

## Product

IR4059 Digital Insulation Tester

## Headline

Digital Insulation Tester with Bar Graph and Remote Switch, 50 V to 1000 V

## Short Description

Digital insulation tester with bar graph display, 5 test voltages from 50 V to 1000 V, insulation resistance up to 4000 MΩ, PASS/FAIL comparator, 200 mA protective conductor test, integrated remote switch in test lead, Bluetooth optional with Z3210

## Banner Specs

- 5 test voltages from 50 V to 1000 V
- Insulation resistance up to 4000 MΩ
- CAT III 600 V safety rating
- Digital display with bar graph
- Integrated remote switch in test lead

## Applications

- Inspection and maintenance of low-voltage electrical installations
- Troubleshooting insulation faults in wiring, motors, and equipment
- Field testing of machinery, control panels, and distribution boards
- Periodic inspection of plant and equipment

Feature	IR4053	IR4056	IR4057-50	IR4057-90	IR4059
PVΩ Function	Yes	-			
Bar Graph Display	-		Yes		
Bluetooth	-		Optional (Z3210)	Yes (Z3210 included)	Optional (Z3210)
Housing	Integrated hard case				Compact housing with silicone protector
L9788-10 Test Lead with Remote Switch	Optional				Yes

## Product Description

In installation and maintenance work, insulation resistance testing is required when checking wiring, distribution boards, motors and electrical equipment after repairs or during periodic

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inspections. A dedicated insulation tester is often the practical choice without the need for a multifunction installation tester or combined test instrument.

The IR4059 is a digital, battery-powered insulation tester with five test voltages from 50 V to 1000 V in a compact design that fits easily into a tool bag. It measures insulation resistance up to 4000 M $\Omega$  and is used for testing electrical installations, motors, machinery and control systems. The instrument complies with EN 61557 requirements for insulation resistance and protective conductor continuity testing in low-voltage installations.

### **Digital Bar Graph and Fast PASS/FAIL Evaluation**

In addition to the numeric display, the IR4059 features a digital bar graph that provides immediate visual indication of insulation resistance during measurement. Changes in resistance are visible directly on the scale display. The integrated comparator evaluates the insulation measurement in approximately 0.3 seconds and indicates PASS or FAIL. PASS and FAIL are signaled acoustically, and in the event of a FAIL result, the display backlight turns red.

The PASS/FAIL threshold can be set individually for each test voltage range and remains stored even after switching the instrument off or changing the range. With the comparator function switched off, the instrument instead displays the insulation resistance value after 60 seconds during an ongoing measurement. This supports time-based evaluation when longer test durations are required.

### **Protective Conductor (PE) and Voltage Check**

Protective conductor testing is performed with a 200 mA test current in accordance with EN 61557-4. The defined test current applies sufficient load to the protective conductor connection to detect increased contact resistance, loose connections and oxidized terminals. This provides a more reliable assessment than a low-current continuity check performed with a standard digital multimeter.

In addition to insulation and low-resistance measurement, the instrument includes AC and DC voltage testing up to 600 V. This allows verification that the test object is not live before starting an insulation measurement. For added safety, the 500 V and 1000 V test voltages must be manually unlocked before the first measurement. This prevents accidental activation of higher test voltage levels.

### **Compact Design for Field Work**

The IR4059 complies with CAT III 600 V and has been tested for a 1 m drop onto concrete. It is specified for operation in ambient temperatures from -25 °C to 65 °C. The high-contrast display with backlight supports work in distribution boards and poorly lit technical rooms. The instrument is supplied with the replaceable Z5042 instrument protector, providing additional mechanical protection during transport and daily use on site without increasing the overall size of the tester. The compact housing takes up little space in a tool bag.

The L9788-10 test lead with integrated remote switch and LED illumination is also included. Measurements can be started directly from the probe, which is particularly useful when both hands are required to position the test leads securely on the test object. An optional Z3210 wireless adapter enables Bluetooth communication for transfer of measured values. With the optional Z3210 adapter, measured values can be transferred via Bluetooth to the free GENNECT Cross app on iOS or Android devices.

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Like all HIOKI insulation testers, it is designed and manufactured in Japan at HIOKI's own production facilities in Nagano Prefecture.

## What's in the box

- IR4059 Digital Insulation Tester
- L9788-10 Remote Switch Test Lead
- L4930 Test Leads 4 mm
- L4935 Alligator Clip Set
- L4938 Test Pin Set
- Z5042 Instrument Protector
- Neck strap
- Instruction manual
- Safety precautions
- LR6 (AA) alkaline batteries ×4

## Related Products

- Z3210 Bluetooth Adapter
- L9788-92 Insulated Extension Pin
- IR4057-90 Digital Insulation Tester
- IR4057-50 Digital Insulation Tester
- IR4056 Digital Insulation Tester
- IR4053 Digital Insulation Tester
- IR5051-90 High Voltage Insulation Tester
- IR5051 High Voltage Insulation Tester
- IR5050 High Voltage Insulation Tester
- 3490 Analog Insulation Tester
- 9804-02 Magnetic Adapter
- C0213 Carrying Case

Version	Date	Author	Approved	Document changes
1.0	23.02.2026	KS	KS	First release