**S1-552/2 and S1-1052/2**

5 kV and 10 kV Insulation Resistance Testers

- CAT IV 600 V
- Mains or battery powered
- Digital/analogue backlit display
- Variable test voltage from 50 to 5000 or 10,000 V
- Automatic IR, PI, DAR, SV and DD tests
- Measures to 15 TΩ (5 kV) and 35 TΩ (10 kV)
- Charge current: 5 mA
- RS232 and USB download of results to Megger Download Manager
- On board memory for results storage

**DESCRIPTION**

The new 5 & 10 kV insulation resistance testers from Megger are designed specifically to assist you with the testing and maintenance of high voltage electrical equipment. IEEE 43-2000 recommends the use of 10 kV for motor windings rated above 12 kV and the Megger S1-1052/2 facilitates this. The case is incredibly rugged and easy to carry, being made of tough polypropylene and achieving an ingress protection rating of IP65. In addition, the model number is marked on both sides of the case for ease of identification in stores or vehicles.

The instruments have a large easy to read backlit LCD display making it equally suitable for use in both bright sunlight and poorly lit environments. Information displayed includes resistance, voltage, leakage current, capacitance, battery status and time constant. In addition, the elapsed time of the test is displayed constantly, removing the need for separate timers. Adjustable timers and limit alarms are included.

The instrument can test when being powered by the mains or its internal rechargeable battery; a great benefit when site conditions are unknown or long term testing is required.

The controls of the instrument are clear and unambiguous and a “quick start” guide is included in the lid of the instrument removing the need to carry bulky manuals under site conditions.

The instrument is fitted with a guard terminal to enhance accuracy. The guard test lead is included as standard with the instrument.

To further enhance the flexibility of the instruments both have the facility to set the test voltage in steps from 50 V to the maximum output voltage avoiding the expense of several insulation resistance testers to meet your application needs.

These IR instruments are designed to meet the highest safety standards and meet the requirements of EN61010. In addition, the instrument measures the voltage at the terminals and if this is above 50 V then the instrument will display the high voltage warning and inhibit testing. At the end of the test the instrument will automatically discharge the energy transferred to the equipment during the test phase.

The S1-552/2 and S1-1052/2 are equally suited to routine testing and diagnostic regimes being pre-programmed with IR, PI, DAR, SV and DD profiles.
SPECIFICATIONS

Voltage input range
85-265 V rms, 50/60Hz, 60 VA

S1-552/2 battery life
Typical capacity is 6 hours continuous testing at 5 kV with a 100 MΩ load

S1-1052/2 battery life
Typical capacity is 4 hours continuous testing at 10 kV with a 100 MΩ load

S1-552/2 test voltages
50 V to 1 kV in 10 V steps, 1 kV to 5 kV in 25 V steps

S1-1052/2 test voltages
50 V to 1 kV in 10 V steps, 1 kV to 10 kV in 25 V steps

S1-552/2 accuracy (23°C, 5 kV)
±5% to 1 TΩ
±20% to 10 TΩ

S1-1052/2 accuracy (23°C, 10 kV)
±5% to 2 TΩ
±20% to 20 TΩ

Guard
2% error guarding 500 kΩ leakage with 100 MΩ load

Display range
Digital display (3 digits) 10 kΩ to 15 TΩ (S1-552/2) to 35 TΩ (S1-1052/2)
Analogue display 100 kΩ to 1 TΩ

Short circuit/charge current
5 mA @ 5 kV (S1-552/2) or 10 kV (S1-1052/2)

Capacitor charge time
<1.5 seconds per µF at 5mA to 5 kV (S1-552/2)
<3 seconds per µF at 5mA to 10 kV (S1-1052/2)

Capacitor discharge time
<120ms per µF to discharge from 5000 V to 50 V (S1-552/2)
<250ms per µF to discharge from 10000 V to 50 V (S1-1052/2)

Capacitance measurement (above 500 V)
10 nF to 50 µF (dependent on measurement voltage)

Capacitance measurement accuracy (23°C)
±5% ±5 nF

Voltage output accuracy (0°C to 30°C)
+4%, -3%, ±10 V of nominal test voltage at 1 GΩ load

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Current measurement range
0.01 nA to 5 mA

Current measurement accuracy (23°C)
±5% ±0.2 nA at all voltages

Interference rejection
S1-552/2 1 mA per 250 V up to a maximum of 2 mA
S1-1052/2 1 mA per 600 V up to a maximum of 2 mA

Timer range
Up to 99 minutes and 59 seconds from start of test
15 second minimum setting for test voltage ≥1000 V
30 second minimum setting for test voltage <1000 V

Memory capacity
32kB

Test regimes
Auto IR, PI, DAR, SV and DD.

Interface
RS232 and USB

Data store
Voltage, test time, leakage current, resistance, PI, DAR, DD, capacitance and time constant

Real time output
Serial, once per second of test voltage, current and resistance

Operating temperature
-20°C to 50°C

Storage temperature
-25°C to 65°C

Ingress protection (lid closed)
IP65

Humidity
90% RH non-condensing at 40°C

Safety
Meets the requirements of EN61010-1:2001 CATIV 600 V

EMC
Meets the requirements of EN61326-1:1998 for use in heavy industrial areas.

Dimensions
305 x 194 x 360 mm (12.7 x 6 x 14.2 inches)

Weight
7.1 kg (16lb) approx.
# S1-552/2 and S1-1052/2

5 kV and 10 kV Insulation Resistance Testers

## Included Accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Order Code</th>
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<tbody>
<tr>
<td>3 m lead set insulated clips</td>
<td>6220-820</td>
</tr>
<tr>
<td>User guide on CD-ROM</td>
<td>2000-213</td>
</tr>
<tr>
<td>RS232 cable</td>
<td>25955-025</td>
</tr>
<tr>
<td>USB cable</td>
<td>25970-041</td>
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<tr>
<td>3 x 3 m lead set insulated clips (S1-1052/2 only)</td>
<td>6220-811</td>
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</table>

## Optional Accessories

### HV test lead sets

<table>
<thead>
<tr>
<th>Item</th>
<th>Order Code</th>
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<tbody>
<tr>
<td>3 x 3 m un-insulated compact clips</td>
<td>8101-181</td>
</tr>
<tr>
<td>3 x 8 m un-insulated compact clips</td>
<td>8101-182</td>
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<tr>
<td>3 x 15 un-insulated compact clips</td>
<td>8101-183</td>
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<tr>
<td>3 x 10 m medium insulated clips</td>
<td>1000-441</td>
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<tr>
<td>3 x 15 m large insulated clips</td>
<td>1000-442</td>
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<tr>
<td>3 x 3 m large insulated clips</td>
<td>6220-811</td>
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<tr>
<td>3 x 10 m large insulated clips</td>
<td>1000-443</td>
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<tr>
<td>3 x 15 m large insulated clips</td>
<td>1000-432</td>
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### Control circuit test lead sets

<table>
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<th>Item</th>
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<tbody>
<tr>
<td>2 x 3 m control circuit, small insulated clips</td>
<td>6220-822</td>
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</table>

### Screened HV test leads

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>1 x 3 m, 5 kV screened un-insulated compact clips</td>
<td>6220-835</td>
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<tr>
<td>1 x 15 m, 5 kV screened un-insulated compact clips</td>
<td>6311-080</td>
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<tr>
<td>1 x 3 m, 10 kV screened un-insulated compact clip</td>
<td>6220-834</td>
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<tr>
<td>1 x 10 m , 10 kV screened un-insulated compact clip</td>
<td>6220-861</td>
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<tr>
<td>1 x 15 m , 10 kV screened un-insulated compact clip</td>
<td>6220-833</td>
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