HIOKI

HIGH ACCURACY / WIDEBAND
CURRENT SENSOR Series

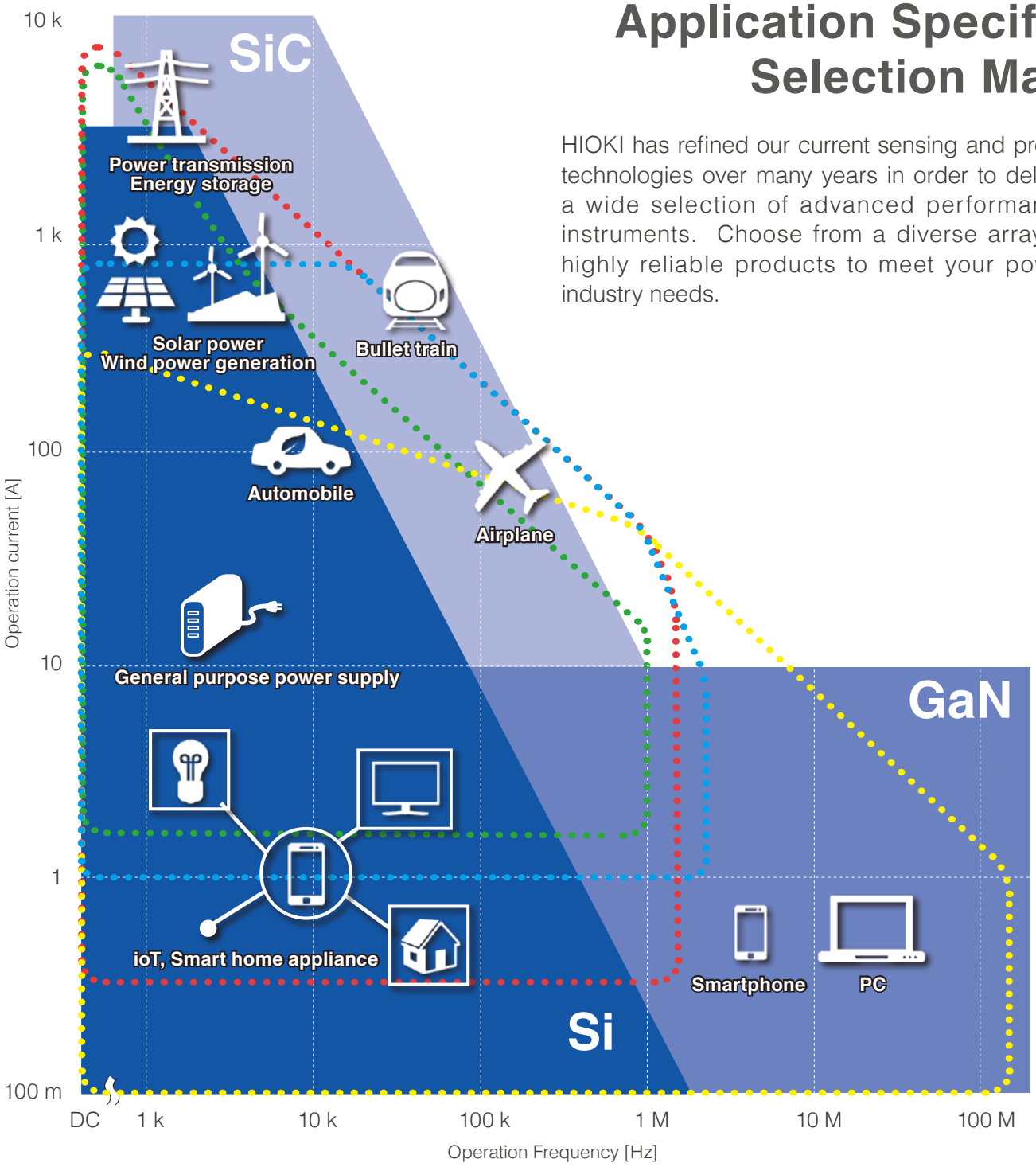
High Accuracy, Wideband Hioki Current Sensor Series

Optimize the Performance of Your a Power Analyzer,
Memory HiCorder, or Oscilloscope

CE

Application Specific Selection Map

HIOKI has refined our current sensing and probe technologies over many years in order to deliver a wide selection of advanced performance instruments. Choose from a diverse array of highly reliable products to meet your power industry needs.



* The dotted lines are an approximation.
* In the case of the high accuracy pull-through types and high accuracy clamp types, use of the aggregation function of the CT9557 Sensor Unit for meeting the operating current and frequency ranges above is included.

High Accuracy Pass-Through Type
Application 1: For development of inverters for EV/HEV/FCV, bullet trains, or airplanes
Application 2: Conversion efficiency evaluation of PV power conditioners

Ultra-High Accuracy Pass-Through Type
Application 1: High-precision power measurement for SiC or GaN inverters of with high switching frequencies
Application 2: Loss evaluation of transformers or reactors

High Accuracy Clamp-type
Application 1: Evaluation of WLTC and automotive new fuel economy (electricity cost) standards
Application 2: Measuring when a wire that cannot be cut

Wideband Clamp-type
Application 1: Current waveform measurement of control signal lines for automobiles and industrial robots
Application 2: Measurement of standby and leakage current for wireless or medical devices

Current Sensors

Current Sensor Types	External appearance	Model	Rating	Frequency characteristics	Basic accuracy (Amplitude)	Basic accuracy (Phase)	Operating temperature range	Measurable conductor diameter
Ultra-High Accuracy Pass-Through	 NEW	CT6904	500 A	DC to 4 MHz	±0.02%rdg. ±0.007%f.s.	Within ±0.08°	-10°C to 50°C (14°F to 122°F)	ϕ 32 mm (1.26 in)
	 NEW	CT6904-60	800 A	DC to 4 MHz	±0.025%rdg. ±0.009%f.s.	Within ±0.08°	-10°C to 50°C (14°F to 122°F)	ϕ 32 mm (1.26 in)
High Accuracy Pass-Through		CT6862-05	50 A	DC to 1 MHz	±0.05% rdg. ±0.01% f.s.	Within ±0.2°	-30°C to 85°C (-22°F to 185°F)	ϕ 24 mm (0.94 in)
		CT6863-05	200 A	DC to 500 kHz	±0.05% rdg. ±0.01% f.s.	Within ±0.2°	-30°C to 85°C (-22°F to 185°F)	ϕ 24 mm (0.94 in)
	 NEW	CT6875	500 A	DC to 2 MHz	±0.04 %rdg. ±0.008 %f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 36 mm (1.42 in)
	 NEW	CT6876	1000 A	DC to 1.5 MHz	±0.04 %rdg. ±0.008 %f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 36 mm (1.42 in)
	 NEW	CT6877	2000 A	DC to 1 MHz	±0.04% rdg. ±0.008% f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 80 mm (3.15 in)
High Accuracy Clamp		CT6841-05	20 A	DC to 1 MHz	±0.3% rdg. ±0.01% f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 20 mm (0.79 in)
		CT6843-05	200 A	DC to 500 kHz	±0.3% rdg. ±0.01% f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 20 mm (0.79 in)
		CT6844-05	500 A	DC to 200 kHz	±0.3% rdg. ±0.01% f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 20 mm (0.79 in)
		CT6845-05	500 A	DC to 100 kHz	±0.3% rdg. ±0.01% f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 50 mm (1.97 in)
		CT6846-05	1000 A	DC to 20 kHz	±0.3% rdg. ±0.01% f.s.	Within ±0.1°	-40°C to 85°C (-40°F to 185°F)	ϕ 50 mm (1.97 in)
High Accuracy Direct Connection		PW9100-03 PW9100-04	50 A	DC to 3.5 MHz	±0.02% rdg. ±0.005% f.s.	Within ±0.1°	0°C to 40°C (32°F to 104°F)	Measurement terminals M6 screws
High Accuracy Clamp		9272-05	20 A, 200 A	1 Hz to 100 kHz	±0.3% rdg. ±0.01% f.s.	Within ±0.2°	0°C to 50°C (32°F to 122°F)	ϕ 46 mm (1.81 in)
Wideband Clamp	 NEW	CT6710	0.5 A, 5 A, 30 A	DC to 50 MHz	Typical ±1.0%rdg. ±1 mV (30 A range /5 Arange)	–	0°C to 40°C (32°F to 104°F)	ϕ 5 mm (0.20 in)
	 NEW	CT6711	0.5 A, 5 A, 30 A	DC to 120 MHz	Typical ±1.0%rdg. ±1 mV (30 A range /5 Arange)	–	0°C to 40°C (32°F to 104°F)	ϕ 5 mm (0.20 in)
		CT6700	5 A	DC to 50 MHz	Typical ±1.0% rdg. ±1 mV	–	0°C to 40°C (32°F to 104°F)	ϕ 5 mm (0.20 in)
		CT6701	5 A	DC to 120 MHz	Typical ±1.0% rdg. ±1 mV	–	0°C to 40°C (32°F to 104°F)	ϕ 5 mm (0.20 in)
		3273-50	30 A	DC to 50 MHz	±1.0% rdg. ±1 mV	–	0°C to 40°C (32°F to 104°F)	ϕ 5 mm (0.20 in)
		3276	30 A	DC to 100 MHz	±1.0% rdg. ±1 mV	–	0°C to 40°C (32°F to 104°F)	ϕ 5 mm (0.20 in)
		3274	150 A	DC to 10 MHz	±1.0% rdg. ±1 mV	–	0°C to 40°C (32°F to 104°F)	ϕ 20 mm (0.79 in)
		3275	500 A	DC to 2 MHz	±1.0% rdg. ±5 mV	–	0°C to 40°C (32°F to 104°F)	ϕ 20 mm (0.79 in)

Specifications

Pass-Through Type

CAT III 1000 V

3 year Warranty

CT6904
500 A AC/DC

Output connector: ME15W

Rated primary current	500 A AC/DC
Frequency band	DC to 4 MHz (±3 dB Typical)
Diameter of measurable conductors	ϕ 32 mm (1.26 in) or less

Accuracy

Frequency	Amplitude	Phase
DC	±0.025% rdg.±0.007% f.s.	-
DC < f < 16 Hz	±0.2% rdg.±0.02% f.s.	±0.1°
16 Hz ≤ f < 45 Hz	±0.1% rdg.±0.02% f.s.	±0.1°
45 Hz ≤ f ≤ 65 Hz	±0.02% rdg.±0.007% f.s.	±0.08°
65 Hz < f ≤ 850 Hz	±0.05% rdg.±0.007% f.s.	±0.12°
850 Hz < f ≤ 1 kHz	±0.1% rdg.±0.01% f.s.	±0.4°
1 kHz < f ≤ 5 kHz	±0.4% rdg.±0.02% f.s.	±0.4°
5 kHz < f ≤ 10 kHz	±0.4% rdg.±0.02% f.s.	±(0.08×f)°
10 kHz < f ≤ 50 kHz	±1% rdg.±0.02% f.s.	±(0.08×f)°
50 kHz < f ≤ 100 kHz	±1% rdg.±0.05% f.s.	±(0.08×f)°
100 kHz < f ≤ 300 kHz	±2% rdg.±0.05% f.s.	±(0.08×f)°
300 kHz < f ≤ 1 MHz	±5% rdg.±0.05% f.s.	±(0.08×f)°

Unit for f in accuracy calculations: kHz.
Amplitude accuracy and phase accuracy are defined at the rated value or less, and within the continuous range of ambient temperature of 50°C (122°F) of the derating in the figure.
However, the accuracy defined for the frequency range of DC < f < 10 Hz is the design value.

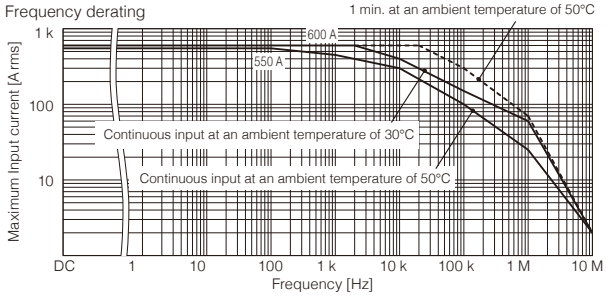
Combined accuracy with the PW6001 Power Analyzer

Frequency	Current	Power	Phase
DC	±0.045% rdg. ±0.037% f.s. (f.s. = PW6001 Range)	±0.045% rdg. ±0.057% f.s. (f.s. = PW6001 Range)	PW6001 accuracy + Sensor accuracy
45 Hz ≤ f ≤ 65 Hz	±0.04% rdg. ±0.027% f.s. (f.s. = PW6001 Range)	±0.04% rdg. ±0.037% f.s. (f.s. = PW6001 Range)	
Bandwidths other than DC and 45 Hz ≤ f ≤ 65 Hz	PW6001 accuracy + Sensor accuracy (Consider sensor rating when calculating f.s. error.)	PW6001 accuracy + Sensor accuracy (Consider sensor rating when calculating f.s. error.)	

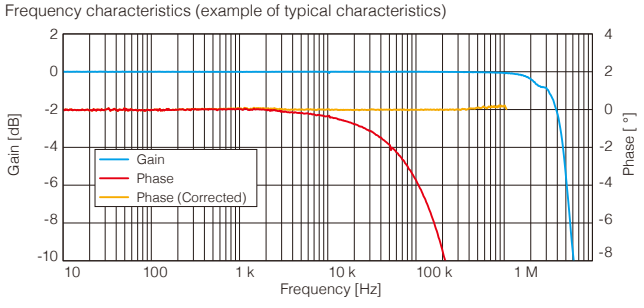
For other measurement parameters, add the PW6001 accuracy and the sensor accuracy (and consider the sensor rating when calculating the f.s. error).
For 10 A Range and 20 A Range, apply ±0.12% f.s. (f.s. = PW6001 Range)

Temperature and humidity range for guaranteed accuracy	23°C ±5°C (73°F ±9°F), 80% RH or less
Accuracy guarantee period	1 year
Effect of temperature	In ranges from -10°C to 18°C (14°F to 64.4°F) or 28°C to 50°C (82.4°F to 122°F) Amplitude sensitivity: ±0.005% rdg./°C Offset voltage: ±0.005% f.s./°C, Phase: ±0.01°/°C
Magnetic susceptibility	5 mA or less (Scaled value, after input of 500 A DC)
Common-mode voltage rejection ratio (CMRR)	140 dB or greater (50 Hz/60 Hz) 120 dB or greater (100 kHz) (Effect on output voltage/common-mode voltage)
Effect of conductor position	±0.01% rdg. or less (100 A input, 50 Hz/60 Hz), ±0.2% rdg. or less (10 A input, 100 kHz), when using wire with 10 mm (0.39 in) outer diameter
Effect of external magnetic field	±50 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	4 mV/A
Operating temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-20°C to 60°C (-4°F to 140°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	1000 V CAT III Expected transient overvoltage: 8000 V
Cable length	Approx. 3 m (9.84 ft) (including relay box) (10m length also available)
Dimensions	Approx. 139 mm (5.47 in) W × 120 mm (4.72 in) H × 52 mm (2.05 in) D (excluding protrusions and cables)
Mass	1.0 kg (35.3 oz)
Accessories	Instruction manual, Carrying case, Color labels (for channel identification)

Frequency derating



Frequency characteristics (example of typical characteristics)



Pass-Through Type

CAT III 1000 V

3 year Warranty

CT6904-60
800 A AC/DC

Output connector: ME15W

(Custom Order)

Rated primary current	800 A AC/DC
Frequency band	DC to 4 MHz (±3 dB Typical)
Diameter of measurable conductors	ϕ 32 mm (1.26 in) or less

Accuracy

Frequency	Amplitude	Phase
DC	±0.030% rdg.±0.009% f.s.	–
DC < f < 16 Hz	±0.2% rdg.±0.025% f.s.	±0.1°
16 Hz ≤ f < 45 Hz	±0.1% rdg.±0.025% f.s.	±0.1°
45 Hz ≤ f ≤ 65 Hz	±0.025% rdg.±0.009% f.s.	±0.08°
65 Hz < f ≤ 850 Hz	±0.05% rdg.±0.009% f.s.	±0.12°
850 Hz < f ≤ 1 kHz	±0.1% rdg.±0.013% f.s.	±0.4°
1 kHz < f ≤ 5 kHz	±0.4% rdg.±0.025% f.s.	±0.4°
5 kHz < f ≤10 kHz	±0.4% rdg.±0.025% f.s.	±(0.08×f)°
10 kHz < f ≤ 50 kHz	±1% rdg.±0.025% f.s.	±(0.08×f)°
50 kHz < f ≤ 100 kHz	±1% rdg.±0.063% f.s.	±(0.08×f)°
100 kHz < f ≤ 300 kHz	±2% rdg.±0.063% f.s.	±(0.08×f)°
300 kHz < f ≤ 1 MHz	±5% rdg.±0.063% f.s.	±(0.08×f)°

Unit for f in accuracy calculations: kHz. f.s.: Rated primary current. (800 A).
Amplitude accuracy and phase accuracy are defined at the rated value or less and 100 Hz or higher is defined within the continuous range of ambient temperature of 50°C (122°F) of the derating in the figure.
However, the accuracy defined for the frequency range of DC < f < 10 Hz is the design value.

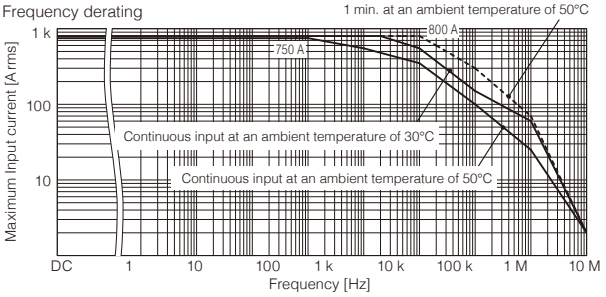
Combined accuracy with the PW6001 Power Analyzer

Frequency	Current	Power	Phase
DC	±0.050% rdg. ±0.037% f.s. (f.s. = PW6001 Range)	±0.050% rdg. ±0.057% f.s. (f.s. = PW6001 Range)	PW6001 accuracy + Sensor accuracy
45 Hz ≤ f ≤ 65 Hz	±0.045% rdg. ±0.027% f.s. (f.s. = PW6001 Range)	±0.045% rdg. ±0.037% f.s. (f.s. = PW6001 Range)	
Bandwidths other than DC and 45 Hz ≤ f ≤ 65 Hz	PW6001 accuracy + Sensor accuracy (Consider sensor rating when calculating f.s. error.)	PW6001 accuracy + Sensor accuracy (Consider sensor rating when calculating f.s. error.)	

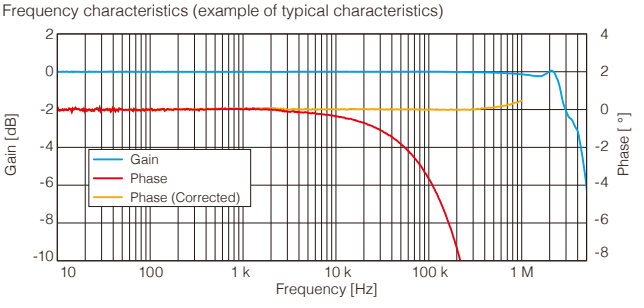
For other measurement parameters, add the PW6001 accuracy and the sensor accuracy (and consider the sensor rating when calculating the f.s. error).
For 20 A Range and 40 A Range, apply ±0.12% f.s. (f.s. = PW6001 Range)

Temperature and humidity range for guaranteed accuracy	23°C ±5°C (73°F ±9°F), 80% RH or less
Accuracy guarantee period	1 year
Effect of temperature	In ranges from -10°C to 18°C (14°F to 64.4°F) or 28°C to 50°C (82.4°F to 122°F) Amplitude sensitivity: ±0.005% rdg./°C Offset voltage: ±0.005% f.s./°C, Phase: ±0.01°/°C
Magnetic susceptibility	5 mA or less (Scaled value, after input of 800 A DC)
Common-mode voltage rejection ratio (CMRR)	140 dB or greater (50 Hz/60 Hz), 120 dB or greater (100 kHz) (Effect on output voltage/common-mode voltage)
Effect of conductor position	±0.01% rdg. or less (100 A input, 50 Hz/60 Hz), ±0.2% rdg. or less (10 A input, 100 kHz), when using wire with 10 mm (0.39 in) outer diameter
Effect of external magnetic field	±100 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	2 mV/A
Operating temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-20°C to 60°C (-4°F to 140°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	1000 V CAT III Expected transient overvoltage: 8000 V
Cable length	Approx. 3 m (9.84 ft) (including relay box) (10m length also available)
Dimensions	139W×120H×52D mm
Mass	1.1 kg (38.8 oz)
Accessories	Instruction manual, Carrying case, Color labels (for channel identification)

Frequency derating



Frequency characteristics (example of typical characteristics)



Pass-Through Type

CT6862
50 A AC/DC

Output connector: PL23

CT6862-05
50 A AC/DC

Output connector: ME15W

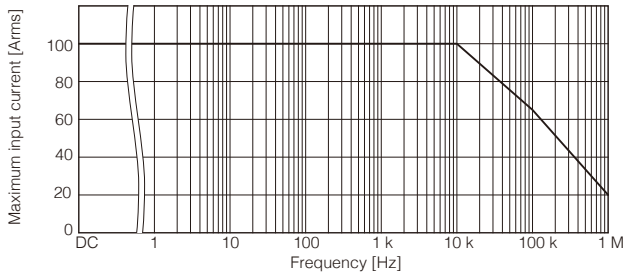
Rated current	50 A AC/DC
Frequency band	DC to 1 MHz (-3 dB)
Diameter of measurable conductors	ϕ 24 mm (0.94 in) or less
Accuracy	

Frequency	Amplitude	Phase
DC	±0.05% rdg. ±0.01% f.s.	-
DC < f ≤ 16 Hz	±0.10% rdg. ±0.02% f.s.	±0.3°
16 Hz < f ≤ 400 Hz	±0.05% rdg. ±0.01% f.s.	±0.2°
400 Hz < f ≤ 1 kHz	±0.2% rdg. ±0.02% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±0.7% rdg. ±0.02% f.s.	±1.0°
5 kHz < f ≤ 10 kHz	±1% rdg. ±0.02% f.s.	±1.0°
10 kHz < f ≤ 50 kHz	±1% rdg. ±0.02% f.s.	±(0.5 + 0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±2% rdg. ±0.05% f.s.	
100 kHz < f ≤ 300 kHz	±5% rdg. ±0.05% f.s.	
300 kHz < f ≤ 700 kHz	±10% rdg. ±0.05% f.s.	-
700 kHz < f < 1MHz	±30% rdg. ±0.05% f.s.	-

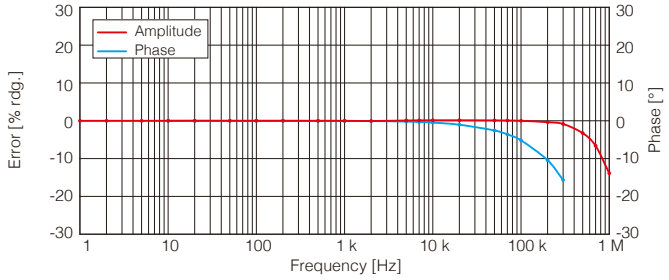
Sine wave input; Conductor at center position; Not including each effect;
Measuring instrument that has an input resistance of 1 MΩ or higher
Amplitude accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 5 Hz is the design value)
Phase accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value)

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -30°C to 0°C (-22°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±0.005% rdg./°C or less Offset voltage: ±0.005% f.s./°C or less
Effect of common mode voltage	0.05% f.s. or less (1000 Vrms, DC to 100 Hz)
Magnetic susceptibility	5 mA or less (Scaled value, after input of 50 A DC)
Effect of conductor position	±0.01% rdg. or less (50 A input, DC to 100 Hz, wire with outer diameter of 5 mm (0.20 in))
Effect of external magnetic field	10 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	0.04 V/A (= 2 V / 50 A)
Output impedance	50 Ω
Output connector	CT6862: HIOKI PL23 CT6862-05: HIOKI ME15W
Operating temperature and humidity range	-30°C to 85°C (-22°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-30°C to 85°C (-22°F to 185°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	1000 V AC/DC (50 Hz/ 60 Hz), Measurement category III, Anticipated transient overvoltage: 8000 V
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±11 V to ±15 V
Supply capacity	±200 mA or less
Rated power	5 VA or less
Cable length	3 m (9.84 ft)
Dimensions	70 mm (2.76 in) W × 100 mm (3.94 in) H × 53 mm (2.09 in) D
Mass	340 g (12.0 oz)
Accessories	Instruction Manual, Mark band
Options	CT6862: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, CT6862-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Pass-Through Type

CT6863
200 A AC/DC

Output connector: PL23

CT6863-05
200 A AC/DC

Output connector: ME15W

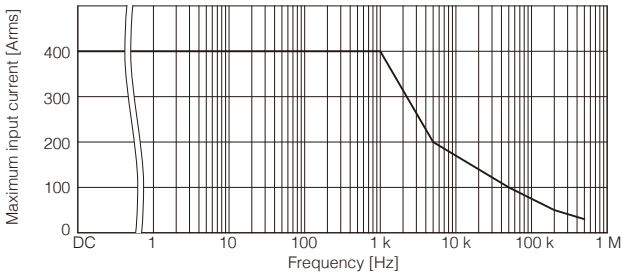
Rated current	200 A AC/DC
Frequency band	DC to 500 kHz (-3 dB)
Diameter of measurable conductors	ϕ 24 mm (0.94 in) or less
Accuracy	

Frequency	Amplitude	Phase
DC	±0.05% rdg. ±0.01% f.s.	-
DC < f ≤ 16 Hz	±0.10% rdg. ±0.02% f.s.	±0.3°
16 Hz < f ≤ 400 Hz	±0.05% rdg. ±0.01% f.s.	±0.2°
400 Hz < f ≤ 1 kHz	±0.2% rdg. ±0.02% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±0.7% rdg. ±0.02% f.s.	±1.0°
5 kHz < f ≤ 10 kHz	±1% rdg. ±0.02% f.s.	±1.0°
10 kHz < f ≤ 50 kHz	±2% rdg. ±0.02% f.s.	±(0.5 + 0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±5% rdg. ±0.05% f.s.	
100 kHz < f ≤ 300 kHz	±10% rdg. ±0.05% f.s.	
300 kHz < f ≤ 500 kHz	±30% rdg. ±0.05% f.s.	-

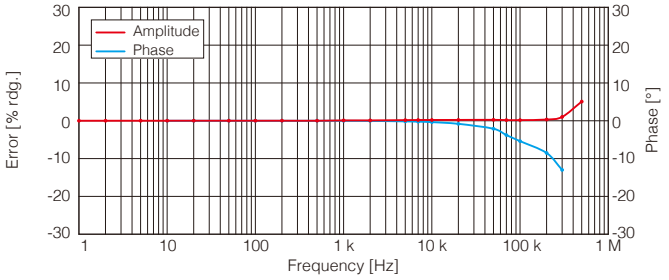
Sine wave input; Conductor at center position; Not including each effect;
Measuring instrument that has an input resistance of 1 MΩ or higher
Amplitude accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 5 Hz is the design value)
Phase accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value)

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -30°C to 0°C (-22°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±0.005% rdg./°C or less Offset voltage: ±0.005% f.s./°C or less
Effect of common mode voltage	0.05% f.s. or less (1000 Vrms, DC to 100 Hz)
Magnetic susceptibility	10 mA or less (Scaled value, after input of 200 A DC)
Effect of conductor position	±0.01% rdg. or less (100 A input, DC to 100 Hz, wire with outer diameter of 10 mm (0.39 in))
Effect of external magnetic field	50 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	0.01 V/A (= 2 V / 200 A)
Output impedance	50 Ω
Output connector	CT6863: HIOKI PL23 CT6863-05: HIOKI ME15W
Operating temperature and humidity range	-30°C to 85°C (-22°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-30°C to 85°C (-22°F to 185°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	1000 V AC/DC (50 Hz / 60 Hz), Measurement category III, Anticipated transient overvoltage: 8000 V
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±11 V to ±15 V
Supply capacity	±200 mA or less
Rated power	6 VA or less
Cable length	3 m (9.84 ft)
Dimensions	70 mm (2.76 in) W × 100 mm (3.94 in) H × 53 mm (2.09 in) D
Mass	350 g (12.3 oz)
Accessories	Instruction Manual, Mark band
Options	CT6863: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, CT6863-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Pass-Through Type

CT6875, CT6875-01
500 A AC/DC

Output connector: ME15W

Cable length: CT6875 3 m
CT6875-01 10 m

Rated current	500 A AC/DC
Frequency band	CT6875: DC to 2 MHz (±3 dB Typical) CT6875-01: DC to 1.5 MHz (±3 dB Typical)
Diameter of measurable conductors	ϕ 36 mm (1.42 in) or less

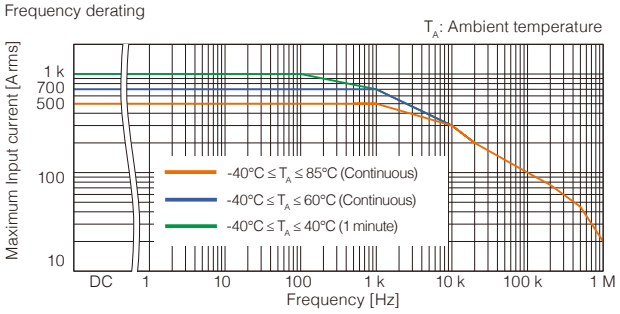
Accuracy

Frequency	Amplitude	Phase
DC	±0.04% rdg. ±0.008% f.s.	-
DC < f < 16 Hz	±0.1% rdg. ±0.02% f.s.	±0.1°
16 Hz ≤ f < 45 Hz	±0.05% rdg. ±0.01% f.s.	±0.1°
45 Hz ≤ f ≤ 66 Hz	±0.04% rdg. ±0.008% f.s.	±0.1°
66 Hz < f ≤ 100 Hz	±0.05% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.1% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±0.2% rdg. ±0.02% f.s.	±0.4°
1 kHz < f ≤ 5 kHz	±0.4% rdg. ±0.02% f.s.	±0.5°
5 kHz < f ≤ 10 kHz	±0.4% rdg. ±0.02% f.s.	±(0.1 × f kHz)°
10 kHz < f ≤ 50 kHz	±1.5% rdg. ±0.05% f.s.	±(0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±2.5% rdg. ±0.05% f.s.	±(0.1 × f kHz)°
100 kHz < f ≤ 1 MHz	±(0.025 × f kHz)% rdg. ±0.05% f.s.	±(0.1 × f kHz)°

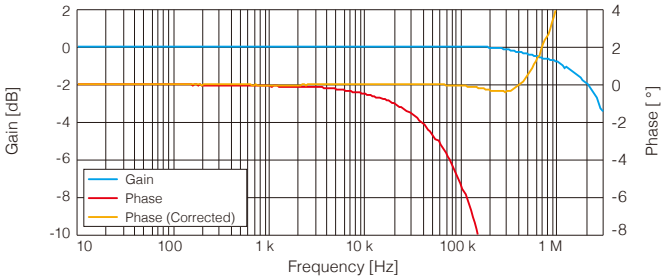
· With sine wave input and centrally positioned conductor; does not reflect various effects.
· When connected to instrument with an input resistance of at least 1 MΩ.
· Amplitude accuracy and phase accuracy are defined for input of 110% f.s. or less that falls within the derating range.
· Values provided for frequencies of DC < f < 10 Hz are design values.
· Add ±0.01% rdg. to the amplitude accuracy for input from 100% f.s. to 110% f.s.
· For the CT6875-01, add the following for frequencies of 1 kHz < f ≤ 1 MHz:
· Amplitude accuracy: ±(0.005 × f kHz)% rdg. Phase accuracy: ±(0.015 × f kHz)°

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±20 ppm of rdg./ °C Offset voltage: ±5 ppm of f.s./ °C
Magnetic susceptibility	10 mA or less (Scaled value, after input of 500 A DC)
Common-mode voltage rejection ratio (CMRR)	140 dB or greater (50 Hz/60 Hz), 120 dB or greater (100 kHz) (Effect on output voltage/common-mode voltage)
Effect of conductor position	DC, 50 Hz/60 Hz: ±0.01% rdg.or less (100 A input) 10 kHz: ±0.4% rdg.or less (10 A input) 100 kHz: ±2.5% rdg.or less (10 A input) With a wire diameter of 10 mm
Effect of external magnetic field	20 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Maximum input current	Within the derating range Maximum input of up to ±1500 Apeak (design value) allowed at 40°C or less for 20 ms or less
Output voltage	4 mV/A
Offset voltage	±15ppm Typical (23°C, no input)
Linearity	±5ppm Typical (23°C)
Output impedance	50 Ω±10 Ω
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	1000 V CAT III Expected transient overvoltage: 8000 V
Power supply	Power supplied from PW6001, PW3390, CT9555, CT9556, CT9557, or external DC power supply
Dimensions	160 mm (6.30 in) W × 112 mm (4.41 in) H × 50 mm (1.97 in) D
Mass	Approx. CT6875: 0.8 kg (28.2 oz), CT6875-01: 1.10 kg (38.8 oz)
Accessories	Instruction Manual, Mark band

Frequency derating



Frequency characteristics (example of typical characteristics)



Pass-Through Type

CT6876, CT6876-01
1000 A AC/DC

Output connector: ME15W

Cable length: CT6875 3 m
CT6875-01 10 m

Rated current	1000 A AC/DC
Frequency band	CT6876: DC to 1.5 MHz (±3 dB Typical) CT6876-01: DC to 1.2 MHz (±3 dB Typical)
Diameter of measurable conductors	ϕ36 mm (1.42 in) or less

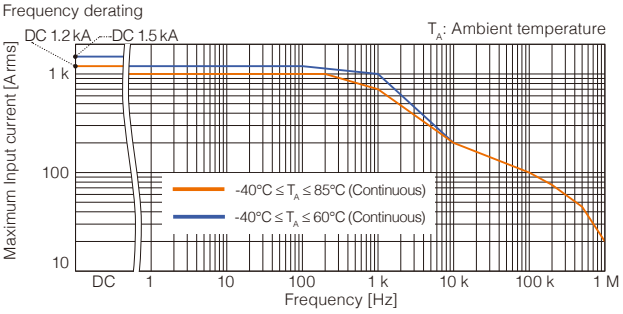
Accuracy

Frequency	Amplitude	Phase
DC	±0.04% rdg. ±0.008% f.s.	-
DC < f < 16 Hz	±0.1% rdg. ±0.02% f.s.	±0.1°
16 Hz ≤ f < 45 Hz	±0.05% rdg. ±0.01% f.s.	±0.1°
45 Hz ≤ f ≤ 66 Hz	±0.04% rdg. ±0.008% f.s.	±0.1°
66 Hz < f ≤ 100 Hz	±0.05% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.1% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±0.2% rdg. ±0.02% f.s.	±0.4°
1 kHz < f ≤ 5 kHz	±0.5% rdg. ±0.02% f.s.	±0.5°
5 kHz < f ≤ 10 kHz	±0.5% rdg. ±0.02% f.s.	±(0.1 × f kHz)°
10 kHz < f ≤ 50 kHz	±2% rdg. ±0.05% f.s.	±(0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±3% rdg. ±0.05% f.s.	±(0.1 × f kHz)°
100 kHz < f ≤ 1 MHz	±(0.03 × kHz)% rdg. ±0.05% f.s.	±(0.1 × f kHz)°

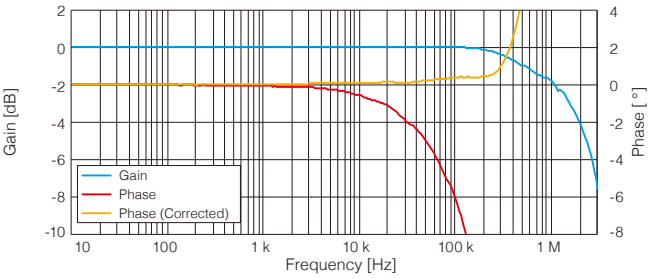
· With sine wave input and centrally positioned conductor; does not reflect various effects.
· When connected to instrument with an input resistance of at least 1 MΩ.
· Amplitude accuracy and phase accuracy are defined for input of 110% f.s. or less that falls within the derating range.
· Values provided for frequencies of DC < f < 10 Hz are design values.
· Add ±0.01% rdg. to the amplitude accuracy for input from 100% f.s. to 110% f.s.
· For the CT6876-01, add the following for frequencies of 1 kHz < f ≤ 1 MHz:
· Amplitude accuracy: ±(0.005 × f kHz)% rdg. Phase accuracy: ±(0.015 × f kHz)°

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±20 ppm of rdg./ °C Offset voltage: ±5 ppm of f.s./ °C
Magnetic susceptibility	20 mA or less (Scaled value, after input of 1000 A DC)
Common-mode voltage rejection ratio (CMRR)	140 dB or greater (50 Hz/60 Hz), 120 dB or greater (100 kHz) (Effect on output voltage/common-mode voltage)
Effect of conductor position	DC, 50 Hz/60 Hz: ±0.01% rdg.or less (100 A input) 10 kHz: ±0.5% rdg.or less (10 A input) 100 kHz: ±3% rdg.or less (10 A input) With a wire diameter of 10 mm
Effect of external magnetic field	40 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Maximum input current	Within the derating range Maximum input of up to ±1800 Apeak (design value) allowed at 40°C or less for 20 ms or less
Output voltage	2 mV/A
Offset voltage	±15ppm Typical (23°C, no input)
Linearity	±5ppm Typical (23°C)
Output impedance	50 Ω±10 Ω
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	1000 V CAT III Expected transient overvoltage: 8000 V
Power supply	Power supplied from PW6001, PW3390, CT9555, CT9556, CT9557, or external DC power supply
Dimensions	160 mm (6.30 in) W × 112 mm (4.41 in) H × 50 mm (1.97 in) D
Mass	Approx. CT6876: 0.95 kg (33.5 oz), CT6876-01: 1.25 kg (44.1 oz)
Accessories	Instruction Manual, Mark band

Frequency derating



Frequency characteristics (example of typical characteristics)



Pass-Through Type

CT6877, CT6877-01
2000 A AC/DC

Output connector: ME15W

Cable length: CT6877 3 m
CT6877-01 10 m

Rated current	AC/DC 2000 A
Frequency band	DC to 1 MHz (±3 dB Typical)
Diameter of measurable conductors	ϕ80 mm (3.14 in) or less

Accuracy

Frequency	Amplitude	Phase
DC	±0.04% rdg. ±0.008% f.s.	-
DC < f < 16 Hz	±0.1% rdg. ±0.02% f.s.	±0.1°
16 Hz ≤ f < 45 Hz	±0.05% rdg. ±0.01% f.s.	±0.1°
45 Hz ≤ f ≤ 66 Hz	±0.04% rdg. ±0.008% f.s.	±0.1°
66 Hz < f ≤ 100 Hz	±0.05% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.1% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±0.2% rdg. ±0.02% f.s.	±0.4°
1 kHz < f ≤ 5 kHz	±0.5% rdg. ±0.02% f.s.	±(0.3+0.1 × f kHz)°
5 kHz < f ≤ 10 kHz	±0.5% rdg. ±0.02% f.s.	±(0.3+0.1 × f kHz)°
10 kHz < f ≤ 50 kHz	±1.5% rdg. ±0.05% f.s.	±(0.3+0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±2.5% rdg. ±0.05% f.s.	±(0.3+0.1 × f kHz)°
100 kHz < f ≤ 700 kHz	±(0.025 × f kHz)% rdg. ±0.05% f.s.	±(0.3+0.1 × f kHz)°
Frequency band	1 MHz (±3 dB Typical)	-

· With sine wave input and centrally positioned conductor; does not reflect various effects.
· When connected to instrument with an input resistance of at least 1 MΩ.
· Amplitude accuracy and phase accuracy are defined for input of 110% f.s. or less that falls within the derating range.
· Values provided for frequencies of DC < f < 10 Hz are design values.
· Add ±0.01% rdg. to the amplitude accuracy for input from 100% f.s. to 110% f.s.
· For the CT6877-01, add the following for frequencies of 1 kHz < f ≤ 700 kHz:
· Amplitude accuracy: ±(0.005 × f kHz)% rdg. Phase accuracy: ±(0.015 × f kHz)°

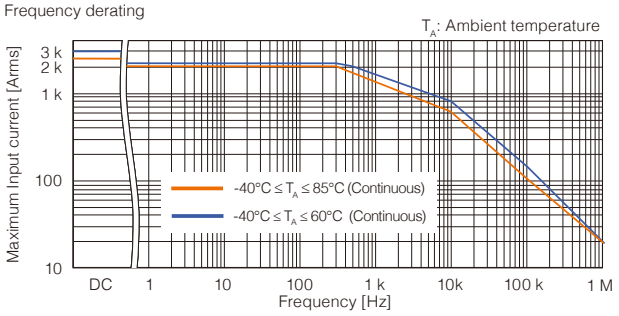
Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±15 ppm of rdg./ °C Offset voltage: ±0.5 ppm of f.s./ °C
Magnetic susceptibility	10 mA or less (Scaled value, after input of 2000 A DC)
Common-mode voltage rejection ratio (CMRR)	140 dB or greater (50 Hz/60 Hz), 120 dB or greater (100 kHz) (Effect on output voltage/common-mode voltage)
Effect of conductor position (With a wire diameter of 10 mm)	DC, 50 Hz/60 Hz: ±0.01% rdg.or less (100 A input) 1 kHz: ±0.05% rdg.or less (10 A input) 10 kHz: ±0.2% rdg.or less (10 A input) 100 kHz: ±0.8% rdg.or less (10 A input)
Effect of external magnetic field	80 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Maximum input current	Within the derating range Maximum input of up to ±3200 Apeak (design value) allowed at 40°C or less for 20 ms or less
Output voltage	1 mV/A
Offset voltage	±10ppm Typical (23°C, no input)
Linearity	±10ppm Typical (23°C)
Output impedance	50 Ω ±10 Ω
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	1000 V CAT III Expected transient overvoltage: 8000 V
Power supply	Power supplied from PW6001, PW3390, CT9555, CT9556, CT9557, or external DC power supply
Dimensions	229W × 232H × 112D mm
Mass	Approx. CT6877: 5 kg (176.4 oz), CT6875-01: 5.3 kg (186.9 oz)

Combined accuracy with the PW6001 Power Analyzer

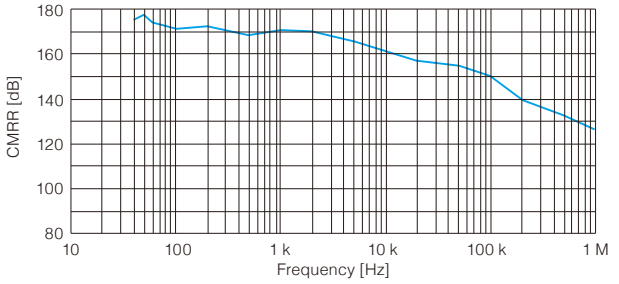
Frequency	Current	Power	Phase
DC	±0.06% rdg. ±0.038% f.s. (f.s.=PW6001 Range)	±0.06%rdg.±0.058%f.s. (f.s.=PW6001 Range)	PW6001 accuracy + Sensor accuracy
45 Hz ≤ f ≤ 66 Hz	±0.06% rdg. ±0.028% f.s. (f.s.=PW6001 Range)	±0.06%rdg.±0.038%f.s. (f.s.=PW6001 Range)	
Bandwidths other than DC and 45 Hz ≤ f ≤ 66 Hz	PW6001 accuracy + Sensor accuracy (Consider sensor rating when calculating f.s. error.)	PW6001 accuracy + Sensor accuracy (Consider sensor rating when calculating f.s. error.)	

For other measurement parameters, add the PW6001 accuracy and the sensor accuracy (and consider the sensor rating when calculating the f.s. error).

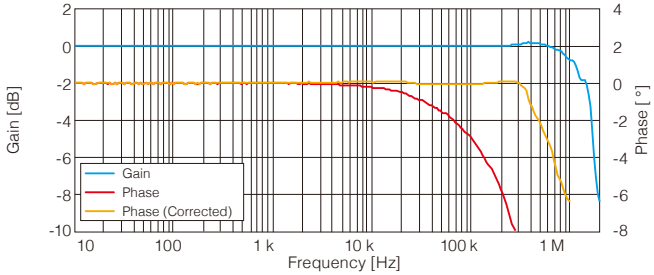
Frequency derating



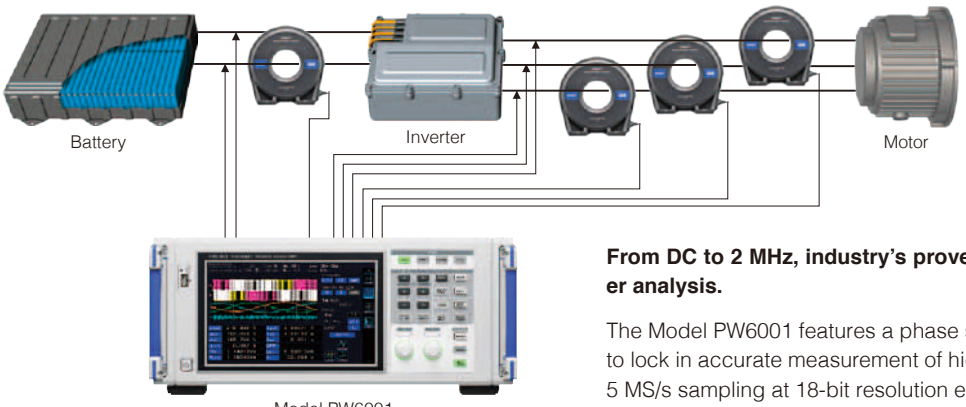
Common-mode rejection ratio (typical characteristics)



Frequency characteristics (example of typical characteristics)



Example of the CT6877 being used with the Power Analyzer PW6001 to evaluate inverter power conversion efficiency



Model PW6001

From DC to 2 MHz, industry's proven solution for high-accuracy power analysis.

The Model PW6001 features a phase shift function for current sensors to lock in accurate measurement of high-frequency power.
5 MS/s sampling at 18-bit resolution ensures true power analysis of PWM waveforms and results that are free of aliasing error.

Clamp Type

CT6841
20 A AC/DC

Output connector: PL23

CT6841-05
20 A AC/DC

Output connector: ME15W

Rated current	20 A AC/DC
Frequency band	DC to 1 MHz (-3 dB)
Diameter of measurable conductors	ϕ 20 mm (0.79 in) or less

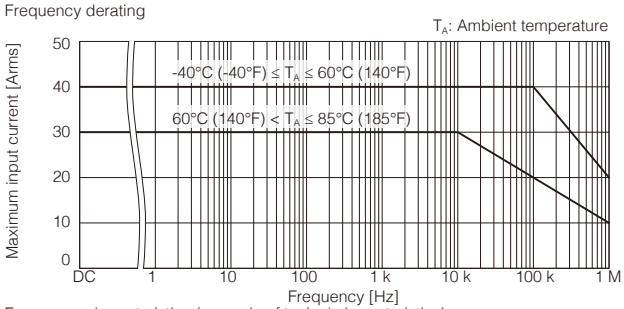
Accuracy

Frequency	Amplitude	Phase
DC	±0.3% rdg. ±0.05% f.s.	-
DC < f ≤ 100 Hz	±0.3% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.3% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±0.5% rdg. ±0.02% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±1.0% rdg. ±0.02% f.s.	±1.0°
5 kHz < f ≤ 10 kHz	±1.5% rdg. ±0.02% f.s.	±1.5°
10 kHz < f ≤ 50 kHz	±2.0% rdg. ±0.02% f.s.	±(0.5 + 0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±5.0% rdg. ±0.05% f.s.	
100 kHz < f ≤ 300 kHz	±10% rdg. ±0.05% f.s.	
300 kHz < f ≤ 500 kHz	±15% rdg. ±0.05% f.s.	-
500 kHz < f < 1 MHz	±30% rdg. ±0.05% f.s.	-

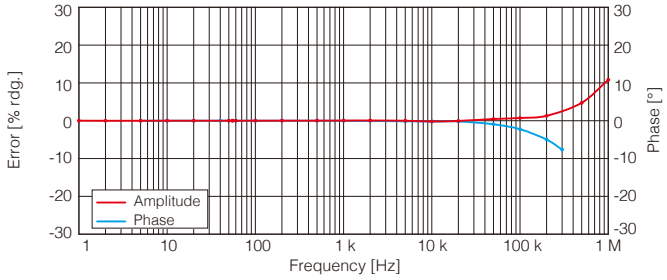
Sine wave input; Conductor at center position; Not including each effect;
Measuring instrument that has an input resistance of 1 MΩ or higher
Amplitude accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 5 Hz is the design value)
Phase accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value)

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±0.01% rdg./°C or less Offset voltage: ±0.005% f.s./°C or less
Effect of common mode voltage	0.05% f.s. or less (1000 Vrms, DC to 100 Hz)
Magnetic susceptibility	10 mA or less (Scaled value, after input of 20 A DC)
Effect of conductor position	±0.1% rdg. or less (20 A input, DC to 100 Hz, wire with outer diameter of 5 mm (0.20 in))
Effect of external magnetic field	50 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	0.1 V/A (= 2 V / 20 A)
Offset adjustable range	±4 mV
Output impedance	50 Ω
Output connector	CT6841: HIOKI PL23 CT6841-05: HIOKI ME15W
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±11 V to ±15 V
Supply capacity	±200 mA or less
Rated power	5 VA or less
Cable length	3 m (9.84 ft)
Dimensions	153 mm (6.02 in) W × 67 mm (2.64 in) H × 25 mm (0.98 in) D
Mass	350 g (12.3 oz)
Accessories	Instruction Manual, Mark band, Carrying case
Options	CT6841: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, CT6841-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Clamp Type

CT6843
200 A AC/DC

Output connector: PL23

CT6843-05
200 A AC/DC

Output connector: ME15W

Rated current	200 A AC/DC
Frequency band	DC to 500 kHz (-3 dB)
Diameter of measurable conductors	ϕ 20 mm (0.79 in) or less

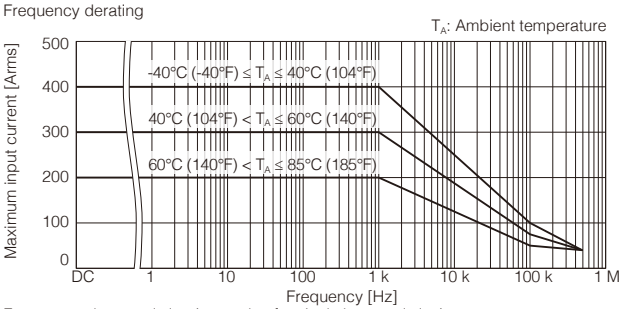
Accuracy

Frequency	Amplitude	Phase
DC	±0.3% rdg. ±0.02% f.s.	-
DC < f ≤ 100 Hz	±0.3% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.3% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±0.5% rdg. ±0.02% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±1.0% rdg. ±0.02% f.s.	±1.0°
5 kHz < f ≤ 10 kHz	±1.5% rdg. ±0.02% f.s.	±0.5°
10 kHz < f ≤ 50 kHz	±5.0% rdg. ±0.02% f.s.	±(0.5 + 0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±15% rdg. ±0.05% f.s.	
100 kHz < f ≤ 300 kHz	±15% rdg. ±0.05% f.s.	
300 kHz < f ≤ 500 kHz	±30% rdg. ±0.05% f.s.	-

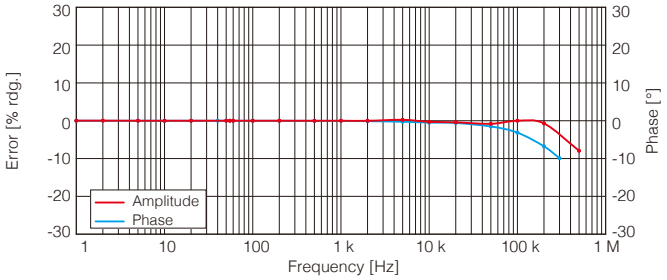
Sine wave input; Conductor at center position; Not including each effect;
Measuring instrument that has an input resistance of 1 MΩ or higher
Amplitude accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 5 Hz is the design value)
Phase accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value)

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±0.01% rdg./°C or less Offset voltage: ±0.005% f.s./°C or less
Effect of common mode voltage	0.05% f.s. or less (1000 Vrms, DC to 100 Hz)
Magnetic susceptibility	30 mA or less (Scaled value, after input of 200 A DC)
Effect of conductor position	±0.1% rdg. or less (100 A input, DC to 100 Hz, wire with outer diameter of 5 mm (0.20 in))
Effect of external magnetic field	50 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	0.01 V/A (= 2 V / 200 A)
Offset adjustable range	±2 mV
Output impedance	50 Ω
Output connector	CT6843: HIOKI PL23 CT6843-05: HIOKI ME15W
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±11 V to ±15 V
Supply capacity	±250 mA or less
Rated power	6 VA or less
Cable length	3 m (9.84 ft)
Dimensions	153 mm (6.02 in) W × 67 mm (2.64 in) H × 25 mm (0.98 in) D
Mass	370 g (13.1 oz)
Accessories	Instruction Manual, Mark band, Carrying case
Options	CT6843: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, CT6843-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Clamp Type

3 year Warranty

CT6844
500 A AC/DC

Output connector: PL23

CT6844-05
500 A AC/DC

Output connector: ME15W

Rated current	500 A AC/DC
Frequency band	DC to 200 kHz (-3 dB)
Diameter of measurable conductors	ϕ 20 mm (0.79 in) or less

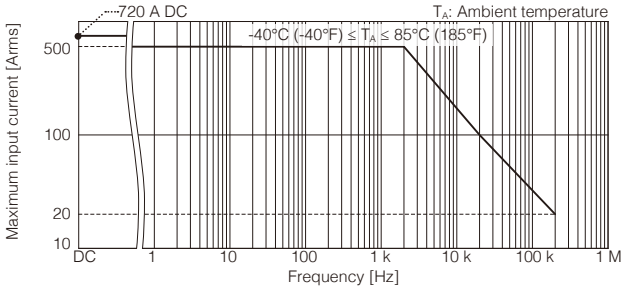
Accuracy

Frequency	Amplitude	Phase
DC	±0.3% rdg. ±0.02% f.s.	–
DC < f ≤ 100 Hz	±0.3% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.3% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±0.5% rdg. ±0.02% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±1.0% rdg. ±0.02% f.s.	±1.0°
5 kHz < f ≤ 10 kHz	±1.5% rdg.±0.02% f.s.	±1.5°
10 kHz < f ≤ 50 kHz	±5% rdg. ±0.02% f.s.	±(0.5 + 0.1 × f kHz)°
50 kHz < f ≤ 100 kHz	±15% rdg. ±0.05% f.s.	
100 kHz < f ≤ 200 kHz	±30% rdg. ±0.05% f.s.	

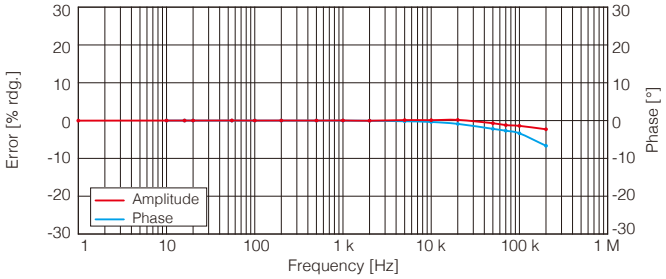
Sine wave input; Conductor at center position; Not including each effect;
Measuring instrument that has an input resistance of 1 MΩ or higher
Amplitude accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 5 Hz is the design value)
Phase accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value)

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±0.01% rdg./°C or less Offset voltage: ±0.005% f.s./°C or less
Effect of common mode voltage	0.05% f.s. or less (1000 Vrms, DC to 100 Hz)
Magnetic susceptibility	75 mA or less (Scaled value, after input of 500 A DC)
Effect of conductor position	±0.1% rdg. or less (100 A input, DC to 100 Hz, wire with outer diameter of 10 mm (0.39 in))
Effect of external magnetic field	100 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	4 mV/A (= 2 V / 500 A)
Offset adjustable range	±2 mV
Output impedance	50 Ω
Output connector	CT6844: HIOKI PL23 CT6844-05: HIOKI ME15W
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±11 V to ±15 V
Supply capacity	±300 mA or less
Rated power	7 VA or less
Cable length	3 m (9.84 ft)
Dimensions	153 mm (6.02 in) W × 67 mm (2.64 in) H × 25 mm (0.98 in) D
Mass	400 g (14.1 oz)
Accessories	Instruction Manual, Mark band, Carrying case
Options	CT6844: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, CT6844-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Clamp Type

3 year Warranty

CT6845
500 A AC/DC

Output connector: PL23

CT6845-05
500 A AC/DC

Output connector: ME15W

Rated current	500 A AC/DC
Frequency band	DC to 100 kHz (-3 dB)
Diameter of measurable conductors	ϕ50 mm or less

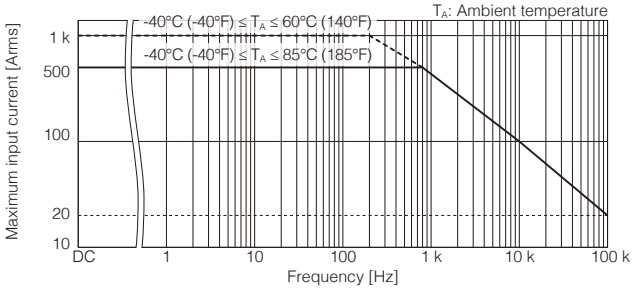
Accuracy

Frequency	Amplitude	Phase
DC	±0.3% rdg. ±0.02% f.s.	–
DC < f ≤ 100 Hz	±0.3% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.3% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±0.5% rdg. ±0.02% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±1.0% rdg. ±0.02% f.s.	±1.5°
5 kHz < f ≤ 10 kHz	±1.5% rdg.±0.02% f.s.	±2.0°
10 kHz < f ≤ 20 kHz	±5.0% rdg. ±0.02% f.s.	±(0.2 × f kHz)°
20 kHz < f ≤ 50 kHz	±10% rdg. ±0.05% f.s.	
50 kHz < f ≤ 100 kHz	±30% rdg. ±0.05% f.s.	

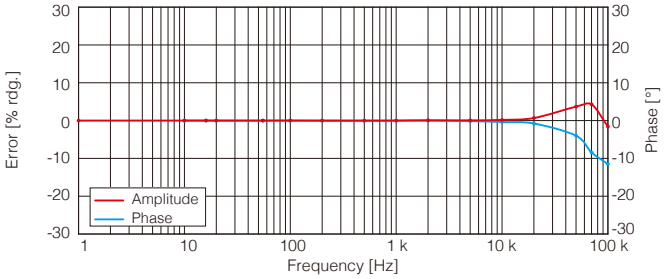
Sine wave input; Conductor at center position; Not including each effect;
Measuring instrument that has an input resistance of 1 MΩ or higher
Amplitude accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 5 Hz is the design value)
Phase accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value)

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±0.01% rdg./°C or less Offset voltage: ±0.005% f.s./°C or less
Effect of common mode voltage	0.05% f.s. or less (1000 Vrms, DC to 100 Hz)
Magnetic susceptibility	75 mA or less (Scaled value, after input of 500 A DC)
Effect of conductor position	±0.2% rdg. or less (100 A input, DC to 100 Hz, wire with outer diameter of 10 mm (0.39 in))
Effect of external magnetic field	150 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	4 mV/A (= 2 V / 500 A)
Offset adjustable range	±2 mV
Output impedance	50 Ω
Output connector	CT6845: HIOKI PL23 CT6845-05: HIOKI ME15W
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±11 V to ±15 V
Supply capacity	±300 mA or less
Rated power	7 VA or less
Cable length	3 m (9.84 ft)
Dimensions	238 mm (9.37 in) W × 116 mm (4.57 in) H × 35 mm (1.38 in) D
Mass	860 g (30.3 oz)
Accessories	Instruction Manual, Mark band, Carrying case
Options	CT6845: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, CT6845-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Clamp Type

3 year Warranty

CT6846
1000 A AC/DC

Output connector: PL23

CT6846-05
1000 A AC/DC

Output connector: ME15W

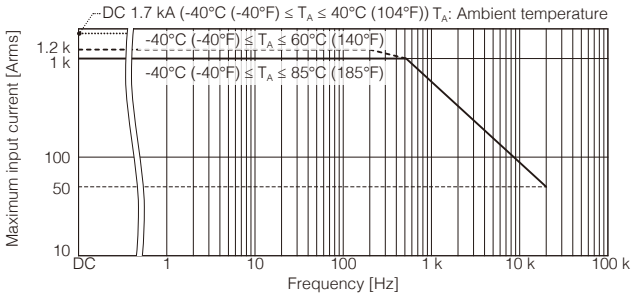
Rated current	1000 A AC/DC
Frequency band	DC to 20 kHz (-3 dB)
Diameter of measurable conductors	ϕ50 mm or less
Accuracy	

Frequency	Amplitude	Phase
DC	±0.3% rdg. ±0.02% f.s.	–
DC < f ≤ 100 Hz	±0.3% rdg. ±0.01% f.s.	±0.1°
100 Hz < f ≤ 500 Hz	±0.5% rdg. ±0.02% f.s.	±0.2°
500 Hz < f ≤ 1 kHz	±1.0% rdg. ±0.02% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±2.0% rdg. ±0.02% f.s.	±1.5°
5 kHz < f ≤ 10 kHz	±5.0% rdg. ±0.05% f.s.	±2.0°
10 kHz < f ≤ 20 kHz	±30.0% rdg. ±0.10% f.s.	±10.0°

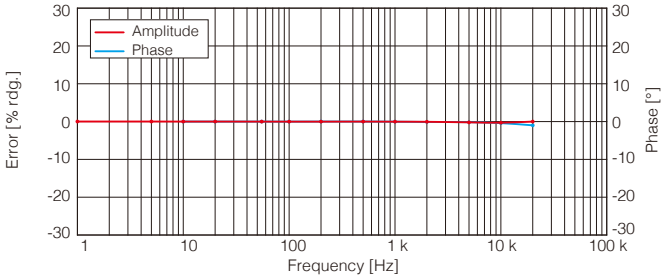
Sine wave input; Conductor at center position; Not including each effect;
Measuring instrument that has an input resistance of 1 MΩ or higher
Amplitude accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 5 Hz is the design value)
Phase accuracy (Defined at the rated value or less and within the derating curve; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value)

Temperature and humidity range for guaranteed accuracy	0°C to 40°C (32°F to 104°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from -40°C to 0°C (-40°F to 32°F) and 40°C to 85°C (104°F to 185°F) Amplitude sensitivity: ±0.01% rdg./°C or less Offset voltage: ±0.005% f.s./°C or less
Effect of common mode voltage	0.05% f.s. or less (1000 Vrms, DC to 100 Hz)
Magnetic susceptibility	150 mA or less (Scaled value, after input of 1000 A DC)
Effect of conductor position	±0.2% rdg. or less (1000 A input, 50 Hz / 60 Hz, wire with outer diameter of 30 mm (1.18 in))
Effect of external magnetic field	150 mA or less (Scaled value, in a DC and 60 Hz magnetic field of 400 A/m)
Output voltage	2 mV/A (= 2 V / 1000 A)
Offset adjustable range	±2 mV
Output impedance	50 Ω
Output connector	CT6846: HIOKI PL23 CT6846-05: HIOKI ME15W
Operating temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-40°C to 85°C (-40°F to 185°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±11 V to ±15 V
Supply capacity	±300 mA or less
Rated power	7 VA or less
Cable length	3 m (9.84 ft)
Dimensions	238 mm (9.37 in) W × 116 mm (4.57 in) H × 35 mm (1.38 in) D
Mass	990 g (34.9 oz)
Accessories	Instruction Manual, Mark band, Carrying case
Options	CT6846: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, CT6846-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Clamp Type

9272-10
20 A / 200 A AC

Output connector: PL23

9272-05
20 A / 200 A AC

Output connector: ME15W

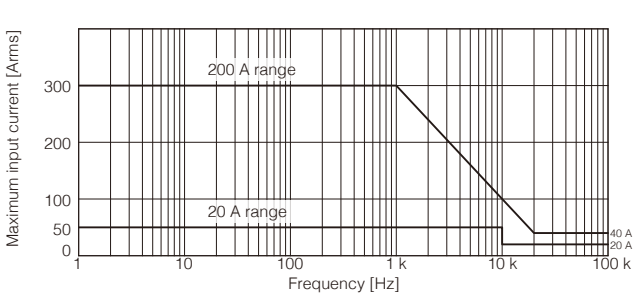
Rated current	20 A Range: 20 Arms AC 200 A Range: 200 Arms AC
Frequency band	1 Hz to 100 kHz (-3 dB)
Diameter of measurable conductors	ϕ 46 mm (1.81 in) or less
Accuracy	

Frequency	Amplitude	Phase
1 Hz ≤ f < 5 Hz	±2.0% rdg. ±0.10% f.s.	Accuracy not defined
5 Hz ≤ f < 10 Hz	±1.0% rdg. ±0.05% f.s.	±1.0°
10 Hz ≤ f < 45 Hz	±0.5% rdg. ±0.02% f.s.	±0.5°
45 Hz ≤ f ≤ 66 Hz	±0.3% rdg. ±0.01% f.s.	±0.2°
66 Hz < f ≤ 500 Hz	±0.5% rdg. ±0.02% f.s.	±0.5°
500 Hz < f ≤ 1 kHz	±0.5% rdg. ±0.02% f.s.	±1.0°
1 kHz < f ≤ 5 kHz	±1.0% rdg. ±0.05% f.s.	±2.0°
5 kHz < f ≤ 10 kHz	±2.5% rdg. ±0.10% f.s.	±3.0°
10 kHz < f ≤ 20 kHz	±5% rdg. ±0.1% f.s.	±5.0°
20 kHz < f ≤ 50 kHz	±5% rdg. ±0.1% f.s.	±15.0°
50 kHz < f ≤ 100 kHz	±30% rdg. ±0.1% f.s.	Accuracy not defined

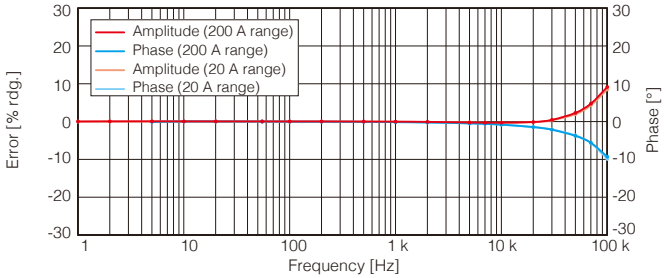
Sine wave input; Conductor at center position; Defined within rated value for each range; Not including each effect; Warm-up time: 1 minute

Temperature and humidity range for guaranteed accuracy	23°C ±5°C (73°F ±9°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	Amplitude sensitivity: ±0.03% rdg./°C or less
Effect of conductor position	±0.2% or less (input current of 100 A, 55 Hz, with the use of a 10 mm diameter conductor)
Effect of external magnetic field	100 mA or less (in a 60 Hz magnetic field of 400 A/m)
Output voltage	20 A Range: 0.1 V/A (= 2 V / 20 A) 200 A Range: 0.01 V/A (= 2 V / 200 A)
Output impedance	50 Ω
Output connector	9272-10: HIOKI PL23 9272-05: HIOKI ME15W
Operating temperature and humidity range	0°C to 50°C (32°F to 122°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 60°C (14°F to 140°F), 80% RH or less (no condensation)
Maximum rated voltage to ground	600 Vrms AC (50 Hz / 60 Hz), Measurement category III
Compliance standards	Safety: EN61010, EMC: EN61326 Class A
Supply voltage	±11 V to ±15 V
Supply capacity	±200 mA or less
Rated power	5 VA or less
Cable length	3 m (9.84 ft)
Dimensions	78 mm (3.07 in) W × 188 mm (7.40 in) H × 35 mm (1.38 in) D
Mass	430 g (15.2 oz)
Accessories	Instruction Manual, Mark band, CARRYING CASE 9355
Options	9272-10: CONVERSION CABLE 9705, EXTENSION CABLE CT9903, CONVERSION CABLE 9318, CONVERSION CABLE CT9900, 9272-05: CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

Frequency derating



Frequency characteristics (example of typical characteristics)



Direct Wire Type

PW9100-03
50 A AC/DC, 3 ch
Output connector: ME15W

PW9100-04
50 A AC/DC, 4 ch
Output connector: ME15W

Number of input channels	PW9100-03: 3-channel, PW9100-04: 4-channel
Input and measurement method	Isolated input, DCCT input
Rated current	50 A AC/DC
Frequency band	DC to 3.5 MHz (-3 dB)
Measurement terminals	Terminal block (with safety cover): M6 screws

Accuracy

Frequency	Amplitude	Phase
DC	±0.02% rdg. ±0.007% f.s.	–
DC < f < 30 Hz	±0.1% rdg. ±0.02% f.s.	±0.3°
30 Hz ≤ f < 45 Hz	±0.1% rdg. ±0.02% f.s.	±0.1°
45 Hz ≤ f ≤ 65 Hz	±0.02% rdg. ±0.005% f.s.	±0.1°
65 Hz < f ≤ 500 Hz	±0.1% rdg. ±0.01% f.s.	±0.12°
500 Hz < f ≤ 1 kHz	±0.1% rdg. ±0.01% f.s.	±0.5°
1 kHz < f ≤ 5 kHz	±0.5% rdg. ±0.02% f.s.	±0.5°
5 kHz < f ≤ 20 kHz	±1% rdg. ±0.02% f.s.	±1°
20 kHz < f ≤ 50 kHz	±1% rdg. ±0.02% f.s.	±(0.05 × f)°
50 kHz < f ≤ 100 kHz	±2% rdg. ±0.05% f.s.	±(0.06 × f)°
100 kHz < f ≤ 300 kHz	±5% rdg. ±0.05% f.s.	±(0.06 × f)°
300 kHz < f ≤ 700 kHz	±5% rdg. ±0.05% f.s.	±(0.07 × f)°
700 kHz < f ≤ 1 MHz	±10% rdg. ±0.05% f.s.	±(0.07 × f)°
Frequency band	3.5 MHz (-3 dB typical)	

Warm-up time: 30 min. or more
Sine wave input; Measuring instrument with an input resistance of 0.9 MΩ to 1.1 MΩ;
Terminal-to-ground voltage: 0 V
- Unit for f in accuracy calculations: kHz
- Amplitude accuracy and phase accuracy are defined within the accuracy guarantee range shown in the derating figure.
- However, the accuracy defined for the frequency range of DC < f < 10 Hz is the design value.
- When using the CT9902 EXTENSION CABLE (5 m (16.41 ft)) add the accuracy shown below. Measurement bandwidth: 2 MHz (±3 dB typical)
- Accuracy is not defined when 2 or more CT9902 are connected together.

Frequency	Amplitude	Phase
DC ≤ f ≤ 10 kHz	±0.015% rdg.	None added
10 kHz < f ≤ 50 kHz	±0.015% rdg.	±(0.02 × f)°
50 kHz < f ≤ 300 kHz	±0.015% rdg.	±(0.03 × f)°
300 kHz < f ≤ 700 kHz	±2% rdg.	±(0.03 × f)°
700 kHz < f ≤ 1 MHz	±4% rdg.	±(0.03 × f)°

Temperature and humidity range for guaranteed accuracy	23°C ±5°C (73°F ±9°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Effect of temperature	In ranges from 0°C to 18°C (32°F to 64°F) and 28°C to 40°C (82°F to 104°F) Amplitude sensitivity: ±0.005% rdg./°C Offset voltage: ±0.005% f.s./°C Phase: ±0.01°/ °C
Effect of common mode voltage (Defined for CMRR)	50 Hz / 60 Hz: 120 dB or greater, 100 kHz: 120 dB or greater (Effect on output voltage/common-mode voltage)
Magnetic susceptibility	5 mA or less (Scaled value, after input of ±50 A)
Output voltage	0.04 V/A (= 2 V / 50 A)
Output impedance	50 Ω
Output connector	HIOKI ME15W
Input resistance	1.5 mΩ or less (50 Hz / 60 Hz)
Input capacitance	Between measurement terminals and case (secondary side), 40 pF or less, defined at 100 kHz
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Dust-proof/water-proof	IP20 (EN60529)
Maximum rated voltage to ground	1000 V (measurement category II), 600 V (measurement category III), Anticipated transient overvoltage: 6000 V
Compliance standards	Safety: EN61010, EMC: EN61326 Class A
Supply voltage	±11 V to ±13 V
Supply capacity	±400 mA per channel or less

Cable length	Output cable length: 0.8 m (2.62 ft)
Dimensions	430 mm (16.93 in) W × 88 mm (3.46 in) H × 260 mm (10.24 in) D
Mass	PW9100-03: 3.7 kg (130.5 oz), PW9100-04: 4.3 kg (151.7 oz)
Accessories	Instruction Manual, channel number stickers, color labels, tie bands
Options	CONVERSION CABLE CT9901, EXTENSION CABLE CT9902

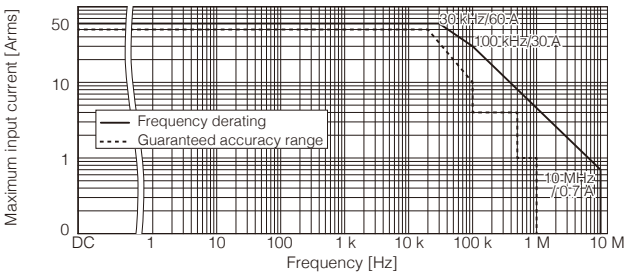
PW6001 POWER ANALYZER combined accuracy

Frequency	Current	Power
DC	±0.04% rdg. ±0.037% f.s. (f.s. = PW6001 Range)	±0.04% rdg. ±0.057% f.s. (f.s. = PW6001 Range)
45 Hz ≤ f ≤ 65 Hz	±0.04% rdg. ±0.025% f.s. (f.s. = PW6001 Range)	±0.04% rdg. ±0.035% f.s. (f.s. = PW6001 Range)
Bandwidths other than DC and 45 Hz ≤ f ≤ 65 Hz	PW6001 accuracy + PW9100 accuracy (Consider sensor rating when calculating f.s. error.)	PW6001 accuracy + PW9100 accuracy (Consider sensor rating when calculating f.s. error.)

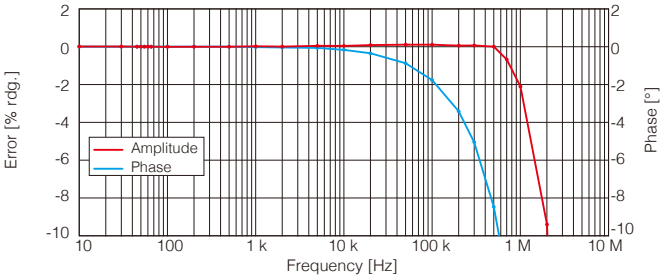
- To calculate the phase accuracy, add the PW6001 accuracy and the PW9100 accuracy.
- For other measurement parameters, add the PW6001 accuracy and the PW9100 accuracy (and consider the sensor rating when calculating the f.s. error).
- Add ±0.12% f.s. (f.s. = PW6001 Range) when using 1 A or 2 A range.
- Accuracy additions defined by conditions in the PW6001 and PW9100 specifications also apply.
- To use the PW6001's sensor phase compensation function when using the CT9902, it is necessary to obtain calibration data for the combination of the device and the CT9902.

PW3390 POWER ANALYZER combined accuracy
- Add the POWER ANALYZER accuracy and the PW9100 accuracy (and consider the sensor rating when calculating f.s. error).
- Accuracy additions defined by the POWER ANALYZER and PW9100 specifications also apply.

Frequency derating and guaranteed accuracy range



Frequency characteristics (example of typical characteristics)



Connecting High Accuracy Sensors to Other Devices

Below are the options necessary for connecting high-accuracy sensors to measurement devices.

Current sensor model	Connector	Extension cable	POWER ANALYZER PW6001, PW3390 SENSOR UNIT CT9555, CT9556, CT9557	POWER HiTESTER 3193-10 (Using AC/DC CLAMP INPUT UNIT 9602)	MEMORY HiCORDER (CURRENT UNIT 8971, 3CH CURRENT UNIT U8977) MR6000, MR8847, MR8827, MR8740, MR8741, MR8740T	MEMORY HiCORDER, Oscilloscope, POWER METER PW3335, PW3336, PW3337
			Connector ME15W (Female)	Connector PL23 (Female)	Connector ME15W (Female)	Connector BNC (Female)
CT6841, CT6843, CT6844, CT6845, CT6846, CT6862, CT6863, 9272-10	 PL23 (Male)	EXTENSION CABLE CT9903	CONVERSION CABLE CT9900	Can be connected directly	CONVERSION CABLE 9318	CONVERSION CABLE CT9900 and SENSOR UNIT CT9555 or CT9557 and CONNECTION CORD L9217 or 9165
CT6841-05, CT6843-05, CT6844-05, CT6845-05, CT6846-05, CT6862-05, CT6863-05, CT6904, CT6875, CT6875-01, CT6876, CT6876-01, CT6877, CT6877-01, PW9100-03, PW9100-04, 9272-05	 ME15W (Male)	EXTENSION CABLE CT9902	Can be connected directly	CONVERSION CABLE CT9901 *Not compatible with CT6877, CT6877-01	CONVERSION CABLE CT9901 and CONVERSION CABLE 9318 *Not compatible CT6877, CT6877-01	SENSOR UNIT CT9555 or CT9557 and CONNECTION CORD L9217 or 9165

SENSOR UNIT

CT9555
SENSOR UNIT, 1 ch

Waveform output
Input connector: ME15W
Output connector: BNC (female)

CT9556
SENSOR UNIT, 1 ch

Waveform output, RMS output
Input connector: ME15W
Output connector: BNC (female)

CT9557
SENSOR UNIT, 4 ch

Waveform output (Each channel), aggregated waveform output, aggregated RMS output
Input connector: ME15W
Output connector: ME15W (CT9557 dedicated), BNC (female)

Input terminals (Unit front)	CT9555, CT9556: HIOKI ME15W (female) CT9557: HIOKI ME15W (female) × 4-channel
Connectable current sensor	Current sensor with HIOKI ME15W (male) on the output terminal CT6841-05, CT6843-05, CT6844-05, CT6845-05, CT6846-05, CT6862-05, CT6863-05, CT6904, CT6875, CT6875-01, CT6876, CT6876-01, PW9100-03, PW9100-04, 9272-05 etc.
Connectable current sensor (Can be connected using the CT9900)	Current sensor with HIOKI PL23 (male) on the output terminal CT6841, CT6843, CT6844, CT6845, CT6846, CT6862, CT6863, + 9272-10, etc.
Rated input voltage	2 V f.s. (rated output signal of the current sensor)
Accuracy	

Waveform output: Same as current sensor
Addition waveform output:
When the same sine wave is input to each SENSOR terminal
1% to 150% of the rated voltage input; The accuracy defined for the frequency range of DC < f < 10 Hz is the design value.

Frequency	Amplitude	Phase
DC	±0.06% rdg. ±0.03% f.s.	Not defined
DC ≤ f ≤ 1 kHz	±0.06% rdg. ±0.03% f.s.	±0.1°
1 kHz < f ≤ 10 kHz	±0.10% rdg. ±0.03% f.s.	±1.0°
10 kHz < f ≤ 100 kHz	±0.20% rdg. ±0.10% f.s.	±(0.1 × f kHz)°
100 kHz < f ≤ 300 kHz	±1.0% rdg. ±0.20% f.s.	
300 kHz < f ≤ 700 kHz	±5.0% rdg. ±0.20% f.s.	
700 kHz < f ≤ 1 MHz	±10.0% rdg. ±0.50% f.s.	

RMS output, addition RMS output:

Frequency	Accuracy
DC	±0.2% rdg. ±0.1% f.s.
5 Hz < f ≤ 10 Hz	±0.3% rdg. ±0.5% f.s.
10 Hz < f < 45 Hz	±0.2% rdg. ±0.2% f.s.
45 Hz ≤ f ≤ 66 Hz	±0.2% rdg. ±0.1% f.s.
66 Hz < f ≤ 10 kHz	±0.2% rdg. ±0.2% f.s.
10 kHz < f ≤ 100 kHz	±0.3% rdg. ±0.5% f.s.
100 kHz < f ≤ 300 kHz	±5.0% rdg. ±0.5% f.s.
300 kHz < f ≤ 700 kHz	±7.0% rdg. ±0.5% f.s.
700 kHz < f ≤ 1 MHz	±10.0% rdg. ±1.0% f.s.

Temperature and humidity range for guaranteed accuracy	23°C ±5°C (73°F ±9°F), 80% RH or less
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	1 year
Temperature coefficient	-10°C to 18°C (14°F to 64°F), 28°C to 50°C (82°F to 122°F) ±0.01% f.s./°C or less
Output voltage	Waveform output, addition waveform output: 2 V f.s. RMS output, addition RMS output: 2 V DC f.s.
Output impedance	50 Ω (only during addition waveform output)
Output terminal	Waveform output: BNC (female) Addition waveform output: BNC (female) or CT9904 dedicated terminal RMS output, addition RMS output: BNC (female)
Connectable devices	Waveform output, addition waveform output, RMS output, addition RMS output (BNC): Devices that can be connected using a cable with BNC (male) (MEMORY HiCORDER, Oscilloscope, etc.)
	Addition waveform output (CT9904 dedicated terminal): Devices with a HIOKI ME15W (female) on the sensor input section Devices with a HIOKI PL23 (female) on the sensor input section such as the 3390, 3193, etc. (CT9901 required)
Operating temperature range	-10°C to 50°C (14°F to 122°F)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), and 80% RH or less (no condensation)
Power supply	AC ADAPTER Z1002: 100 to 240 V AC, 50 / 60 Hz Combined maximum rated power consumption: CT9555, CT9556: 45 VA; CT9557: 155 VA
	External power supply: 10 V to 30 V DC Maximum rated power consumption: CT9555, CT9556: 15 VA; CT9557: 60 VA
Dimensions	CT9555, CT9556: 33 mm (1.30 in) W × 67 mm (2.64 in) H × 132 mm (5.20 in) D (excluding protrusions) CT9557: 116 (4.57 in) mm W × 67 mm (2.64 in) H × 132 mm (5.20 in) D (excluding protrusions)
Mass	CT9555, CT9556: 200 g (7.1 oz) CT9557: 420 g (14.8 oz)
Accessories	CT9555, CT9556: AC ADAPTER Z1008, Power supply cord, Instruction Manual CT9557: AC ADAPTER Z1002, Power supply cord, Instruction Manual
Options	CONNECTION CORD L9217, CONNECTION CORD 9165, CONVERSION CABLE CT9901 (CT9557 only: CONVERSION CABLE CT9900, CONNECTION CABLE CT9904)

Options

Connector Conversion

CONVERSION CABLE CT9900
Converts PL23 (10 pin) to ME15W (12 pin)

CONVERSION CABLE CT9901
Converts ME15W (12 pin) to PL23 (10 pin)

CONVERSION CABLE 9318
For connecting PL23 (10 pin) terminals and CURRENT UNIT 8971, 38 cm (1.25 ft)

Cable Extension

EXTENSION CABLE CT9902
5 m (16.41 ft), ME15W (12 pin) - ME15W (12 pin) terminal

EXTENSION CABLE CT9903
5 m (16.41 ft), PL23 (10 pin) - PL23 (10 pin) terminal

Sensor Unit Options

CONNECTION CABLE CT9904
ME15W (12 pin) terminal - ME15W (12 pin) terminal, 1 m (3.28 ft)
(For CT9557 addition output and PW6001/PW3390 connection)

CONNECTION CORD L9217
Both cord ends are isolated BNC, 1.6 m (5.25 ft)

CONNECTION CORD 9165
Metallic BNC at both ends, for metallic BNC terminals, 1.5 m (4.92 ft)

Phase Shift Values

When using the phase shift function of the PW6001 and PW3390, please input the adjustment (typical) values.

Model No.	Frequency [kHz]	Typical value of phase difference between input and output [°]
9272 (20 A)	50.0	-3.34
9272 (200 A)	50.0	-4.18
CT6841	100.0	-1.82
CT6843	100.0	-1.68
CT6844	50.0	-1.29
CT6845	20.0	-0.62
CT6846	20.0	-1.89
CT6862	300.0	-10.96
CT6863	100.0	-4.60
CT6875	200.0	-10.45
CT6875-01	200.0	-12.87
CT6876	200.0	-12.96
CT6876-01	200.0	-14.34
CT6877	100.0	-2.63
CT6877-01	100.0	-3.34
CT6904	300.0	-9.82
CT6904-60	300.0	-9.82
PW9100	300.0	-2.80

*Not compatible with CT6877, The values for each sensor are true for the following conditions:
- Standard cable length in use (not using an extension)
- The conductor being measured is placed in the center of the sensor

Connecting Wideband Sensors to Other Devices


BNC terminal

Below are the options necessary for connecting wide-bandwidth sensors to measurement devices.

Current sensor model No.	POWER ANALYZER PW6001	MEMORY HiCORDER Oscilloscope
3273-50 3274 3275 3276 CT6700 CT6701	- Direct connection possible - Power by the PW6001	- Dedicated extension cable (synthetic resin BNC or metal BNC conversion cable) is recommended - Power supply 3269 or 3272 is required - When using a recorder, the Probe Power Unit Z5021 is also available.
CT6710 CT6711	–	When using a recorder, the Probe Power Unit Z5021 supports the use of up to 4 sensors.

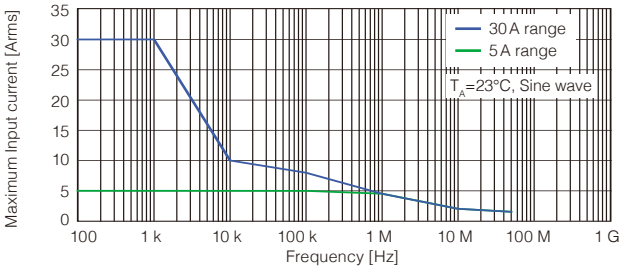
Wideband Sensor Specifications

Clamp Type

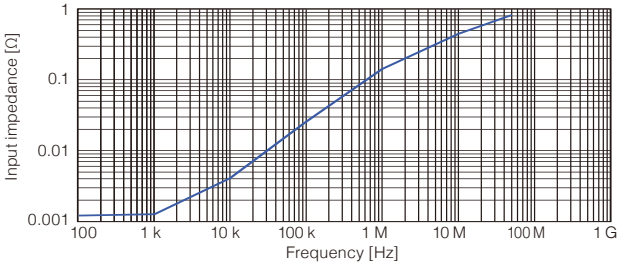
CT6710
30 A, 5 A, 0.5 A AC/DC
Output connector: BNC

Rated current (DC or 45 to 66 Hz sine wave,within maximum peak current for each range)	30 A range : 30 Arms 5 A range : 5 Arms 0.5 A range : 0.5 Arms
Frequency band	DC to 50 MHz (-3dB)
Diameter of measurable conductors	ϕ 5 mm (0.20 in) or less
Amplitude accuracy (DC or 45 to 66 Hz sine wave, within maximum peak current for each range)	30 A range : ±3.0 %rdg. ±1 mV, Typical ±1.0 %rdg. ±1 mV (≤ 10 A rms) 5 A range : ±3.0 %rdg. ±1 mV, Typical ±1.0 %rdg. ±1mV 0.5 A range : ±3.0 %rdg. ±10 mV, Typical ±1.0 %rdg. ±10 mV 23°C± 5°C (73°F ±9°F), Warm-up time: 30 minutes
Accuracy guarantee period	1 year (until the upper jaw has been retracted and locked up to 10,000 cycles)
Guaranteed accuracy period after adjustment made by Hioki	6 months
Noise	75 μ Arms or less (typical 60 μArms) (For current probe only) (0.5 A range, with a 20MHz bandwidth instrument)
Rise time (10% to 90%)	7.0 ns or less
Delay time (The time lag between the input signal with a rise time of 1 ns and the output signal)	30 A range : Typical 12 ns 5 A range : Typical 12 ns 0.5 A range : Typical 13 ns
Maximum peak current	30 A range : ±50 A peak (Maximum 2 sec input)* 5 A range : ±7.5 A peak 0.5 A range : ±0.75 A peak (<10 MHz), ±0.3 A peak (≥10 MHz)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Effect of external magnetic fields	20 mA or less (DC or 60 Hz input, 400 A/m magnetic field)
Measurable conductors	Insulated conductors
Compliance standards	Safety : EN61010, EMC : EN61326
Supply voltage	DC ±12 V ±0.5 V
Rated power	7.8 VA (For current probe only), (when measuring 30 A rms continuously)
Cable length	Sensor cable (Between sensor and junction box) : 1.5 m, Power cord : 1.0 m
Dimensions (Excluding BNC connector or protrusions)	Sensor : 155W × 18H × 26D mm Junction box : 45W × 120H × 25D mm Termination unit : 29W × 83H × 40D mm
Mass	Approx. 370 g (13.1 oz.)
Accessories	Instruction Manual, Carrying case
Option	Model 3269 Power Supply (Up to two simultaneous sensor connections possible)

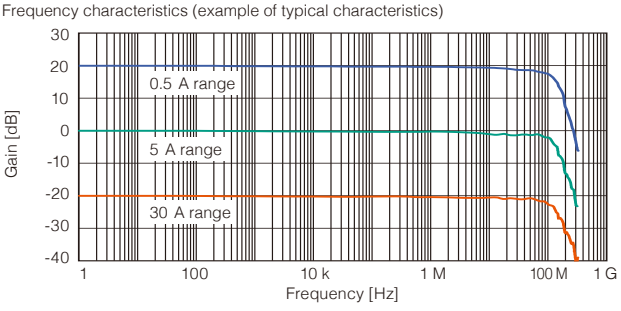
Frequency derating (example of typical characteristics)



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)

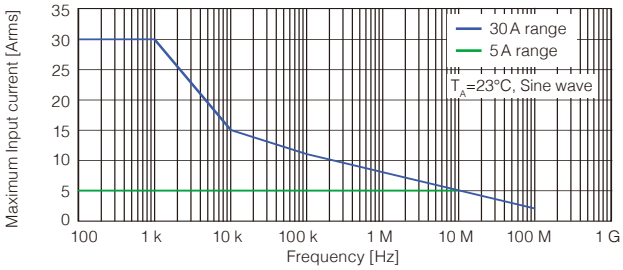


Clamp Type

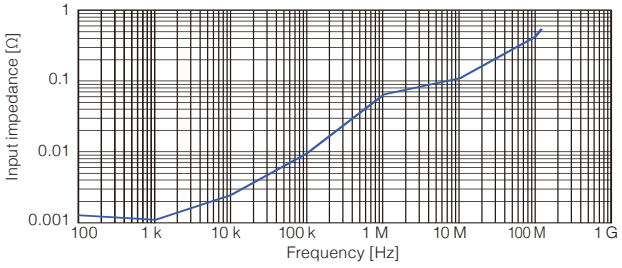
CT6711
30 A, 5 A, 0.5 A AC/DC
Output connector: BNC

Rated current (DC or 45 to 66 Hz sine wave,within maximum peak current for each range)	30 A range : 30 Arms 5 A range : 5 Arms 0.5 A range : 0.5 Arms
Frequency band	DC to 120 MHz (-3dB)
Diameter of measurable conductors	ϕ 5 mm (0.20 in) or less
Amplitude accuracy (DC or 45 to 66 Hz sine wave, within maximum peak current for each range)	30 A range : ±3.0 %rdg. ±1 mV, Typical ±1.0 %rdg. ±1 mV (≤ 10 A rms) 5 A range : ±3.0 %rdg. ±1 mV, Typical ±1.0 %rdg. ±1mV 0.5 A range : ±3.0 %rdg. ±10 mV, Typical ±1.0 %rdg. ±10 mV 23°C± 5°C (73°F ±9°F), Warm-up time: 30 minutes
Accuracy guarantee period	1 year (until the upper jaw has been retracted and locked up to 10,000 cycles)
Guaranteed accuracy period after adjustment made by Hioki	6 months
Noise	75 μA rms or less (typical 60 μArms) (For current probe only) (0.5 A range, with a 20MHz bandwidth instrument)
Rise time (10% to 90%)	2.9 ns or less
Delay time (The time lag between the input signal with a rise time of 1 ns and the output signal)	30 A range : Typical 12 ns 5 A range : Typical 12 ns 0.5 A range : Typical 13 ns
Maximum peak current	30 A range : ±50 A peak * 5 A range : ±7.5 A peak 0.5 A range : ±0.75 A peak (<10 MHz), ±0.3 A peak (≥10 MHz)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Effect of external magnetic fields	5 mA or less (DC or 60 Hz input, 400 A/m magnetic field)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	DC ±12 V ±0.5 V
Rated power	7.8 VA (For current probe only), (when measuring 30 A rms continuously)
Cable length	Sensor cable (Between sensor and junction box) : 1.5 m, Power cord : 1.0 m
Dimensions (Excluding BNC connector or protrusions)	Sensor : 155W × 18H × 26D mm Junction box : 45W × 120H × 25D mm Termination unit : 29W × 83H × 40D mm
Mass	Approx. 370 g (13.1 oz.)
Accessories	Instruction Manual, Carrying case
Option	Model 3269 Power Supply (Up to two simultaneous sensor connections possible)

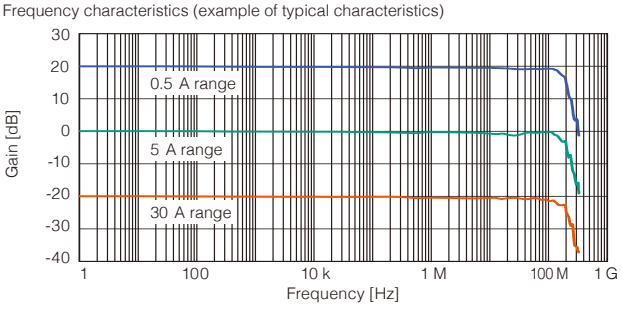
Frequency derating (example of typical characteristics)



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)



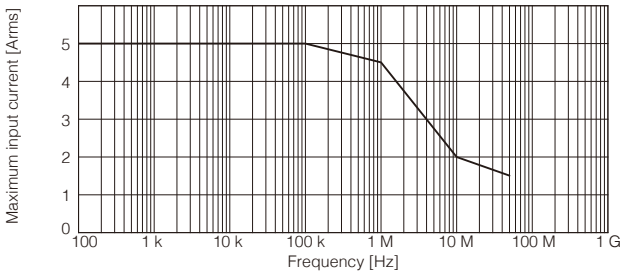
Clamp Type

CT6700
5 A AC/DC

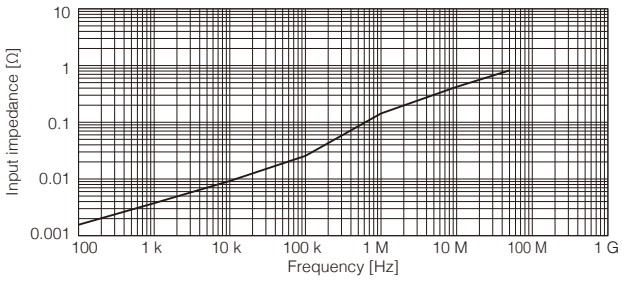
Output connector: BNC

Rated current	5 Arms
Frequency band	DC to 50 MHz (-3 dB)
Diameter of measurable conductors	ϕ 5 mm (0.20 in) or less
Accuracy	Amplitude accuracy: ±3.0% rdg. ±1 mV (typical ±1.0% rdg. ±1 mV) DC, 45 Hz to 66 Hz, Sine wave input from 0 to 5 A rms 23°C± 5°C (73°F ±9°F), Warm-up time: 30 minutes
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	6 months
Output noise	75 µArms or less (typical 60 µA rms, with measurement instrument of 30 MHz band)
Effect of temperature	±2% rdg. or less (When zero-adjustment is performed in the range excluding 23°C ±5°C (73°F ±9°F), with 50 Hz / 5 Arms input)
Output voltage	1 V/A
Output impedance	50 Ω
Output connector	BNC connector
Input resistance	Refer to the input impedance characteristics table
Rising time	7.0 ns or less (10% to 90%)
Delay time	13 ns Typical
Maximum peak current	±7.5 Apeak (Non-continuous)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±12 V ±0.5 V
Rated power	3.2 VA or less
Cable length	Sensor cable: 1.5 m (4.92 ft), Power supply cable: 1 m (3.28 ft)
Dimensions	Sensor: 155 mm (6.10 in) W × 18 mm (0.71 in) H × 26 mm (1.02 in) D, Termination section: 29 mm (1.14 in) W × 83 mm (3.27 in) H × 40 mm (1.57 in) D
Mass	250 g (8.8 oz)
Accessories	Instruction Manual, Carrying case
Options	POWER SUPPLY 3269, POWER SUPPLY 3272

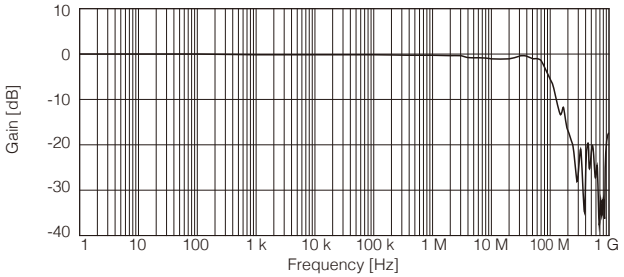
Frequency derating



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)



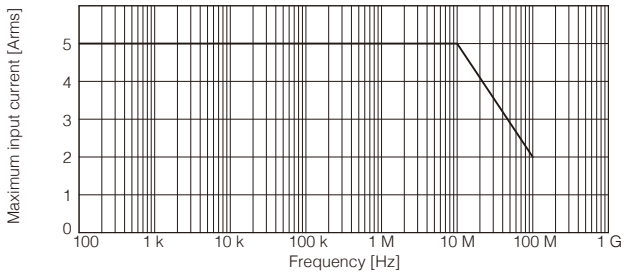
Clamp Type

CT6701
5 A AC/DC

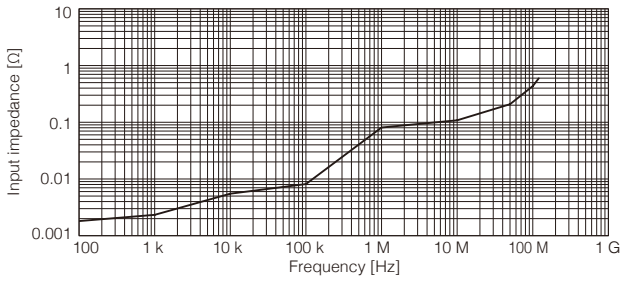
Output connector: BNC

Rated current	5 Arms
Frequency band	DC to 120 MHz (-3 dB)
Diameter of measurable conductors	ϕ 5 mm (0.20 in) or less
Accuracy	Amplitude accuracy: ±3.0% rdg. ±1 mV (typical ±1.0% rdg. ±1 mV) DC, 45 Hz to 66 Hz, Sine wave input from 0 to 5 A rms 23°C± 5°C (73°F ±9°F), Warm-up time: 30 minutes
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	6 months
Output noise	75 µA rms or less (typical 60 µArms, with measurement instrument of 30 MHz band)
Effect of temperature	±2% rdg. or less (When zero-adjustment is performed in the range excluding 23°C ±5°C (73°F ±9°F), with 50 Hz / 5 Arms input)
Output voltage	1 V/A
Output impedance	50 Ω
Output connector	BNC connector
Input resistance	Refer to the input impedance characteristics table
Rising time	2.9 ns or less (10% to 90%)
Delay time	12 ns Typical
Maximum peak current	±7.5 Apeak (Non-continuous)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±12 V ±0.5 V
Rated power	3.2 VA or less
Cable length	Sensor cable: 1.5 m (4.92 ft), Power supply cable: 1 m (3.28 ft)
Dimensions	Sensor: 155 mm (6.10 in) W × 18 mm (0.71 in) H × 26 mm (1.02 in) D, Termination section: 29 mm (1.14 in) W × 83 mm (3.27 in) H × 40 mm (1.57 in) D
Mass	250 g (8.8 oz)
Accessories	Instruction Manual, Carrying case
Options	POWER SUPPLY 3269, POWER SUPPLY 3272

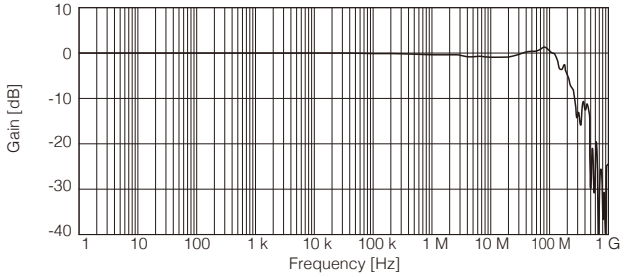
Frequency derating



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)



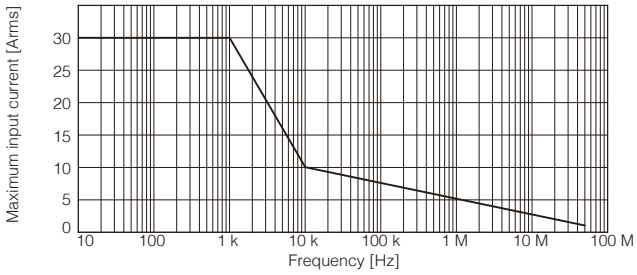
Clamp Type

3273-50
30 A AC/DC

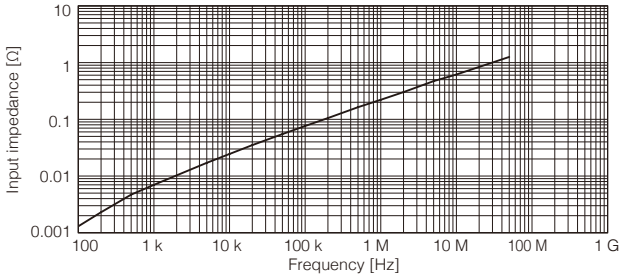
Output connector: BNC

Rated current	30 A rms
Frequency band	DC to 50 MHz (-3 dB)
Diameter of measurable conductors	ϕ 5 mm (0.20 in) or less
Accuracy	±1.0% rdg. ±1 mV; to 30 A rms ±2.0% rdg. ; to 50 A peak 23 ±5°C (73°F ±9°F), Warm-up time: 30 minutes, DC, 45 to 66 Hz, Sine wave at input within continuous maximum input range
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	6 months
Output noise	2.5 mArms or less (with measurement instrument of 20 MHz band)
Effect of temperature	Within ±2% (with input of 50 Hz / 30 Arms, in range of 0°C to 40°C (32°F to 104°F))
Output voltage	0.1 V/A
Output connector	BNC connector
Input resistance	Refer to the input impedance characteristics table
Rising time	7 ns or less (10% to 90%)
Delay time	16 ns Typical
Maximum peak current	50 A peak (Non-continuous)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±12 V ±0.5 V
Rated power	5.6 VA or less
Cable length	Sensor cable: 1.5 m (4.92 ft), Power supply cable: 1 m (3.28 ft)
Dimensions	Sensor: 175 mm (6.89 in) W × 18 mm (0.71 in) H × 40 mm (1.57 in) D, Termination section: 27 mm (1.06 in) W × 55 mm (2.17 in) H × 18 mm (0.71 in) D
Mass	230 g (8.1 oz)
Accessories	Instruction Manual, Soft case
Options	POWER SUPPLY 3269, POWER SUPPLY 3272

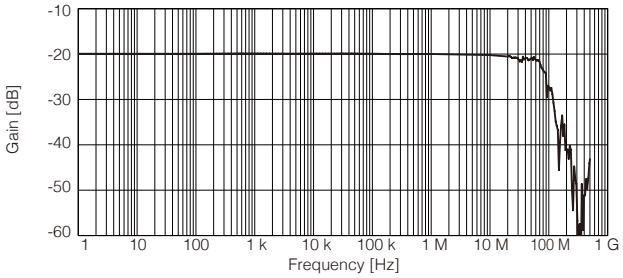
Frequency derating



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)



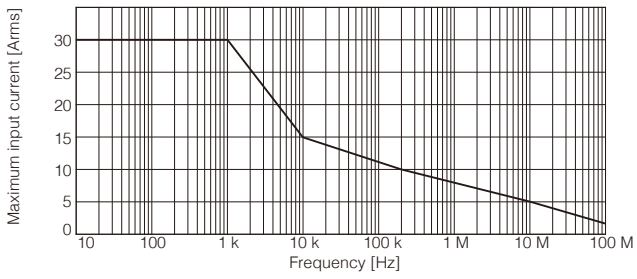
Clamp Type

3276
30 A AC/DC

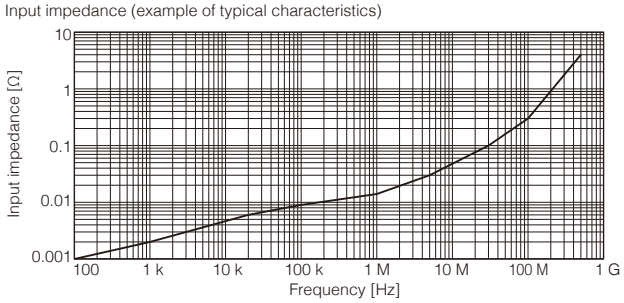
Output connector: BNC

Rated current	30 A rms
Frequency band	DC to 100 MHz (-3 dB)
Diameter of measurable conductors	ϕ 5 mm (0.20 in) or less
Accuracy	±1.0% rdg. ±1 mV; to 30 A rms ±2.0% rdg. ; to 50 A peak Accuracy at 23°C ±5°C (73°F ±9°F), within 30 minutes of turning the power on DC, 45 Hz to 66 Hz, Sine wave at input within continuous maximum input range
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	6 months
Output noise	2.5 mArms or less (with measurement instrument of 20 MHz band)
Effect of temperature	Within ±2% (with input of 50 Hz / 30 A rms, in range of 0°C to 40°C (32°F to 104°F))
Output voltage	0.1 V/A
Output connector	BNC connector
Input resistance	Refer to the input impedance characteristics table
Rising time	3.5 ns or less (10% to 90%)
Delay time	14 ns Typical
Maximum peak current	50 A peak (Non-continuous)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±12 V ±0.5 V
Rated power	5.3 VA or less
Cable length	Sensor cable: 1.5 m (4.92 ft), Power supply cable: 1 m (3.28 ft)
Dimensions	Sensor: 175 mm (6.89 in) W × 18 mm (0.71 in) H × 40 mm (1.57 in) D, Termination section: 27 mm (1.06 in) W × 55 mm (2.17 in) H × 18 mm (0.71 in) D
Mass	240 g (8.5 oz)
Accessories	Instruction Manual, Carrying case
Options	POWER SUPPLY 3269, POWER SUPPLY 3272

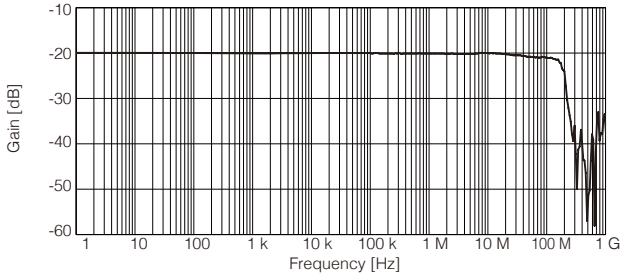
Frequency derating



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)



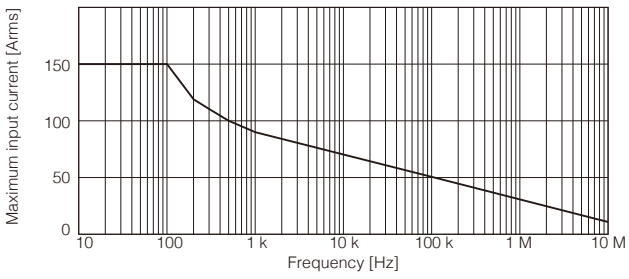
Clamp Type

3274
150 A AC/DC

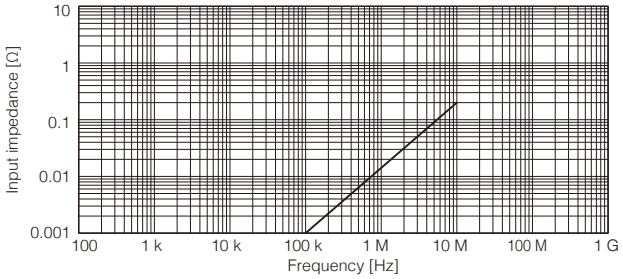
Output connector: BNC

Rated current	150 A rms
Frequency band	DC to 10 MHz (-3 dB)
Diameter of measurable conductors	ϕ 20 mm (0.79 in) or less
Accuracy	To 150 A: ±1.0% rdg. ±1 mV 150 A to 300 A peak: 2.0% rdg. 23°C± 5°C (73°F ±9°F), Warm-up time: 30 minutes DC, Sine wave from 45 Hz to 66 Hz
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	6 months
Output noise	25 mA rms or less (with measurement instrument of 20 MHz band)
Effect of temperature	Within ±2% (with input of 55 Hz / 150 A, in range of 0°C to 40°C (32°F to 104°F))
Output voltage	0.01 V/A
Output connector	BNC connector
Input resistance	Refer to the input impedance characteristics table
Rising time	35 ns or less (10% to 90%)
Delay time	40 ns Typical
Maximum peak current	300 Apeak (500 Apeak with pulse width ≤ 30 μs)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±12 V ±1 V
Rated power	5.5 VA or less
Cable length	Sensor cable: 2 m (6.56 ft), Power supply cable: 1 m (3.28 ft)
Dimensions	Sensor: 176 mm (6.93 in) W × 69 mm (2.72 in) H × 27 mm (1.06 in) D, Termination section: 27 mm (1.06 in) W × 55 mm (2.17 in) H × 18 mm (0.71 in) D
Mass	500 g (17.6 oz)
Accessories	Instruction Manual, Carrying case
Options	POWER SUPPLY 3269, POWER SUPPLY 3272

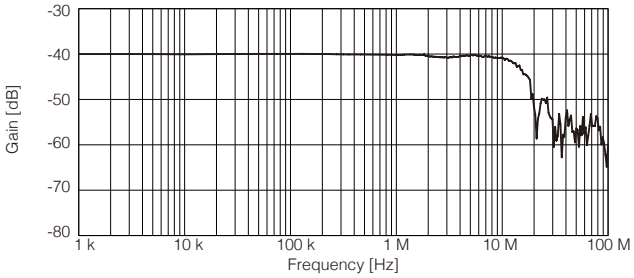
Frequency derating



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)



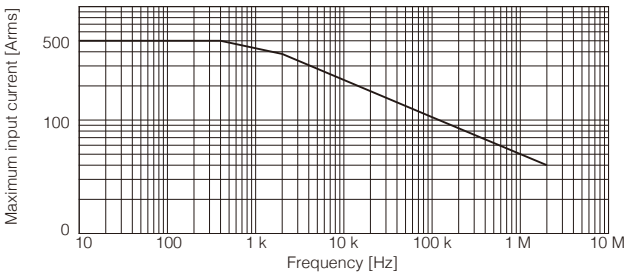
Clamp Type

3275
500 A AC/DC

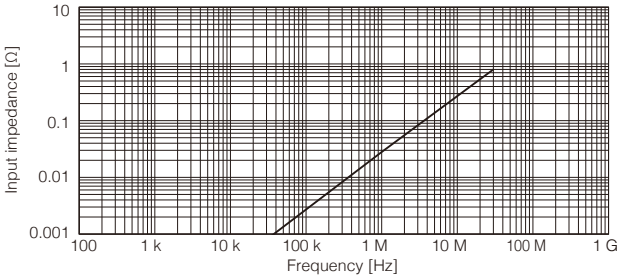
Output connector: BNC

Rated current	500 A rms
Frequency band	DC to 2 MHz (-3 dB)
Diameter of measurable conductors	ϕ 20 mm (0.79 in) or less
Accuracy	To 500 A: ±1.0% rdg. ±5 mV To 700 A peak: ±2.0% rdg. 23°C± 5°C (73°F ±9°F), Warm-up time: 30 minutes DC, Sine wave from 45 Hz to 66 Hz
Accuracy guarantee period	1 year
Guaranteed accuracy period after adjustment made by Hioki	6 months
Output noise	25 mA rms or less (with measurement instrument of 20 MHz band)
Effect of temperature	Within ±2% (with input of 50 Hz / 500 A, in range of 0°C to 40°C (32°F to 104°F))
Output voltage	0.01 V/A
Output connector	BNC connector
Input resistance	Refer to the input impedance characteristics table
Rising time	175 ns or less (10% to 90%)
Delay time	66 ns Typical
Maximum peak current	700 Apeak (Non-continuous)
Operating temperature and humidity range	0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
Storage temperature and humidity range	-10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
Measurable conductors	Insulated conductors
Compliance standards	Safety: EN61010, EMC: EN61326
Supply voltage	±12 V ±0.5 V
Rated power	7.2 VA or less
Cable length	Sensor cable: 2 m (6.56 ft), Power supply cable: 1 m (3.28 ft)
Dimensions	Sensor: 176 mm (6.93 in) W × 69 mm (2.72 in) H × 27 mm (1.06 in) D, Termination section: 27 mm (1.06 in) W × 55 mm (2.17 in) H × 18 mm (0.71 in) D
Mass	520 g (18.3 oz)
Accessories	Instruction Manual, Carrying case
Options	POWER SUPPLY 3269, POWER SUPPLY 3272

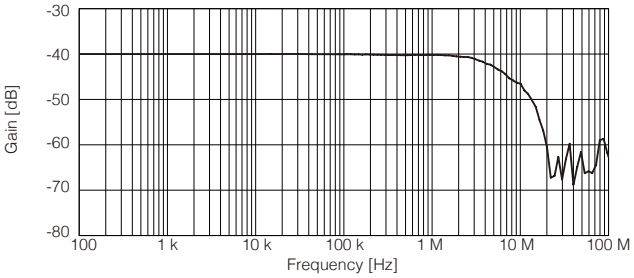
Frequency derating



Input impedance (example of typical characteristics)



Frequency characteristics (example of typical characteristics)



Technology that Supports the Evolution of Current Testing

Measurement Method

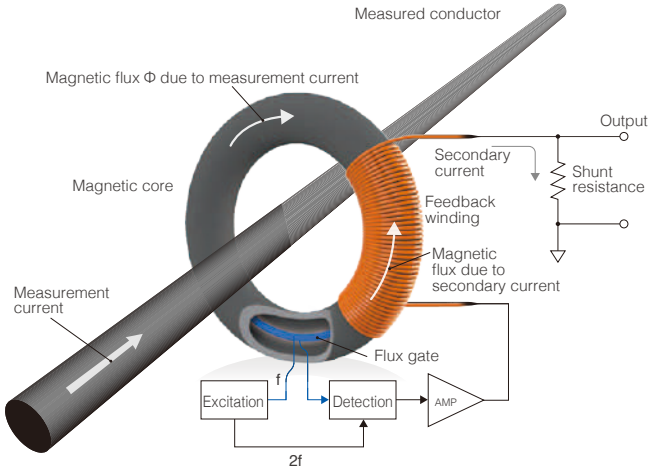
HIOKI's high performance sensors are divided in two types: high accuracy sensors and wideband sensors.

High-Accuracy Sensors

High-accuracy sensors use the "zero flux method (flux gate detection type)" as the measurement method. High-frequency currents are detected with the winding (CT method), and DC to low frequency currents are detected using a "flux gate."

Flux gate detection

Flux gate detection has outstanding linear properties, and maintains high precision even at low current levels.
The flux gate component, used in DC detection, has extremely small offset in a wide range of temperatures due to its operating principle and therefore achieves high precision and superior stability. **Ideal for measurements that require high accuracy using instruments such as power analyzers and power meters.**
Highly applicable for testing inverter efficiency, inverter output power, reactor or transformer loss, as well as long-term DC measurements.

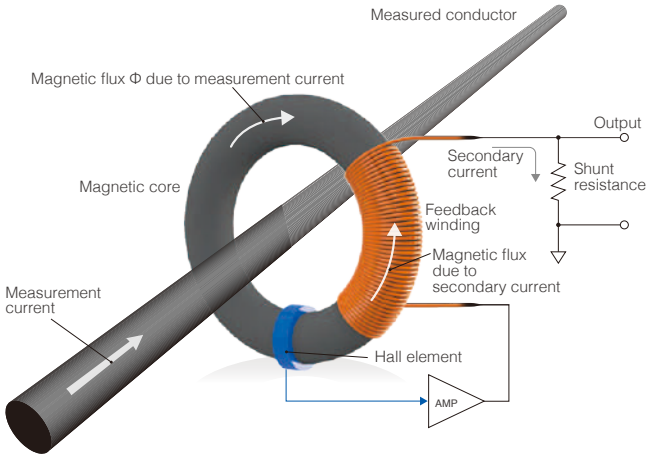


Wideband Sensors

Wideband sensors use the "zero flux method (Hall element detection type)" to measure. High-frequency currents are detected with the winding (CT method), and low frequency currents including DC are detected with the "Hall element."

Hall element detection

Hall element detection is characterized by a simple structure and a sensor section that can easily be downsized. Hioki combines our own proprietary thin-film Hall elements with the zero flux method to deliver sensors that can conduct measurements over a wide range of frequencies, from DC to MHz bands.
Ideal for waveform observations using a MEMORY HiCORDER or oscilloscope, Hall element detection achieves a high S/N ratio in the wideband range, making them particularly well-suited for design verification of high-speed signal circuits and other electronic circuitry.

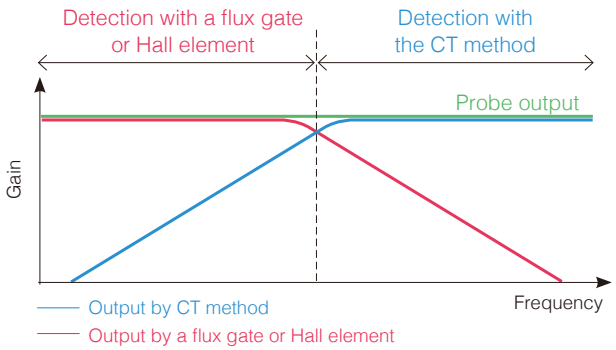


Zero flux method

The zero flux method is a measurement method used in both high-accuracy and wideband sensors. As the principles the sensor is based on give it both low operating magnetic flux level and low insertion impedance, it is characterized by its lack of effect on the measured object and low instrument loss.

Operating principle

1. The current flowing in the measured conductor (primary side) generates a magnetic flux Φ in the magnetic core.
2. A secondary current corresponding to the turns ratio on the feedback winding on the secondary side flows to cancel the magnetic flux Φ.
3. By detecting the secondary current from step 2. using the shunt resistance, the output proportional to the current flowing in the measured conductor can be calculated.

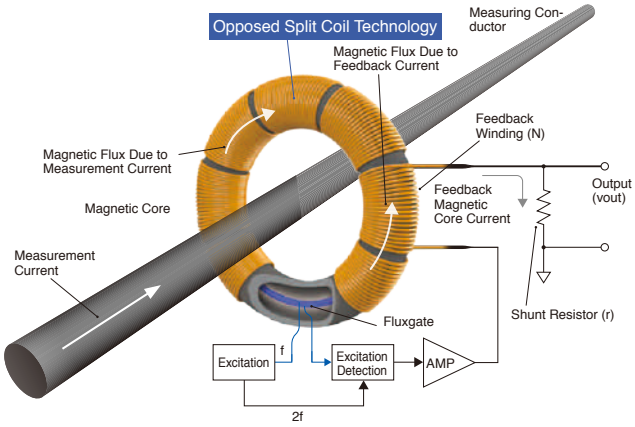


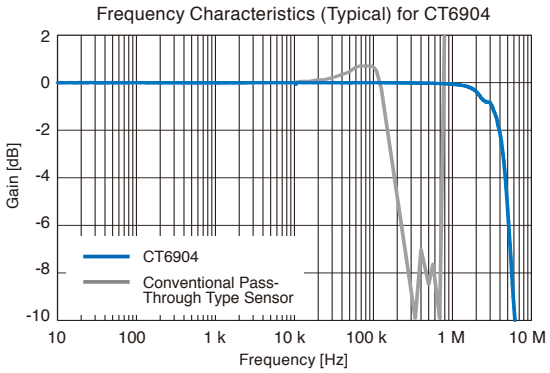
CT6904: World Leading Bandwidth and Accuracy Measurement in One Device

Broadband Flux Gate Zero-Flux Method Sensor with New Opposed Split Coil

Current sensor performance is maximized with the “Zero Flux (Fluxgate Detection)” measurement method. High frequency current is detected with windings (CT method), and direct to low frequency current is detected with flux gates.
The CT6904 achieves wide-bandwidth measurement with the newly developed opposed split coil (*1).

*1: Opposed Split Coil: Coil in which divided windings are arranged opposite each other on a magnetic core to broaden the range of current detection

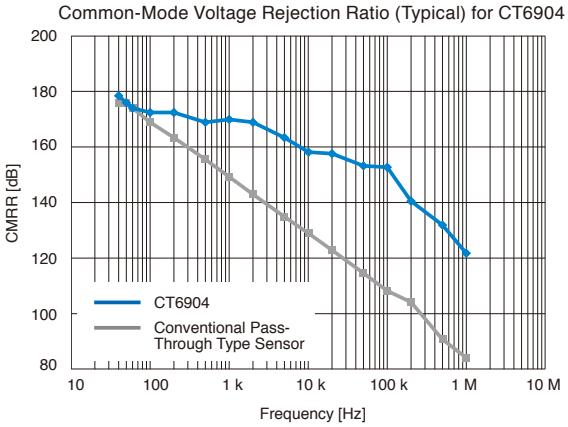




High Noise Resistance Common-Mode Rejection Ratio (CMRR) of 120 dB or More (100 kHz)

The CT6904 achieves both a broadband and an overwhelming noise resistance by completely shielding the opposing split coils with a solid shield (*2) of a unique shape. Exact measurements can be performed without effects from of ambient voltage.

*2: Aluminum shield machined into a unique shape to eliminate influence on current measurements



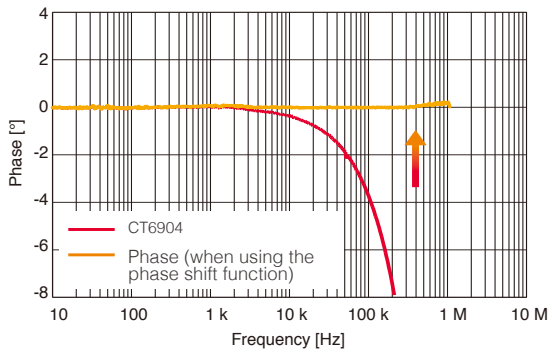
Sensor-Meter Compatibility That Only Hioki Can Achieve

Hioki designs and produces both meters and current sensors in-house, balancing their mutual characteristics to provide optimized measurement systems. For example, by compensating for the current sensor’s phase characteristics on the meter, the system flexibly supports even measurement environments that require high precision phase characteristics.

Phase shift made possible by in-house sensor development

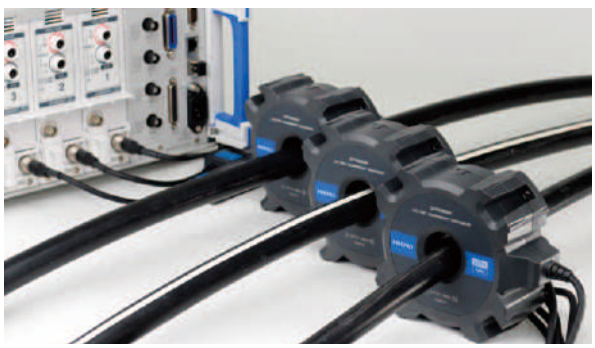
Any current sensor will have “phase characteristics” that create phase errors in wide bandwidths. The Hioki POWER ANALYZER corrects for phase errors not only on specific frequencies, but across a wide range of bandwidths.

AC/DC CURRENT SENSOR CT6904’s phase shift example (typical value)



One-button connection and automatic sensor recognition

Power can be supplied to the current sensor from the power analyzer itself, so there is no need for a separate external power supply. Connected sensors are recognized automatically for quick and reliable measurements.



High Quality, Easy-to-Use Clamp Sensors

Ideal for use in environmental testing

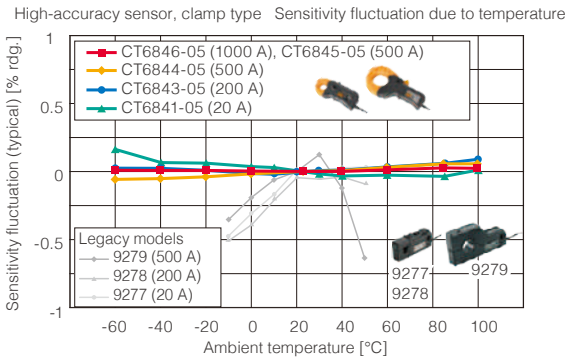
Broad temperature characteristics and an operating temperature range of -40°C to 85°C lets you use Hioki clamp sensors for operational evaluations of devices and inside equipment that are subject to extreme temperature changes. The instruments' tough performance helps ensure you can make the measurements you need.

Single-handed operation, even in confined spaces

This product is 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.

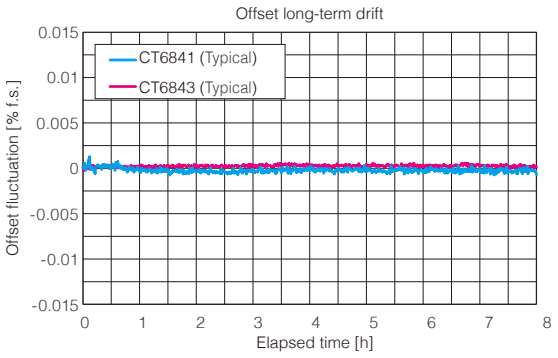
Highly convenient for onsite testing

Easily connect high-accuracy clamp-type sensors without cutting the cables. Sensors operate over a temperature range of -40°C to 85°C (-40°F to 185°F), which enables highly accurate measurements even inside the engine compartment of a car.



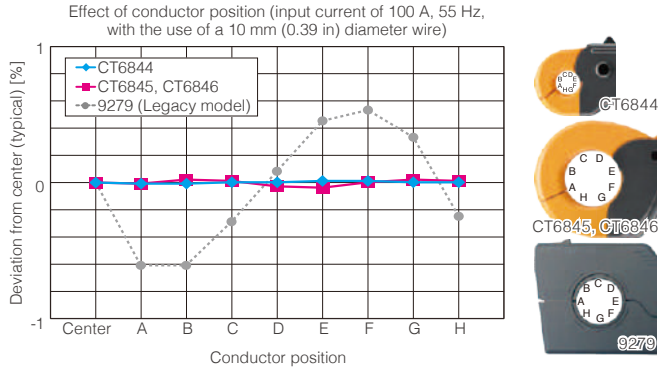
Offset stability

The flux gate technology achieves long-term, high offset stability.



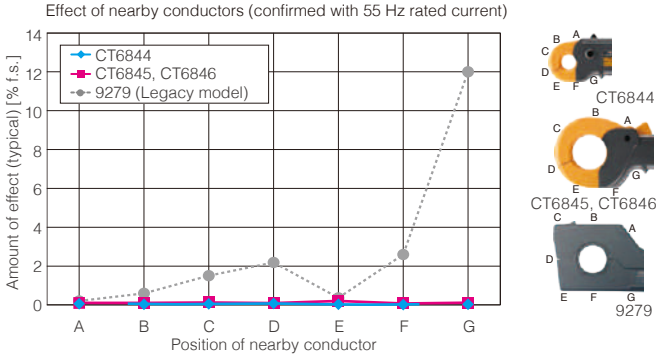
Effect of conductor position

Conductor position changes within the clamp core have little effect on measured values.



Effect of nearby conductors

Virtually no effect from currents flowing in surrounding wires when measuring complex wiring.



Models & Options

High-Accuracy Sensor (ME15W Terminal)

Product Name	Model No. (Order Code)	Specifications
AC/DC CURRENT SENSOR	CT6904	500 A
AC/DC CURRENT SENSOR	CT6904-60	800 A (Custom Order)
AC/DC CURRENT SENSOR	CT6862-05	50 A
AC/DC CURRENT SENSOR	CT6863-05	200 A
AC/DC CURRENT SENSOR	CT6875	500 A
AC/DC CURRENT SENSOR	CT6875-01	500 A, 10 m (32.81 ft) length
AC/DC CURRENT SENSOR	CT6876	1000 A
AC/DC CURRENT SENSOR	CT6876-01	1000 A, 10 m (32.81 ft) length
AC/DC CURRENT SENSOR	CT6877	2000 A

Product Name	Model No. (Order Code)	Specifications
AC/DC CURRENT SENSOR	CT6877-01	2000 A, 10 m (32.81 ft) length
AC/DC CURRENT PROBE	CT6841-05	20 A
AC/DC CURRENT PROBE	CT6843-05	200 A
AC/DC CURRENT PROBE	CT6844-05	500 A, ϕ20 mm (0.79 in)
AC/DC CURRENT PROBE	CT6845-05	500 A, ϕ50 mm (1.97 in)
AC/DC CURRENT PROBE	CT6846-05	1000 A, ϕ50 mm (1.97 in)
CLAMP ON SENSOR	9272-05	20 A/ 200 A
AC/DC CURRENT BOX	PW9100-03	50 A, 3-ch
AC/DC CURRENT BOX	PW9100-04	50 A, 4-ch

High-Accuracy Sensor (PL23 Terminal)

Product Name	Model No. (Order Code)	Specifications
AC/DC CURRENT SENSOR	CT6862	50 A
AC/DC CURRENT SENSOR	CT6863	200 A
AC/DC CURRENT PROBE	CT6841	20 A
AC/DC CURRENT PROBE	CT6843	200 A

Product Name	Model No. (Order Code)	Specifications
AC/DC CURRENT PROBE	CT6844	500 A, ϕ 20 mm (0.79 in)
AC/DC CURRENT PROBE	CT6845	500 A, ϕ 50 mm (1.97 in)
AC/DC CURRENT PROBE	CT6846	1000 A
CLAMP ON SENSOR	9272-10	20 A/ 200 A

High-Accuracy Sensor Options

Product Name	Model No. (Order Code)	Specifications
SENSOR UNIT	CT9555	For single-line drive
SENSOR UNIT	CT9556	For single-line drive, with RMS output
SENSOR UNIT	CT9557	For 4-line drive, with aggregated output
CONVERSION CABLE	CT9900	PL23 - ME15W
CONVERSION CABLE	CT9901	ME15W-PL23
CONVERSION CABLE	9318	PL23 - ME15M

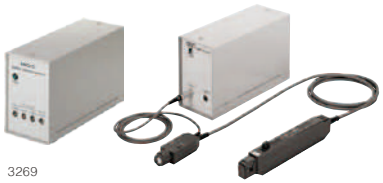
Product Name	Model No. (Order Code)	Specifications
EXTENSION CABLE	CT9902	ME15W - ME15W
EXTENSION CABLE	CT9903	PL23 - PL23
CONNECTION CABLE	CT9904	Aggregated output - ME15W
CONNECTION CORD	L9217	Isolated BNC - Isolated BNC
CONNECTION CORD	9165	Metallic BNC - Metallic BNC

Wideband Sensor

Product Name	Model No. (Order Code)	Specifications
CLAMP ON PROBE	3273-50	30 A
CLAMP ON PROBE	3274	150 A
CLAMP ON PROBE	3275	500 A
CLAMP ON PROBE	3276	30 A

Product Name	Model No. (Order Code)	Specifications
CURRENT PROBE	CT6700	5 A
CURRENT PROBE	CT6701	5 A
CURRENT PROBE	CT6710	30 A, 5 A, 0.5 A
CURRENT PROBE	CT6711	30 A, 5 A, 0.5 A

Wideband Sensor Options



3269

3272 pictured with current probe

Product Name	Model No. (Order Code)
POWER SUPPLY	3269
POWER SUPPLY	3272

Specifications	3269	3272
Connectable current sensor	CT6700, CT6701, 3273-50, 3274, 3275, 3276× 4 max. CT6710,CT6711 ×2 max.	CT6700, CT6701 × 2 max. 3273-50, 3274, 3275, 3276 × 1 max.
Number of supply channels	4	2
Output voltage	12 V ±0.5 V, 2.5 A (sum of each channel)	12 V ±0.5 V, 600 mA (sum of each channel)
Power supply	100 V to 240 V AC, 50 Hz/60 Hz, 170 VA max.	100 V AC ±10%, 50 Hz/60 Hz, 20 VA max. (Specification required for 120, 220, 240 V)
Dimensions, Mass	80 mm (3.15 in) W × 119 mm (4.69 in) H × 200 mm (7.87 in) D, 1.1 kg (38.8 oz)	73 mm (2.87 in) W × 110 mm (4.33 in) H × 186 mm (7.32 in) D, 1.1 kg (38.8 oz)
Accessories	Power supply cord, Instruction Manual	Power supply cord, Instruction Manual, Spare fuse

HIOKI

HIOKI E.E. CORPORATION

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

Scan for all regional contact information

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All information correct as of June 20, 2019. All specifications are subject to change without notice.

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