

# High Accuracy Microhmmeter Model DO5000



The DO5000 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 10 Amps ensures that the DO5000 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 DO5000 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 DO5000 will measure up to 50 measurements per second without loss of accuracy.

For the measurement of inductive circuits such as motor and generator windings the DO5000 has built in measurement algorithms to ensure steady and stable readings are achieved.

- ✓ Wide Measuring Range 0.1  $\mu\Omega$  ... 30,000 $\Omega$
- ✓ 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

## CROPICO

Precision measurement solutions since 1952

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## Technical Specification

Range	Resolution	Min. Current	Max. Current	Accuracy at full rated current
30 k $\Omega$	1 $\Omega$	10 $\mu$ A	100 $\mu$ A	$\pm(0.03\% \text{ Rdg} + 0.02\% \text{ FS})$
3 k $\Omega$	100 m $\Omega$	100 $\mu$ A	1 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
300 $\Omega$	10 m $\Omega$	1 mA	10 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
30 $\Omega$	1 m $\Omega$	10 mA	100 mA	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
3 $\Omega$	100 $\mu\Omega$	100 mA	1 A	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
200 m $\Omega$	10 $\mu\Omega$	1 A	10 A	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
30 m $\Omega$	1 $\mu\Omega$	1 A	10 A	$\pm(0.03\% \text{ Rdg} + 0.01\% \text{ FS})$
3 m $\Omega$	0.1 $\mu\Omega$	1 A	10 A	$\pm(0.03\% \text{ Rdg} + 0.02\% \text{ FS})$

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

**Display:** LCD Graphics panel with backlight 30,000 count

**Open Circuit Voltage:** 3V dc

**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)  
(470 x 470 x 320 packed in a card carton)

### Available accessories Include

#### Cable Clamps



#### Temperature probes



**Mass:** 12 kg approx.

(12kg packed in a card carton)

**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 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 instructions 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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