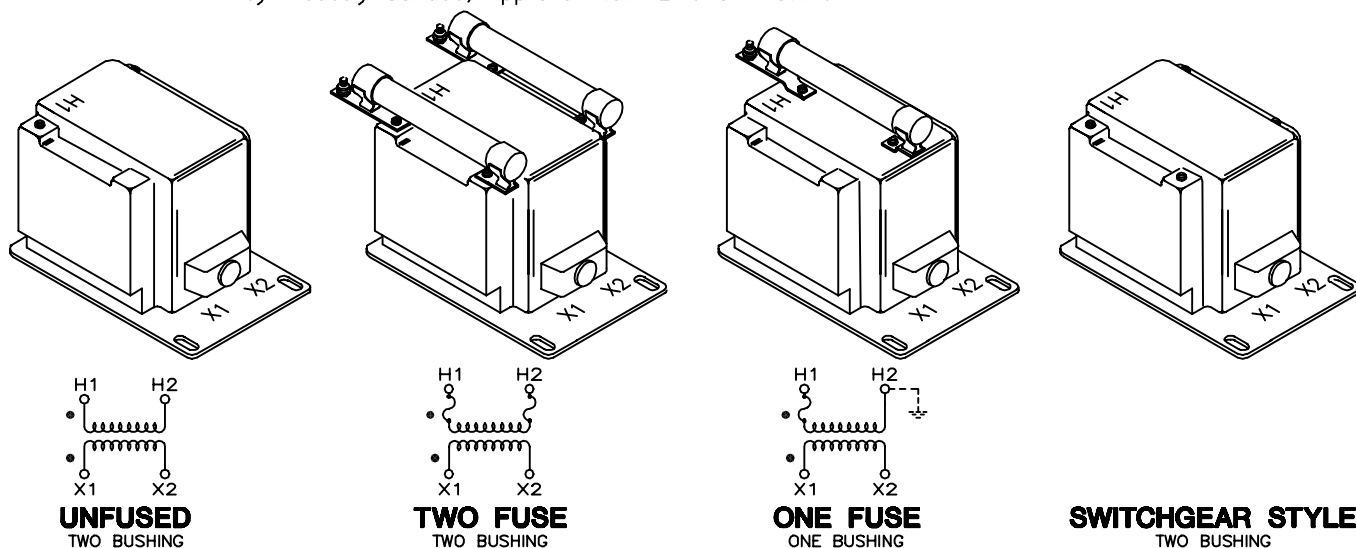
1500 VA at 30°C. amb.
1000 VA at 55°C. amb.

WEIGHT:

Approximately 85 lbs. unfused.

- Primary terminals that are unfused are 1/4-20 brass screws with one flatwasher and lockwasher, unless otherwise specified.
- Primary terminals that are fused are 1/4-20 brass screws with one flatwasher, lockwasher and two nuts.
- Secondary terminals are No.10-32 brass screws with one flatwasher and lockwasher.
- 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.
- 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.
- A test card is provided with each unit.

NOTE: All primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by Industry Canada, Approval No. AE-0431 Rev. 01



GROUP	TWO BUSHING (a)			CATALOG NUMBERS			
	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	*7200	60:1	120	PTG5-2-110-722	PTG5-2-110-722FF	PTG5-2-110-722CC	PTG5-2-110-722SS
1	*8400	70:1	120	PTG5-2-110-842	PTG5-2-110-842FF	PTG5-2-110-842CC	PTG5-2-110-842SS
2	11000	100:1	110-50Hz	PTG5-2-110-113	PTG5-2-110-113FF	PTG5-2-110-113CC	PTG5-2-110-113SS
2	*12000	100:1	120	PTG5-2-110-123	PTG5-2-110-123FF	PTG5-2-110-123CC	PTG5-2-110-123SS
2	13200	110:1	120	PTG5-2-110-1322	PTG5-2-110-1322FF	PTG5-2-110-1322CC	PTG5-2-110-1322SS
2	*14400	120:1	120	PTG5-2-110-1442	PTG5-2-110-1442FF	PTG5-2-110-1442CC	PTG5-2-110-1442SS

GROUP	ONE BUSHING (b)				CATALOG NUMBERS		
	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	R _{FF} (c)	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	*7200	60:1	120	65	PTG5-1-110-722F	PTG5-1-110-722C	PTG5-1-110-722S
4A	*8400	70:1	120	65	PTG5-1-110-842F	PTG5-1-110-842C	PTG5-1-110-842S
4B	11000	100:1	110-50Hz	65	PTG5-1-110-113F	PTG5-1-110-113C	PTG5-1-110-113S
4B	*12000	100:1	120	65	PTG5-1-110-123F	PTG5-1-110-123C	PTG5-1-110-123S
4B	13200	110:1	120	65	PTG5-1-110-1322F	PTG5-1-110-1322C	PTG5-1-110-1322S
4B	*14400	120:1	120	65	PTG5-1-110-1442F	PTG5-1-110-1442C	PTG5-1-110-1442S

(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 110% of rated value.

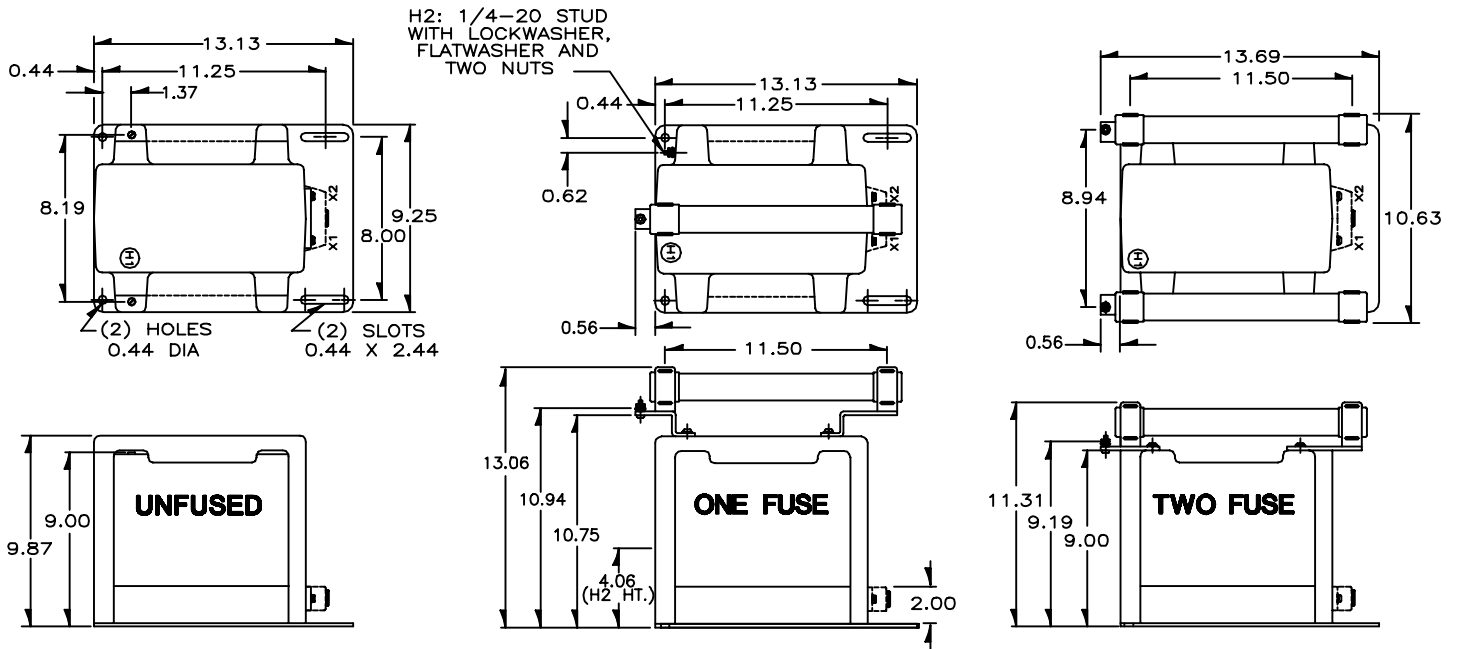
(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

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

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

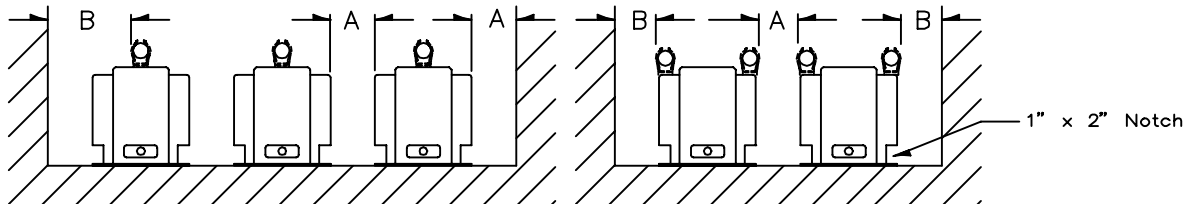
PTG5-1-110

PTG5-2-110



RECOMMENDED SPACINGS

A=UNIT TO UNIT OR TO GROUND=1.25" MIN.
B=HV TO GROUND IN AIR=6.5" MIN.



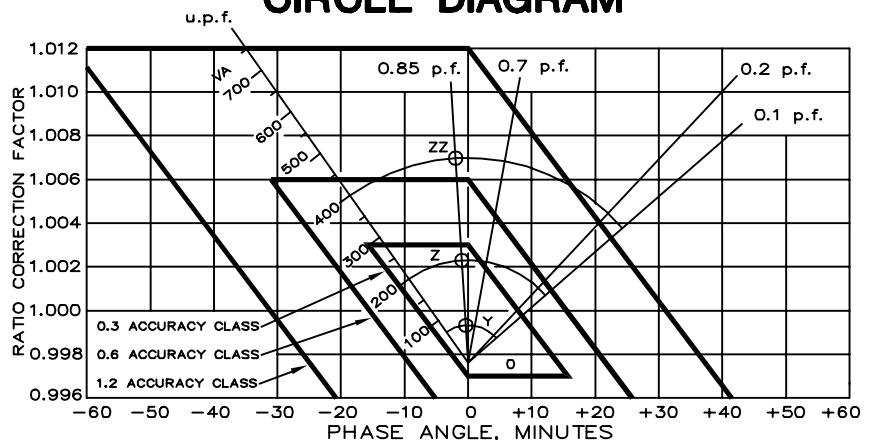
Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.

FUSE FOR MODEL PTG5 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

* SEE PAGE 4, Primary Fuse Rating

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.

CIRCLE DIAGRAM



INDOOR VOLTAGE TRANSFORMER

Models PTW5-1-110
PTW5-2-110

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.

REGULATORY AGENCY APPROVALS



Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

MAXIMUM SYSTEM VOLTAGE:

15.5kV, BIL 110kV full wave.

THERMAL RATING:

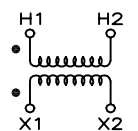
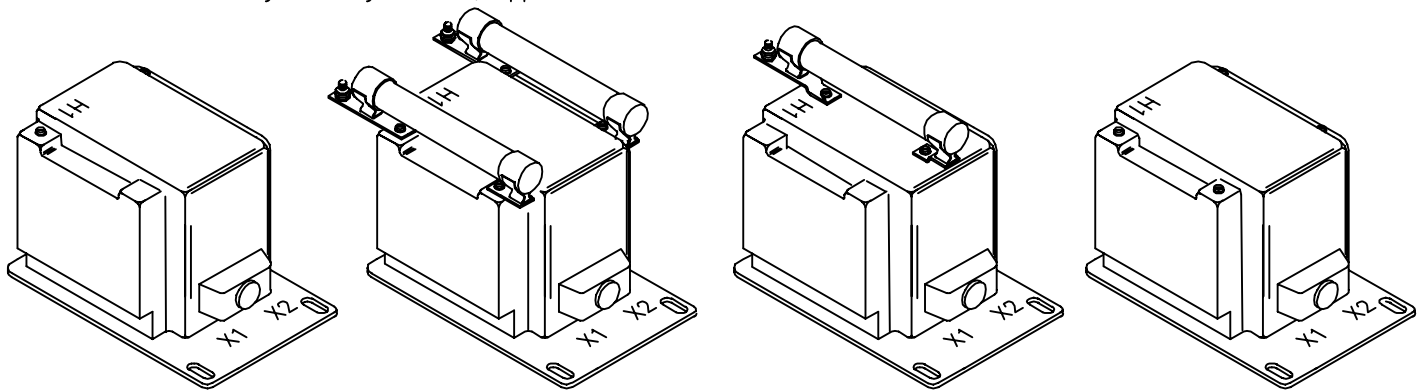
1500 VA at 30°C. amb.
1000 VA at 55°C. amb.

WEIGHT:

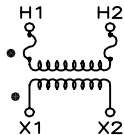
Approximately 85 lbs. unfused.

- Primary terminals that are unfused are 1/4-20 brass screws with one lockwasher and flatwasher.
- Primary terminals that are fused are 1/4-20 brass screws with one flatwasher, lockwasher and two nuts.
- Secondary terminals are No.10-32 brass screws with one flatwasher and lockwasher.
- 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.
- 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.
- A test card is provided with each unit.

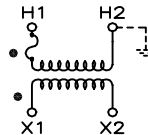
NOTE: All primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by Industry Canada, Approval No.AE-0431 Rev. 01



UNFUSED
TWO BUSHING



TWO FUSE
TWO BUSHING



ONE FUSE
ONE BUSHING

SWITCHGEAR STYLE
TWO BUSHING
ONE BUSHING NOT SHOWN

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

SINGLE BUSHING (b)				R _{FR} (c)	CATALOG NUMBERS		
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE		FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	*7200	60:1	120	65	PTW5-1-110-722F	PTW5-1-110-722C	PTW5-1-110-722S
4A	*8400	70:1	120	65	PTW5-1-110-842F	PTW5-1-110-842C	PTW5-1-110-842S
4B	11000	100:1	110-50Hz	65	PTW5-1-110-113F	PTW5-1-110-113C	PTW5-1-110-113S
4B	*12000	100:1	120	65	PTW5-1-110-123F	PTW5-1-110-123C	PTW5-1-110-123S
4B	13200	110:1	120	65	PTW5-1-110-1322F	PTW5-1-110-1322C	PTW5-1-110-1322S
4B	*14400	120:1	120	65	PTW5-1-110-1442F	PTW5-1-110-1442C	PTW5-1-110-1442S

(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 110% of rated value.

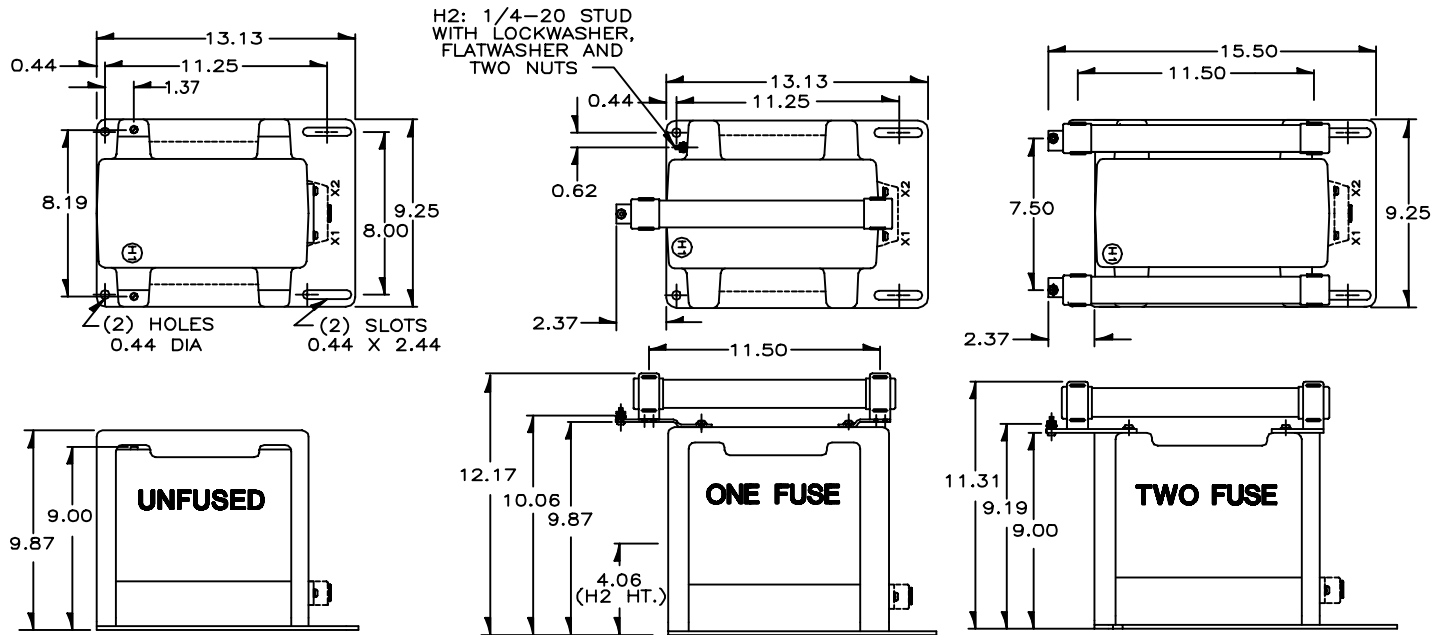
(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

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

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

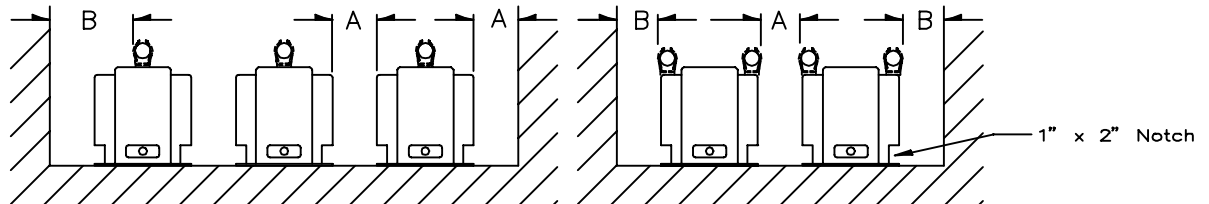
PTW5-1-110

PTW5-2-110



RECOMMENDED SPACINGS

A=UNIT TO UNIT OR TO GROUND=1.25" MIN.
B=HV TO GROUND IN AIR=6.5" MIN.



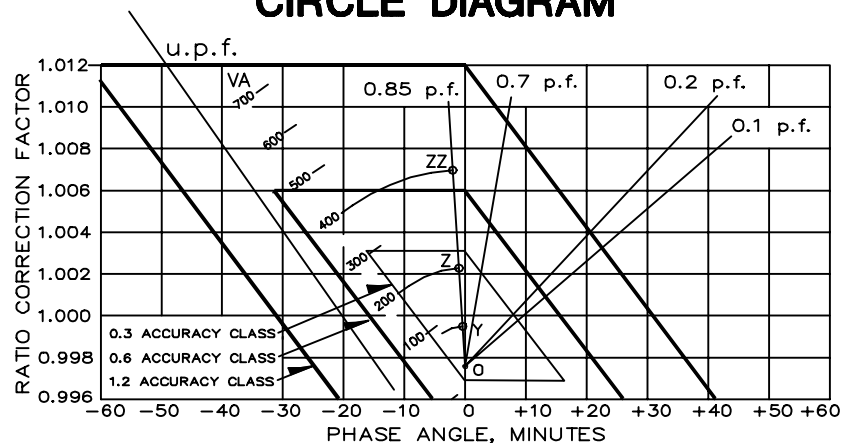
Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.

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

* SEE PAGE 4, Primary Fuse Rating

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.

CIRCLE DIAGRAM



INDOOR VOLTAGE TRANSFORMER

Model PT6-1-125
ANSI Groups 4A & 4B

REGULATORY AGENCY APPROVALS



ACCURACY CLASS:

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

FREQUENCY:

60 Hz.

MAXIMUM SYSTEM VOLTAGE:

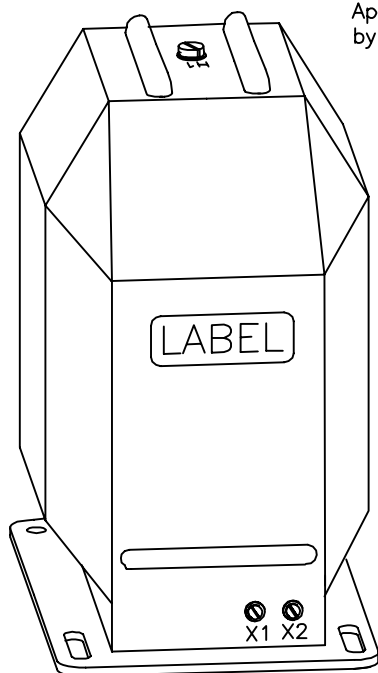
25.5 kV, BIL 125kV full wave.

THERMAL RATING:

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

WEIGHT:

Approximately 125 lbs.



Approved for revenue metering in Canada
by Industry Canada, Approval No. AE-0676

- 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.
- Thermal burden rating is for 120 volt secondaries.
- Plated steel mounting base.
- A primary fuse is not supplied, but is recommended. Use a 25kV, 0.5E rated fuse for primary ratings of 13000 volts or greater and 1.0E for those rated less than 13000 volts. *
- A test card is provided with each unit.

ONE BUSHING

	GROUP	PRIMARY VOLTAGE (a)	RATIO	SECONDARY VOLTAGE	CATALOG NUMBER	R _{FR} (b)
	4A	10200	85:1	120	PT6-1-125-1022	82 ohms
	4A	12000	100:1	120	PT6-1-125-123	82 ohms
	4A	13200	110:1	120	PT6-1-125-1322	82 ohms
	4A	13800	115:1	120	PT6-1-125-1382	82 ohms
	4A	14400	120:1	120	PT6-1-125-1442	82 ohms
	4B	18000	150:1	120	PT6-1-125-183	82 ohms
	4B	21000	175:1	120	PT6-1-125-213	82 ohms
	4B	24000	200:1	120	PT6-1-125-243	82 ohms

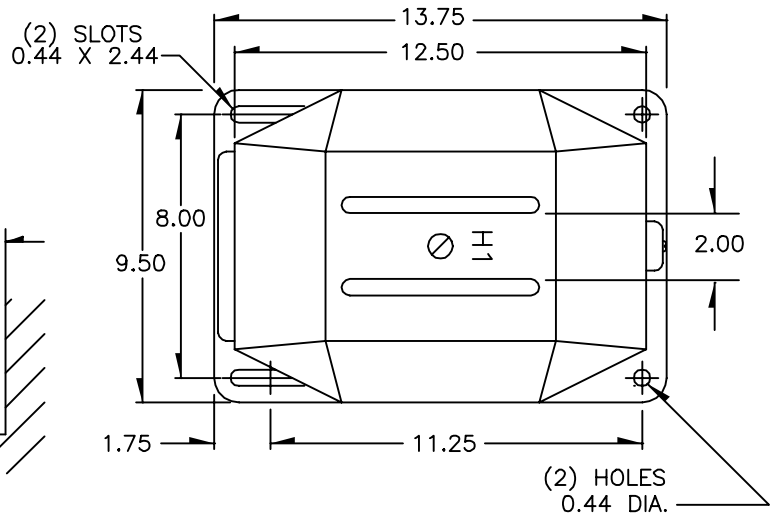
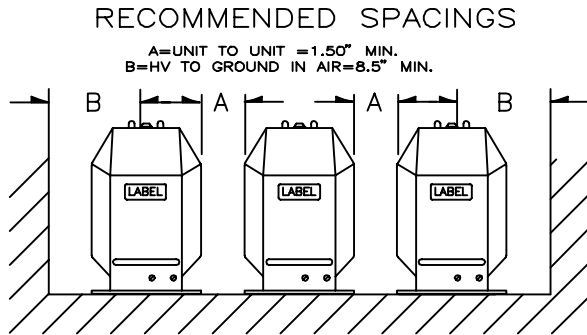
(a) Also available are other ratios and frequencies, double secondaries and units meeting IEC 44-2 rated voltage factors of 1.50 or 1.90.

(b) See page 4, item 2 for ferroresonance considerations.

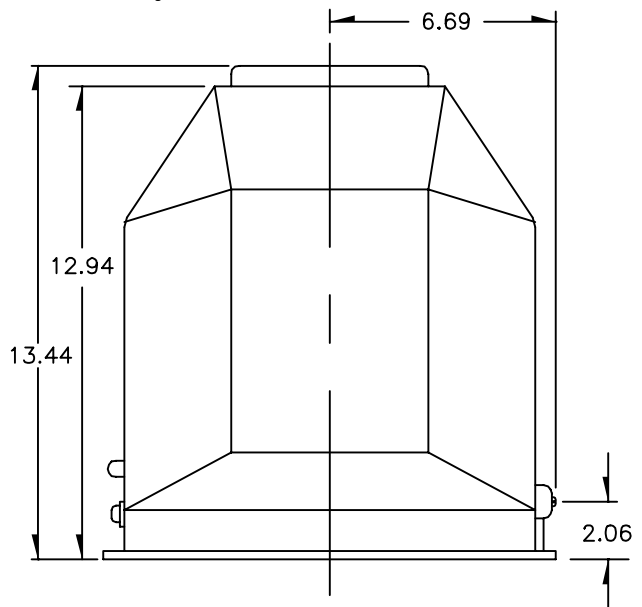
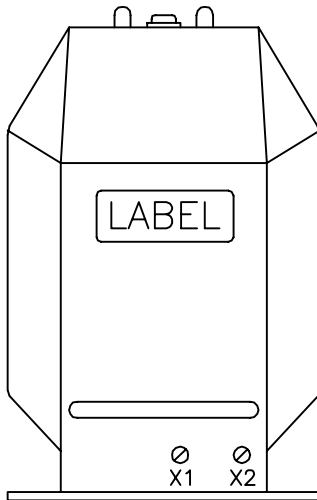
* SEE PAGE 4, Primary Fuse Rating

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. Transformers may be connected line-to-neutral on a system rated 25,500 volts grounded wye. It is recommended that the system line-to-line voltage not exceed the transformer maximum system voltage level.

PT6-1-125

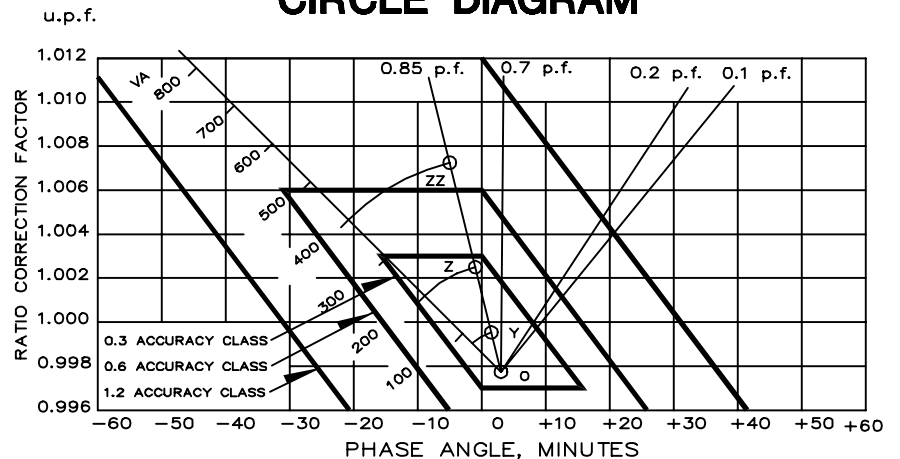


Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.



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.



INDOOR VOLTAGE TRANSFORMER

Model PT6-2-125
ANSI Groups 1 & 2

REGULATORY AGENCY APPROVALS

UL E145172 **SP** LR89403
Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

ACCURACY CLASS:

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

FREQUENCY

60 Hz.

MAXIMUM SYSTEM VOLTAGE:

25.5 kV, BIL 125kV full wave.

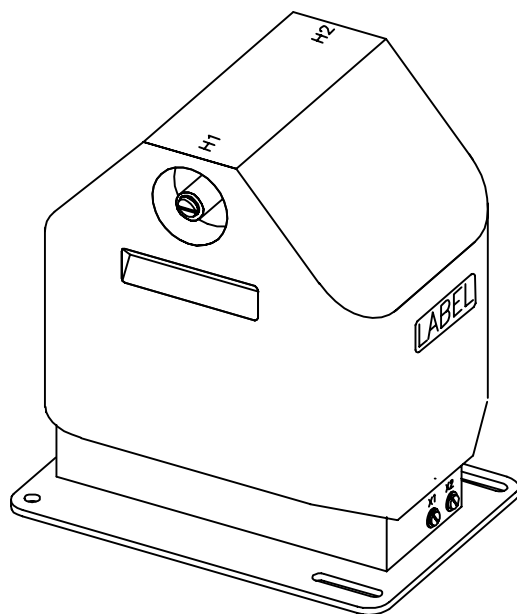
THERMAL RATING:

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

WEIGHT:

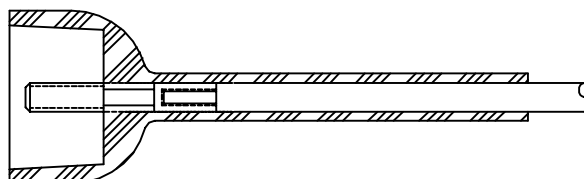
Approximately 125 lbs.

Approved for revenue metering in Canada
by Industry Canada, Approval No. AE-0676



TWO BUSHING

- 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.
- Thermal burden rating is for 120 volt secondaries.
- Plated steel mounting base.
- Primary fuses are not supplied, but are recommended. Use 25kV, 0.5E rated fuse for primary ratings of 13000 volts or greater and 1.0e for those rated less than 13000 volts. *
- A test card is provided with each unit.



- Suggested primary terminal kit No. 0882B06446 is available at extra cost.
(Includes 2 each 3/8-16 terminals, terminal boots and 48" of No.6, 15kV lead wire. Order above kit as a separate item.)

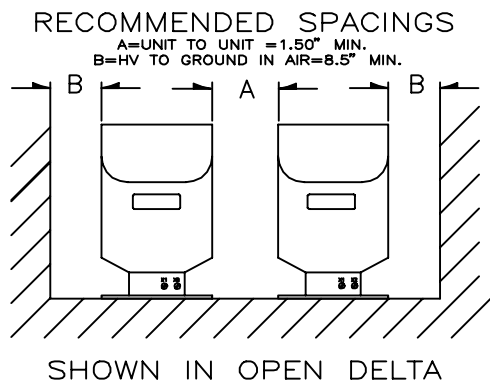
	GROUP	PRIMARY VOLTAGE (a)	RATIO	SECONDARY VOLTAGE	CATALOG NUMBER
	1	12000	100:1	120	PT6-2-125-123
	1	14400	120:1	120	PT6-2-125-1442
	2	18000	150:1	120	PT6-2-125-183
	2	21000	175:1	120	PT6-2-125-213
	2	23000	191.7:1	120	PT6-2-125-233
	2	24000	200:1	120	PT6-2-125-243
	2	25000	208.3:1	120	PT6-2-125-253

(a) Also available are other ratios and frequencies, double secondaries and units meeting IEC 44-2 rated voltage factors of 1.20 or 1.50.

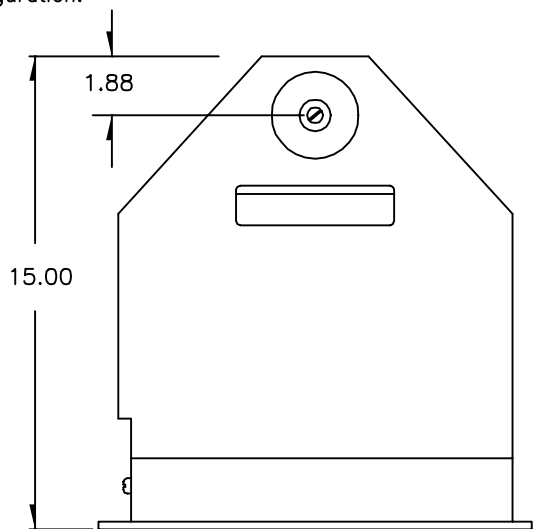
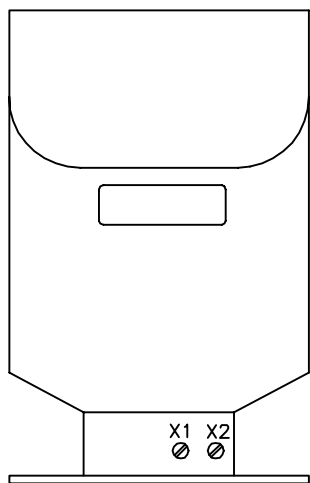
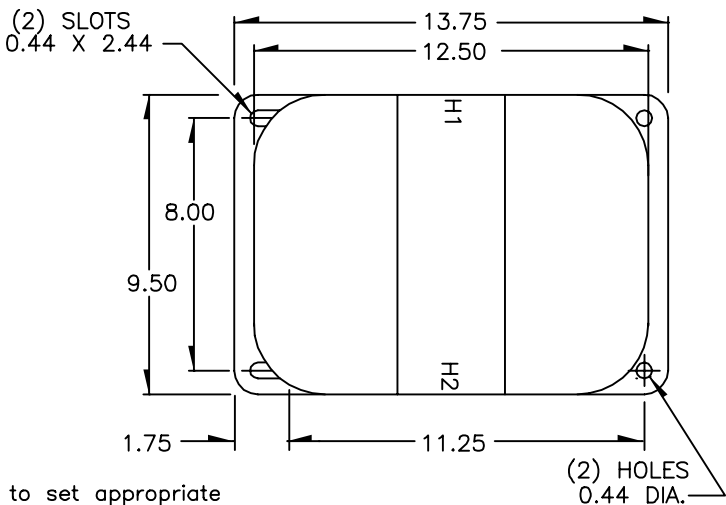
* SEE PAGE 4, Primary Fuse Rating

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

PT6-2-125

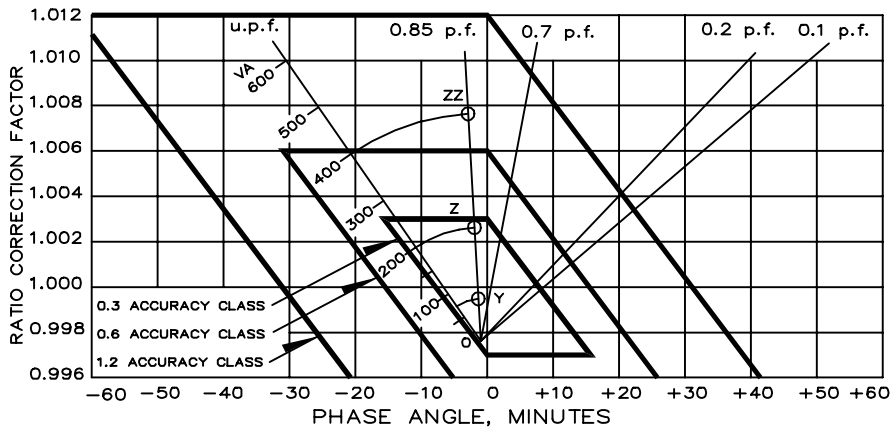


Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.



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.



INDOOR VOLTAGE TRANSFORMER

Models PT7-1-150

PT7-1-200

ANSI Group 4A

REGULATORY AGENCY APPROVALS



E14572



LR89403

Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

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 WXYZ 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)

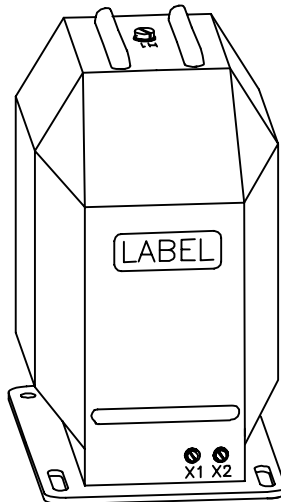
750 & 750VA 30°C. amb.

500 & 500VA 55°C. amb.

WEIGHT:

Approximately 140 lbs.

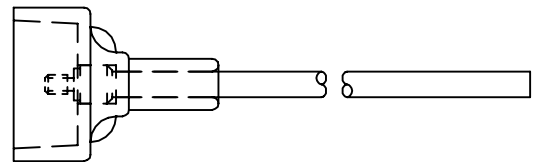
Approved for revenue metering in Canada
by Industry Canada, Approval No. AE-0677



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 _{FR}
	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

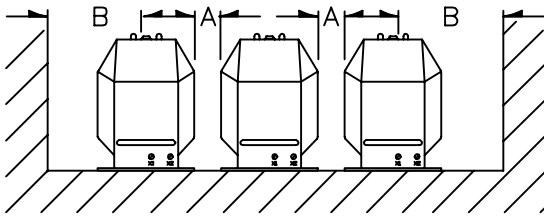
NOTE: Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta. It is recommended the line-to-line voltage not exceed the transformer maximum system voltage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

PT7-1-150 PT7-1-200

RECOMMENDED SPACINGS

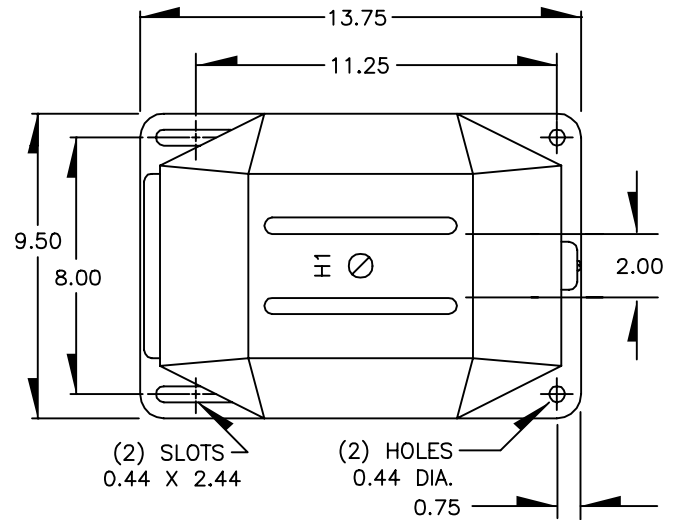
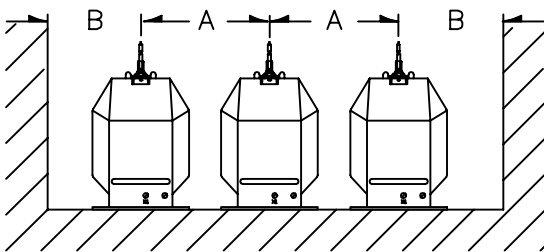
PT7-1-150

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

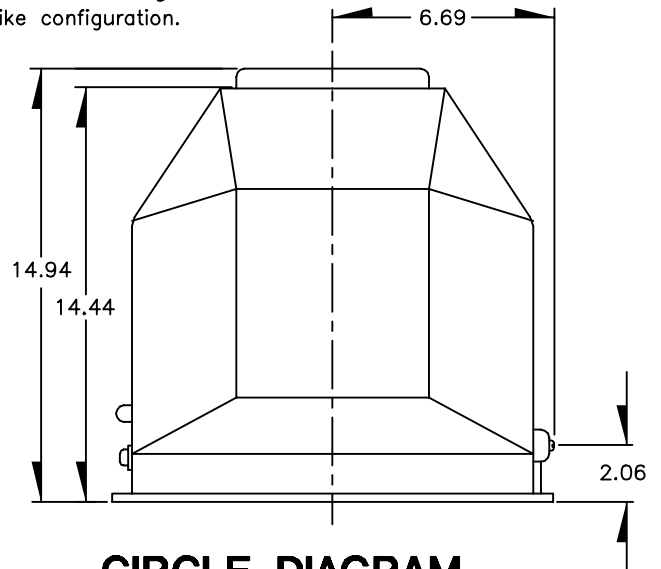
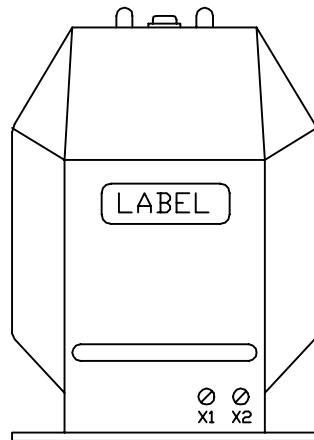


PT7-1-200

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

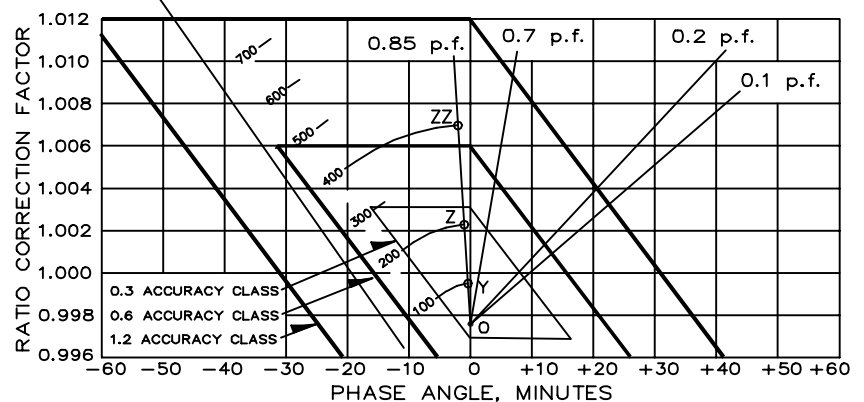


Recommended spacings are for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude; and other considerations like configuration.



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.

CIRCLE DIAGRAM



INDOOR VOLTAGE TRANSFORMER

Models PT7-2-150
PT7-2-200
ANSI Group 2

REGULATORY AGENCY APPROVALS

UL E145172 **SP** LR89403
Manufactured to meet the requirements of ANSI/IEEE C57.13.
Classified by U.L. in accordance with IEC 44-2

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 PT7-2-150
36.5kV, BIL 150kV full wave.

Model PT7-2-200
36.5kV, BIL 200kV full wave.

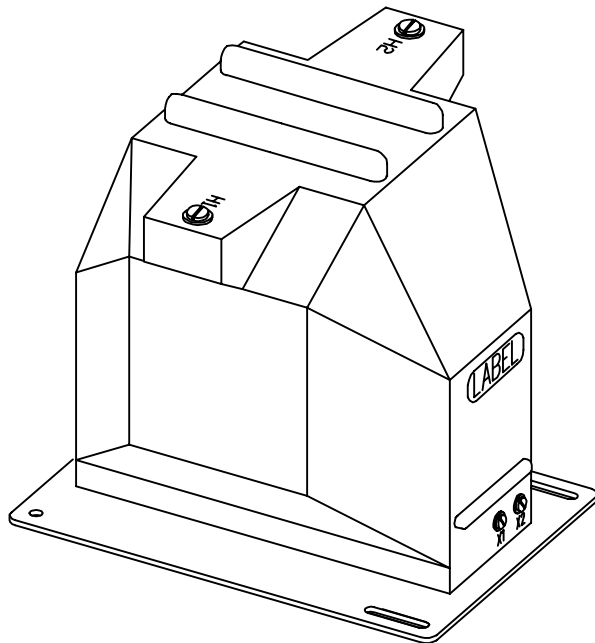
THERMAL RATING:

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

WEIGHT:

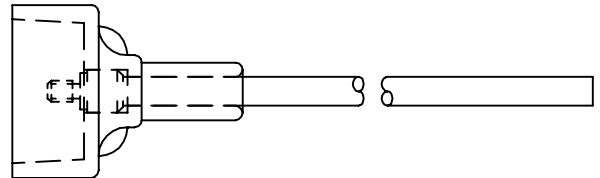
Approximately 175 lbs.

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



TWO BUSHING

- 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.
- Primary fuses are not supplied, but are recommended. Use 34.5 kV, 0.5E rated fuses. *
- A test card is provided with each unit.



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

	PRIMARY VOLTAGE (a)	RATIO	SECONDARY VOLTAGE	150 kV BIL CATALOG NUMBER	200 kV BIL (b) CATALOG NUMBER
	24000	200:1	120	PT7-2-150-243	PT7-2-200-243
	27600	240:1	115	PT7-2-150-2762	PT7-2-200-2762
	34500	300:1	115	PT7-2-150-3452	PT7-2-200-3452

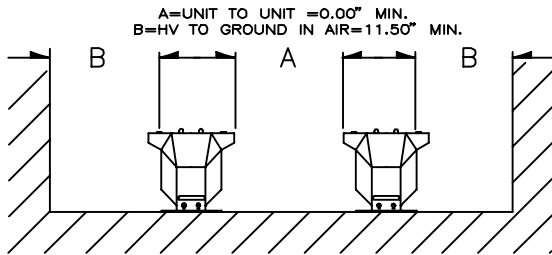
(a) Also available are other ratios and frequencies, double secondaries and units meeting IEC 44-2 rated voltage factors of 1.20 or 1.50.

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

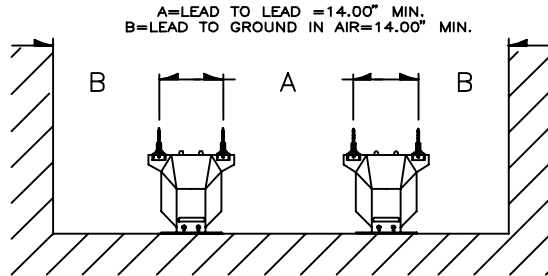
* SEE PAGE 4, Primary Fuse Rating

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

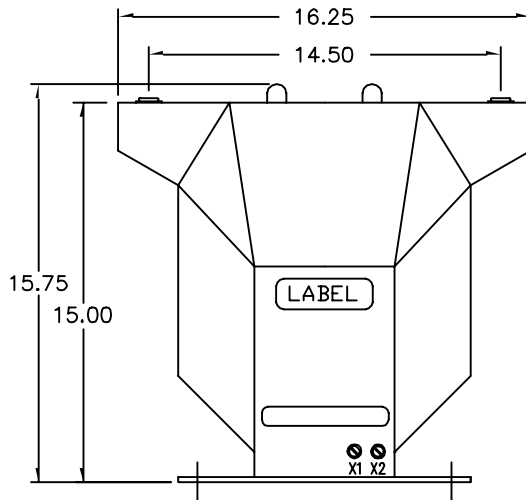
RECOMMENDED SPACINGS PT7-2-150



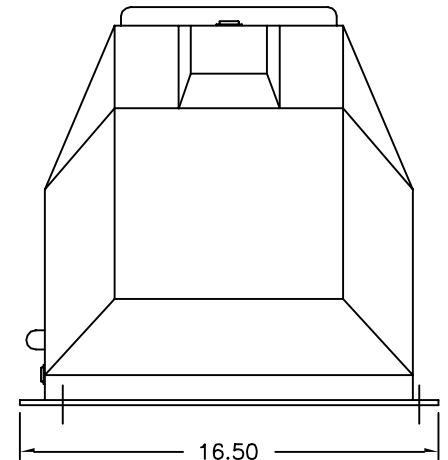
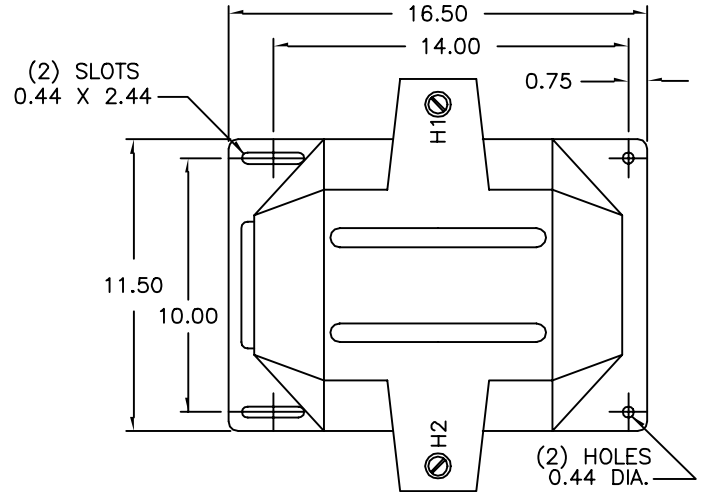
PT7-2-200



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.

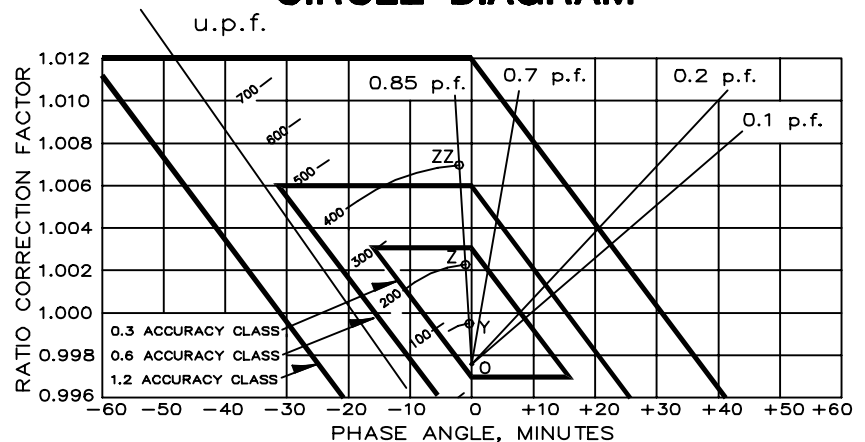


PT7-2-150 PT7-2-200



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.

CIRCLE DIAGRAM



INDOOR VOLTAGE TRANSFORMER

Model PT7A-1-150

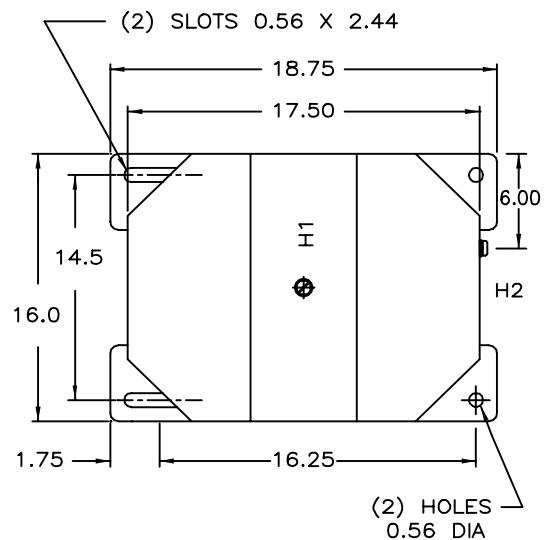
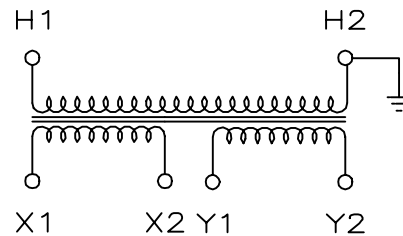
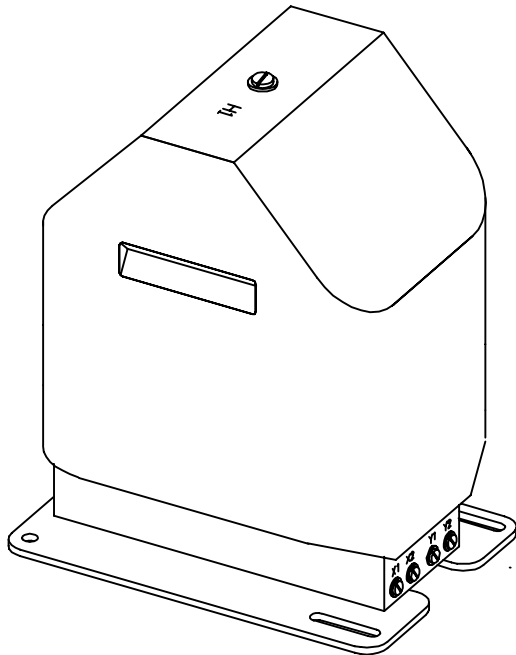
ACCURACY CLASS:
0.3 ZZ/0.3 ZZ

FREQUENCY
60 Hz.

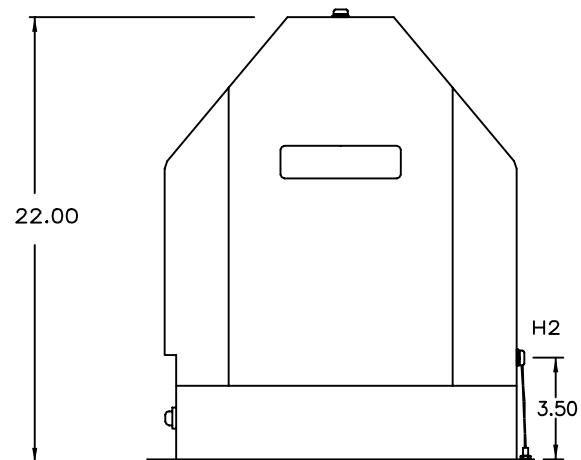
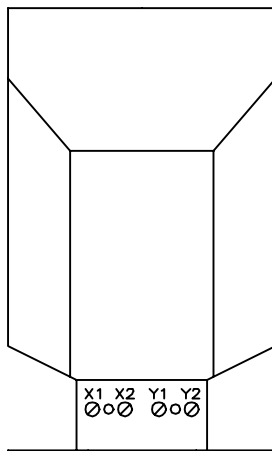
INSULATION CLASS:
34.5 kV, BIL 150kV full wave.

THERMAL RATING:
1500/1500 VA @
30°C ambient.

- Primary terminals are 3/8–16 brass screws with one flatwasher and lockwashers.
- Secondary terminals are 1/4–20 brass screws with one flatwasher and lockwashers. Two terminal covers (Not shown) are provided.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Approximate weight: 490 lbs.



ONE BUSHING



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.

INDOOR VOLTAGE TRANSFORMER

Model PT7A-2-150

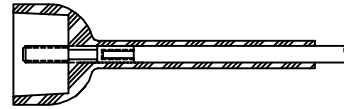
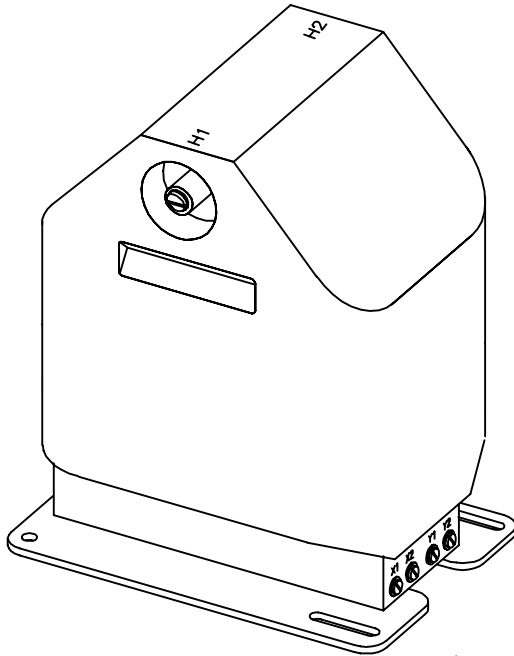
ACCURACY CLASS:
0.3 ZZ/0.3 ZZ

FREQUENCY
60 Hz.

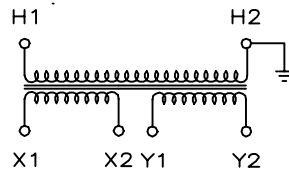
INSULATION CLASS:
34.5 kV, BIL 150kV full wave.

THERMAL RATING:
1500/1500 VA @
30°C ambient.

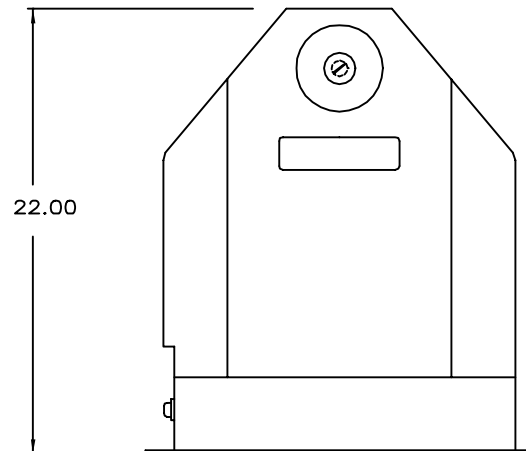
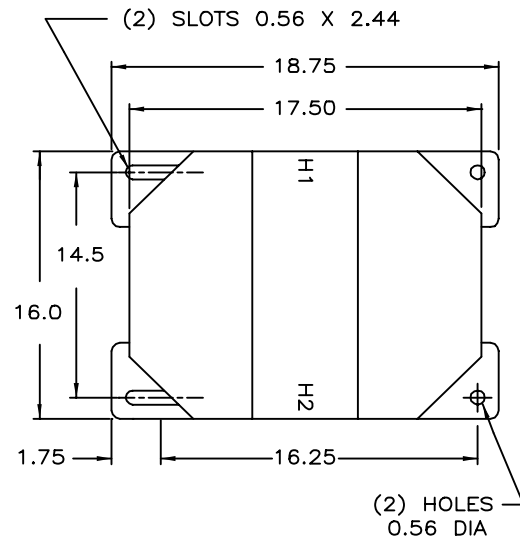
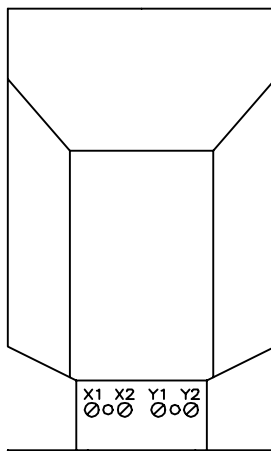
- Primary terminals are 3/8–16 brass screws with one flatwasher and lockwashers.
- Secondary terminals are 1/4–20 brass screws with one flatwasher and lockwashers. Two terminal covers (Not shown) are provided.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Approximate weight: 490 lbs.



Suggested primary terminal kit No. 0882B06446 is available at extra cost.
(Includes 2 each 3/8–16 terminals, terminal boots and 48" of No.6, 15kV lead wire. Order above kit as a separate item.)



TWO BUSHING



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.

INDOOR VOLTAGE TRANSFORMER

Model PT8-1-250

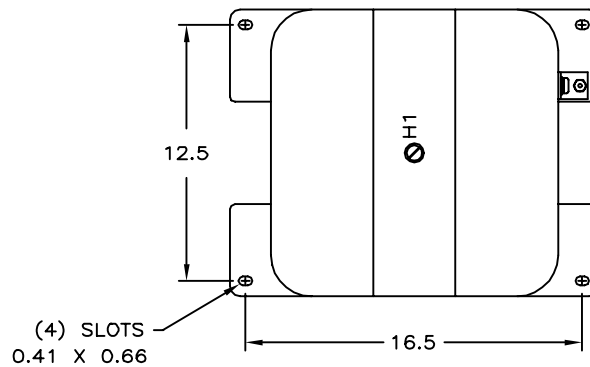
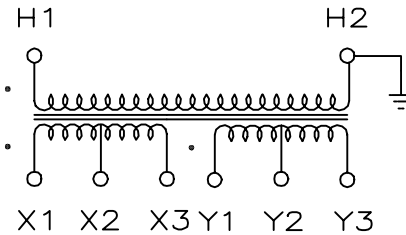
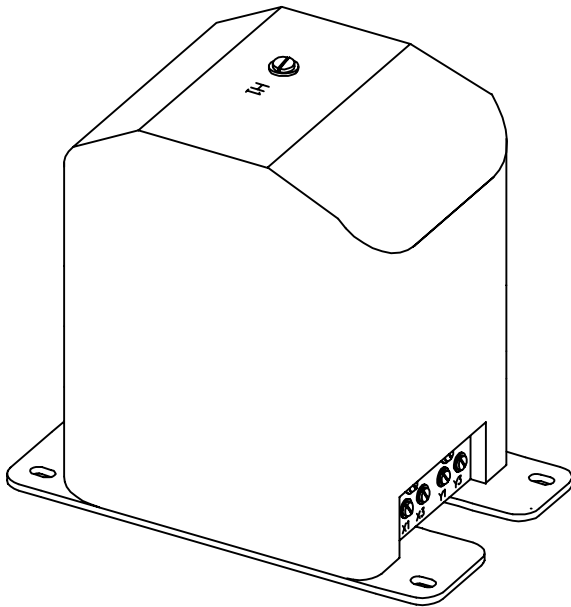
ACCURACY CLASS:
0.3 WXY, 1.2Z on any
winding and any tap.

FREQUENCY
60 Hz.

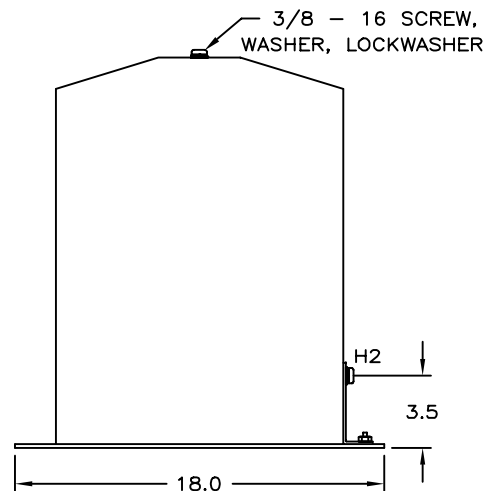
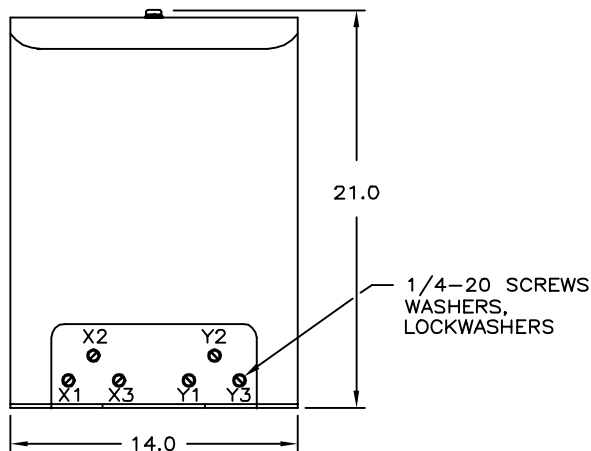
INSULATION CLASS:
34.5 kV, BIL 250kV full wave.

THERMAL RATING:
Combined load of 500VA
from each of X2-X3 and
Y2-Y3 or 750VA from each
X1-X3 and Y1-Y3, all at
30°C ambient.

- Primary terminals are 3/8-16 brass screws with one flatwasher and lockwashers.
- Secondary terminals are 1/4-20 brass screws with one flatwasher and lockwashers. Two terminal covers (Not shown) are provided.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Approximate weight: 290 lbs.



ONE BUSHING



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.