HIOKI

INSULATION TESTER
IR4056-20, IR4057-20

Field Measuring Instruments

5-range INSULATION & CONTINUITY

CAT III 600V
IEC/EN 61557

DROP PROOF

3 years
Guaranteed for 3 years

5 Ranges 50/125/250/500/1000V

200mA continuity

AC/DC 600V
AC/DC automatic detection range

Model IR4056-20

with Bar Graph

Model IR4057-20

QUICK & EASY

Comparator Function Improves Work Efficiency

- Identify the Insulation and Low Resistance Conditions with the PASS/FAIL Icon
- FAIL Alert with Red LCD and Audio Buzzer

Stable Digital Readings are Easy to Read

ISO 9001 JMI-0216

ISO14001 JQA-E-90091

INTERNET HIOKI Website

www.hioki.com

HIOKI company overview, new products, environmental considerations and other information are available on our website.

CE

Efficient, Safe Measurement with Digital Insulation Resistance Testers

Comparator function provides PASS/FAIL decisions at a glance

- The comparator function compares measured values to pre-set reference values to generate a pass or fail judgment. (Can be used with insulation resistance measurement and low-resistance measurement.)
- The stable display is easy to read, increasing work efficiency.

Instant judgment

Since the IR4056-20 and IR4057-20 generate judgments as soon as the test lead makes contact, it is possible to make a rapid series of measurements in the manner of a continuity check.

*In some cases, the capacitance component may prevent a judgment from being made until charging completes.

Identify PASS/FAIL using light and sound

The IR4056-20 and IR4057-20 notify the operator of pass and fail judgments using a beeping sound, LCD light, and comparator indicator on the test lead with remote control switch (optional accessory), allowing determinations of compliance to be made without looking at the instrument.

PASS

When the measured value is greater than or equal to the reference value*

Short beep

No change

Green

FAIL

When the measured value is less than the reference value*

Continuous tone

Red

Red

*Insulation resistance measurement

Designed for safety and peace of mind

Featuring improved convenience and ease of use

DROP PROOF

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

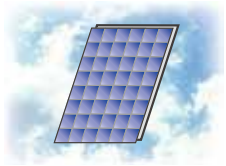
DROP PROOF

Integrated hard case with sliding cover

With cover closed

AC/DC voltage measurement (With AC/DC automatic detection function)

Use as a tester replacement thanks to DC voltage measurement functionality, which is useful in applications involving solar power and electric vehicles (EVs).



IR4056-20

TEST LEAD L9787

Connect either the test probe or alligator clip for the earth side

Easy-to-see LCD

An FSTN LCD ensures the instrument's display is easy to read from any angle.

Effective maximum display value

A ">" mark is displayed when the measured value is greater than the effective maximum display value for the function in use.

Backlight (White LED)

A backlight makes it possible to work in dark or poorly lit locations.

200 mA grounding line continuity check function

The IR4056-20 and IR4057-20 can perform EV and HEV continuity checks as well as resistance measurement of safety conductors in building electrical equipment as defined by IEC 60364.

Safety-oriented double-action

500 V/1000 V range only

1 Set the function key to either 500 V or 1000 V.

2 Press the flashing "RELEASE" key.

IR4056-20 Economic model

5 ranges 50/125/250/500/ 1000 V	Rated output voltage (DC)	5 ranges 50/125/250/500/ 1000 V
✓	Voltage measurement	✓
✓	Resistance measurement	✓
Approx. 0.8 s	Comparator judgment result response time	Approx. 0.3 s
✓	200 mA continuity	✓
-	Bar graph	✓
159W×177H×53D	Dimensions(mm)	159W×177H×53D
600	Mass(g)	640

IR4057-20 Bar graph for visual judgments High-speed model

Bar graph

Useful in determining compliance of circuits with a large capacitance component, for example solar panels, due to the ability to illustrate charging status behavior.

Specifications

Guaranteed accuracy period: 1 year, Accuracy guarantee for temperature and humidity: 23°C±5°C (73°F ±9°F) and 90% RH

Insulation resistance measurement

Rated output voltage (DC)	50V	125V	250V	500V	1000V
Effective maximum indicated value	100 MΩ	250 MΩ	500 MΩ	2000 MΩ	4000 MΩ
Effective medium value	2 MΩ	5 MΩ	10 MΩ	50 MΩ	100 MΩ
1st effective measuring range [MΩ]	0.200 to 10.00	0.200 to 25.0	0.200 to 50.0	0.200 to 500	0.200 to 1000
Accuracy	±4 % rdg.				
2st effective measuring range [MΩ]	10.1 to 100.0	25.1 to 250	50.1 to 500	501 to 2000	1010 to 4000
Accuracy	±8 % rdg.				
Other measuring range [MΩ]	0 to 0.199				
Accuracy	±2 % rdg. ±6 dgt.				
Lower limit resistance value to maintain nominal output voltage	0.05 MΩ	0.125 MΩ	0.25 MΩ	0.5 MΩ	1 MΩ
Overload protection	600 VAC (10 s)				1200 VAC (10 s)

Test leads with sleeves

When measuring in a CAT IV or CAT III environment, be sure to attach the sleeve to the test leads.
When the CAT (measurement category) rating of the main unit is lower than that of test leads, the CAT of the main unit takes precedence.

Sleeves can be removed.

Basic specifications

Indicator	Indicator: Semi-transmissive FSTN LCD, Positive backlight
Functions	Live circuit indicator, Automatic electric discharge, Automatic DC/AC detection, Comparator, Built-in battery power indicator etc.
IR4057-20 functions	Bar graph, Displaying 1-min. values
Power supply	LR6 alkaline battery × 4
Continuous operating time	Approx. 20 hours (Comparator off, backlight off, 500 V range, no load)
Auto power save	The power will go off automatically 10 minutes after the last operation
Operating temperature and humidity	0 to 40°C (32 to 104°F) 90% RH or lower (non-condensating)
Storage temperature and humidity	-10 to 50°C (14 to 122°F) 90% RH or lower (non-condensating)
Maximum rated voltage to earth	600 V AC/DC, Measurement category III, Anticipated transient overvoltage: 6000 V
Dielectric strength	7060 V AC, 50/60 Hz, Measurement terminals - electrical enclosure, 1 min, current sensitivity 1 mA
Degree of protection	IP40
Standards	EN61326 (EMC), EN61557-1/ -2/ -4*/ -10
Drop proof	On concrete: 1 m
Dimensions	Approx. 159W×177H×53D mm (6.26"W×6.97"H×2.09"D) (excluding protrusions)
Mass	IR4056-20: Approx. 600g (21.2 oz) IR4057-20: Approx. 640g (22.6 oz) (including battery, excluding test lead)
Accessories	Test lead L9787 × 1, Neck strap × 1, Instruction manual × 1, LR6 alkaline battery × 4

* Subclause 4.3 of Part 4 (interchanging of test leads) is not applicable when L9788-10 is used.

Voltage measurement

		4.2 V	42 V	420 V	600 V
DC V	Display range (Auto range)				
	Maximum indicated value	4.200 V	42.00 V	420.0 V	750 V
	Resolution	0.001 V	0.01 V	0.1 V	1 V
	Accuracy	±1.3 % rdg. ±4 dgt. *			

		420 V (Minimum indicated value: 30.0 V)	600 V
AC V	Display range (Auto range)		
	Maximum indicated value	420.0 V	750 V
	Resolution	0.1 V	1 V
	Accuracy	±2.3 % rdg. ±8 dgt. *	
	Measurement principles	Average responding type	
	Frequency range	50/60 Hz	
AC/DC automatic detection range		AC detected at 30 V or greater (50/60 Hz) (Pulsating currents with an overlapping AC component of 30 V or greater are detected as AC)	
Effect of temperature		Measurement accuracy per 1°C × 0.1 (Applicable to the operating temperature range other than 18 to 28°C)	

* Ranges in excess of 600 V are outside the accuracy guarantee.

Resistance measurement

Display range (Auto range)	10 Ω	100 Ω	1000 Ω
Maximum indicated value	10.00 Ω	100.0 Ω	1000 Ω
Resolution	0.01 Ω	0.1 Ω	1 Ω
Accuracy (after zero adjustment)	0 to 0.19 Ω: ±3dgt. 0.20 to 10.00 Ω: ±3%rdg. ±2dgt.	±3%rdg. ±2dgt.	
Measuring current	200 mA or more (at 6 Ω or less) (Display value before zero adjustment)		
Overload protection	600 VAC (10s, using fuse)		

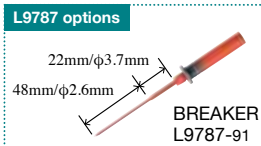
Accessories

TEST LEAD
L9787

Neck strap
Instruction manual
LR6 alkaline battery × 4

Options

L9787 options



BREAKER PIN
L9787-91

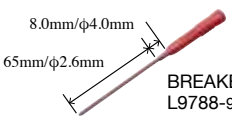
Shared options

MAGNETIC ADAPTER
9804-02

Attaches to tip of the ground lead; 11 mm diameter.

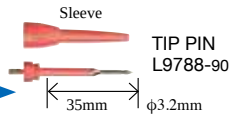
L9788-11 options

TEST LEAD SET
WITH REMOTE
SWITCH L9788-11



BREAKER PIN
L9788-92

TEST LEAD WITH
REMOTE SWITCH
(RED)
L9788-10



TIP PIN
L9788-90

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