



# ELIT MIC-5050, Grafisk

## Technical description

ELIT MIC-5050 insulation resistance meters constitute a reliable tool to measure insulation resistance up to 20 TO. The instrument is designed for control tests of electric shock protection in AC power networks. It is used to carry out measurements whose results determine the safety condition of the installation.

**Features**

- Insulation resistance measurement up to 20 TO
- Measurement voltage - any in the range of 505000 V, 501000 V with steps of 10 V, 110 kV with steps of 25 V
- Continuous indication of measured insulation resistance or leakage current
- Automatic discharge of measured object capacitance voltage after the end of insulation resistance measurement
- Acoustic signalling of 5-second intervals to facilitate capturing time characteristics
- Adjustable measuring time - up to 99'59"
- $T_{sub1}$ ,  $T_{sub2}$  and  $T_{sub3}$  test times for measuring one or two absorption coefficients from the range of 1600 s
- Polarization index (PI), absorption coefficients Ab1, Ab2 and dielectric absorption ratio (DAR) measurement
- Indication of actual test voltage during measurement 1.2 mA, 3 mA or 6 mA
- Insulation resistance measurement using two- or three-wire method
- Measurements with test leads up to 20 m
- Protection against measuring live objects
- Automatic measurement of multiple core cables with the optional AutoISO-5000 adapter (for MIC-10k1 max. measuring voltage 5 kV)
- Measurement of capacitance during the measurement of ISO
- Measurement of temperature (with optional probe ST-1)
- Step voltage insulation resistance measurement (SV)
- Dielectric Discharge calculation (DD)
- Damage location (burnout)
- Digital filters for measurements with strong interferences
- It can work in an environment where electromagnetic interferences of 400 kV occur
- Measurement of DC and AC voltages within the range of 0750 V
- Application

MIC-5050 meter is designed to measure the insulation resistance of electro-power objects, i.e. single- and multi-core cables, transformers, motors and generators, capacitors, switches and other devices installed in power stations. Furthermore, it is dedicated for measurements in areas with very high electromagnetic disturbances, e.g. electrical substations with 765 kV voltage or higher.

**Capabilities**

- Highly efficient HV inverter, with test voltage of 5 kV and current of 6 mA, suitable for measuring the insulation resistance up to 20 TO.

Achieving such a result makes these meters unrivalled devices. Three-wire resistance measurement, performed using a "GUARD" wire, eliminates surface leakage currents caused by contaminated insulation, thereby increasing the reliability of obtained results.

The meter measures temperature of tested object, which is necessary to determine the temperature correction factor for  $R_{subISO}$ . In addition, it indicates the absorption coefficient (DAR - Dielectric Absorption Ratio), Polarization Index (PI) and the value of Dielectric Discharge (DD). The device allows user to assess the condition of the insulation, by applying the test voltage incrementally in steps (SV). This solution ensures that a dielectric in good condition will provide the same results, regardless of the applied voltage. Deviations in obtained resistance values of approx. 25%, observed on the chart in the individual steps, may indicate the potential insulation defects.

MIC-5050 has the unique ability to perform measurements on multi-core cables, within one connection step, using the AutoISO-5000 adapter. This solution reduces the duration of measurements on repetitive objects, such as cables of street lighting systems. Inverter with a power of almost 30 W is able to intensify the point of cable damage, which facilitates finding the location of the fault using a reflectometric method e.g. with TDR-420 device.



## Advantages:

Product name/ Art.nr/ GTIN	ELIT MIC-5050, Grafisk display/ 10170005/ 7070811202385
According to:	---
Indication	Digital
Analogue bar graph display	Yes
Current supply	Battery
Background lighting LC-indication	Yes
Isolation resistance measuring range	0,05 - 20000000 Mega-Ohm
Nominal test voltage 100 V	Yes

Nominal test voltage 250 V	Yes
Nominal test voltage 500 V	Yes
Nominal test voltage 1000 V	Yes
Nominal test voltage 2500 V	Yes
Nominal test voltage 5000 V	Yes
Nominal test voltage adjustable	Yes
Nominal test voltage adjustable with ramp function	Yes
Low resistance measurement	Yes
Voltage measurement	Yes
Measured value memory	Yes
External voltage detection at OFF-state	Yes
Data hold	Yes
Interface	Yes