Operating environment	Indoor use, pollution degree 2, altitude up to 2000 m (6562 ft.)
Operating temperature and humidity range	–40°C to 85°C (–40°F to 185.0°F) 80% RH or less (non-condensing)
Storage temperature and humidity range	–40°C to 85°C (–40°F to 185.0°F) 80% RH or less (non-condensing)
Standards	Safety: EN 61010 EMC: EN 61326
Withstand voltage	7.4 kV AC (sensed current: 1 mA) 50 Hz/60 Hz for 1 minute, between through window and cable output terminal
Protection against mechanical impacts	IK07 (energy level: 2 J, test height defined in EN 61010 Safety requirements: 400 mm)
Power supply	Supplied from PW8001, PW6001, PW3390, CT9555, CT9556, CT9557, U8977, or external DC power supply Rated supply voltage: ±11.5 V to ±15 V (Tracking) Maximum rated current: ±150 mA (50 A/55 Hz measurement, ±12 V power supply)
Maximum rated power	4 VA (50 A/55 Hz measurement, ±12 V power supply)
Interface	Dedicated interface (ME15W)
Dimensions	Approx. 70W × 100H × 53D mm (2.76"W × 3.94"H × 2.09"D) (excluding protrusions and the cable)
Output cable length	CT6872: Approx. 3 m CT6872-01: Approx.10 m
Mounting hole diameter	ϕ4.8mm (M4 screw, recommended tightening torque: 1.2 N•m to 1.5 N•m)
Weight	CT6872: Approx. 370 g (13.1 oz.) CT6872-01: Approx. 690 g (24.3 oz.)
Product warranty duration	3 years
Accessories	Mark band ×6 Instruction Manual Operating Precautions (0990A907)
Options	CT9901 Conversion Cable CT9902 Extension Cable
Memory function	Sensor information can be read for products with memory function support. Applicable product: PW8001
Rated current	50 A AC/DC
Measurable conductor diameter	ϕ24 mm or less
Maximum input current	Not exceeding derating curve shown in Figure 1 However, a current of up to ±150 A peak (design value) is allowable for up to 20 ms at 40°C or less.
Output voltage	4 mV/A
Maximum rated line-to-ground voltage	1000 V (Measurement category III) Anticipated transient overvoltage: 8000 V
Output resistance	50 Ω ±10 Ω
Accuracy guarantee conditions	Accuracy guarantee duration: 1 year Accuracy guarantee duration after adjustment made by Hioki: 1 year Accuracy guarantee temperature and humidity range: 23°C ±5°C (73°F ±9°F), 80% RH or less Warm-up time: at least 30 min Sine wave inputted, connected with measuring instrument with input resistance 1 MΩ ±10%, line-to-ground voltage: 0 V, no external magnetic field, conductor arranged at center of window

Measurement accuracy

Frequency	Amplitude ±(% of reading + % of full scale)	Phase
DC	0.03% + 0.002%	–
DC < f < 16 Hz	0.1% + 0.01%	±0.1°
16 Hz ≤ f < 45 Hz	0.05% + 0.01%	±0.08°
45 Hz ≤ f ≤ 66 Hz	0.03% + 0.007%	±0.05°
66 Hz < f ≤ 100 Hz	0.04% + 0.01%	±0.1°
100 Hz < f ≤ 500 Hz	0.06% + 0.01%	±0.15°
500 Hz < f ≤ 1 kHz	0.1% + 0.01%	±0.4°
1 kHz < f ≤ 5 kHz	0.15% + 0.02%	±0.4°
5 kHz < f ≤ 10 kHz	0.15% + 0.02%	±0.5°
10 kHz < f ≤ 1 MHz	(0.012 × f)% + 0.05%	± (0.04 × f) ±0.1°
Frequency range	10 MHz (±3 dB Typical)	–

- The variable f in accuracy equations is expressed in kHz.
- Accuracy of amplitude and phase is specified with 110% of full scale input or less and not exceeding derating curve in Figure 1.
  Accuracy in range of DC < f < 10 Hz are design value.
- Add ±0.01% of reading to amplitude accuracy when input is 100% of full scale to 110% of full scale.
- For Model CT6872-01, add the following values to accuracy in the range of 1 kHz < f ≤ 1 MHz.
  Phase accuracy: ±(0.015 × f)°

Linearity error[*1 *2]	±2 ppm Typical (23°C)
Offset voltage[*2]	±5 ppm Typical (23°C, no input)
Amplitude error[*3]	DC: ±7 ppm Typical 10 Hz to 100 Hz: ±0.005% Typical 100 Hz to 1 kHz: ±0.01% Typical 1 kHz to 50 kHz: ±0.1% Typical 50 kHz to 100 kHz: ±0.3% Typical 100 kHz to 300 kHz: ±1% Typical 300 kHz to 1 MHz: ±3% Typical

*1: Measuring the output voltage while cycling the input current (DC) from +50 A → 0 A→ –50 A → 0 A → +50 A at an interval of 10 A.
Defined as the difference between the regression line calculated from the above measurements and the measurement points.
*2: Defined as a percentage of the rated current.
*3: DC error is defined as (linearity error + offset voltage).
AC error is defined as deviation from the 55 Hz measurement point.

Output noise	300 µV rms or less (≤ 1 MHz)
Effects of temperature	Within the range of –40°C to 18°C or 28°C to 85°C Amplitude sensitivity: ±20 ppm of reading/°C Offset voltage: ±0.2 ppm of full scale/°C
Effects of magnetization	0.5 mA or less (input equivalent, after 50 A DC is inputted)
Common mode rejection ratio (CMRR)	150 dB or more (DC to 1 kHz) 140 dB or more (1 kHz to 10 kHz) 120 dB or more (10 kHz to 100 kHz) 100 dB or more (100 kHz to 1 MHz) (Effect on output voltage / common-mode voltage)
Effects of conductor position	DC: ±0.004% of reading or less (input current: 50 A) 50 Hz/60 Hz: ±0.005% of reading or less (input current: 50 A) 1 kHz: ±0.04% of reading or less (input current: 50 A) 10 kHz: ±0.04% of reading or less (input current: 50 A) 100 kHz: ±0.8% of reading or less (input current: 10 A) When wire of outer diameter 10 mm is used
Effects of radiated radio-frequency electromagnetic field	0.5% of full scale or less at 10 V/m
Effects of conducted radio-frequency electromagnetic field	0.1% of full scale or less at 10 V
Effects of external magnetic field	2 mA or less (input equivalent, under a magnetic field of 400 A/m, DC) 25 mA or less (input equivalent, under a magnetic field of 400 A/m DC or 400 A/m with 60 Hz)

Connectable products

1. PW8001 Power Analyzer

-1. U7001 Combined accuracy

Frequency	Current ±(% of reading + % of range)	Power ±(% of reading + % of range)	Phase
DC	0.05% + 0.052%	0.05% + 0.052%	U7001 accuracy + sensor accuracy
45 Hz ≤ f ≤ 66 Hz	0.05% + 0.057%	0.05% + 0.057%	
Bands other than DC and 45 Hz ≤ f ≤ 66 Hz	U7001 accuracy + sensor accuracy (Consider sensor rating for full scale error.)		

- For other measurement parameters, U7001 accuracy + sensor accuracy (consider sensor rating for full scale error).
- For the 1 A range or the 2 A range, add ±0.15% of range.
- Add accuracy according to each condition in specifications of the power analyzer and sensor.
- Defined after zero adjustment has been performed.

-2. U7005 Combined accuracy

Frequency	Current ±(% of reading + % of range)	Power ±(% of reading + % of range)	Phase
DC	0.05% + 0.032%	0.05% + 0.032%	U7005 accuracy + sensor accuracy
45 Hz ≤ f ≤ 66 Hz	0.04% + 0.027%	0.04% + 0.027%	
Bands other than DC and 45 Hz ≤ f ≤ 66 Hz	U7005 accuracy + sensor accuracy (Consider sensor rating for full scale error.)		

- For other measurement parameters, U7005 accuracy + sensor accuracy (consider sensor rating for full scale error).
- For the 1 A range or the 2 A range, add ±0.15% of range.
- Add accuracy according to each condition in specifications of the power analyzer and sensor.
- Defined after zero adjustment has been performed.

2. PW6001 Power Analyzer

Combined accuracy

Frequency	Current ±(% of reading + % of range)	Power ±(% of reading + % of range)	Phase
DC	0.05% + 0.032%	0.05% + 0.052%	PW6001 accuracy + sensor accuracy
45 Hz ≤ f ≤ 66 Hz	0.05% + 0.027%	0.05% + 0.037%	
Bands other than DC and 45 Hz ≤ f ≤ 66 Hz	PW6001 accuracy + sensor accuracy (Consider sensor rating for full scale error.)		

- For other measurement parameters, add PW6001 accuracy + sensor (consider sensor rating for full scale error).
- For the 1 A range or the 2 A range, add ±0.15% of range.
- Add accuracy according to each condition in specifications of the power analyzer and sensor.
- Defined after zero adjustment has been performed.

3. PW3390 Power Analyzer

Combined accuracy

Frequency	Current ±(% of reading + % of range)	Power ±(% of reading + % of range)	Phase
DC	0.08% + 0.072%	0.08% + 0.072%	PW3390 accuracy + sensor accuracy
45 Hz ≤ f ≤ 66 Hz	0.07% + 0.057%	0.07% + 0.057%	
Bands other than DC and 45 Hz ≤ f ≤ 66 Hz	PW3390 accuracy + sensor accuracy (Consider sensor rating for full scale error.)		

- For other measurement parameters, PW3390 accuracy + sensor accuracy (consider sensor rating for full scale error).
- For the 1 A range or the 2 A range, add ±0.15% of range.
- Add accuracy according to each condition in specifications of the power analyzer and sensor.
- Defined after zero adjustment has been performed.

4. CT9555, CT9556, CT9557 Sensor Unit

Combined accuracy
- Sensor accuracy is applicable (with output coaxial cable of length 1.6 m or less).
- Add sensor unit accuracy when RMS output or total output is used.
- Add accuracy according to each condition in specifications of the products to be connected and sensor.

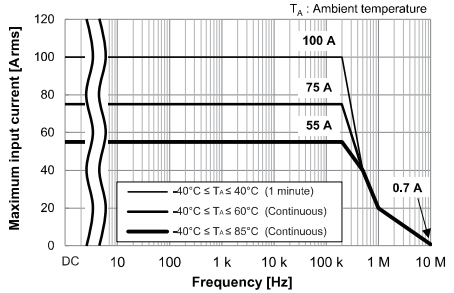
5. U8977 3CH Current Unit

Combined accuracy
- (U8977 accuracy) + (sensor accuracy)
- Add accuracy according to each condition in specifications of Memory HiCorder to be connected and sensor.
- Defined after zero adjustment has been performed.

6. 8971 Current Unit

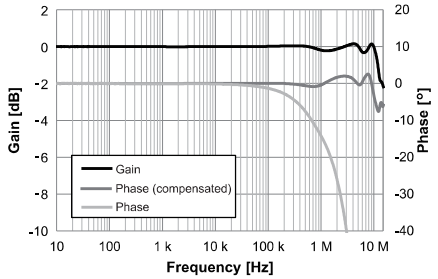
Combined accuracy
- (8971 accuracy) + (sensor accuracy)
- Add accuracy according to each condition in specifications of Memory HiCorder to be connected and sensor.
- The 9318 Conversion Cable (accessory of 8971) and CT9901 are required.
- Defined after zero adjustment has been performed.

Figure 1. Frequency Derating Curve

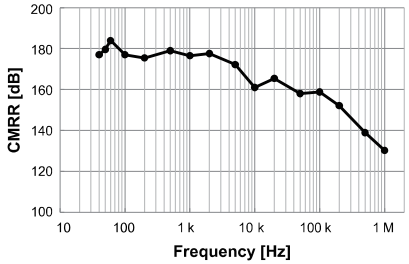


Characteristics

Frequency characteristics (Typical)



CMRR (Typical)



Linearity error (Typical)