

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

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

Measurement accuracy: +0.07 % of reading
Frequency range: DC to 50 kHz



CT6830

CT6831

CT7812

CT7822

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

Measurement accuracy: +0.3 % of reading
Frequency range: DC to 100 kHz



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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°C to $+85^{\circ}\text{C}$

50% smaller than the previous model



Ø20 mm

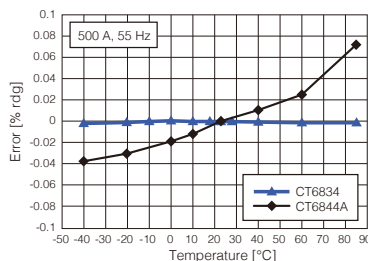


Easy lock mechanism with a single finger

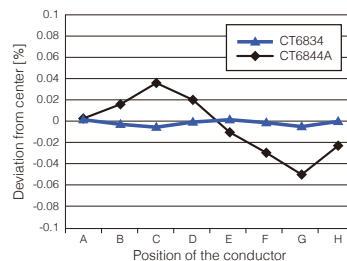
Maximum conductor diameter
Ø20 mm

Advanced fluxgate technology that redefines measurement performance

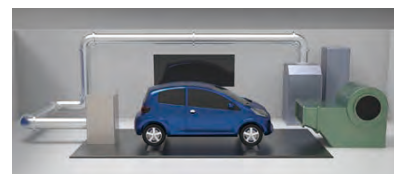
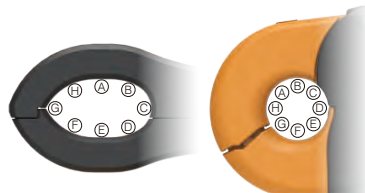
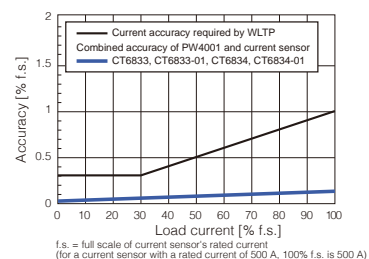
Superior temperature stability



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





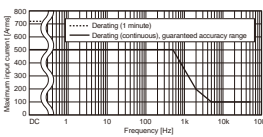
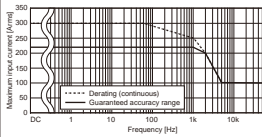
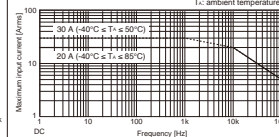
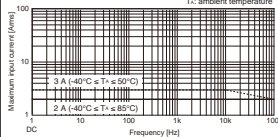


Application

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.

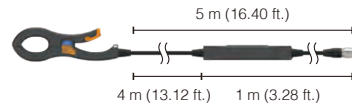
High-accuracy clamp current sensors

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

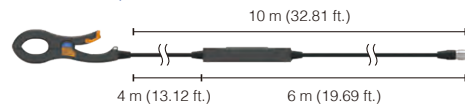
Custom cable lengths are also available. Please inquire with your HioKI distributor.

Cable lengths

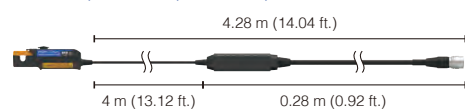
CT6833, CT6834



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 | PW4001 | POWER MEASUREMENT MODULE | M7103 |
| POWER ANALYZER | PW6001 | | |
| POWER ANALYZER | PW3390 | | |



Connector type
HIOKI ME15W
(12-pin terminal)

External power supplies and connection cords



Sensor Unit CT9555
Power supply for current sensor (1ch, with waveform output)



Sensor Unit CT9557
Power supply for current sensor (4ch, with additive function, waveform/RMS output. Waveform and RMS outputs can be used simultaneously)



Connection Cord L9217
BNC with insulation on both ends of the cord, 1.6 m (5.25 ft.)



Connection Cord 9165
BNC with metal on both ends of the cord, used for metallic BNC terminals, 1.5 m (4.92 ft.)



Extension cable CT9902
HIOKI ME15W (12 pin) - HIOKI ME15W (12 pin) connector, 5 m (16.40 ft.)
*Connects up to 2 cables

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



Connector type
HIOKI PL14

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