

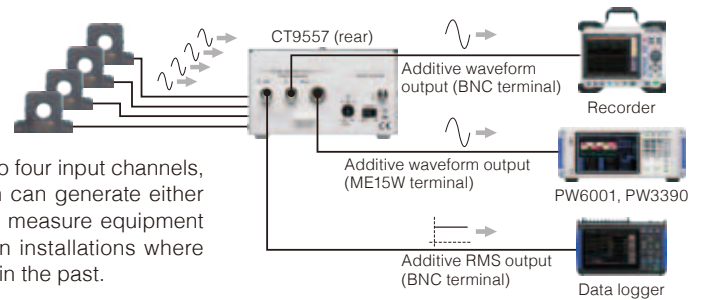
Aggregate and measure large currents in multi-cable circuits

The Sensor Unit CT9555 series is a power supply for high-precision current sensors that also provides waveform output functionality.

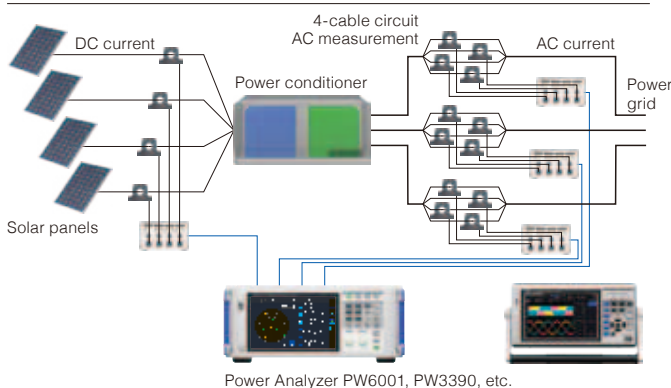
In addition to serving as a four-channel power supply, the CT9557 generates additive output for aggregating input waveforms and outputting them as a single waveform.



The CT9557's additive output function adds current waveforms from up to four input channels, converting them into a 2 V f.s. waveform for output. The device, which can generate either additive waveform output or additive RMS output, makes it possible to measure equipment such as high-capacity solar power conditioners and inverters, even in installations where issues with ratings and cable diameters made measurement impossible in the past.

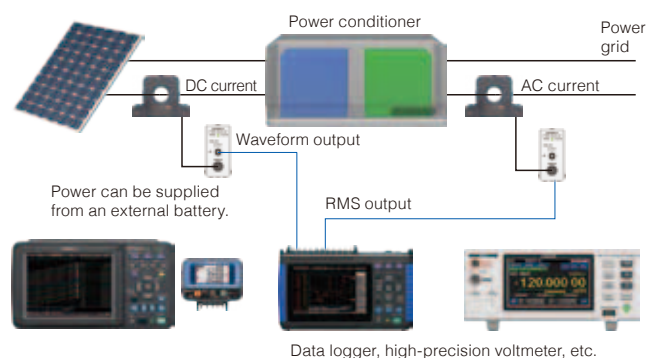


Measuring large currents and multi-cable circuits with additive functionality

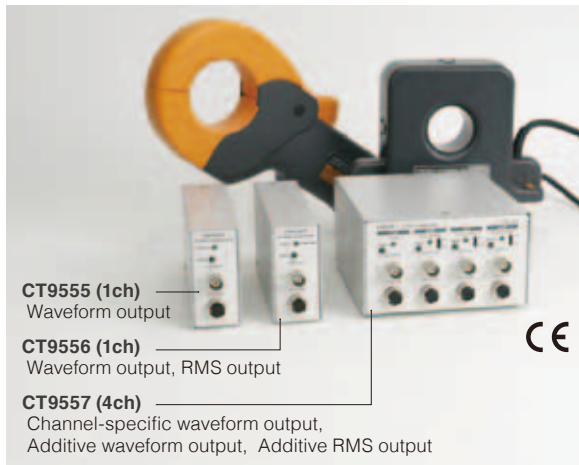


Once a current sensor has been attached to each branch cable, the CT9557 adds the sensor signals together to create an additive signal. Since the device can treat multiple sensors as a single sensor, as illustrated in the figure above, the current can be measured using a single power meter.

Using a data logger to perform high-precision current measurement



In this setup, waveform output is monitored on the DC current side, and RMS output is monitored on the AC current side of the circuit. Even a logger that lacks RMS conversion functionality can be used to measure AC current. A wireless logger can also be used. If a high-precision voltmeter is used, both the AC and DC currents can be measured with a high degree of precision.



CT9555 (1ch) — Waveform output
CT9556 (1ch) — Waveform output, RMS output
CT9557 (4ch) — Channel-specific waveform output, Additive waveform output, Additive RMS output



The CT9555 series can also be used as a replacement for Hioki's previous 9555-10.

Compatible products

AC/DC CURRENT SENSOR (pass-through type)

CT6862-05	50 A AC/DC	φ24 mm	DC to 1 MHz
CT6863-05	200 A AC/DC	φ24 mm	DC to 500 kHz
9709-05	500 A AC/DC	φ36 mm	DC to 100 kHz
CT6865-05	1000 A AC/DC	φ36 mm	DC to 20 kHz

AC/DC CURRENT PROBE (clamp-on type)

CT6841-05	20 A AC/DC	φ20 mm	DC to 1 MHz
CT6843-05	200 A AC/DC	φ20 mm	DC to 500 kHz
CT6844-05	500 A AC/DC	φ20 mm	DC to 200 kHz
CT6845-05	500 A AC/DC	φ50 mm	DC to 100 kHz
CT6846-05	1000 A AC/DC	φ50 mm	DC to 20 kHz

AC/DC CURRENT BOX (direct-connect type)

PW9100-03, -04	50 A AC/DC	Terminal block (M6 screws)	DC to 3.5 MHz
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Specifications

(Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

Model	SENSOR UNIT CT9557		SENSOR UNIT CT9556	SENSOR UNIT CT9555
Model No. (Order Code)	CT9557		CT9556	CT9555
Appearance				
Connectable current sensors	Current sensors with a Hioki ME15W (male) output connector (CT686x-05, CT684x-05, etc.)			
Output voltage	Waveform output/ additive waveform output: 2 V f.s. Additive RMS output: 2 V DC f.s.		Waveform output: 2 V f.s. RMS output: 2 V DC f.s.	Waveform output: 2 V f.s.
Output resistance	50 Ω			
Operating temperature range	-10 °C to 50 °C (14 °F to 122 °F)			
Product warranty period	1 year			
Power supply	<ul style="list-style-type: none"> AC Adapter Z1002 (100 to 240 V AC, 50/60 Hz, maximum rated power when used with sensors: 155 VA) External power supply (10 to 30 V DC; maximum rated power: 60 VA) 		<ul style="list-style-type: none"> AC Adapter Z1008 (100 to 240 V AC, 50/60 Hz, maximum rated power when used with sensors: 45 VA) External power supply (10 to 30 V DC; maximum rated power: 15 VA) 	
Response time	0.8 s for both RMS output and additive RMS output (when the input value changes as follows: 0% to 90%, 100% to 10%)			-
Dimensions	116 mm (4.57 in)W × 67 mm (2.64 in)H × 132 mm (5.20 in)D mm (excluding protruding parts)		33 mm (1.30 in)W × 67 mm (2.64 in)H × 132 mm (5.20 in)D mm (excluding protruding parts)	
Mass	420 g (14.8 oz)		200 g (7.1 oz)	
Accessories	AC Adapter Z1002, power cord, user manual		AC Adapter Z1008, power cord, user manual	

Additive waveform output accuracy (CT9557)

Frequency	Amplitude accuracy	Phase accuracy
DC	±0.06 %rdg. ±0.03 %f.s.	-
DC ≤ f ≤ 1 kHz	±0.06 %rdg. ±0.03 %f.s.	±0.1 deg.
1 kHz < f ≤ 10 kHz	±0.10 %rdg. ±0.03 %f.s.	±(0.1×f kHz) deg.
10 kHz < f ≤ 100 kHz	±0.20 %rdg. ±0.10 %f.s.	
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.	

Additive RMS output accuracy (CT9557), RMS output accuracy (CT9556)

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.

Options

<p>CONNECTION CABLE CT9904 CT9557 terminal to HIOKI ME15W (12 pin) terminal, 1 m (3.28 ft) length (for connecting PW6001 or PW3390)</p>	<p>CONNECTION CORD L9217 Cord has insulated BNC connectors at both ends, 1.6 m (5.25 ft) length</p>	<p>CONNECTION CORD 9165 Cord has metallic BNC connectors at both ends, use at metallic terminal, 1.5 m (4.92 ft) length</p>	<p>CONVERSION CABLE CT9901 HIOKI ME15W (12 pin) to HIOKI PL23 (10 pin) connector</p>	<p>CONVERSION CABLE CT9900 HIOKI PL23 (10 pin) to HIOKI ME15W (12 pin) connector</p>
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HIOKI

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