

# HIOKI

AC/DC CURRENT PROBE CT6833, CT6834  
AC/DC CURRENT PROBE CT6830, CT6831  
AC/DC CURRENT SENSOR CT7812, CT7822

**NEW**



## Unrivalled sensing technology

HIOKI's new current sensor features a small size while delivering precise and reliable performance across a wide temperature range. Perfect for automotive testing, it simplifies installation in tight spaces, enhances measurement accuracy, and improves testing efficiency. Experience innovation that saves time and increases accuracy.



CT6833

CT6834

**200 A (RMS)** **500 A (RMS)**

Measurement accuracy  $\pm 0.07$  % of reading  
Frequency range DC to 50 kHz



CT6830

CT6831

CT7812

CT7822

**2 A (RMS)** **20 A (RMS)**

Measurement accuracy  $\pm 0.3$  % of reading  
Frequency range DC to 100 kHz

**CE**



# Half the size, twice the convenience

AC/DC CURRENT PROBE

## CT6833, CT6834

### Current probes for automotive certification testing

With its compact design, these sensors easily connect to cables in tight motor compartments, significantly reducing setup-time and enhancing overall efficiency.

- Current rating: 200 A (CT6833), 500 A (CT6834)
- Frequency range: DC to 50 kHz
- Accuracy:  $\pm 0.07\%$  of reading
- Operating Temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

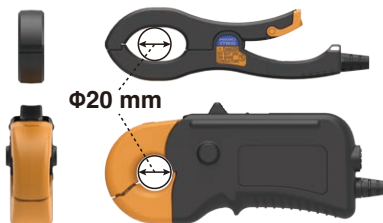


Maximum conductor diameter  $\Phi 20\text{ mm}$



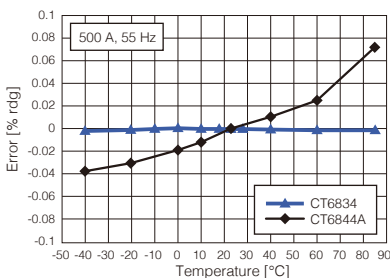
Easy lock mechanism with a single finger

50% smaller than the previous model

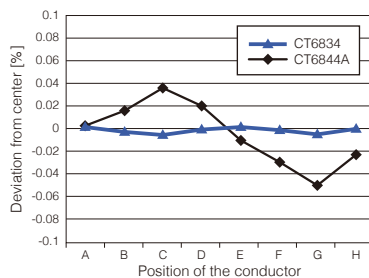


### Advanced fluxgate technology that redefines measurement performance

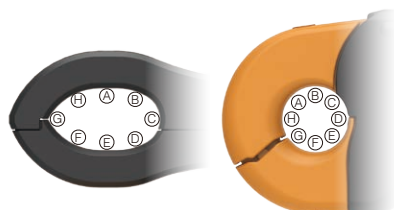
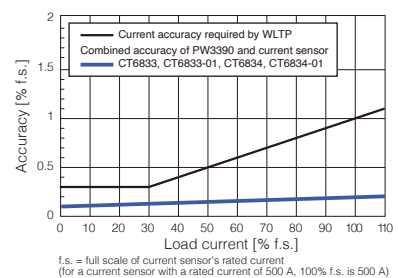
#### Superior temperature stability



#### High reproducibility regardless of conductor position



#### Exceptional accuracy for WLTP across all current ranges



# Precision fits in your hand

AC/DC CURRENT PROBE

**CT6830, CT6831**

AC/DC CURRENT SENSOR

**CT7812, CT7822**



## The future standard in a compact size.

The CT6830, CT6831, CT7812, and CT7822 were developed with the concept of "easily clamp wires in tight spaces." As the world's smallest zero-flux AC/DC current probes and sensors, these offer high accuracy with a lightweight design.

- Current rating: **2 A** (CT6830, CT7812), **20 A** (CT6831, CT7822)
- Frequency range: **DC to 100 kHz**
- Accuracy: **±0.3%** of reading
- Operating Temperature: **-40°C to +85°C**



Maximum conductor diameter  
**Φ5 mm**

For precision power analyzer

CT6830

CT6831



For multichannel data logger

CT7812

CT7822



## Application

### Pinpoint ECU issues in completed-vehicle testing

The compact CT7812 (2 A) and CT7822 (20 A) sensors access intricate wiring with ease and ensure stable, high-accuracy current measurements. Combined with the LR8450 Data Logger, they record CAN signals and current data simultaneously, enabling quick issue identification.



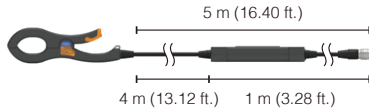
# High-accuracy clamp current sensors

|  | CT6834, CT6834-01   | CT6833, CT6833-01   | CT6831, CT7822  | CT6830, CT7812  |
|--|---|---|---|---|
| Appearance   |   |   |   |   |
| Rated current  | 500 A AC/DC   | 200 A AC/DC   | 20 A AC/DC  | 2 A AC/DC   |
| Frequency band   | DC to 50 kHz  | DC to 50 kHz  | DC to 100 kHz   | DC to 100 kHz   |
| Diameter of measurable conductors  | Max. φ 20 mm (0.79 in.)   | Max. φ 20 mm (0.79 in.)   | Max. φ 5 mm (0.20 in.)  | Max. φ 5 mm (0.20 in.)  |
| Accuracy<br>Sensor only (amplitude) ±(% of reading + % of full scale)<br>Full scale is the rated current of sensor | DC : ±0.07% + 0.01%   | DC : ±0.07% + 0.01%   | DC : ±0.3% + 0.10%  | DC : ±0.3% + 0.10%  |
|  | DC < f < 16 Hz : ±0.15% + 0.01%   | DC < f < 16 Hz : ±0.15% + 0.01%   | DC < f ≤ 66 Hz : ±0.3% + 0.01% (CT6831)<br>±0.3% + 0.05% (CT7822)   | DC < f ≤ 66 Hz : ±0.3% + 0.05%  |
|  | 16 Hz ≤ f ≤ 66 Hz : ±0.07% + 0.007%   | 16 Hz ≤ f ≤ 66 Hz : ±0.07% + 0.007%   | 66 Hz < f ≤ 500 Hz : ±0.3% + 0.02% (CT6831)<br>±0.3% + 0.05% (CT7822)   | 66 Hz < f ≤ 500 Hz : ±0.3% + 0.05%  |
|  | 66 Hz < f ≤ 100 Hz : ±0.07% + 0.007%  | 66 Hz < f ≤ 100 Hz : ±0.07% + 0.007%  | 500 Hz < f ≤ 1 kHz : ±0.5% + 0.05%  | 500 Hz < f ≤ 1 kHz : ±0.5% + 0.05%  |
|  | 100 Hz < f ≤ 500 Hz : ±0.1% + 0.01%   | 100 Hz < f ≤ 500 Hz : ±0.1% + 0.01%   | 1 kHz < f ≤ 5 kHz : ±1.0% + 0.10%   | 1 kHz < f ≤ 5 kHz : ±1.0% + 0.10%   |
|  | 500 Hz < f ≤ 1 kHz : ±0.25% + 0.02%   | 500 Hz < f ≤ 1 kHz : ±0.25% + 0.02%   | 5 kHz < f ≤ 10 kHz : ±5.0% + 0.10%  | 5 kHz < f ≤ 10 kHz : ±5.0% + 0.10%  |
| 1 kHz < f ≤ 20 kHz : ±(0.25 × f)% + 0.02%  | 1 kHz < f ≤ 20 kHz : ±(0.25 × f)% + 0.02%   | 10 kHz < f ≤ 100 kHz : ±30% + 0.02%   | 10 kHz < f ≤ 100 kHz : ±30% + 0.02%   |   |
| Operating temperature  | Sensor: -40°C to 85°C (-40°F to 185°F), 80% RH or less<br>Relay box: -25°C to 50°C (-77°F to 122°F), 80% RH or less                                       | Sensor: -40°C to 85°C (-40°F to 185°F), 80% RH or less<br>Relay box: -25°C to 50°C (-77°F to 122°F), 80% RH or less                                       | Sensor: -40°C to 85°C (-40°F to 185°F), 80% RH or less<br>Relay box: -25°C to 50°C (-77°F to 122°F), 80% RH or less   | Sensor: -40°C to 85°C (-40°F to 185°F), 80% RH or less<br>Relay box: -25°C to 50°C (-77°F to 122°F), 80% RH or less   |
| Dimensions   | Sensor: approx. 149W × 46H × 16.5D mm (approx. 5.87W × 1.81H × 0.65D in.)<br>Relay box: approx. 126W × 57H × 20.5D mm (approx. 4.96W × 2.24H × 0.81D in.) | Sensor: approx. 149W × 46H × 16.5D mm (approx. 5.87W × 1.81H × 0.65D in.)<br>Relay box: approx. 126W × 57H × 20.5D mm (approx. 4.96W × 2.24H × 0.81D in.) | Sensor: approx. 76.5W × 23.4H × 14.2D mm (approx. 3.00W × 0.92H × 0.56D in.)<br>Relay box: approx. 80W × 20H × 26.5D mm (approx. 3.15W × 0.79H × 1.04D in.) | Sensor: approx. 76.5W × 23.4H × 14.2D mm (approx. 3.00W × 0.92H × 0.56D in.)<br>Relay box: approx. 80W × 20H × 26.5D mm (approx. 3.15W × 0.79H × 1.04D in.) |
| Connector type   | HIOKI ME15W   | HIOKI ME15W   | CT6831: HIOKI ME15W<br>CT7822: HIOKI PL14   | CT6830: HIOKI ME15W<br>CT7812: HIOKI PL14   |
| Cable length   | CT6834: approx. 5 m (16.40 ft.) including relay box<br>CT6834-01: approx. 10 m (32.81 ft.) including relay box  | CT6833: approx. 5 m (16.40 ft.) including relay box<br>CT6833-01: approx. 10 m (32.81 ft.) including relay box  | Between sensor and relay box: approx. 4 m (13.12 ft.)<br>Between relay box and output connector: approx. 0.2 m (0.66 ft.)                                   | Between sensor and relay box: approx. 4 m (13.12 ft.)<br>Between relay box and output connector: approx. 0.2 m (0.66 ft.)                                   |
| Weight   | CT6834: approx. 500 g (17.64 oz.)<br>CT6834-01: approx. 710 g (25.05 oz.)   | CT6833: approx. 500 g (17.64 oz.)<br>CT6833-01: approx. 710 g (25.05 oz.)   | CT6831: approx. 160 g (5.64 oz.)<br>CT7822: approx. 140 g (4.94 oz.)  | CT6830: approx. 160 g (5.64 oz.)<br>CT7812: approx. 140 g (4.94 oz.)  |
| Derating properties  |   |   |   |   |

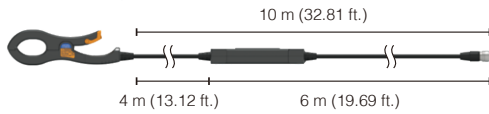
Custom cable lengths are also available. Please inquire with your Hioki distributor.

## Cable lengths

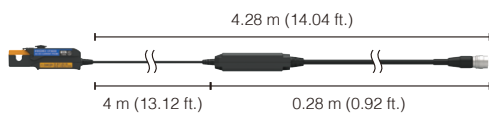
### CT6833, CT6834



### CT6833-01, CT6834-01



### CT6830, CT6831, CT7812, CT7822



## Options

| CT6830, CT6831, CT6833, CT6834, CT6833-01, CT6834-01 |        |                          |       |
|--|--------|--------------------------|-------|
| POWER ANALYZER                                       | PW8001 | CURRENT UNIT             | U8977 |
| POWER ANALYZER                                       | PW6001 | POWER MEASUREMENT MODULE | M7103 |
| POWER ANALYZER                                       | PW3390 |                          |       |



## External power supplies and connection cords

|  |  |  |   |   |
|--|--|--|---|---|
|  |  |  |   |   |
| <b>Sensor Unit CT9555</b><br>Power supply for current sensor (1ch, with waveform output) | <b>Sensor Unit CT9557</b><br>Power supply for current sensor (4ch, with additive function, waveform/RMS output. Waveform and RMS outputs can be used simultaneously) | <b>Connection Cord L9217</b><br>BNC with insulation on both ends of the cord, 1.6 m (5.25 ft.) | <b>Connection Cord 9165</b><br>BNC with metal on both ends of the cord, used for metallic BNC terminals, 1.5 m (4.92 ft.) | <b>Extension cable CT9902</b><br>HIOKI ME15W (12 pin) - HIOKI ME15W (12 pin) connector, 5 m (16.40 ft.)<br>*Connects up to 2 cables |

| CT7812, CT7822          |        |
|-------------------------|--------|
| CURRENT MODULE          | U8556  |
| WIRELESS CURRENT MODULE | LR8536 |



Note: company names and product names appearing in this brochure are trademarks or registered trademarks of various companies.

# HIOKI

HIOKI E. E. CORPORATION

HEADQUARTERS  
81 Koizumi,  
Ueda, Nagano 386-1192 Japan  
<https://www.hioki.com/>



Scan for all regional contact information

DISTRIBUTED BY