



# 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

Sone! S.A.  
ul. Wokulskiego 11  
58-100 Świdnica, PL  
tel. +48 74 85 83 860  
fax +48 74 85 83 809

[export@sonel.pl](mailto:export@sonel.pl)  
[www.sonel.pl](http://www.sonel.pl)



# 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.

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).

## 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<sub>b</sub>=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
- auto power OFF 30 min.
- accordance with following standards EN 61010-1:2004
- quality standard EN 61010-2-032 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	
4,000 A	0,001 A	±(2,5% m.v. + 5 digits)
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	
4,000 A	0,001 A	±(3,0% m.v. + 7 digits)
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	
40,00 MΩ	0,01 MΩ	±(2,0% m.v. + 3 digits)

## 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	
100,0 µF	0,1 µF	±(5,0% m.v. + 5 digits)

„m.v.”- measured value