Introduction
Thank you for purchasing the Hioki CT7044, CT7045, CT7046 AC Flexible Current Sensor. To obtain maximum performance from the device, please read this manual first, and keep it handy for future reference.

Be sure to also read the separate booklet "Current Sensor Operating Precautions" before use.

Use Environment of the Device

Although part of this device is designed to resist the ingress of dust and dripping water, it is not entirely waterproof or dustproof, so avoid electric shock or damage, and do not use it in a wet or dusty environment.

Troubleshooting
If the device seems to be malfunctioning, contact your authorized Hioki distributor or reseller.

Overview
This device measures large currents of up to 6000 A AC. The air core coil makes the sensor unit highly flexible, allowing it to be used for clamping in narrow spaces with crowded wiring. This current sensor has a Hioki PL14 output connector, which is handy for future reference.

Specifications

### General Specifications

<table>
<thead>
<tr>
<th>CT7044</th>
<th>CT7045</th>
<th>CT7046</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating environment</strong></td>
<td>Indoors, pollution degree 2, altitude up to 2000 m (6602 ft.)</td>
<td>Indoors, pollution degree 2, altitude up to 2000 m (6602 ft.)</td>
</tr>
<tr>
<td><strong>Operating temperature and humidity</strong></td>
<td>-25°C to 65°C (+13°F to 149°F)</td>
<td>-25°C to 65°C (+13°F to 149°F)</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>Less than 80% RH</td>
<td>Less than 80% RH</td>
</tr>
<tr>
<td><strong>Storage temperature and humidity</strong></td>
<td>-30°C to 70°C (-22°F to 158°F), 80% RH or less</td>
<td>-30°C to 70°C (-22°F to 158°F), 80% RH or less</td>
</tr>
</tbody>
</table>

### Input Specifications, Output Specifications, and Measurement Specifications

#### Basic specifications

<table>
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<tr>
<th>CT7044</th>
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</thead>
<tbody>
<tr>
<td><strong>Output connector</strong></td>
<td>Hioki PL14</td>
<td>Hioki PL14</td>
</tr>
<tr>
<td><strong>Rated measurement current</strong></td>
<td>6000 A AC</td>
<td>6000 A AC</td>
</tr>
<tr>
<td><strong>Internal ranges</strong></td>
<td>6000 A AC / 6000 A AC</td>
<td>6000 A AC / 6000 A AC</td>
</tr>
<tr>
<td><strong>Maximum rated measurement current</strong></td>
<td>10000 A peak (6000 A range)</td>
<td>10000 A peak (6000 A range)</td>
</tr>
<tr>
<td><strong>RMS value, continuous</strong></td>
<td>8000 V (Measurement category II)</td>
<td>8000 V (Measurement category II)</td>
</tr>
<tr>
<td><strong>Frequency band</strong></td>
<td>10 Hz to 50 kHz (within ±3 dB)</td>
<td>10 Hz to 50 kHz (within ±3 dB)</td>
</tr>
<tr>
<td><strong>Measurable electrical quantities (at rated measurement current)</strong></td>
<td>8 kV</td>
<td>8 kV</td>
</tr>
<tr>
<td><strong>Peak value: 1500 A peak (600 A range)</strong></td>
<td>1500 A peak (600 A range)</td>
<td>1500 A peak (600 A range)</td>
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</table>

#### Accuracy specifications

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</tr>
</thead>
<tbody>
<tr>
<td><strong>(1) Accuracy specifications</strong></td>
<td>f.s. (range): The currently selected range.</td>
<td>f.s. (range): The currently selected range.</td>
</tr>
<tr>
<td><strong>rdg. (reading or displayed value): The value currently being measured and indicated on the measuring instrument.</strong></td>
<td>±1.0% rdg. ±0.2% rdg.</td>
<td>±1.0% rdg. ±0.2% rdg.</td>
</tr>
</tbody>
</table>

#### Conditions of guaranteed accuracy

- Guaranteed accuracy period: 1 year
- Guaranteed accuracy period after adjustment made by Hioki: 1 year

#### Measurement accuracy

- Accuracy guaranteed for temperature and humidity: 23°C±5°C (73°F±9°F), 80% RH or less
- (With no flexible loop stretching, damage, or cross-sectional deformation in shape)

#### Phase accuracy

- Within ±1.0° (at 45 Hz to 66 Hz)

#### Effect of conductor position

- Within ±3.0% (deviation from center)

#### Temperature coefficient

- In the operating temperature range, add 0.05% specified accuracy°C (at temperatures other than 23°C±5°C).

#### Effect of external magnetic field

- 1.25% f.s. or less, 1.5% f.s. or less
- 400 A/m, 50 Hz / 60 Hz

#### Offset voltage

- ±1 mV or less
**Parts Names**

Example: CT7044

- Cable
- Circuit box
- Flexible loop
- Coupling
- Output connector
- Output cable

**Measurement Methods**

**Inspection Before Use**

Verify that the device operates normally to ensure that no damage occurred during storage or shipping. If you find any damage, contact your authorized Hioki distributor or reseller.

<table>
<thead>
<tr>
<th>Check Items</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the flexible loop or cable insulation torn, or is any metal exposed?</td>
<td>Device damage may result in electric shock. Contact your authorized Hioki distributor or reseller.</td>
</tr>
<tr>
<td>Is there a broken connection involving the connector or sensor base?</td>
<td>Broken connections will make proper measurement impossible. Discontinue use and contact your authorized Hioki distributor or reseller.</td>
</tr>
</tbody>
</table>

- Attach the clamp around only one conductor. If you clamp single-phase (2-wire) or three-phase (3-wire) conductors together, the device will not be able to make a measurement.

- Be aware of the following precautions to avoid damage to the device:
  - Do not pull with excessive force.
  - Do not force the flexible loop into a bent position.
  - Do not store while bent.

**1 Connect the output connector to the connected instrument**

1. Align and insert the connector.

**2 Disconnect the flexible loop from the coupling**

1. Rotate the dial until the blue mark is in the UNLOCK position.

2. Remove

**3 Clamp the conductor**

Clamp only the conductor you wish to measure with the current direction indicator pointing toward the load side.

(To ensure that the measured current and sensor output have the same phase.)

**4 Connect the flexible loop to the coupling**

1. Insert

2. Rotate the dial until the blue mark is in the LOCK position.

**5 Once measurement is complete, remove the device from the conductor and disconnect it from the instrument.**

When disconnecting the device from the instrument, grip the tip of the output connector (the part with the arrow) and pull the connector straight out.

Pulling forcibly on the base of the connector may damage the device.

Memo