

# DLRO600

## Digital Microhmmeter



- **Small and weighs less than 15kg**
- **Test currents from 10A to 600 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**

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### DESCRIPTION

Megger DLRO600 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 600 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 DLRO600 to be kept to a minimum; the instrument weighs less than 15kg. This small size makes DLRO600 equally at home in the workshop, on the production floor or in the field. The high current capability and compact design make DLRO600 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 DLRO600'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. DLRO600 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.

DLRO600 uses a four terminal measurement technique to cancel the resistance of the test leads from the measurement.

### 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

DLRO600 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. DLRO600 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 7 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 DLRO600 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, DLRO600 detects that all four leads are connected, carries out a test and stops.

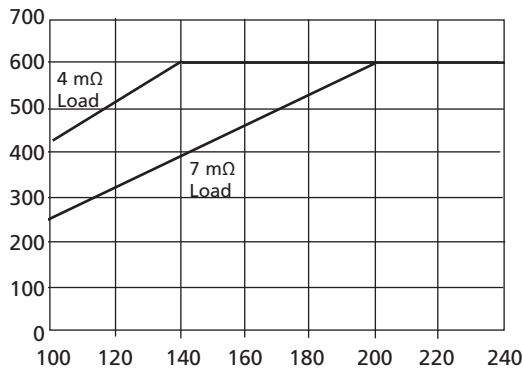
When you move to the next joint DLRO detects the new completed circuit automatically and carries out the next test, and so on until all joints have been tested. The results may be stored automatically and may be recalled to the display or downloaded for review.

**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 $\Omega$



**Output Current:**

The chart above shows the maximum output current available at different supply voltages with a 4 m $\Omega$  load (i.e. standard 5 m current leads only) and with a 7 m $\Omega$  load

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

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 60 seconds at 600 A @ 20°C ambient.

**Power Supply for:** See chart. full output: 207 to 265 V 50/60 Hz with a load less than 7 m $\Omega$  including current leads

**reduced output:** Down to 100 V 50/60 Hz.

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

**Test Time:** 7 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:** 200 characters max.

**Test Current Range:** 10 A to 600 A unsmoothed d.c. in 1 A steps

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

**Voltmeter input impedance:** >200 k $\Omega$

**Hum rejection:** 5 V rms 50 Hz/60 Hz

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

**Storage Temperature:** -25 to +65°C

**Calibration:** 20°C

**Co-efficient:** <0.05% per °C

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

**Maxi Altitude:** 2000 m

**Safety:** IEC61010-1

**EMC:** IEC61326-1

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

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

## ORDERING INFORMATION

### STANDARD VERSIONS WITH TEST LEADS

Description	Part number
DLRO600 High Current Digital Low Resistance Ohmmeter (English QWERTY keyboard)	DLRO600-EN
DLRO600 High Current Digital Low Resistance Ohmmeter (French AZERTY keyboard)	DLRO600-FR
<b>Included accessories</b>	
5 m (16.4 ft.) Lead set set comprising 2 x 50 mm <sup>2</sup> current leads with clips and 2 potential leads with clips	6220-755
Download Manager	6111-442
User Guide on CD-ROM	6172-763
RS232 download cable	25955-025
Quick Start Guide (English)	6172-782
Quick Start Guide (French)	6172-783
Warranty card.	6170-618

### VERSIONS WITHOUT TEST LEADS

Description	Part number
DLRO600 High Current Digital Low Resistance Ohmmeter (English QWERTY keyboard)	DLRO600-EN-NLS
DLRO600 High Current Digital Low Resistance Ohmmeter (French AZERTY keyboard)	DLRO600-FR-NLS
<b>Included Accessories</b>	
Download Manager	6111-442
User Guide on CD-ROM	6172-763
RS232 download cable	25955-025
Quick Start Guide (English)	6172-782
Quick Start Guide (French)	6172-783
Warranty card.	6170-618

#### NOTE:

For further test lead information refer to datasheet [DLRO\\_TL\\_DS\\_en\\_V01.pdf](#)

## TEST LEAD INFORMATION



6220-755 5m Lead set (600 A)

2 x 50 mm<sup>2</sup> current leads with clamps and 2 x potential leads with clips.

#### DESCRIPTION

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 HD crocodile clips 22 mm jaw capacity).

#### Note:

6220-755 supplied as standard with DLRO600-EN and DLRO600-FR



6220-756 10m Lead set

2 x 70mm<sup>2</sup> current leads with clamps and 2 x potential leads with clips.

6220-757 15m Lead set

2 x 95mm<sup>2</sup> current leads with clamps and 2 x potential leads with clips.

#### DESCRIPTION

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 HD crocodile clips 22 mm jaw capacity).

#### SALES OFFICE

Megger Limited  
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E UKsales@megger.com

#### DLRO600\_DS\_en\_V14

www.megger.com  
ISO 9001  
The word 'Megger' is a registered trademark

**Megger**<sup>®</sup>

# Diensten van EURO-INDEX

EURO-INDEX is fabrikant, importeur en distributeur van diverse A-merken op het gebied van test- en meetinstrumenten. Daarnaast leveren wij een groot aantal diensten om het gebruik van deze instrumenten in uw bedrijfsvoering te optimaliseren. Dit omvat uiteraard onderhoud, reparatie en kalibratie van de instrumenten, maar ook kennisdeling via de EURO-INDEX Academy en verhuur van instrumenten.

## Geautoriseerd Service Centrum

EURO-INDEX b.v. is van alle vertegenwoordigde merken een Geautoriseerd Service Centrum. Dit betekent dat uw instrumenten worden behandeld door technici die zijn opgeleid door de fabrikant en beschikken over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen toegepast en de garantie van uw instrument, evenals de certificering (ATEX, EN50379, etc.) blijven intact.

## Kalibratielaboratorium

Ons moderne service- en kalibratielaboratorium beschikt over een RvA accreditatie naar NEN-EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105.



Kijk voor een overzicht van al onze diensten op [euro-index.nl/diensten](http://euro-index.nl/diensten)



## Mobiele Service

Naast de vaste kalibratielaboratoria in Capelle aan den IJssel en Zaventem beschikken wij ook over een laboratorium op wielen met de naam "Mobiele Service". Dit biedt vertrouwde service en kwaliteit, bij u voor de deur!

## KWS®

KWS® is een uniek servicesysteem voor uw meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten. Via een gratis webportal ([mijnkws.nl](http://mijnkws.nl)) heeft u altijd en overal beschikking over uw kalibratiecertificaten.

## Verhuur van meetinstrumenten

- Uitgebreid assortiment
- Nauwkeurigheid aantoonbaar door actueel kalibratiecertificaat
- Deskundig advies
- Complete levering inclusief accessoires

## EURO-INDEX Academy

- Trainingen (individueel en klassikaal)
- Cursussen en workshops
- Demonstratie- en instructievideo's
- Whitepapers



Servicebalie



Onderhoud, reparatie en kalibratie



Cursussen en workshops



Mobiele Service

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