Our range of devices include clamp-on ammeters for measuring current leaks, AC and DC power, voltage, power, resistance, pace, capacity or frequency.

Some clamp-on meters have an easy to read display and they allow for one handed operation. Thanks to the ability to measure without direct contact, it’s no longer necessary to stop the machine or electrical installation, in order to measure.

As a result, these types of clamps are regarded as an essential tool in maintenance and inspection jobs. In addition to the clamp-on meters, PCE Instruments offer power meters that measure voltage and using this information calculate apparent power, reagent power and active power, as well as all other data related to the measuring of power.

Power meters are available to purchase with one, two, three or four clamp-on ammeters.

### Technical Specifications

#### PCE-DC1
- **Nominal Range**: 200 A / 100 mA / ±3.0 % +10 dgt
- **DC current**: 200 A / ±3.0 % +10 dgt
- **Frequency**: 40 ... 50 Hz / ±1.0 Hz / ±1.0 % +5 dgt
- **DC voltage**: 600 VDC / ±1.0 % +6 dgt
- **Resis.**: 600 Ohm / ±1.0 % +6 dgt
- **Aperture of clamps**: 18 mm max.
- **Power**: 2 x 1.5 V batteries AAA
- **Delivery content**: Clamp meter, batteries, transport bag, instructions

#### PCE-DC2
- **Nominal Range**: 200 A / ±2 % +8 dgt
- **DC current**: 200 A / ±2 % +8 dgt
- **Frequency**: 40 ... 50 Hz / ±1.0 Hz / ±1.0 % +5 dgt
- **DC voltage**: 600 VAC / ±1.0 % +6 dgt
- **Resis.**: 600 Ohm / ±1.0 % +6 dgt
- **Aperture of clamps**: 18 mm max.
- **Power**: 2 x 1.5 V batteries AAA
- **Delivery content**: Clamp meter, test cables, batteries, instructions

#### PCE-DC3
- **Nominal Range**: 200 A / ±3.0 % +8 dgt
- **DC current**: 200 A / ±3.0 % +8 dgt
- **Frequency**: 40 ... 50 Hz / ±1.0 Hz / ±1.0 % +5 dgt
- **DC voltage**: 600 VDC / ±1.0 % +6 dgt
- **Resis.**: 600 Ohm / ±1.0 % +6 dgt
- **Aperture of clamps**: 18 mm max.
- **Power**: 2 x 1.5 V batteries AAA
- **Delivery content**: Clamp meter, batteries, transport bag, instructions
Clamp meter measures from 10 µA
- Mass current leakage & current up to 100 µA
- Measures voltage up to 400 V
- Continuity test
- Automatic off after 30 min.
- Measures resistance up to 400 Ω
- Max/min. values are viewed on the display
- Input current 10 mA

Technical specifications
- Magn. meas.: ACA current
  - ACA: 0 ... 4 A / 1 mA / ±3.5 % +5 dgt
  - 0 ... 400 µA / ±1 %
  - 0 ... 400 mA / ±0.5 %
- DCA: 0 ... 4 A / 1 mA / ±3.5 % +5 dgt
  - 0 ... 400 µA / ±1 %
  - 0 ... 400 mA / ±0.5 %
- ACV: 0 ... 600 V / 100 mV / ±1 % +5 dgt
  - 0 ... 600 V / ±0.5 %
  - 0 ... 600 V / ±0.2 %
- DCV: 0 ... 600 V / 100 mV / ±1 % +5 dgt
  - 0 ... 600 V / ±0.2 %
  - 0 ... 600 V / ±0.1 %
- Resolution: 0.1 V
- Measurement range: 4.0 ... 600 V
- Frequency: 50 / 500 Hz / 250 / 500 kHz / 1 MHz
- Measurement range: Automatic
- Diode test: Yes
- Warning tone: Yes
- Diode test: Yes
- Dimensions: 80 x 229 x 49 mm
- Power: 2 x 1.5 V AAA batteries
- Weight: 303 g

Digital clamp meter 1,000 A AC (IEC 1010-1 / 600 V CAT III)
- LCD 3,9/4-digit screen, 17 mm, max. indicator: 3,699 / 0 conductor: 31 mm max.
- Resistance, frequency, capacitance, duty cycle, and temperature measurements
- Automatic & manual range selection / Automatic off
- AC current up to 1,000 A / Voltage up to 600 V AC/DC
- Diode test / Continuity test

Technical specifications
- Magn. meas.: ACA current
  - ACA: 0 ... 1,000 A / 10 A / ±3.5 % +5 dgt
  - 0 ... 400 mA / ±1 %
  - 0 ... 400 mA / ±0.5 %
- DCA: 0 ... 1,000 A / 10 A / ±3.5 % +5 dgt
  - 0 ... 400 mA / ±1 %
  - 0 ... 400 mA / ±0.5 %
- ACV: 0 ... 600 V / 100 mV / ±1 % +5 dgt
  - 0 ... 600 V / ±0.5 %
  - 0 ... 600 V / ±0.2 %
- DCV: 0 ... 600 V / 100 mV / ±1 % +5 dgt
  - 0 ... 600 V / ±0.2 %
  - 0 ... 600 V / ±0.1 %
- Resolution: 100 µV
- Measurement range: 400 mV / 4 / 40 / 400 / 600 V
- Frequency: 5 / 50 / 500 Hz / 5 / 50 / 500 kHz / 5 / 10 MHz
- Range selection: Automatic
- Diode test: Yes
- Warning tone: Yes
- Dimensions: 130 x 80 x 43 mm
- Power: 2 x 1.5 V batteries
- Weight: 380 g

Optional accessories
- K-CAL-MZ ISO Calibration certificate

Delivery content
- Clamp meter, bag, test cables, type-K temperature probe, 9 V battery & instructions manual
- Warning tone: Yes
- Diode test: Yes
- Dimensions: 80 x 229 x 49 mm
- Conductor Ø 170 mm
- Weight: 380 g

AC current: ±0.5 % ±5 dgt
- Voltage: ±0.5 % ±5 dgt
- Screen: 4.000 digits
- Bending diam.: max. 35 mm
- Dimensions: 130 x 80 x 43 mm
- Power: 2 x 1.5 V batteries
- Weight: 380 g

Technical specifications
- Range: 300 / 1,000 A / 600 V CAT III
- Resolution: 0.1 A / 0.1 V
- Accuracy: ±0.5 % +4 dgt
- LCD display: 4 + 4 digits
- Automatic range selection
- Fast Peak function: 20 µs
### PCE-UT232

**Power & energy meter (in real time)**
- **Indirect measuring (1 to 3 phases) with integrated clamps**
- **Power measurement:** Active (kW), apparent (kVAR) & reagent (kVAR), power factor (cos φ), phase angle, active energy counter (kWh)
- **Voltage:** (TRMS), current (TRMS) & frequency
- **Memory:** 599 readings shown on display
- **Accuracy:**
  - Power: ±0.5 % +4 dgt
  - Active energy: ±3.0 % +2 dgt
  - Active power measurements: ±20 % +10 dgt
  - Reagents energy: ±10 % +3 dgt
  - Apparent power measurements: ±30 % +5 dgt
- **Operating conditions:**
  - 20 °C ±5 °C
  - -10 °C to +50 °C

### PCE-PCM 1

**Power meter with memory, USB & software**
- **Power measurement:** Active (kW), apparent (kVAR) & reagent (kVAR), power factor (cos φ), phase angle, active energy counter (kWh)
- **Voltage:** (TRMS), current (TRMS) & frequency
- **Memory:** 99 readings
- **Connection:**
  - PC: USB (Windows 7/8/10)
  - Data interface: PC, PCMCIA

### PCE-GPA 62

**3 phase power & energy meter**
- **Measures:**
  - Power factor and phase angle, frequency, energy, active, apparent & reagent power (single or three-phase in symmetrical networks)
  - Max. conductor diameter: 55 mm or 65 x 24 mm contact rail
- **Analyses harmonic waves:**
  - Harmonics in voltage & current
- **Data memory:**
  - 50,000 sets of data
  - **Screen:** Graphic screen, 128 x 64 LCD with backlight
- **Accuracy:**
  - Harmonics in the voltage abs.: ±0.2 % +20 dgt
  - Harmonics in the voltage rel.: ±0.2 % +20 dgt
- **Delivery content:**
  - Harmonic analyser, measuring pins with 2 m cable, batteries, USB cable, software, bag, instructions manual

---

**Reference**
- **Item:**
  - K-PCE-UT232: Power meter
  - K-PCE-PCM 1: Power meter
  - K-PCE-GPA 62: Power meter
- **Optional accessories:**
  - ISO Calibration certificate

---

**Technical specifications**

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>Accuracy</td>
</tr>
<tr>
<td>Measurement range</td>
<td>Accuracy</td>
</tr>
<tr>
<td>Measurement range</td>
<td>Accuracy</td>
</tr>
</tbody>
</table>
PCE-360

3 phase power & energy meter with data storage

- Standard CAT III / 1000 V clamp: CAT III / 600V
- Harmonic wave analyser (through software connected to a computer)
- Real time view, recording and analysis systems from 1 & 3 phases
- Data storage for 20,000 sets of data (004 KB) 12,000 sets of data per measurement
- Voltage measurement / current (real effective)
- Measures power factor and phase angle
- Measures active, apparent & reagent power
- With current clamp to measure the neutral conductor

Technical specifications

Voltage measurement: 50 ... 600.0 V effective real value
Resolution: 0.1 V
Accuracy: ±1.5 % reading +20 dgt
Current measurement: 0.1 A
Accuracy: ±1.5 % reading +15 dgt
Resolution: 0.001 A
Accuracy: ±1.5 % reading +10 dgt

Measurement range: 0,000 ... +1,000
Power factor PF
Accuracy: ±1.5 % reading +20 dgt
Measurement range: 0,0 ... 119,3 MWh / MVAh / Mvarh
Power (active, reagent & apparent)
Accuracy: ±1.5 % reading +20 dgt
Measurement range: 150 Var ... 999.9 kVar / 0.1 KVar
Reagents power meas. Q
Accuracy: ±1.5 % reading +20 dgt
Measurement range: 150 VA ... 999.9 kVA / 0.1 KVA
Apparent power S
Accuracy: ±1.5 % reading +20 dgt
Resolution: 0.1 kW
Measurement range: 150 W ... 999.9 kW
Active power P
Accuracy: ±1.5 % reading +15 dgt
Resolution: 0.1 A
Measurement range: 3 ... 999.9 A effective real value
Current measurements
Accuracy: ±1.5 % reading +10 dgt
Resolution: 0.1 V
Measurement range: 50 ... 600.0 V effective real value
Voltage measurement

Power Analyser

PCE-PA 8000

3 phase power and energy analyser

- Power analyser with network of / 4 conductors, 3 phases / 3 conductors, 1 phase / 2 conductors / 1 phase / 3 conductors
- True RMS for measuring current / voltage, active, apparent & reagent power
- Phase angle & power factor / measures active, apparent & reagent energy
- Voltage measurement up to 600V/AC / Current measurements up to 1,200A/AC
- Measured values are recorded on the SD card / 1 s intervals / RS-232 interface, USB

Technical specifications

AC voltageV
10 ... 600 V
0.1 V
Accuracy: ±0.1 % reading +5 V
AC current I
250 A
0.01 A
Accuracy: ±0.5 % reading
AC current I
1,200 A
0.1 A
Accuracy: ±2 % reading +10 kA
AC current I
5,000 A
0.01 A
Accuracy: ±5 % reading +50 kA
Active power P
0 ... 9,999 kW
0.1 kW
Accuracy: ±0.5 % reading +50 kW
1 ... 999.9 MW
0.1 MW
Accuracy: ±2 % reading +500 MW
The data for apparent & reagent energy are analogs of active energy
Active energy E
0 ... 9,999 kWh
0.001 kWh
Accuracy: ±0.5 % reading +50 kWh
1 ... 999.9 MWh
0.001 MWh
Accuracy: ±2 % reading +500 MWh
The data for apparent & reagent power are analogs of active power
Active power P
0 ... 9,999 MW
0.001 MW
Accuracy: ±0.5 % reading +50 MW
1 ... 999.9 MW
0.001 MW
Accuracy: ±2 % reading +500 MW

Power factor PF
0.1
Accuracy: ±0.5 % reading +10 %
Phase angle
-180° ... +180°
0.1°
Accuracy: ±2 % reading +10°
Voltage meas. range: 100 ... 600 V AC, Automatic range selection
Current meas. range: 0.1 ... 1,200 A AC / automatic / Manual
Input resistance: 10 MΩ

Delivery content

- Power analyser, current clamps, test cables, crocodile clips, 2 GB SD card, 9V DC adapter, batteries, transport bag, instructions manual
- Clamp meter: 225 x 125 x 64 mm / 498 g incl. batteries

Accessories

- Clamp meter: 86 mm (außen)
- Clamp meter: 210 x 64 x 33 mm / 497 g incl. cable
- Clamp: 86 mm (außen)
- Power analyser with network of / 4 conductors, 3 phases / 3 conductors, 1 phase / 2 conductors / 1 phase / 3 conductors
- True RMS for measuring current / voltage, active, apparent & reagent power
- Phase angle & power factor / measures active, apparent & reagent energy
- Voltage measurement up to 600V/AC / Current measurements up to 1,200A/AC
- Measured values are recorded on the SD card / 1 s intervals / RS-232 interface, USB

Reference

- Item: K-PCE-PA 8000
- Power meter
- Current clamp: 1 A
- Current clamp: 5 A

- K-USA-USB-USB 9 V adapter / 1 A
- Power analyser with network of / 4 conductors, 3 phases / 3 conductors, 1 phase / 2 conductors / 1 phase / 3 conductors
- True RMS for measuring current / voltage, active, apparent & reagent power
- Phase angle & power factor / measures active, apparent & reagent energy
- Voltage measurement up to 600V/AC / Current measurements up to 1,200A/AC
- Measured values are recorded on the SD card / 1 s intervals / RS-232 interface, USB

- Power meter
- Current clamp: 1 A
- Current clamp: 5 A
- K-USA-USB-USB 9 V adapter / 1 A

- Power analyser with network of / 4 conductors, 3 phases / 3 conductors, 1 phase / 2 conductors / 1 phase / 3 conductors
- True RMS for measuring current / voltage, active, apparent & reagent power
- Phase angle & power factor / measures active, apparent & reagent energy
- Voltage measurement up to 600V/AC / Current measurements up to 1,200A/AC
- Measured values are recorded on the SD card / 1 s intervals / RS-232 interface, USB

- Power meter
- Current clamp: 1 A
- Current clamp: 5 A
- K-USA-USB-USB 9 V adapter / 1 A
Power Analyser

PCE-PA 8300

3 phase network failure analyser with graphic display & harmonics, with large clamps Ø

- Measures harmonic wavelength up to 50
- Clamps can be connected with power clamps from numerous other suppliers
- Measures phase angle / Frequency / Power factor
- SD memory card with adjustable intervals
- Protection IEC1010CAT III 600V

Technical specifications

Voltage measurement (AC V)

| Range | Accuracy | Phase angle | Frequency | Harmonics of the alt. voltage are the same as
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>±2%</td>
<td>±0.5 A</td>
<td>45...65 Hz / 0.1 Hz / ±0.1 Hz</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Meas. range 20 A / 200 A / 1,200A

Accuracy ±0.5 % +0.5 V

10 V ... 600 V (Phase to phase)

Meas. range 10 V ... 600 V (Phase to neutral),

±2 % +0.5 V, ±2 % +10 digit |

Resolution 0.001 A (< 10 A), 0.01 A (≥ 10 A) /

Power factor 0...1 (+0.001)

Operating conditions -20 ... +50 °C

Casing Shock resistant

Connection cable L= 0.5 m

Screen 6 + 1 cyclometer register

Min. power 6 W

Consumption < 0.5 W

Frequency 50 Hz

Current carrying capacity 16 A

Voltage range 230 V AC

Technical specifications

A/C meter for voltage

- Flexible and easy to use everywhere
- Easy to read screen
- ABS stable casing
- Cable length connections 0.50 m / each side
- Available with different plug types

A/C meter for current

- With CE Ex A or 32 A connectors / adaptors (as per the model selected)
- Flexible application irrespective of surroundings
- Easy to read screen
- ABS stable casing
- Cable length is approx. 0.50 m / each side

Reference Item

K-Easycount-3-32-A Current meter, CEE plug 32 A, calibrated

K-Easycount-3-16-A Current meter, CEE-plug

K-Easycount-1-CEE-G Meter, CEE, calibrated

K-Easycount-1-Schuko-G Meter, Schuko, calibrated

K-Easycount-1-CEE-U Meter, CEE

K-Easycount-1-Schuko-U Meter, Schuko

Optional accessories

K-Cal-PCE-PA 8000 ISO Calibration cert

K-PCE-PA C1 3 x Clamp meter

K-PCE-PA C2 3 x Flex. Clamp meter

PCE-MHU

An external service to assist you

- If you want us to demonstrate XXXXXXXX to you personally, please do not hesitate to contact us.
- We can meet you where it is necessary.
- You choose where and when suits you best.

Free service

A personal demonstration at home will establish the options of ensuring effective distribution of your work. Our external team members are not just salespeople, they also provide an excellent service and are skilled advisors of all high quality measuring equipment. Expanding your workshop? Or maybe you are you building a new installation or expanding and modernising your existing facilities? Then this is the right time to turn to our external service. We are a competent team, capable in assisting in your needs. For a personal evaluation, do not hesitate to make an appointment with our technical advisors.

E-Mail

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www.pce-instruments.com/us

www.pce-instruments.com/english

PCE-PA C2

PCE-PA C1

PCE-PA C1

PCE-PA C2

PCE-PA C1
Insulation meters have many uses, such as performing VDE checks on fixed electrical installations or mobile devices. Good insulation between power lines and electrical installations is a strict requirement to ensure that people are protected from possible electric shock, but good insulation also acts as an effective form of preventing fires. Measuring insulation non-destructively with an insulation meter is the first important step to determine the status of existing or new electric installations. In the case of a negative result, steps must be taken to determine and identify the defective point, in order for damaged equipment and installations to be removed accordingly. Devices designed to protect from overload, which ensure the strict control of transient overloads, can be installed. The most common insulation errors are due to defective connections, for instance if N and PE have been mixed up or if the lines insulation are in older electrical installations. There may also be wiring located behind lamps or AP switches that are trapped. Our insulation meters can determine if electrical installations are installed correctly and according to safety regulations.

### Technical specifications

<table>
<thead>
<tr>
<th>Test voltage</th>
<th>Insulation range</th>
<th>Accuracy</th>
<th>Voltage control</th>
<th>Short circuit current</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 V</td>
<td>0.5 MΩ – 5 GΩ</td>
<td>±5 % +1 digit</td>
<td>50 V / 125 V / 250 V</td>
<td>2 mA DC</td>
</tr>
<tr>
<td>1,000 V</td>
<td>10 MΩ – 10 GΩ</td>
<td>±5 % +1 digit</td>
<td>50 V / 125 V / 250 V</td>
<td>2 mA DC</td>
</tr>
<tr>
<td>1,500 V</td>
<td>50 MΩ – 50 GΩ</td>
<td>±5 % +1 digit</td>
<td>50 V / 125 V / 250 V</td>
<td>2 mA DC</td>
</tr>
<tr>
<td>2,500 V</td>
<td>100 MΩ – 100 GΩ</td>
<td>±5 % +1 digit</td>
<td>50 V / 125 V / 250 V</td>
<td>2 mA DC</td>
</tr>
</tbody>
</table>

- **Accuracy**: ±5 % +1 digit
- **Voltage control**: 50 V / 125 V / 250 V
- **Short circuit current**: 2 mA DC

### Delivery content

- Insulation meter
- Test cables
- Crocodile clips
- 8 x 1.5 V batteries (LR 14)
- Software

### Reference Item

- **K-PCE-IT181 Insulation meter for telecommunications**
  - **Price**: €95.00

### Optional accessories

- **K-CAL-PCE-IT-Series ISO Calibration certificate**: €125.00

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Insulation meter for telecommunications

- **Specificity for telecommunications**
- **Meets security standards**
- **Auto discharge of measurement circuit**
- **Battery indicator**
- **3 DC test voltages**
- **Short circuit protection / Analog scale**

### Technical specifications

- **RMS control**: 
- **Meas. range**: Insulation range 20 MΩ
- **Voltage control**: 50 V / 125 V / 250 V
- **Short circuit current**: 2 mA DC

### Delivery content

- Insulation meter, test cable, clips, 8 x batteries, instructions manual

### Reference Item

- **K-PCE-IT181 Insulation meter for telecommunications**
  - **Price**: €95.00

- **K-CAL-PCE-IT-Series ISO Calibration certificate**: €125.00

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Insulation meter up to 100 GΩ

- **Standard IEC 1010-1, CAT III 1,000 V / Test voltage up to 2,500 V**
- **Memory for 18 meas. readings / USB Interface for transferring data**
- **Screen with backlight & bar graph**
- **Alarm when the predetermined measurement limit values are exceeded**

### Technical specifications

<table>
<thead>
<tr>
<th>Test voltage</th>
<th>Insulation range</th>
<th>Insulation resis.</th>
<th>Current control</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 V</td>
<td>0.5 MΩ – 5 GΩ</td>
<td>DC 500 V / 20 %</td>
<td>1 ... 1.2 mA / 500 kΩ</td>
</tr>
<tr>
<td>1,000 V</td>
<td>10 MΩ – 10 GΩ</td>
<td>DC 1,000 V / 20 %</td>
<td>1 ... 1.2 mA / 1 MΩ</td>
</tr>
<tr>
<td>1,500 V</td>
<td>50 MΩ – 50 GΩ</td>
<td>DC 1,500 V / 20 %</td>
<td>1 ... 1.2 mA / 1.5 MΩ</td>
</tr>
<tr>
<td>2,500 V</td>
<td>100 MΩ – 100 GΩ</td>
<td>DC 2,500 V / 20 %</td>
<td>1 ... 1.2 mA / 2.5 MΩ</td>
</tr>
</tbody>
</table>

- **Accuracy**: ±5 % +1 digit / 10 ... 100 GΩ: ±10 % +1 digit
- **Interface**: USB
- **Screen**: LCD display & bar graph, 123 x 58 mm
- **Power**: 4 x 1.5 V batteries (LR 14)
- **Oper. conditions**: 0 ... +40°C / < 80 % r.H.
- **Dimensions**: 165 x 170 x 92 mm
- **Weight**: 970 g

### Delivery content

- Insulation meter, test cables, crocodile clips, software, USB cable, battery, instructions manual

### Reference Item

- **K-PCE-UT 512 Insulation meter**
  - **Price**: €194.00

- **K-CAL-PCE-UT-Series ISO Calibration certificate**: €115.00

---

Insulation meter up to 200 GΩ

- **Standard IEC 1010-1, CAT IV 2,000 V / Test voltage up to 2,500 V**
- **Memory for 18 meas. readings / USB Interface for transferring data**
- **Screen with backlight & bar graph**
- **Alarm when the predetermined measurement limit values are exceeded**

### Technical specifications

<table>
<thead>
<tr>
<th>Test voltage</th>
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<th>Insulation resis.</th>
<th>Current control</th>
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<tr>
<td>500 V</td>
<td>0.5 MΩ – 5 GΩ</td>
<td>DC 500 V / 20 %</td>
<td>1 ... 1.2 mA / 500 kΩ</td>
</tr>
<tr>
<td>1,000 V</td>
<td>10 MΩ – 10 GΩ</td>
<td>DC 1,000 V / 20 %</td>
<td>1 ... 1.2 mA / 1 MΩ</td>
</tr>
<tr>
<td>1,500 V</td>
<td>50 MΩ – 50 GΩ</td>
<td>DC 1,500 V / 20 %</td>
<td>1 ... 1.2 mA / 1.5 MΩ</td>
</tr>
<tr>
<td>2,500 V</td>
<td>100 MΩ – 100 GΩ</td>
<td>DC 2,500 V / 20 %</td>
<td>1 ... 1.2 mA / 2.5 MΩ</td>
</tr>
</tbody>
</table>

- **Accuracy**: ±5 % +1 digit / 10 ... 100 GΩ: ±10 % +1 digit
- **Interface**: USB
- **Screen**: Analog scale
- **Power**: 9 x 1.5 V Batteries V
- **Dimensions**: 165 x 170 x 92 mm

### Delivery content

- Insulation meter, test cables, crocodile clips, software, USB cable, battery, instructions manual
### Technical specifications

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Range</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulation Meter</td>
<td>0.1 MΩ ~ 1000 MΩ</td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Temperature</td>
<td>-40 °C ~ +537 °C</td>
<td>±(1.0 % +10 digit)</td>
</tr>
<tr>
<td>Frequency</td>
<td>0.01 Hz ~ 1 MHz</td>
<td>±0.01 % / ±1 Hz</td>
</tr>
<tr>
<td>DC Voltage</td>
<td>0 V ~ 1000 V</td>
<td>±0.1 % / ±100 mV</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>0 V ~ 1000 V</td>
<td>±0.1 % / ±100 mV</td>
</tr>
<tr>
<td>DC Current</td>
<td>0 μA ~ 20 mA</td>
<td>±0.1 % / ±100 μA</td>
</tr>
<tr>
<td>AC Current</td>
<td>0 μA ~ 20 mA</td>
<td>±0.1 % / ±100 μA</td>
</tr>
<tr>
<td>Resistance</td>
<td>0 Ω ~ 10 TΩ</td>
<td>±0.1 % / ±100 Ω</td>
</tr>
<tr>
<td>Conductance</td>
<td>0 μS ~ 10 MS</td>
<td>±0.1 % / ±100 μS</td>
</tr>
<tr>
<td>Capacitance</td>
<td>0 nF ~ 10 μF</td>
<td>±0.1 % / ±100 nF</td>
</tr>
<tr>
<td>Frequency</td>
<td>0 Hz ~ 2 MHz</td>
<td>±0.01 % / ±1 Hz</td>
</tr>
<tr>
<td>Diode Test</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Temperature Test</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Data Storage</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Battery Type</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Battery Capacity</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
</tbody>
</table>

### Reference Item €

- Data cable, batteries, carrying case, instructions manual
- Insulation meter, colour coded silicon test cable, silicon protective cover for coaxial conductors, batteries, instructions
- K-CAL-PCE-UT-512: ISO Calibration certificate (with multimeter function)

### Technical specifications

<table>
<thead>
<tr>
<th>Measurement Type</th>
<th>Range</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulation Meter</td>
<td>0.1 MΩ ~ 1000 MΩ</td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Temperature</td>
<td>-40 °C ~ +537 °C</td>
<td>±(1.0 % +10 digit)</td>
</tr>
<tr>
<td>Frequency</td>
<td>0.01 Hz ~ 1 MHz</td>
<td>±0.01 % / ±1 Hz</td>
</tr>
<tr>
<td>DC Voltage</td>
<td>0 V ~ 1000 V</td>
<td>±0.1 % / ±100 mV</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>0 V ~ 1000 V</td>
<td>±0.1 % / ±100 mV</td>
</tr>
<tr>
<td>DC Current</td>
<td>0 μA ~ 20 mA</td>
<td>±0.1 % / ±100 μA</td>
</tr>
<tr>
<td>AC Current</td>
<td>0 μA ~ 20 mA</td>
<td>±0.1 % / ±100 μA</td>
</tr>
<tr>
<td>Resistance</td>
<td>0 Ω ~ 10 TΩ</td>
<td>±0.1 % / ±100 Ω</td>
</tr>
<tr>
<td>Conductance</td>
<td>0 μS ~ 10 MS</td>
<td>±0.1 % / ±100 μS</td>
</tr>
<tr>
<td>Capacitance</td>
<td>0 nF ~ 10 μF</td>
<td>±0.1 % / ±100 nF</td>
</tr>
<tr>
<td>Frequency</td>
<td>0 Hz ~ 2 MHz</td>
<td>±0.01 % / ±1 Hz</td>
</tr>
<tr>
<td>Diode Test</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Temperature Test</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Data Storage</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
<tr>
<td>Battery Type</td>
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<tr>
<td>Battery Capacity</td>
<td></td>
<td>±0.1 % / ±10 Ω</td>
</tr>
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</table>

### Reference Item €

- Data cable, batteries, carrying case, instructions manual
- Insulation meter, colour coded silicon test cable, silicon protective cover for coaxial conductors, batteries, instructions
- K-CAL-PCE-UT-512: ISO Calibration certificate (with multimeter function)
Earth ground meters are used primarily to verify operation of grounding installations. The only way there could be any security in a building, is if the electric installations installed have grounding components. Only then, can you find a path in ground for electrical currents in the case of a lightning strike or current overload.

As a result, not only people, but also machines have to be protected from overloads. An earth ground meter can be used to take measurements according to strict existing regulations, which can then verify the effectiveness of grounding installations.

A milliohmmeter is a measuring device for taking precise readings of minimum resistance values in coils, transformers, power lines, bus systems etc. Our milliohmmeters measure resistance with the highest degree of accuracy using a four-wire technique. The measured resistance value is indicated on the display.

### PCE-ERT 10
- Earth resistance meter up to 2,000 Ω
- 3 conductors measuring method
- Measures earth voltage up to 200 V
- Can be set to zero
- Measures alternating and direct voltage
- Standards: IEC10101, CAT III 1,000 V

**Technical specifications**
- Earth/ground insulation: 20 / 200 / 2,000 Ω, ±2 % ±2 digits
- Direct voltage: 10 V / 20 V / 100 V, ±2 % ±2 digits
- Alternating voltage: 200 V ac / 500 V ac, ±2 % ±2 digits
- Resistance: 200 kΩ / 200 kΩ / 200 kΩ, ±2 % ±2 digits
- Measuring time: 2.5 / 5 seconds
- Screen: LCD display, with backlight
- Power: 6 x 1.5 AA batteries
- Dimensions: 200 x 92 x 50 mm
- Weight: 0.1 kg

**Delivery content**
- Earth resis. meter, set of test cables, picks, carrying case, batteries, instructions manual

**Reference Item** €
- K-PCE-ERT 10 Earth resis. meter 94.00

**Optional accessories** €
- K-CAL-ERTD ISO Calibration certificate 99.00

**Technical specifications**
- Fall of Potential: 0...2,000 V
- Measurement range: 0...2,000 V
- Resolution: 0.01 V
- Accuracy: ±3 % ±3 dgt
- Earth resistivity ρ用电 4 Pole method
- Measurement range: 0...200 Ω
- Resolution: 0.01 Ω
- Accuracy: ±3 % ±3 dgt
- Screen: LCD display, with backlight
- Memory: Up to 256 readings
- Power supply: 6 V / Battery 1.8 Ah
- Dimensions: Approx. 215 x 90 x 110 mm
- Weight: 1.7 kg

**Delivery content**
- Digital earth resis. meter, test cables (15m red, 10m yellow, 5m green), picks, batteries, instructions manual

**Reference Item** €
- K-PCE-ERT 20 Earth resis. meter 199.00

**Optional accessories** €
- K-PCE-ERTD ISO Calibration certificate 99.00

### PCE-ERT 20
- Earth resis. meter h. 2 kΩ / VDE 0413
- LCD display 3½ digits (max 2000)
- Battery life indicator & range exceeding indic.
- Test frequency 820 Hz
- Security characteristics as per VDE 0413
- Waterproof casing
- Standard: EN 61010-1; CAT III 300 V

**Technical specifications**
- Earthground insul.: 20 / 200 / 2,000 Ω, ±2 % ±2 digits
- Voltage: 2,500 V AC, 50/60 Hz, ±3 % ±2 digits
- Resistance indication: Indicates whether the resistance of additional electrodes lay within the counting resistance range
- Storage temp.: 0...+55 °C
- Operating conditions: 0...+40 °C
- Power: 8 x 1.5 V batteries (UM3, AA)
- Dimensions: 250 x 190 x 120 mm
- Weight: 1.5 kg

**Delivery content**
- Digital earth resis. meter, test cables (15m red, 10m yellow, 5m green), picks, batteries, instructions manual

**Reference Item** €
- K-PCE-ERT 20 Earth resis. meter 199.00

**Optional accessories** €
- K-PCE-ERTD ISO Calibration certificate 99.00

### Pulsar Earth
- Earth ground tester meters
- Earth resistance meter using 2 / 3 pole mode
- 4-pole earth resist. p testing
- Auto off function to save battery life
- Standard: CEI EN 61010-1 CAT III 300 V
- CEI EN 61557
- Pollution grade 2

**Technical specifications**
- Earth/ground insulation: 0.1 Ω
- Earth/ground voltage: 200 V / 0.1 V / ± (3 % ±3 dgt)
- Direct voltage: 0...200 V / 0.1 V / ± (3 % ±3 dgt)
- Alternating voltage: 1000 V ac / 2000 V ac, x (1.5 % ±3 dgt)
- Resistance: 200 kΩ / 0.1 kΩ / ± (1 % ±2 digits)
- Measuring time: 2.5 / seconds
- Screen: LCD display, with backlight
- Power: 6 x 1.5 AA batteries
- Dimensions: 200 x 92 x 50 mm
- Weight: 0.8 kg

**Delivery content**
- Earth resis. meter, 3 conductor cables with Schuko plug, charger, manufacturer’s cert., instructions manual

**Reference Item** €
- K-Pulsar Earth Earth resis. meter 795.00

**Optional accessories** €
- K-PULSAR ISO Calibration cert 159.00
Earth ground meters / Milliohmeters

Pulsar Test

**Versatile resistance meter**
- Pitch control / Insulation resistance / Loop resistance P-P, P-N, P-PN
- Grounding resistance / Earth/ground specific insul.
- Measures current & trip time setting for safety disconnection from faulty powerlines
- Indicator for rotation field direction

**Technical specifications**
- Continuity test in protective earth conductor
- Measurement range 10...100 000
- Resolution 0.1 Ohm
- Accuracy ±3 % ±5 digits
- Insulation resistance (con 500 VDC)
- Measurement range 0...200 MΩ
- Resolution 0.1 MΩ
- Accuracy ±3 % ±5 digits
- Grounding resistance (Current control: 10 A max.)
- Measurement range 0...2 000 Ω
- Resolution 0.1 Ω
- Accuracy ±3 % ±5 digits
- Voltage control 220 V ± 5 %
- Resolution 0.1 V
- Accuracy ±5 % ±3 digits
- Current control 100 mA
- Resolution 0.1 mA
- Accuracy ±3 % ±5 digits
- Measurement range 0...200 Ω
- Resolution 0.1 Ω
- Accuracy ±3 % ±5 digits

**Milliohmeter up to 40 Ω**
- 4 connectors for Kelvin measurements
- 4,000 digits, LCD display 3 1/2 digit, with backlight
- High accuracy with 0.1 mA, with 200 mA output curr.
- Battery life indicator
- Overload protection for entire measurement range

**Technical specifications**
- Mag. range
- Line resistance 400 mΩ / 40 Ω
- Accuracy ±3 % ±5 digits
- DCV 1 000 V
- Accuracy ±1 % ±2 digits
- ACV 400 mV
- Accuracy ±1 % ±2 digits
- Resistance 40 kΩ
- Accuracy ±1 % ±2 digits
- Capacity 4 mF
- Functions Mini. / max. function, Data-Hold, Auto-Shut-Off (15 min)
- Resolution 0.1 mΩ
- Dimensions 120 x 92 x 130 mm
- Weight 482 g

**Delivery content**
- Milliohmeter, 2 x Kelvin security cables, test cables, holder, bag, instructions

**PCE-MO 1000**

**PCE-MO 2001**

**Mains-powered milliohmeter**
- Standard IEC-1010-1: CAT IV 20 V
- For mass. resistance in coils, generators, transformers, circuits, e.g. in parallel or adjoining commutation circuits, commutators and relays
- Pitch control in relay systems (RingBus) to be used in industry and home.

**Technical specifications**
- Measurement range 0...2 000 mΩ / 100 µΩ
- Accuracy ±0.5 % ±4 digits (± ±5 °C)
- Resolution 0.1 mΩ
- Capacity 100 mA
- Test current 1 mA (2000 Ω-Range) / 1 µA (2000 mΩ-Range)
- Accuracy ±1 %
- Functions Max. range, 8.0 V, 10 mA, 8 x 1.5 V batteries (AA)
- Dimensions 230 x 190 x 200 mm
- Weight 1.3 kg

**Delivery content**
- Milliohmeter, test cables with Kelvin connectors, mains cable, USB optic cable, software, instructions manual

**PCE-MO 3001**

**Micro-ohmmeter**
- Resolution up to 1 µΩ
- Large LCD display with control panel
- Can be powered by batteries, internal temperature monitoring
- System with four conductors
- Standard EN 61010-1

**Technical specifications**
- Measurement range 0...4 000 Ω / 4 mΩ
- Resolution 0.1 Ω
- Accuracy ±1.5 %
- Test current 10 mA (200 D Range) / ±1.5 %
- Output voltage max. (100 C) 260 V
- Dimensions 330 x 260 x 160 mm / 3.8 kg
- Weight 1.5 kg

**Delivery content**
- Micro-ohmmeter, set of test cables (4 units),etwork cable, instructions manual

**PCE-MO 3002**

**High precision milliohmeter**
- Extremely precise measurement range
- Robust and waterproof case
- LED Display & indic. when value limits exceeded
- System with four conductors with Kelvin connectors
- Standards IEC-1010-1: CAT IV 20 V

**Technical specifications**
- Measurement range 0...200 mΩ / 200 µΩ
- Resolution 0.1 mΩ
- Accuracy ±0.5 % ±4 digits (± ±5 °C)
- Test current 100 mA (4000 Ω-Range) / 10 mA (2000 Ω-Range)
- Accuracy ±0.2 %
- Functions Max. range, 8.0 V, 10 mA, 8 x 1.5 V batteries (AA)
- Dimensions 230 x 190 x 200 mm
- Weight 1.5 kg

**Delivery content**
- Milliohmeter, test cables with Kelvin connectors, mains cable, USB optic cable, software, instructions manual

WWW.PCE-INSTRUMENTS.COM/US

WWW.PCE-INSTRUMENTS.COM/ENGLISH
Detectors are often employed when there is the need to locate live cables, pipes, circuits, short circuits or other live contacts. It can be extremely annoying, hazardous and often costly when gas pipes, water pipes, or electrical cables are accidentally drilled into.

Our detectors are highly reliable, regardless of whether they are used for private or business purposes. They can locate lines without voltage as well as low voltage lines in walls, floors or on the ground. As a result, it is possible to drill walls, ceilings and floors quickly and safely, or execute excavations without the need for sketches or connection plans.

We also have a range of detectors and scanners available that are able to locate current lines, pieces of metal and wooden beams.

**PCE-STM 3**
- Detects wood, metal, copper & iron
- Locates wood/metal/voltage lines (depth 3 cm)
- Security drilling in the right place / Bubble and laser alignment
- Permanent alarm (visual and acoustic)
- With protective felt
- Adjustment of the laser beam (45°)

**Technical specifications**
- **Location depth**: max. 3 cm
- **Screen**: Graphic LCD display
- **Linear laserbeam**: Adjustable at ±45°

**Multifinder Pro**
- Detector for wood, metal, copper,...
- LCD display with operation prompts
- Permanent voltage warning
- With protective felt
- Search depth: 10 cm
- Detects beams / cavities, metal, conductors
- Drilling point safety

**Technical specifications**
- **Location depth**: max. 10 cm
- **Stud-Scan**: Up to 3 cm (wood, metal)
- **Metal-Scan**: From 5 up to 10 cm (copper, iron)
- **AC-Scan**: Up to 4 cm
- **Screen**: Arrow on the LCD
- **Power / Weight**: 9 V battery / 250 g

**PCE-191 CB**
- Cable detect. for power lines & cables
- Follows cables in walls or cable ducting
- Detects cable interruptions in walls
- Live cables can be detected, it’s not necessary to remove the fuse
- Acoustic alarm when interruptions are detected
- Easy to use / Compact design

**Technical specifications**
- **Voltage range**: 220...240 V AC
- **Frequency range**: 50 / 60 Hz
- **Line detection**: By acoustic signal
- **Connection**: Euroconnector
- **Alarm**: Visual and acoustic
- **Casing**: ABS plastic
- **Power / Weight**: 9 V battery / 250 g

**Reference Item €**
- K-PCE-STM 3 Multifunction wall detector 29.00
- K-Multifinder Pro Detector 52.90
- K-PCE-191 CB Cable detector 45.00
Detectors

PCE-180 CB

- **Cable detector for cable breaks**
  - **Adjustable sensitivity / volume**
  - Ideal for controlling current, network and coaxial cables.
  - RJ-11 connector and crocodile clips
  - Includes 2 x 9 V batteries & bag

PCE-CL 10

- **Detector de short circuits & ground**
  - **Overload standard**: CAT III, 300 V
  - **Locates lines in ceilings, walls & floors**
  - Can locate breaks in cables, switches and fuses / Can detect short circuits
  - **Detection of ground connection in AC**
  - **Can follow protective water piping and heating**

PCE-LT1

- **LAN multimeter to test networks**
  - Manual or automatic testing of individual connectors
  - For testing cables, connections and cables inside walls
  - Includes a remote unit & BNC adapter
  - Measures continuous / voltage and continuous / current

D-tecct 150 SV

- **Detector / Wall scanner**
  - Identifies the properties of the material & its distance from other objects
  - Detection of objects in damp concrete
  - Radar sensor with ultra-wideband technology for millimetre-acoustic detection
  - With large graphic display and backlit

Easyloc

- **Detector for construction sites**
  - Detects cables / underground piping
  - Digital screen with bar graphs & tracking indicator for fast locating of underground lines
  - Passive detection mode using natural radio signals
  - Active detection mode using inductive components
  - Direct transmission onto cables using a transmitter clamp, direct electric supply or galvanised connector

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**Technical specifications**

- **PCE-180 CB**
  - Voltage range: 0 to 1100 V
  - Current measurement: 0 to 10 A
  - Frequency: 32.768 kHz
  - Output power: 0.1 W / 0.5 W

- **PCE-CL 10**
  - Voltage: 0 to 1000 V
  - Current: 0 to 10 A
  - Frequency: 50 Hz / 60 Hz

- **PCE-LT1**
  - Voltage: 0.3 ... 5 mV
  - Current: 0.3 ... 20 mA

- **D-tecct 150 SV**
  - Frequency range: 15 ... 23 kHz
  - Range 1: Power / 150 Hz / Hz
  - Range 2: Power / 50 Hz / Hz

- **Easyloc**
  - Range 1: Power / 200 m / 2 kV / 20 MΩ
  - Range 2: Power / 100 m / 2 kV / 20 MΩ

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**Delivery content**

- **PCE-180 CB**
  - Cable detector

- **PCE-CL 10**
  - Cable detector

- **PCE-LT1**
  - Tester LAN

- **D-tecct 150 SV**
  - Tested 150 SV Detector

- **Easyloc**
  - K-Easyloc-Cable detector

---

**Reference Item €**

- **K-PCE-180 CB**
  - Cable detector

- **K-PCE-CL 10**
  - Cable detector

- **K-PCE-LT1**
  - Tester LAN

- **K-D-tecct 150 SV**
  - Detector / 150 SV Detector

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**www.pce-instruments.com/us**

**www.pce-instruments.com/english**
An oscilloscope is an electronic measuring device, used to observe the change of an electrical signal over time, on a screen.

We provide an extensive range of oscilloscopes some which are suitable for wireless tasks, for measuring in the workshop and also in laboratories.

There are USB oscilloscopes, handheld oscilloscopes and table oscilloscopes. They are available with bandwidths of 8, 20, 25, 40, 60, 80, 100, 150 and 200 MHz. The USB oscilloscopes, digital oscilloscopes, real-time oscilloscopes or those with memory are equipped with one, two or four channels and have screens with either a monochrome or colour display.

If you need any further advice or have any questions on our oscilloscopes, please do not hesitate to contact our technicians and engineers at the following number: +44 ( 0 ) 2380 98703 0

Technical specifications

**Oscilloscopes**

- **Input AC, DC / Protection 1,000 V (peak-peak)**
- **Input impedance** 10 MΩ
- **Accuracy ±5.0 % vertical / ±0.1 % horizontal**  
- **Read. vert. / horizont. 20 mV/div ... 500 V/div; 100 ns ... 5 s/div**
- **DC Voltage 400 mV / 400 / 40 / 4 / 400 / 4 / 1,000 V; ±0.8 % +8 dgt**
- **AC Voltage 4 / 40 / 400 / 4000 V; ±1 % +15 dgt**
- **DC Current 400 / 4,000 / 400 / 40 / 400 mA / 4 / 10 A; ±1 % +8 dgt**
- **AC Current 400 / 4,000 / 400 / 400 mA / 4 / 10 A; ±1.5 % +8 dgt**
- **Resistance 0.4 / 4 / 40 / 400 / 4000 kΩ / 4 / 40 / 400 MΩ / ±1 % +5 dgt**
- **Capacity 40 / 400 / 40 / 400 / 1000 µF / ±3 % +8 dgt**
- **Frequency 5.12 Hz ... 5.12 MHz**
- **Duty cycle 0.1 ... 99.9 % / Meas. range 2.5 times/s**
- **Oscilloscope Anal. band width 10 MHz**
- **RT Sample rate 50 MS/s**
- **Resolution 8 Bits (vertical)**
- **No linearity ±1 Bit**
- **Range selection 0.20 µs / div ... 20 s / div (dep. on time)**
- **Delivery content** Oscilloscope-multimeter, software incl. USB data cable, test cables kit, bag, AC adapter/charger, batteries, instructions manual

<table>
<thead>
<tr>
<th>Reference</th>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-PCE-OC 2</td>
<td>Oscilloscope-multimeter</td>
<td>€195.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional accessories</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-CAL-DMM ISO Calibration certificate</td>
<td>€92.00</td>
</tr>
</tbody>
</table>

**Multimeters**

- **DCV 400.0 mV / 4.000 / 40.00 / 400.0 / 4000 V**
- **ACV 400.0 mV / 4.000 / 40.00 / 400.0 / 750 V**
- **DCA 40.00 / 400.0 mA / 4000 / 20.00 A**
- **ACA 40.00 / 400.0 mA / 4000 / 20.00 A**
- **Resistance 400.0 Ω / 4.000 / 40.00 / 400.0 / 4000 kΩ / 4.000 / 40.00 MΩ**
- **Capacitance 51.20 / 512.0 / 5120 / 51.20 / 100,000 µF**
- **Frequency 5.12 Hz ... 5.12 MHz**
- **Duty cycle 0.1 ... 99.9 % / Meas. range 2.5 times/s**
- **Oscilloscope Anal. band width 10 MHz**
- **RT Sample rate 50 MS/s**
- **Resolution 8 Bits (vertical)**
- **No linearity ±1 Bit**
- **Range selection 0.20 µs / div ... 20 s / div (dep. on time)**
- **Accuracy ± (5 % +0.1 div.) vertical / ± (0.01 % +0.1 div.) horizontal**
- **Delivery content** Oscilloscope-multimeter, software incl. USB data cable, test cables kit, bag, AC adapter/charger, batteries, instructions manual

<table>
<thead>
<tr>
<th>Reference</th>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-PCE-DMM 81C</td>
<td>Oscilloscope-multimeter</td>
<td>€198.00</td>
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</table>

<table>
<thead>
<tr>
<th>Optional accessories</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-CAL-DMM ISO Calibration certificate</td>
<td>€92.00</td>
</tr>
</tbody>
</table>

**Delivery content** Oscilloscope, software, USB cable, test cables, bag, mains adapt., instructions manual
Oscilloscopes

**Oscilloscope up to 60 MHz with multimeter & function generator**

PCE-DSO8060

- **2 Channels**
  - Bandwidth: 60 MHz
  - Resolution: 100 / 100 / 10 / 10 / 10 mA
  - Input impedance: 10 MΩ

- **Multimeters**
  - Resolution: 10 / 100 pF / 1 / 10 / 100 nF
  - Measurement range: 40 / 400 nF / 4 / 40 / 400 µF

- **Function Generator**
  - Input impedance: 10 MΩ
  - Input current max.: 10 A AC, 10 A DC
  - Input voltage max.: 600 V AC, 800 V DC
  - Resolution max.: 6.000 digits
  - Continuity test: < 30 Ω
  - Diode test: 0 ... 2 V

- **Input voltage**
  - 300 V (DC / AC peak)

- **Triggering**
  - Trigger linking: AC, DC, GND
  - Trigger form: Auto, Normal, Individual
  - Trigger source: CH1, CH2, EXT

- **Sampling rate**
  - 500 MS/s (Meas. 2 channels)
  - 1 GS/s (Meas. 1 channel)

- **Input voltage**
  - DC-Current: 60 / 600 mA / 6 / 10 A
  - DC-Voltage: 60 / 600 mV / 6 / 800 / 600 V

- **Memory depth**
  - 4 KSamples

- **Output channels**
  - One channel

- **Vertical resolution**
  - 12 Bit

- **Operation**
  - Stability: < 30 ppm
  - Amplitude: ±3.5 V max.
  - Output impedance: 50 Ω

- **Screen**
  - 5.7″ LC (240 x 230 px)

- **Power**
  - Integrated Li-Ion battery or Mini-USB (Oscilloscope <-> PC)

- **Dimensions**
  - 245 x 163 x 52 mm

- **Weight**
  - 1,200 g

- **Delivery content**
  - Oscilloscope, probe, laboratory test leads, softc., BNC cable, network lead, Li-Ion batt., instructions

**Technical specifications**

- **Reference Item**
  - K-PCE-DSO8060 Oscilloscope 849.00

**Optional accessories**

- **Reference Item**
  - K-PCE-DSO8060 Calibration certificate 230.00

- **Output: 8.5 V / 1,500 mA
- Input: 100 ... 240 V AC; 50 / 60 Hz
- Power: 50 VA max.
- Power dissipation: 5 W
- Weight: 2.3 kg
- Dimensions: 305 x 133 x 154 mm
- Resolution: 480 x 234 pixels
- Colour depth: 64,000 colours
- Screen: TFT 7” colour

**Standard CAT II, 400 V, up to 1 GS/s frequency exploration in real time; max. sensitivity: 10 ns**

**Mathematical functions: summate, subtract, multiply, divide, FFT, analysis, interpolation: sin(x) / x**

**Auto-measuring function: Maximum sensitivity: 10 ns**

**Up to 1 GS/s sampling rate in real time**

**7” widescreen TFT display**

**Bandwidth: 50 MHz**

**Up to 12 menu languages**

**Oscilloscopes**
PCE-DSCO5xxx Series

Oscilloscope with 200 MHz memory, large 7" display & 2 input channels

- Up to 200 MHz / 2 input channels / Adjustable trigger / Auto set function
- USB connection
- Large 7" display
- Many automatic measuring functions
- Single shot

Technical specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PCE-DSCO5062</th>
<th>PCE-DSCO5102B</th>
<th>PCE-DSCO5202B</th>
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<td>200 MHz</td>
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<tr>
<td>Sample rate</td>
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<td>Inputs</td>
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<tr>
<td>Input impedance</td>
<td>AC, DC, GND</td>
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<tr>
<td>Input capacitance</td>
<td>1 μF, 0,1 μF</td>
<td>20 pF, ±3 pF</td>
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<td>Inputs max. V</td>
<td>300 V (DC + AC), CAT I, CAT II</td>
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</tr>
<tr>
<td>Memory power</td>
<td>30 W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>313 x 142 x 108 mm (L x B x H)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>2.08 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General data for memory oscilloscope</td>
<td>TFT 7&quot; colour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>800 x 480 pixels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channels</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower frequency limit</td>
<td>≤ 10 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical functions</td>
<td>Summate, subtract, multiply, divide, FFT- analysis, interpolation: sin(x)/x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horizontal part</td>
<td>1 MSamples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trigger</td>
<td>1 GS/ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trigger signal</td>
<td>Edge, pulse width, video, eligible setting or trigger position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trigger source</td>
<td>CH1, CH2, EXT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trigger form</td>
<td>Auto, Normal, Individual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trigger coupling</td>
<td>AC, DC, LF, HF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Delivery content

2 Channel oscilloscope with memory, probes, power cable, instructions

Reference Item €
K-PCE-DSCO5062B Oscilloscope, 60 MHz 285,00
K-PCE-DSCO5102B Oscilloscope, 100 MHz 410,00
K-PCE-DSCO5202B Oscilloscope, 200 MHz 500,00

Optional accessories €
K-CAL-PCE-UTO ISO Calibration certificate 150,00

PCE-SDG10xx Series

Function generator with 2 outputs

- Up to 50 MHz / various modulation types
- 5 signal types / Arbitrary function
- Screen 3.5" LCD / Resolution 320 x 240 pixels
- 3 channels / USB Interface

Technical specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PCE-SDG1010</th>
<th>PCE-SDG1025</th>
<th>PCE-SDG1050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>10 MHz</td>
<td>25 MHz</td>
<td>50 MHz</td>
</tr>
<tr>
<td>Resolution</td>
<td>125 MSamples / s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical resolution</td>
<td>14 Bits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency counter</td>
<td>100 mHz ... 200 MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output channel 1</td>
<td>2 mVpp ... 10 Vpp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output channel 2</td>
<td>2 mVpp ... 6 Vpp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical accuracy</td>
<td>±(0.3 dB + 1 mV) of the value adjusted in 100 kHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>3 W</td>
<td>5 W</td>
<td>7 W</td>
</tr>
<tr>
<td>For memory</td>
<td>30 W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oper. conditions</td>
<td>0 °C ±40 °C / 90 % r.H.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>229 x 105 x 281 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>2.6 kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Delivery content

Function generator, electric cable, Cable USB, software, instructions manual.

Reference Item €
K-PCE-SDG1010 Function generator 310,00
K-PCE-SDG1025 Function generator 400,00
K-PCE-SDG1050 Function generator 560,00

Optional accessories €
K-MKS-1 BNC/4 mm, 1 m cable 6,50
K-CAL ISO Calibration certificate 6,50
The PCE catalogue offers VDE testers according to VDE 0701 / 0702 and 0751 regulations. VDE testers are used for repeated safety checks on mobile devices.

At PCE Instruments, VDE testing devices verify (depending on the model), grounding conductor resistance, insulation resistance, the absence of voltage, and leakage current, for example, the patient leakage current in the field of medicine. Such testing ensures that electrical devices can continue to be used safely.

Our VDE testers not only comply with the DIN guidelines, but also the standards ÖVE and BGV A3, etc. In order to document the measurement values, the VDE testers are equipped with a memory or integrated printer. Using the documentation software measurement, results can be transferred to a database.

**VDE testing devices**

**PKT-2775**

VDE testing device as per 0701/0702

- Standards TUV/ VDE: IEC-1010-1, VDE 0701 / 0702
- Fast PLL-controlled LCD-display
- Mass. cable calibrated in R-PE range
- Standard: TUV/ VDE
- Includes software package
- Power 230 VAC / 50 Hz

**Technical specifications**

<table>
<thead>
<tr>
<th>Prot. line Resis. Range</th>
<th>R-PE</th>
<th>20 Ω</th>
<th>Method: UO ~ 20 VAC, IK &gt; 200 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prot. line Limit value</td>
<td>0.10 / 0.30 / 1.00 Ω</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Delivery content**

- VDE tester, set of tester cables with tip, cable, crocodile clips, instructions manual

**Optional accessories**

- K-PKT-2775 VDE tester incl. software/cable: 585.00 €
- K-PKT-2755 VDE tester incl. software/cable: 928.00 €

**Secutest Series**

**PKT-2765**

VDE tester as per 0701/0702/0751

- Standards TUV/ VDE: IEC-1010-1, VDE 0701 / 0702 / 0751
- Fast PLL-controlled LCD-display
- Mass. cable calibrated in R-PE range
- Standard: TUV/ VDE
- Includes software package
- Power 230 VAC / 50 Hz

**Technical specifications**

<table>
<thead>
<tr>
<th>Prot. line Resistance Range</th>
<th>R-PE</th>
<th>20 Ω</th>
<th>Method: UO ~ 20 VAC, IK &gt; 200 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prot. line Limit value</td>
<td>0.10 / 0.30 / 1.00 Ω</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Delivery content**

- VDE tester, set of tester cables with tip, cable, crocodile clips, power cable, USB cable, calibration certificate, instructions manual

**Optional accessories**

- K-PKT-2765 VDE tester Base: 1.875.00 €
- K-M7050-V001 VDE tester Base 10: 2.075.00 €
- K-M7050-V002 VDE tester XTRA: 1.875.00 €

**Technical specifications**

- Insulation resist.: 1 Ω / 10 Ω / 100 Ω
- Leakage current: 0 μA / 10 μA / 100 μA
- Interface: 1x USB slave device for computer, 2x USB master device for keypad, 2x USB master device for keypad, barcode reader, mem. USB & printer
- Memory approx. 50,000 sets of data
- Screen: 4.3" (9.7 x 5.5 cm) with backlight, 480 x 272 pixels
- Oper. cond: -5 ... +40 °C, max. 75 % r.H.
- Power: 100 ... 240 V AC, Freq. 50 ... 400 Hz
- Dimensions: 295 x 145 x 150 mm
- Weight: approx. 2.5 kg

**Delivery content**

- VDE Tester (depending on the model), crocodile clips, probe, power cable, USB cable, calibration certificate, instructions manual

**Optional accessories**

- K-CAL-VDE-Secu ISO Calibration certificate: 230.00 €
## Safetytest 1L & 1N

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VDE testing devices</strong></td>
<td>as per VDE 0701/0702 with internal memory for 16,000 values &amp; alphanumeric buttons</td>
</tr>
<tr>
<td>1. Safetytest 1L: Testing done using 2 sockets &amp; commutator</td>
<td></td>
</tr>
<tr>
<td>2. Safetytest 1N: Testing done using a socket and no commutator</td>
<td></td>
</tr>
<tr>
<td>3. Active SKI / passive (with or without network connection)</td>
<td></td>
</tr>
<tr>
<td>4. SKII, fixed connection, extension line, single measurement</td>
<td></td>
</tr>
<tr>
<td>5. Device with fixed connection using a clamp ammeter</td>
<td></td>
</tr>
</tbody>
</table>

### Technical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leakage current</td>
<td>I-ABL 4 mA</td>
<td>Method Direct</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>I-ISO 30 mA</td>
<td>Method UN 500 VDC, 1,000 VDC, IK = 1.5 mA</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>I-Diff 40 mA</td>
<td>Method Filter</td>
</tr>
<tr>
<td>Voltage</td>
<td>0.0 ... 260.0 V</td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>0.00 ... 20.00 A</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>From 0 ... 4,000 W</td>
<td></td>
</tr>
<tr>
<td>Operation current I-ABL</td>
<td>0.00 ... 4,000 mA</td>
<td></td>
</tr>
<tr>
<td>Operation current I-ABL 0.4 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation current I-ISO 0.4 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation current I-ISO 20 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation current I-ISO 40 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation current I-Diff 0.4 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation current I-Diff 20 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation current I-Diff 40 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>230 V / 50 Hz</td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>RS-232, USB</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>16,000 measurement protocols for max. 32 clients</td>
<td></td>
</tr>
<tr>
<td>Functions</td>
<td>Real time clock</td>
<td></td>
</tr>
<tr>
<td>Screen</td>
<td>LED</td>
<td></td>
</tr>
<tr>
<td>Barcode reader</td>
<td>Direct (optional)</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>230 VAC / 50 Hz</td>
<td></td>
</tr>
<tr>
<td>Connection</td>
<td>16A Schuko</td>
<td></td>
</tr>
<tr>
<td>Oper. conditions</td>
<td>0 ... +40 °C</td>
<td></td>
</tr>
<tr>
<td>Dimens. / Weight</td>
<td>300 x 195 x 100 mm / 50 g</td>
<td></td>
</tr>
</tbody>
</table>

### Delivery Content

- VDE tester, tester cable, software, instructions manual on CD
- VDE tester, tester cable, software, instructions manual on CD

## Safetytest 3S

<table>
<thead>
<tr>
<th>Tester as per BGV A3, for 3 phase &amp; single phase test objects</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Device tester with termination using a clamp ammeter.</td>
<td></td>
</tr>
<tr>
<td>2. Network connection tester / Good/Bad evaluation /</td>
<td></td>
</tr>
<tr>
<td>3. Device tester with termination using a clamp ammeter.</td>
<td></td>
</tr>
<tr>
<td>4. SKII, fixed connection, extension line, single measurement</td>
<td></td>
</tr>
</tbody>
</table>

### Technical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric supply</td>
<td>Rotary current with neutral line or alternating current</td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>0.0 ... 260.0 V</td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>0.00 ... 4,000 mA</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>230 V / 50 Hz</td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>RS-232, USB</td>
<td></td>
</tr>
<tr>
<td>Memory, clock</td>
<td>8,000 measuring protocols for max. 32 customers</td>
<td></td>
</tr>
<tr>
<td>Dimens. / Weight</td>
<td>380 x 300 x 220 mm / approx. 7 kg</td>
<td></td>
</tr>
</tbody>
</table>

### Optional accessories

- K-6733040 Clamp meas. current leakage, 40 mm, up to 40 A
- K-ST-BCS Barcode reader 325.00
- K-ST-BP Barcode printer 325.00
- K-ST-CC Inspection clamp, 4mm, black 15.00
- K-ST-BR Brush sensor 4mm black for effective protect line meas. 47.00
- K-ST-DEE32A Connection cable CEE 32A - 16A Schuko 67.00
- K-ST-DEE32A Connection cable for 32A sockets CEE 32A 67.00
- K-ST-DEE32A Connection cable for 32A sockets CEE 32A 67.00
- K-ST-ECU Inspection clamp, 4mm, black 15.00
- K-ST-EDJ Clamp max. current leakage, 40 mm, up to 40 A 380.00
- K-ST-EDJ Clamp max. current leakage, 40 mm, up to 40 A 380.00
- K-ST-EDJ Clamp max. current leakage, 40 mm, up to 40 A 380.00
- K-ST-BR Barcode reader 325.00
- K-ST-BCS Barcode reader 325.00
- K-ST-BP Barcode printer 325.00
- K-ST-CC Inspection clamp, 4mm, black 15.00
- K-ST-DEE32A Connection cable CEE 32A - 16A Schuko 67.00
- K-ST-DEE32A Connection cable for 32A sockets CEE 32A 67.00
- K-ST-DEE32A Connection cable for 32A sockets CEE 32A 67.00

### Inspection procedures

- Regulation: DIN VDE 0701/0702, SKI active / passive (with or without network connection), SKII, termination, protection line, single measurement
- Memory, clock 8,000 measuring protocols for max. 32 customers
- Dimens. / Weight 380 x 300 x 220 mm / approx. 7 kg

### Reference

- K-Safetytest 3S VDE Tester as per BGV A3 2,665.00
- K-Safetytest 3S VDE Tester as per BGV A3 2,665.00
- K-Safetytest 3S VDE Tester as per BGV A3 2,665.00
- K-Safetytest 3S VDE Tester as per BGV A3 2,665.00
- K-Safetytest 3S VDE Tester as per BGV A3 2,665.00
- K-Safetytest 3S VDE Tester as per BGV A3 2,665.00
- K-Safetytest 3S VDE Tester as per BGV A3 2,665.00
A FI Tester determines the current of the trigger and the trigger time of fuse protection switches. All home facilities have faulty current protection devices, known as fuses. The power supply is interrupted immediately to produce a current failure. FI Testers pass a leakage current and can determine when the protection switch triggers and the time lapse for that reaction to occur. These two parameters, the trigger current and the trigger time, are the relevant security values for a fuse indicator switch. With a FI tester, voltage and frequency measurements can be made on-site. The management of the tester is very simple. The main task of a FI Tester is the verification of FI protection switches (standard, selective, type A and AC), and the measurement of current or current failure, with a current clamp convertor. FI Testers with a Schuko plug can demonstrate if all socket lines work, and that they are properly connected.

Alarm and memory functions are useful features when using the FI fuse protection tester. Please contact our support team if you have any questions on these devices.

### Technical specifications

**RCD Types**
- Normal or selective RCDs
- Supported networks: TT neutral & TN system
- Voltage range: 210 ... 240 V (neutral phase), 50/60 Hz
- Current control: 10 mA
- Alarms: Input volt. too high, lack of grounded, and ground potential > 50 V
- Screen: LCD display 3 digits, backlight (blue / red)
- Oper. conditions: -15 ... +45 °C
- Power: 4 x 1.5 V AA
- Standard: EN 61010-1: CAT III 600 V
- Dimensions: 71 x 210 x 51 mm
- Weight: 340 g
- Protoc. class: IP 40

**Delivery content**
- Tester FI / RCD, bag, instructions manual

**Reference**
- K-PCE-RCD 1 Tester FI / RCD
- Price: €83.00

### DT-6650

**Multi-functional installation analyser (CAT III 600 V)**
- Insulation resistance tester up to 1,000 V test voltage
- Dual TFT LCD screen 3.5" dual (320 x 240 pixels)
- Loop impedance L-N, L-PE & N-PE
- Earthing resistance / Voltage measurement / Frequency meas.
- Adjustable control current, good/bad evaluation, FI tester
- Type of signal for test current: Sinus (AC), Puls (DC)
- 50 variat. & Bluetooth
- Protoc. class IP 65

**Technical specifications**

**Insulation test**
- Clamp current: 125 V / 250 V / 500 V / 1,000 V (0 ... 10 %)
- Measurement range: 0.125 ... 4 / 4.001 ... 40 / 40.01 ... 400 / 400.1 ... 1,000 MΩ

**Low impend. meas.**
- Meas. range / Resol. 0 ... 2,000 Ω / 0.001 / 0.01 / 0.1 Ω (in differing meas. ranges)
- Off load voltage: max. 5.8 V (Overload protec.: 250 Vrms)

**Loop resistance**
- L-PE
- L-N
- Meas. range / Accuracy 0.23 ... 999 Ω / ±4 % +4 digit
- 0.23 ... 999 Ω / ±5 % +6 digit
- 0.23 ... 99 Ω / ±4 % +4 digit

**RCD Test**
- RCD (In) 10 / 30 / 100 / 300 / 650 mA / 1 A in multipliers x½; x1; x2; x5
- Tripping characteristic G & S (Tripping point: 0° or 180°)

**Earth resistance / Voltage measurement / Frequency meas.**
- Meas. range / Accuracy 0.00 ... 2,000 Ω / approx. ±2 %
- Power: 3 x batteries AA 1.5 V

**Delivery content**
- Installation analyser, carrying bag, crocodile clips, measurement cables, HV sensor tip, meas. adapters for Shuko, charger with various replaceable plug types C, A, G & I, charger connection, batteries, hard case, instructions

**Reference**
- K-DT-6650 Installation Analyzer
- Price: €520.00

**Optional accessories**
- K-CAL-DT-6650 Manufacturer's Calibration certificate
- Price: €215.00
Calibrators regenerate electrical signals. Using the MSR technique, they adjust and check measurement and control applications.

Calibrators have different magnitudes that should be attributed to normal measurement signals. These measurement signals or regulated magnitudes are denominated as the test signal, which our calibrators can provide. They are defined as 0 to 20mA, 4 to 20mA, 0 to 10V and 0.2 to 1 bar. These magnitudes signify for example temperature, output or settings of a test valve (0 to 100% of valve opening). As these correlations are very important for an accurate test and the transmission of process signals, all measurement instruments and regulations should be calibrated previously with a calibrator. Existing regulations are checked at regular intervals and if necessary are re-calibrated with process calibrators.

Our high quality calibrators using the MSR technique, supply experts and quality control technicians, the standards required for measuring instruments.

### PCE-123

**Simulation regulation signals**
- Can calibrate almost any unit parameter, & meas. dev.
- Temperature: Sensors K, J, E, T (°C & °F)
- Output signal: 4...20 mA / 0...10 mV / 0...1 V / 0...12 V
- Frequency range: 1...62,500 Hz

**Technical specifications**
- Sensor type: Type K, J, E, T
- Ranges: -200...0 °C & 0...+1370 °C; 4...20 mA / 0...20 mA / 0...24 mA; 0...100 mV / ...10,000 V / ...1,0000 V; 1...125 Hz & 126...62,5 kHz
- Resolution: 1 °C; 1 µA; 10 µV / 1 mV / 1,0000 V; 1 Hz / from 126 Hz 604 predet. frequencies
- Accuracy: ±0.025 % ±3 µA; ±0.05 % ±30 µV / ±300 µV ±1.1 °C (as per sensor)
- Screen: LCD display
- Power: 1 x 9 V or 6 x 1.5 V batt pack
- Oper. condit.: 0 ... +50 °C, < 85 % r.H.
- Dimensions: 88 x 168 x 26 mm
- Weight: 330 g

**Delivery content**
- Calibrator, carrying case, type-k adaptor, pack of batteries, cables with crocodile clips, instructions

**Reference Item**
- K-PCE-123 Process calibrator €325.00
- K-CAL-PCE-123 ISO Calibration certificate €155.00

**Optional accessories**
- €

### PCE-789

**Multifunctional calibrator / Simulator**
- Simulates and measures current, voltage, frequency, temperature (type: K, J, E, T, R, S, N, L, U, B, C)
- Integrated function generator
- Graphic screen with backlight
- Data logging function / battery powered
- Own waveform generator

**Technical specifications**
- **Simulate / Generate**
  - Current: (no charge voltage > 15 V)
  - Range: -4...24 mA
  - Resolution: 1 µA
  - Accuracy: ±0.03 % +5 dgt
- Voltage: (max. 1 mA)
  - Range: -3...15 V
  - Resolution: 1 mV
  - Accuracy: ±0.1 % +5 dgt
- Thermocouples
  - Range: According to type
  - Resolution: 0.1 °C
  - Accuracy: According to type
- **Measurement**
  - Range: 0.3...20,000 Hz
  - Accuracy: 0.002 ... 2 Hz
- Frequency
  - Range: 0.1 Hz
  - Accuracy: ±1 % +5 dgt
- Current
  - Range: -4...24 mA
  - Resolution: 1 µA
  - Accuracy: ±0.1 % +5 dgt
- Voltage
  - Range: -3...15 V

**Delivery content**
- Multifunctional calibrator, type-k adaptor, 2 x test cable, 2 x crocodile clips, 2 x meas. sensors, software, USB cable, mains adaptor, carrying case, instructions

**Reference Item**
- K-PCE-789 Multifunctional calibrator €587.00
- K-CAL-PCE-789 ISO Calibration certificate €165.00

**Optional accessories**
- €
LCR meters are used to determine specific details of electrical magnitudes. With the LCR meters you will be able to obtain accurate inductance, capacitance and resistance values. LCR meters are the most suitable tool for fast, precise testing of alternating current resistance, phase angles or components, and our appliances comply with all the IEC1010-1 and CAT II safety requirements.

Every LCR unit can also simultaneously be used as a multimeter. The standard equipment has diverse components, however special additional components can be purchased depending on model, as such as four poles test clips, infrared software, testing heads, etc. LCR meters are mainly used in the manufacturing and production sectors, but they are also used for practical demonstrations and courses in universities.

All our LCR meters offer a high degree of measurement accuracy, are calibrated and can be provided with ISO certificates.

### Technical Specifications

**PCE-LCR 1**
- **Measures induct., capacity, resist.**
- **Protoc. class:** IP 67 / 11,000 counts
- **Automatic range selection (m & C)**
- **Automatic off / backlight**
- **L-, C-, R-, diode and continuity test**
- **Standard EN61010-1**

**PCE-LC 1**
- **LC meter for induct. / condensors**
- **Sampling rate 0 - 5 / Automatic turn-off**
- **Female connector / Zero adjustment**
- **Large screen**
- **4 mm banana connectors on LC meter**
- **Wide measuring range**

**PCE-UT603**
- **LC meter with compact case**
- **Large LCD screen**
- **Wide measuring range**
- **Diode test / Continuity test / Transistor test**
- **Battery life indicator**
- **Optional ISO Calibration**

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**LCR meters**

**www.pce-instruments.com/english**

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**PCE-UT603**

- **Technical specifications**
  - **Measurement range**
    - **Inductance:** 2 / 20 / 200 mH; 2 / 20 H
    - **Capacity:** 2 / 20 / 200 nF; 2 / 20 / 200 / 600 µF
    - **Resistance:** 200 Ω; 2 / 20 / 200 kΩ; 2 / 20 MΩ
  - **Resolution**
    - **Inductance:** 1 / 10 / 100 µH; 1 / 10 mH
    - **Capacity:** 1 / 10 / 100 pF; 0.001 / 0.01 / 0.1 / 1 µF
    - **Resistance:** 0.1 / 1 / 10 GΩ; 1 / 10 KΩ
  - **Meas. range:** 0.5 s
  - **Sampl. rate**
    - **Inductance, Capac.: 100 Hz / 1 kHz**
    - **Res.: 100 Hz / 1 kHz**
  - **Screen**
    - **1,999 digits LCD display**
  - **Power**
    - **9 V battery block**
  - **Dimensions**
    - **185 x 92 x 35 mm**
  - **Weight**
    - **250 g**
  - **Reference Item €**
    - K-PCE-UT603: 39.00
  - **Optional accessories €**
    - K-CAL-LCR ISO Calibration certificate: 169.00

---

**PCE-LCR 1**

- **Technical specifications**
  - **Meas. range**
    - **2 mF / 20 mF / 200 mF / 2 µF**
  - **Resolution**
    - **1 / 10 / 100 pF; 1 / 10 µF**
  - **Accuracy**
    - ± (5.0 % + 5) within 20 µF
    - ± (2.0 % + 5) at 2 mH ... 2 H
  - **Screen**
    - **1,999 digits LCD display**
  - **Oper. condit.**
    - **0 ... +50 °C / < 70 % r.H.**
  - **Power**
    - **9 V battery block**
  - **Dimensions**
    - **185 x 92 x 35 mm**
  - **Weight**
    - **250 g**
  - **Reference Item €**
    - K-PCE-LCR 1: 24.95
  - **Optional accessories €**
    - K-CAL-LCR ISO Calibration certificate: 169.00

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**PCE-LC 1**

- **Technical specifications**
  - **Meas. range**
    - **2 mF / 20 mF / 200 mF / 2 µF**
  - **Resolution**
    - **1 / 10 / 100 pF; 1 / 10 µF**
  - **Accuracy**
    - ± (5.0 % + 5) within 20 µF
    - ± (2.0 % + 5) at 2 mH ... 2 H
  - **Screen**
    - **1,999 digits LCD display**
  - **Power**
    - **9 V battery block**
  - **Dimensions**
    - **185 x 92 x 35 mm**
  - **Weight**
    - **250 g**
  - **Reference Item €**
    - K-PCE-LC 1: 24.95
  - **Optional accessories €**
    - K-CAL-LCR ISO Calibration certificate: 169.00

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**K-PCE-UT603**

- **Reference Item €**
  - K-PCE-UT603: 39.00
  - K-PCE-LCR 1: 24.95
  - K-PCE-LC 1: 24.95
  - K-CAL-LCR ISO Calibration certificate: 169.00
Endoscopes offer new perspectives to viewing the insides of machines and are the ideal tool for care and maintenance. Thanks to their flexible fibre optic cables and light weight enclosure, these extraordinary endoscopes are the ideal tool for preventative measures to be taken without the need to dismantle the machinery first. With the help of endoscopes, inspections in industrial sector can therefore be organized considerably faster, and more cost-efficiently. Endoscopes are used mainly by electricians, security personnel, specialists in the professional sector, and mechanics of all types. Endoscopes are exceptional tools in places such as schools or universities, especially in practical applications, for demonstrating the internal systems of a larger system or device. Originally, endoscopes were developed for medical diagnostics, today also are used in industry to make visual checks of difficult-to-access spaces. Our technicians and engineers will be pleased to be able to advise you on all our products.

### PCE-DE 25

**Endoscope with 9.8 mm diameter**

- Semi-flexible cable / 1,000 mm length
- Single-hand operation / Adjustable endoscope
- LCD monitor / TFT 2.4” with 320 x 240 pixels

**Technical specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable length</td>
<td>1,000 mm</td>
</tr>
<tr>
<td>Lens</td>
<td>Ø 9.8 mm</td>
</tr>
<tr>
<td>Cable</td>
<td>Ø 7 mm</td>
</tr>
<tr>
<td>Type of cable</td>
<td>Semi-flexible</td>
</tr>
<tr>
<td>Radius bend</td>
<td>54”</td>
</tr>
<tr>
<td>Resolution</td>
<td>640 x 480 pixels</td>
</tr>
<tr>
<td>Object lens</td>
<td>1 x 2.8 view angle: 54°...60°</td>
</tr>
<tr>
<td>Angle of vision</td>
<td>20 fps (iPhone, iPad), 30 fps (Windows)</td>
</tr>
<tr>
<td>Light exposure</td>
<td>Automatic</td>
</tr>
<tr>
<td>Screen</td>
<td>CMOS Monitor TFT 2.4”</td>
</tr>
<tr>
<td>Camera</td>
<td>CMOS Optic sensor</td>
</tr>
<tr>
<td>Brightness</td>
<td>Adjustable using dial</td>
</tr>
<tr>
<td>Power</td>
<td>4.5 V batteries AA</td>
</tr>
<tr>
<td>Weight</td>
<td>560 g</td>
</tr>
</tbody>
</table>

**Delivery content**

- Endoscope, semi-flexible cables
- Instructions

**Reference Item €**

<table>
<thead>
<tr>
<th>Item</th>
<th>Item</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-PCE-DE 25</td>
<td>Endoscope</td>
<td>49.00</td>
</tr>
</tbody>
</table>

### PCE-DE 30

**WiFi-Endoscope (Ø 8.5 mm / L = 1 m)**

- Wi-Fi function to transfer the measured data to smartphones or tablets
- Can reach 20 m
- Swan-neck, semiflexible & waterproof
- The 4 LED lights make it possible to see in dark areas.

**Technical specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable length</td>
<td>1 m</td>
</tr>
<tr>
<td>Diameter</td>
<td>8.5 mm</td>
</tr>
<tr>
<td>Radius bend</td>
<td>90 mm</td>
</tr>
<tr>
<td>Resolution</td>
<td>640 x 480 pixels</td>
</tr>
<tr>
<td>Object lens</td>
<td>1 x 2.8 view angle: 54°...60°</td>
</tr>
<tr>
<td>Angle of vision</td>
<td>25 fps (iPhone, iPad), 30 fps (Windows)</td>
</tr>
<tr>
<td>Light exposure</td>
<td>Automatic</td>
</tr>
<tr>
<td>Screen</td>
<td>CMOS Sensor VGA CMOS</td>
</tr>
<tr>
<td>Superfl. sensor</td>
<td>10 fps (iphone, iPad, Android, Windows)</td>
</tr>
<tr>
<td>Vision distance</td>
<td>20 ... 150 mm</td>
</tr>
<tr>
<td>Operates with</td>
<td>iPhone, iPad, Android, Windows XP, Vista, 7, 8</td>
</tr>
<tr>
<td>Camara</td>
<td>CMOS Optic sensor</td>
</tr>
<tr>
<td>LED</td>
<td>4, white</td>
</tr>
<tr>
<td>Brightness</td>
<td>Adjustable using dial</td>
</tr>
<tr>
<td>Power</td>
<td>3.7 V Li-ion battery</td>
</tr>
<tr>
<td>Dimensions</td>
<td>230 x 155 x 100 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>500 g</td>
</tr>
</tbody>
</table>

**Delivery content**

- Endoscope Wi-Fi, USB cable, manual tie, video cable, mains adaptor, instructions manual

**Reference Item €**

<table>
<thead>
<tr>
<th>Item</th>
<th>Item</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-PCE-DE 30</td>
<td>Endoscope Wi-Fi, 1 m</td>
<td>98.40</td>
</tr>
</tbody>
</table>

### PCE-RVE 30

**Rigid endoscope with 3.9 mm Ø**

- Video endoscope with 2 LED’s
- Noodle diameter only 3.9 mm
- Rigid end with flexible 3 m long cable
- Casing protection IP 67
- Possible to save images & videos with sound
- Data stored on SD card (not included)

**Technical specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable length</td>
<td>3,000 mm (flexible)</td>
</tr>
<tr>
<td>Resol. Image sens.</td>
<td>320 x 240</td>
</tr>
<tr>
<td>Image resolution</td>
<td>Up to 360°</td>
</tr>
<tr>
<td>Screen</td>
<td>TFT 3.5” display</td>
</tr>
<tr>
<td>Resol. / Screen</td>
<td>640 x 480</td>
</tr>
<tr>
<td>Zoom</td>
<td>5x</td>
</tr>
<tr>
<td>Numeration</td>
<td>1 LEDs, adjustable</td>
</tr>
<tr>
<td>Sharp range</td>
<td>30 ... 80 mm</td>
</tr>
<tr>
<td>Cable diam.</td>
<td>Ø 3.9 mm</td>
</tr>
<tr>
<td>Interface cable</td>
<td>Swan-neck, semi-flexible</td>
</tr>
<tr>
<td>Radius bend</td>
<td>4.5 cm</td>
</tr>
<tr>
<td>Angle of vision</td>
<td>54°</td>
</tr>
<tr>
<td>Light exposure</td>
<td>Automatic</td>
</tr>
<tr>
<td>White balance</td>
<td>Automatic</td>
</tr>
<tr>
<td>Screen</td>
<td>LCD Monitor TFT 2.4”</td>
</tr>
<tr>
<td>Camera</td>
<td>CMOS Sensor VGA CMOS</td>
</tr>
<tr>
<td>Superfl. sensor</td>
<td>10 fps (iphone, iPad, Android, Windows)</td>
</tr>
<tr>
<td>Vision distance</td>
<td>20 ... 150 mm</td>
</tr>
<tr>
<td>Operates with</td>
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<td>CMOS Optic sensor</td>
</tr>
<tr>
<td>LED</td>
<td>4, white</td>
</tr>
<tr>
<td>Brightness</td>
<td>Adjustable using dial</td>
</tr>
<tr>
<td>Power</td>
<td>3.7 V Li-ion battery</td>
</tr>
<tr>
<td>Dimensions</td>
<td>230 x 155 x 100 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>562 g</td>
</tr>
</tbody>
</table>

**Delivery content**

- Endoscope, semi-flexible cables
- Instructions

**Reference Item €**

<table>
<thead>
<tr>
<th>Item</th>
<th>Item</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-PCE-RVE 30</td>
<td>Endoscope</td>
<td>399.00</td>
</tr>
</tbody>
</table>

Endoscopes

www.pce-instruments.com/english

Endoscopes