

POWER ANALYZER 3390-10

Power measuring instruments

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Maximizing the Efficiency of Energy Conversion



Super Precise ±0.1% Accuracy Model to Meet the Demanding Needs of Today

Exceed the Accuracy of Direct Wiring

With Pull-Through Current Sensors



Models CT6862-10, CT6863-10 and 9709-10

For 50A, 200A and 500A Testing





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A Higher-Accuracy Power Meter Supporting the Attainment of Maximum Efficiency

Improved Efficiency The needs of electrical devices driving energy conservation and green energy initiatives such as motors, inverters, solar panels, power conditioners, electric vehicles, and air conditioners are increasing at a pace never seen before. For R&D centers wishing for 0.1% levels of efficiency improvement, highly precise and accurate large current measurements are now within reach. The new 3390-10 delivers unsurpassed top-of-the-class $\pm 0.1\%$ accuracy to aid in accomplishing maximum efficiency in all of your devices.



POINT Pair the 3390-10 with High Accuracy Sensors And Achieve an Even Higher Level of Excellence in Testing



Enhanced accuracy parameters available with the higher accuracy combination:

•Voltage Measurement Accuracy: DC (45 to 66 Hz accuracy remains the same as the 3390) •Current and Active Power Measurement Accuracy: DC and 45 to 66Hz •Effect of Power Factor: 45 to 66Hz

Accuracy for other parameters is the same as that on the standard Model 3390. Accuracy is guaranteed for 1 year.

Accuracy for the high accuracy Models 3390-10 and Current Sensors are not defined individually. Please use these products in combination to obtain ±0.1% accuracy.



High Accuracy Guarantee Period is Further Extended



Measure on Any Channel POINT

High accuracy using HIOKI high accuracy current sensors is guaranteed, no matter which channel you use



Model 3390-10 Specifications

Accuracy	Accuracy guaranteed for 1 year		
	Voltage(U)	Current(I)	Active Power(P)
DC	±0.07%rdg.±0.1%f.s.	±0.07%rdg.±0.1%f.s.	±0.07%rdg.±0.1%f.s.
45Hz to 66Hz	±0.05%rdg.±0.05%f.s.	±0.05%rdg.±0.05%f.s.	±0.05%rdg.±0.05%f.s.
	Accuracy is defined for th Model 3390-10 with HIOK the ranges of the 3390-10). Voltage and active power reference only.	e frequency range indicate I high accuracy current sen r values for 1000V or hig	d above only when paring sors (where f.s. is based of her measurements are fo
	Voltage(U)	Current(I)	Active Power(P)
0.5Hz to 30Hz	±0.1%rdg.±0.2%f.s.	±0.1%rdg.±0.2%f.s.	±0.1%rdg.±0.2%f.s.
30Hz to 45Hz	±0.1%rdg.±0.1%f.s.	±0.1%rdg.±0.1%f.s.	±0.1%rdg.±0.1%f.s.
66Hz to 1kHz	±0.1%rdg.±0.1%f.s.	±0.1%rdg.±0.1%f.s.	±0.1%rdg.±0.1%f.s.
1kHz to 10kHz	±0.2%rdg.±0.1%f.s.	±0.2%rdg.±0.1%f.s.	±0.2%rdg.±0.1%f.s.
10kHz to 50kHz	$\pm 0.3\%$ rdg. $\pm 0.2\%$ f.s.	$\pm 0.3\%$ rdg. $\pm 0.2\%$ f.s.	±0.4%rdg.±0.3%f.s.
50kHz to 100kHz	$\pm 1.0\% rdg. \pm 0.3\% f.s.$	$\pm 1.0\% rdg. \pm 0.3\% f.s.$	±1.5%rdg.±0.5%f.s.
100kHz to 150kHz	±20%f.s.	±20%f.s.	±20%f.s.
	For current and active pow add the uncertainty range o The following accuracy dat Voltage, current and active pow Voltage and active power excee Voltage and active power excee Voltage and active power excee	er accuracy within the frequ of the current sensors. ta are for reference only: er within the 0.5Hz to 10Hz frequ ding 220V within the 10Hz to 10 ding 750V within the 30kHz to 10 ding (22000/[kHz])V within the 1 ding 1000V	uency range indicated abov ency range Iz frequency range 0kHz frequency range 00kHz to 150kHz frequency rang

	Conditions for Guaranteed A c c u r a c y	Current Input	Only when using HIOKI high-accuracy current sensors (options) (Accuracy specifications defined for Model 3390 apply when other sensors are used)
P) S.S. f.S. iring d on e for		Temperature and Humidity Range	bile sensors are used) $23^{\circ}C\pm 3^{\circ}C(73^{\circ}F\pm 5^{\circ}F)$, max. 80% rh (3390-10) $23^{\circ}C\pm 5^{\circ}C(73^{\circ}F\pm 9^{\circ}F)$, max. 80% rh (when using the 50A to 500A range of Model 9709-10) $\pm 1^{\circ}C(1.8^{\circ}F)$ of temperature after zero adjustment, within $23^{\circ}C\pm 5^{\circ}C(73^{\circ}F\pm 9^{\circ}F)$, max. 80% rh (when using the 10A and 20A range of Model 9709-10) 0 to $40^{\circ}C(32^{\circ}F to 104^{\circ}F)$, max. 80% rh (when using Model CT6862-10 or CT6863-10)
		Warm-up time	At least 30 minutes
P) .s. .s.		Input	On condition that the signal is a sine wave, with power factor=1, voltage to ground=0V, after zero- adjustment is conducted with current sensors at 23°C±3°C(73°F±5°F), and when the fundamental waveform is the sync source
.s. .s.	Temperature coefficient	When used within the operating temperature range but outside the guaranteed temperature and humidity ranges for accuracy, add the following (the f.s. of the ranges of Model 3390-10 applies)	
.s.		3390-10	±0.01%f.s./°C; for DC, add ±0.01%f.s./°C
bove,		9709-10	Current: ±0.01%rdg./°C; for DC, add ±(0.005%f. s.+2mA)/°C Active power: ±0.01%rdg./°C; for DC, add ±(displayed voltage value x (0.005%f.s.+2mA))/°C
		CT6862-10, CT6863-10	Current: ±0.01%rdg./°C; for DC, add ±0.005%f.s. /°C Active Power: ±0.01
range	Effect of Maximum ±0.2% f.s. (at 45Hz to 66Hz, p.f.=0.0) Power Factor Add ±0.45% f.s. when LPF is 500 Hz		s. (at 45Hz to 66Hz, p.f.=0.0) nen LPF is 500 Hz

For specifications not defined above, please refer to the catalog for Model 3390 Power Analyzer.

Power Analyzer (High Accuracy Model) 3390-10

Dedicated Current Sensors (High Accuracy Models) AC/DC CURRENT SENSOR(50A) CT6862-10

AC/DC CURRENT SENSOR(200A) CT6863-10

AC/DC CURRENT SENSOR(500A) 9709-10

If calibration data sheets pairing the 3390-10 with specific current sensors are required, please specify at time of order. Calibration data sheets for specific combinations after the products have been delivered will require that the devices be returned to the HIOKI factory for re-calibration.

Please also specify preferred channels if necessary.

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6 Corporate Drive, Cranbury, NJ 08512 USA TFI +1-609-409-9109 / FAX +1-609-409-9108 http://www.hiokiusa.com / E-mail: hioki@hiokiusa.com Supplied Accessories: Instruction Manual for Model 3390 x 1, Instruction Manual for Model 3390-10 x 1, Measurement Guide x 1, Power cord x 1, USB cable x 1, D-sub connector x 1 (when 9792 or 9793 is installed), Color label x 2

Please note: The dedicated PC application software and communication command manual for Model 3390 are also compatible to Model 3390-10. Please download them from the HIOKI website.

Please purchase separately-sold voltage cords and current sensors for measurements. A HIOKI-issued PC card is also necessary in order to save measured data.

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All information correct as of June. 17, 2011. All specifications are subject to change without notice.

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