



Metro.ISO it is a next generation Insulation Measuring instrument designed and manufactured in Europe with the last technology available in 2014. It can test Insulation-Resistance, Capacitance, AC / DC Voltage, Cable test, Selectable measuring lead pairs.

Datasheet

# ALBEDO Metro.ISO

**Metro.ISO** is a modern and well prepared instrument for engineers working in electrical and telecom installations, at factory, the central office or the field.

[Metro.ISO is compliant with IEC61010 CATIII 600V]

## 1. CONFIGURATION

### 1.1 Insulation-Resistance (analog)

- Range: 10 kΩ...50 MΩ
- Display-Range: logarithm scaled
- Resolution: 71 divisions linear scaled
- Limits of error: ±1.5 scale-dividers
- Measuring rate: 10/s
- Same technical data as Insulation-Resistance (digital)

### 1.2 Insulation-Resistance (digital)

- Range: 0...9.99 MΩ / 10...99.9 MΩ
- Display-Range: 0...19.99 MΩ / 0...199.9 MΩ
- Resolution: 10 kΩ / 100 kΩ
- Limits of error: ±2.5 % of m.v. + 1 dig.)
- Automatically discharging in hold position
- Measuring voltage: 100 V DC (+0% ... 10%) (Polarity-change possible)
- Short circuit current: ≤1 mA
- Input resistance: approx. 100 kΩ
- Max. overload:  $U_{eff} = 600$  V
- Max. interference voltage:  $U_{eff} \leq 10$  V

### 1.3 DC-Voltage measurement

- Range: 0...500 V
- Display-Range: 0...1000V
- Resolution: 1V
- Limits of error: ± (1% of m.v.+1 dig.)
- Input resistance: 1 MΩ
- Max. overload:  $U_{eff} = 600$  V

### 1.4 AC-Voltage measurement

- Range: 0...500 V
- Display-Range: 0...1000V
- Resolution: 1V
- Frequency range: 10-40-400 Hz
- Limits of error: ± (1% of m.v.+1 dig.)
- Input resistance: 1 MΩ
- Max. overload:  $U_{eff} = 600$  V

### 1.5 Capacitance measurement

- Range: 0...10.000 nF / 0...1000.0 nF
- Display-Range: 0...19.999 nF / 0...1999.9 nF
- Resolution: 1 pF / 100 pF
- Frequency range: 8.333 Hz / 833.3 Hz
- Limits of error: ± (1 % of m.v. +10 dig.) ± (0.5% + 30 dig.) 18...28° C

- *Additional error at parallel resistance:*  
10 000 nF / 100 kΩ resp.  
1000.0 nF / 33 kΩ  $\leq 1$  % of range
- Measuring voltage:  $U_{PP} = 2$  V, Square-wave
- Max. overload:  $U_{eff} = 250$  V

### 1.6 Fault-Location (for cable-break)

- *Range:* 1...20,000 m
- *Display-Range:* 0...19,999 m
- *Resolution:* 1 m
- *Limits of error:*  $\pm$  (1 % of m.v. +1 dig.)
- *Principle Measurement:* Measurement of capacitance
- All data are the same as Capacitance measurement

### 1.7 Resistance measurement

- *Range:* 1...10000  $\Omega$
- *Display-Range:* 0...19999  $\Omega$
- *Resolution:* 1  $\Omega$
- *Limits of error:*  $\pm$  (0.4 % of m.v. +4 dig.)
- *Open circuit voltage:* 5 V / DC
- *Measuring current:* 100  $\mu$ A / DC
- *Max. overload:*  $U_{eff} = 250$  V

## 2. GENERAL

### 2.1 Ergonomics

- Display: OLED 2.5 inches, 64x128 pixels
- LED: 9 on/off
- Fan-less case
- Perimetral rubber-boot protection
- Dimension: 210 x 100 x 40 mm
- Weight: 0.540 kg with batteries

### 2.2 Operation

- 3-pole lead connection
- Working temperature range:  $-10^{\circ}$  C to  $50^{\circ}$  C
- Nominal temperature range:  $0^{\circ}$  C to  $50^{\circ}$  C
- Storage temperature range:  $-30^{\circ}$  C to  $55^{\circ}$  C
- Climatic class: JWG as per DIN 40040 (3/73)
- Protective type: IP 30 as per DIN 40050 (7/80)

### 2.3 Power Supply

- External Power: 12V, AC/DC converter
- Batteries: Ni-Mh, 7.2V, 2k2 mAh
- Fast recharge cycle
- Automatic power on/off when no activity
- Operation time: up to 7 days on normal operation

- Continuous normal operation: 7h

### 2.4 Other

- Protective procedure to avoid accidents caused by a wrong selection (i.e. isolation instead of insulation)
- Self-calibration
- Rearmable Fusible based on PTC

