

# Insulation Tester PCE-ITE 50



**Robust Insulation Tester/ Electrical resistance / Earthing resistance/  
Grinding impedance / Voltage measurement / Low resistance measurement/ RCD test**

The PCE-ITE 50 is a robust installation tester with a large 3.5" TFT color LCD display. The installation tester PCE-ITE 50 also offers, in addition to the various measuring modes such as insulation resistance, grounding resistance, loop impedance, voltage, low-impedance measurement and RCD test with the camera function, the possibility of documenting suitable photos with the measurements. With the installation tester PCE-ITE 50, you can ensure that fixed installations are safely and correctly installed. Thanks to the dual display, the intuitive symbols and the high viewing angle, you can comfortably and quickly perform your measurements with the PCE-ITE 50 installation tester. With the low-resistance measurement of the PCE-ITE 50 installation tester, you can check grounding conductors, potential equalization rails and protective conductors for low impedance.

The measuring range for low-resistance measurement with the installation tester PCE-ITE 50 is in the range of 0 - 2000  $\Omega$  with a resolution of 0.001 - 1  $\Omega$ . Probably the most important measurement of the installation tester PCE-ITE 50 is the measurement of insulation resistance. Electrical cables are placed under voltage during the insulation measurement in order to detect fault currents, which generate material migration or heat. In most cases, these current faults are so minimal that they are not detected by protective devices and in the worst case they can lead to a fire. The installation tester PCE-ITE 50 can carry out installation measurement with a test voltage of 125V, 250V, 500V or 1000V. The load current is in each case 1 mA. The PCE-ITE 50 installation tester is independent of the mains supply. In order to bring all systems and circuits of a power supply system to a common potential (ground reference or potential reference) and to protect against short-circuit currents and overvoltages, the earthing resistor should be as low-impedance as possible. With a measuring range of 0 ... 2000  $\Omega$  with a resolution of 0.01 ... 1  $\Omega$ , the installation tester DT-6650 offers all the prerequisites for a meaningful measurement of the grounding resistance.

- ▶ 3.5" color TFT LCD display
- ▶ Loop resistance L-N, L-PE and N-PE
- ▶ Adjustable FI test current
- ▶ SD card and Bluetooth
- ▶ Dual display
- ▶ Good / bad FI test
- ▶ Low Ohm measurement
- ▶ Up to 1000V terminal voltage

# Specifications

## Isolation test

Terminal voltage	Measuring range	Resolution	Accuracy	Load current	Short circuit current
125V (0 ... 10 %)	0,125 ... 4 MΩ	0.001 MΩ	± (2% + 10 digits)	1-mA @ Last 125 kΩ	≤ 1-mA
	4,001 ... 40 MΩ	0.01 MΩ	± (2% + 10 digits)		
	40,01 ... 400 MΩ	0.1 MΩ	± (4% + 5 digits)		
	400,1 ... 1000 MΩ	1 MΩ	± (5% + 5 digits)		
250V (0 ... 10 %)	0,125 ... 4 MΩ	0.001 MΩ	± (2% + 10 digits)	1-mA @ Last 250 kΩ	≤ 1-mA
	4,001 ... 40 MΩ	0.01 MΩ	± (2% + 10 digits)		
	40,01 ... 400 MΩ	0.1 MΩ	± (3% + 2 digits)		
	400,1 ... 1000 MΩ	1 MΩ	± (3% + 2 digits)		
500V (0 ... 10 %)	0,125 ... 4 MΩ	0.001 MΩ	± (2% + 10 digits)	1-mA @ Last 500 kΩ	≤ 1-mA
	4,001 ... 40 MΩ	0.01 MΩ	± (2% + 10 digits)		
	40,01 ... 400 MΩ	0.1 MΩ	± (3% + 2 digits)		
	400,1 ... 1000 MΩ	1 MΩ	± (4% + 5 digits)		
1000 V (0 ... 10 %)	0,125 ... 4 MΩ	0.001 MΩ	± (3% + 10 digits)	1-mA @ Last 1 MΩ	≤ 1-mA
	4,001 ... 40 MΩ	0.01 MΩ	± (2% + 10 digits)		
	40,01 ... 400 MΩ	0.1 MΩ	± (3% + 2 digits)		
	400,1 ... 1000 MΩ	1 MΩ	± (4% + 5 digits)		

Subject to change



## Low Ohm

Measuring range	Resolution	Accuracy	Max. open circuit voltage	Overload protection
2,000 $\Omega$	0.001 $\Omega$	$\pm$ (1.5% + 30 digits)	5.8V	250 Vrms
20,00 $\Omega$	0.01 $\Omega$	$\pm$ (1.5% + 3 digits)	5.8V	250 Vrms
200,0 $\Omega$	0.1 $\Omega$	$\pm$ (1.5% + 3 digits)	5.8V	250 Vrms
2000 $\Omega$	1 $\Omega$	$\pm$ (1.5% + 5 digits)	5.8V	250 Vrms

## Continuity tester

Measuring range	Resolution	Max. open circuit voltage	Overload protection	Short circuit current
2000 $\Omega$	0.01 $\Omega$	5.8V	250 Vrms	$\geq$ 200-mA

## Grinding resistance

L-PE (Hi-Amp): Load current 4.0 A

Measuring range	Resolution	Accuracy
0.23 ... 9.99 $\Omega$	0.01 $\Omega$	$\pm$ (4% + 4 digits)
10.0 ... 99.9 $\Omega$	0.1 $\Omega$	$\pm$ (4% + 4 digits)
100 ... 999 $\Omega$	1 $\Omega$	$\pm$ (4% + 4 digits)

L-PE (without tripping): Load current 15-mA

Measuring range	Resolution	Accuracy
0.23 ... 9.99 $\Omega$	0.01 $\Omega$	$\pm$ (5% + 6 digits)
10.0 ... 99.9 $\Omega$	0.1 $\Omega$	$\pm$ (5% + 6 digits)
100 ... 999 $\Omega$	1 $\Omega$	$\pm$ (5% + 6 digits)

L-N: Load current 4.0 A

Measuring range	Resolution	Accuracy
0.23 ... 9.99 $\Omega$	0.01 $\Omega$	$\pm$ (4% + 4 digits)
10.0 ... 99.9 $\Omega$	0.1 $\Omega$	$\pm$ (4% + 4 digits)
100 ... 999 $\Omega$	1 $\Omega$	$\pm$ (4% + 4 digits)

## RCD Test

RCD (In)	10-mA, 30-mA, 100-mA, 300-mA, 650-mA, 1 A
Factors	x 1/2, x1, x2, x5
Accuracy of the tripping time	$\pm$ (1% + 1 ms)

Subject to change



Signal form of the test current	Sine (AC), pulse (DC)
Tripping characteristics	G and S
Release time	0° or 180°
Voltage range	194 ... 260V AC (50/60 Hz)
Accuracy of current measurement	± (5% + 2 digits)
RCD Types	Type A, Type B

#### **Voltage measurement**

Measuring range	Resolution	Accuracy
80...500 V AC/DC	1 V	± (2 % + 2 digits)

#### **Frequency measurement**

Measuring range	Resolution	Accuracy
45...65 Hz	1 Hz	±2 Hz

#### **Grounding measurement**

Measuring range	Resolution	Accuracy
0.00...99.99 Ω	0.01 Ω	± (2% + 30 digits)
100.0...999.9 Ω	0.1 Ω	± (2% + 6 digits)
1000...2000 Ω	1 Ω	± (2% + 6 digits)

#### **General specifications**

Power supply	8 x 1.2 ... 1.5V AA batteries
Operating time	ca. 15 h
Measurement category	CAT III 600V
Protection class	IP 65
Display	3.5" TFT (320 x 240 Pixel)
Operating environment	0 ... 45°C 0 ... 95% rH, non condensing
Measurements	24.2 x 10.5 x 14.5 cm
Weight	1.56 kg / 3.4 lbs

Subject to change