DLRO200
Digital Microhmmeter

- **Small and weighs less than 15 kg (33 lbs)**
- **Test currents from 10 to 200 A DC**
- **0.1 µΩ 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 (16.4 ft.) test leads and download software**
- **Smooth, continuous applied current eliminates magnetic transients capable of inductively tripping breaker controls (115 V version)**

DESCRIPTION

Megger DLRO200 measures resistances between 0.1 µΩ and 1 Ω, at high currents.

This versatile instrument can provide test currents from 10 A up to 200 A 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 15 kg. 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.

History of 'Ducter' testing

For over 100 years the 'Ducter test' has been used to describe a simple test for measuring very low contact resistances and "Ducter", which is still used as a trade mark, was the name originally given to the low resistance ohmmeter manufactured by Megger. The name Ducter was registered by Megger in June 1908 and 'Ducter' has since become the industry standard.

Test Modes

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.

DLRO200
Digital Microhmmeter

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 µΩ to 999.9 mΩ (Subject to supply voltage and leads used)

Accuracy: Voltage ±0.5% ± 0.1 mV

Current ±0.5% ± 0.1 A

Resistance: Better than 1% from 300 µΩ to 100 mΩ

Better than ±2% from 100 µΩ to 300 µΩ

Current Lead Resistance (Megger supplied leads)

2 x 5 m 25 mm² current leads 8 mΩ

2 x 5 m 50 mm² current leads 4 mΩ

2 x 10 m 70 mm² current leads 5.4 mΩ

2 x 15 m 95 mm² current leads 6 mΩ

Maximum Continuous Test Time

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

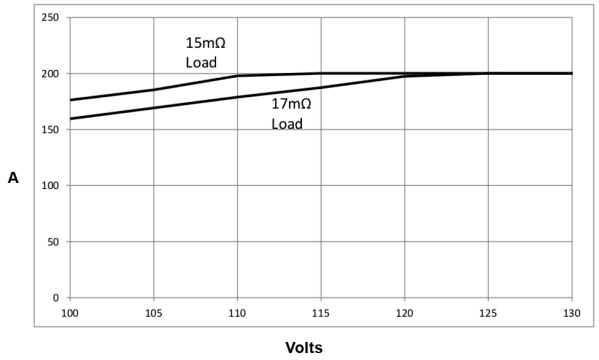
Power Supply for DLRO200 for full output (unsmoothed d.c.)

100 to 265 V 50/60 Hz with a load less than 19 mΩ (supply >207 V rms) or 11 mΩ (115 V rms) including current leads

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

100 to 130 V 50/60 Hz with a load less than 11 mΩ including current leads

Load Curve:



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 to 200 A DC (dependant on load and input voltage)
Accuracy:	±2% ±2 A
Voltmeter input impedance:	>200 kΩ
Hum rejection:	5 V rms 50 Hz/60 Hz
Temperature Operation:	-10 to +50 °C (-14 to +122 °F)
Storage:	-25 to +65 °C (-13 to +149 °F)
Calibration:	20 °C
Co-efficient:	<0.05% per °C
Max. Humidity:	95% RH non-condensing
Maxi Altitude:	2000 m
Safety:	IEC61010-1
EMC:	IEC61326-1
Dimensions:	410 x 250 x 270 mm (16.4 x 9.84 x 10.63 ins)
Weight:	14.5 kg (excluding test leads) (31.97 lbs)

ORDERING INFORMATION - VERSIONS WITH TEST LEADS

Description	Part number
DLRO200-EN Low Resistance Ohmmeter 200A (English Keyboard), Industrial Plug 32A IP44 240V 2P+E.	DLRO200-EN
DLRO200-EU Low Resistance Ohmmeter 200A (English Keyboard), Schuko Industrial Plug 32A IP44 240V 2P+E.	1001-841
DLRO200-FR Low Resistance Ohmmeter 200A (French Keyboard), Industrial Plug 32A IP44 240V 2P+E.	DLRO200-FR
DLRO200-115 US Low Resistance Ohmmeter 200A (English Keyboard) Filtered Output, 115V Input, US NEMA 5 -15P Plug.	DLRO200-115
DLRO200-115 FR Low Resistance Ohmmeter 200A (French Keyboard) Filtered Output, 115V Input, US NEMA 5 -15P Plug.	1000-208
DLRO200-US Low Resistance Ohmmeter 200A (English Keyboard) Unfiltered Output, 100 to 125 V AC Input. US NEMA 5 -15P Plug.	1012-782

Included accessories (depending on version)

Lead set consists of pair of flexible high current capacity leads, together with a separate pair of lightweight potential leads.

Current leads are fitted with heavy duty sprung clamps (60 mm jaw capacity). Potential leads fitted with smaller heavy duty crocodile clips (22 mm jaw capacity).

DLRO200-EN, DLRO200-EU, DLRO200-FR, DLRO200-US

5 m (16.4 ft.) Lead set set comprising: 6220-755
2 x 50 mm^2 current leads with clips Reorder code: 1008-028
and 2 potential leads with clips

DLRO200-115, DLRO200-115 FR

5 m (16.4 ft.) Lead set in bag comprising: 6220-787
2 x 25 mm^2 current leads with clamps Reorder code: 1008-029
and 2 potential leads with clips

ORDERING INFORMATION - VERSIONS WITHOUT TEST LEADS

Description	Part number
DLRO200-EN NLS Low Resistance Ohmmeter 200A (English Keyboard), Industrial Plug 32A IP44 240V 2P+E.	DLRO200-EN-NLS
DLRO200-FR NLS Low Resistance Ohmmeter 200A (French Keyboard), Industrial Plug 32A IP44 240V 2P+E	DLRO200-FR-NLS

Description	Part number
DLRO200-115-FR NLS Low Resistance Ohmmeter 200A (French Keyboard), Filtered Output, 115V Input, US NEMA 5 -15P Plug	6411-164
DLRO200-115V NLS Low Resistance Ohmmeter 200A (English Keyboard), Filtered Output, 115V Input, US NEMA 5 -15P Plug	1000-565
DLRO200-US NLS Low Resistance Ohmmeter 200A (English Keyboard), Unfiltered Output, 100 to 125 V AC Input. US NEMA 5 -15P Plug	1012-783

INCLUDED ACCESSORIES FOR ALL VERSIONS

Description	Part number
Download manager	6111-442
User guide on CD-ROM	6172-763
RS232 download cable	25955-025

Description	Part number
Quick start guide (English)	6172-782
Quick start guide (French)	6172-783
Warranty card	2000-231

OPTIONAL ACCESSORIES FOR ALL VERSIONS

Lead set consists of pair of flexible high current capacity (600 A cont.) leads, together with a separate pair of lightweight potential leads.

Current leads are fitted with heavy duty sprung clamps (60 mm jaw capacity). Potential leads fitted with smaller heavy duty crocodile clips 22 mm jaw capacity).

10 m Lead set 2 x 70 mm 2 current leads with clamps and 2 x potential leads with clips	6220-756
15 m Lead set 2 x 95 mm 2 current leads with clamps and 2 x potential leads with clips	6220-757

For further information visit the website: **www.megger.com**

SALES OFFICE
Megger Limited
Archcliffe Road Dover
CT17 9EN England
T. +44 (0) 1304 502101
E. UKsales@megger.com

DLRO200_DS_en_V10
www.megger.com
ISO 9001

Megger