A wide-range digital multimeter with the emphasis on safety

Conformable to IEC 1010 and EMC directive.
The 3256 is a general-purpose digital multimeter with the emphasis on safety: a terminal shutter interlock mechanism coupled to the rotary function selection switch prevents wrong connections. In addition to AC/DC 560mV ranges, the unit has a wide set of current ranges, from 56 µA to 10 A. Analog measurement look-and-feel is also available, with the bar graph function.

- The terminal shutter interlock mechanism exposes only the correct terminals for connection in the currently selected function.
- Wide current range, from 56 µA to 10 A.
- Minimum voltage range (AC and DC) is 560 mV.
- Frequency measurement up to 400 kHz.
- Bar graph function.
- Conformable to IEC 1010 and EMC directive.
- Maximum reading 5610.
- Hold-auto function automatically displays maximum voltage or current value and minimum resistance value.
- Auto power saving function.
- Overload circuit protection to 600 V AC/DC. (Resistance Function)
Terminal shutter interlock mechanism for foolproof operation -- IEC 1010 safety standard compliance

Terminal shutter mechanism eliminates erroneous terminal connections.

Voltage ranges

Single operation

Simply turn rotary switch.

V and COM terminals open

μA range

μA and COM terminals open

**IEC 1010**: International safety standard for measurement, control and research electrical equipment; the 3256 is designed to conform with every detail of the specification.

### Specification

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<th>Function</th>
<th>Range</th>
<th>Accuracy</th>
<th>Notes</th>
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<tr>
<td>DC voltage</td>
<td>500 mV</td>
<td>±0.35% ±0.4µA</td>
<td>Apprex. 11.5Ω</td>
</tr>
<tr>
<td>5.60 V</td>
<td>±0.35% ±0.4µA</td>
<td>Apprex. 11.5Ω</td>
<td></td>
</tr>
<tr>
<td>56.0 V</td>
<td>±0.6% ±0.4µA</td>
<td>Apprex. 10.5Ω</td>
<td></td>
</tr>
<tr>
<td>500 V</td>
<td>±1.0% ±0.4µA</td>
<td>Apprex. 10.5Ω</td>
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</tr>
<tr>
<td>1000 V</td>
<td>±1.0% ±0.4µA</td>
<td>Apprex. 10.5Ω</td>
<td></td>
</tr>
<tr>
<td>AC voltage</td>
<td>500 mV</td>
<td>±2.0% ±0.4µA</td>
<td>Approx. 11.5Ω</td>
</tr>
<tr>
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<td>±2.0% ±0.4µA</td>
<td>Approx. 11.5Ω</td>
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</tr>
<tr>
<td>500 V</td>
<td>±2.0% ±0.4µA</td>
<td>Approx. 10.5Ω</td>
<td></td>
</tr>
<tr>
<td>750 V</td>
<td>±2.0% ±0.4µA</td>
<td>Approx. 10.5Ω</td>
<td></td>
</tr>
</tbody>
</table>

**Frequency**

- 149.99 Hz: ±0.02% ±0.4µA
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- 400 kHz: ±0.02% ±0.4µA

Frequency range: 0.01 Hz to 500 kHz. Maximum measurable input in each range of input sensitivity is 50V, 500V, 1000V and 1000V, respectively.

**Resistance**

- 500Ω: ±1.0% ±0.4µA
- 5.60 kΩ: ±0.5% ±0.4µA
- 50 kΩ: ±0.5% ±0.4µA
- 500 kΩ: ±0.5% ±0.4µA
- 2 MΩ: ±0.5% ±0.4µA

Open-circuit terminal voltage approx. 0.3 V

**Conductivity check**

- 500Ω: ±1.0% ±0.4µA

Open-circuit terminal voltage approx. 1.25 V

**Diode test**

- 2.0 kΩ V ±0.5% ±0.4µA

Test method: 300 µA constant current

**DC current**

- 50 mV: ±1.5% ±0.4µA
- 500 µA: ±1.5% ±0.4µA
- 500 µA: ±1.5% ±0.4µA
- 500 µA: ±1.5% ±0.4µA
- 100 A: ±1.5% ±0.4µA

10.5Ω max.

**AC current**

- 50 mV: ±2.5% ±0.4µA
- 500 µA: ±2.5% ±0.4µA
- 500 µA: ±2.5% ±0.4µA
- 500 µA: ±2.5% ±0.4µA
- 100 A: ±2.5% ±0.4µA

10.5Ω max.

Internal resistance

10Ω max.

Measurement frequency 50 Hz

Measurement accuracy

10Ω max.

**Power supply**

- R33/AAA x 2 batteries (operating life approx. 500 h continuous on DC V range)

**Power consumption**

- 2.0 mW typical (DC V ranges)

**Battery low indication**

- "B" indication appears when battery voltage is 2.25 V ±0.15 V or below.

**Dimensions and mass**

- 76mm(W) x 167mm(H) x 33mm(D); approx. 280g

**Accessories**

- 9170 test leads, 1 A / 250 V fuse (fusing capacity 1500 A), 10 A / 250 V fuse (fusing capacity 750 A)

**Safety standards**

- Complies with IEC 1010-1 overload voltage category III

**Electromagnetic compatibility**

- EN55011, EN50082-1

**3256 DIGITAL HITESTER 3256-01 DIGITAL HITESTER (with 9378 case)**

**Options**

- 9170 TEST LEADS
- 9379 CARRYING CASE
- 9014 30kV DC High-Voltage Probe

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*In 10 A range, measurement is continuous up to 7 A; from 7 to 10 A, measurement for 1 minute maximum.*

**Measurement method:** Double integration

**Display:** 3 1/2 digit LCD; maximum reading 5610

**Range switching:** Automatic and manual

**Sampling rate:** 2.5 samples/s (other than frequency)

2 samples/s (frequency)

20 samples/s (bar graph)

**Withstand voltage:** 7.4 kV rms AC sine wave (50/60 Hz for 1 minute) input between terminals and body

**Overload protection Voltage functions:**

- 1000 V DC / 750 V AC (sine wave) circuit protection

**Resistance functions:**

- 600 V DC/AC rms (sine wave) circuit protection

**Current functions:**

- 100 A range: 10 A / 250 V fuse protection

- Other ranges: 1 A / 250 V fuse protection

**Operating temperature range:** 0 to 40°C, 80% R.H. maximum, must be no condensation

**Power supply:**

- R33/AAA x 2 batteries (operating life approx. 500 h continuous on DC V range)

**Power consumption:**

- 2.0 mW typical (DC V ranges)

**Battery low indication:**

- "B" indication appears when battery voltage is 2.25 V ±0.15 V or below.

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All information correct as of Mar. 27, 1996. All specifications are subject to change without notice.

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