

METRISO 5024

Insulation and Resistance Measuring Instrument with Voltage Measuring Range

3-349-347-03
4/8.14

- Insulation resistance measurement: 0.1 ... 400 M Ω
- Low-resistance measurement: 0 ... 4 Ω
- Voltage measurement: 0 ... 500 V
- LED and beeper
 - as function control
 - for GO/NO GO decisions
- Scale illuminated by LED for insulation and low-resistance measurement
- Compact and rugged
For service calls under harsh conditions and laboratory use



Features

Nominal Voltages: 100 V, 250 V and 500 V

The instrument is suitable for the measurement of insulation resistance at voltage-free devices and equipment with nominal voltages of up to 500 V.

Low-Resistance Measurement: 0 ... 4 Ω

Low-resistance measurement is performed in accordance with VDE 0413, part 4. It is used for testing resistance at ground cables, protective conductors and equipotential bonding conductors, including related connections and terminals.

Voltage Measurement to 500 V

The instrument is also equipped with a 500 V measuring range for direct and alternating voltages. This provides users with the advantage of checking devices under test for the absence of voltage, and discharging capacitive devices under test.

Minimal Battery Depletion

Measurement is only performed in the resistance measuring ranges when the M Ω or Ω key is pressed. Battery service life is maximized in this way.

Voltage measurement can be performed without using the battery.

Characteristic Values

Insulation Resistance Measurement, Measuring Voltages: 100/250/500 V

Measuring Range	Intrinsic Uncertainty	Overload	Measuring Current	Short-Circuit Current
0.1 ... 400 M Ω	2.5%	600 V AC	> 1 mA	< 10 mA

* Measuring error under reference conditions relative to scale length (l = 84.6 mm)

Low-Resistance Measurement, Measuring Voltage: 4.5 V

Measuring Range	Intrinsic Uncertainty	Overload	Measuring Current	
0 ... 4 Ω	2.5%	250 V DC	>200 mA	

* Measuring error under ref. conditions relative to upper range value (l = 74.9 mm)

Voltage Measurement, DC / AC (40 ... 200 Hz)

Measuring Range	Intrinsic Uncertainty	Overload	Internal Resistance
0 ... 500 V	2.5%	600 V AC	450 k Ω

* Measuring error under reference conditions relative to scale length (l = 73.3 mm)

Applicable Regulations and Standards

IEC 61010-1/EN 61010-1/ VDE 0411-1	Safety requirements for electrical equipment for measurement, control and laboratory use
IEC 61557 EN 61557 VDE 0413	Part 1: General requirements Part 2: Insulation resistance measuring instruments Part 4: Instruments for measuring resistance at ground cables, protective conductors and equipotential bonding conductors
EN 60529 VDE 0470, Part 1	Test instruments and test procedures Protection provided by enclosures (IP code)
IEC 61326/EN 61326	Electromagnetic compatibility (EMC)

METRISO 5024

Insulation and Resistance Measuring Instrument with Voltage Measuring Range

Reference Conditions

Normal position of use	horizontal
Ambient temperature	+23 °C ±2 K
Relative humidity	40 ... 60%
Measured quantity frequency	45 ... 65 Hz (during voltage measurement)
Line voltage waveshape	sinusoidal (RMS value)
Battery voltage	5.5 V ±0.5 V

EMC

	EN 61326
Interference emission	EN 55022 class B
Interference immunity	EN 61000 -4-2 power feature A -4-3 power feature B

Mechanical Design

Protection	IP 40 per DIN VDE 0470 part 1/EN 60529
Dimensions	98 mm x 310 mm x 40 mm
Weight	approx. 0.5 kg with batteries

Influence Error under Nominal Conditions of Use

Total error caused by battery, temperature and normal position of use = 10%

Nominal Conditions of Use

Temperature	0 ... 40 °C
Normal position of use	any
Battery voltage	4.4 ... 6.5 V

Ambient Conditions

Storage temperature	-25 °C ... + 60 °C (without batteries)
Relative humidity	max. 75%, no condensation allowed
Elevation	to 2000 m

Power Supply

Batteries	4 ea. 1.5 V mignon-cell per IEC LR6 (size AA)
Working range	4.4 ... 6.5 V
Battery test	by means of LED

Electrical Safety

Safety class	II
Test voltage	3.7 kV
Measuring category	II / 600 V
Fouling factor	2
Fuse	F0.25A/500V, 6.3x32

Standard Equipment

- 1 insulation and resistance measuring instrument
- 1 carrying pouch
- 1 replacement fuse
- 1 operating instructions

Accessories

KS24 cable set

4 m single strand extension cable with permanently connected test probe and a contact-protected socket on the other end, as well as one alligator clip which can be plugged onto the test probe.

ISO calibrator 1



Calibration adapter for testing the accuracy of instruments used for measuring insulation resistance and low-resistance (per VDE 0413, parts 1, 2 and 4).

Order Information

Description	Type	Article Number
Insulation and resistance measuring instrument with carrying pouch	METRISO 5024	M540E
Cable set for insulation measuring instruments	KS24	GTZ3201000R0001
Calibration adapter	ISO calibrator	M662A

Edited in Germany • Subject to change without notice • A pdf version is available on the internet

 GOSSEN METRAWATT

GMC-I Messtechnik GmbH
Südwestpark 15
90449 Nürnberg • Germany

Phone +49 911 8602-111
Fax +49 911 8602-777
E-Mail info@gossenmetrawatt.com
www.gossenmetrawatt.com

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



Mobiele Service

Naast de vaste kalibratielaboratoria in Capelle aan den IJssel en Zaventem beschikken wij ook over laboratoria 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. Uw kalibratiecertificaten zijn digitaal beschikbaar via Mijn KWS (gratis webportaal en app).

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

Wijzigingen voorbehouden EURO-INDEX® NL 24005



NEDERLAND
Rivium 2e straat 12
2909 LG Capelle a/d IJssel
T: 010 - 2 888 000
F: 010 - 2 888 010
verkoop@euro-index.nl
www.euro-index.nl



BELGIË
Leuvensesteenweg 607
1930 Zaventem
T: +32 - (0)2 - 757 92 44
F: +32 - (0)2 - 757 92 64
info@euro-index.be
www.euro-index.be