The JPSXXX-XXX-X series PQ-CT current transformers measure AC line current in circuits up to 600 Vac and nominal currents up to 1200 amps.

They are easy to install with their split-core design. The PQ-CT is ideal for use in High Performance Power Quality Monitoring (IEC 61000-4-30 Class A or S). It may also be used in other power metering applications.

The JPSXXX-XXX-X may be field-installed inside distribution and control equipment such as switchboards and panelboards, or used in equipment designed for MV / LV substations, power quality meters, energy meters, branch circuit meters, PV monitoring, motor quality diagnostics, traction and data center use, etc.

Precautions

- Install in accordance with ANSI/NFPA 70, "National Electrical Code" (NEC). Follow all local electrical codes.
- Only qualified personnel or licensed electricians should install the current transformer (CT). Line voltages of 120 Vac to 600 Vac can be lethal.
- Do not install CTs where they block ventilation openings.
- Do not install CTs in the area of breaker arc venting.
- The current transformer cannot measure direct current (DC), and excessive DC will degrade AC measuring accuracy.
- Electrical codes prohibit installation of CTs in equipment where they exceed 75% of the wiring space of any cross-sectional area.
- The PQ-CT lead wires are considered Class 1 wiring (as defined by the NEC) and must be installed accordingly. They are not suitable for Class 2 wiring methods and should not be connected to Class2 equipment.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not install the CT where it may be exposed to: temperatures below -40°C or above 80°C (-40°F to 176°F), excessive moisture, dust, salt spray, or other contamination.
- The PQ-CT may be damaged if dropped or subjected to impact. This can result in reduced accuracy.

Pre-Installation Checklist

- The CT’s rated current should match or exceed the maximum current of the measured circuit. Ensure that the fuse or circuit breaker’s rating does not exceed the CT’s maximum continuous current rating.
- For highest accuracy, try to separate the CTs installed on different phases by 1.0 inch (25 mm) to minimize magnetic interference.
- It is preferable to install the CT and meter or monitoring device close to each other. However, you may extend the CT wires by 300 feet (100 m) or more by using shielded twisted-pair cabling and by running the CT wires away from high current and line voltage conductors.

Connecting the Current Transformer

WARNING: Make sure that safe and proper working conditions exist prior to installing the CTs. Open/disconnect the circuit from the power distribution system before installing or servicing current transformers to reduce the risk of electric shock.

No special tools are required to install the PQ-CT, JPSXXX-XXX-X series. In order to connect the CTs to the meter correctly, follow these steps:

1) Find the correct direction of the current flow. P1 should face the source of current.

Note: If the CT is mounted backwards, the measured power will be negative.

2) Make sure all contact surfaces are clean. Debris will increase the magnetic gap, decreasing accuracy. Place the CT around the conductor and close the CT.

3) Use cable ties to ensure the PQ-CT does not move from its position around the conductor.
4) Connect the secondary leads to the meter. The secondary current from PQ-CT should flow to the meter through S1.

5) Close PQ-CT after verifying the installation. You will hear a ‘click’ if the CT has been closed properly.

Note: If the Yellow and Brown wires are reversed, the measured power will be negative. Be careful to match the CT to the voltage phases being measured. Make sure the Ø A CT is measuring the current on the Ø A conductor, and the same for phases B and C. Use colored tape or labels to identify the wires.

### Specifications

**JPSXXX-XXX-XX**

<table>
<thead>
<tr>
<th>Model</th>
<th>JPSXXX-XXX-V</th>
<th>JPSXXX-XXX-A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rated Amps</strong></td>
<td></td>
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<tr>
<td>JPS10</td>
<td>5, 15, 20, 30, 50, 70, 100</td>
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<tr>
<td>JPS33</td>
<td>250, 300, 400, 500, 600</td>
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<tr>
<td>JPS52</td>
<td>400, 500, 600, 800, 1000, 1200, 1600</td>
<td>400, 500, 600, 800, 1000, 1200, 1600</td>
</tr>
</tbody>
</table>

**Input Current**
- AC current, sine wave, 50/60Hz (specify)

**Output Voltage**
- 100, 250, 333, 500mV AC

**Output Current**
- -
- 40, 50, 80, 100mA AC

- Insulation Category:
  - CAT IV (service entrance): 600 Vac per IEC 61010-1

- Standard Accuracy (% of reading)
  - IEC Accuracy Class: IEC 61869-2 Class 0.2S or 0.5S
  - US Accuracy Class: IEEE/ANSI C57.13, Class 0.3 or 0.6

- Standard Lead Length: 8 ft (2.4m) 18 AWG (Shielded cable option available)

- Bandwidth: 40Hz to 400Hz standard

- Operating Temperature: -40°C to 80°C

- Altitude: Up to 3000 meters, Pollution Degree 3, Humidity up to 95% (non-condensing)

- Construction: Molded cases 120°C UL recognized plastic

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**Notes:**

- Insulation Category:
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**Wiring Diagram**

**JPSXXX-XXX-V**

**JPSXXX-XXX-A**

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