

## ANALOG MΩ HiTESTER SERIES

Field measuring instruments



Models IR 4016-20, IR 4017-20, IR 4018-20, 3490

**Single range: IR 4010 SERIES**  
**3-range: 3490**



**Flip the Cover**



Quick and easy storage without disconnecting the leads



**3 years**

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[sales@GlobalTestSupply.com](mailto:sales@GlobalTestSupply.com)

# Built for the Field

## LIGHT

See better in the dark

### Luminous Scale



### Bright LED

- Work safely knowing that when the RED is lit, live wires, high voltage or electrical discharge is present
- The super bright light at the tip of the optional 9788 Test Leads adds to efficiency



## Check the Battery Status

Be well-informed about the condition of your batteries. Green signals that the battery level is sufficiently high, and red warns of low battery power. Replace the batteries before the LED turns completely off.

## Check for Live Circuits

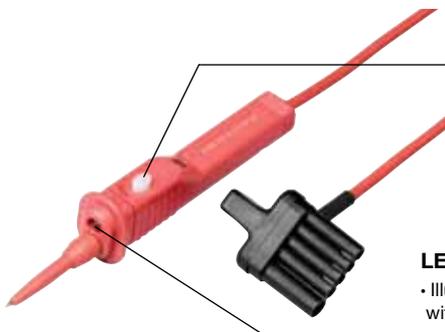
The LIVE CIRCUIT LED will light up in red whenever the voltage exceeds 20V AC between the LINE and EARTH terminals, and when at least 20V DC is still remaining during the auto discharge.



**BATT : Hi**    **BATT : Lo**    **BATT : Dead**



## TEST LEAD WITH REMOTE CONTROL SWITCH



### REMOTE CONTROL SWITCH

- Start and stop the test at the touch of a button
- Test for insulation resistance single-handedly

### LED LIGHT

- Illuminate the test location with a bright white LED

## MEASURE SWITCH

- Ergonomic design lets you start and stop tests with a single press



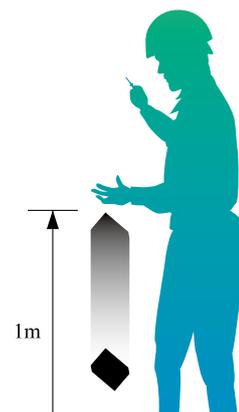
- Simply flip the switch to measure continuously



## DROP PROOF



Testers are built tough to withstand a 1-meter drop onto a concrete floor



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# Model Line-up

# At A Glance

MODEL	Insulation Resistance			Resistance Measurement	AC voltage Measurement
	250V	500V	1000V		
IR 4016-20	—	100MΩ	—	—	600V AC
IR 4017-20	—	1000MΩ	—	—	600V AC
IR 4018-20	—	—	2000MΩ	—	600V AC
3490	100MΩ	100MΩ	4000MΩ	3Ω, 30Ω	600V AC

## Single range

Models IR 4016-20, IR 4017-20, IR 4018-20

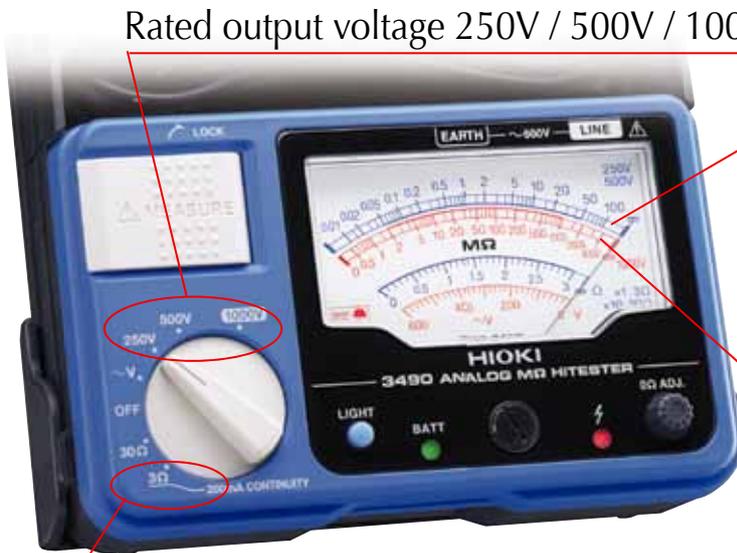


Rated output voltage  
Effective maximum indicated value

## 3-range

Model 3490

INSULATION & CONTINUITY



Rated output voltage 250V / 500V / 1000V

### Easy-to-Read Scale

The 250V and 500V ranges share a common 100MΩ, making the display completely clean and uncluttered

SCALE  
250V/ 50MΩ  
500V/100MΩ ➔ 100MΩ

4000MΩ Scale at the 1000V Range

3Ω range, 200mA EN 61557

Checks ground wire continuity with current of 200mA

Also capable of testing the continuity of electrical grounds in accordance with EN 61557

## Accessories

### TEST LEAD L9787 (1.2m)

Conforms to safety standard IEC61010-031 (revised) for hand-held probes



**Detachable!**

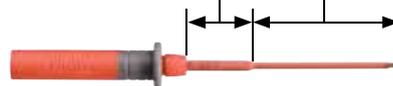
included as a standard accessory  
(This sleeve cannot be attached to previous products)

When measuring in a CAT III environment, be sure to attach the sleeve to the test leads.

## Options

### BREAKER PIN L9787-91 (for Model L9787)

22mm/ φ3.7mm      48mm/ φ2.6mm



Extra long tips extend deep into the breaker openings for more reliable testing

### COMPLETE TEST LEAD WITH REMOTE CONTROL SWITCH L9788-11 (1.2m)



### TIP PIN L9788-90 (for Model L9788-10)

When measuring in a CAT III environment, be sure to attach the sleeve to the test leads.

35mm/ φ3.2mm



Sleeve

### TEST LEAD WITH REMOTE CONTROL SWITCH L9788-10 (1.2m)



## General Specifications

Power supply	Rated power voltage: 1.5 VDC × 4, LR6 alkaline battery × 4
Continuous operating time	Approx. 20 hours (at 500V range, no load) *1
Auto Power Save	Approx. 15 minutes
Operating Temperature & Humidity	0 to 40°C (32 to 104°F), 90%RH or lower (non-condensating) 40 to 50°C (104 to 122°F), at 50°C and below relative with linear decrease up to 50%RH
Storage Temperature & Humidity	-10 to 50°C (14 to 122°F), 90%RH or lower (non-condensating)
Maximum rated voltage to earth	600 VAC, Measurement Category III, Anticipated Transient Overvoltage: 6000V
Dielectric strength	5312 VAC, 50/60Hz, Measurement terminals - electrical enclosure, current sensitivity 1 mA
Standards	Safety EN61010, EMC EN61326 *3490 only: EN61557-1/-2/-4 *IR 4016-20, IR 4017-20, IR 4018-20: EN61557-1/-2
Drop Proof	On concrete: 1m/1 time
Dimensions (excluding protrusions)	Approx. 159W × 177H × 53D mm (6.26"W × 6.97"H × 2.09"D)
Mass	Approx. 610g (21.5 oz.) (including battery, not including test lead)
Accessories	Test lead L9787 × 1, Instruction manual × 1, Shoulder strap × 1, LR6 alkaline battery × 4

\*1 IR 4018-20 :15 hours

### □ 3490 specifications

Guaranteed for one year at 23°C±5°C (73°F±9°F) and 90% RH

Insulation resistance measurement	Rated output voltage	250 V DC	500 V DC	1000 V DC
	Effective maximum indicated value	100 MΩ		4000 MΩ
	Center scale value	1 MΩ		50 MΩ
	1st effective measuring range	0.05 to 50 MΩ		2 to 1000 MΩ
		±5% of indicated value		
	2nd effective measuring range	0.01 to 0.05 MΩ 50 to 100 MΩ	0.5 to 2 MΩ 1000 to 4000 MΩ	
		±10% of indicated value		
	Open circuit voltage	1 to 1.2 times of rated output voltage		
	Lower limit measurement resistance value to be maintained rated output voltage	0.25 MΩ	0.5 MΩ	1 MΩ
Rated current	1mA (Tolerance: 1 to 1.2 times of the rating value)			
Overload protection	1200V AC (10 sec.)			
Resistance measurement	Ranges	3Ω		30Ω
	Center scale value	1.5Ω		15Ω
	Accuracy	±0.09Ω		±0.9Ω
	Open-circuit voltage	4.1 to 6.9 V		
	Measuring current	200mA DC or more	20mA DC or more	
	Overload protection	720V AC (10 sec., by Fuse)		
AC voltage measurement	Measuring range	0 to 600 V (50/60 Hz)		
	Accuracy	±5% of maximum scale value		
	Input resistance	100 kΩ or more (50/60Hz)		
	Overload protection	1200V AC (10 sec.)		

### □ IR 4016-20, IR 4017-20, IR 4018-20 specifications

Guaranteed for one year at 23°C±5°C (73°F±9°F) and 90% RH

Model		IR 4016-20	IR 4017-20	IR 4018-20
Insulation resistance measurement	Rated output voltage	500 V DC	500V	1000 V DC
	Effective maximum indicated value	100 MΩ	1000 MΩ	2000 MΩ
	Center scale value	2 MΩ	20 MΩ	50 MΩ
	1st effective measuring range	0.1 to 50 MΩ	1 to 500 MΩ	2 to 1000 MΩ
		±5% of indicated value		
	2nd effective measuring range	0.01 to 0.1 MΩ 50 to 100 MΩ	0.5 to 1 MΩ 500 to 1000 MΩ	1 to 2 MΩ 1000 to 2000 MΩ
		±10% of indicated value		
	Open circuit voltage	1 to 1.2 times of rated output voltage		
	Lower limit measurement resistance value to be maintained rated output voltage	0.5 MΩ	0.5 MΩ	1 MΩ
Rated current	1mA (Tolerance: 1 to 1.2 times of the rating value)			
Overload protection	600V AC (10 sec.)		1200V AC (10 sec.)	
AC voltage measurement	Measuring range	0 to 600 V (50/60 Hz)		
	Accuracy	±5% of maximum scale value		
	Input resistance	500 kΩ or more (50/60Hz)		
	Overload protection	600V AC (10 sec.)		1200V AC (10 sec.)

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