

If it has to be a bit more precise...



METRISO | **SERIES**
INSULATION | TESTER

Insulation Measurement

Investment in the Future – High precision METRISO SERIES Insulation Measuring Instruments

Made for you: more user-friendly and handy

They're capable of executing all required electrical measurements and tests quickly and safely, in a retraceable fashion.

- Good insulation resistance assures safe, efficient, loss-free operation of electrical systems.
- Good insulation resistance is the foremost, truly effective fire prevention measure.
- Insulation measurement confirms that the respective electrical system is on good operating condition, and is thus important for new systems and handovers – fulfillment of warranted performance.
- Insulation measurement is a non-destructive test in accordance with specific stipulations.
- VDE 0100, part 600 (IEC 60 364-6), specifies what has to be measured, and where.
- In parts 1, 2 and 10, VDE 0413 specifies how measurement must be performed.
- Low-resistance measurement (RLO) is also possible per EN 61557-4 (VDE 0413, part 4).
- Convenient compensation of different measurement cable lengths for low-resistance measurements per offset
- The proper functioning can be checked at any time with the built-in $10\text{ M}\Omega$ test resistance in accordance with VDE 0105-100 (EN 50110-1).

The following functions simplify your measuring tasks:

- Warning in case of dangerous contact voltage
- Quick test with red LED indicator on the instrument
- Measuring voltage: 50 V to 1000 V DC
- Measuring range: 100 to $1\text{ T}\Omega$
- Low-resistance measurement from 0.01 to $10\ \Omega$ per DIN VDE 0413 part 4
- DAkkS calibration certificate included
- Overvoltage protection
- Test resistor per VDE 0105-100 (EN 50110)
- METRISO XTRA only
PI, DAR, DD, Uvar, Uramp
ETC report generating software
 - Bidirectional data transmission,
 - Creation of data structures
- With the so-called 1 mA test per DIN VDE 0845/EN 61645, the test instrument also allows for on-site testing of the trigger voltage of overvoltage components (varistors, Zener diodes, etc.) of requirement categories B and C / SPD type 2 and 3 and for subsequent evaluation in conformity with manufacturer's data.

Your Advantages:

- **Intelligent filter** - precise and measurement-dependent activation for the measurement of very high resistances in the case of:
 - Beating, i. e. compensation of 16 2/3 Hz and 50 Hz interference
 - Attenuation of capacitive influences from power cables, etc.
 - Suppression of electric field influences
- **Acoustic signalling** when limit value is exceeded
- **Detection of interference voltage** in switch position OFF
- **Overvoltage protection** - protects the instrument in the event of inadvertent connection to mains power
 - Fuse link for all resistance measuring ranges
 - **Electronic fuse** for the protection of low resistance and resistance measurement R_{L0} and R



Metriso Series as 19" panel-mounting type

* Optional cables with remote triggering, a signal lamp and measuring point illumination are also available in order to increase operating convenience. The needs of those responsible for quality, auditing technicians and authorized inspectors have thus been met.

Overview of the Most Important Functions

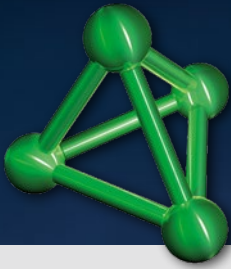
Type	Measuring Voltage ----- Measuring Range	CAT	Low-Resistance Measurement Polarization Index PI Absorption Ratio DAR	Voltage Measurement	USP's				
					Backlit Display	Offset	Test Resistor VDE0105	Intelligent Filter	Electronic Fuse
 METRISO INTRO Insulation Tester	250, 500, 1000 V ----- 10 kΩ ... 10 GΩ	CAT IV 300 V / CAT III 600 V	0.17 Ω ... 10 Ω	10V ... 500V	■	■	—	—	■
 METRISO TECH Insulation Tester	50 to 500 V (BASE) 50 to 1000 V (TECH) ----- 10 kΩ ... 100 GΩ (BASE) 10 kΩ ... 200 GΩ (TECH)	CAT IV 300 V / CAT III 600 V /	0.17 Ω ... 10 Ω	10V ... 500V / 10V ... 1000V	■	■	■	■	■
 METRISO XTRA Insulation Tester with Memory	50 to 1000 V (50, 100, 250, 500, 1000) ----- Uvar, Uramp ----- 10 kΩ ... 1TΩ	CAT IV 300 V / CAT III 600 V /	0.17 Ω ... 10 Ω PI, DAR	10V ... 1000V	■	■	■	■	■
 METRISO PRO Insulation Tester	50 to 1000 V (50, 100, 250, 500, 1000) ----- 10 kΩ ... 1TΩ	CAT IV 300 V / CAT III 600 V /	0.17 Ω ... 4 Ω	10V ... 1000V	■	■	■	■	■
 METRISO OEM Insulation Tester	50 to 1000 V (50, 100, 250, 500, 1000) ----- 10 kΩ ... 1TΩ	—	0.17 Ω ... 10 Ω PI, DAR	10V ... 1000V	—	■	—	■	■
 METRISO PRIME Insulation Tester	100 to 5000 V (100, 250, 500, 1000 1500, 2500, 5000) ----- 10 kΩ ... 1TΩ	CAT IV 300 V / CAT III 600 V	—	0 ... 2000V AC / DC 15 ... 500 Hz	—	—	—	—	—
 METRISO PRIME+ Insulation Tester	100 V ... 5000 V (100, 250, 500, 1000 1500, 2500, 5000) ----- 0.4 MΩ ... 1TΩ Uvar	CAT IV 300 V / CAT III 600 V	PI, DAR Capacitance Measurement	50 V ... 5kV DC 50 V ... 1 kV AC / DC 15 ... 500 Hz	■	—	—	—	—

Measurements which are more and more in demand:

The polarization index (PI) is a long-term insulation measurement, during which measured values obtained after one minute and after ten minutes are compared with each other.

Insulation resistance values acquired over a period of ten minutes may provide information regarding defects, as well as penetration by contamination or moisture. If the insulation is intact, insulation resistance is initially low, and then increases. The curve usually flattens out in the case of contamination or moisture. IEEE standard 43-2000 specifies reference values for measurements at motors and generators.

These measurements can be performed with the METRISO XTRA and Metriso PRIME+ with any measurement voltage. Whereas the polarization index (PI) is used with preference for large objects, the dielectric absorption ratio (DAR) serves as a subset of the polarization index for smaller machines. In this case, insulation resistance measurements after 30 and 60 seconds are compared with each other.



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