

DIGITAL LOW RESISTANCE OHMMETERS

Megger has been manufacturing low resistance ohmmeters for many decades. In fact the first low resistance ohmmeter was launched in 1908. The first low resistance ohmmeter used a cross-coils meter movement.

Today, Megger has a comprehensive range of Digital Low Resistance Ohmmeters, under the DLRO trade mark, providing accurate and reliable measurements with test currents ranging from a few μA to 600 A suitable for many applications.

These instruments are used in markets such as:

- Airports
- Electric Utilities/Industrial Substations
- Government/Military
- Ports
- Power Plants
- Railroads/Rapid Transit
- Telecommunications (Cellular, POTs, etc.)
- Universities
- Water/Waste Treatment
- Wind/Renewable Energy

DLRO10HD NEW

The all new DLRO10HD is a heavy-duty addition to the successful DLRO10 range. Common with the DLRO10 series the instrument features output power limiting to 0.25Ω so as not to heat the test piece. However, the DLRO10HD has the additional benefit of combining this with two high power, high compliance ranges. Benefits include the ability to use much longer test leads if required, the ability to heat and, therefore, identify circuit weakness. In addition, with the ability to maintain 10 A for at least a minute, this allows for improved testing of inductive loads.

The DLRO10HD is truly heavy duty in all respects — physically the instrument is designed to operate in the harshest of conditions, surviving knocks, drops, dusty and wet conditions. It can be used in the rain and with the lid closed is sealed to IP65. It's electrically heavy duty too; no need to worry about inadvertent connection to live supplies. High input protection shrugs it off without even blowing a fuse.

The DLRO10HD is battery powered, but is equally at home running on a line supply, even while charging the battery. This means the instrument is at home in manufacturing environments, never having to wait for the battery to charge. The DLRO10HD is always ready to test.

DLRO-10 and DLRO-10X

The DLRO-10 and DLRO-10X are built into a strong, lightweight case that is equally suitable in the field or in the laboratory. Light enough to be worn around the neck, they are small enough to be taken into areas which were previously too small to access. The DLRO-10 uses a large, bright $\frac{4}{2}$ -digit LED display while the DLRO-10X has a large, backlit LCD.

The DLRO-10 displays the average of measurements achieved using forward and reverse current, while the DLRO-10X displays both individual measurements and the average. The DLRO-10X uses a menu system controlled by a two-axis paddle to allow the user to manually select the test current. The unit also adds real-time download of results and on-board storage for later download to a PC.



- NEW DLRO10HD
- Battery powered
- Line powered
- IP65 lid closed
- IP54 in use



DLRO-10, shown above
Shown at right, DLRO-10X

DIGITAL LOW RESISTANCE OHMMETERS

General Purpose DLROs (247000 Series)

Three models designed for general purpose testing applications. All units in this family feature digital readout, offer a resolution to $1 \mu\Omega$ or better, and have a basic accuracy of $\pm 0.25\%$.

Dual-Pak DLRO (Cat. No. 247000)

- Separate measuring and charging modules
- Weighs less than 8 lbs (3.6 kg)
- Rechargeable battery with separate charger for hours of testing

Single-Pak DLRO (Cat. No. 247001)

- Measuring circuits, rechargeable batteries, and charger in one self-contained unit
- Housed in a tough case with hinged, removable lid and carrying handle
- Includes captive wing nuts

Single-Pak/Low-Range DLRO (Cat.No. 247002)

- Features a current-reversing switch to average out voltage offset
- Includes captive wing nuts
- Adds an extra decimal of resolution



General Purpose Model (247001)

DLRO200 and DLRO200-115

The DLRO200 can provide test currents from 10 amps up to 200 amps subject to the load resistance and supply voltage. Its unique design allows the weight and size of DLRO200 to be kept to a minimum.

The high current capability and compact design make the DLRO200 suitable for testing circuit breaker contacts, switch contacts, busbar joints or other applications where high current is needed.

A full QWERTY keyboard allows you to set the test current by typing in the value required and annotate test results for further analysis.

For applications that demand a smooth dc current, the DLRO200-115 has extra filtering on the output to reduce mains frequency ripple and can drive 200 amps through a total current loop resistance of 11 milliohms. The filtered output of the DLRO200-115 eliminates magnetic transients that could inductively trip a breaker's control if left in the test circuit.

BT51 Milli-Ohmmeter

- Stable, accurate and reliable
- Two measuring ranges (2000 $m\Omega$ and 20.00 $m\Omega$)
- Four terminal measurement

Ordering Information

Cat. No.		List Price USD
BT51	Milliohmmeter	\$2,650.00



DLRO200

DIGITAL LOW RESISTANCE OHMMETERS

Selection Guide for Digital Low Resistance Ohmmeters

Cat. No.	DLRO10HD (1000-348)	DLRO-10	DLRO-10X	247000	247001	247002	DLRO200	DLRO200-115
Output Current								
10 Amp	■	■	■	■	■	■		
200 Amp†							■	■
Additional Smoothing								■
Resistance Range								
0 to 599.9 $\mu\Omega$						■		
0 to 1.9999 m Ω		■	■					
0 to 5.999 m Ω				■	■	■		
0 to 19.999 m Ω		■	■					
0 to 59.99 m Ω				■	■	■		
0 to 199.99 m Ω		■	■			■		
0 to 599.9 m Ω				■	■	■		
0 to 1.9999 Ω		■	■			■		
0 to 5.999 Ω				■	■	■		
0 to 19.999 Ω		■	■			■		
0 to 59.99 Ω				■	■	■		
0 to 199.99 Ω		■	■					
0 to 1999.9 Ω		■	■					
0.1 $\mu\Omega$ to 999.9 m Ω							■	■
0 to 2500.0 $\mu\Omega$	■							
0 to 25.000 m Ω	■							
0 to 250.00 m Ω	■							
0 to 2500.0 m Ω	■							
0 to 25.000 Ω	■							
0 to 250.00 Ω	■							
0 to 2500.0 Ω	■							
Resolution								
*0.1 $\mu\Omega$	■	■	■			■	■	■
1 $\mu\Omega$	■	■	■	■	■	■		
10 $\mu\Omega$	■	■	■	■	■	■		
100 $\mu\Omega$	■	■	■	■	■	■		
1 m Ω	■	■	■	■	■	■		
10 m Ω	■	■	■	■	■	■		
100 m Ω	■	■	■					
Accuracy								
0.2% + 2 lsd		■				■		
0.25% + 1 lsd				■	■			
0.3% + 2 lsd						■		
*0.5% + 2 lsd							■	■
*1.00%							■	■
0.2% 200 m Ω	■							
0.2% 20 m Ω	■	■	■					
0.2% 2 m Ω	■	■	■					
0.2% 200 $\mu\Omega$	■							
0.2% 20 $\mu\Omega$	■	■	■					
0.2% 2 $\mu\Omega$	■	■	■					
0.2% 0.2 $\mu\Omega$	■	■	■					
Power Source								
Rechargeable Battery	■	■	■	■	■	■		
Line Power	■						■	■
List Price USD	\$3,200.00	\$2,960.00	\$3,690.00	\$3,312.00	\$3,292.00	\$4,467.00	\$5,470.00	\$5,900.00

† Configurable current output: 10 A to 200 A

* Varies with current

DIGITAL LOW RESISTANCE OHMMETERS

Megger DLROs require test leads, two potential and two current, to make low-resistance measurements. In addition to individual current and potential lead sets, duplex leads that combine current and potential connections in one set are offered. A variety of C-clamps, Kelvin clips, fixed point, and helical spring-point leads are available in various lengths.

Helical Spring Points

Tips rotate and compress into the probe's body to ensure accurate measurement. Cat. No. 242011-7, 242011-18, 242011-30, 242009-18



Cat. No. 242011-7

Heavy Duty Fixed Points

Economical, light weight and durable. Cat. No. 242002-7, 242002-18, 242002-30



Cat. No. 242002-7

Heavy Duty C-Clamps

Current passes through the C-Clamp and screw thread; potential passes through a four-point anvil insulated from the clamp metal. Cat. No. 242004-7, 242004-18, 242004-30



Cat. No. 242004-18

Kelvin Clips

Feature spade lugs on outboard end and alligator clips with insulated, silver or gold plated jaws. Cat. No. 241005-7, 242005-7, 242006-7, 242006-18, 242006-30



Cat. No. 241005-7

Hand Spikes, DH Series

Feature indicator lights in one of the probes which duplicate warning and signal lights on the instruments. Cat. No. EV6111-503 (DH4), EV6111-517 (DH5).



Cat. No. EV6111-503

NEW

Wind Turbine Lightning Protection Test Lead Set

Specially designed for measuring resistance of lightning protection circuit between wind turbine blade tip to ground. Cat. No. 1000-809



Individual Test Leads

Cat. No.	Type	Termination	Length	Current	List Price
242021-7	Potential	Hand Spikes	7 ft. (2 m)	N/A	\$275.00
242021-18			18 ft. (5.5 m)		\$350.00
242021-30			30 ft. (9 m)		\$395.00
242041-7	Current	Terminal Clips	7 ft. (2 m)	10 A	\$235.00
242041-18			18 ft. (5.5 m)		\$275.00
242041-30			30 ft. (9 m)		\$310.00
242144-16	Current	Clamps	16 ft (5 m)	100 A	\$825.00
242144-26			26 ft (8 m)		\$851.00

Duplex Test Leads

Cat. No.	Termination	Length	Current	List Price
242011-7	Helical Hand Spikes with Spring Points	7 ft. (2 m)	10 A	\$629.00
6111-022		8 ft. (2.5 m)	10 A	\$385.00
242011-18		18 ft. (5.5 m)	10 A	\$702.00
6111-023		20 ft. (6 m)	10 A	\$535.00
242011-30		30 ft. (9 m)	10 A	\$725.00
6111-503*	Duplex Hand Spikes	4 ft. (1.2 m)	10 A	\$440.00
6111-517*	Duplex Hand Spikes	8 ft. (2.5 m)	10 A	\$465.00
6111-518*	Duplex Hand Spikes	4 ft. (1.2 m)	10 A	\$435.00
242009-18	Helical Hand Spikes with Spring Points and Current Push-button Switch	18 ft. (5.5 m)	10 A	\$510.00
242002-7	Heavy-Duty Fixed-Point Hand Spikes	7 ft. (2 m)	10 A	\$460.00
242002-18		18 ft. (5.5 m)	10 A	\$650.00
242002-30		30 ft. (9 m)	10 A	\$733.00
242003-7	Replaceable Needle Points	7 ft. (2 m)	10 A	\$651.00
242104-2-16	Heavy-duty C-clamps	16 ft (5 m)	100 A	\$805.00
242104-2-26		26 ft (8 m)	100 A	\$915.00
242004-7		7 ft. (2 m)	10 A	\$350.00
242004-18		18 ft. (5.5 m)	10 A	\$445.00
242004-30		30 ft. (9 m)	10 A	\$515.00
241005-7**	0.5 in. (1.3 cm) Kelvin Clips	7 ft. (2 m)	10 A	\$480.00
242005-7***		7 ft. (2 m)	10 A	\$165.00
242006-7	1.5 in. (4 cm) Kelvin Clips	7 ft. (2 m)	10 A	\$290.00
242006-18		18 ft. (5.5 m)	10 A	\$425.00
242006-30		30 ft. (9 m)	10 A	\$750.00
6220-755	Current Lead with HD Clips and	16 ft (5 m)	600 A	\$720.00
6220-756		33 ft (10 m)	600 A	\$1,360.00
6220-757	Separate Potential Leads with Clips	49 ft (15 m)	600 A	\$2,395.00
6220-787		16 ft (5 m)	200 A	\$655.00
NEW 1000-809*	Kelvin clip and hook ends on HD cable reel with friction brake DH2 lead with duplex hand spikes and hook end	328 ft (100 m)	10 A	\$1,200.00
		16 ft (5 m)		

* Used with DLRO10 and DLRO10X only

** Gold plated

*** Silver plated