

MTO106

Transformer ohmmeter



- **Entry level transformer ohmmeter**
- **2 channels with max 6 A current output**
- **±0.25% measurement accuracy**
- **48 V test voltage for fast saturation of transformers**
- **Multimeter type operation, intuitive and fast**
- **Safety through automatic, passive discharge circuitry**
- **True portability – compact size and low weight**

DESCRIPTION

The MTO106 transformer ohmmeter is an easy-to-use, line-operated instrument specifically designed for safe and accurate field measurement of winding resistance in smaller transmission and distribution transformers.

It has dual channels with a wide measurement range and can accurately provide information about the vast majority of power transformers, reactors and instrument transformers. The test current can be manually set in five different ranges to fit transformers of various sizes.

The instrument is exceedingly simple to use, which minimises the need to train service engineers. It has a single selector switch for test current and a single button to activate the test cycle. The instrument is also supplied with test leads fitted with Kelvin clamps that allow for a single, one-time connection to the unit under test. The test leads are 10 m (33 ft) in length to allow for easy testing of pole mounted transformers.

The compact and lightweight instrument is housed in a rugged plastic case for true portability. When closed, the case is rated IP67, which means your instrument will always arrive safely to the testing location even in the harshest conditions.

Users are protected by an automatic discharge function that de-energises the transformer winding at the end of every test. The discharge function is passive and thus also functions if there is an inadvertent loss of power or if the test or mains leads are accidentally pulled.

APPLICATIONS

The MTO106 is mainly intended for field measurements of smaller transmission and distribution transformers:

- To verify factory test readings.
- As part of a regular maintenance program.
- To help locate the presence of defects in transformers such as increased contact resistance in terminal connections and tap changers.

The instrument can also be used for general resistance measurements of, for instance control wiring, voltage regulators, motors, generators and all types of connections.

SPECIFICATIONS

Specifications are valid at nominal input voltage. Specifications are subject to change without notice.

Environment

Application field The instrument is intended for use in high-voltage substations and industrial environments.

Temperature

Operating -20°C to +50°C (-4°F to +122°F)

Storage & transport -50°C to +70°C (-58°F to +158°F)

Humidity (operating) 0% – 90% RH, non-condensing

CE-marking

LVD 2014/35/EU

EMC 2014/30/EU

RoHS 2011/65/EU

General

Mains voltage 100-240 V AC, 50/60 Hz

Input power 400 VA (max)

Case Ruggedized plastic case with removable lid and carrying handle, IP 67 when closed

Dimensions (W x D x H) 360 x 304 x 194 mm (14.2 x 12 x 7.6")

Weight 7.3 kg (16 lbs) excl. cables

Display 4-inch, backlit, monochrome alphanumeric display

Test leads 2 x 10 m (33 ft), with banana connectors and Kelvin clamps

Ground lead 1 x 5 m (16 ft), 2.5 mm²

Measurement section

Measurement range 10 µOhm to 30 kOhm

Resolution Up to 4 digits

Open circuit test voltage up to 48 V DC

Measurement voltage up to 20 V DC

| Current range | Resistance range | Inaccuracy | Resolution |
|---------------|----------------------|------------------------|------------|
| 6 A | 10.00 mΩ to 5.000 Ω | ±(0.25%rdg + 1 digit) | 4 digits |
| | 0.010 mΩ to 9.999 mΩ | ±(0.25%rdg + 2 digits) | 0.001 mΩ |
| 1 A | 100.0 mΩ to 30.00 Ω | ±(0.25%rdg + 1 digit) | 4 digits |
| | 0.10 mΩ to 99.99 mΩ | ±(0.25%rdg + 2 digits) | 0.01 mΩ |
| 100 mA | 1.000 Ω to 300.0 Ω | ±(0.25%rdg + 1 digit) | 4 digits |
| | 1.0 mΩ to 999.9 mΩ | ±(0.25%rdg + 2 digits) | 0.1 mΩ |
| 10 mA | 10.00 Ω to 3000 Ω | ±(0.25%rdg + 1 digit) | 4 digits |
| | 0.010 Ω to 9.999 Ω | ±(0.25%rdg + 2 digits) | 0.001 Ω |
| 1 mA | 100.0 Ω to 30.00 kΩ | ±(0.25%rdg + 1 digit) | 4 digits |
| | 0.10 Ω to 99.99 Ω | ±(0.25%rdg + 2 digits) | 0.01 Ω |

INCLUDED ACCESSORIES



OPTIONAL ACCESSORIES



Transport case suited for the instrument and cables.

ORDERING INFORMATION

| Item | Order No. |
|--|------------|
| MTO106 | BN-19090 |
| Included accessories | |
| Test lead black with banana connector and Kelvin clamp, 10 m (33 ft) | 1 GC-32310 |
| Test lead red with banana connector and Kelvin clamp, 10 m (33 ft) | 1 GC-32312 |
| Ground lead, 5 m (16 ft) 2.5 mm ² | 1 GA-00200 |
| Mains cable | 1 AA-00010 |
| User's manual | 1 ZP-BN01E |
| MTO106 Report pad | 1 XP-BN01E |
| MTO106 Reporting template file | 1 SB-0022E |
| Carry bag | 1 2000-091 |
| MTO106 Without accessories | BN-19000 |
| Optional accessories | |
| Transport case for instrument and leads | 1009-744 |
| MTO106 dual channel measurement lead set | GA-03310 |
| Parts included in the MTO106 dual channel measurement lead set (GA-03310). | |
| Sensing lead, black, 10 m (33 ft) | 1 KG-00530 |
| Sensing lead, red, 10 m (33 ft) | 1 KG-00532 |
| Timing clamp | 2 KD-03040 |
| Test cable, black, 2 m (6.5 ft) | 1 04-35030 |

SWEDEN

Megger Sweden AB
Box 724,
SE-182 17 Danderyd
SWEDEN
T. +46 8 510 195 00
E. seinfo@megger.com

MTO106_DS_en_V03a

ZI-BN01E • Doc. BN034793CE • 2018
Subject to change without notice
Registered to ISO 9001 and 14001
The word 'Megger' is a registered trademark
www.megger.com