

# 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:  $\pm 0.07\%$  of reading  
Frequency range: DC to 50 kHz



CT6830

CT6831

CT7812

CT7822

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

Measurement accuracy:  $\pm 0.3\%$  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:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

50% smaller than the previous model



$\Phi 20\text{ mm}$

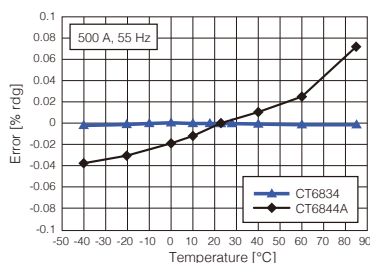


Easy lock mechanism with a single finger

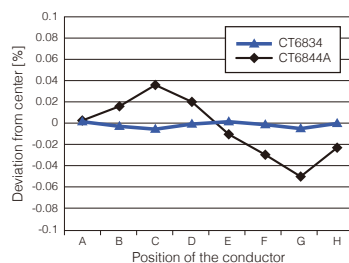
Maximum conductor diameter  $\Phi 20\text{ mm}$

### Advanced fluxgate technology that redefines measurement performance

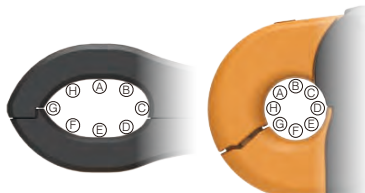
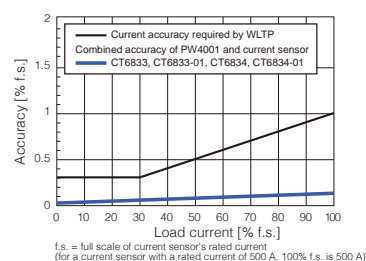
#### Superior temperature stability



#### 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





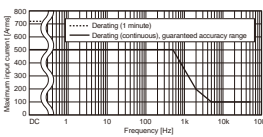
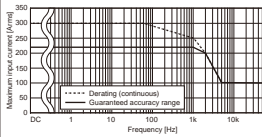
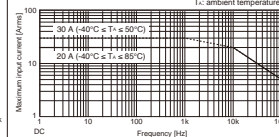
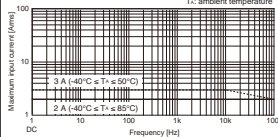


## Application

### 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.

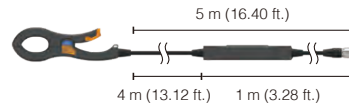
# High-accuracy clamp current sensors

	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. $\phi$ 20 mm (0.79 in.)	Max. $\phi$ 20 mm (0.79 in.)	Max. $\phi$ 5 mm (0.20 in.)	Max. $\phi$ 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	CT6830: 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				

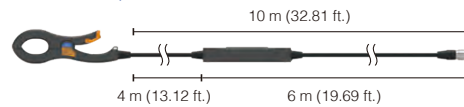
Custom cable lengths are also available. Please inquire with your HioKI distributor.

## Cable lengths

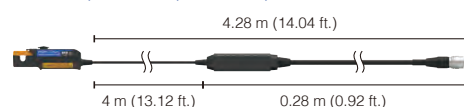
### CT6833, CT6834



### 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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