DROP PROOF

Built tough to withstand a 1-meter drop onto a concrete floor

5 ranges
Rated output voltage (DC)
Effective maximum indicated value

<table>
<thead>
<tr>
<th>Voltage Range</th>
<th>Resistance Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 V / 100 MΩ</td>
<td></td>
</tr>
<tr>
<td>125 V / 250 MΩ</td>
<td></td>
</tr>
<tr>
<td>250 V / 500 MΩ</td>
<td></td>
</tr>
<tr>
<td>500 V / 2000 MΩ</td>
<td></td>
</tr>
<tr>
<td>1000 V / 4000 MΩ</td>
<td></td>
</tr>
</tbody>
</table>

Sinificantly improve testing speed using test lead with remote switch

1. LED light shines a spotlight on the target
2. Red light warns of live voltage detection
3. Measurement start switch
4. Identify pass/fail decisions with red or green light

TEST LEAD SET WITH REMOTE SWITCH L9788-11 (Option)

*Standard with the IR4056-21

Identify PASS / FAIL using light and sound

RED light
Continuous tone

Compare measured values to pre-set reference values to generate a pass or fail decision with the Comparator function.

Easy-to-see LCD

Built-in white LED backlight, large wide angle screen and bar graph display let you easily see measured results even in the dark.

One-touch Start and Stop

Measurement voltage is applied while MEASURE key is pressed

Continuous test

Lift and lock the MEASURE key to apply a continuous stream of voltage

Prevent Accidental High Voltage Generation

Under [500V], [1000V], or [PVΩ] settings, the RELEASE button will blink. Press to unlock the release of high voltages as an extra safety measure.

MailCloud

Bluetooth® communication

HOLD displayed data to automatically upload to your mobile device (5m line-of-sight)

Verify data as a list or map measured values right on a photo of the location under test. Easily make test reports using saved data.

*IR4058-20 Only

Convenient for inspections

- Low resistance measurement
  Perform EV and HEV continuity checks as well as resistance measurement of protective conductors in facility electrical equipment as defined by IEC 60364.

- AC/DC voltage measurement
  Automatically detect AC or DC for testing. Use as a tester thanks to DC voltage measurement functionality.

- PV Ω dedicated function
  Measurement is not affected even when the PV system is online.

  *1 Excludes IR4053  *2 IR4053 Only
## Lineup

<table>
<thead>
<tr>
<th>Measurement type</th>
<th>Standard</th>
<th>High-speed</th>
<th>PV</th>
<th>High-voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>IR4056-20</td>
<td>IR4057-20</td>
<td>IR4058-20</td>
<td>IR4053-10</td>
</tr>
</tbody>
</table>

### Appearance

| Number of ranges | 5 | 5 | 5 | 5 | 5 |

<table>
<thead>
<tr>
<th>Testing voltage (DC) / Effective maximum indicated value</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 V / 100 MΩ</td>
</tr>
<tr>
<td>250 V / 500 GΩ</td>
</tr>
</tbody>
</table>

### 1st effective measuring range

| PV Ω measurement | N / A | N / A | N / A | ✓ | N / A |
| Leakage current | N / A | N / A | N / A | N / A | 1.00 nA to 1.20 mA |
| DC voltage | 600 V | 600 V | 600 V | 1000 V | 1.00 kV |
| AC voltage | 600 V | 600 V | 600 V | 600 V | 750 V |
| Low resistance measurement | ✓ | ✓ | ✓ | N / A | N / A |
| Displaying 1-min. values | N / A | ✓ | ✓ | N / A | N / A |
| Comparator decision response time | 0.8 second | 0.3 second | 0.3 second | 0.8 second (PV : 4 s) | N / A |
| AUTO power save | ✓ | ✓ | ✓ | ✓ | N / A |
| AUTO range | ✓ | ✓ | ✓ | ✓ | ✓ |
| Data hold | MANUAL | MANUAL | MANUAL | MANUAL | MANUAL |
| Bluetooth® communication | N / A | N / A | ✓ | N / A | N / A |
| Bar graph | N / A | ✓ | ✓ | N / A | ✓ |
| Backlight | ✓ | ✓ | ✓ | ✓ | ✓ |
| Safety standard category | CAT III 600 V | CAT III 600 V | CAT III 600 V | CAT III 600 V | CAT IV 600 V CAT III 1000 V |
| CE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Dustproof and waterproof | IP40 | IP40 | IP40 | IP40 | IP40 |
| Drop proof | ✓ | ✓ | ✓ | N / A | ✓ |
| Power supply | LR03 x 4 alkaline | LR03 x 4 alkaline | LR03 x 4 alkaline | LR03 x 4 alkaline | LR03 x 6 alkaline |
| Dimensions (W × H × D) | 159 × 177 × 53 mm 6.26 × 6.97 × 2.09 in | 159 × 177 × 53 mm 6.26 × 6.97 × 2.09 in | 159 × 177 × 53 mm 6.26 × 6.97 × 2.09 in | 159 × 177 × 53 mm 6.26 × 6.97 × 2.09 in | 260 × 250.6 × 119.5 mm 10.24 × 9.87 × 4.70 in |
| Mass | 600 g (21.2 oz) | 640 g (22.6 oz) | 640 g (22.6 oz) | 600 g (21.2 oz) | 2.8 kg (98.8 oz) |
INSULATION TESTER IR4056-20, IR4056-21

Ranges in excess of 600 V/1000 V are outside the accuracy guarantee.

Minimum indicated value: 30.0 V

Subclause 4.3 of Part 4 (interchanging of test leads) is not applicable when L9788-11 is used.

With:
- TEST LEAD L9787
- Neck strap
- LR6 alkaline battery x4
- Instruction manual

IR4056-20

IR4056-21 Not CE marked

INSULATION TESTER IR4057-20, IR4058-20

Other operating temperature
IR4056, 57, 58: -25℃ to 65℃, 90% rh or less (non-condensating)
IR4053: 0℃ to 50℃, 90% rh or less (non-condensating)

Storage temperature
IR4056, 57, 58: -25℃ to 65℃, 90% rh or less (non-condensating)
IR4053: -10 ℃ to 50℃, 90% rh or less

Dustproof and waterproof IP40

Standards
EN61326 (EMC)
EN61557-1/-2/-4/-10

Other

Power supply
Continuously operating 20 hours
LR6 alkaline battery x4

Dimensions (W x H x D)
159 × 177 × 53 mm (6.26 × 6.97 × 2.09 inch)

Mass
IR4056, 53: 600 g (21.2 oz)
IR4057, 58: 640 g (22.6 oz)

With:
- TEST LEAD L9787
- Neck strap
- LR6 alkaline battery x4
- Instruction manual

IR4057-20

IR4058-20

Please see www.hioki.com for list of supported regions.

INSULATION TESTER (For Photovoltaic Generation Systems) IR4053-10

Order code
IR4056-20
IR4056-21
IR4057-20
IR4058-20
IR4053-10

Model IR4056, 57, 58 | IR4053
---|---

<table>
<thead>
<tr>
<th>Measurement parameters</th>
<th>Insulation resistance</th>
<th>PV Ω measurement</th>
<th>DC Voltage</th>
<th>AC Voltage</th>
<th>Low resistance measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>N / A</td>
<td>N / A</td>
<td>N / A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.200 V/42.00 V/420.0 V/1000 V</td>
<td>420.0 V</td>
<td>10.00 Ω/100.0 Ω/1000 Ω</td>
</tr>
</tbody>
</table>

Testing voltage (DC) 50 V 125 V 250 V 500 V 1000 V

Effective maximum indicated value (MΩ) 200 to 100 200 to 25.0 200 to 50.0 200 to 500 200 to 1000 ±2% rdg ±2 dgt

1st effective measuring range (MΩ) 10.0 to 100 10.1 to 100 25.1 to 250 50.1 to 500 101.0 to 4000 ±5% rdg ±1.3% rdg ±4 dgt

2nd effective measuring range (MΩ) 100 to 1000 250 to 2500 500 to 5000 1000 to 5000 6000 Ω ±4% rdg ±8% rdg

PV Ω measurement
N / A

AC Voltage
420.0 V

Low resistance measurement
10.00 Ω/100.0 Ω/1000 Ω ±3% rdg ±2 dgt

Please see www.hioki.com for list of supported regions.

CAT III 600 V

Comparator decision response time : 0.8 s

Comparator decision response time (PV) : 4 s

CAT III 600 V

1 Ranges in excess of 600 V/1000 V are outside the accuracy guarantee.
2 Minimum indicated value: 30.0 V
3 Subclause 4.3 of Part 4 (interchanging of test leads) is not applicable when L9788-10 is used.
**Function introduction**

**HIGH VOLTAGE INSULATION TESTER IR3455**

**STEP 5.0 kV step voltage test**

Voltage application time for each step: 30 s/1/2/5 m.

In this type of test, the voltage is gradually raised and the insulation resistance and leakage current change is measured.

Two different step settings are available:
- 500 V 1.0 kV 1.5 kV 2.0 kV 2.5 kV 3.0 kV 3.5 kV 4.0 kV 4.5 kV 5.0 kV
- 1 kV 2 kV 3 kV 4 kV 5 kV

**PI: Polarization Index**

**DAR: Dielectric Absorption Ratio**

**Data Memory Function**

The IR3455 provides a manual storage function for 100 data and a logging function for 10 data (360 times). Date and time are also stored, reducing the need for handwritten notes.

Install the included software on your computer and connect via USB to transfer the data stored in the internal memory of the IR3455 to your computer.

**Function introduction**

**INSULATION TESTER (For Photovoltaic Generation Systems) IR4053-10**

**Measurement not affected by generating PV**

The IR4053, which was designed for PV, can accurately measure insulation resistance without being affected by the generating PV.

**Accurate and safe measurement without creating shorts**

Normally, to accurately measure the insulation resistance of a generating PV, one needs to short the measured circuit. That's not necessary with the IR4053.
Analog Meters

**Single range**
- IR4016-20
- IR4017-20
- IR4018-20

**3 range**
- 3490

---

**See better in the dark**

- Bright LED

**Significantly improve testing speed using test lead with remote switch**

- Remote Control Switch L9788-11 (Option)
- Start and stop the test at the touch of a button
- Illuminate the test location with a bright white LED
- Work safely knowing that when the RED is lit, live wires, high voltage or electrical discharge is present

---

**Check for Live Circuits**

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

**One-touch Start and Stop**

- **Single test**
  - Measurement voltage is applied while MEASURE key is pressed
- **Continuous test**
  - Lift and lock the MEASURE key to apply a continuous stream of voltage

---

**Flip the Cover**

Quick and easy storage without disconnecting the leads

**Check the Battery Status**

- **BATT : Hi**
- **BATT : Lo**
- **BATT : Dead**
### Measurement parameters

<table>
<thead>
<tr>
<th>Model</th>
<th>IR4016-20</th>
<th>IR4017-20</th>
<th>IR4018-20</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing voltage (DC)</strong></td>
<td>500 V</td>
<td>500 V</td>
<td>1000 V</td>
</tr>
<tr>
<td><strong>Effective maximum indicated value</strong></td>
<td>100 MΩ</td>
<td>1000 MΩ</td>
<td>2000 MΩ</td>
</tr>
<tr>
<td><strong>1st effective measuring range</strong></td>
<td>0.1 MΩ to 50 MΩ</td>
<td>1 MΩ to 500 MΩ</td>
<td>2 MΩ to 1000 MΩ</td>
</tr>
<tr>
<td><strong>2nd effective measuring range</strong></td>
<td>0.01 MΩ to 0.1 MΩ or less</td>
<td>0.5 MΩ to 1 MΩ or less</td>
<td>1 MΩ to 2 MΩ or less</td>
</tr>
</tbody>
</table>

### 3 Ranges 3490

<table>
<thead>
<tr>
<th><strong>Testing voltage (DC)</strong></th>
<th>250 V</th>
<th>500 V</th>
<th>1000 V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effective maximum indicated value</strong></td>
<td>100 MΩ</td>
<td>4000 MΩ</td>
<td></td>
</tr>
<tr>
<td><strong>1st effective measuring range</strong></td>
<td>0.05 MΩ to 50 MΩ</td>
<td>2 MΩ to 1000 MΩ</td>
<td></td>
</tr>
<tr>
<td><strong>2nd effective measuring range</strong></td>
<td>0.01 MΩ to 0.05 MΩ or less</td>
<td>0.5 MΩ to 2 MΩ</td>
<td>1000 MΩ to 4000 MΩ</td>
</tr>
</tbody>
</table>

### Accuracy (Insulation)
- ±5% of indicated value (1st effective measuring range)
- ±10% of indicated value (2nd effective measuring range)

### Operating temperature
0°C to 40°C, 90% rh or less (non-condensating)

### Storage temperature
-10°C to 50°C, 90% rh or less (non-condensating)

### Dustproof and waterproof
IP40

### Drop proof
YES

### Backlight
YES

### Safety standard category
CAT III 600 V

### Standards
EN61010 (Safety), EN61326 (EMC)

### Power supply
LR6 alkaline battery x4

### Continuous operating time
20 hours

### Dimensions (W x H x D)
- IR4016, 17, 18: 162 x 182 x 57 mm (6.38 x 7.17 x 2.24 in)
- 3490: 162 x 167 x 52 mm (6.38 x 6.57 x 2.05 in)

### Mass
- IR4016, 17, 18: 820 g (28.9 oz)
- 3490: 840 g (29.6 oz)

### Accessories
- TEST LEAD L9787 (1.2 m)
- Neck strap
- LR6 alkaline battery x4
- Instruction manual

### Order code
- IR4016-20
- IR4017-20
- IR4018-20
- 3490

### Lineup
- Product warranty for 3 years
- Accuracy guaranteed for 1 year
**Options**

### IR401X, IR405X, 3490

<table>
<thead>
<tr>
<th>1</th>
<th>TEST LEAD SET WITH REMOTE SWITCH L9788-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>TEST LEAD L9787</td>
</tr>
<tr>
<td>3</td>
<td>TEST LEAD WITH REMOTE SWITCH (RED) L9788-10</td>
</tr>
<tr>
<td>4</td>
<td>TIP PIN L9788-90</td>
</tr>
<tr>
<td>5</td>
<td>BREAKER PIN L9788-92</td>
</tr>
<tr>
<td>6</td>
<td>MAGNETIC ADAPTER 9804-02</td>
</tr>
<tr>
<td>7</td>
<td>BREAKER PIN L9787-91</td>
</tr>
</tbody>
</table>

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

### IR3455

<table>
<thead>
<tr>
<th>1</th>
<th>TEST LEAD 9750-01 RED, 3 m (9.84 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>TEST LEAD 9750-02 BLACK, 3 m (9.84 ft)</td>
</tr>
<tr>
<td>3</td>
<td>TEST LEAD 9750-03 BLUE, 3 m (9.84 ft)</td>
</tr>
<tr>
<td>4</td>
<td>TEST LEAD 9750-11 RED, 10 m (32.81 ft)</td>
</tr>
<tr>
<td>5</td>
<td>TEST LEAD 9750-12 BLACK, 10 m (32.81 ft)</td>
</tr>
<tr>
<td>6</td>
<td>TEST LEAD 9750-13 BLUE, 10 m (32.81 ft)</td>
</tr>
<tr>
<td>7</td>
<td>ALLIGATOR CLIP 9751-01 RED</td>
</tr>
<tr>
<td>8</td>
<td>ALLIGATOR CLIP 9751-02 BLACK</td>
</tr>
<tr>
<td>9</td>
<td>ALLIGATOR CLIP 9751-03 BLUE</td>
</tr>
<tr>
<td>10</td>
<td>TEMPERATURE SENSOR 9631-01 Molded plastic thermistor type (1 m (3.28 ft))</td>
</tr>
<tr>
<td>11</td>
<td>TEMPERATURE SENSOR 9631-05 Molded plastic thermistor type (5 cm (0.16 ft))</td>
</tr>
<tr>
<td>12</td>
<td>AC ADAPTER 9418-15</td>
</tr>
<tr>
<td>13</td>
<td>BATTERY PACK 9459</td>
</tr>
</tbody>
</table>

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All information correct as of June 12, 2020. All specifications are subject to change without notice.