

High Accuracy Microhmmeter

Model DO5002

Low Current version



The DO5002 provides flexibility of measurement combined with high accuracy and exceptional functionality. Encompassing all the features required of an ohmmeter in one instrument. Programmable measuring current in 100 steps up to 100 mA ensures that the DO5002 is suitable for all your applications. Automatic temperature compensation references the measurement to 20 degrees C and the Hi / Lo limits permit sorting of components with the minimum of fuss. All these options are included in the standard unit as well as RS232 and a data logging function which stores up to 4000 readings with date and time stamp. Statistical analysis of these stored readings allows you to display the max / min / average values as well as the peak to peak values and standard deviation. The DO5002 is a truly remarkable instrument and ideally suited to laboratory testing of samples, or production line testing. With the addition of the RS232, IEEE-488 or PLC interfaces it may be remotely controlled and integrated into automated test systems. For those applications where speed is important the DO5002 will measure up 50 measurements per second without loss of accuracy.

For the measurement of inductive circuits such as motor and generator windings the DO5002 has built in measurement algorithms to ensure steady and stable readings are achieved.

- ✓ Wide Measuring Range 10 $\mu\Omega$... 30,000 Ω
- ✓ High Accuracy $\pm 0.03\%$
- ✓ Programmable measuring Current 10%...100% 100 steps 10 Amps maximum
- ✓ Programmable High Low Limits with red / green lamps on front panel
- ✓ Fast Measuring mode 50 measurements / second
- ✓ Automatic Temperature Compensation with programmable coefficients
- ✓ Open Circuit Lead warning
- ✓ Open Circuit Voltage limit Mode 20mV / 50 mV maximum
- ✓ Measuring Current Selection + I - I auto average
- ✓ Data logging with statistical analysis
- ✓ Interface Options RS232 IEEE-488 PLC
- ✓ Cable length calculations

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Technical Specification

Range	Resolution	Min. Current	Max. Current	Accuracy at full rated current
30 k Ω	1 Ω	10 μ A	100 μ A	$\pm(0.03\% \text{ Rdg} + 0.02\% \text{ FS})$
3 k Ω	100 m Ω	100 μ A	1 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
300 Ω	10 m Ω	1 mA	10 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
30 Ω	1 m Ω	10 mA	100 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
3 Ω	100 $\mu\Omega$	10 mA	100 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
200 m Ω	10 $\mu\Omega$	10 mA	100 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$

Measurement: Four terminal Kelvin/Thomson principle eliminates errors due to lead resistance

Display: LCD Graphics panel with backlight
30,000 count

Open Circuit Voltage: 5 Vdc

Range Selection: 8 ranges, with manual or automatic selection.

Terminals: 4mm safety sockets

Working Temperature: 0...+45°C rel. humidity
80% max. non condensing

Storage Temperature: -20...+60°C

Mains Supply: 115/230 Volts +10%-10%
47..163Hz 20VA

Safety: EN61010-1
EMC - EN61236

Dimensions: 339 x 324 x 131mm (W H D)

Mass: 12 kg approx.

Available accessories include

Cable Clamps



Temperature Probes



Auto Zero: Permits the zero of measured values

Average: Automatic average and display of measurement with forward and reverse current.

Automatic Temperature compensation:

Automatically references measurement to temperature of 20 Degrees C or other user defined temperature. User coefficients may be used. External Pt100 senses temperature manual value can also be used.

Hi / Lo Limits: Limit values can be set over entire measurement range

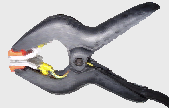
Interfaces: RS232 fitted as standard GPIB and PLC by option

Calibration: Digital Pass code protected

Protection: 415Vrms maximum at the measuring terminals will blow internal protection fuse

Accessories: Supplied complete with mains cord, measuring leads with Kelvin clips, operating handbook and calibration certificate

Additional Lead sets



LS03-P large Kelvin clips 3 metre leads

LS04-P Large Kelvin clips 3 and 15 metre leads

HS01-P Duplex Handspikes 3 meter leads

HS02-P Duplex handspikes 3 and 15 metre leads



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