Models PTW5-1-110 & PTW5-2-110

Indoor Voltage Transformers
Medium Voltage

Accuracy Class
0.3 WXMYZ 1.2 ZZ at 100 % rated voltage with 120 V based ANSI burden.
0.3 WXMY, 1.2Z at 58 % rated voltage with 69.3 V based ANSI burden

Maximum System Voltage
15.5 kV, BIL 110 kV.

Thermal Rating
1,500 VA 30 °C. amb.
1,000 VA 55 °C. amb.

Approximate weight 85 lbs. unfused.

Frequency
60 Hz.

Model PTW5 - 2

<table>
<thead>
<tr>
<th>Group</th>
<th>Primary Voltage (V)</th>
<th>Ratio</th>
<th>Secondary Voltage (V)</th>
<th>Unfused</th>
<th>Fuses</th>
<th>Fuse Clips Only (d)</th>
<th>Switchgear</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>*7,200</td>
<td>60:1</td>
<td>120</td>
<td>PTW5-2-110-722</td>
<td>PTW5-2-110-722FF</td>
<td>PTW5-2-110-722CC</td>
<td>PTW5-2-110-722SS</td>
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<tr>
<td>1</td>
<td>8,400</td>
<td>70:1</td>
<td>120</td>
<td>PTW5-2-110-842</td>
<td>PTW5-2-110-842FF</td>
<td>PTW5-2-110-842CC</td>
<td>PTW5-2-110-842SS</td>
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<tr>
<td>2</td>
<td>11,000</td>
<td>100:1</td>
<td>110-50 Hz</td>
<td>PTW5-2-110-113</td>
<td>PTW5-2-110-113FF</td>
<td>PTW5-2-110-113CC</td>
<td>PTW5-2-110-113SS</td>
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<tr>
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<td>*12,000</td>
<td>100:1</td>
<td>120</td>
<td>PTW5-2-110-123</td>
<td>PTW5-2-110-123FF</td>
<td>PTW5-2-110-123CC</td>
<td>PTW5-2-110-123SS</td>
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<tr>
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<td>13,200</td>
<td>110:1</td>
<td>120</td>
<td>PTW5-2-110-1322</td>
<td>PTW5-2-110-1322FF</td>
<td>PTW5-2-110-1322CC</td>
<td>PTW5-2-110-1322SS</td>
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<tr>
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<td>120:1</td>
<td>120</td>
<td>PTW5-2-110-1442</td>
<td>PTW5-2-110-1442FF</td>
<td>PTW5-2-110-1442CC</td>
<td>PTW5-2-110-1442SS</td>
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</table>

Model PTW5 - 1

<table>
<thead>
<tr>
<th>Group</th>
<th>Primary Voltage (V)</th>
<th>Ratio</th>
<th>Secondary Voltage (V)</th>
<th>Rn [c]</th>
<th>Fuses</th>
<th>Fuse Clips Only (d)</th>
<th>Switchgear</th>
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</thead>
<tbody>
<tr>
<td>4A</td>
<td>*7,200</td>
<td>60:1</td>
<td>120</td>
<td>65</td>
<td>PTW5-1-110-722</td>
<td>PTW5-1-110-722CC</td>
<td>PTW5-1-110-722SS</td>
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<tr>
<td>4A</td>
<td>8,400</td>
<td>70:1</td>
<td>120</td>
<td>65</td>
<td>PTW5-1-110-842</td>
<td>PTW5-1-110-842CC</td>
<td>PTW5-1-110-842SS</td>
</tr>
<tr>
<td>4B</td>
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<td>110-50 Hz</td>
<td>65</td>
<td>PTW5-1-110-113</td>
<td>PTW5-1-110-113CC</td>
<td>PTW5-1-110-113SS</td>
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<tr>
<td>4B</td>
<td>*12,000</td>
<td>100:1</td>
<td>120</td>
<td>65</td>
<td>PTW5-1-110-123</td>
<td>PTW5-1-110-123CC</td>
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</tr>
<tr>
<td>4B</td>
<td>*14,400</td>
<td>120:1</td>
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<td>PTW5-1-110-1442</td>
<td>PTW5-1-110-1442CC</td>
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</tr>
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NOTE: All Primary voltages marked with an asterisk (*) are approved for revenue metering in Canada by Industry Canada, Approval No. AE-0451 Rev. 01
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.

Recommended Minimum Spacings

A = Unit to Unit or to Ground = 1.25” minimum.
B = HV to Ground in air = 6.50” 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.

Models PT Models PTW5-1-110 & PTW5-2-110

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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.
The core and coil assembly is vacuum encapsulated in polyurethane resin.
Thermal burden rating is for 120 volt secondaries.
Switch gear style is similar to fused style. No fuse or fuse clip is provide, but inserts for fuse clips are supplied.
A test card is provided with each unit.

Fuse for Model PTG4 Transformer
Rating (kV) Interrupting Amperes (Sym.) Suggested Rating Continuous Amperes Cap Dia. Inches (a) Length Inches Clip Centers Inches
7,200:120 V 15.5 80,000 1.0 E 1.63 13 11.50
4,800:120 V 15.5 80,000 1.0 E 1.63 13 11.50
11,000:120 V 15.5 80,000 0.5 E 1.63 13 11.50
12,000:120 V 15.5 80,000 0.5 E 1.63 13 11.50
13,200:120 V 15.5 80,000 0.5 E 1.63 13 11.50
14,400:120 V 15.5 80,000 0.5 E 1.63 13 11.50
(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 32, item 1 for ferroresonance considerations. Values in table are in ohms.
Note: It is recommended that system line-to-line voltage not exceed the transformer maximum system voltage level.

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GE Grid Solutions

Worldwide Contact Center
Web: www.GEGridSolutions.com/contact
Phone: +44 (0) 1785 250 070
USA and Canada: +1 (0) 800 547 8629
Europe, Middle East and Africa: +34 (0) 94 485 88 00