

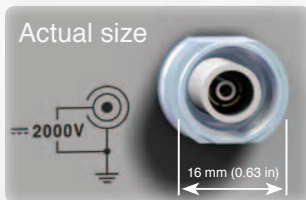
For highly stable measurements with strong noise resistance

Highest speed **6.7ms** Double-speed IR Meter

*Approx. twice as fast as the legacy model, the DSM-8104



Built-in large-diameter triaxial connector to deliver maximum **2000 V** output



- Large triaxial connector (approx. 16 mm (0.63 in) in diameter) that supports high-capacity output of 2000 V (2 mA) or 1000 V (10 mA) ensures both safety and functionality
- Triaxial TNC connector brings out the measuring characteristics of the instrument by reducing, instrument by reducing the effect of the noise in the working environment and allowing for stable measurement at a maximum of ± 10 dgt.
- Two models available: the 2000 V high-voltage model and the basic 1000 V output model

*Contact us for information on how to connect to a legacy HIOKI model or a standard triaxial connector.



1000 V output SM7110
2000 V output SM7120

Superinsulation measurement

$2 \times 10^{19} \Omega$

Maximum display range

Leakage current measurement

0.1 fA

Resolution

From high-volume production of 1600 units per minute to high-precision evaluation of semiconductors



Measurement + contact check

Highest speed
6.7 ms
From trigger input to index output

2000 V microcurrent measurement

With a single instrument, you can measure protective semiconductor elements such as varistors, vehicle capacitors, and other high-voltage components.

This SUPER MEGOHM METER applies voltage from 0.1 V to 2000 V and measures with a resolution of 0.1 fA.



Embedded in the line for reliable high-speed and "high-performance" contact checks

Measure small-capacity components	With multiple various measuring instruments	In ammeter mode	When changing cables on-site
Lowest threshold value setting of 0.1 pF	2-band selection	Compatible with external power sources	Cable length correction function
The super megohm meter allows you to perform reliable contact checks on low-capacity capacitors as well as on other measurement objects with small capacitance.	To prevent the check signals on a production line with multiple various measuring instruments from getting crossed, select the measurement frequency for contact checks.	The contact check function is also available when you use the instrument as an ammeter with an external power source. The instrument is also suitable for measurements over 2000 V.	To replace a cable, simply register the measuring cable length. Time-consuming adjustments are no longer necessary and the instrument can be used for changing the line in a flexible manner.

Current measurement accuracy

Range	Maximum display value	Resolution	Current measurement accuracy ($\pm\%$ rdg. \pm dgt.)			
			FAST	MED	SLOW	SLOW2
20 pA	19.9999 pA	0.1 fA	-	-	2.0+45	2.0+30
200 pA	199.999 pA	1 fA	1.0+90	1.0+60	1.0+45	1.0+30
2 nA	1.99999 nA	10 fA	0.5+60	0.5+40	0.5+30	0.5+20
20 nA	19.9999 nA	100 fA	0.5+30	0.5+20	0.5+15	0.5+10
200 nA	199.999 nA	1 pA	0.5+30	0.5+20	0.5+15	0.5+10
2 μ A	1.99999 μ A	10 pA	0.5+30	0.5+20	0.5+15	0.5+10
20 μ A	19.9999 μ A	100 pA	0.5+30	0.5+20	0.5+15	0.5+10
200 μ A	199.999 μ A	1 nA	0.5+30	0.5+20	0.5+15	0.5+10
2 mA	1.99999 mA	10 nA	0.5+30	-	-	-

Voltage measurement accuracy ($\pm\%$ rdg. \pm dgt.)

Range	Maximum display value	Resolution	Voltage measurement accuracy
10 V	10.000 V	0.001 V	0.03+2
100 V	100.00 V	0.01 V	0.03+2
1000 V	1000.0 V	0.1 V	0.03+2
*2000 V	2000.0 V	0.1 V	0.2+2

*SM7120 only Take the withstand voltage of electrodes into account.

Resistance accuracy

Current measurement accuracy
+
voltage measurement accuracy

Measurement time

	Sampling time (internal integration time)	Power supply frequency	
		50 Hz	60 Hz
FAST	2 ms	6.7 ms	6.7 ms
MED	1 PLC	24 ms	21 ms
SLOW	4 PLC	100 ms	84 ms
SLOW2	15 PLC	320 ms	320 ms

PLC: Power Line Cycle

Specifications overview (Accuracy guaranteed for 1 year; Post-adjustment accuracy guaranteed for 1 year)

Applied voltage	SM7110: 0.1 V to 1000 V	SM7120: 0.1 V to 2000 V
Accuracy guarantee temperature and humidity range	23°C \pm 5°C (73°F \pm 9°F), 80% RH or less, warm-up: 30 minutes or longer	
Resistance display range	50 Ω to 2x10 ¹⁹ Ω (19.9999 E Ω)	
Temperature measurement accuracy	Accuracy (display) range: -40°C to 80°C (-40°F to 176°F), measurement accuracy: \pm 0.5°C (\pm 0.9°F) (with the Z2011 HUMIDITY SENSOR)	
Humidity measurement accuracy	Display range: 0.0% RH to 90.0% RH, accuracy range: 20.0% RH to 80.0% RH, measurement accuracy: \pm 5% RH (with the Z2011 HUMIDITY SENSOR)	
Display parameters	Resistance / current / surface resistivity / volume resistivity / measurement voltage	
External interface	EXT I/O, USB device (USB 2.0 Full-Speed), GP-IB, RS-232C	
Power supply	100 to 240 V AC, 50/60 Hz, 55 VA	
Dimensions and mass	330 mm (12.99 in) W x 80 mm (3.15 in) H x 400 mm (15.75 in) D (excluding protrusions), 6.7 kg (236.3 oz)	
Accessories	Instruction manual x1, power cord x1, male connector for EXT I/O x1, banana/banana cable (150 mm (5.91 in) x1	

Product name

SUPER MEGOHM METER
SUPER MEGOHM METER

Model (order code)

SM7110
SM7120

Specifications

Output voltage 1000 V
Output voltage 2000 V

Options



Z2011 HUMIDITY SENSOR

*Contact us for information on connecting to a measuring electrode.

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HIOKI

HIOKI E. E. CORPORATION

HEADQUARTERS

81 Koizumi, Ueda, Nagano, 386-1192, Japan
TEL +81-268-28-0562 FAX +81-268-28-0568
http://www.hioki.com / E-mail: os-com@hioki.co.jp

HIOKI USA CORPORATION

TEL +1-609-409-9109 FAX +1-609-409-9108
http://www.hioki.com / E-mail: hioki@hioki.com

HIOKI (Shanghai) SALES & TRADING CO., LTD.
TEL +86-21-63910090 FAX +86-21-63910360
http://www.hioki.cn / E-mail: info@hioki.com.cn

HIOKI INDIA PRIVATE LIMITED
TEL +91-124-6590210
E-mail: hioki@hioki.in

HIOKI SINGAPORE PTE. LTD.
TEL +65-6634-7677 FAX +65-6634-7477
E-mail: info-sg@hioki.com.sg

HIOKI KOREA CO., LTD.
TEL +82-2-2183-8847 FAX +82-2-2183-3360
E-mail: info-kr@hioki.co.jp

DISTRIBUTED BY

instrumentos de medida

Septiembre, 31 - 28022 Madrid
Tel. 913000191 - Fax. 913885433

www.idm-instrumentos.es - ids@idm-instrumentos.es