Consistent, high-precision current testing across a wide temperature range

- **High-accuracy measurement with a clamp-type design**
- **Compact form enables single-handed operation, even with tangled wiring**
- **Excellent heat resistance facilitates measurement inside automobile engine compartments**
- **Use as a replacement for legacy HIOKI models**

**UNIVERSAL CLAMP ON CT 9277/9278:**
- Improved accuracy (9277/9278 basic accuracy: ±0.5% rdg.)
- Improved frequency characteristics (9277/9278 frequency characteristics: DC to 100kHz)

**GOOD DESIGN AWARD 2014**

- **Broad temperature range**
  - Operating temperature range: -40°C to 85°C
- **Easy-to-use**
  - Clamp type: No need to cut wires
- **High accuracy**
  - Basic amplitude accuracy: ±0.3% rdg.

**CT6841**
- 20A AC/DC
- DC to 1MHz

**CT6843**
- 200A AC/DC
- DC to 500kHz

Compatible with the Power Analyzer 3390!
Compact, high-accuracy clamp current sensor

Operating temperature range -40°C to 85°C

Ideal for use in environmental testing

The CT6841 and CT6843 feature broad temperature characteristics and an operating temperature range of -40°C to 85°C, allowing them to be used in operational evaluations of devices and inside equipment that are subject to extreme temperature changes. The current sensors’ tough performance helps ensure you can make the measurements you need.

Single-handed operation, even in confined spaces

The CT6841/CT6843 feature a smaller sensor head and grip than previous models, making single-handed operation easy. Each sensor also features a robust locking mechanism so that external shocks won’t knock it off the wire being measured.

High accuracy

Reliable track record and high accuracy of ±0.3% rdg.

Dramatic improvements

Compared to the legacy UNIVERSAL CLAMP ON CT 9277/9278, the CT6841/CT6843 deliver dramatically improved characteristics.

Zero-point stability made possible by flux gate technology*

*Flux gate: An AC/DC current detection method. Compared to sensors that use the Hall element, flux gate sensors exhibit less offset drift.
Applications

1. Measuring the charge and discharge efficiency of EV/HEV batteries
   In some cases, it is not possible to use high-accuracy pass-through sensors to evaluate EVs and HEVs since their wiring cannot be easily disconnected. The CT6841/CT6843's clamp-type design simplifies high-accuracy measurement. The resin casing of the clamp is more resistant to deformation from heat than that used in legacy products, allowing you to take measurements inside engine compartments without issue.

2. Evaluating inverter and power conditioner efficiency
   A current sensor's amplitude accuracy and phase accuracy are both important considerations when you need to accurately measure AC power. Phase accuracy has a particularly large effect on power values when the power factor is low. The CT6841/CT6843 help ensure accurate power measurement by delivering high phase accuracy.

3. Evaluating fuel cells, contactless power supply circuitry, and other next generation devices
   Offset drift* is characterized by minute variations, but those changes can add up over time, resulting in large errors during long-term measurement. The CT6841/CT6843 are designed to minimize offset drift, allowing them to be used in long-term evaluation of fuel cells. Thanks to their broad frequency characteristics, the sensors can also measure DC ripple current. Additionally, the current sensors can be used to measure power transmission efficiency in contactless power supply circuitry thanks to their DC to 1 MHz frequency band.

Connecting the CT6841/CT6843 to supported measuring instruments

- When connecting to the POWER ANALYZER 3390:
  - 3390
  - CT6841 / CT6843

- When connecting to the POWER HiTESTER 3193-10:
  - 3193-10
  - AC/DC CLAMP INPUT UNIT 9602
  - CT6841 / CT6843

- When connecting to the POWER METER PW3337/PW3336 series:
  - PW3337 series / PW3336 series
  - CONNECTION CORD L9217
  - SENSOR UNIT CT9555, CT9556
  - CT6841 / CT6843

- When connecting to the AC/DC POWER HiTESTER 3334-10:
  - 3334-10
  - CT6841 / CT6843

- When connecting to the MEMORY HiCORDER MR8847 series:
  - MR8847 series
  - CURRENT UNIT 8971
  - CONVERSION CABLE 9318
  - CT6841 / CT6843

- When connecting to the MEMORY HiCORDER 8860-50/8861-50:
  - 8860-50 / 8861-50
  - F/V UNIT 8940
  - CONVERSION CABLE 9318
  - CONVERSION CABLE 9705
  - CT6841 / CT6843

- When connecting to a measuring instrument such as an oscilloscope or MEMORY HiCORDER (via a BNC terminal):
  - Oscilloscope, MEMORY HiCORDER, etc.
  - CONNECTION CORD L9217
  - SENSOR UNIT CT9555, CT9556
  - CT6841 / CT6843

*Offset drift: A phenomenon that occurs when measuring DC current with a clamp-type current sensor. The zero point gradually shifts relative to its position at the start of measurement due to variations in the temperature of the sensor's internal circuitry.

See below for more information about compatibility with equipment other than power meters, for example oscilloscopes and Memory HiCorders.
### Specifications

<table>
<thead>
<tr>
<th></th>
<th>CT6841</th>
<th>CT6843</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated primary current</td>
<td>20 A AC/DC</td>
<td>200 A AC/DC</td>
</tr>
<tr>
<td>Maximum input current*</td>
<td>40 A rms (57 A peak)</td>
<td>400 A rms (570 A peak)</td>
</tr>
<tr>
<td>Frequency characteristics*</td>
<td>DC to 1 MHz</td>
<td>DC to 500kHz</td>
</tr>
<tr>
<td>Measurable conductor diameter</td>
<td>20 mm (0.79&quot;) or less</td>
<td></td>
</tr>
<tr>
<td>Output voltage</td>
<td>0.1 V/A</td>
<td>0.01 V/A</td>
</tr>
<tr>
<td>Basic accuracy (DC)&lt;f ≤ 100Hz&gt;</td>
<td>±0.3% rdg. ±0.01% f.s.</td>
<td>±0.3% rdg. ±0.02% f.s.</td>
</tr>
<tr>
<td>Basic accuracy (DC)**</td>
<td>Amplitude accuracy : ±0.3% rdg. ±0.05% f.s.</td>
<td>Amplitude accuracy : ±0.3% rdg. ±0.02% f.s.</td>
</tr>
<tr>
<td>Offset adjustment</td>
<td>In DC measurement, adjust offset with a dial</td>
<td></td>
</tr>
<tr>
<td>Temperature and humidity range of guaranteed accuracy</td>
<td>-40°C to 0°C and 40°C to 85°C (-40 to 32°F and 104 to 185°F)</td>
<td>Amplitude sensitivity : ±0.01%rdg./° or less, Offset voltage : ±0.005%f.s./°C or less</td>
</tr>
<tr>
<td>Operating temperature and humidity</td>
<td>≤ 85°C (-185°F), 80% rh or less</td>
<td></td>
</tr>
<tr>
<td>Storage temperature and humidity</td>
<td>≤ 85°C (-185°F), 80% rh or less (non-condensation)</td>
<td></td>
</tr>
<tr>
<td>Effect of conductor position</td>
<td>±0.1%rdg. or less</td>
<td></td>
</tr>
<tr>
<td>Effect of external electromagnetic field</td>
<td>50 mA or less (Scaled value, in a DC or 60 Hz magnetic field of 400 A/m)</td>
<td>30 mA or less (Scaled value, after 200 A DC input)</td>
</tr>
<tr>
<td>Magnetic susceptibility</td>
<td>10 mA or less (Scaled value, after 20 A DC input)</td>
<td>30 mA or less (Scaled value, after 200 A DC input)</td>
</tr>
<tr>
<td>Effect of common-mode voltage</td>
<td>0.05%f.s. or less (1000 V rms, DC to 100 Hz)</td>
<td></td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>±11 to ±15 V</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>5 VA or less</td>
<td>6 VA or less</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Approx. 153W × 67H × 25D mm (Approx. 6.02&quot;W × 2.64&quot;H × 0.98&quot;D)</td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>Approx. 350 g (12.3 oz), 370 g (13.1 oz)</td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td>Instruction manual x1, Mark band x6, Carrying Case x1</td>
<td></td>
</tr>
</tbody>
</table>

#### Products Lineup

**Model : AC/DC CURRENT PROBE CT6841**

<table>
<thead>
<tr>
<th>Model No. (Order Code) (Note)</th>
<th>CT6841</th>
<th>CT6841-05</th>
</tr>
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<tbody>
<tr>
<td>(20 A AC/DC)</td>
<td></td>
<td>(20 A AC/DC, 12 pin terminal)</td>
</tr>
</tbody>
</table>

**Model : AC/DC CURRENT PROBE CT6843**

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<th>CT6843-05</th>
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<tr>
<td>(200 A AC/DC)</td>
<td></td>
<td>(200 A AC/DC, 12 pin terminal)</td>
</tr>
</tbody>
</table>

#### Options

- **Options A**
  - SENSOR UNIT CT9554
  - Waveform/RMS output
  - 12-pin terminal
  - HIOKI ME15W (12 pin) connector
  - To connect to the F/V Unit 8940 or Current Unit 8971

- **Options B**
  - CONVERSION CABLE
  - ME15W (12 pin) connector
  - CT9900 (20 A AC/DC)

- **Options C**
  - EXTENSION CABLE CT9902
  - HIOKI ME15W (12 pin) connector
  - (12 pin) - HIOKI ME15W (12 pin)

- **Options D**
  - CONNECTION CORD L9217
  - HIOKI ME15W (12 pin)

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