

# DLRO 200

## Digital Microhmmeter



- **Small and weighs less than 15kg**
- **Test currents from 10 A to 200 A d.c.**
- **0.1  $\mu\Omega$  best resolution**
- **On board memory for up to 300 test results and notes**
- **RS232 port to download stored results or for real time output to a printer**
- **Supplied complete with 5m test leads and download software**

### DESCRIPTION

Megger DLRO200 measures resistances between 0.1  $\mu\Omega$  and 1  $\Omega$ , at high currents.

This versatile instrument can provide test currents from 10 amps up to 200 amps subject to the load resistance and supply voltage. A large liquid crystal display provides all the information needed to perform a test; all test parameters and measurement results are displayed.

The unique design allows the weight and size of DLRO200 to be kept to a minimum; the instrument weighs less than 15kg. This small size makes DLRO200 equally at home in the workshop, on the production floor or in the field. The high current capability and compact design make DLRO200 suitable for testing circuit breaker contacts, switch contacts, busbar joints or other applications where high current is needed.

300 sets of results may be stored in DLRO200's on board memory for later download to a PC or may be output directly to a printer via the RS232 port. You may also add notes to any stored result by using the on board alphanumeric keypad, thereby making later identification of results straightforward.

As well as adding notes to stored results, the alphanumeric keypad allows you to set the test current directly by typing in the value required. DLRO200 will check the continuity of the test circuit, and will quickly ramp the test current up to the desired level. The keyboard is also used to set upper and lower limits for the result and to prevent the use of excessive currents by setting an upper limit to the allowable test current.

DLRO200 uses a four terminal measurement technique to cancel

the resistance of the test leads from the measurement.

DLRO200 operates in one of three modes, which are simply selected from the on screen menu.

CONTINUOUS mode is provided for users who wish to monitor a resistance over a period of time. Connect the test leads, select the test current and press the TEST button. DLRO200 will pass a current continuously, and measure the resulting voltage at 2 second intervals, until the test button is pressed to stop the test or the test circuit is interrupted.

In NORMAL mode you connect the leads, select the test current and press the TEST button. The test current will ramp up to the desired level, hold for 2 seconds and then ramp down. The whole process takes approximately 10 seconds.

In AUTO mode select the desired current, connect the current leads and press the TEST button. The TEST lamp will flash to show that the DLRO200 is ready to carry out a test. As soon as the potential leads are connected, a test will start. To repeat a test, simply break contact with the voltage probes and remake contact.

Measuring individual joints in a busbar is a good example of the convenience to be gained by using AUTO mode. The two current leads are connected to the ends of the busbar. They will remain connected here until all tests have been completed. When the voltage leads make contact across a joint, DLRO200 detects that all four leads are connected, carries out a test and stops. When you move to the next joint DLRO detects the new completed circuit automatically and carries out the next test, and so on until all joints have been tested. The results may be stored automatically and may be recalled to the display or downloaded for review.

**SPECIFICATIONS**
**Measurement:**
**Range:** 0.1  $\mu\Omega$  to 999.9 m $\Omega$ 

(Subject to supply voltage and leads used)

**Accuracy:**

Voltage	$\pm 0.5\% \pm 0.1$ mV
Current	$\pm 0.5\% \pm 0.1$ A
Resistance:	Better than 1% from 100 $\mu\Omega$ to 100 m $\Omega$

**Current Lead Resistance (Megger supplied leads)**

2 x 5 m 25 mm <sup>2</sup> current leads	8 m $\Omega$
2 x 5 m 50 mm <sup>2</sup> current leads	4 m $\Omega$
2 x 10 m 70 mm <sup>2</sup> current leads	5.4 m $\Omega$
2 x 15 m 95 mm <sup>2</sup> current leads	6 m $\Omega$

**Maximum Continuous Test Time**

More than 10 minutes at 200 A @ 20°C ambient.

**Power Supply DLRO200**
**for full output (unsmoothed d.c.):**

 100 to 265 V 50/60 HZ with a load  
 less than 19 m $\Omega$  (supply >207 V rms), or  
 11 m $\Omega$  (115 V rms) including current leads

**Power Supply DLRO200-115**
**for full output (additional smoothing):**

 100 to 130 V 50/60 HZ with a load  
 less than 11 m $\Omega$  including current leads

**Test Modes:** Manual, Auto, Continuous.

**Test Time:** 10 seconds NORMAL /AUTO mode.  
 Refreshed every 2 seconds in CONTINUOUS mode

**Display:** Large, high resolution backlit liquid crystal display

**Warnings** Current flowing: - LED. Other warnings are shown on the lcd display.

**Data Transfer** Real time or batch download via RS232 using Download Manager.

**Storage Capacity:** 300 result sets and memo, battery backed for 10 years.

**Memo field:** 160 characters max.

**Test Current**
**Range:** 10 A to 200 A d.c. \*

**Accuracy:**  $\pm 2\% \pm 2$  A

**Voltmeter input impedance:** >200 k $\Omega$ 
**Hum rejection:** 5 V rms 50 Hz/60 Hz

**Temperature**
**Operation:** -10 to +50°C

**Storage:** -25 to +65°C

**Calibration:** 20°C

**Co-efficient:** <0.05% per °C

**Max. Humidity:** 95% RH non-condensing

**Maxi Altitude:** 2000 m

**Safety:** IEC61010 – (1995)

**EMC:** EN61326 annex A (heavy industrial)

**Dimensions:** 410 x 250 x 270 mm

**Weight:** 14.5 kg (excluding test leads)

 \* DLRO200-115 supplied with 25 mm<sup>2</sup> current leads 6220-787 as standard

**ORDERING INFORMATION**

Item (Qty)	Order No.	Item (Qty)	Order No.
DLRO200 High Current Digital Low Resistance Ohmmeter (English QWERTY keyboard)	DLRO200 E	EQuick Start Guide (French)	6172-783
DLRO200 High Current Digital Low Resistance Ohmmeter (French AZERTY keyboard)	DLRO200 F	Warranty card.	6170-618
DLRO200-115 High Current Digital Low Resistance Ohmmeter 115 V (English QWERTY keyboard)	DLRO200-115 E	<b>Optional Accessories at extra cost</b>	
<b>Included Accessories</b>		*5m Lead set in bag comprising:	6220-787
5 m Lead set comprising 2 x 50 mm <sup>2</sup> current leads with clips and 2 potential leads with clips	6220-755	2 x 25mm <sup>2</sup> current leads with clamps and 2 x potential leads with clips.	6220-787
Download Manager	6111-442	15m Lead set comprising 2 x 95 mm <sup>2</sup> current leads with clamps and 2 x potential leads with clips.	
User Guide on CD-ROM	6172-763	10m Lead set comprising 2 x 95 mm <sup>2</sup> current leads with clamps and 2 x potential leads with clips.	6220-757
RS232 download cable	25955-025		
Quick Start Guide (English)	6172-782		6220-756

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**DLRO200\_DS\_en\_V01**
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