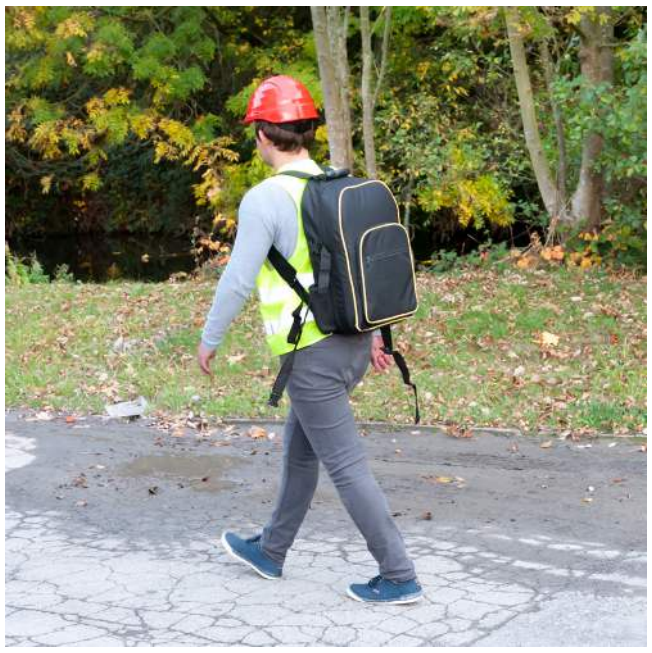
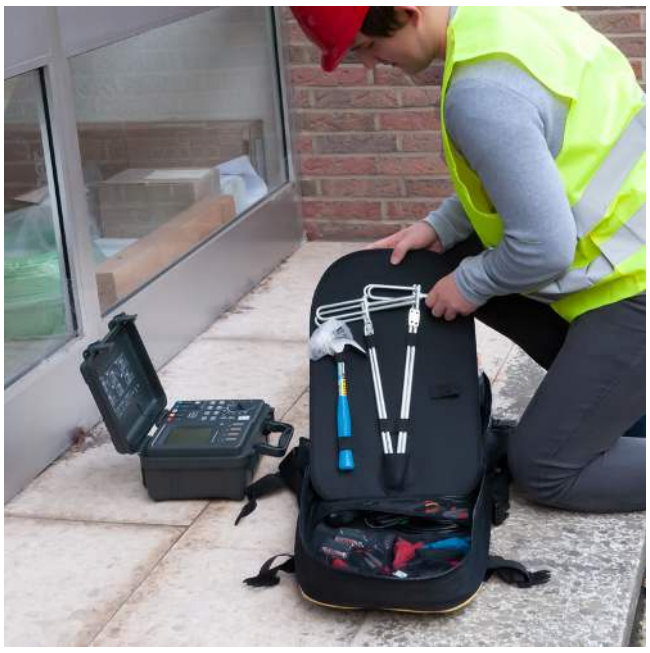
Earth Tester PCE-ET 5000





Earth Tester PCE-ET 5000

Grounding meter with memory / Mobile use possible thanks to battery / Resistance measurement /Protective conductor test / Visual connection aid / Lightning conductor test / BacklightTesting of disturbing voltages, frequencies and currents

The grounding meter is a versatile ohmmeter. With this grounding meter a variety of resistance measurements can be performed. Thus, with the grounding meter, the possibility exists to perform a normal resistance measurement of 2- or 4-pole application. It is also possible to determine the resistance of the soil with the grounding meter. For the measurement of earth resistance corresponding earth spikes are included in the scope of supply. These ground spikes can easily be connected to the grounding device via the supplied separate 20 meter / 66 ft cable.

Another important measuring function is the measurement of the resistance of, for example, lightning conductors. This measurement is used to control the lightning conductors on, for example, schools or university buildings and is essential to derive a possible lightning strike into the ground. This grounding meter can thus be used to determine whether the lightning rod is properly connected to the ground and whether it has the right resistance value to discharge a lightning bolt into the ground.

To ensure a perfect measurement, the grounding meter has a measuring terminal detection. After the operator has set the grounding meter to the desired measurement function, the terminals to be used light up. If an incorrect connection has been selected by the operator, the grounding meter signals the operator both acoustically and visually. At the same time, the measurement by the grounding meter is refused until the test setup has been properly connected. This massively limits faulty measurements by the intelligent grounding meter. Also, the grounding device has a memory. This allows the measurement data from the grounding meter to be transferred to a PC and evaluated after a measurement.

- Mobile use thanks to battery and batteries
- Data memory for later analysis on the PC
- Visual connection aid for easy operation
- Alarm in case of incorrect connection of the measuring line
- Direct and indirect resistance measurement
- Interference currents, interference voltages, frequencies

Subject to change

Specifications

3-pole earth resistance

Test voltage	20, 48V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	26 seconds
Probe resistance Rs	<100 kΩ
Auxiliary earth resistance Rh	<100 kΩ
Resolution	0.001 Ω
Measuring range Re	0.02 Ω ... 300 kΩ
Accuracy	± (5% + 10 digits)
Ust	< 24V
Fst	16 ... 400 Hz

The accuracy is ensured in an environment of 0 ... 28°C / 32 ... 82°F, < 80% RH (non-condensing).
Response time < 15 seconds (Time required to reach the specified accuracy, after the start of the measurement with the average function switched off.)

4-pole grounding resistor

Test voltage	20, 48V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	30 seconds
Probe resistance Rs	< 100 kΩ
Auxiliary earth resistance Rh	< 100 kΩ
Resolution	0.001 Ω
Measuring range Re	0.02 Ω ... 300 kΩ
Accuracy	± (5% + 10 digits)
Ust	< 24V
Fst	16 ... 400 Hz

The accuracy is ensured in an environment of 0 ... 28°C / 32 ... 82°F, < 80% RH (non-condensing).
Response time < 25 seconds (Time required to reach the specified accuracy, after the start of the measurement with the average function switched off.)

3-pole earth resistance with current clamp

Test voltage	20, 48V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	26 seconds
Probe resistance Rs	< 100 kΩ
Auxiliary earth resistance Rh	< 100 kΩ
Resolution	0.001 Ω
Measuring range Re	0.02 Ω ... 20 kΩ
Accuracy	± (5% + 10 digits)
Ust	< 24V
Fst	16 ... 400 Hz

More information

More product info

Similar products

Subject to change

The accuracy is ensured in an environment of 0 ... 28°C / 32 ... 82°F, < 80% RH (non-condensing).
Response time < 25 seconds (Time required to reach the specified accuracy, after the measurement has started with the average function switched off.)
If the current on the current probe is too low, the measurement can be aborted.

4-pole earth resistance with current clamp

Test voltage	20, 48V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	26 seconds
Probe resistance Rs	< 100 kΩ
Auxiliary earth resistance Rh	< 100 kΩ
Resolution	0.001 Ω
Measuring range Re	0.02 Ω ... 20 kΩ
Accuracy	± (5% + 10 digits)
Ust	< 24V
Fst	16 ... 400 Hz

The accuracy is ensured in an environment of 0 ... 28°C / 32 ... 82°F, < 80% RH (non-condensing).
Response time < 25 seconds (Time required to reach the specified accuracy, after the measurement has started with the average function switched off.)
If the current on the current probe is too low, the measurement can be aborted.

Grounding resistor only with current clamps

Test voltage	48V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	26 seconds
Measuring range Re	0.02 Ω ... 150 Ω
Resolution	0.001 Ω
Accuracy	± (5% + 10 digits)
Ust	< 24V
Fst	16 ... 400 Hz

The accuracy is ensured in an environment of 0 ... 28°C / 32 ... 82°F, < 80% RH (non-condensing).
Response time < 25 seconds (Time required to reach the specified accuracy, after the measurement has started with the average function switched off.)
If the current on the current probe is too low, the measurement can be aborted.

Soil resistance (removal resistance)

Test voltage	20, 48V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	26 seconds
Resolution	0.001 Ω * m
Measuring range Re	0.02 Ω ... 1000 kΩ * m
Accuracy	± (5% + 10 digits)

2-pole resistance measurement (AC)

Test voltage	20V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	26 seconds
Measuring range Re	0.02 Ω ... 300 kΩ
Resolution	0.001 Ω
Accuracy	± (5% + 10 digits)
Ust	< 24V
Fst	16 ... 400 Hz

2-pole resistance measurement (DC)

Test voltage	20V DC
Short circuit current	250-mA
Test time	26 seconds
Measuring range Re	0.02 Ω ... 3 kΩ
Resolution	0.001 Ω
Accuracy	± (5% + 10 digits)
Ust	< 3V
Fst	16 ... 400 Hz

4-pole resistance measurement (DC)

Test voltage	20V DC
Short circuit current	250-mA
Test time	26 seconds
Measuring range Re	0.02 Ω ... 3 kΩ
Resolution	0.001 Ω
Accuracy	± (5% + 10 digits)
Ust	< 3V
Fst	16 ... 400 Hz

Line compensation

Test voltage	20, 48V AC
Test frequency	94 Hz, 105 Hz, 111 Hz, 128 Hz, AFC
Short circuit current	250-mA
Test time	26 seconds
Resolution	0.001 Ω
Measuring range Re	0.02 Ω ... 30 Ω
Accuracy	± (3% + 10 digits)
Ust	< 24V
Fst	16 ... 400 Hz

Interference voltage

Measuring range	± 50V DC
	1 ... 50V AC
Resolution	0.1V
Accuracy	± (5% + 5 digits)

Interference current

Measuring range	20-mA ... 2 A
Resolution	1-mA

Subject to change

Accuracy	± (5% + 5 digits)

Interference frequency

Measuring range	16 ... 400 Hz
Resolution	1 Hz
Accuracy	± (1% + 10 digits)

Other specifications

Data storage	100 readings
Operating conditions	0 ... 40°C / 32 ... 104°F, < 80% RH (non-condensing)
Charge ambient conditions to the battery	10 ... 40°C / 50 ... 104°F, < 80% rh (non-condensing)
Storage conditions	-10 ... 50°C / 50 ... 122°F, < 90% rh (non-condensing)
Storage conditions for the battery	-20 ... 30°C / -4 ... 86°F, < 80% rh (non-condensing)
Storage height	< 12,000 m / 39,370 ft
Operating altitude	< 2,000 m / 6,561 ft
Clamp diameter	51 mm
Display	Backlit LCD, 9,999 digits
Display measuring range exceeded	> LIMIT
Display below measuring range	-
Measuring frequency earthing resistance / leakage current	1 Hz (If the average value function is activated: one value every four seconds)
Measuring frequency voltage measurement	2 Hz
Measuring frequency interference voltage	4 Hz
Measuring frequency interference frequency	1 Hz
Measuring frequency interference current	1 Hz
interfaces	Measuring connection: E, ES, S, H, pliers connection USB-B, charging connection
Power supply batteries	6 x 1.5V D LR14 batteries
Power supply battery	1 x 7.2V nickel-metal hydride battery pack
Power supply power supply	Primary: 100 ... 240V, 50 ... 60 Hz Secondary: 12V, 3A
Max. Power consumption with power supply	15V A
Max. Power consumption with battery or rechargeable battery	6V A
Running time in battery mode	About 5 hours
Running time in the battery	About 9 hours (without backlight)
Maximum input voltage	
Maximum input voltage relative to earth	300V rms (CAT III)
Insulation thickness	6880V AC: 15 seconds
Overvoltage protection	250V AC between the connections

Dimensions	260 x 125 x 280 mm / 10.2 x 4.9 x 11 in
Weight	About 2.5 kg / 5.5 lbs
Standardize	Safety: EN61010-1: 2001, EN61010-031: 2002 Pollution degree 2, CAT III 300V, EMC: EN61000-3-2: 2000, IEC61326-1: 1997 A

Subject to change