

METRALINE RLO^{CHECK}

Digital Low-Resistance Meter per EN 61557-4

3-447-018-03
1/5.18

- Cable reel with 30 m cable
- Contact resistance measurement, measuring range: 0.00 Ω ... 20.0 Ω
- Acoustic signaling for continuity ($R < 1 \Omega$)
- Acoustic and optical indication of interference voltage detection
- Interference voltage display: 8 ... 400 V
- Automatic polarity reversal per DIN EN 61557-4/VDE 0413-4
- Balancing function for cable reel and accessories (compensation for up to 4 Ω)
- Test certificate
- Extensive accessories



Applications

The METRALINE RLO-CHECK is a test instrument for checking the continuity of protective conductors and equipotential bonding. With the help of the acoustic and luminous signals generated by the test instrument, the user determines whether or not the continuity of the protective conductor and equipotential bonding has an electrical resistance of no greater than 1 Ω .

Measurement can be alternatively conducted between two input sockets instead of between a measuring instrument input socket and the cable reel output.

Features

Interference Voltage Detection

If interference voltage is detected at the respective protective conductor, resistance measurement is disabled. An intermittent acoustic signal is generated, the color of the display is changed to red and interference voltage is displayed as an RMS value. Input impedance: 300 k Ω , warning range: 8 V~/DC to 400 V~/DC.

Balancing and Calibration

The measuring instrument can be balanced to 0 Ω with the help of the short-circuit shunt.

The threshold for the continuity test can be balanced to 1 Ω with the help of the calibration shunt.

Applicable Regulations and Standards

IEC 61010-1/-031 DIN EN 61010-1/-031 VDE 0411-1/-031	Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General requirements Part 31: Safety requirements for hand-held probe assemblies for electrical measurement and test
DIN EN 61557-1 VDE 0413-1	Electrical safety in low voltage distribution systems up to 1000 V AC and 1500 V DC – Equipment for testing, measuring or monitoring of protective measures Part 1: General requirements
DIN EN 61557-4 VDE 0413-4	Part 4: Resistance of earth connection and equipotential bonding
IEC 61326-1 DIN EN 61326-1	Electrical equipment for measurement, control and laboratory use – EMC requirements Part 1: General requirements
DIN EN 60529 VDE 0470-1	Degrees of protection provided by enclosures (IP code)

Digital Low-Resistance Meter per EN 61557-4

Characteristic Values

Contact Resistance Measurement

Range (Ω)	Resolution (Ω)	Measuring Uncertainty
0.00 ... 0.49	0.01	$\pm 0.07 \Omega$
0.50 ... 1.99	0.01	$\pm (10\% \text{ rdg.} + 0.02 \Omega)$
2.00 ... 9.99	0.01	$\pm 8\% \text{ rdg.}$
10.0 ... 20.0	0.1	

Measuring voltage: 4 ... 6 V, automatic polarity reversal per DIN EN 61557-4/VDE 0413-4

Measuring current: 200 mA ... 210 mA

Key

rdg. = reading

Ambient Conditions

Operating Conditions

Operating temperature -20 ... 55 °C

Relative humidity max. 80% for temperatures of up to 31 °C, linear decrease in relative humidity down to 50% at 40 °C, no condensation allowed

Storage Conditions

Temperature -20 ... 55 °C

Electrical Safety

Measuring category With attached test probe cap:
CAT III 600 V / CAT IV 300 V

Pollution degree 2

Protection category II

Fuse link 500 mA, 6.3 mm x 32 mm,
breaking capacity: 30 kA at 690 V

Maximum current in cable during use as cable reeling device 0.5 A (protected by fuse)

Electromagnetic Compatibility (EMC)

Interference emission EN 61326-1:2013 class B

Interference immunity EN 61326-1:2013

Mechanical Design

Weight 1.3 kg with hip belt

Dimensions Drum diameter: 18 cm, height: 12 cm

Power Supply

Batteries 4 ea. AA battery, 1.5 V alkaline or 1.2 V NIMH (with at least 750 mAh) (Rechargeable AA batteries can be used but they reduce the period of use).

Period of use Approx. 1.7 days under normal conditions of use at 20 °C with new batteries.

Approx. 5 hours and 50 minutes for continuous measurement of the contact resistance of an earthing conductor at less than 1 Ω with activated acoustic signal and new batteries.

Battery indicator Battery capacity display via battery symbol

Power OFF function The meter is switched off automatically after five minutes of nonuse.

Scope of Delivery

- 1 Measuring instrument
- 4 Batteries (AA)
- 1 Hip belt
- 1 Cable reel with 30 m cable
- 1 Test probe with protective cap
- 1 Alligator clip
- 1 Coil cable (test cable)
- 1 PE adapter for electric outlets
- 1 Short-circuit shunt (0 Ω)
- 1 Calibration shunt for continuity threshold (1 Ω)
- 1 Set of operating instructions
- 1 Test certificate

Order Information

Description	Type	Article Number
Digital low-resistance measuring instrument per DIN EN 61557-4 / VDE 0413-4 with cable reel and 30 m cable for measuring the resistance of protective conductors and equipotential bonding	METRALINE RLO-CHECK	M630W
Telescoping rod for RLO and RINS measurements, CAT III 600 V / CAT IV 300 V, 1 A, retracted: 53.5 cm, extended: 120 cm, 190 g	TELEARM 120 ^{D)}	Z505C
Telescoping rod for RLO and RINS measurements, CAT III 600 V / CAT IV 300 V, 1 A, retracted: 73.5 cm, extended: 180 cm, 250 g	TELEARM 180 ^{D)}	Z505D

^{D)} Data sheet available