

CMM-10

MULTIMETER

The most important features of CMM-10 are:

- Autoranging/manual range selection.
- „DATA HOLD” function, for holding measured values.
- „REL” function, which allows you to make measurements relative to a stored reference value.
- Continuity test with acoustic signalling (beeper).
- „AUTO-OFF” function.
- Display 3 7/8 digits (5000 max).



Standard accessories:

- test leads (2 pcs.)
- battery 9V
- K type temperature probe
- operating manual

WAPZCMP1

WASONTEMK

Optional accessories:

- carrying case S1

WAFUTS1

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CMM-10

Multimeter CMM-10 has been designed for the purpose of measurements of AC/DC voltage, AC/DC current, resistance, capacitance, frequency, duty cycle, temperature and also for testing diodes and continuity.

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- „REL” function, which allows you to make measurements relative to a stored reference value.
- Continuity test with acoustic signalling (beeper).
- „AUTO-OFF” function.
- Display 3 7/8 digits (5000 max).

Frequency measurement

| Range | Resolution | Accuracy |
|-----------|------------|-------------------------|
| 5,000 Hz | 0,001 Hz | ±(1,5% m.v. + 5 digits) |
| 50,00 Hz | 0,01 Hz | |
| 500,0 Hz | 0,1 Hz | |
| 5,000 kHz | 0,001 kHz | ±(1,2% m.v. + 3 digits) |
| 50,00 kHz | 0,01 kHz | |
| 500,0 kHz | 0,1 kHz | |
| 5,000 MHz | 0,001 MHz | ±(1,5% m.v. + 4 digits) |
| 10,00 MHz | 0,01 MHz | |

- sensitivity: ≥8V RMS

Duty cycle measurement

| Range | Resolution | Accuracy |
|-------------|------------|-------------------------|
| 0,1...99,9% | 0,1% | ±(1,2% m.v. + 2 digits) |

- sensitivity: ≥8V RMS,
- pulse width: 100µs - 100ms,
- frequency width: 5Hz...150kHz.

Temperature measurement

| Range | Resolution | Accuracy * |
|----------------|------------|-----------------------|
| -20°C...+760°C | 1°C | ±(3% m.v. + 5°C, 9°F) |
| -4°F...+1400°F | 1°F | |

*) probe (K type) accuracy not included

| | |
|---------------------------------------|--|
| Electric security: | |
| - type of insulation | double, according to EN 61010-1 and IEC 61557 |
| - measurement category | CAT II 600V acc. to EN 61010-1:2004 |
| - protection class acc. to EN 60529 | IP40 |
| Other technical data: | |
| - power supply | 9V battery type 6LR61 |
| - diode test | I=0,3mA, U _c =1,5V DC |
| - continuity test | I<0,3mA, sound signal for R<50Ω |
| - over range indication | OL displayed |
| - sampling rate | 2 times per second |
| - input impedance | 7,8MΩ (V AC/DC) |
| - display | 5000 counts LCD display with function indication |
| - dimensions | 138 x 68 x 37 mm |
| - weight | approx. 210 g |
| - fuses | mA, µA range: 0,5A/250V fast A range: 10A/250V fast |
| - auto power OFF | 30 min. |
| - accordance with following standards | EN 61010-1:2004 EN 61010-2-032 |
| - quality standard | ISO 9001 |

| | |
|--------------------------------------|-----------------------------------|
| Rated operational conditions: | |
| - operating temperature | 0...+50°C at <70% rel. humidity |
| - storage temperature | -20...+60°C at <80% rel. humidity |

DC voltage measurement

| Range | Resolution | Accuracy |
|----------|------------|-------------------------|
| 400,0 mV | 0,1 mV | ±(0,5% m.v. + 2 digits) |
| 4,000 V | 0,001 V | |
| 40,00 V | 0,01 V | ±(1,2% m.v. + 2 digits) |
| 400,0 V | 0,1 V | |
| 600 V | 1 V | ±(1,5% m.v. + 2 digits) |

- input impedance: 7,8 MΩ

AC voltage measurement

| Range | Resolution | Accuracy |
|----------|------------|--------------------------|
| 400,0 mV | 0,1 mV | ±(1,5% m.v. + 70 digits) |
| 4,000 V | 0,001 V | ±(1,2% m.v. + 3 digits) |
| 40,00 V | 0,01 V | ±(1,5% m.v. + 3 digits) |
| 400,0 V | 0,1 V | |
| 600 V | 1 V | ±(2,0% m.v. + 4 digits) |

- input impedance: 7,8 MΩ,
- frequency range: 50...400Hz.

DC current measurement

| Range | Resolution | Accuracy |
|----------|------------|-------------------------|
| 400,0 µA | 0,1 µA | ±(1,0% m.v. + 3 digits) |
| 4 000 µA | 1 µA | ±(1,5% m.v. + 3 digits) |
| 40,00 mA | 0,01 mA | |
| 400,0 mA | 0,1 mA | ±(2,5% m.v. + 5 digits) |
| 4,000 A | 0,001 A | |
| 10,00 A | 0,01 A | |

AC current measurement

| Range | Resolution | Accuracy |
|----------|------------|-------------------------|
| 400,0 µA | 0,1 µA | ±(1,5% m.v. + 5 digits) |
| 4 000 µA | 1 µA | ±(1,8% m.v. + 5 digits) |
| 40,00 mA | 0,01 mA | |
| 400,0 mA | 0,1 mA | ±(3,0% m.v. + 7 digits) |
| 4,000 A | 0,001 A | |
| 10,00 A | 0,01 A | |

- frequency range: 50...400Hz.

Resistance measurement

| Range | Resolution | Accuracy |
|----------|------------|-------------------------|
| 400,0 Ω | 0,1 Ω | ±(1,2% m.v. + 4 digits) |
| 4,000 kΩ | 0,001 kΩ | ±(1,0% m.v. + 2 digits) |
| 40,00 kΩ | 0,01 kΩ | ±(1,2% m.v. + 2 digits) |
| 400,0 kΩ | 0,1 kΩ | |
| 4,000 MΩ | 0,001 MΩ | ±(2,0% m.v. + 3 digits) |
| 40,00 MΩ | 0,01 MΩ | |

Capacitance measurement

| Range | Resolution | Accuracy |
|----------|------------|-------------------------|
| 40,00 nF | 0,01 nF | ±(5,0% m.v. + 7 digits) |
| 400,0 nF | 0,1 nF | ±(3,0% m.v. + 5 digits) |
| 4,000 µF | 0,001 µF | |
| 40,00 µF | 0,01 µF | ±(5,0% m.v. + 5 digits) |
| 100,0 µF | 0,1 µF | |

„m.v.”- measured value