

ISOLATION METER

PCE-IT 110



- » Insulation test voltages 125V, 250V, 500V, 1000V
- » Measuring functions: HOLD, MIN, MAX, PEAK
- » PI (polarization index), DAR (absorption ratio)
- » High voltage and overload indicator
- » Diode test
- » Automatic discharge
- » Automatic switch-off
- » Locking button
- » Data memory with logger
- » Bluetooth for app connection
- » Connections for Rogowski coil

The isolation meter combines the functions of a fully-fledged digital multimeter with a powerful isolation meter and is ideal for professional applications in industry, trade and energy supply. In addition to measuring voltage, current and resistance, the device also offers frequency and capacitance measurement as well as temperature measurement via the supplied type K thermocouple. The automatic range selection and the 3.5 inch LCD color display enable simple and precise operation. The isolation meter allows insulation tests with selectable test voltages from 125 V to 1000 V and measures insulation resistances of up to 6000 MΩ. It also supports the measurement of the polarization index (PI) and the absorption ratio (DAR), which enables a well-founded assessment of the insulation quality of cables, motors, control cabinets and electrical systems.

Thanks to the integrated data memory, measurement results can be called up directly on the device for later analysis. The recorded data can be transferred wirelessly to a smartphone or tablet via Bluetooth - particularly practical for documentation and test reports. Other features such as automatic discharge after the measurement, MIN/MAX/PEAK value recording, hold function and a lock button for hands-free operation round off the device.

Specification

Direct voltage DC

Measurement range up to 0 ... 600 mV

Resolution 0,1 mV

Accuracy $\pm(0.9\% +5 \text{ digits})$

Overload 1000 V

Direct voltage DC

Measurement range up to 600 mV ... 6 V

Resolution 0,001 V

Accuracy $\pm(0.9\% +5 \text{ digits})$

Direct voltage DC

Measurement range up to 6 ... 60 V

Resolution 0,01 V

Accuracy $\pm(0.9\% +5 \text{ digits})$

Direct voltage DC

Measurement range up to 60 ... 600 V

Resolution 0,1 V

Accuracy $\pm(1\% +5 \text{ digits})$

Direct voltage DC

Measurement range up to 600 ... 1000 V

Resolution 1 V

Accuracy $\pm(1\% +5 \text{ digits})$

Direct current DC

Measurement range up to 0 ... 200 μ A

Resolution 0,1 μ A

Accuracy $\pm(0.9\% +8 \text{ digits})$

Direct current DC

Measurement range up to 200 μ A ... 600 mA

Resolution 0,1 mA

Accuracy $\pm(1.2\% +3 \text{ Digits})$

Direct current DC

Measurement range up to 600 mA ... 10 A

Resolution 0,01 A

Accuracy $\pm(1.5\% +5 \text{ digits})$

Capacity

Measurement range up to 0 ... 60 nF

Resolution 0,01 nF

Accuracy $\pm(5\% +35 \text{ digits})$

Capacity

General technical data

Measuring functions MIN, MAX, HOLD, PI, DAR

Display type LC colour display

Display size 3,5 Inch

Display refresh rate 3 x per second

Measuring rate 3 Hz

Storage medium Internal memory

Storage capacity 1800 Values

Storage interval from 1 s

Storage interval to 60 min.

Interface Bluetooth

Automatic power-off from...to 15 ... 60 min.

Automatic power-off can be deactivated Yes

Safety standard CAT III 1000V, CAT IV 600V

Diode test Test current: <1.5 mA
Max. Voltage in open circuit: 3.2V DC

Menu language English, English (GB)

Protection class (device) IP65

(Rechargeable) battery 6 x 1,5 V AA battery , Alkali-manganese

Capacity 2500 mAh

Operating conditions 5 ... 40 °C , 0 ... 80 % RH

Storage conditions -20 ... 60 °C , 0 ... 80 % RH

Dimensions (L x W x H) 215 x 100 x 65 mm

Weight 569 g

Measurement range up to	60 ... 600 nF
Resolution	0,1 nF
Accuracy	±(2.5 % +8 digits)
Capacity	
Measurement range up to	600 nF ... 6 µF
Resolution	0,001 µF
Accuracy	±(3% +5 digits)
Capacity	
Measurement range up to	6 ... 60 µF
Resolution	0,01 µF
Accuracy	±(3% +5 digits)
Capacity	
Measurement range up to	60 ... 600 µF
Resolution	0,1 µF
Accuracy	±(3% +5 digits)
Capacity	
Measurement range up to	600 ... 6000 µF
Resolution	1 µF
Accuracy	±(2.5% +20 Digits)
Temperature K-type	
Measurement range up to	-20 ... +600 °C
Resolution	0,1 °C
Accuracy	±(3 % of Rd +5 °C)
Temperature K-type	
Measurement range up to	600 ... 1000 °C
Resolution	1 °C
Accuracy	±(3 % of Rd +5 °C)
Temperature K-type	
Measurement range up to	-4 ... +600 °F
Resolution	0,1 °F
Accuracy	±(3% v.Mw. +9°C)
Temperature K-type	
Measurement range up to	600 ... 1832 °F
Resolution	1 °F
Accuracy	±(3% v.Mw. +9°C)
AC voltage	
Measurement range up to	0 ... 6 V
Resolution	0,001 V
Accuracy	±(1% +5 Digits) @50 ... 60 Hz / ±(3% +5 Digits) @61 ... 1000 Hz

Overload 1000 V

Frequency range 50 ... 1000 Hz

AC voltage

Measurement range up to 6 ... 60 V

Resolution 0,01 V

Accuracy $\pm(1\% + 5 \text{ Digits}) @ 50 \dots 60 \text{ Hz} / \pm(3\% + 5 \text{ Digits}) @ 61 \dots 1000 \text{ Hz}$

Frequency range 50 ... 1000 Hz

AC voltage

Measurement range up to 60 ... 600 V

Resolution 0,1 V

Accuracy $\pm(1\% + 5 \text{ Digits}) @ 50 \dots 60 \text{ Hz} / \pm(3\% + 5 \text{ Digits}) @ 61 \dots 1000 \text{ Hz}$

Frequency range 50 ... 1000 Hz

AC voltage

Measurement range up to 600 ... 1000 V

Resolution 1 V

Accuracy $\pm(1,2\% + 5 \text{ Digits}) @ 50 \dots 60 \text{ Hz} / \pm(3\% + 5 \text{ Digits}) @ 61 \dots 1000 \text{ Hz}$

Frequency range 50 ... 1000 Hz

Alternating current AC

Measurement range up to 0 ... 200 μA

Resolution 0,1 μA

Accuracy $\pm(1,2\% + 8 \text{ digits})$

Frequency range 50 ... 1000 Hz

Alternating current AC

Measurement range up to 200 μA ... 600 mA

Resolution 0,1 mA

Accuracy $\pm(1,2\% + 5 \text{ digits})$

Frequency range 50 ... 1000 Hz

Alternating current AC

Measurement range up to 600 mA ... 10 A

Resolution 0,01 A

Accuracy $\pm(1,5\% + 5 \text{ digits})$

Frequency range 50 ... 1000 Hz

Insulation resistance

Test voltage DC 125V

Measurement range up to 0,125 ... 6 M Ω

Resolution 0,001 M Ω

Accuracy $\pm(2\% + 10 \text{ digits})$

Insulation resistance

Test voltage DC 250V

Measurement range up to	0,25 ... 6 M Ω
Resolution	0,001 M Ω
Accuracy	$\pm(2\% +15 \text{ Digits})$
Insulation resistance	
Test voltage DC	500V
Measurement range up to	0,5 ... 6 M Ω
Resolution	0,001 M Ω
Accuracy	$\pm(2\% +10 \text{ digits})$
Insulation resistance	
Test voltage DC	1000V
Measurement range up to	1 ... 6 M Ω
Resolution	0,001 M Ω
Accuracy	$\pm(3\% +10 \text{ Digits})$
Insulation resistance	
Test voltage DC	125V, 250V, 500V, 1000V
Measurement range up to	6 ... 60 M Ω
Resolution	0,01 M Ω
Accuracy	$\pm(2\% +10 \text{ digits})$
Insulation resistance	
Test voltage DC	125V, 250V, 500V, 1000V
Measurement range up to	60 ... 600 M Ω
Resolution	0,1 M Ω
Accuracy	$\pm(4\% +5 \text{ digits})$
Insulation resistance	
Test voltage DC	125V, 250V, 500V, 1000V
Measurement range up to	600 ... 6000 M Ω
Resolution	1 M Ω
Accuracy	$\pm(5\% +10 \text{ Digits})$
Resistance	
Measurement range up to	0 ... 600 Ω
Resolution	0,1 Ω
Accuracy	$\pm(1,2\% +10 \text{ digits})$
Resistance	
Measurement range up to	600 Ω ... 6 k Ω
Resolution	0,001 k Ω
Accuracy	$\pm(1,5\% +5 \text{ digits})$
Resistance	
Measurement range up to	6 ... 60 k Ω
Resolution	0,01 Ω

Accuracy $\pm(1.5\% +5 \text{ digits})$

Resistance

Measurement range up to 60 ... 600 k Ω

Resolution 0,1 k Ω

Accuracy $\pm(1.5\% +5 \text{ digits})$

Resistance

Measurement range up to 600 k Ω ... 6 M Ω

Resolution 0,001 M Ω

Accuracy $\pm(1.5\% +5 \text{ digits})$

Resistance

Measurement range up to 6 ... 60 M Ω

Resolution 0,01 M Ω

Accuracy $\pm(2.5\% +10 \text{ digits})$

Frequency

Measurement range up to 40 ... 10000 Hz

Resolution 0,01 Hz

Accuracy $\pm(1\% +5 \text{ digits})$