

Digital Micro-Ohm Meters



DMO-100



DMO-100D

The compact, robust, direct reading Eltel Digital Micro-Ohm Meters-Models DMO-100 and DMO-100D are specially designed with built-in 100A DC regulated current source for measuring low resistance of contacts, busbars, breakers, SF-6 switchgear, switches, fuses, railbonds etc.

The measurements can be made at different DC currents up to 100A using a ratiometric circuit. The voltage drop across the unknown resistance is read directly on a 4½ digit LCD display (3½ digit DPM on DMO-100) as milli-ohms or micro-ohms. A true four terminal measurement is used which eliminates need for cable calibration, ensuring high accuracy.

The instruments are line powered and employ a current regulating circuit. This stabilises the test current against line voltage fluctuations and variation of resistance in the test loop. As they are line voltage operated, the need for battery packs is eliminated.

The Model DMO-100 has a thermal overload protection circuit with a LED indicating over temperature. When the temperature of the transformer goes beyond normal limits, a thermal protective circuit operates and cuts off the current supply. The Micro-Ohm Meter reads directly either in micro or milli-ohms which are indicated by two separate LEDs. A three position switch (High/Med/Low) is provided so that the operator can select the optimum resolution and sensitivity. A selector switch is also provided either to display the test current or resistance being measured.

The Model DMO-100D provides a continuous 100 amp test current using up-to-date Switch Mode Technology to provide current regulation on four ranges against line variations or sample resistance changes. The Test Set also provides five resistance ranges for maximum resolution & versatility. A large 4½ digit LCD displays either the measured resistance directly in milli-ohms or micro-ohms or the current flowing through specimen.

FEATURES

- Built-in 100-A DC regulated source (Continuous on DMO-100D)
- Digital display of resistance and DC current
- Large 4½ digit display for high resolution (DMO-100D)
- Suitable for operation in Live Switchyard Conditions
- Direct, high accuracy resistance reading
- True four terminal measurement
- Current "ON" warning indicator
- Light weight and portable

APPLICATIONS

For fast, reliable & accurate measurement of low resistance on:

- Switch contacts
- SF-6 Switchgears
- Bus bars
- Splices
- Joints
- Fuses
- Breaker contacts
- Railbonds

SPECIFICATIONS

MODEL DMO-100D

Resistance Ranges: 5 ranges: 19.999μ ohms, 199.99μ ohms, 1999.9μ ohms and 19.999 milli-ohms, 199.99 milli-ohms.

Test Current	Multiplier Setting			
	199.99mΩ	1999.9μΩ	1999.9μΩ	199.99μΩ
10A	199.99mΩ	1999.9μΩ	1999.9μΩ	199.99μΩ
20A	19.999mΩ	199.9μΩ	199.9μΩ	19.99μΩ
50A	19.999mΩ	199.9μΩ	199.9μΩ	19.99μΩ
100A	19.999mΩ	199.9μΩ	199.9μΩ	19.99μΩ

Measuring Current	:	10, 20, 50 & 100A DC continuous on all ranges
Resolution	:	0.001 μΩ, in 0-19.999 μΩ range 0.01 μΩ, in 0-199.99 μΩ range 0.1 μΩ, in 0-1999.9 μΩ range 1 μΩ, in 0-19.999 milli range 10 μΩ, in 0-199.99 milli range
Accuracy	:	±0.3% of reading, ±0.2% of the F.S in all ranges except in 20μΩ ranges ±1% of reading, ±0.2% of the F.S in 20μΩ range
Open Circuit Measuring Voltage	:	3V DC
Input	:	230V ±10%, 50Hz OR 110V ±10%, 60Hz, <700VA
Dimensions	:	450mm X 230mm X 200mm (LxWxH)
Operating Temperature	:	0 – 50°C; Ambient to 90% RH
Weight	:	Approximately 15 kgs

OTHER PRODUCTS

- Manual & Automatic Transformer Ratio Meters.
- Manual & Automatic Transformer Winding Resistance & On Load Tap Changer Test Sets.
- Automatic CT/VT Test Sets & System.
- Automatic & Semi-Automatic HV Capacitance & Tan Delta Test Sets.
- Manual & Automatic Tan Delta & Resistivity Test sets for Transformer Oil.
- Manual & Automatic Portable LV Capacitance & Tan Delta Test Sets.
- Relaying Current Transformer Analyser.

SPECIFICATIONS

MODEL DMO-100

Resistance Ranges: 4 ranges: 199.9 micro-ohms, 1999 micro-ohms, 19.99 milli-ohms and 199.9 milli-ohms.

Test Current	Multiplier Setting		
	Low	Med	High
100, 50, 20	199.9μ	1999μ	19.99m
10, 5	1999μ	19.99m	199.9m

Measuring Current: 100A DC - 3 minutes 'ON' - 15 minutes 'OFF':
50A DC - 6 minutes 'ON' - 15 minutes 'OFF': 5 to 20A DC-continuous

Resolution	:	0.1 μΩ, in 0-199.9 μΩ range 1 μΩ, in 0-1999 μΩ range 10 μΩ, in 0-19.99 μΩ range 100 μΩ, in 0-199.9 μΩ range
Accuracy	:	±1% of reading ±5 digits on all ranges
Open Circuit Measuring Voltage	:	8V DC
Input	:	230V ± 10%, 50Hz OR 110V ± 10%, 60 Hz, < 800VA
Dimensions	:	440mm X 400mm X 190mm (LxWxH)
Opening Temperature	:	0 – 50°C; Ambient to 90% RH
Weight	:	Approximately 25 kgs

SWITCHES, DISPLAYS AND INDICATORS

- 4½ LCD display (3½ DPM display on DMO-100) to display the measured Resistance/Current flowing through test specimen
- Warning Indicator to caution operator of current flow in test specimen
- Resistance Range Selector Switch (DMO-100D) to select appropriate range;
Low/Med/High Selector Switch (DMO-100) to select maximum resolution
- Over Temperature Trip Indicator and milli/micro-ohm indicator (DMO-100)
- Power "ON" Switch with indicator
- Fuse on front panel for easy replacement
- Test Current Control Switch
- Selector Switch to display either measured resistance or the DC current output
- Two independent Current and Potential Terminals

The Digital Micro - Ohm Meters are supplied with AC line power cord, instruction manual, spare fuses and transport case.

RECOMMENDED ACCESSORIES

- A set of 5 / 10 / 15 meter cable with 2 potential and 2 current leads.



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(SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)

