

4³/₄-Digit Programmable Multimeter HM8012

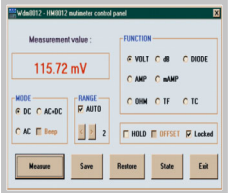
HM8012



HZ15 (included)



WDM8012 Software
(included)



- 4³/₄-digit display with 50,000 counts
- Basic accuracy 0.05%
- Max. Resolution: 10µV, 0.01dBm, 10nA, 10mΩ, 0.1°C
- Offset function/relative value measurement
- RS-232 interface and software included

Mainframe HM8001-2
required for operation

4½-Digit Programmable Multimeter HM8012

All data valid at 23 °C after 30 minute warm-up

DC voltage

Measurement ranges: 500 mV, 5V, 50V, 500V, 600V


Resolution: 10 µV, 100 µV, 1 mV, 10 mV, 100 mV

Accuracy:

5V, 500V, 600V: ±(0.05 % of reading + 0.002 % of full scale)

500 mV, 50V: ±(0.05 % of reading + 0.004 % of full scale)

Overload protection:

V/Ω/T°/dB/  to COM and to chassis:

850 V_p at max. 60 Hz or 600 V_{DC}

COM against chassis: 250 V_{rms} at max. 60 Hz or 250 V_{DC}

Input resistance:

50V, 500V, 600V: 10 MΩ || 90 pF

500 mV, 5V: > 1 GΩ || 90 pF

Input current:

10 µA

Common mode rejection ratio: ≥ 100 dB (50/60 Hz ± 0.5 %)

Serial mode rejection ratio: ≥ 60 dB (50/60 Hz ± 0.5 %)

dB Mode

Accuracy: ±(0.02 dB + 2 digits) [display > -38.7 dBm]

Resolution: 0.01 dB above 18 % of rating

DC current

Measurement ranges: 500 µA, 5 mA, 50 mA, 500 mA, 10 A

Resolution: 10 nA, 100 nA, 1 µA, 10 µA, 1 mA

Accuracy:

0.5...500 mA: ±(0.2 % of reading + 0.004 % of full scale)

10 A: ±(0.3 % of reading + 0.004 % of full scale)

Voltage drop:

10 A range: 0.2 V max.

500 mA range: 2.5 V max.

other ranges: 0.7 V max.

AC voltage

Measurement ranges: 500 mV, 5V, 50V, 500V, 600V

Resolution: 10 µV, 100 µV, 1 mV, 10 mV, 100 mV

Accuracy 0.5...50V:

40 Hz...5 kHz: ± (0.4 % of reading + 0.07 % of full scale)

20 Hz...20 kHz: ± (1 % of reading + 0.07 % of full scale)

Accuracy 500V and 600V:

40 Hz...1 kHz: ± (0.4 % of reading + 0.07 % of full scale)

20 Hz...1 kHz: ± (1 % of reading + 0.07 % of full scale)

Overload protection:

V/Ω/T°/dB/  to COM and to chassis:

850 V_p at max. 60 Hz or 600 V_{DC}

COM against chassis: 250 V_{rms} at max. 60 Hz or 250 V_{DC}

Input impedance

AC mode: 1 MΩ || 90 pF

AC + DC mode: 10 MΩ || 90 pF

Bandwidth at -3 dB: 80 kHz typical

dB mode: 20 Hz...20 kHz

Accuracy

-23.8 dBm...59.8 dBm: ±0.2 dBm

Resolution: 0.01 dB above 9 mV

CMRR¹⁾: ≥ 60 dB (50/60 Hz ± 0.5 %)

Crest factor: 7 max.

AC current

Measurement ranges: 500 µA, 5 mA, 50 mA, 500 mA, 10 A

Resolution: 10 nA, 100 nA, 1 µA, 10 µA, 1 mA

Accuracy:

0.5...500 mA: ±(0.7 % of reading + 0.07 % of f.s.) 40 Hz...5 kHz

10 A: ±(1 % of reading + 0.07 % of full scale)

AC + DC measurements

As shown for AC + 25 digit

Resistance

Measurement ranges: 500 Ω, 5 kΩ, 50 kΩ, 500 kΩ, 5 MΩ, 50 MΩ

Resolution: 10 mΩ, 100 mΩ, 1 Ω, 10 Ω, 100 Ω, 1 kΩ

Accuracy:

500 Ω...500 kΩ: ±(0.05 % of reading + 0.004 % of f.s. + 50 mΩ)

5 MΩ...50 MΩ: ±(0.3 % of reading + 0.004 % of full scale)

Input protection max. 300 V_{rms}

Measurement current: 500 Ω...5 kΩ range: 1 mA

50 kΩ range: 100 µA

500 kΩ range: 10 µA

5...50 MΩ range: 100 nA

Measurement voltage: 10 V typical for open inputs, depending on the value of resistance to be measured. Negative polarity of measurement voltage is across common terminal.

Temperature

2-wire resistance measurement with linearization for PT100 sensors as per standard EN60751

Range: -200 °C...+500 °C

Resolution: 0.1 °C

Measurement current: approx. 1 mA

Display: in °C, °F

Accuracy: ± (0.4 °C + 0.0005 x T) from -200 °C...+200 °C
± (0.5 °C + 0.0005 x T) from +200 °C...+500 °C
[T in °C, sensor tolerance not included]

Temperature coefficient: [reference 23°C]

V = 500 mV, 50V 30 ppm/°C

600 V range 80 ppm/°C

other ranges 20 ppm/°C

V ~ 600 V range 80 ppm/°C

other ranges 50 ppm/°C

mA all ranges 200 ppm/°C

mA-all ranges 300 ppm/°C

Ω 5 MΩ, 50 MΩ ranges 200 ppm/°C

other ranges 50 ppm/°C

Miscellaneous

Power supply (from mainframe):

+5V 300 mA

~26V 140 mA

Operating temperature: +5 °C...+40 °C

Storage temperature: -20 °C...+70 °C

Max. rel. humidity: 5%...80% (non condensing)

Dimensions (W x H x D) (without 22-pole flat plug):

135 x 68 x 228 mm

Weight: approx. 0.5 kg

Accessories supplied: Operator's Manual, HZ15 PVC test leads, Software CD and interface cable HZ14

Optional accessories:

HZ10S/R Silicone test lead

HZ812 PT100 Temperature probe

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