

4³/₄-Digit Programmable Multimeter HM8012

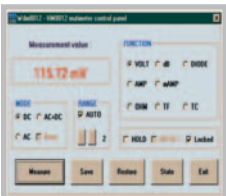
HM8012



HZ15 (included)



WDM8012 Software
(included)



Mainframe HM8001-2
required for operation

4³/₄-digit display with 50,000 counts

Basic accuracy 0.05 %

Max. Resolution: 10 μ V, 0.01 dBm, 10 nA, 10 m Ω , 0.1 °C/°F

Offset function / relative value measurement

RS-232 interface and software included

4½-Digit Programmable Multimeter HM8012

Valid at 23 °C after a 30 minute warm-up period

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/ $\overleftarrow{\text{A}}$ 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:	5V, 500V, 600V: 10 MΩ 90 pF 500 mV, 50V: > 1 GΩ 90 pF
Input current:	10 A
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 0.5-50 V:	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 500 V and 600 V:	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/ $\overleftarrow{\text{A}}$ 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 to 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 digits

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 to 500 kΩ: ±(0.05 % of reading + 0.004 % of f.s. + 50 mΩ) 5 MΩ to 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 to +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 to +200 °C ± (0.5 °C + 0.0005 x T) from +200 °C to +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:	+10 °C to +40 °C
Max. relative humidity:	80 % (without condensation)
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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