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Product

CT6847AAC/DC Current Clamp

Headline

AC/DC High-accuracy Current Clamp, 2000 A / 70 kHz

Short Description

AC/DC current clamp using advanced fluxgate technology, 2000 A rated current, basic accuracy $\pm 0.15\%$ rdg., wide temperature range of $-40\text{ }^{\circ}\text{C}$ to $85\text{ }^{\circ}\text{C}$, bandwidth from DC to 70 kHz, maximum conductor diameter 50 mm, cable length 3 m

Banner Specs

- DC currents up to 2000 A, AC current up to 1400 Arms
- Frequency Bandwidth DC to 70 kHz
- Basic accuracy: $\pm 0.15\%$ rdg.
- Operating temperature: $-40\text{ }^{\circ}\text{C}$ to $85\text{ }^{\circ}\text{C}$
- Output voltage ratio 1 mV/A

Applications

- WLTP testing (Worldwide harmonized Light vehicles Test Procedure) on electric vehicles such as high-performance EVs, EV trucks, and other heavy-duty electrified applications.
- Design validation of high-power electric powertrains, including electric construction machinery and electric aircraft
- Current measurements for high-power UPS systems and power conditioners

Product Description

The CT6847A AC/DC Current Clamp combines the flexibility of a clamp-style sensor with high-precision measurement, achieving a basic accuracy of $\pm 0.15\%$ rdg. This allows for easy, non-intrusive current measurement without breaking the circuit while maintaining the accuracy needed for precise power analysis in demanding applications. Utilizing advanced fluxgate technology, it ensures outstanding stability and accuracy in both AC and DC current measurements. With a maximum current rating of 1000 ADC and 1400 Arms and a wide frequency bandwidth from DC to 70 kHz, it enables accurate detection of rapid current fluctuations. This capability makes it suitable for applications with demanding measurement requirements, such as automotive and power electronics industries.

The current clamp delivers reliable performance across a wide temperature range of $-40\text{ }^{\circ}\text{C}$ to $85\text{ }^{\circ}\text{C}$, ensuring stability even in demanding environments such as engine compartments and outdoor testing locations. It is well-suited for evaluating the current consumption of automotive electrical components, including air compressors and power steering systems.

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Additionally, its high-accuracy clamp design allows for efficient on-site assessment of IGBT inverters (Insulated Gate Bipolar Transistors) and motor performance. Technicians can use it to conduct precise efficiency evaluations and current measurements, enabling them to quickly identify anomalies or performance degradation, ultimately supporting effective maintenance and diagnostics.

Phase shift correction functions of HIOKI Power Analyzers are supported, including the automatic correction feature of the PW8001 Power Analyzer. By integrating these features, it ensures accurate power analysis in dynamic and high-frequency applications, minimizing measurement errors and enabling higher precision in power evaluation.

Direct connection to HIOKI Power Analyzers and Memory Recorders is possible via the ME15W connector, which also supplies power to the CT6847A. Additionally, when combined with a HIOKI sensor unit (CT9555, CT9556, CT9557), it can be used with oscilloscopes and other data acquisition (DAQ) systems, providing a voltage output ratio of 1 mV/A. Furthermore, its robust construction, 50 mm core diameter, and 3-meter cable length allow for flexible installation in various test environments.

The CT6847A is an essential tool for high-precision current measurement, including WLTP testing (Worldwide harmonized Light vehicles Test Procedure). With a durable design, precise fluxgate technology, and adaptability to various operating environments, it provides reliable measurement performance across both laboratory and field applications.

What's in the box

- CT6847A AC/DC Current Clamp
- Carrying Case
- Markup bands ×6
- Instruction Manual

Related Products

- PW8001 8-ch Power Analyzer
- PW40014-ch Power Analyzer
- MR6000 Memory recorder
- U8977 3-ch Current Unit
- LR8101 Data Logger
- LR8102 Data Logger
- M7103 Power Measurement Module
- CT9555 Sensor Unit (1 ch)
- CT9556 Sensor Unit (1 ch, wave / rms)
- CT9557 Sensor Unit (4 ch)
- CT9902 Extension Cable
- CT6833 (200 A) AC/DC Current Clamp
- CT6834 (500 A) AC/DC Current Clamp
- CT6841A (20 A) AC/DC Current Clamp
- CT6843A (200 A) AC/DC Current Clamp
- CT6844A (500 A) AC/DC Current Clamp
- CT6845A (500 A) AC/DC Current Clamp

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- CT6846A (1000 A) AC/DC Current Clamp
- CT6830 (2 A) AC/DC Current Probe
- CT6831 (20 A) AC/DC Current Probe

Version	Date	Author	Approved	Document changes
1.0	16.04.2026	VL	VL	First Release
1.1	28.04.2026	VL	VL	Added clamp to "What's in the box"