CE CROPICO DO5000

Digital Micro-Ohmmeter

DO5000 - 10 Amps Programmable Current

This new generation of micro-ohmmeters offers flexibility of measurement with high accuracy and exceptional functionality. The DO5000 encompasses all the features required of an ohmmeter in one instrument. Programmable measuring current in 100 steps ensures that the DO5000 is suitable for all your applications. Automatic temperature compensation references the measurement to 20°C and Hi / Lo limits permits sorting of components with the minimum of fuss. All these options are included in the basic unit as well as a data logging function which stores up to 4000 readings with date and time stamp. Statistical analysis of these values allows you to display the Max / Min / Average values as well as peak to peak and standard deviation. The DO5000 is a truly remarkable instrument and ideally suited for laboratory testing of samples, for production line testing, and with the addition of the interfaces RS232 / IEEE-488 or PLC the DO5000 may be remotely controlled and integrated into an automated testing system. For those applications where speed is important the DO5000 has a FAST measurement mode which measures at 50 measurements per second.

Whatever your resistance measurement application the DO5000 provides the solution.

- Wide Measuring Range 0.1µΩ ... 30,000Ω
- High Accuracy ±0.03%
- Programmable Measuring Current 10% to 100% in 100 steps 10 Amps maximum
- Programmable Hi/Lo limits with red/green lamps on front panel
- Fast measuring Mode 50 measurements / second
- Automatic Temperature Compensation with programmable Coefficients
- Open Circuit Voltage Limit Mode 20mV / 50mV maximum
- Measuring Current Selection + I - I and auto average
- Interface Options RS232 / IEEE 488/PLC
- Data Logging with Statistical Analysis

Range	Resolution	Min. Current	Max. Current	Accuracy at full rated current
30kΩ	1Ω	10 µA	100 µA	±(0.03% Rdg +0.02% FS)
3kΩ	100mΩ	100 µA	1mA	±(0.03% Rdg +0.01% FS)
300Ω	10mΩ	1mA	10mA	±(0.03% Rdg +0.01% FS)
30Ω	1mΩ	10mA	100mA	±(0.03% Rdg +0.01% FS)
3Ω	100µΩ	100mA	1A	±(0.03% Rdg +0.01% FS)
200mΩ	10µΩ	1A	10A	±(0.03% Rdg +0.01% FS)
30mΩ	1µΩ	1A	10A	±(0.03% Rdg +0.01% FS)
3mΩ	100nΩ	1A	10A	±(0.03% Rdg +0.02% FS)

Open circuit voltage ≈ 5 Vdc

CROPICO DO5001-2 CE

NEW

DO5001 - Battery Version

The DO5000 is also available with rechargeable batteries, the batteries are housed internally together with the itelligent charger circuit. The batteries used are sealed lead acid type and the built in charger maintains them in optimum condition. The performance and functionality of the DO5001 is the same as standard mains only version. When measuring on battery power the DO5001 automatically switches to single measurement mode to preserve battery life and maximise the operating time. The DO5001 will both charge the batteries and provide full 10 Amps measuring current when connected to mains supply. For real portability combined with measurement accuracy the DO5001 is the best choice.

Range	Resolution	Min. Current	Max. Current	Accuracy at full rated current
30kΩ	1Ω	10 µA	100 µA	±(0.03% Rdg +0.02% FS)
3kΩ	100mΩ	100 µA	1mA	±(0.03% Rdg +0.01% FS)
300Ω	10mΩ	1mA	10mA	±(0.03% Rdg +0.01% FS)
30Ω	1mΩ	10mA	100mA	±(0.03% Rdg +0.01% FS)
3Ω	100µΩ	100mA	1A	±(0.03% Rdg +0.01% FS)
200mΩ	10µΩ	1A	10A	±(0.03% Rdg +0.01% FS)
30mΩ	1µΩ	1A	10A	±(0.03% Rdg +0.01% FS)
3mΩ	100nΩ	1A	10A	±(0.03% Rdg +0.02% FS)

Open circuit voltage ≈ 3 V dc

Battery Life: = 6000 measurements in fast mode using 10Amps measurement current, or approximately 3000 measurements in slow mode.

DO5002 - Low Current Version

With all the functionality of standard DO5000 but with limited measuring current and the ability to limit the open circuit voltage to either 20mV or 50mV. This model has been primarily developed to satisfy those applications where open circuit voltage and the measuring current needs to be limited. A typical application is for the measurment of switch contact resistance to conform to standards such as NFC93050.

Range	Resolution	Min. Current	Max. Current	Accuracy at full rated current
30kΩ	1Ω	10 µA	100 µA	±(0.03% Rdg +0.02% FS)
3kΩ	100mΩ	100 µA	1mA	±(0.03% Rdg +0.01% FS)
300Ω	10mΩ	1mA	10mA	±(0.03% Rdg +0.01% FS)
30Ω	1mΩ	10mA	100mA	±(0.03% Rdg +0.01% FS)
3Ω	100µΩ	10mA	100mA	±(0.03% Rdg +0.01% FS)
200mΩ	10µΩ	10mA	100mA	±(0.03% Rdg +0.01% FS)

Note: The 2 lowest ranges of the standard DO5000 are deleted in this model
Open circuit voltage ≈ 5 V dc with Limit options for 20mV and 50mV

- Wide Measuring Range 0.1µΩ ... 30,000Ω
- High Accuracy ±0.03%
- Programmable Measuring Current 10% to 100% in 100 steps 10 Amps maximum
- Programmable Hi/Lo limits with red/green lamps on front panel
- Fast measuring Mode 50 measurements / second
- Automatic Temperature Compensation with programmable Coefficients
- Open Circuit Voltage Limit Mode 20mV / 50mV maximum
- Measuring Current Selection + I - I and auto average
- Interface Options RS232 / IEEE 488/PLC
- Data Logging with Statistical Analysis

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✓ **Wide Measuring Range**	✓ **High Accuracy Large LCD Display**
The long scale length 30000 count combined with its wide memory range enables the DO5000 to tackle the most demanding tasks with ease. The resolution is **0.1µΩ** on the lowest range and the maximum reading is **30,000Ω.**	The measuring accuracy ±0.03% ensures the highest quality of measurement.
✓ **Programmable Measuring Current**	✓ **Measuring Current**
The measuring current is a maximum 10 Amps on the lowest ranges and may be programmed between 10 and 100% in 1% steps. This ensures that whatever specification you are testing, the DO5000 can be configured to your requirements.	The measuring current may be selected for forward (+I), reverse (-I) or auto average mode which automatically switches the current and displays the average reading. This further enhances the measurement accuracy and reliability eliminating errors due to thermal emf.
✓ **Programmable Hi/Lo limits**	✓ **Fast Measuring Mode**
Hi/Lo limits may be set with audible (beeper) and visual(red/green panel lamps) indicating if the measured values are outside the limits. In addition if one of the interfaces is fitted a signal is available to control other equipment.	The normal measuring speed is approximately 2 measurements/second, for automated testing where speed is important a FAST mode is available which measures at 50 measurements /second, ideal for production lines.
✓ **Automatic Temperature Compensation**	✓ **Open Circuit Voltage Limit**
Automatically compensates the measured resistancevalue for temperature, referencing the value to 20°C, particularly useful when measuring materials which have a relatively high temperature coefficient.	To comply with some testing standards for switches it is possible to limit the open circuit voltage to 20 or 50mV.
✓ **Digital Calibration**	✓ **Interface Options**
The calibration of the DO5000 is all digital with no need to open the instrument. All adjustments are made via the front panel keyboard ensuring low cost of ownership. The calibration is protected with a password and the date of the last calibration is recorded.	For those wishing to automate their resistance measurements three interfaces are available. The RS232 and IEEE-488 interfaces are fully talk/listen and generally conform to the SCPI standard. The PLC interface carries all the connectors required to perform measurements and include potential free relay contacts for limit pass/fail and analogue output.
✓ **Data Logging**	✓ **Ohms/Length & Length Feature**
The DO5000 has the ability to store up to 4000 readingswith date and time stamp. From the stored values max, min, average values may be displayed together with a calculation of the standard deviation.	This feature provides the ability to input the length of a cable and using the measured resistance, display the resistance per length (Ω/l). The length of a cable can also be displayed.

CROPICO DO5000 CE

Measurement
4 wire eliminates lead resistance
Display
LCD graphics panel with backlight
30,000 count
Range Selection
Manual / Automatic
Auto Zero
Value Average Hold

Systems Interface
RS232 fitted as standard, IEEE-488, PLC - option
Terminals
4mm safety sockets
Working Temperature
0°C ... 45°C
Storage Temperature
-10°C ... + 60°C
Mains Supply
230 V ±10%, 115 V ±10%
47 ... 63Hz

Safety
IEC 1010 Class 1
Dimensions
339 x 324 x 131mm (WDH)
Weight 12 kg
Battery Version 15 kg
Accessories
supplied with RS232 interface, mains cord, handbook and certificate of conformity.

High Accuracy Measurement Solutions ... from CROPICO

If you are ...	with the DO5000 you can measure ...
• a fuse manufacturer	• the fuse resistance on production line using FAST mode 50 measurements per second and interface.
• an automotive component manufacturer	• the air bag and seat belt detonator resistance • the ABS braking system coils
• an electrical/electronic component manufacturer	• the switch contact resistance • the relay contact resistance
• a resistor manufacturer	• the resistance values for quality control and tolerance sorting
• an electric motor and generator manufacturer and repairer	• the winding resistance for the determination of heat rise in motors and generators
• a cable manufacturer	• the cable resistance (usually 1 metre length) to ensure compliance with specification
• a transducer manufacturer	• the resistance measurement of transducers

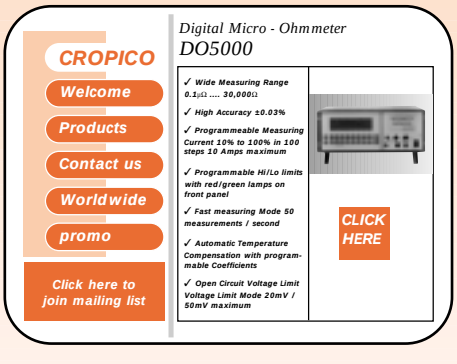
CROPICO on the Web

Details of THE DO5000 and other

CROPICO instruments can be found

on our web site at:

www.cropico.com



IF YOU ARE NOT ON THE LIST ABOVE, PLEASE GIVE US A CALL.
WE WILL FIND A SOLUTION TO YOUR RESISTANCE MEASUREMENT NEEDS