



















Measurement instruments

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Temperature Meters

PCE-T312

Highly accurate thermometer with two type-K channels

The PCE-T312 handheld digital thermometer has a large LCD and is accurate to within $\pm 0.15\%$. Thanks to the backlit display you can use it under adverse conditions. The instrument has 2 type-K channels and is frequently used to measure temperature before and after carrying out an action or process, i.e. when you turn a machine on or off. Pressing the backlight key will turn on and off the display backlight and the user will be able to see the readings shown for T1 and T2.

- For type-K and type-J thermocouples
- Data Hold function
- Min Hold and Max Hold functions
- Low battery indicator
- Shock-resistant ABS enclosure
- 3 1/2 digit LCD
- Backlight key
- Type K thermocouple and battery included



Technical specifications

Measurement range	-200 to 1372 °C
Resolution	up to 100 °C: 0.1 °C above: ± 1 °C
Accuracy	up to 1000 °C: $\pm 0.15\%$, ± 1 °C above: $\pm 0.5\%$ ± 2 °C
Inputs	2
Display	large LCD
Power	3 x 1.5 V batteries (included)
Operating temperature	0 to +50 °C, below 80 % r.h.
Dimensions	150 x 50 x 35 mm
Weight	200 g



Contents

PCE-T312 thermometer, thermocouple sensors, batteries and user's manual

Model No. Description

PCE-T312 Thermometer with 2 channels

Optional Accessories

CAL-T2 ISO Calibration, 2 channels

See page 3 for temperature sensors.

PCE-T390

Thermometers with memory, RS-232 interface and software

The PCE-T390 handheld thermometer is very accurate and has an internal memory that can store up to 16,000 readings. With the software, which is included and in English, and the RS-232 interface you can transfer data to a PC for further analysis. Time interval measurements can be set by the user. The PCE-T390 can display 4 simultaneous readings and store them automatically to memory.

- Thermometer with 4 channels
- Data Hold and Max Hold indicators
- Average value measurement
- Low battery indicator
- Auto shut-off
- Type-K and type-J thermocouple sensor and Pt100
- Windows compatible software
- Thermocouple sensors up to 220 °C included
- Battery pack included



Technical specifications

Measurement range	type K: -200 to +1370 °C Pt100: -200 to +1562 °C
Resolution	type K: 0.1 °C (-200 to +1000 °C) 1 °C (+1000 to +1370 °C) Pt100: 0.1 °C (-200 to +850 °C) 1 °C (+850 to +1562 °C)
Accuracy	type K: $\pm 0.5\%$ of reading +1 °C Pt100: $\pm 0.4\%$ of reading +1 °C
Thermocouple inputs	4
Sequence measurement	1 to 3599 seconds (adjustable)
Data memory	16,000 values, with four sensors, 4,000 values each one
Display	four times display LCD 52 x 38 mm
Power supply	6 x AAA batteries (1.5 V) or optional external net power adaptor
Operating temperature	0 to +50 °C, < 80 % r.h.
Dimensions	174 x 68 x 42 mm
Weight	310 g

Contents

PCE-T390 thermometer, type-K thermocouple sensor, software, RS-232 cable and user's manual

Model No. Description

PCE-T390 Thermometer with 4 channels

Optional Accessories

NET-300 Net Power Adaptor
RS232-USB USB to RS-232 cable adapter
BOX-LT1 Carrying case
CAL-T4 ISO Calibration, 4 channels

See page 3 for temperature sensors.

PCE-T395

Data logger thermometer with date / clock function, RS-232 interface and software

The PCE-T395 handheld thermometer is accurate and has an internal memory that can store up to 16,000 values with date and time. With the software and the RS-232 interface you can transfer data to a PC for further analysis. Time interval measurements can be set by the user. The PCE-T395 can display 4 simultaneous readings and store them automatically to memory.

- Data logger with date and time function
- Data Hold and Max Hold indicators
- Average value measurement
- Auto power-off
- For type-K thermocouple sensor
- Windows compatible software
- 2 x Thermocouple sensors up to 220 °C included
- Battery and carrying case included



Technical specifications

Measurement range	-200 to 1370 °C
Resolution	0.1 °C (from -200 to 200 °C) 1 °C (from +200 to 1370 °C)
Accuracy	$\pm 0.2\%$ of reading measurement (-200 to 200 °C) +0.5 % (200 to 400 °C) +0.2 % (400 to 1370 °C)
Thermocouple inputs	4
Sequence measurement	3 seconds for 4 sensors
Data logger	16,000 values with date and time, with four sensors, 4,000 values each one
Display	four times display LCD (25 mm) with clock
Power supply	9 V pack or optional external power adaptor
Operating temperature	0 to +50 °C, < 90 % r.h.
Dimensions	184 x 64 x 30 mm
Weight	250 g (battery included)

Contents

PCE-T395 thermometer, 2 x type-K thermocouple sensor, software, RS-232 cable, carrying case and user's manual

Model No. Description

PCE-T395 Data logger thermometer, 4 channels

Optional Accessories

NET-300 Socket for mains power adaptor
RS232-USB USB to RS-232 cable adapter
CAL-T4 ISO Calibration, 4 channels

See page 3 for temperature sensors.

Thermocouples / Temperature sensors type K / Type Pt100

A variety of thermocouples are available, each suitable for different measuring applications. You can choose, from the list below, one or several temperature sensors which are compatible with our thermometers.

Common specifications for all sensors:

- Type-K (NiCr-Ni)
- Type-I according to DIN/ IEC 584 ($\pm 1.5\text{ }^\circ\text{C}$ or $0.004 \times \text{It}$)
- ABS plastic handle (110 mm long, $90\text{ }^\circ\text{C}$ max.)
- Stainless steel sensor tube
- 1000 mm long cable, sometimes spiral form
- Miniature connector



Model No.	Description	Image	T 90	min T max T
TF-110A	Sensor with high surface temperature probe heater with 90° angle, L = 130mm, A = 50mm, \varnothing 8mm		2 s	-200 $^\circ\text{C}$ 900 $^\circ\text{C}$
TF-101	Sensor with high surface temperature and a spring at the end, L = 130mm, \varnothing 3mm		5 s	-200 $^\circ\text{C}$ 450 $^\circ\text{C}$
TF-509	Self-adhesive temperature sensor made of fibreglass 50 x 25 x 2mm		2 s	-10 $^\circ\text{C}$ 250 $^\circ\text{C}$
TF-513	Magnetic sensor heater 5 x 5 x 2mm, insulated wire PTFE		2 s	-50 $^\circ\text{C}$ 200 $^\circ\text{C}$
TF-104A	Fold-away sensor with resistance to high temperature suitable for gases, liquids, furnaces, etc. L = 300mm, \varnothing 3mm		12 s	-200 $^\circ\text{C}$ 1100 $^\circ\text{C}$
TF-106	Probe with pointer for liquids, gum, L = 130mm, \varnothing 3mm		6 s	-200 $^\circ\text{C}$ 600 $^\circ\text{C}$
TF-119	Switch sensor for hard or frozen materials or with external cable L = 130mm, \varnothing 6mm		18 s	-180 $^\circ\text{C}$ 200 $^\circ\text{C}$
TF-108	Operating temperature sensor suitable for gas and air, L = 130mm, \varnothing 6mm		2 s	-50 $^\circ\text{C}$ 600 $^\circ\text{C}$
TF-120	Thermal sensor (made of fibreglass) suitable for air and liquids, L = 1000mm, \varnothing 2 x 1mm		1 s	-50 $^\circ\text{C}$ 480 $^\circ\text{C}$
TF-121	Thermal sensor for high temperatures (with ceramic insulation), for air and liquids, L = 1000mm, \varnothing 2 x 0.8mm		1 s	-50 $^\circ\text{C}$ 1430 $^\circ\text{C}$
TF-520	Thermocouple stem extension for type-K miniature connectors, L = 10m		/	-50 $^\circ\text{C}$ 85 $^\circ\text{C}$
TF-550	Plug adaptor (male)		/	/
TF-551	Plug adaptor (female)		/	/



PCE-T317

High precision thermometer with 1 channel for sensors type PT100

You can connect resistance sensors to the PCE-T317 thermocouple thermometer. The PT100 sensor has a resistance of 100 Ohms at $0.0\text{ }^\circ\text{C}$. The thermometer offers you the possibility to calculate maximum value, minimum value and average value over a measurement period of 9.7 hours. Pressing the "MEM" button allows you to store up to 97 values in the internal memory, so that you can analyse the data at your convenience.

- Accurate to within $\pm 0.05\%$
- Large $3\frac{1}{2}$ digit LCD
- Alarm indicator
- Max, min and average value
- Data Hold function
- Memory for 97 readings (manual storage and recall)
- Backlight
- Selectable units
- Auto shut-off to save battery life
- PT100 Thermocouple for air and liquid included up to $+600\text{ }^\circ\text{C}$, dimensions: \varnothing 3.2mm x 155mm



Technical specifications

Measurement range	-190 to 790 $^\circ\text{C}$ (depending on the sensor)
Resolution	0.1 $^\circ\text{C}$
Accuracy	$\pm 0.05\%$ of reading, $+0.5\text{ }^\circ\text{C}$ (more deviation of the sensor)
Thermocouple inputs	1
Timed measurement interval	every 1.5 second
Internal storage	97 readings (manual)
Auto shut-off	turns off after 30 min to save battery life
Display	display LCD with 3 1/2 pos
Power	6 x AAA batteries (1.5 V) for 55 hours of operation
Operating conditions	0 to 50 $^\circ\text{C}$, $< 80\%$ r.h.
Dimensions	150 x 72 x 35mm
Weight	235 g (including battery)

Contents

Thermometer, PT100 sensor (maximum 600 $^\circ\text{C}$) with cable and pin, 6 batteries and user's manual

Model No.	Description
PCE-T317	Thermometer with 1 channel

Optional Accessories

CAL-T1	ISO Calibration
PT-385	replacement sensor for the PCE-T317



Temperature Meters

PCE-8xx

Infrared thermometers with visible laser for measuring surface temperature without contact

Infrared thermometers are used to measure, without contact, surface temperature up to 1600 °C. The relation of distance to measurement point is an indication of the optic that you use; when the value is higher, the diameter of the measurement point is smaller for the same distance. For example, with the PCE-888, the diameter of the measurement point is 25 cm at a distance of 4m, while, with the PCE-889, the diameter is 8 cm at the same distance. Every surface radiates heat in the form of infrared radiation. To adjust the infrared radiation, of different surfaces, some models allow the for you to regulate the level of emissions.

- Built-in laser pointer to improve aim
- Adjustable emission level
- Auto-power off after 7 seconds
- Distance to spot size: 16:1, laser point Ø 19 mm a 30 cm, 75 mm at 1,2 m and 150 mm at 2,4 m
- Battery and carrying case included
- Small 6 mm point of measurement at a distance of 30 cm
- Optics 50:1
- Measurement range up to +1000 °C
- Data Hold for short-term storage of measurements
- Min./max./average function
- Adjustable alarm value
- Small 6 mm point of measurement at a distance of 30 cm
- Optics 50 :1
- Measurement range up to +1600 °C
- Set high and low alarms
- Data Hold for short-term storage of measurements.
- Min./max./average function



Technical specifications

Model	PCE-888	PCE-889	PCE-890
Measurement range	-50 to +550 °C	-50 to +1000 °C	-50 to +1600 °C
Resolution	0.1 °C at 200 °C, or 1 °C	0.1 °C	0.1 °C
Reproducibility	0.5 °C	0.5 °C	0.5 °C
Accuracy	-50 to -20 °C: ±5 °C -20 to +550 °C: ±1,5 % ±2 °C	50 to -20 °C: ±5 °C -20 to +200 °C: ±1.5 % ±2 °C +200 to +538 °C: ±2.0 % ±2 °C > +538 °C: ±2.5 % ±5 °C	-50 to -20 °C: ±5 °C -20 to +200 °C: ±1.5 % ±2 °C +200 to +538 °C: ±2.0 % ±2 °C +538 to +1300 °C: ±3.5 % ±5 °C > +1300 °C: ±3.8 % ±5 °C
Spectral range	8 to 14 µm	8 to 14 µm	8 to 14 µm
Response time	< 500 ms	<1 s	<1 s
Distance to size ratio	16 : 1	50 : 1	50 : 1
Emissivity	0.1 to 1.0 adjustable	0.1 to 1.0 adjustable	0.1 to 1.0 adjustable
Laser	Built-in laser pointer	Built-in laser pointer	Built-in laser pointer
Min/max/average function	- - -	yes	yes
Long-term measurements	- - -	yes	yes
Adjustable alarm value	- - -	yes	yes
Backlight display	yes	yes	yes
Operating temperature	0 to +50 °C	0 to +50 °C	0 to +50 °C
Power	battery 9 V pack	1 battery 9 V pack	1 battery 9 V pack
Dimensions	230 x 56 x 100 mm	230 x 56 x 100 mm	230 x 56 x 100 mm
Weight	290 g	290 g	290 g
delivery included	battery, carrying case and user's manual	battery, carrying case and user's manual	mini tripod, carrying case, battery and user's manual

Model No.	Description
PCE-888	Thermometer IR PCE-888, -50 ... +550 °C
PCE-889	Thermometer IR PCE-889, -50 ... +1000 °C
PCE-890	Thermometer IR PCE-890, -50 ... +1600 °C

Optional Accessories

CAL-IR	ISO Calibration for IR thermometer PCE-888 or PCE-889
CAL-IR-2	ISO Calibration for IR thermometer PCE-890

PCE-IR 425

Infrared thermometer with laser pointer and an input for type-K thermoelements

The PCE-IR 425 infrared thermometer comes with a dual laser pointer and an input for type-K temperature sensors. The device has an optical resolution of 50:1 that allows for an accurate temperature measurement of small surface areas without contact. It also allows for upper and lower alarm limits to be set for the highest level of control during a measurement.

- IR thermometer with a type-k input for thermopar NiCr-Ni sensor
- Large display: simultaneously shows average value as well as minimum and maximum limits
- Double laser for accurate targeting of measurement area
- 50:1 optical resolution
- Wide temperature range
 - Infrared: de -60°C to 1000°C
 - Type-K: -64°C to 1370°C
- HOLD, maximum, minimum, differential and average functions
- Adjustable emissivity
- Backlit display
- High and low alarm limits



Technical specifications

Measurement range	IR: -60 to +1000 °C type K: -64 to +1370 °C
Resolucion	0.1 °C above +200 °C; 1.0 °C blow +200 °C
Accuracy	IR: ±2 % of reading or ±2 °C tipo K: ±1% of reading or ±1 °C
Response time	<200 ms
Distance to size ratio	50 : 1
Emissivity	0.10 to 1.00 (adjustable)
Laser	2 visible points
Spectral range	6 to 14 µm
Functions	HOLD, MAX, MIN, DIF, AVG, LOCK HI-LO-ALARM, C/F
Operating conditions	0 to +50 °C / 10 to 90 % r.h.
Power	2 AAA batteries
Dimensions	215 x 145 x 45 mm
Weight	1150 g



Contents

Infrared thermometer, 2 batteries, carrying case and user's manual

Model No.	Description
PCE-IR 425	Infrared thermometer

Optional Accessories

CAL-IR	ISO Calibration (only for infrared sensor, without retractable probe)
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See page 3 for temperature sensors.

PCE-JR 911

Infrared thermometer with printer, memory and RS-232 port

The PCE-JR 911 can measure the temperature of objects without contact and store the readings in its internal memory allowing the data to be transferred to a computer via the RS-232 port. It can also print readings once have been taken, thanks to its built-in printer. The thermometer comes calibrated from the factory.

- Functions:
 - Measurements saved directly to memory
 - Measurements / history / data tables
 - Measurements over a set period of time
- Printer and able to take readings and save them to memory
- RS-232 port
- Internal memory for 1200 readings in 4 series of measurements
- Possible to assign 99 positions per series
- Single beam laser sight for accurate targeting
- Adjustable emissivity
- Date & time function



Technical specifications

Measurement range	-40 to +500 °C
Resolution	0.1 °C < +100 °C; 1 °C > +100 °C
Accuracy	±2 % of reading or ±2 °C (highest value valid)
Response time	<200 ms
Reproducibility	0.5 °C
Distance to size ratio	8 : 1
Emissivity	0.3 to 1.0 (adjustable)
Laser	Built-in laser pointer
Spectral range	8 to 14 µm
Memory	1200 readings (4 x 99 series)
Printer	38 mm thermal printer
Operating conditions	0 to +50 °C / 10 to 90 % r.h. (without condensation)
Power	4 x AA batteries (1.5 V)
Dimensions	208 x 70 x 53 mm
Weight	260 g

Ideal to control receiving material



Contents

Infrared thermometer, 4 batteries, paper roll, software with RS-232 data cable, carrying case and user's manual

Model No.	Description
PCE-JR 911	Infrared thermometer

Optional Accessories

HI 710034	Replacement rolls of paper, 10 pack
NET-300	Net Power Adaptor
STAT	Aluminium tripod
RS232-USB	RS-232 to USB adaptor
CAL-IR	ISO Calibration for thermometer

PCE-IR 1800

High temperature infrared thermometer up to 1800 °C

This infrared thermometer has been specially developed to carry out measurements on metal and steel, although it offers solutions for many high temperature applications up to 1800 °C. Adjustable emissivity provides versatility when measuring a variety of surfaces. The distance to spot size ratio is 120:1 making it possible to target small distant objects.

- Measurement range of 400 °C to 1800 °C
- With sighting scope
- Takes Celsius and Fahrenheit temperature readings
- Distance and spot size ratio 120:1
- Adjustable emissivity (0.10 to 1.00)
- Spectral range 2.1 to 2.4 µm
- Adjustable alarm (high / low)
- Data Hold function



Technical specifications

Measurement range	+400 to +1800 °C
Resolution	1 °C
Accuracy	±1 %
Response time	200 ms
Repeatability	±0.5 %
Ratio	120:1
Emissivity	adjustable between 0.10 to 1.00
Laser	single dot laser system
Spectral range	2.1 to 2.4 µm
Alarm adjustable (Hi / Lo)	yes
Functions	MIN / MAX / AVG / HOLD
Operating conditions	-10 to +50 °C / 10 to 90 % r.h. (without condensation)
Power	2 x 9V battery packs
Weight	600 g



Contents

PCE-IR 1800 Infrared thermometer, carrying case and user's manual

Model No.	Description
PCE-IR 1800	High temperature IR thermometer

Optional Accessories

CAL-IR-2	ISO Calibration for thermometer
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PCE-IR 100 (HACCP)

Food safety infrared and contact thermometer

The PCE-IR 100 thermometer allows control of the surface temperature in a quick and precise way without risk of contamination. It also offers the possibility to determine the internal temperature of food with its retractable probe or with the infrared system.

The different coloured LED's, which are found below the display, allow for clear indication of temperature ranges that are "safe" or "unsafe".

- Infrared and probe temperature measurement
- Food safety measurement according to the HACCP
- Response time
- Temporary hold function for minimum and maximum values
- Timer
- Possibility of ISO Calibration
- Water resistant enclosure



Technical specifications

	Infrared
Measurement range	-40 to +280 °C
Resolution	0.1 °C
Accuracy	-40 °C to 0 °C: ±1 °C + 0.1 °C/°C 0 °C to +65 °C: ±1 °C +65 °C to +280 °C: ±1.5 % of reading
Response time	< 500 ms
Emissivity	0.97
Ratio	3 : 1
	Retractable Probe
Measurement range	-40 to +200 °C
Resolution	0.1 °C
Accuracy	-40 °C to -5 °C: ±1 °C -5 °C to +65 °C: ±0.5 °C +65 °C to +200 °C: ±1 °C or ±1.5 % of reading
Dimensions	167 x 62 x 36 mm
Power	1 battery 9 V pack
Ingress protection	IP65 (water resistant)

Contents

PCE-IR 100 thermometer, battery and user's manual

Model No.	Description
PCE-IR 100	Infrared thermometer

Optional Accessories

CAL-IR	ISO Calibration (only for infrared sensor, Without retractable probe)
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Temperature Meters

PCE-IR10

Thermometer with LCD to measure the temperature of solids by infrared (for fixed installations)

The PCE-IR10 infrared thermometer is made up of a sensor head and a separate electronic component that can be disconnected to accommodate optional sensors with longer cable lengths. Its sensor is so small that it can be installed anywhere yet offers the same benefits as other bigger systems. The electronic component offers signal processing functions that usually other products can't offer, for example, with the LCD controller you can adjust emissivity, choose maximum value, minimum value or calculate average value. You can also program the thermometer using optional PC software. This product can measure the temperature of moving objects without difficulties. Its small dimensions and low cost makes it ideal for multiple installation in a production process.

- Measurement range up to 600 °C
- Sensor head can be installed anywhere
- Analogue output
- USB / RS-232 / RS-485 output relay (optional)
- Adjustable emissivity
- LCD
- Series connection: maximum of 32 sensors
- Power supply: 8 to 36 VDC



Technical specifications

Outputs	analogue: 4 to 20 mA, 0 to 20 mA, 0 to 5 V, 0 to 10 V (in scale), type-K or type-J thermocouple optional: relay, USB, RS-232, RS-485
Inputs	emissivity value, ambient temperature compensation, programmable software
Cable length	1 m (standard, you can order other cable lengths)
Current	max. 100 mA
Power	8 to 36 VDC
Ingress protection	IP65 (NEMA-4)
Operating temperature (head)	-20 to 180 °C
Storage temperature	-40 to 85 °C
Relative humidity	10 to 95 % without condensation
Weight (sensor head)	40 g
(electronic component)	420 g
Measurement range	-40 to 600 °C
Spectral range	8.0 to 14 µm
Optical resolution	15 : 1
Accuracy	±1 % or ±1 °C
Repeatability	±0.5 % or ±0.5 °C
Temperature coefficient	±0.05 °C / °C or ±0.05 % / °C
Temperature resolution	0.1 °C
Response time	150 ms (95 %)
Emissivity	0.100 - 1.100 digital adjustment, reading 0.001
Transmission	0.100 - 1.000 digital adjustment, reading 0.001
Signal processing	maximum value, minimum value and average value

Contents

Thermometer (electronic unit), analogue interface, 1 m cable with sensor head (ratio 15:1) and user's manual

Model No.	Description
PCE-IR10	Thermometer PCE-IR10

Optional Accessories

ACCTFB	Mounting bracket
ACCTMG	Mounting fork adjustable on 2 axis
ACCTAP	Cooling camera for infrared
ACCTUSBK	USB kit with USB interface, cable, software
ACCTRS232K	RS232 kit with interface, cable, software
ACCTRS485K	RS485 kit to connect up to 32 sensors in series
ACCTRS485B	RS485 interface card
ACCTRI	Output relay, two other open relays, 60VDC / 42VAC, 0.4A
CAL-PCE-IR10	ISO calibration certificate

PCE-IC1

Blackbody IR calibrator up to +350 °C for Infrared thermometers

The PCE-IC1 is a portable blackbody calibration source covering the range from +50 to 350 °C with 0.1 °C resolution. Whether you are using an infrared thermometer, you need a high performance calibration standard to verify accuracy. The portable IR calibrator provides a stable blackbody target for calibration non-contact IR thermometers up to 350 °C. The IR calibrator is as easy to use as point and shoot. Simply set the desired temperature from the convenient front panel control buttons, wait a few minutes for equilibrium, then point the IR thermometer at the target. The radiated energy from the blackbody is measured by your IR thermometer. Now simply compare it is reading to the display on the IR calibrator and record the difference.

- Easy to use
- Emitter diameter 58 mm
- Range from +50 °C to +350 °C
- High accuracy
- Compact design



Technical specifications

Temperature range	+50 to +350 °C
Accuracy	±0.5 °C up to 100 °C ±1.0 °C up to 200 °C ±1.5 °C up to 350 °C
Emissivity Blackbody	0.95
Emitter diameter	Ø 58 mm
Heating time	30 min up to 350 °C
Cooling time	30 min from 350 °C below 100 °C
Power	230 V / 50 Hz
Dimensions	180 x 114 x 233 mm
Weight	3000 g



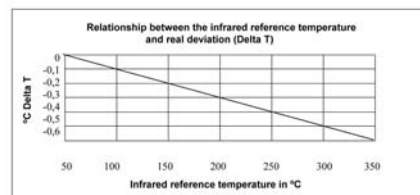
Contents

PCE-IC1 temperature-calibrator, manufacturer certificate and user's manual

Model No.	Description
PCE-IC1	Blackbody-IR-Calibrator

Optional Accessories

CAL-PCE-IC1	ISO calibration certificate
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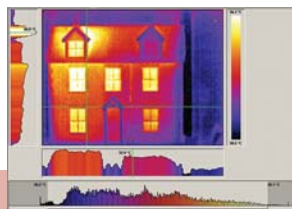
Temperature Meters

PCE-TC 3

Thermal imaging camera with high optical resolution (160 x 120 pixels) / good relation between price and quality

The core element of the thermal imaging camera is an Uncooled Focal Plane Array with a resolution of 160 x 120 pixels. This thermal imaging camera has been ergonomically designed making it easy to use with one hand. Thanks to it weighing only 750 g, it's ideal for the analysis of machines and installations, for construction among many other applications. The PCE-TC 3 thermal imaging camera offers a maximum accuracy of $\pm 2\text{ }^{\circ}\text{C}$ or $\pm 2\%$ in a temperature range of $-10\text{ }^{\circ}\text{C}$ up to $250\text{ }^{\circ}\text{C}$. On the colour display, both cursors can be moved, while on the job, to different points and the corresponding temperature read directly and determine the difference in temperature between both points. With these high range functions, the user can immediately identify irregularities and take pertinent measurements instantaneously. The integrated laser point also allows the user to precisely locate the measurement area while capturing an image or taking a measurement. Images can be stored to an SD memory card and transferred to a computer later. Across the USB port, data can be transferred in real time; in this case the user can select up to 10 measurement points. Included with the thermal imaging camera are an SD memory card reader and software to allow further detailed analysis of data and thermal images, as well as accompanying descriptions.

- Resolution 160 x 120 pixels
- Temperature range: -10 to $250\text{ }^{\circ}\text{C}$
- Accuracy: maximum $\pm 2\text{ }^{\circ}\text{C}$ or $\pm 2\%$ of compensation of optimum temperature
- Automatic detection of hottest and coldest point in an image
- Ergonomic: use with only one hand, weighs 750 g, ideal for portable use
- Free licence: frequency below 9 Hz
- Laser pointer: Allows for exactly locating measurement point
- SD memory card to store 1000 images
- Software for data transmission and analysis is included

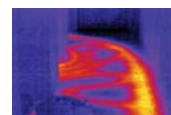
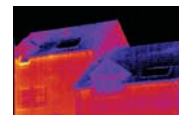
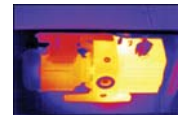


large 3.5" colour display

Software, SD memory card, rechargeable battery, charger, USB cable, card reader, strap and holster included

Technical specifications

Temperature range	-10 to $+250\text{ }^{\circ}\text{C}$
Resolution	0.15 $^{\circ}\text{C}$
Accuracy	$\pm 2\%$ of reading or $\pm 2\text{ }^{\circ}\text{C}$
Points of measurement	160 x 120 (19.200 points)
Sensor	Uncooled Focal Plane Array (UFPA)
Lens (FOV)	20° x 15°
Measurement distance	300 mm to infinity
Spectral range	8 to 14 μm
Emissivity	0.20 to 1.00 (adjustable)
Memory	approx. 1000 images with an SD card
Interface	USB
Display	3.5" colour
Temperature units	$^{\circ}\text{C}$, $^{\circ}\text{F}$ or K
Shades	4 variations
Cursor	2 manually moveable cursors
Laser pointer	class II
Power	litium rechargeable
Operating time (with battery)	approx. 4 hours
Enclosure	plastic
Operating temperature	-15 to $+45\text{ }^{\circ}\text{C}$
Ingress protection	IP 54
Dimensions	230 x 120 x 110 mm
Weight	750 g



Contents

PCE-TC 3 thermal imaging camera, rechargeable battery, charger, USB cable, software, SD memory card, card reader, strap, holster, carrying case and user's manual

Model No.	Description
PCE-TC 3	Thermal imaging camera

Optional Accessories

PCE-TC LG	Battery charger (bench type)
PCE-TC ALG	Charger for automobiles
PCE-TC LS	Light protector for optics
PCE-TC BP	Replacement battery
STAT	Tripod
CAL-PCE-TC	Calibration certificate (with first order)
CAL-PCE-TC R	Calibration certificate (recalibration)



Battery charger (bench type)



Charger for automobiles



Tripod

Temperature Meters

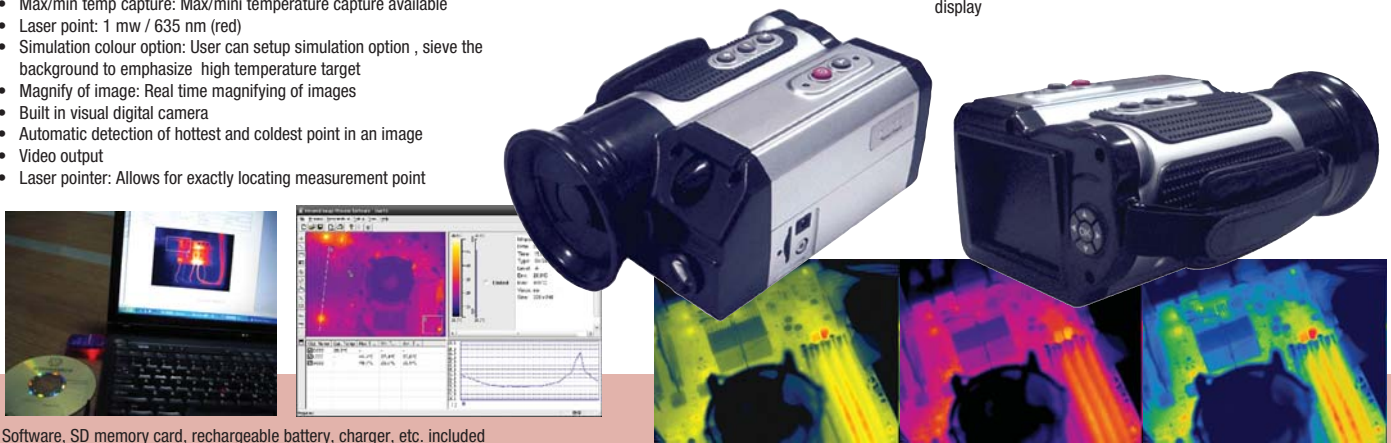
PCE-TC 8

Thermal imaging camera with high optical resolution (320 x 240 pixels)

PCE-TC 8 portable thermal camera can be used to carry out preventive maintenance, diagnose and validate of equipment failure etc. The circuit of this products has been designed as total digital chip, it has characteristics such as fast response, low power loss, clear image and so on. PCE-TC 8 has both outstanding function and easy operation, it widely applies in industrial detection, electric power and electron, petrochemicals, building inspection, scientific research and many other fields. The core element of the thermal imaging camera is an Uncooled Focal Plane Array with a resolution of 320 x 240 pixels. This thermal imaging camera has been ergonomically designed making it easy to use with one hand. Thanks to it weighing only 1200 g, it's ideal for the analysis of machines and installations, for construction among many other applications. The PCE-TC 8 thermal imaging camera offers a maximum accuracy of $\pm 2\%$ or $\pm 1\%$ °C in a temperature range of -20 °C up to +250 °C. On the colour display, 4 cursors can be moved, while on the job, to different points and the corresponding temperature read directly and determine the difference in temperature between 4 points. With these high range functions, the user can immediately identify irregularities and take pertinent measurements instantaneously. The integrated red laser point (1 mw /653 nm) also allows the user to precisely locate the measurement area while capturing an image or taking a measurement.

- High resolution 320 x 240 pixels
- Wide temperature range: -20 to +250 °C
- High accuracy: $\pm 2\%$ of reading or $\pm 1\%$ °C
- Operation: Drop-down menu
- Adjustment: Auto adjust brightness/contrast, Auto/manual mix colours
- Dot temperature: Decussation dot temperature display, and sustain 10 dots contemporary most
- Max/min temp capture: Max/mini temperature capture available
- Laser point: 1 mw / 635 nm (red)
- Simulation colour option: User can setup simulation option , sieve the background to emphasize high temperature target
- Magnify of image: Real time magnifying of images
- Built in visual digital camera
- Automatic detection of hottest and coldest point in an image
- Video output
- Laser pointer: Allows for exactly locating measurement point

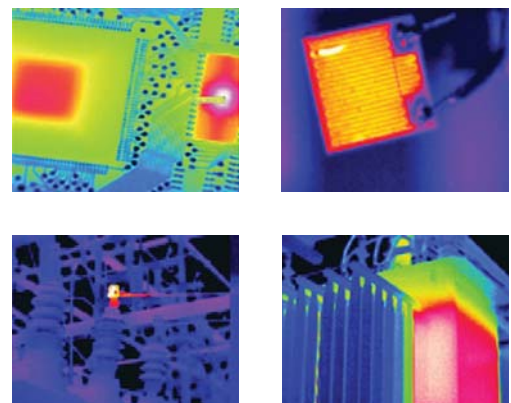
large 3.5" colour display



Software, SD memory card, rechargeable battery, charger, etc. included

Technical specifications

Temperature range	-20 to +250 °C
Resolution	0.1 °C
Accuracy	$\pm 2\%$ of reading or $\pm 1\%$ °C
Points of measurement	320 x 240 (76.800 points)
Sensor	Uncooled Focal Plane Array (UFPA)
Lens (FOV)	20.6° x 15.5°
Measurement distance	500 mm to infinity
Spectral range	8 to 14 μ m
Emissivity	0.20 to 1.00 (adjustable)
Frame rate	50 frames / s (PAL)
Response time	4 ms
Memory	1 GB SD card
Interfaces	USB / Video out
Display	high resolution 3.5" colour
Temperature units	°C, °F or K
Shades	5 variations
Cursor	4 manually moveable cursors
Laser pointer	class II
Power	7.2 V lithium battery, rechargeable
Operating time (with battery)	approx. 3 hours
Enclosure	plastic
Operating conditions	-20 to +50 °C / <95 % r.h.
Ingress protection	IP 54
Dimensions	200 x 135 x 95 mm
Weight	1200 g



Contents

PCE-TC 8 thermal imaging camera, rechargeable battery, charger, lens hood, software, 1 GB SD memory card, Video line, carrying case and user's manual

Model No.	Description
PCE-TC 8	Thermal imaging camera

Humidity- / Moisture Meters

PCE-555

Pocket thermohygrometer (Dew point)

The PCE-555 pocket thermohygrometer allows you to measure air humidity and temperature quickly and it can also calculate dew point and display wet bulb. Using this in the food industry you will be able to avoid the formation of fungus when transporting and storing food products. If used in the construction industry, you will be able to assess buildings for damp and prevent the formation of mildew by identifying condensation in walls.

- Easy to use
- The LCD shows both temperature and humidity
- Peak Hold function
- Takes MIN and MAX values
- Highly accurate
- Measures dew point and temperature



Technical specifications

Measurement range	0 to 100 % r.h. -30 to 100 °C
Resolution	0.01 % r.h. 0.01 °C
Accuracy	±2.0 % r.h. at 25 °C ±0.5 °C at 25 °C
Display	4.5 digit, dual display LCD
Battery	1 x 9V battery (PP3)
Dimensions	225 x 45 x 34 mm
Weight	200 g

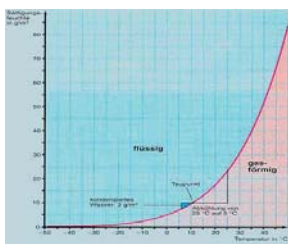


Contents

PCE-555 thermohygrometer, carrying case, battery and user's manual

Model No. Description

PCE-555 Thermohygrometer



PCE-310

Psychrometer (Dew point)

The PCE-310 psychrometer is an extraordinary cheap measuring instrument. It can measure environmental conditions (temperature and relative humidity) and can measure surface temperature with its external sensor which is included in the delivery. This psychrometer also offers you the ability to measure dew point and wet bulb.

- Measures relative humidity and temperature with an internal sensor and surface temperature of walls or food with its external sensor
- Dual backlight display (temperature and humidity)
- Measurement of dew point and wet bulb
- Calculates T1 - T2 differential
- Calibration kit
- MAX, MIN, Hold function
- Auto shut-off to save battery life
- ISO Certificate (optional)



Technical specifications

Measurement range	Temperature (internal) -20 to 50 °C Relative Humidity 0 to 100 % r.h. Temperature -21.6 to 50 °C Dew point -78.7 to 50 °C Temperature (external) -20 to 70 °C
Resolution	Temperature 0.1 °C Relative humidity 0.1 %
Accuracy	Temperature ±1 °C Relative humidity ±3 %
Response time	approx. 60 s
Humidity sensor	endurance sensor
Memory	- - -
Interface	- - -
External temperature-sensor	external temperature sensor cable of 1.1m, adjustable with 2.5 mm jack plug / dimensions with handle: 15 cm
Power	2 AAA batteries (1.5 V)
Operating conditions	-20 to 50 °C / 0 to 100 % r.h.
Dimensions	25 x 50 x 180 mm
Weight	130 g

Contents

PCE-310 psychrometer, external temperature sensor, 2 batteries and user's manual

Model No. Description

PCE-310 Psychrometer with external temperature sensor

Optional accessories

- PCE-310-TF Replacement temperature sensor
- CAL-SET-RF Calibration bottles for 33 % or 75 % r.h.
- CAL-RF ISO Certificate



Optional calibration bottles

PCE-320

Psychrometer (Dew point), with data storage and type-K temperature probes

The PCE-320 psychrometer is the bigger brother to our PCE-310. This psychrometer can measure different environmental conditions, in addition to also being able to simultaneously display the surface temperature of walls and products with its external temperature sensor. It can also calculate dew point and wet bulb. The PCE-320 also has a memory to stores up to 99 measurements.

- Real time clock and date
- Memory stores up to 99 readings
- Measures relative humidity and temperature with an internal sensor and surface temperature of walls or food with its external sensor
- Determines dew point and wet bulb
- ISO Certificate (optional)



Technical specifications

Measurement range	Temperature (internal) -20 to 50 °C Relative humidity 0 to 100 % r.h. Temperature -21.6 to 50 °C Dew point temperature -78.7 to 50 °C Temperature (external) -20 to 70 °C (depending on sensor)
Resolution	Temperature 0.1 °C Relative humidity 0.1 %
Accuracy	Temperature ±0.6 °C Relative humidity ±3 %
Response time	approx. 60 s
Humidity sensor	endurance sensor
Memory	stores up to 99 readings
External temperature-sensor	external temperature sensor cable of 1.1 m, adjustable with a type K heat wire temperature / dimensions with handle: 15 cm
Power supply	4 AA batteries (1.5 V)
Operating temperature	-20 to 50 °C / 0 to 100 % r.h.
Dimensions	44 x 57 x 230 mm
Weight	200 g

Contents

PCE-320 psychrometer, external temperature sensor, 4 batteries and user's manual

Model No. Description

PCE-320 Psychrometer with external temperature sensor, memory, RS-232

Optional accessories

- CAL-SET-RF Calibration bottles for 33 % or 75 % r.h.
 - CAL-RF ISO Certificate
- On page 3 you will find type-K temperature sensors



Optional calibration bottles

Humidity- / Moisture Meters

PCE-313 A

Thermohygrometer with memory and software, for professionals

In addition to relative humidity, this thermohygrometer also measures temperature. Its internal memory allows for storage of up to 16,000 readings individually or as a data logger. Once the data has been stored to memory, it can later be transferred to a PC with the help of the software. This thermohygrometer is extremely easy to use.

- Simultaneous display of temperature and relative humidity
- Sensor with 1.5 m cable
- Data logger with time and date
- Software to transfer and evaluate your data
- Auto shut-off (can be disabled)
- Data Hold
- Internal memory
- Max Hold
- ISO 9000 Certificate (optional)



Technical specifications

Measurement range	0 to 100 % r.h. -20 to 60 °C
Accuracy	±2.5 % r.h. ±0.7 °C
Resolution	0.1 % r.h. 0.1 °C
Memory	16,000 values
Measurement quota	1 second or less
Min/Max/Peak-Hold	yes
Recalibration	optional calibration kits
Software	in English
Interface	RS-232
Display	3.5 digit LCD
Operating conditions	0 to 40 °C, < 80 % r.h.
Power	9V battery pack
Dimensions	sensor: 190 mm x 13 mm diameter device: 186 x 64 x 30 mm
Weight	320 g

Contents

PCE-313 A thermohygrometer, data cable, software, battery pack, carrying case and user's manual

Model No. Description

PCE-313 A	Thermohygrometer with data logger
PCE-313 S	Thermohygrometer with data logger as the PCE-313 A, but with sintered filter for adverse conditions

Optional accessories

RS232-USB	RS-232 to USB Adaptor
CAL-RF	ISO Certificate
CAL-SET-RF	Calibration bottles for 33 % or 75 % r.h.
NET-300	Power supply (300 mA)



Optional calibration bottles

PCE-3000

Thermohygrometer with dew point calculation, memory and software

The PCE-3000 thermohygrometer is an accurate tool which can measure dew point, relative humidity and temperature. The most important feature of this thermohygrometer is its internal memory with which you can store up to 1000 readings. You can store the data individually or in form of a data logger, allowing for measurements to be taken over a period of time without the need to monitor the device. The thermohygrometer stores the measurements with date and hour. Using the software, the readings can be transferred to a computer to be analysed.

- Simultaneously displays relative humidity and temperature
- Accurate to within ±2 % of relative humidity
- Dew point measurement
- Software and data cable included
- Memory stores up to 1000 readings
- RS-232 interface
- ISO 9000 Certificate (optional)



Technical specifications

Measurement range	0 to 100 % r.h. 0 to 50 °C
Accuracy	±2 % r.h. ±0.5 °C
Resolution	0.01 % r.h. 0.01 °C
Dew point	-25.3 to 48.9 °C
Memory	1000 readings
Timed measurement intervals	1, 2, 10, 30, 60, 600, 1800 or 3600 seconds
Min Max Peak Hold	yes
Recalibration	yes, in PCE Group
Software	in English
Interface	RS-232
Display	16mm dual display LCD
Power	9V battery pack
Sensor dimensions	200 x 15 mm
Measurer dimensions	203 x 76 x 38 mm
Weight	315 g

Contents

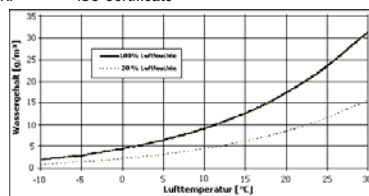
PCE-3000 thermohygrometer with sensor, software, RS-232 cable, battery, carrying case and user's manual

Model No. Description

PCE-3000	Thermohygrometer with memory
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Optional accessories

RS232-USB	RS-232 to USB Adaptor
CAL-RF	ISO Certificate



PCE-WM 1

Thermohygrometer to measure relative and absolute humidity [g/m³] and dew point

The PCE-WM 1 Thermohygrometer simultaneously measures relative humidity and temperature. It comes with an external sensor to measure surface temperature and it can calculate dew point and absolute humidity in g/m³. The two external probes, the thermohygrometer probe and the temperature probe, each have a 1m long spiral cable.

- Measures relative humidity and temperature
- Calculates absolute humidity in g/m³ and dew point
- Data Hold function maintains readings on the display
- External probe with spiral cable
- Auto shut-off function
- ISO Certificate (optional)



Technical specifications

Measurement range	10 to 95 % r.h. -20 to 80 °C
Accuracy	±2 % r.h. ±0.5 °C
Resolution	0.1 % r.h. 0.1 °C
Dew point	-25.3 to 48.9 °C
Memory	-
Timed measurement intervals	-
Min Max Peak Hold	yes
Recalibration	yes
Software	-
Interface	-
Display	3.5 digit LCD
Power	9V battery pack
Sensor dimensions	150 x 30 mm
Device dimensions	165 x 80 x 33 mm
Weight	380 g

Contents

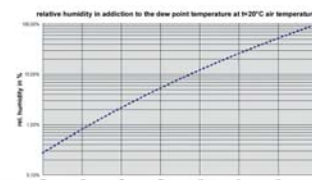
PCE-WM 1 thermohygrometer with combi probe and temperature probe, battery pack, carrying case and user's manual

Model No. Description

PCE-WM 1	Thermohygrometer to measure dew point and temperature
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Optional accessories

PCE-WM-KF	Spare combi probe (humidity + temp.)
CAL-RF	ISO Certificate



Humidity- / Moisture Meters

PCE-333

Compact moisture meter for wood

The wood moisture meter is very user friendly. You only need to press the electrode pins of the moisture meter into the surface of wood (if possible, it is better to measure a sample splinter or a fresh piece of wood) and read the absolute humidity of wood in the luminous band shown in percent. The measurement of wood or firewood is important to have good combustion. The firewood that has more than 20 % of absolute humidity has too much humidity and must be dried for about a year. You will also be able to use this moisture meter when you are purchasing wood. With this meter, you will be sure that you are buying wood and not water.

- The moisture meter is very user friendly and quick to measure the moisture levels in wood
- Solid enclosure and pocket-sized
- No recalibration necessary (conductivity principle with a curve preset in the unit)
- Illuminated band for readability



Technical specifications

Measurement range	wood: 6 to 44 % 0.2 to 2.0 %
Accuracy	wood: ± 1.0 % other materials: ± 0.05 %
Indicator	LCD
Pointer	integrated in the enclosure, electrode pin length: 8 mm
Type of wood	the unit is integrated the type of wood more currently in Europe
Operating temperature	0 to 40 °C
Operating relative humidity	0 to 85 % r.h.
Power	3 batteries (CR2032)
Enclosure	ABS plastic
Dimensions	130 x 40 x 25 mm
Weight	129 g

Contents

PCE-333 moisture meter, batteries and user's manual

Model No.	Description
PCE-333	Humidity Meter



PCE-WP 21

Moisture meter for construction materials

The PCE-WP 21 moisture meter is an instrument which allows you to measure moisture in concrete. The measurement procedure operates according to the dielectric constant principle or the principle of high frequency. To obtain a result it is only necessary to select the type of concrete and place the electrode pins on the surface. The electromagnetic radiation seeps through the surface up to 50 mm in depth. The reading will be that of the moisture content at 50 mm below the surface of the concrete.

- Measures moisture to a depth of 50 mm
- Very user friendly and displays the result quickly
- No preparation required before measuring
- LCD with battery life indicator



Technical specifications

Measurement range	1 to 8 % of absolute moisture
Accuracy	± 0.7 %
Resolution	0.1 %
Measurement depth	approx. 50 mm
Display	3.5 digit LCD
Power	9 V battery pack
Dimensions	165 x 80 x 30 mm
Weight	500 g

Contents

PCE-WP 21 moisture meter, battery back, carrying case and user's manual

Model No.	Description
PCE-WP 21	Moisture Meter



PCE-WT1

Sawdust moisture meter

Sawdust moisture meter PCE-WT1 is a state-of-the-art electronic device for measuring moisture contents in sawdust, scobs, wood shavings, slivers and other finely crumbled wood waste. The moisture meter measures the resistance of a compressed sample of sawdust. This moisture meter is extremely easy to use.

- Measure moisture of sawdust
- Simple to use, quick result
- Measurement is done in two steps
- Heavy housing
- ISO Certificate (optional)



Technical specifications

Measurement range	8 to 50 % (absolute)
Resolution	0.1 %
Accuracy	± 1 % of reading
Volume of chamber	120 cm ³
Pressure range	0.2 MPa
Temperature compensation	adjustable
Indicator	LCD
Power	9 V battery pack
Operating temperature	0 to +50 °C
Dimensions	300 x 215 x 65 mm
Weight	950 g

Contents

PCE-WT1 moisture meter, screwdriver, battery, carrying case and user's manual

Model No.	Description
PCE-WT1	Moisture meter

Optional accessories

CAL-PCE-WT1 ISO Certificate



Humidity- / Moisture Meters

Serie PCE-MB

Balance to measure moisture



The PCE MB series Balance has been specially designed for the use in industry or in the laboratory. This balance provides a quick and accurate method to measure moisture content and dry weight analysis of a wide range of products and materials. The user's manure will provide you with advice and numerous practical examples. The two quartz halogen lamps (200W each) provide constant, even drying of the sample at a temperature pre-selected by the operator.

Only a small sample needs to be placed on the balance, then close the cover, press the button and read the result (content of humidity; dry content). This instrument is the perfect tool in determining moisture and dry content weight accurately. You will be able to determine the humidity of materials of a range of materials, such as plastic, wood pellets, pharmaceutical substances, tobacco, tea, cereals, etc.

Checking moisture and dry content can be done three different ways:

- Automatic: drying material until it has a constant weight
- Semi-automatic: drying stop when loss per unit of time goes below theoretical value
- Manual: adjusting the timer between 2 minutes and 9 hours and 59 minutes

The balance includes:

- RS-232 adaptor to transfer data to a PC
- External calibration function
- 230 V power supply

The image to the right shows the balance opened to allow the sample material to be placed inside and tested. The process which determines the moisture content begins once you close the cover and press the start button.



Technical specifications

Model	Weight range Max	Readability d	Repeatability	Pan size
PCE-MB 50	50 g 0 to 100 % absolute humidity 100 to 0 % dry content	0.001 g 0.01 %	0.01 g 0.02 %	Ø 90 mm
PCE-MB 100	100 g 0 to 100 % absolute humidity 100 to 0 % dry content	0.001 g 0.01 %	0.01 g 0.02 %	Ø 90 mm
PCE-MB 200	200 g 0 to 100 % absolute humidity 100 to 0 % dry content	0.001 g 0.01 %	0.01 g 0.02 %	Ø 90 mm
Tara range	Full			
Heating	2 x 200 W quartz halogen heaters			
Temperature range	+50 to +160 °C			
Drying time	2 min to 9 h 59 min (adjustable by 1 second increments)			
Drying modes	automatic, semi-automatic, manual			
Drying sequence	pre-selected on the display using a diagram			
Indication after drying	moisture [%] / dryness weight, weight before dryness [%] ATRO / date and time			
Memor<	160 (to allow user to produce drying curves for specific materials)			
Display	large display with multilingual menu			
Calibration	external calibration (with optional calibration weight)			
Interface	RS-232			
Operating conditions	+18 to +30 °C			
Power	230 V / 50 Hz			
Enclosure	die cast aluminium			
Ingress protection	IP 54			
Dimensions	235 x 245 x 260 mm			
Weight	approx. 8 kg			



Contents

PCE- MB series moisture analyser balance (one of the available models), 10 aluminium sample pans, power cord and user's manual

Model No.	Description
PCE-MB 50	Moisture Analyser Balance PCE-MB 50
PCE-MB 100	Moisture Analyser Balance PCE-MB 100
PCE-MB 200	Moisture Analyser Balance PCE-MB 200

Optional accessories

CAL-PCE-MB	ISO Certificate
PCE-SB	Software with RS-232 data cable
RS232-USB	RS-232 to USB Adaptor
PCE-BP1	Thermal printer with RS-232 data cable
PCE-MB-PS	Pack of 50 aluminium sample pans
PCE-MB-GF	Pack of 100 fibreglass



Thermal printer PCE-BP1

Humidity- / Moisture Meters

FMW, FMC, FME & FMD

Material moisture meters to determine the absolute moisture of materials such as wood, paper, building materials, etc.

Accurately measure the percentage of absolute moisture of all types of materials. The FMW-B and the FMW-T meters measure just by touching the surface, and will not damage to surface of the material. The FMC, FME and FMD6 models can be used with an array of optional sensors. All the units contain calibration curves for wood, building materials and paper. Once the material's corresponding curve has been selected, you will be able to determine the absolute moisture in a more accurate way that with conventional moisture meters. The FMD 6 has the possibility of being programmed with other curves and in addition to that, transmit to a computer the readings to allow the data to be analysed.

- Very user friendly
- High reproducibility (hybrid sensor)
- Highly accurate
- Choice of an array of sensors
- Auto shut-off after 10 min



FMW



FMC



FME



FMD 6

Technical specifications

Model	FMW-B/FMW-T	FMC	FME	FMD 6
Measurement without damaging materials	yes	-	-	-
Measurement with external sensor contact points	-	yes	yes	yes
Temperature measurement	-	-	yes, with optional sensor	yes, with optional sensor
Compensation of temperature	-	manual	yes, automatic with optional sensor	yes, automatic with optional sensor
Reference calibration curve AS/NZS1080.1	-	yes	yes	yes
Wood calibration curves for types of wood (4)	-	yes	-	-
Calibration curves for wood	yes	-	yes	yes
Calibration curves for building materials	yes (only for FMW-B)	yes	yes	yes
Calibration curves for paper	-	yes	yes	yes
Adjustable calibration curves	-	-	-	yes, 10 lines
Memory	50 values	-	50 values	2000 values
Statistic, data, hour	-	-	-	yes
Real time clock	-	-	-	yes
Software	-	-	-	yes
Measuring depth	FMW-B: 10 to 30 mm; FMW-T: 10 to 20 mm	depending on the sensor	depending on the sensor	depending on the sensor
Measurement range in %	2 to 30 (wood) 0 to 60 (building materials)	5 to 99 (wood) 0 to 99 (building materials)	5 to 99 (wood) 0 to 99 (building materials)	5 to 99 (wood) 0 to 99 (building materials)
Resolution in %	0.1	0.1	0.1	0.1
Accuracy in %	0.5	0.3	0.2	0.2
Temperature range (material)	0 to 50 °C	0 to 50 °C	0 to 50 °C	0 to 50 °C
Battery life	yes	yes	yes	yes
Power	9 V battery pack	9 V battery pack	9 V battery pack	3 batteries (1.5 V)
Dimensions	180 x 80 x 35 mm	160 x 80 x 30 mm	160 x 80 x 30 mm	190 x 100 x 34 mm
Weight	260 g	260 g	260 g	300 g
MPA approval	no	no	yes	yes

Contents

Absolute moisture meter (according to the model ordered), user's manual

Model No. Description

- FMW-B Wood and building material moisture meter (without damaging materials), sensor on the back side
- FMW-T Wood and building material moisture meter (without damaging materials), sensor on the front side

For the FMC, FME and FMD moisture meters you should order optional sensors corresponding to the model of meter you have:

- FMC Wood and building materials moisture meters with manual temperature compensation
- FME Wood and building material moisture meters with automatic temperature compensation
- FMD 6 Material moisture meters with automatic temperature compensation and software included



Humidity- / Moisture Meters

Optional accessories for the FMC, FME, FMD6 Moisture meters

HEHB	Hand probe for measuring wood and building moisture
REHB	Hammer probe for measuring wood moisture (for good depth measurement)
ENS-30	Non-insulated measuring pins for hand and hammer probes. Suitable for measuring moisture to a maximum thickness of 30mm (10 units)
ENS-60	Insulated measuring pins for hammer probe. Suitable for measuring moisture to a maximum depth of 60mm (10 units)
TFK	Temperature sensor for measuring material temperature (only for FME and FMD)

Hand probe



Hammer probe



Non-insulated measuring pins



Insulated measuring pins (60mm)



Temperature probe



The universal sensor handle will connect for the following electrodes.

UFH	Sensor handle with cable for connecting sensors to moisture meters (for sensors in the following list)
BH-OFF	Sensor for surfaces (for all material surfaces, without damaging materials)
ESF-325	Thrust sensor of 325 mm (for granulated, wood, pellets, sand, etc)
NF4-15	1.5mm sensor with 4 pins (for cork, rubber, fabrics, etc)
NF4-17	17mm sensor with 4 pins (for building materials, wood, etc)
NF2-100	100mm sensor with (for insulating material, fibreglass, fruits, etc)
SNF-175	175 + 75mm sensor with 2 pins; the first 175mm are insulated (stacks of coffee, pellets, etc)
BH-RF	Sensor with rollers for moving surfaces (for rolls of paper, fabrics, etc)

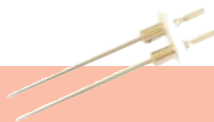
Sensor handle



Sensor for surfaces



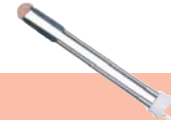
325mm sensor



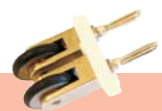
Sensor with 4 pins (1.5 or 17mm)



Sensor with 2 pins (175 + 75mm)



Sensor with rollers



Special sensors

BH-KF	Sensor with case encased in steel (for stacks of materials, such as sawdust, cereals, etc); you must purchase the cable as an optional component
BH-KF-K	Cable for the case sensor
BFS	Sensor kit for concrete (for concrete and road surfaces)
BFS-10	Set of pins for the concrete sensor (10 units)

Sensor with case



Sensor kit for concrete



Applications for the special sensors:

Sensor with case

The steel encased case sensor is filled with the material to be measured. This sensor is also good to measure stacks of pellets, shavings, granulated materials, etc.

Concrete measurement kit

The concrete measurement kit measures at a maximum depth 10cm. The probes are introduced into previously made holes.

Data Loggers

PCE-HT 71

Mini data register for temperature and humidity, with USB connection

Self-sufficient data register with internal sensors to measure environmental temperature and humidity. The register is ideal for continuous testing of warehouses, transport, containers, etc. Using the software, the device can be programmed and data retrieved and transferred to computer to allow for analysis of data or graphical representation of the data.

- Memory for 32,000 readings (16,000 readings for temperature and 16,000 for humidity)
- Measurement time intervals adjustable from 1 s up to 2 h
- Device works self-sufficiently
- USB connector for connection to a computer
- Easy to use
- Compact design
- Ability to transfer data
- Includes software



Technical specifications

Measurement range	-40 to +70 °C / 0 to 100 % r.h.
Accuracy	±0.5 °C / ±2 % r.h.
Resolution	0.1 °C / 0.1 % r.h.
Sampling time	1 s to 2 h, adjustable
Start and finish date	programmable
Memory	32,000 readings 16,000 by parameter
Software	yes, to read and programme
Operating conditions	-40 to +70 °C / 0 to 100 % r.h. without condensation
Power	replaceable internal battery, 3 year battery life
Dimensions	30 x 25 x 130 mm
Holder	wall mount included
Weight	30 g



Contents

PCE-HT 71 data logger, software, battery, wall mount and user's manual

Model No.	Description
PCE-HT 71	Mini data logger



PCE-T100 & PCE-HT110

Data logger with backlight display for continuous measurements of temperature or temperature and relative humidity simultaneously (software is optional)

The data logger determines the temperature (PCE-T100) or the temperature and the humidity of the air (PCE-HT110). The most important feature of this data logger is its memory (up to 64,000 values) which allows the user to take measurements over a period of time. This is useful in food processing for upright freezers in supermarkets, refrigerated trucks or warehouses, and for the industrial sector relating to warming and cooling processes, machine temperature or in warehouses. The current measurement is displayed in the LCD and it is recorded to memory so you can read the value at the time of measurement, or if you prefer, you can transfer the data to a PC and process this data for analysis or presentation. You will be able to remove the numeric columns and for example, in the food processing sector, you will recognize quickly if there has been a temperature change and what time it occurred. The internal real time clock allows the user to organize the events accurately. You can adjust time interval measurements as you require. The enclosure is resistant to dust and exposure to water, and the electronic component is shock resistant and against rough handling that might occur in the industrial sector. The data logger has a backlight display in case of insufficient light conditions.

- Measure and record the temperature or the temperature and humidity
- Memory: up to 64,000 readings
- Optional software and optional RS-232 cable to transmit the data to a computer for analysis
- Display with backlight
- Real time clock and data adjustment (5 sec / month departure)
- Measurement intervals and time adjustment (1 s to 60 min)
- Battery included
- Battery status shown on the display
- Wall mounting clip included
- Ingress protection IP 64: water proof for all weather applications
- ISO Certificate (optional)



Technical specifications

	PCE-T100	PCE-HT110
Model	PCE-T100	PCE-HT110
Measurement range	-30 to +70 °C	-30 to +70 °C / 5 to 98 % r.h.
Accuracy	±0.7 °C < +40 °C, ±1.5 °C > +40 °C	±0.7 °C < +40 °C, ±1.5 °C > +40 °C / ±3 % r.h.
Resolution	0.1 °C	0.1 °C / 0.1 % r.h.
Memory	64,000	64,000 (32,000 depending on parameter)
Software and RS-232 cable	optional	
Sampling time	1 second to 60 min (adjustable)	
Power	2 replaceable internal batteries of (1.5 V)	
Battery life	approx. 1 year	
Operating conditions	-30 to +70 °C / 0 to 98 % r.h.	
Dimensions	92 x 55 x 22 mm	
Weight	200 g	



Software with connection station can be ordered separately



Anti-theft system available separately, includes padlock

Contents

Data logger (model PCE-T100 or PCE-HT110), wall mounting clip, batteries and user's manual (Software is available as an optional accessory)

Model No.	Description
PCE-T100	Temperature logger with internal sensor
PCE-HT110	Temperature and humidity logger with combined sensor

Optional accessories

PCE-CB	Kit software (software in English, Docking-Station and RS-232 cable for PC)
RS232-USB	RS-232 to USB adaptor
PCE-SAFE	Anti-theft / metal wall support, padlock included
CAL-T1	ISO Certificate for the temperature logger PCE-T100
CAL-RF	ISO Certificate for the temperature and humidity logger PCE-HT110

DaqPro

8 channel data logger which accepts NTC, thermocouples, electrical current, voltage...

Data logger with 8 input channels of universal use which provides almost all the requirements in the industrial sector. With its high resolution and fast Analog to Digital converter (ADC), DaqPro meets the majority of data logging requirements in most industrial applications. Its unique ability to display measured values and analyze them in real-time on a graphical interface minimizes the need to download collected data to a computer for further analysis.

- Highest quality
- Automotive testing
- External research
- Quality assurance
- Heating sector, air conditioning and ventilation applications
- Plant trouble-shooting
- Electricity transients fail detection
- Plant and monitoring stations
- 8 channels for measurement
- Inputs: 0 ... 24 mA, 0 ... 5 mA, 0 ... 5 mV, 0 ... 10 V, NTC, Pt100, thermocouples, pulses and frequency
- Alarm output
- Memory: 512 KB, accuracy: 16 bits
- Calibration certificate
- Powerful analysis software for Windows and carrying case



Technical specifications

Ranges / Accuracy	current: 0 to 24 mA; $\pm 0.5\%$ voltage: 0 to 50 mV or 0 to 10 V; $\pm 0.5\%$ frequency (0 to 5 V): 20 to 4.000 Hz pulse counter (0 to 5 V): 0 to 65,000 PT100: -200 to +400 °C; 0.1 °C; $\pm 0.5\%$ thermocouples (J, K, T): 0.1 °C; $\pm 0.5\%$
Memory	up to 512,000 values
Sampling time	adjustable: 4,000 values/sec for 1 value/hour
Interface	USB
Connection	terminal strip
Operating temperature	0 to +50 °C
Indicator	graphical display LCD 64 x 128
Housing	plastic (ABS)
Dimensions	182 x 100 x 28 mm
Weight	450 g
Power	internal battery of 7.2 V or electricity network
Battery life	40 hours

Contents

DaqPro, internal battery, operator's manual

Model No.

Description

DaqPro 8 channel data logger

Optional accessories

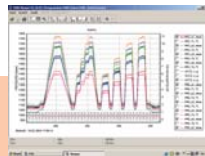
PCE-TPHL	Cable with connectors and open ended wires to connect to the DaqPro and measurement converter
PCE-TA-601	Optical revolutions adaptor, 10 to 20000 r.p.m.
PCE-PS-403	Pressure adaptor, 1/4" thread, 3.5 to 3500 kPa
PCE-LX-02	Light adaptor, 0 to 50000 lux
PCE-AM-402	Wind speed velocity adaptor, impeller, 0.2 to 30 m/s
PCE-SL-406	Sound adaptor, 30 to 130 dB(A)
PCE-EMF-824	EMP adaptor, 0 to 20 μ Tesla / 0 to 200 mGauss

Serie PCE-MSR145

Data logger for continuous measurement, 2,000,000 values like temperature, humidity, pressure and acceleration, longlife rechargeable battery pack

The MSR 145 is a miniaturised universal datalogger for measuring and recording different physical measurement parameters. It contains a temperature sensor, a humidity sensor with integrated temperature, a pressure sensor and a 3-axis accelerometer (X, Y and Z axes). The measurement parameters can be transferred to a PC either once data logging is completed or during the data logging process. The software enables users to customise the way in which the MSR 145 measures and records data according to their requirements. The integrated clock (RTC) allows data from as many MSR 145 units as required to be synchronised and merged into a single data record.

- Available as standard model and as waterproof model
- For temperature, relative humidity with integrated temperature sensor, pressure (e.g. altimeter, water level, barometer) and triaxial acceleration (e.g. location determination)
- Memory for 2,000,000 values
- USB- interface
- Software included
- Real time clock and data adjustment
- Measurement intervals and time adjustment (1 s to 12 h)
- Longlife rechargeable Li-Ion battery pack
- Indicator LED (incl. alarm)



Technical specifications

Ranges	temperature -10 to +65 °C	humidity 0 to 100 % r.h.	pressure 0 to 2500 mbar	acceleration $\pm 2g$ and $\pm 10g$
Accuracy	± 0.1 °C (+5 to +45 °C) sonst ± 0.2 °C	$\pm 2\%$ r.h.	± 2.5 mbar (750 to 1100 mbar)	± 0.15 g (at 25 °C)
Sampling time	1 s to 12 h	1 s to 12 h	10 s to 12 h	50 s to 12 h
Memory	2,000,000 values			
Start and finish date	programmable			
Alarms	adjustable			
Indicator	3 x LED			
Interface	USB			
Software	included			
Dew point	calculated in the PC after transfer (accuracy ± 2 °C)			
Power	Lithium-Polymer-Battery 170 mAh			
Battery life	many months with sampling rate 1 value per minute			
Operating conditions	-20 to +65 °C / 500 mbar to 2500 mbar (absolute)			
Ingress protection	PCE-MSR145S: IP 60 PCE-MSR145W: IP 67			
Dimensions	PCE-MSR145S: 20 x 15 x 52 mm PCE-MSR145W: 18 x 14 x 60 mm			
Weight	18 g / 20 g			

Contents

Data logger PCE-MSR145, software with USB cable and operator's manual

Model No.

Description

MSR145S-TH	2 channel data logger (temperature, humidity)
MSR145S-TP	2 channel data logger (temperature, pressure)
MSR145S-TA	2 channel data logger (temperature, acceleration)
MSR145S-THP	3 channel data logger (temperature, humidity, pressure)
MSR145S-THA	3 channel data logger (temperature, humidity, acceleration)
MSR145S-THPA	4 channel data logger (temperature, humidity, pressure, acceleration)
MSR145W-TH	2 channel data logger, waterproof (temperature, humidity)
MSR145W-TP	2 channel data logger, waterproof (temperature, pressure)
MSR145W-TA	2 channel data logger, waterproof (temperature, acceleration)
MSR145W-THP	3 channel data logger, waterproof (temperature, humidity, pressure)
MSR145W-THA	3 channel data logger, waterproof (temperature, humidity, acceleration)
MSR145W-THPA	4 channel data logger, waterproof (temperature, humidity, pressure, acceleration)

Pressure Meters

PCE-Pxx

Differential pressure meter for air and gas measurement with optional cable and software

Highly accurate professional pressure meter. With this unit, besides measuring, you will be able to transmit data to a PC. This instrument is ideal for industrial applications, technical service or for a laboratory (especially for measuring non-corrosive gases). It has overload protection (double measurement range) to avoid damaging the sensor. We have four models available with a measurement range up to 7 bar.

- 9 measuring units to choose from
- Positive, negative and differential pressures
- 2 pins of Ø 4 mm
- Memory LCD
- It is used in heating and air conditioning, in pneumatic systems, in medical units, etc.
- ISO Certificate (optional)



Technical specifications

Model	PCE-P05	PCE-P15	PCE-P30	PCE-P50	
PSI	Range	0 to ±5	0 to ±15	0 to ±30	0 to ±100
	Resolution	0.003	0.01	0.02	0.1
mbar	Range	0 to ±350	0 to ±1000	0 to ±2000	0 to ±6900
	Resolution	0.2	1	2	4
InH ₂ O	Range	0 to ±140	0 to ±415	0 to ±830	0 to ±2750
	Resolution	0,1	0,3	0,5	2
InHg	Range	0 to ±9.999	0 to ±30.5	0 to ±61	0 to ±200
	Resolution	0.001	0.05	0.01	0,1
mmHg	Range	0 to ±260	0 to ±750	0 to ±1500	0 to ±5200
	Resolution	0.2	0.5	1	3
kPa	Range	0 to ±35	0 to ±100	0 to ±200	0 to ±690
	Resolution	0.02	0.1	0.2	0.4
cmH ₂ O	Range	-	0 to ±1050	0 to ±2100	0 to ±7000
	Resolution	-	1	2	4
Kg/cm ²	Range	-	0 to ±1.05	0 to ±2,1	0 to ±7,0
	Resolution	-	0.001	0.002	0.004
Accuracy	±0.3 % (full range at +25 °C)				
Reproducibility	±0.2 % (maximum ±0.5 % of final value)				
Measurement interval	0.3 ms				
Min, Max, Peak, Hold	yes				
Interface	yes, RS-232				
Software	yes, as optional, for data transfer and check (in English)				
PC requirements	CD player, Windows 95 or better				
Power	9 V battery (PP3)				
Enclosure	ABS plastic				
Dimensions	182 x 72 x 30 mm				
Weight	150 g				

Contents

Differential pressure meter (one of our models), carrying case and user's manual

Model No. Description

PCE-P05	Gas pressure meter up to 0.35 bar
PCE-P15	Gas pressure meter up to 1.00 bar
PCE-P30	Gas pressure meter up to 2.00 bar
PCE-P50	Gas pressure meter up to 6.90 bar

Optional accessories

SOFTP-AZ	Software and data cable
CAL-PCE-P	ISO Certificate
SS-AZ	Silicon probe (2 m)



PCE-910 & PCE-917

Differential pressure meter for air and liquid measurements (you can't use it with acids or bleaches)

The digital differential pressure meter is ideal for industrial or laboratory uses. With this unit you can measure hydraulic or pneumatic systems. The most important feature of this differential pressure meter is its accuracy. The RS-232 interface allows the user to transmit the data to a computer for analysis and evaluation. We have optional software and an RS-232 data cable available. If your PC only has a USB, we recommend the purchase of an RS-232 to USB adaptor.

- Selection of measurement units
- High, negative and differential pressures
- Min, Max, and Data-Hold
- RS-232 interface
- For measuring air, gas and non-corrosive liquids
- ISO Certificate (optional)



Technical specifications

Model	PCE-910	PCE-917	
PSI	Range	±29.00	±101.00
	Resolution	0.01	0.05
mbar	Range	±2000	±7000
	Resolution	1	5
inH ₂ O	Range	±802.0	±2800
	Resolution	0.5	2
mH ₂ O	Range	±20.40	±70.00
	Resolution	0.01	0.05
inHg	Range	±59.00	±206.0
	Resolution	0.02	0.1
mmHg	Range	±1500	±5250
	Resolution	1	5
Kg/cm ²	Range	±2.040	±7.000
	Resolution	0.001	0.005
atmospheres	Range	±1.974	±6.905
	Resolution	0.001	0.005
Accuracy	±2 % (full range)		
Reproducibility	±1 %		
Measurement interval	0.8 s		
Min, Max, Peak, Hold	yes		
Interface	RS-232		
Power	9 V battery (PP3)		
Enclosure	plastic		
Enclosure dimensions	180 x 72 x 32 mm		
Weight	345 g		

Contents

PCE-910 or PCE-917 differential pressure meter, carrying case, battery and user's manual

Model No. Description

PCE-910	Differential pressure meter for gas and liquids up to 2000 mbar
PCE-917	Differential pressure meter for gas and liquids up to 7000 mbar

Optional accessories

SOFT-LUT-D	Software with RS-232 cable
RS232-USB	RS-232 to USB Adaptor
CAL-AZ	ISO Certificate



PCE-932

Pressure meter with external sensors for ranges up to 400 bar, optional RS-232 cable and software

This handheld pressure meter is used to measure high ranges of pressure in the industrial sector and in research and development. You can connect a pressure sensor, up to a maximum of 400 bar, to the unit (with a 1.2m long connecting cable). The integrated RS-232 interface can be used to transfer data to a computer, using the optional software and data cable. This pressure meter comes calibrated, but if you want, we can offer you an optional laboratory calibration ISO (with certificate).

- Pressure measurement for several conditions and systems
- Maximum pressure up to 400 bar (depending on sensor)
- It's not necessary to recalibrate if you change the sensor
- RS-232 interface
- Optional software to transfer data to a computer
- Several units adjustable (bar, psi, mWs, etc.)
- MIN, MAX, Data Hold functions
- Auto shut-off to save battery life (can be disabled)
- ISO Certificate (optional)



Technical specifications

Measurement range	0 to 400 bar (depending on sensor / pressure connection)
Selectable measuring units	bar, psi, Kg/cm ² , mm/Hg, inch/Hg, mH ₂ O, inch/H ₂ O, atmospheres
Pressure connection	optional, voltage DC 5V (maximum sensor output DC 100 mV (see ranges)
Zero function for offset correction	via keypad
Functions	pressure, Min and Max, Hold, transfer to a PC through integrated RS-232 interface
Auto shut-off	to save battery life (can be disabled)
Measurement interval	every 0.8 sec. approximately
Indicator	large LCD (61 x 34 mm)
Operating temperature	0 to +50 °C
Operating humidity	0 to 80 % r.h.
Enclosure	ABS plastic
Battery life	indicated on the display
Power	9 V battery pack
Dimensions	180 x 72 x 32 mm
weight	345 g

Technical specifications (sensors)

Model	PS-100-20	PS-100-50	PS-100-100	PS-100-400
Range	0 to 20 bar	0 to 50 bar	0 to 100 bar	0 to 400 bar
Accuracy	±0.5 % of measurement range			
Resolution	0.02 bar	0.05 bar	0.1 bar	0.5 bar
Screw thread	1/4 "			
Operating temperature	maximum +80 °C			
Dimensions	Ø 30 mm x length 85 mm			
Cable length	1.2 m			
Weight	160 g			

Contents

Pressure meter PCE-932, user's manual (pressure probes are not included in the delivery)

Model No.	Description
PCE-932	Pressure meter PC-932

Optional accessories

PS-100-20	Pressure probe for 20 bar
PS-100-50	Pressure probe for 50 bar
PS-100-100	Pressure probe for 100 bar
PS-100-400	Pressure probe for 400 bar
SOFT-LUT-D	Software with RS-232 cable
RS232-USB	RS-232 to USB Adaptor
CAL-PS	ISO Certificate



PCE-THB 38

Thermometer, hygrometer and barometer all-in-one, with dew point calculation

The PCE-THB38 thermo-hygrometer and barometer can measure and display digitally the relative humidity, temperature and barometric pressure. Temperature is measured using an RTD sensor and relative humidity is measured using a capacitive sensor with a high repeatability. The barometer also calculates dew point. All this is contained with one complete climatological meter.

- Measures temperature, humidity and barometric pressure
- Calculates dew point
- Selection of units of pressure: hPa (mbar), mmHg and inHG
- Minimum, maximum and Hold functions
- Internal sensor is protected
- Compact design
- ISO Certificate (optional)



Technical specifications

Measurement ranges	
- Barometric pressure	10 to 1100 hPa (mbar)
- Temperature	0 to +50 °C
- Relative humidity	10 to 95 % r.h.
- Dew point (calculation)	-25 to +49 °C
Resolution	
- Barometric pressure	0.1 hPa <1000 hPa, 1 hPa >1000 hPa
- Temperature	0.1 °C
- Relative humidity	0.1 % r.h.
- Dew point	0.01 °C
Accuracy	
- Barometric pressure	±1.5 hPa <1000 hPa, ±2 hPa >1000 hPa
- Temperature	±0.8 °C
- Relative humidity	±3 % of reading ±1 % r.h. < 70 % r.h. ±3 % r.h. >70 % r.h.
Operating temperature	
Power	0 to +50 °C
Power	4 x 1,5 V battery AAA
Dimensiones	210 x 40 mm
Weight (incl. batteries)	160 g



Contents

PCE-THB38 Thermo-hygrometer-barometer, batteries and user's manual

Model No.	Description
PCE-THB 38	Thermo-hygrometer and barometer

Optional accessories

CAL-THB	ISO Certificate (for barometric pressure)
CAL-RF	ISO Certificate (for thermometer and hygrometer)

Tachometers

PCE-OM 15

Stroboscope with external trigger and AC power

The PCE-OM 15 stroboscope has an external trigger function as well as a 6500 K xenon white lamp. This unit flash freezes the motion and measures the speed of a rotating object without contact, simply by aiming and synchronizing its flash rate (fpm) with the speed (rpm) of the object. The stroboscope has a 230V power supply and it is ideal for quality control of all type of components and rotating machines in preventative inspection, maintenance procedures, motion analysis, gear movement, etc.

- ON / OFF switch, range adjustment, fine and coarse adjustment buttons to synchronize flash, double or divide in half the flashing and display rate with just one activation, memory
- Frequency range adjustment with turn-key
- Detachable pistol-grip handle
- Xenon white lamp of 6.500 K
- External trigger function
- RS-232 interface
- Tripod for fix the unit
- ISO Certificate as optional



Technical specifications

Measurement range	5 to 12,500 r.p.m. 0.083 to 208 Hz
Accuracy	±0.15 % (up to 1,000 r.p.m.) ±0.5 % (up to 3,300 r.p.m.) ±1.0 % (over)
Resolution	0.1 (up to 999 r.p.m.) 1.0 (> 999 r.p.m.)
Maximum distance	1 m (depending on operating illumination)
Phase shift	no
Power	230 V AC 50 Hz
Enclosure	ABS plastic
Dimensions	210 x 120 x 120 mm
Weight	1100 g

Contents

PCE-OM 15 Stroboscope, detachable pistol-grip, power adaptor and user's manual

Model No.	Description
PCE-OM 15	Stroboscope

Optional accessories

XL-DS	Spare Xenon White lamp
STAT	Tripod
CAL-DS	ISO Certificate



PCE-OM 200

Phase displacement stroboscope, trigger input and powered by rechargeable battery

High performance stroboscope with sturdy enclosure. The flash frequency is adjusted from the apparatus and appears on the LED display. The machine component or the material to be tested is illuminated in respect to the frequency of repetition of movement and when this is done, the user perceives the object to be stationary. Impulses can be divided or multiplied to determine the exact number of revolutions.

- Powered by rechargeable NiCad battery (14.4 V)
- Phase displacement
- Flash frequency adjusted using the device or it can be input from an external sensor/trigger input
- Frequency can be adjusted: x2 or /2
- Continuous operation without losing power thanks to the large reflector and good heat displacement
- 13 W, 6,300 K, white Xenon lamp
- Large LED display
- Optional ISO calibration certificate



Technical specifications

Measurement ranges	30.0 to 14,000 r.p.m. 0.5 to 233.33 Hz
Accuracy	±0.01 %
Resolution	0.1 r.p.m.
Maximum distance	1,5 m (depending on illumination)
Phase displacement	yes, up to 360 °
Power	internal rechargeable battery
Mains Power	230 V / 50 Hz
Indicator	LED
Enclosure	plastic
Dimensions	110 x 185 x 300 mm
Weight	with accumulator 1880 g

Contents

PCE-OM 200 stroboscope, rechargeable battery, charger, replacement lamp, case and user's manual

Model No.	Description
PCE-OM 200	Stroboscope with rechargeable battery, charger, spare lamp and carrying case

Optional accessories

UNX-TP	Trigger cable (impulse input)
UNX-TC	Trigger cable (contact input)
EA-200	Replacement rechargeable battery
ER-200	Replacement xenon lamp
STAT	Tripod
CAL-DS	ISO Certificate

Beacon

Handheld stroboscope with high light unit

The high powered, handheld Beacon stroboscope allows you to measure revolutions, oscillations or observe movement in sieving processes. It has a small, light weight enclosure. Because of this it can be used to measure with comfort in the places difficult to access. The intensity of light of 1374 lux at 5 m distance allows you use it in conditions of low illumination. The flash frequency is adjusted with two keys and it appears on the digital display.

- ON/OFF switch, fine and coarse adjustment buttons to synchronize flash, double or divide to half the flashing
- 1374 lux Xenon white lamp (100 million flashes)
- FPS/Hz = flashes / second or Hz
- Three power levels
- Long battery life: 30 min (maximum intensity and flash range)
- Solid enclosure
- Operates with rechargeable battery
- Two batteries included
- ISO Certificate as optional



Technical specifications

Measurement range	30.0 to 18,000 r.p.m. 0.5 to 300 Hz
Accuracy	±0.01 % of reading
Resolution	± 0.1 r.p.m. (full range)
Maximum distance	5 m (depending on operating illumination)
Phase shift	yes, up to 360 °
Power	15 VDC (internal rechargeable battery, charges in 2 to 3 h)
Enclosure	ABS plastic
Dimensions	168 x 161 x 342 mm
Weight	2300 g (with battery)



Beacon in use

Contents

Beacon Stroboscope, battery charger, adaptor, 2 batteries and user's manual

Model No.	Description
Beacon	Stroboscope with batteries

Optional accessories

TC-BEAC	Trigger cable (impuls & contact)
ER-BEAC	Replacement xenon lamp
EA-BEAC	Replacement battery
NST-BEAC	Nylon carrying case
CAL-DS	ISO Certificate

PCE-T259

Handheld tachometer and stroboscope: two meters in one

This tachometer and stroboscope in one is useful for inspection and maintenance in production processes. It is a handheld meter that is ideal for checking revolutions of machine components or in motors, fans and other mechanisms.

Stroboscope

The stroboscope has a measurement range of 100 to 100,000 r.p.m.. Due to the connection IC and the orange lamp LED the meter has low power consumption and it doesn't require maintenance. The stroboscope is adjusted by two knobs for fine and normal adjustment.

Tachometer with non-contact measurement

Tachometer without contact from 5 to 100.000 r.p.m. with a resolution of 0.1 (within <1,000 r.p.m.).

- High power LED lamp
- Solid, ABS plastic enclosure
- 5 digit LCD, 10mm, 180° automatic drawing (depending on measurer model)
- Memory for last, maximum and minimum values, automatic update when the unit is turned on
- ISO Certificate as optional



Technical specifications

Measurement range	5 to 99,999 r.p.m. (photo) 100 to 100,000 r.p.m. (stroboscope - flashes/min)
Accuracy	±0.1 % of value; ±2 positions
Resolution	0.5 r.p.m. <1000 r.p.m. (photo) 1.0 r.p.m. >1000 r.p.m. (photo) 0.1 r.p.m. (< 1000 r.p.m.) (stroboscope) 1.0 r.p.m. (> 1000 r.p.m.) (stroboscope)
Maximum distance	50 to 150 mm; max. 300 mm
Min Max Peak Hold	yes
Interface /data transfert	-
Software	-
PC requirements	-
Power	4 AA batteries (1.5V)
Enclosure	ABS plastic
Dimensions	65 x 215 x 38 mm
Weight	300 g



Optical measurement of rotation

Contents

PCE-T259 Tachometer, reflective marking tape (600mm), carrying case and user's manual

Model No.	Description
PCE-T259	Stroboscope and tachometer

Optional accessories

REFB	Reflective marking tape (500mm roll)
CAL-DS	ISO Certificate (for stroboscope function)
CAL-DT	ISO Certificate (for tachometer function)

Tachometers

PCE-DT62

Photo tachometer with laser for non-contact measurements

Portable PCE-DT62 tachometer is the ideal measurer for measuring revolutions in machine components, conveyor belts, motors, etc.. The non-contact measurement is carried out with the help of a reflective marker on the object to be measured and you must aim the laser light beam for accurate readings that are refreshed every second. This tachometer has a switch to select the measurement: you can select the revolutions per minute measurement (RPM) or the count (TOT). You can also store the MAX and MIN values.

- Narrow beam laser for accurate non-contact measurement
- Use reflective marker on object to be measured and aim the laser light beam to take accurate measurements that refresh every second
- Solid ABS plastic enclosure
- Built-in memory recall, Last, MIN / MAX values stored
- ISO Certificate optional



Technical specifications

Measurement range	2 to 99,999 r.p.m.
Resolution	in the range 2 to 999.9 = 0.1 r.p.m. in the range 1000 to 99,999 = 1 r.p.m.
Accuracy	± 0.05 % of reading, ±1 digit
Maximum distance	500 mm
Memory	MAX, MIN and last values
Power	1 battery 9 V pack
Operating temperature	0 to +50 °C
Enclosure	ABS plastic
Indicator	5 digit LCD (16 mm)
Dimensions	160 x 58 x 39 mm
Weight	150 g

Contents

Laser Photo Tachometer, batteries, 5 reflective tape markers of (15 cm), carrying case and user's manual

Model No.	Description
PCE-DT62	Tachometer

Optional accessories

REFB	Reflective tape marker (5 m roll)
CAL-DT	ISO Certificate

Use of the PCE-DT62 handheld tachometer



non-contact measurement

PCE-T236

Combination contact/photo tachometer

This handheld tachometer is a complete instrument for optical RPM (Revolutions Per Minute) measurement. The PCE-T236 is suitable for revolutions of machine components, conveyor belts, motors, etc. Measurement without contact (photo) using a reflective marker on the object to be measured. You only need to point the laser light beam at the rotating component for accurate readings that are refreshed every second. Contact measurement with contact through a flat tip, spare, cone tip or surface wheels which are included in the delivery (see picture). This tachometer has a switch to select four ranges and memory which stores MAX, MIN and Peak values.

- Provides RPM (photo) readings with reflective tape markers (60 mm) and linear surface speed (contact) measurements
- Contact RPM measurements for flywheels, conveyor belts, pumps and elevators
- Non-contact RPM measurements for fans, motors and gears
- Tachometer memory stores last, MIN e MAX readings
- Complete with wheel for linear surface RPM measurements
- ISO Certificate as optional



Technical specifications

Measurement range	5 to 99,999 r.p.m. (photo measure.) 0.5 to 19,999 r.p.m. (measure. with contact) 0.05 to 1999 m/min (measure. with contact)
Accuracy	± 0.05 % of reading; ±1 dgt.
Resolution	0.1 r.p.m. (range 0.5 to 999.9 r.p.m.) 1.0 r.p.m. (other range)
Maximum distance	300 mm
Min Max Peak Hold	yes
Interface	-
Software	-
PC requirements	-
Power	4 AA batteries (1.5 V)
Enclosure	ABS plastic
Dimensions	65 x 215 x 38 mm
Weight	300 g

Contents

PCE-T236, cone tip, flat tip, surface wheel, reflective marker tape (60 mm) and user's manual

Model No.	Description
PCE-T236	Tachometer

Optional accessories

REFB	Spare reflective marker tape (roll of 5 m)
EMA-DT	Spare adaptor kit
CAL-DT	ISO Certificate

Use of PCE-T236 handheld tachometer



non-contact measurement



measurement with contact



measurement of conveyor belt

PCE-151

Tachometer with interface and software

Photo tachometer with RS-232 interface, software for data transfer. You can add an adaptor for contact measurements. Thanks to the possibility of data transmission, you can use this unit in experiments and in tests to determine the number of rotations of a specific object. It is also possible to take an accurate count of pieces or products on conveyor belts. The unit can also be fixed to a tripod or another mounting device.

- Solid enclosure
- Non-contact measurement with reflective tape markers
- Contact measurement with an optional adaptor
- 5 digit LCD (10 mm)
- Tachometer memory stores last, MIN e MAX readings
- Auto shut-off after 30 min
- RS-232 interface and software to transfer data to a PC
- ISO Certificate as optional



optional adaptor

Technical specifications

Measurement range	10 to 99,999 r.p.m. (photo measurement) 0 to 99,999 (photo measurement) 0.2 to 1999 Hz (r/s), (optical measurement) 10 to 29,999 r.p.m. (with adaptor) 0.2 to 500 Hz (r/s), (with adaptor)
Accuracy	± 0.04 % of reading; ±2 dgt.
Resolution	0.001 / 0.01 / 0.1 / 1 in all ranges (photo and contact measurements)
Maximum distance	300 mm
Min Max Peak Hold	yes
Interface	yes, RS-232, sampling time of 2 sec
Software	yes, for transfert and check values
PC requirements	CD, Windows 95 or better
Power	4 AA batteries (1.5 V)
Enclosure	ABS plastic
Dimensions	172x 63x 36 mm
Weight	190 g

Contents

PCE-151 Tachometer, reflective marker tape, interface, software and user's manual

Model No.	Description
PCE-151	Tachometer

Optional accessories

REFB	Spare reflective marker tape (5 m)
PCE-152	Adaptor for contact measurement
STAT	Tripod
CAL-DT	ISO Certificate



non-contact measurement



measurement with contact



measurement of conveyor belt

PCE-155

Tachometer/Ratemeter with a range of 8 m, pulse output and sensors

The PCE-155 handheld tachometer is a digital, battery-powered, optical unit which operates up to 8m from a moving target using a laser light source. The ergonomic design allows for safe, direct line-of-sight of both the target and the display at the same time, while providing a non-slip rubber surface for single hand operation. This tachometer is a 32 function tachometer/ratemeter and timer (stopwatch), which can be programmed. Support is built-in for both our optional remote contact assembly (RCA) and our remote sensors. It has a TTL compatible Pulse Output to trigger devices like data collectors or stroboscopes. The kit comes supplied complete with a Remote Contact Assembly including concave and convex tips and a 10cm linear speed wheel.

- Handheld tachometer for non-contact measurements up to 8 m
- Velocity in m/min, r.p.m.
- Large 5 digit LCD (12 mm)
- Built-in memory recalls Last, MIN / MAX values stored
- Large measurement range,
- External sensors
- Contact tachometer (optional)
- Internal totals and timer functions
- ISO Certificate as optional



Technical specifications

Contact RPM range	0.5 to 20,000 r.p.m. (probes) 0.5 to 12,000 r.p.m. (wheels) accurate to within ±0.05 %
Optical range	5 to 200,000 r.p.m. accurate to within ±0.01 %
Resolution	0.001 to 1.0 r.p.m.
Operating range	5 cm to 8 m, ±70 °
Laser sensor	class 3R, 3 mW, 650 nm
Length measurement	0 to 999,999 inchs, feet, yards, cm or m (10 cm wheel)
Stop/time switch	minutes: seconds: decimal up to 99:59.9
Memory	MIN, MAX and last values
Indicator	5 digit LCD (12 mm)
Type input	jack plug
Pulse output	jack plug, 1:1, 0 to 3.3 VDC
Power	2 AA batteries (1.5 V)
Operating conditions	+5 °C to +40 °C, 5 % to 80 % r.h.
Enclosure	Rubberized
Dimensions	175 x 61 x 41 mm
Weight	210 g

Contents

PCE-155: tachometer and user's manual with pictures or PCE-155 KIT: tachometer, tips, 10cm wheel, reflective marking tape, handle and carrying case.

Model No.	Description
PCE-155	Handheld tachometer PCE-155
PCE-155 Kit	Tachometer PCE-155 Kit

Optional accessories

OSEN	Optical sensor
ISEN	Infrared sensor
STAT	Tripod to mount the PCE-155
CAL-TRM	ISO-9000 Certificate



non-contact measurement



measurement with contact



measurement of conveyor belt

Vibration Meters

PCE-S 41

Electronic vibration meter for inspection and machine maintenance

This battery powered electronic vibration meter is used to measure noises in machines, e.g. in fans or pistons. This unit gives the user the opportunity to identify problem areas before they cause a machine to breakdown (preventative maintenance). This vibration meter is an entry level product which is an easy to use, versatile unit which comes complete with transducer, probe and carrying case. The headphones of the vibration meter are equipped with two adjustable auditory protectors and a 1m cable.

- Suitable for inspection and maintenance (to find potential machine malfunctions)
- Revolving switch for volume control
- ABS plastic enclosure
- With two needles (70 + 290 mm)



Technical specifications

Measurement range	100 Hz to 10 kHz
Volume	adjustable
Tweeter	8 W
Operating conditions	-10 to +55 °C
Power	9 V battery included
Enclosure	ABS
Dimensions	meter: 206 x 50 x 32 mm sensor: 1 x 290 mm ; 1 x 70 mm (length)
Sensor	stainless steel
Weight	240 g with battery included



Contents

PCE-S 41 vibration meter, headphones with 1m cable, battery, 70 and 290 mm sensors, carrying case and user's manual

Model No.	Description
PCE-S 41	Electronic vibration meter



PCE-VT 1000 & PCE-VT 2600

Pocket-sized device to measure vibration velocity in machines and installations

The vibration meter is used primarily for the preventative maintenance of production machinery and installations. This vibration meter quickly measures imbalance and tests the state of mechanisms. It is also used to check small electromotors.

- Measures the velocity of vibration; The PCE-VT 2600 also measures acceleration of vibration and displacement
- Retains reading after each measurement
- Easy to use, powered by batteries
- Wide frequency range
- Automatic shut-off after two minutes of inactivity
- Advises when battery needs changing



Technical specifications

Measurement ranges	PCE-VT 1000	PCE-VT 2600
- acceleration	---	0.01 to 199.9 m/s ²
- velocity	0.1 to 199.9 mm/s	0.01 to 199.9 mm/s
- displacement	---	0.001 to 1.999 mm
Resolution		
- acceleration	---	0.01 m/s ²
- velocity	0.1 mm/s	0.01 mm/s
- displacement	---	1 µm
Accuracy	±5 %	±5 %
Frequency ranges		
- acceleration	---	10 Hz to 1 kHz
- velocity	10 Hz to 1 kHz	10 Hz to 1 kHz
- displacement	---	10 Hz to 500 Hz
Indicator	display LCD with 3.5 digits, with Data Hold function	
Power	2 batteries (1.5 V) CR 2032, approx. 5 hours of continuous operation	
Operating conditions	0 to +40 °C, < 85 % r.h.	
Dimensions	150 x 22 x 15 mm	
Weight	100 g	

Contents

Pen vibration meter, leather case, batteries and user's manual

Model No.	Description
PCE-VT 1000	Pen vibration meter
PCE-VT 2600	Pen vibration meter

Optional accessories

CAL-V-I	ISO Certificate for PCE-VT 1000
CAL-V-II	ISO Certificate for PCE-VT 2600



PCE-VT 2000

Pen vibration meter for velocity (RMS) and acceleration (peak)

The pen vibration meter is basically used for preventative maintenance in machines and installations by measuring velocity and acceleration. This pocket tester is ideal for personal maintenance and repair technicians. This instrument can be used anywhere as it is powered by batteries.

- Measures velocity and acceleration
- Data hold, Memory (max., min.)
- Large display
- Wide frequency range
- Shows low battery indicator
- Auto-Power-Off



Technical specifications

Measurement ranges	
- acceleration	0.1 to 199.9 m/s ²
- velocity	0.1 to 199.9 mm/s
- displacement	---
Resolution	
- acceleration	0.1 m/s ²
- velocity	0.1 mm/s
- displacement	---
Accuracy	±5 %
Frequency ranges	
- acceleration	10 Hz to 1 kHz
- velocity	10 Hz to 1 kHz
- displacement	---
Indicator	display LCD, 20 x 28 mm
Power	4 AAA batteries (1.5 V);
Operating conditions	0 to +50 °C, < 80 % r.h.
Dimensions	175 x 40 x 132 mm
Weight	240 g

Contents

Pen vibration meter, 30 mm needle probe, magnetic plate, batteries, carrying case and user's manual

Model No.	Description
PCE-VT 2000	Pen vibration meter

Optional accessories

CAL-V-I	ISO Certificate for PCE-VT 2000
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PCE-VT 2700

Vibration meter for velocity (RMS), acceleration (peak) and displacement (peak-peak)

The vibration meter is basically used for preventative maintenance in machines and installations by measuring velocity, acceleration and displacement. This small tester is ideal for personal maintenance and repair technicians. This device can be used anywhere as it is battery powered.

- Measures velocity, acceleration and displacement
- RS-232 interface
- Retains maximum value after each measurement
- Large display
- Wide frequency range
- Shows low battery indicator
- Automatic shut-off



Technical specifications

Measurement ranges	
- acceleration	0.1 to 400.0 m/s ²
- velocity	0.1 to 400.0 mm/s
- displacement	0.001 to 4.000 mm
Resolution	0.1 m/s ² ; 0.1 mm/s; 1 µm
Accuracy	±5 %
Frequency ranges	
- acceleration	10 Hz to 1 kHz
- velocity	10 Hz to 1 kHz
- displacement	10 Hz to 1 kHz
Indicator	4 digit LCD; shows last reading
Interface	RS-232
Power	4 AAA batteries (1.5 V); approx. 4.5 hours of continuous operation
Operating conditions	0 to +50 °C, < 90 % r.h.
Dimensions	124 x 62 x 30 mm
Weight	240 g

Contents

PCE-VT 2700 vibration meter, sensor, 2 needle probes, magnetic pedestal, case and user's manual

Model No.	Description
PCE-VT 2700	Vibration meter

Optional accessories

VT-2700-SW	Software and RS-232 interface
CAL-V-II	ISO Certificate

PCE-VT 204

Vibration meter with external acceleration sensor and tachometer function to measure revolutions, with or without contact

The PCE-VT 204 Vibration meter and hand tachometer are combined into one device. It is the ideal device for testing machines and installations that have components that rotate or vibrate. This will help detect possible damage and allow for a repair programme to be established to minimise machine down time. In future there will also be an infrared thermometer available (-20 to +270°C), that will allow this device to measure surface temperature without contact.

- measures velocity, displacement and acceleration
- optically measures revolutions with a laser point and reflective tape up to a distance of 1.5m or by contact
- measures velocity in m/min by way of a contact measurement
- external vibration sensor (Ø 18 x 40 mm) with magnetic pedestal included
- Memory for 1000 readings
- Minimum, maximum and Data-hold functions
- computer interface
- Optional: software and USB cable, calibration certificate



The order includes a needle sensor and magnetic pedestal

Technical specifications

Vibration functions	
Acceleration range	0.5 to 199.9 m/s ²
Velocity range	0.5 to 199.9 mm/s
Displacement range	0.005 to 1.999 mm
Resolution	0.1 m/s ² , 0.1 mm/s; 0.001 mm
Accuracy	±5 % ±2 digit
Frequency range	10 Hz to 1 kHz
Tachometer functions	
Revolution range (optical)	10 to 99,999 U/min
Revolution range (contact)	0.5 to 19,999 U/min
Speed range (contact)	0.05 to 1,999 m/min
Resolution	0.1 r.p.m (<1000) 1 r.p.m (>1000) 0.01 m/min (<100), 0.1 m/min (>100)
Accuracy	± 0.05 % of reading; ±1 digit
Measure. distance	50 to 1500 mm (depending on surface)
General properties	
Memory	1000 readings
Indicator	LCD with graphic bars
Power	4 AA batteries (1.5 V)
Operating conditions	0 to +50 °C, < 80 % r.h.
Dimensions	188 x 76 x 47 mm
Weight	400 g

Contents

PCE-VT 204 vibration meter / tachometer, external sensor, needle sensor, magnetic pedestal, measurement end, measurement cone (the measurement end and cone are for tachometer functions), reflective tape (600 mm), case, batteries and user's manual

Model No.	Description
PCE-VT 204	Tachometer / Vibration meter

Optional accessories

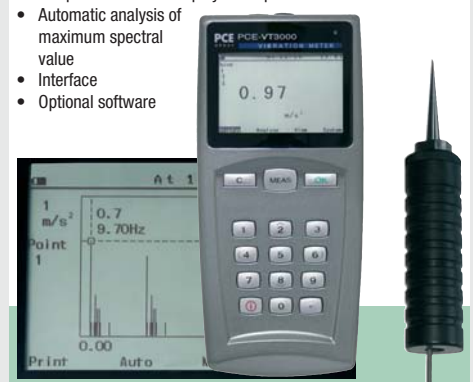
VT-204-SW	Software and USB interface
REFB	Reflective tape (5 m roll)
CAL-V-II	ISO Certificate (Vibration)
CAL-DT	ISO Certificate (Tachometer)

PCE-VT 3000

Vibration meter with memory, FFT analysis, interface for PC and optional software

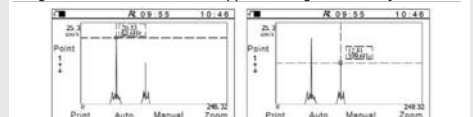
This vibration meter is an easy to use, versatile unit which measures the acceleration, displacement and oscillation speed quickly. One advantage is the possibility to store readings directly to the unit's internal memory. With the RS-232 interface, you will be able to transfer the data from the vibration meter to a PC.

- Acceleration, velocity, displacement, turn and frequency of vibration
- Internal memory to store up to 1800 values (in 25 groups of 72 values)
- Three operating modes:
 - Special mode: displays maximum acceleration, turn velocity in RMS and displacement of maximum value
 - Common mode: only displays one of the previous values in large cifres
 - Spectrum mode: displays the spectrum value
- Automatic analysis of maximum spectral value
- Interface
- Optional software



Technical specifications

Measurement ranges	
Acceleration range	0.1 m/s ² to 392 m/s ² (Peak); (39.95 g force)
Velocity range	0.01 cm/s to 80 cm/s (RMS)
Displacement range	0.001 mm to 10 mm (Peak-Peak)
Frequency ranges	
Acceleration range	10 Hz to 200 Hz, 10 Hz to 500 Hz 10 Hz to 1 kHz, 10 Hz to 10 kHz
Velocity range	10 Hz to 1 kHz
Displacement range	10 Hz to 500 Hz
General features	
Resolution	0.25 Hz
Accuracy	±5 %
Interface	RS-232
Power	rechargeable battery
Operating conditions	0 to 40 °C / <80 % r.h.
Dimensions	171 x 78,5 x 28 mm
Weight	approx. 230 g with battery



Contents

PCE-VT 3000 Vibration meter, probe (50 mm pointer with handle and 1.5m cable), battery, battery charger, carrying case and user's manual

Model No.	Description
PCE-VT 3000	Vibration meter

Optional accessories

MT-WEDGE-PCE-VT	Software and RS-232 interface
RS232-USB	RS-232 to USB Adapter
CAL-V-II	ISO Certificate

Force Gauges

PCE-PTR 200

Fruit firmness tester which helps determine the ripeness of fruit

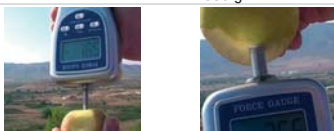
The PCE-PTR 200 fruit firmness tester, also known as a fruit pressure tester, is a penetrometer that measures fruit firmness and provides a quick, easy and accurate method to determine the ripeness of fruit. Contrary to other analogical penetrometers, this digital fruit firmness tester will offer you high levels of accuracy and resolution in its measurements. With this tester you will obtain very valuable information, for example, the date of harvest, the condition of the fruit during storage, transport and at point of sale. This fruit firmness tester can be used as either a handheld instrument or mounted on an optional test stand for more precise measurements.

- Combines 3 penetration probes
- kg/cm² conversion table
- Sotores MAX value
- Zero reset
- Peak Hold and recall MAX value
- Auto shut-off
- Low battery indicator
- Overrange protection = 150 %
- RS-232 interface
- ISO Certificate (optional)



Technical specifications

Model	PCE-PTR 200
Measurement ranges	0 to 20 kg / 0 to 196 N
Accuracy	±0.5 %, ±2 of reading
Resolution	10 g / 0.05 N
Units of measurement	grams / Newton
Overload capacity	30 kg
Interface	yes
Software	yes, (optional)
Memory	-
Functions	push / pull measure. with Peak Hold
Display	5 digit LCD; 10 mm
Power	6 1.5 V batteries or adaptor
Enclosure	ABS plastic
Dimensions	227 x 83 x 39 mm
Weight	550 g



Contents

PCE-PTR 200 fruit firmness tester, 3 penetration probes (Ø6, Ø8, Ø11 mm), 2 stop washers, conversion table, carrying case and user's manual

Model No.	Description
PCE-PTR 200	Fruit firmness tester

Optional accessories

SOFT-LUT-D	Software in English with data cable included
RS232-USB	RS232 to USB adaptor
CAL-FG-II	ISO Certificate for PCE-PTR
NET-300	Net adaptor

optional teststands on pages 28 / 29

Serie PCE-FM

Force gauge (5 kg and 20 kg) with RS-232 interface and optional software and test stand for serial measurements

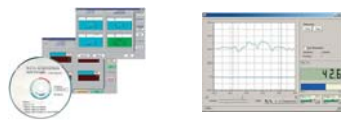
PCE-FM series force gauge with quick and precise reading of push and pull measurements. The display can be rotated 180 ° to allow for the gauge to be in the correct position to take an accurate measurement. This force gauge can be used as either a handheld instrument or mounted on an optional test stand for more precise measurements.

- Two models available: 5 kg and 20 kg
- RS-232 interface
- Software (optional)
- Hold function for tension / compression maximum values
- Zero reset button
- Peak Hold and maximum value recall
- Auto shut-off
- Overrange protection = 150 %
- Holes for test stand mounting
- Test stand (optional)
- ISO Certificate (optional)



Technical specifications

Model	PCE-FM50	PCE-FM200
Ranges	0 to 5 kg / 0 to 49 N	0 to 20 kg / 0 to 196 N
Accuracy	±0.4 %, ±1 dgt	±0.5 %, ±2 dgt
Resolution	1 g / 0.01 N	10 g / 0.05 N
Unit	grams / Newton	grams / Newton
Overrange capacity	7.5 kg	30 kg
Interface	yes	yes
Software	yes, (optional)	yes, (optional)
Memory	-	-
Functions	push / pull measure with Peak Hold	push / pull measure with Peak Hold
Display	5 digit LCD; 10 mm	5 digit LCD; 10 mm
Power	6 1.5 V batteries or adaptor	6 1.5 V batteries or adaptor
Enclosure	ABS plastic	ABS plastic
Dimensions	227 x 83 x 39 mm	227 x 83 x 39 mm
Weight	550 g	550 g



Contents

Force gauge (one of our models), flathead, hook, cone and chisel adaptors, extension rod (120 mm), carrying case and user's manual

Model No.	Description
PCE-FM50	Force gauge up to 5 kg
PCE-FM200	Force gauge up to 20 kg

Optional accessories

SOFT-LUT-D	Software in English with RS-232 cable
RS232-USB	RS232 to USB adaptor
CAL-FG-I	ISO Certificate for the PCE-FM50
CAL-FG-II	ISO Certificate for the PCE-FM200
NET-300	Net adaptor

optional teststands on pages 28 / 29

PCE-FM1000

Force gauge with external load cell, RS-232 interface and optional software

Force gauge that measures tension and compression up to 100 kg (981 N). The external dynamometric cell can be hung or hooked with a bracket (included in the delivery) that can be unscrewed and separated from both sides of the cell to fasten onto test stands and bench tests.

- External load cell with 2 m cable
- Crane hook and adjustable bracket
- Optional software and test stand
- Hold function for push/pull maximum values
- Zero reset button
- Peak Hold and maximum value recall
- Auto shut-off
- Overrange protection = 150 %
- ISO Certificate (optional)

PCE-LTS20 test stand and holder to adjust the unit (optional)



Technical specifications

Model	PCE-FM1000
Range	0 to 100 kg / 0 to 981 N
Accuracy	±0.5 % ± 2 digits / ± 5 N
Resolution	0.05 kg / 0.2 N
Units	grams / Newton
Overrange protection	50 % (max. 150 kg)
Interface	yes
Software	yes, optional
Memory	-
Functions	push and pull with Peak Hold
Display	5 digit LCD (10 mm)
Power	6 1.5V batteries or AC adaptor
Enclosure	ABS plastic
Dimensions	load cell: 130 x 51 x 18 mm unit: 227 x 83 x 39 mm
Weight	external load cell: 380 g unit: 450 g



Contents

PCE-FM1000 force gauge with external load cell and 2 m cable, carrying case and user's manual

Model No.	Description
PCE-FM1000	Force gauge up to 100 kg

Optional accessories

SOFT-LUT-D	Software with RS-232 cable
RS232-USB	RS232 to USB Adaptor
CAL-FG-III	ISO Certificate for PCE-FM1000
NET-300	Net adaptor

optional teststands on pages 28 / 29

PCE-SH 500

Digital push/pull force gauge with internal load cell

This digital push/pull force gauge measures compression and tension forces through an internal dynamometric cell. The force gauge can be used to test the force, compression and tension, fracture force, insertion/withdraw force, adhesive force, and so on. The most important feature of this unit is its high resolution of 0.5 Newton. If you want, you can use the digital push force gauge on the PCE-FTS50 test stand for more precise measurements.

- Display backlight
- N, t and lb units are selected at the push of a button
- Peak or average force
- Overlimit alarm (upper and lower limit)
- Memory to store up to 10 values
- RS-232 interface
- Overrange protection= 120 %
- Force direction displayed
- ISO Certificate (optional)



optional PCE-FTS50 test stand

Technical specifications

Model	PCE-SH 500
Range	0 to 500 N 0 to 51 kg
Resolution	0.1 N
Load cell	internal
Dimensions [mm]	- - -
Accuracy	±0.5 % of reading
Response time	< 0.1 sec
Peak Hold	yes
Real time / Peak mode	yes
Internal memory	10 peak values (recall)
Interface	RS-232
Data transfer	PRINT button
Overrange protection	up to 20% higher
Display	LCD backlight
Power	internal 8.4 V NiHi battery / 1200 mA
Dimensions	225 x 66 x 36 mm
Weight	approx. 460 g

Contents

PCE-SH 500 force gauge, 6 adaptors, battery (internal), battery charger, carrying case and user's manual

Model No.	Description
PCE-SH 500	Force gauge (0 ... 500 N)

Optional accessories

PCE-SOFT-SH	Software with data cable
CAL-FG-III	ISO Certificate PCE-SH 500

optional teststands on pages 28 / 29

Serie PCE-SH

Handheld force gauge with high accuracy

This handheld force gauge measures the tension and compression forces through an external dynamometrical cell with a 2.5 m cable. It can be used to test the force, fracture force, insertion/withdraw force, adhesive force, and so on. The most important feature of this dynamometer is its high resolution and its high measurement range up to 50,000 N (according to the model). You will be able to quickly check the compression force at the press of a button or the hydraulic tension force. It isn't necessary to use additional measurement cells, because with the combined cell "Z" you will be able to measure tension and compression forces.

- LCD backlight
- N, t and lb units are selected at the push of a button
- Peak or average force
- "Overlimit alarm" (upper and lower limit)
- Memory to store up to 10 values
- RS-232 interface
- Overrange protection
- Force direction displayed
- ISO Certificate (optional)



Technical specifications

Model	PCE-SH 2K	PCE-SH 10K	PCE-SH 50K
Range	0 to 2 kN 0 to 204 kg	0 to 10 kN 0 to 1019 kg	0 to 50 kN 0 to 5097 kg
Resolution	1 N	5 N	10 N
Load cell	external	external	external
Dimensions [mm]	76 x 50 x 25	76 x 50 x 25	107 x 75 x 25
Accuracy	± 0.5 % of reading		
Response time	< 0.1 sec		
Peak Hold	yes		
Real time / Peak mode	yes		
Memory	10 peak values (recall)		
Interface	RS-232		
Data transfer	PRINT button		
Overrange	up to 20 % over par value		
Display	LCD backlight		
Power supply	internal battery NiHi of 8.4 V / 1200 mA		
Dimensions	225 x 39 x 60 mm		
Weight	approx. 130 g (without cell)		

Contents

PCE-SH force gauge (depending on model), dynamometric cell with 2.5 m cable, push/pull bolt fastener, rechargeable battery, battery charger, carrying case and user's manual

Model No.	Description
PCE-SH 2K	Dynamometer (0 ... 2.000 N)
PCE-SH 10K	Dynamometer (0 ... 10.000 N)
PCE-SH 50K	Dynamometer (0 ... 50.000 N)

Optional accessories

PCE-SOFT-SH	Software with data cable
CAL-SH2-D	ISO Cert. for PCE-SH 2K (pressure)
CAL-SH2-Z	ISO Cert. for PCE-SH 2K (pulling)
CAL-SH5-D	ISO Cert. for PCE-SH 10K & 50K (pressure)
CAL-SH5-Z	ISO Cert. for PCE-SH 10K & 50K (pulling)

optional teststands on pages 28 / 29

Force Gauges

PCE-FTS50

Test station with digital distance meter for our dynamometers

The PCE-FTS50 test station can be used for our PCE-PTR, PCE-FM50, PCE-FM200 and PCE-SH 500 dynamometers. It is indicated below whether it needs an adaptor or not.

- Range up to 500 N or 50.9 kg
- Maximum distance of 335 mm
- Distance can be read through the digital distance meter
- Operated by way of crank
- The PCE-SH 500 can be attached without adaptor
- The PCE-PTR, PCE-FM50 and PCE-FM200 can be attached with the corresponding adaptor
- The adaptors or the dynamometer are not included in the order



Technical specifications

Ranges	0 to 50.9 kg / 0 to 500 N
Distance travelled	max. 335 mm
Velocity	-
Functions	manual, by way of crank
Power	button type battery for the digital length meter
Dimensions	540 x 210 x 128 mm
Weight	approx. 8.8 kg

Adaptor (optional)

PCE-PTR	PCE-FTS-ADP
PCE-FM50 / PCE-FM200	PCE-FTS-ADP
PCE-SH 500	directly, no adaptor required

Contents

PCE-FTS50 test stand, digital length meter, battery and user's manual

Model No.	Description
PCE-FTS50	Teststand

Optional accessories

PCE-FTS-ADP or PCE-FM200	Adaptor for the PCE-PTR, PCE-FM50
PCE-SJJ05	PCE-SJJ05 clamp
PCE-SJJ11	PCE-SJJ11 clamp
PCE-SJJ13	PCE-SJJ13 clamp



PCE-SJJ05



PCE-SJJ11



PCE-SJJ13

PCE-LTS20

Test station with a large range of force for our dynamometers

The PCE-LTS20 test station can be used for our PCE-PTR, PCE-FM50, PCE-FM200 and PCE-FM1000 dynamometers. One adaptor will be needed for the PCE-FM1000 model of dynamometer. The PCE-LTS20 has a range of force up to 1000 Newton.

- Range up to 1000 N or 101.9 kg
- Maximum distance of 345 mm
- Operated by a crank
- Adaptor is not required for the PCE-PTR, PCE-FM50 and PCE-FM200 models
- The corresponding adaptor is needed for the PCE-FM1000 model
- Adaptors, clamps or dynamometers are not included in the order



Technical specifications

Ranges	0 to 101.9 kg / 0 to 1000 N
Distance travelled	max. 345 mm
Velocity	-
Functions	manually, by way of crank
Power	-
Dimensions	530 x 250 x 230 mm
Weight	approx. 7 kg

Adaptor (optional)

PCE-PTR	directly, no adaptor required
PCE-FM50 / PCE-FM200	directly, no adaptor required
PCE-FM1000	FG-ADP

Contents

PCE-LTS20 test stand and user's manual

Model No.	Description
PCE-LTS20	Teststand

Optional accessories

FG-ADP	Adaptor for the PCE-FM1000
KG-LTS-20	KG-LTS-20 clamp
PCE-SJJ05	PCE-SJJ05 clamp
PCE-SJJ11	PCE-SJJ11 clamp
PCE-SJJ13	PCE-SJJ13 clamp



KG-LTS-20

PCE-MTS500

Automated test station for our dynamometers

The PCE-MTS500 automated test station for our dynamometers offers the possibility to quickly test traction. The maximum travel distance is 214mm, taking into account that when disconnected, the measurement is automatically stopped.

- Range up to 5000 N or 509 kg
- Maximum distance 214 mm
- Automatic shut off when completed
- Adjustable velocity (0 to 240mm / min)
- Automatic or manual modes
- Corresponding adaptors for our dynamometer
- Does not include adaptors or dynamometer



Technical specifications

Ranges	0 to 509 kg / 0 to 5000 N
Distance travelled	max. 214 mm
Velocity	0 to 240 mm /min (adjustable)
Functions	automatic or manuel
Power	230 V / 50 Hz
Dimensions	1020 x 400 x 260 mm
Weight	approx. 60 kg

Adaptor (optional)

PCE-PTR	ADP-MTS-500
PCE-FM50 / PCE-FM200	ADP-MTS-500
PCE-FM1000	directly, no adaptor required
PCE-SH 500	ADP-MTS-500
PCE-SH 2K	directly, no adaptor required
PCE-SH 10K	directly, no adaptor required

(Limited to a max. range of force of 509 kg)

Contents

PCE-MTS500 test stand, mains cable and user's manual

Model No. Description

PCE-MTS500	Teststand
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Optional accessories

ADP-MTS-500	Adaptor for one force gauges
PCE-SJJ05	PCE-SJJ05 clamp
PCE-SJJ11	PCE-SJJ11 clamp
PCE-SJJ13	PCE-SJJ13 clamp



PCE-SJJ05



PCE-SJJ11



PCE-SJJ13

PCE-AFG Serie

Analogue force meter with ranges of 30 and 120 kN and a large display

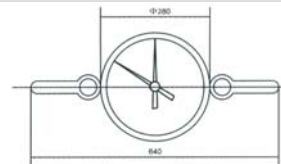
The PCE-AFG series are analogue force meters for measuring traction in Newton. There are two shackles included with the device. This durable model can be used in adverse industrial conditions. These force meters come calibrated from the manufacturer. If an ISO calibration certificate is required for a force meter, one can be ordered separately.

- Analogue, no power supply required
- Light weight for easy transport
- Drag needle to maintain the maximum weight
- Resistant to impacts
- Comes with two shackles (above and below)
- Type of protection: IP 54
- Maximum overload allowed is 200%
- ISO certificate (optional)



Technical specifications

Model	PCE-AFG 30	PCE-AFG 120
Range	0 ... 30 kN	0 ... 120 kN
Accuracy	class 2	class 2
Readability	0,5 kN	2 kN
Minimum load	0,5 kN	2 kN
Unit	Newton	Newton
Tara	full range	
Max. load	up to 200% above nominal maximum	
Display	analogue dial with drag needle	
Ingress protection	IP 54	
Power	---	



Contents

PCE-AFG force meter (various models), 2 x shackle, box and user's manual

Model No. Description

PCE-AFG 30	Force meter up to 30 kN
PCE-AFG 120	Force meter up to 120 kN

Optional accessories

CAL-PCE-AFG	ISO certificate
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Material Testers

PCE-CT 24

Car body tester to test metal coatings

The car body tester is a pocket size device for testing the condition of car bodies and determining the thickness of the varnish layer as well as checking whether the car was repaired after an accident. This car body tester allows the user to locate areas where filler has been used and to determine how thick it is.

- Pocket size tester
- Easy to clean and with integrated sensor
- Easy to use (even for non qualified people)
- LCD with backlight
- Auto shut-off



Technical specifications

Range	0 to 1000 µm
Resolution	1 µm
Accuracy	±7 digits <200 µm ±3 % ±4 digits >200 µm
Indicator	LCD with backlight
Operating temperature	0 to +50 °C
Power	9 V battery pack
Dimensions	148 x 105 x 42 mm
Weight	120 g



Contents

PCE-CT 24 car body tester and user's manual

Model No. Description

PCE-CT 24 Car body tester PCE-CT 24

PCE-CT 26

Waterproofing thickness gauge for metal coatings

This thickness gauge has been developed to measure non-magnetic coatings on ferrous surfaces in the automobile industry. Professionals in the sale and purchase of automobiles value this unit because they can identify areas of damage that a vehicle has potentially suffered in an accident. This thickness gauge is used to measure layers of varnish, isolating coatings or determining thickness of plastic foil laid on steel. The external probe makes it possible to take internal measurements. It's very easy to use, just switch it on, place the probe on the area to inspect and read the thickness of the paint on the LCD

- Easy to clean, with external probe (1.2 m cable)
- Easy to use (even for non qualified people)
- Digital LCD
- Zero reset on metals without paintwork
- Auto shut-off to protect battery life
- Memory containing 3 characteristics of user's calibration
- ISO Certificate (optional)



Technical specifications

Measurement range	0 to 2000 µm
Resolution	0.1 µm in the range 0.0 to 99.9 µm 1 µm in the range 100 to 2000 µm
Accuracy	±2 % or ±2.5 µm
Indicator	4 digit LCD
Operating temperature	0 to +50 °C
Power	4 AAA batteries 1.5 V (incl.)
Dimensions	126 x 65 x 27 mm
Weight	130 g incl. batteries



Contents

PCE-CT 26 coating thickness gauge, calibration plate, carrying case, batteries and user's manual

Model No. Description

PCE-CT 26 Coating thickness gauge PCE-CT 26

Optional accessories

CAL-DFT ISO Certificate

PCE-CT 28

Easy to use coating thickness meter to measure steel and non-ferrous metal surfaces.

The PCE-CT 28 coating thickness meter is an economical device for taking measurements without damaging steel and non ferrous metal surfaces. One significant advantage of the device is that it automatically detects the surface type, eliminating the need to select the surface type manually. The coating thickness meter with its integrated measurement sensor can be operated by pressing a single button, making it a very accurate device to use. It's ideal for measuring the surfaces of vehicles, making it very effective for steel or aluminium bodywork.

- Measurement range up to 1250 µm
- Automatic surface detection (F or FN)
- Wear resistant measurement head
- The V slot in the measurement head simplifies measuring rounded surfaces
- Easy and comfortable to use with only one hand
- Units interchangeable from µm to mils
- Auto shut-off to preserve battery power
- ISO Certificate (optional)



Technical specifications

Measurement range	0 to 1250 µm
Resolution	0.1 µm in the range 0.0 to 99.9 µm 1 µm in the range 100 to 1250 µm
Accuracy	±2 % or ±2.5 µm
Minimum object size	6 x 6 mm
Minimum substrate thickness	typ F: 0.3 mm typ N: 0.1 mm
Indicator	4 digit LCD
Operating temperature	0 ... +50 °C
Power	4 AAA batteries 1.5 V (incl.)
Dimensions	126 x 65 x 27 mm
Weight	120 g incl. batteries



Contents

PCE-CT 28 coating thickness gauge, calibration plate, carrying case, batteries and user's manual

Model No. Description

PCE-CT 28 Coating thickness gauge PCE-CT 28

Optional accessories

CAL-DFT ISO Certificate

PCE-TG100, PCE-TG110, PCE-TG120 & PCE-TG130

Ultrasonic thickness gauge for several materials (metal, plastic, glass, and other consistent materials)

The PCE-TG100 Series is a handheld thickness gauge specifically designed for measuring the thickness of metallic and non-metallic materials from one side where it is not possible to gain access to the other side. It can measure materials as aluminium, glass, ceramics, plastics and other ultrasonic wave-conducting materials. The measurement range for steel is from 0.8 to 225 mm. This unit can perform precise measurements on various types of raw materials, component parts, and assembled machinery. It can be used to monitor all types of pipes and pressure vessels for loss of thickness due to corrosion. Various probe configurations serve a wide range of applications.

- Pulse echo with dual probe
- High accuracy even in residual thickness
- Large LCD with backlight
- Low battery indicator on LCD
- 250 hours continuous operation, 30 hours with backlight
- Hermetically sealed probe with 1.60m cable
- You can replace the probe quickly and easily
- Carrying case which includes probe, ultrasonic couplant and batteries
- ISO calibration certificate (optional)

Choose one of our models that suits your needs:

PCE-TG100: Material thickness gauge for standard applications

PCE-TG110: Material thickness gauge for high temperature

PCE-TG120: Material thickness gauge for tubes with small diameters

PCE-TG130: Material thickness for high dampening measurements



Technical specifications

	PCE-TG100	PCE-TG110	PCE-TG120	PCE-TG130
Use range	probe for standard measurements such as steel, non-ferrous metals, aluminium, ceramics, plastic, glass...	probe for high temp. such as steel, non-ferrous metals, aluminium, plastics, ceramics, glass...	mini probe for measure steel, non-ferrous metals, aluminium, plastics, ceramics, glass, edges, ratios, small surfaces...	probe for high dampening measurements such as ferrous, plastics...
Measure. range (steel)	0.8 to 225 mm	2.5 to 200 mm	1 to 30 mm	3 to 225 mm
Resolution	0.1 mm	0.1 mm	0.1 mm	0.1 mm
Accuracy	±0.1 mm	±0.1 mm	±0.1 mm	±0.1 mm
Frequency	5 MHz	5 MHz	5 MHz	2.5 MHz
Surface temperature	-10 to +50°C	-10 to +400°C	0 to +50°C	-10 to +50°C
Surface diameter	10 mm	12 mm	7 mm	12 mm
Probe connection	right	right	right angle	right angle
Sound speed		500 to 9999 m/s, adjustable in readings of 1 m/s		
Indicator		4 digit LCD with backlight		
Auto power off		after 5 min. without activity		
Low battery		BAT displayed in the screen		
Operating temperature		-10 to +50 °C		
Operating humidity		20 to 90 % r.h.		
Dimensions		124 x 67 x 30 mm		
Weight		240 g		

Contents

PCE-TG material thickness gauge, probe, battery, ultrasonic couplant, carrying case and user's manual

Model No. Description

PCE-TG100	Material thickness gauge for standard applications
PCE-TG110	Material thickness gauge for high temperature
PCE-TG120	Material thickness gauge for tubes with small diameters
PCE-TG130	Material thickness gauge for high dampening measurements

Optional accessories

PCE-TG-ST	Standard probe
PCE-TG-HT	Probe for high temperatures
PCE-TG-MT	Mini probe
PCE-TG-HD	Probe for high dampening measurements
TT-GEL	Ultrasonic couplant, 120 ml
CAL-TG	ISO Certificate

PT-TG 200

Material thickness gauge with adjustable ultrasonic velocity, memory and interface

The PCE-TG 200 material thickness gauge is ideal for measuring wall thickness and the effects of corrosion or erosion on tanks, pipes or any structure where access is limited to one side. This ultrasonic thickness gauge measures wall thickness of materials such as steel, cast iron, plastic and more.

- Ideal for measuring wall thickness and materials such as steel, cast iron, plastic...
- Internal memory which stores up to 4000 values
- LCD with backlight
- mm / inch switchable
- RS-232 interface for data transfer to a PC
- ISO calibration certificate (optional)



Technical specifications

Measurement range	0.8 to 220.00 mm
Probe	5 MHz
Resolution	0.01 mm
Surface temperature	-20 to +60 °C
Calibration	internal calibration test block
Accuracy	±0.04 mm (<100 mm) ±0.3 % (>100 mm)
Units	mm / inch (switchable)
Measurement time	4 readings / sec
Sound speed	1000 to 9999 m/s
Sound speed resolution	1 m/s
Indicator	LCD
Memory	stores up to 4000 values
Data output	RS-232 interface
Power	2 AAA batteries (1.5 V)
Battery life	250 h (without backlight)
Dimensions	108 x 61 x 28 mm
Weight	230 g batteries included

Contents

PCE-TG 200 material thickness gauge, 5 MHz probe, software, RS-232 data cable, batteries, ultrasonic coupling, carrying case and user's manual

Model No. Description

PCE-TG 200	Thickness gauge PCE-TG 200
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Optional accessories

CAI-TG	ISO Certificate
TT-GEL	Ultrasonic coupling
RS232-USB	RS-232 to USB adaptor

Material Testers

PCE-TG 250

Thickness meter with adjustable sound velocity and compensation for surface coatings

The PCE-TG 250 thickness meter is an easy to use device that allows for the measurement of material thickness under coated surfaces. Due to its adjustable sound velocity, this thickness meter is ideal for measuring various materials such as steel, aluminium, glass and homogenous plastics. This allows for the device to be used on tanks, tubes and other coated objects.

- Measures through coatings
- Memory for 500 readings, divisible into 5 files and can be displayed on screen
- Measures between two adjustable limits with acoustic alarm
- Sound velocity can be adjusted (for measuring different materials)
- Measures thicknesses from 1 to 250.00mm
- Calibration of one or two points
- Steel plate integrated for recalibration of the device
- Backlit display
- Includes test block



Technical specifications

Measurement range	1.00 to 250.00 mm (steel) 2.50 to 20.00 mm (surface coating)
Resolution	0.01 mm (<100 mm) 0.1 mm (>100 mm)
Accuracy	±0.01 mm
Probe	5 MHz
Surface temperature	-20 to +60 °C
Calibration	integrated steel plate
Units	mm / inch (selectable)
Sound speed	1000 ... 9999 m/s
Sound speed resolution	1 m/s
Indicator	128 x 64 graphic LCD
Memory	500 (5 x 100) readings
Power	2 AA batteries
Dimensions	149 x 73 x 32 mm
Weight	350g with batteries



Contents

PCE-TG 250 material thickness meter, 5MHz sensor head, calibration standards, batteries, tube of coupling gel, carrying case and user's manual

Model No.	Description
PCE-TG 250	Thickness meter

Optional accessories

CAL-TG	ISO calibration certificate
TT-GEL	Ultrasonic coupling gel

PCE-1000

Portable hardness tester for ferrous materials

This portable hardness tester utilizes state-of-the-art micro-electronic technology, follows the Leeb's rebound principle. This uniquely designed pocket-sized instrument incorporates a hardness impact probe, microprocessor and data display in a single, compact unit. It's capable of displaying hardness measurements in Rockwell B & C, Vickers HV, Brinell HB, Shore HS and Leeb HL. With the digital indicator, you avoid any error in your measurements.

- Pocket-sized meter
- Measures the hardness of most materials
- Impact and rebound speed of a small body
- Large measurement range
- High accuracy
- Tests at any position, even up-side-down
- Auto shut-off
- Rechargeable battery and charger included
- You can connect several adaptors
- ISO calibration certificate (optional)



Technical specifications

Unit	HRC	HRB	HB	HV	HSD
steel / casting	20 to 68	60 to 100	80 to 647	80 to 940	32 to 99
cold-work tool steel	20 to 67	---	---	80 to 898	---
stainless steel	20 to 62	46 to 101	85 to 655	85 to 802	---
grey cast iron	---	---	93 to 334	---	---
spheroidal iron	---	---	131 to 387	---	---
aluminium alloy	---	---	30 to 159	---	---
brass	---	14 to 95	40 to 173	---	---
bronze	---	---	60 to 290	---	---
copper	---	---	45 to 315	---	---

Hardness values HL, HRC, HRB, HB, HV, HSD
Material (adjustable)



STEEL
CWT. STEEL
STAIN. STEEL
GC. IRON
NC. IRON
C. ALUMIN
BRASS
BRONZE
COPPER

Accuracy	±6 HL for HL = 800 (0.8 %)
Impact device	type D (integrated)
Maximum hardness	940 HV
Radius of object (convex / concave)	Rmin = 30 mm (with element 10 mm)
Minimum object weight	5 kg without basement, 2 to 5 kg with basement 50 g to 2 kg with basement and coupling liquid
Minimum object size	3 mm with coupling liquid
Minimum penetration	0.8 mm
Interface	---
Memory	---
Power	9 V rechargeable battery
Max. object temperature	+120 °C
Dimensions	100 x 60 x 33 mm
Weight	150 g

Contents

PCE-1000 portable hardness tester, hardness test block, battery charger, rechargeable batteries, cleaning brush, carrying case and user's manual

Model No.	Description
PCE-1000	Portable hardness tester PCE-1000

Optional accessories

CAL-IMPACT	ISO Certificate
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PCE-2000 & PCE-2000DL

Portable hardness tester for metal with external impact device and RS-232 interface

The PCE-2000 (with D impact device) and the PCE-2000 (with DL impact device) portable hardness tester allows the user to attach various Leeb impact probes and perform rebound hardness measurements with convenient conversion to every popular Rockwell B & C, Vickers HV, Brinell HB, Shore HS and Leeb HL. The external digital indicator of all functions and measurement values avoid errors. They have a statistical function and a RS-232 interface to transfer data to computer (software and cable optional).

- Automatic conversions
- External impact device
- PCE-2000 DL with Leeb impact probes for narrow surfaces
- RS-232 interface
- Tests in any position, even up-side-down
- High accuracy
- Internal memory
- Software and optional cables
- ISO calibration certificate (optional)



PCE-2000
type D

PCE-2000DL
type DL

Technical specifications

Unit	HRC	HRB	HB	HV	HSD
steel / casting *	20 to 68	60 to 100	80 to 647	80 to 940	32 to 99
cold-work toll steel *	20 to 67	---	---	80 to 898	---
stainless steel	20 to 62	46 to 101	85 to 655	85 to 802	---
grey cast iron	---	---	93 to 334	---	---
spheroidal iron	---	---	131 to 387	---	---
aluminium alloy	---	---	30 to 159	---	---
brass	---	14 to 95	40 to 173	---	---
bronze	---	---	60 to 290	---	---
copper	---	---	45 to 315	---	---
Hardness values	HL, HRC, HRB, HB, HV, HSD				
Materials (adjustable)	STEEL *				
* PCE-2000DL only for STEEL & CWT.STEEL	CWT. STEEL *				
	STAIN. STEEL				
	GC. IRON				
	NC. IRON				
	C. ALUMIN				
	BRASS				
	BRONZE				
	COPPER				
Accuracy	±4 HL for HL = 800 (±1.0 %)				
Impact device	PCE-2000: type D, PCE-2000DL: type DL				
Maximum hardness	940 HV				
Radius of object (convex / concave)	Rmin = 30 mm (with element 10 mm)				
Minimum object weight	5 kg without basement, 2 to 5 kg with basement 50 g to 2 kg with basement and coupling liquid				
Minimum object size	3 mm with adhesive liquid				
Minimum penetration	0.8 mm				
Interface	RS-232				
Memory	1250 groups (value, data..)				
Power	2 AAA batteries (1.5 V)				
Max. object temperature	+120 °C				
Dimensions	108 x 62 x 25 mm				
Weight	180 g				

Contents

PCE-2000 or PCE-2000DL portable hardness tester, impact device with 1.5m cable, cleaning brush, adhesive liquid, hardness test block, carrying case and user's manual

Model No.	Description
PCE-2000	Portable hardness tester PCE-2000
PCE-2000DL	Portable hardness tester PCE-2000 DL

Optional accessories

PCE-2000-Soft	Software with RS-232 interface
PCE-2000-SKD	Spare impact device type D
PCE-2000-SKDL	Spare impact device type DL
CAL-IMPACT	ISO Certificate

PCE-2500

Hardness tester for metals, with memory, USB port, software and USB cable

The PCE-2500 hardness tester for metals is portable, easy to use and is the same size as a pen, allowing it to be carried in a pocket. It is attractive due to its innovative design in the shape of a pen, with a sophisticated load and trigger mechanism. For this reason, it is ideal for testing regular metals where it is necessary to quickly and accurately see the hardness reading. It also allows for the device to have the mechanism correctly positioned upon the material. The hardness tester for metals has memory for storing up to 1250 values and using the USB port, this data can be transferred to a computer.

- Measures in typical hardness units
- Highly accurate
- Automatically shows readings on the LCD
- Measurements can be taken with the device in any position
- Internal memory for up to 1250 readings
- Software and data cable
- Shows all functions and parameters on the display
- Lithium-ion rechargeable battery
- USB port for data transfer



Technical specifications

Unit	HRC	HRB	HB	HV	HSD
steel / casting	20 to 68	38 to 100	80 to 647	80 to 940	32 to 100
cold-work toll steel	20 to 67	46 to 101	---	80 to 898	---
stainless steel	20 to 62	---	85 to 655	85 to 802	---
grey cast iron	---	---	131 to 387	---	---
spheroidal iron	---	---	90 to 334	---	---
aluminium alloy	---	---	30 to 160	---	---
brass	---	20 to 95	40 to 173	---	---
bronze	---	---	60 to 290	---	---
copper	---	---	45 to 315	---	---
Hardness values	HL, HRC, HRB, HB, HV, HSD				
Materials (adjustable)	STEEL				
	CWT. STEEL				
	STAIN. STEEL				
	GC. IRON				
	NC. IRON				
	C. ALUMIN				
	BRASS				
	BRONZE				
	COPPER				
Accuracy	±0,5 % for HL = 800				
Impact device	type D				
Maximum hardness	940 HV				
Radius of object (convex / concave)	Rmin = 30 mm (with element 10 mm)				
Minimum object weight	5 kg without basement, 2 to 5 kg with basement 50 g to 2 kg with basement and coupling liquid				
Minimum object size	3 mm with adhesive liquid				
Minimum penetration	0.8 mm				
Interface	USB				
Memory	1250 groups				
Power	Li-ion batteries				
Max. object temperature	+120 °C				
Dimensions	158 x 41 x 26 mm				
Weight	120 g				

Contents

PCE-2500 hardness tester, software, USB cable, test block, charger and user's manual

Model No.	Description
PCE-2500	Portable hardness tester PCE-2500

Optional accessories

CAL-IMPACT	ISO Certificate
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Material Testers

PCE-DX Series

Mechanical durometers to test durability of soft glue, hard glue, rubber, elastomer and thermal plastic

These models of durometers are to measure durability in Shore A or Shore D. It comes with a measuring component that has a measuring head and a 360° antiglare dial with pressure readings of 0.5 hardness units. Meets the standards DIN 53505, ISO 868, ISO 7619 y ASTM D 2240.

- Shore A models: with/without memory pointer
- Large indicator
- Hardness units (scale's graduation)
- Pointer sweep of 360°
- High accuracy
- Ergonomic design
- Optional ISO calibration certificate



Technical specifications

Model	PCE-DX-A / -AS	PCE-DX-DS
Unit	Shore A	Shore D
Scale range	0 ... 100	0 ... 100
Measurement ranges	10 ... 90	30 ... 90
Accuracy	±0,5	±0,5
Scale division	1	1
Drag needs	only PCE-DX-AS	yes
Press power	12,5 N	50,0 N
Indentor	35° ball	30° point
Minimum hardness	> 6 mm	> 6 mm
Testing standards	DIN 53505	DIN 53505
Display body diameter	57 mm	57 mm
Overall length	107 mm	107 mm
Weight	240 g	240 g
Materials applications	soft gum, rubber, elastomers	hard gum, thermoplastics

Contents

Durometer (various models), case and user's manual

Model No. Description

PCE-DX-A	Durometer for Shore A
PCE-DX-AS	Durometer for Shore A with drag needle
PCE-DX-DS	Durometer for Shore D with drag needle

Optional accessories

CAL-DX	Certificate of calibration
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PCE-HT 200

Shore A Hardness tester with RS-232 interface

This digital durometer for Shore hardness testing is a handheld unit with integrated probe which measures in place on the job, as well as in a laboratory. It has a digital display with a result resolution of 0.1 hardness units. This hardness tester conforms to standards DIN 53505, ISO 7619 and ASTM D 2240. You can use it as a handheld instrument in production or with the optional test stand for serial tests without subjective influences. It has a PC interface allowing for data transfer to a computer. With the RS-232 interface and software you will be able to carry out detailed analysis of the data and serial measurements.

- Pocket size unit with integrated probe
- Peak Hold function
- Auto shut-off after 5 min (protects battery life)
- Low battery indicator
- Serial or isolated measurements
- Data transfer to a PC or portable computer through an optional interface
- ISO calibration certificate (optional)



Technical specifications

Measurement range	0 to 100 (Shore A)
Resolution	0.1 hardness degree
Accuracy	±1 hardness degree
Result display	hardness result, max value, average value (peak value lock)
Interface for PC	RS-232
Others functions	auto shut-off, low battery indicator
Power	3 batteries 1.25 V (V357)
Battery life	approx. 300 h
Operating temperature	0 to +40 °C
Dimensions	168 x 31 x 30 mm
Weight	145 g
Approvals	DIN 53505, ISO 7619, ASTM D 2240

Contents

PCE-HT 200 durometer, batteries, carrying case and user's manual

Model No. Description

PCE-HT 200	Durometer for Shore A
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Optional accessories

PCE-HT200FJ	Test stand for the PCE-HT 200
SOFT-HT-200	Software and RS-232 cable
RS232-USB	RS-232 to USB adaptor
CAL-HT-2	ISO Certificate

Test stand PCE-HT200FJ (optional)



PCE-HT 210

Shore D Hardness tester with RS-232 interface

This durometer is used as a handheld unit to measure on the job as well as in a laboratory. It has a solid enclosure with built-in digital display and is accurate to within 0.2 hardness units. It conforms these standards: DIN 53505, ISO 7619, JKS K 6253 and ASTM D 2240. You can use it in production or with an optional test stand for serial tests without subjective influences. It has an RS-232 interface allowing for data transfer to a PC. With the RS-232 interface and software you will be able to evaluate and analyse the serial measurements. If your PC only has an USB interface, you can order an optional RS-232 to USB adaptor.

- Bright and clear LCD
- Peak Hold function
- Universal use
- Auto shut-off
- Low battery indicator
- Serial or isolated measurements
- Data transfer to a PC or portable computer through an optional interface
- ISO calibration certificate (optional)



Technical specifications

Measurement range	0 to 100 (Shore D)
Resolution	0.2 hardness degree
Accuracy	±1 hardness degree
Result display	hardness result, max. and average values (peak value freeze)
Interface for PC	RS-232
Others functions	auto shut-off, low battery indication
Power	3 batteries 1.25 V (V357)
Battery life	approx. 300 h
Operating life	0 to +40 °C
Dimensions	173 x 56 x 42 mm
Weight	233 g
Approvals	DIN 53505, ISO 7619, ASTM D 2240, JKS K 6253

Contents

PCE-HT 210 durometer, batteries, carrying case and user's manual

Model No. Description

PCE-HT 210	Durometer for Shore D
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Optional accessories

PCE-HT210FJ	Test stand for PCE-HT 210
SOFT-HT-200	Software and RS-232 cable
RS232-USB	RS-232 to USB adaptor
NET-300	Net adaptor 230V / 50Hz
CAL-HT-2	ISO Certificate

Test stand PCE-HT210FJ (optional)



PCE-HT-225A

Portable concrete tester

This hardness tester is based on the Schmidt principle of measurement and is in the form of a hammer. The durometer is used primarily in the construction sector and other industrial sectors (hardness of wound products). The durometer comes calibrated from the factory, but an optional ISO certification can also be ordered.

- Extremely robust design
- Special rebounding body to take numerous measurements of concrete
- Easy to use
- Conversion table on the back
- Correct usage explained in the user's manual
- ISO calibration certificate (optional)



Technical specifications

Measurement range	100 to 600 kg/cm ² (~9.81 to 58.9 N/mm ²)
Accuracy	18 kg/cm ² (~±1.8 N/cm ²)
Normal kinetic energy	2207 J
Impact scale indication	0 to 100 (without dimensions)
Pressure resistance table (rear part)	conversion to kg/cm ² (with angular correction)
Angular correction table	included in the user's manual
Minimum concrete thickness	70 cm
Dimensions	Ø 66 x 280 mm
Weight	1 kg

20	125	115		IMPACT ANGLE α
21	135	125		
22	145	135	110	
23	160	145	120	
24	170	160	130	
25	180	170	140	100
26	190	180	150	110
27	210	200	165	130
28	220	210	180	140
29	230	220	190	150
30	250	230	210	170
31	260	250	220	180
32	280	265	235	190
33	290	280	250	210

Conversion table on the back

Contents

PCE-HT-225A portable concrete test hammer, grinding stone, wooden carrying case and user's manual

Model No.	Description
PCE-HT-225A	Portable concrete test hammer

Optional accessories

CAL-225A	ISO Certificate
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PCE-RT 1200

Surface roughness tester for Ra, Rz, Rq and Rt with interface for connection to a computer

The PCE-RT 1200 meets almost all standards for the detection of roughness. It can test the surface of many different surfaces and can detect many different parameters. The device comes with a mechanism to level off surface irregularities. It's especially useful for a series of measurements, such as testing the parts shipments or to check internal quality.

- Detects Ra, Rz, Rq y Rt
- Measures the inside of spaces from 6mm of diameter and with a depth of 15mm
- Easy to use menu
- Large LCD with backlight
- Memory for 7 series of measurements
- RS-232 interface
- Rechargeable ion-litium battery (for 3000 measurements)
- ISO calibration certificate (optional)



Technical specifications

Parameters	Ra, Rz, Rq, Rt
Units	µm and pinch
Measurement ranges	Ra: 0.005 to 16 µm Rz: 0.02 to 160 µm
Resolution	0.001 µm <10 µm 0.01 µm <100 µm 0.1 µm >100 µm
Accuracy	class 2 according to DIN 4772
Indicator	LCD 128 x 64 and illumination
Cut off length	0.25 mm / 0.8 mm / 2.5 mm
Measurement distance In In	1 to 5 wave length limit
Measurement distance In It	(1 to 5) +2 wave length limit
Stylus tip	diamond, radius 5 µm
Interface	RS-232
Operating conditions	0 to +50 °C, <80 % r.h.
Power	rechargeable ion-litium battery
Dimensions	140 x 52 x 48 mm (device without feeler)
Weight	420 g

Contents

PCE-RT 1200 surface roughness tester, microprobe, rechargeable battery, charger, roughness standard, case and user's manual

Model No.	Description
PCE-RT 1200	PCE-RT 1200 surface roughness tester

Optional accessories

RT-1200-SW	Software and RS-232 cable
RS232-USB	RS-232 to USB adaptor
CAL-RT 1200	ISO Certificate for the PCE-RT 1200

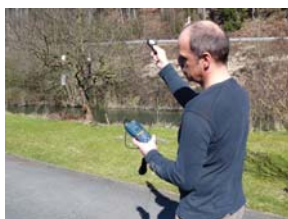
Radiation Meters

PCE-172

Industrial lux meter

The PCE-172 industrial lux meter is ideal for precise light measurements within the industrial, trade, agriculture and research sectors. You can also use it to check computer light, and measure the light in workplaces, decorations on windows and all type of lit designs. It meets international lux meter standards. The result is displayed in lux and the equivalent of 100 lux is 1 W/m² or 9.29 fc.

- Easy to use and solidly built
- Large LCD with bar graph indication
- Co-sine corrected measurement
- Min- / Max-Hold function
- Over range indicator
- ISO calibration certificate (optional)



Technical specifications

Measurement range	0 to 40.00 lux 0 to 400.0 lux 0 to 4,000 lux 0 to 40,000 lux 0 to 400,000 lux
Resolution	0.01 / 0.1 / 1 / 10 / 100 lux
Accuracy	±5 % of reading ±10 digit (<10,000 lux) ±10 % of reading ±10 digit (>10,000 lux)
Repeatability	±3 %
Refresh rate	approx. 1.5 times /sec.
Light sensor	silicon photodiode
Min Max function	yes
Overload indicator	yes
Memory	no
Memory intervals	no
Interface	no
Display	3 3/4 digit LCD
Bargraph	yes
Operating conditions	0 to +40 °C, < 80 % r.h.
Power	9 V battery
Dimensions	sensor: 115 x 60 x 50 mm device: 75 x 203 x 50 mm
Weight	280 g
Approvals	IEC- 1010- 1; EN 61010- 1 EN 50081-1; EN 50082-1 (DIN 5031 ; DIN 5032)

Contents

PCE-172 lux meter, sensor with cable, battery, carrying case and user's manual

Model No.	Description
PCE-172	Lux meter

Optional accessories

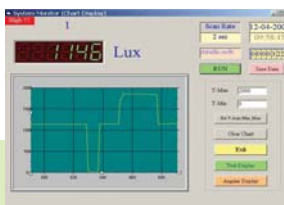
CAL-LUX	ISO Certificate
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PCE-174

Light meter with internal memory, interface and optional software

Datalogging light meter that automatically records up to 16,000 data points along with time and date. Once the data has been stored to memory, it can later be transferred to a PC with the help of the software. It reads in lux or foot-candles and has up to 5 ranges. This well made unit has a detachable probe and a large, easy to read, LCD.

- Internal memory records up to 16,000 data points
- Memory interval adjustable from 2 sec. and 9 hours
- Large LCD with bar graph indication
- Large range up to 400,000 lux
- USB interface
- Min- / Max-Hold function
- Over range indicator
- ISO calibration certificate (optional)



Technical specifications

Measurement range	0 to 400.0 lux 0 to 4,000 lux 0 to 40,000 lux 0 to 400,000 lux
Resolution	0.1 / 1 / 10 / 100 lux
Accuracy	±5 % of reading ±10 digit (<10,000 lux) ±10 % of reading ±10 digit (>10,000 lux)
Repeatability	±3 %
Refresh rate	approx. 1.5 times /sec.
Light sensor	silicon photodiode
Min Max function	yes
Overload indicator	yes
Memory	up to 16,000 values
Memory intervals	from 2 sec. and 9 hours
Interface	USB
Display	3 3/4 digit LCD
Bargraph	yes
Operating conditions	0 to +40 °C, < 80 % r.h.
Power	9 V battery
Dimensions	sensor: 115 x 60 x 50 mm device: 75 x 203 x 50 mm
Weight	280 g
Approvals	IEC- 1010- 1; EN 61010- 1 EN 50081-1; EN 50082-1 (DIN 5031 ; DIN 5032)

Contents

PCE-174 lux meter, sensor with cable, software, usb data cable, battery, carrying case and user's manual

Model No.	Description
PCE-174	Lux meter

Optional accessories

CAL-LUX	ISO Certificate
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PCE-GM 100

Gloss meter with multiple angles: 60°, 20° and 85°

The PCE-GM 100 gloss meter is ideal to measure flat surfaces and it operates according to the refractometer principle. Its rugged design and its practical dimensions provide big advantages when you measure on the spot or in the production sector such as in factories. Geometry selection allows matte, normal or hi-gloss to be measured.

- Matte, normal and hi-gloss
- 3 selectable angles: 20°, 60° and 85°
- High repeatability
- Rugged dimensions
- Battery powered
- Calibration function
- Calibration plate included in the delivery
- ISO calibration certificate (optional)



Technical specifications

Measurement range	0.0 to 200
Optical angle	20°, 60°, 85° (selectable)
Accuracy	±1.2 of gloss units
Repeatability	±0.4 of gloss units
Measurement area	11 x 54 mm
Type of light	A
Detector	silicon photo diode
Display	LCD with 10 mm high digits
Power	1.5 V battery
Battery life	60 h or 10,000 measurements
Dimensions	145 x 80 x 38 mm
Weight	330 g



Contents

Gloss meter, calibration standard, carrying case, battery and user's manual

Model No.	Description
PCE-GM 100	Gloss meter

Optional accessories

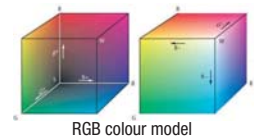
CAL-IG	ISO certificate (only for 20° and 60° angles)
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PCE-RGB 2

Spectral colour analyser with external display and interface to connect to a computer.

This colorimeter is based on the most modern microsystem technology and operates accurately according to the spectral model: a source of defined light illuminates the sample and the light reflected by the surface is measured in spectral mode. With this device, luminous surfaces, such as an LCD, can be measured relatively. The measurement results are shown on the display, but can also be transferred to a computer using the optional software package for further analysis. The applications of use for this device are extensive.

- Measurement of non-luminous surfaces, such as paper, skin, fabric, paint, etc.
- Relative measurement of luminous surfaces, such as and LCD
- Calibrate using the white standard (included)
- Relative function to compare different materials
- ISO calibration certificate (optional)



Technical specifications

Measurement geometry	circular illumination 45°/ 0° by 45°, 0° measurement according to DIN5033
Chromatic surfaces	RGB and HSL
Measurement ranges	RGB: 0 to 1023 for R, G and B HSL: 0 to 1.000 for H, S and L
Resolution	1 measurement RGB; 0.001 measurement HSL
Reproducibility	< 3 RGB, for a minimum of 10 measurements
Spectral range	400 nm to 700 nm
Light source	2 white diodes
Applications	1. non-luminous surfaces (absolut value) 2. luminous surfaces (relative measurement) Note: the colour analyser can only be used for non-fluorescent surfaces
Indications	relative and absolute values
Interface	RS-232 (via display)
Software	optional
Power	9 V battery
Dimensions (sensor)	45 x 92 x 160 mm
Dimensions (device)	205 x 76 x 37 mm
Weight	approx. 600 g
Operating conditions	0 to +50°C / maximum 80 % r.h.
Standards	DIN 5033

Contents

PCE-RGB 2, display with sensor and 1m cable, white standard, case and user's manual

Model No.	Description
PCE-RGB 2	Colour analyser with external display

Optional accessories

SOFT-LUT-B02	Software and RS-232 interface
RS232-USB	RS-232 to USB adaptor

Radiation Meters

PCE-UV34

UV light meter for radiation measurement (UVA + UVB)

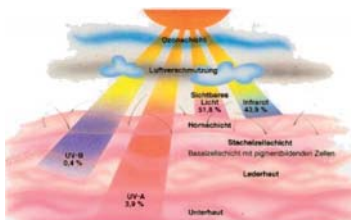
This handheld UV light meter with large LCD, measures ultraviolet radiation (UVA/UVB) in the UV spectrum from 290 nm to 390 nm. It has a wide range of applications and it is used in industry to control the danger levels of light used in soldering, in UV sterilization, in photochemical compensation, in virology laboratories or in DNA research as well as in the microbial genetics.

- Separate UV light probe
- Rugged enclosure
- Battery life indicator
- Several accessories
- ISO certificate (optional)



Technical specifications

Measurement ranges	0.000 to 1.999 mW/cm ² 1.999 to 19.99 mW/cm ²
Resolution	0.001 mW/cm ²
Accuracy	±4 %; +2 dgt.
Sensor	LCD (21.5 mm)
Indicator	4.5 digit LCD
Power	1.9 V battery (PP3)
Dimensions	device: 68 x 200 x 30 mm sensor: 68 x 60 x 27 mm
Weight	220 g



Contents

PCE-UV34 UV light meter, battery, carrying case and user's manual

Model No.	Description
PCE-UV34	UV light meter

Optional accessories

CAL-PCE-UV34 ISO certificate

PCE-UV36

Ultraviolet light meter for measuring UVC radiation

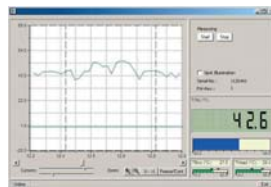
UVC meter to measure ultraviolet radiation in the UV spectrum of 254 nm. UVC radiation, with wave lengths of 200 to 300 nm, is often used to disinfect and sterilize. It is absorbed by DNA, destroys its structure and kills living cells. Micro-organisms, such as viruses and bacteria, are destroyed in seconds with the help of UVC radiation. To do this, special light is used, high and low pressure lamps, that emit radiation with a wave length of 254 nm.

- External UVC light sensor
- Wide measurement range
- Minimum, Maximum and Hold functions
- RS-232 interface
- Battery level indicator
- Automatic shut-off
- ISO calibration certificate (optional)



Technical specifications

Measurement ranges	0.1 to 199.9 µW/cm ² 0.001 to 1.999 mW/cm ² 0.01 to 19.99 mW/cm ²
Resolution	0.1 µW/cm ² / 0.001 mW/cm ² / 0.01 mW/cm ²
Precision	±2 % + 2 digits
Wave length	254 nm
Indicator	4.5 digit LCD
Operating conditions	0 to +50 °C, <80 % r.F.
Power	9 V battery
Dimensions	device: 180 x 72 x 32 mm sensor: Ø 38 x 25 mm
Weight	335 g



Software available separately

Contents

PCE-UV 36 UVC meter, case, battery and user's manual

Model No.	Description
PCE-UV36	UVC light meter

Optional accessories

SOFT-LUT-D Software with RS-232 data cable
RS232-USB RS-232 to USB adaptor
CAL-PCE-UV36 ISO calibration certificate

PCE-SPM 1

Solar radiation meter for solar installation professionals

The solar radiation meter is the optimum device for engineers, architects and any technician interested in applications for solar energy. This meter detects the intensity of solar energy, allowing for conclusions regarding energy output. Readings stored in the internal memory can be transferred to a computer, using software, for further analysis.

- Measures light intensity
- Switch to energy efficiency
- Cosine correction
- Suitable for measurements over a duration of time (data recording function)
- Measures energy output
- Minimum, maximum and average value function
- ISO calibration certificate (optional)



Technical specifications

Measurement range	0 to 2000 W/m ²
Resolution	1 W/m ²
Accuracy	±10 W/m ² or ±5 % for highest value
Spectral range	400 to 1100 nm
Memory	32,000 readings
Interface	RS-232
Display	LCD
Operating conditions	0 to +50 °C, < 80 % r.h.
Power	4 AAA batteries
Operating time (batteries)	100 hours
Dimensions	111 x 64 x 34 mm
Weight	165 g



Contents

PCE-SPM 1 solar radiation meter, software, RS-232 cable, mini tripod, batteries, carrying case and user's manual

Model No.	Description
PCE-SPM 1	Solar radiation meter

Optional accessories

RS232-USB RS-232 to USB adaptor
CAL-SPM ISO calibration certificate

PCE-EM29

Electrical field meter for three-dimensional measurements up to 3.5 GHz

The electrical field meter comes with a spherical, three-dimensional probe to detect electromagnetic radiation from 50 MHz up to 3.5 GHz. The electrical field meter is equally suitable to measure in transformers, also for the evaluation of magnetic fields that are produced by computer displays, televisions and industrial installations. It is also capable of detecting radiation of wireless systems, such as a wireless LAN, of GSM or to determine radiation from microwave ovens. With frequencies up to 3.5 GHz, it can be used effectively in high frequency ranges. Thanks to its three-dimensional probe, it makes the conversion of each axis individually.

- Three-dimensional probe (spherical)
- Function to calculate average value
- Memory for 99 readings (stored values can be shown on the display)
- Different units of measurement
- Adjustable alarm limit values
- Large display
- Frequency range up to 3.5 GHz
- Suitable for the analysis of physical work space



Technical specifications

Frequency range	50 MHz to 3.5 GHz
Sensor type	electrical field (E)
Measurement	three-dimensional, isotropic
Measurement range	38 mV/m to 11 V/m
Range selection	automatic
Response time	1 s (until 90 % of absolute value is reached)
Units	mV/m, V/m, $\mu\text{A}/\text{m}$, mA/m, $\mu\text{gW}/\text{m}^2$, mW/m ²
Resolution	0,1 mV/m; 0,1 $\mu\text{A}/\text{m}$; 0,01 $\mu\text{gW}/\text{m}^2$
Absolute error	$\pm 1,0$ dB
Accuracy	$\pm 1,0$ dB (50 MHz to 1,9 GHz) $\pm 2,4$ dB (1,9 GHz to 3,5 GHz)
Isotropic deviation	$\pm 1,0$ dB (in one frequency >50 MHz)
Maximum value over-range	4,2 W/m ² (40 V/m)
Deviation due to temperature	$\pm 1,5$ dB
Display update	every 400 ms
Limit value	adjustable
Alarm	Piepton bei Grenzwert- überschreitung
Average value	adjustable from 4 s to 15 min
Memory	99 readings (can be shown on the display)
Power	9 V battery
Dimensions	220 x 60 x 30 mm
Weight	350 g

Contents

PCE-EM29 electrical field meter, battery, case and user's manual

Model No.	Description
PCE-EM29	PCE-EM29 electrical field meter

Gamma-Scout®

Alpha, beta and gamma radiation detector with memory and software

This radiation detector has an interface and software for data transfer to a PC. Its modern technique allows you to determine low level radiation in a range of >0.01 $\mu\text{Sv}/\text{h}$, as well as high level radiation.

One push of a button is enough to start radiation monitoring. Gamma-Scout makes day and night inspections and the result is displayed in its large display. If you want, you can store the values and transmit them to the PC at your convenience. The software and USB cable are included in the delivery.

- Geiger-Müller counting tube
- Measures alpha, beta and gamma radiations
- Ray selection switch
- Memory for data storage
- GS-2 model has audio alert function
- Comes with calibration certificate



Technical specifications

Detector	reliable Geiger-Müller detector
Radiation type	alpha from 4 MeV beta from 0,2 MeV gamma from 0,02 MeV
Diaphragm aperture	alpha: without shielding beta: Al foil approx. 0.1mm, alpha protected gamma: Al shielding approx. 3 mm, shielding off alpha completely and beta to 2 MeV, weakens gamma less than 7%
Sensitivity	95.0 pulses / minute referenced to Co60 radiation
Zero rate	<10 pulses/min
Measurement range	0.01 $\mu\text{Sv}/\text{h}$ to 1000 $\mu\text{Sv}/\text{h}$
Battery	10 years, less with interface use
Power	< 10 mA
Pulses measurement	1 to 99 s, 1 to 99 min, 1 to 99 h, 24 h average in $\mu\text{Sv}/\text{h}$
Pulses storage	1 min, 10 min, 1 h, 24h, 7 days
Memory	2 KB
Interface	RS-232
Indicator	4 digit LCD
Operating conditions	-20 to +60 °C
Enclosure	impact-resistant plastic
Dimensions	161 x 72 x 30 mm
Weight	153 g
Certificates	certificate of quality for each unit
Standards	CE standard USA standard FFC15

Contents

Gamma-Scout® with software, USB cable, certificate of quality, battery and user's manual

Model No.	Description
GS-1	Gamma-Scout GS-1
GS-2	Gamma-Scout GS-2 with adjustable alarm
GS-3	Gamma-Scout GS-3 for transmission in real time

Optional accessories

GT-GS	Holster with belt clip
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PCE-G28

Magnetic field meter with 3-axial probe (0 to 2000 μT or 0 to 20,000 mGs)

The magnetic field meter with 3-axial probe determines electromagnetic radiation. This device has been specially developed to measure transformers and to evaluate magnetic fields generated by computer screens, televisions, industrial electric systems (magnetic separators, electric motor, etc.). This unit meets European standards; European Union Electromagnetic Compatibility Directive IEC 801-1 (EN 50081-1) and it also meets laboratory and measurers prescriptions; IEC 204 (IN 60204).

- 3-axial probe for magnetic field measurements
- "HOLD" function
- Units: μT or mGs
- Wide frequency range (up to 300 Hz)
- Battery powered
- Ideal for workplace applications
- Satisfies European standards
- ISO calibration certificate (optional)



Technical specifications

Measurement ranges	microTesla: 0 to 20 μT / 0 to 200 μT / 0 to 2000 μT milli Gauss: 0 to 200 mGs / 0 to 2000 mGs / 0 to 20,000 mGs
Resolution	0.01 / 0.1 / 1 μT (depending on measure. range) 0.1 mGs / 1 mGs / 10 mGs
Accuracy	± 4 %; +3 d (in range 20 μT and 200 mGs) ± 5 %; +3 d (in range 200 μT and 2000 mGs) ± 10 %; +5 d (in range 2000 μT and 20,000 mGs) these accuracies are available in the frequency: 50 - 60 Hz and < 3 V/m (RF).
Frequency	30 to 300 Hz
Indicator	LCD
Power	9V battery
Dimensions	device: 195 x 68 x 30 mm probe: 225 x 75 x 55 mm
Weight	470 g (with battery)



Contents

PCE-G28 magnetic field meter, combined 3-axial probe and 1 m cable, battery, carrying case and user's manual

Model No.	Description
PCE-G28	PCE-G28 Gaussmeter

Optional accessories

CAL-EMF	ISO certificate
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Sound Level Meters

PCE-355

Personal noise dosimeter with data logger, interface and software

The PCE-355 personal noise dosimeter is used to measure the noise level accumulated in the workplace, in the industrial sector, etc. The most important features of this device are its external microphone that you can hang on your neck using a clip, its data logging to store the measurements and its software. It can be connected to a PC to display the dose in %, assess the data, establish the quota and exposure time. The device is pocket-sized, so you can put it in your coat pocket and, for example, you will be able to measure and store the acoustic values that occurred during your working day (8 hours).

- Lightweight and easy to use
- Measurement range of 70 to 140 dB (A)
- Noise dose range of 0 to 1999 %
- Data logger, interface and software
- A frequency weighting
- Fast and slow time weighting
- 4 digit LCD
- Wind shield
- ISO calibration certificate (optional)



Technical specifications

Measurement range	sound dose: 0 to 1999 % sound range: 70 to 140 dB(A)
Resolution	0.1 dB
Accuracy	±1.5 dB (for 94 dB and 1 kHz)
Frequency weighting	A
Criterion levels	80, 84, 85, 90 dB
Threshold level	70 to 90 dB of reading; 1 dB
Time weighting	fast / slow
Microphone	1/2 inch Electret condenser
Operating conditions	0 to +50 °C, <80 % r.h.
Power	4 AAA batteries
Battery life	approx. 38 hours
Dimensions	106 x 60 x 34 mm
Weight	350 g
Applicable standards	IEC 651 type II, ANSI S1.25-1991

Contents

Noise dosimeter, external microphone with 1.5 m cable, interface, software in English, wind shield, carrying case and user's manual

Model No.	Description
PCE-355	Noise dosimeter

Optional accessories

PCE-SC41	Sound calibrator (94 dB)
CAL-355	ISO Certificate
RS232-USB	RS-232 to USB adaptor

PCE-999

Industrial sound level meter for first time users

The PCE-999 sound level meter has some characteristics that only the most expensive devices possess. It measures noise, assess the noise in the workplace and controls measurements for gastronomy, traffic, environment, works, etc. You can purchase the optional ISO calibration certificate, as for the PCE-318, PCE-322A and PCE-353 LEQ models (with a laboratory calibration and a certificate for your company) and a sound calibrator (class II) to recalibrate.

- 2 measurements ranges: Low & High
- A and C frequency weighting
- Frequency range 31.5 Hz up to 8 kHz
- Fast and slow time weighting
- Min / Max Hold functions
- 4 digit LCD
- Auto shut-off feature
- 1/2" Electret microphone
- ISO calibration certificate (optional)



Precision sound calibrator



Technical specifications

Measurement range	30 to 130 dB in 2 ranges
Resolution	0.1 dB
Accuracy	±1.5 dB
Updating	1 x / s
Frequency	31.5 Hz to 8 kHz
MIN / MAX functions	- / yes
LEQ	-
Memory	-
Outputs	-
Software	-
Frequency weighting	A & C
Indicator	4 digit LCD
Operating conditions	0 to +40 °C, <90 % r.h.
Power	9 V battery
Dimensions	210 x 55 x 32 mm
Weight	230 g
Applicable standards	IEC 651 type II, EN60651

Contents

PCE-999, carrying case, wind shield, battery and user's manual

Model No.	Description
PCE-999	Sound Level Meter

Optional accessories

PCE-SC41	Sound calibrator (94 dB)
CAL-SL	ISO Certificate

PCE-318

Sound level meter with a measurement range from 26dB(A) and analogue output

The PCE-318 sound level meter has a measurement range from 26 to 130dB. This sound level meter is best suited to measure very low noises, such as those generated by computers fans, acoustic protection in machine housings, etc. It has an analogue output that makes it possible to record the values in external places. If you want, you can purchase the ISO calibration certificate and a sound calibrator of (class II) for in-house recalibrations when required.

- Measurement range from 26dB(A)
- Datalogging function records up to 99 records (manual)
- Analogue output: AC & DC
- 6 adjustable measurement ranges
- A and C frequency weighting
- Frequency range from 31.5 Hz to 8 kHz
- Fast and slow time weighting
- Min & Max Hold functions
- LCD with analogue bargraph
- ISO calibration certificate (optional)



Precision sound calibrator



Technical specifications

Measurement range	26 to 130 dB in 6 ranges
Resolution	0.1 dB
Accuracy	±1.5 dB
Updating	1 x / s
Frequency	31.5 Hz to 8 kHz
MIN / MAX functions	yes / yes
LEQ	-
Memory	99 (with keyboard)
Outputs	analogue AC & DC
Software	-
Frequency weighting	A & C
Indicator	4 digit LCD with analogue bargraph
Operating conditions	-10 to +50 °C, <90 % r.h.
Power	9 V battery
Dimensions	264 x 68 x 27 mm
Weight	260 g
Applicable standards	IEC 651 type II, EN60651

Contents

PCE-318, carrying case, wind shield, adjustment screwdriver, 3.5 mm pin (for analogue output), battery and user's manual

Model No.	Description
PCE-318	Sound Level Meter

Optional accessories

PCE-SC41	Sound calibrator (94 dB)
CAL-SL	ISO Certificate
MIC	Microphone extension cable (5 m)
STAT	Tripod mount
NET	AC adaptor (300 mA)

PCE-322 A

Sound level meter with data logger and software (for long period monitoring)

This sound level meter is best suitable to measure in the industrial, sanitary and security sectors, as well as check environmental noise. The built-in memory allows you store up to 32,000 readings. You can transfer data to a PC through the interface and assess it with the Windows data logging software (in English) which offers you a visualization of data in tables and bar graph format.

- Datalogging function records up to 32,000 readings
- USB Interface and software to transfer data to a PC
- Min / Max functions
- Bargraph indication (2 dB)
- A and C frequency weighting
- Frequency range from 31.5 Hz to 8 kHz
- Impulse, fast and slow time weighting
- 1/2" Electret microphone
- ISO calibration certificate (optional)



PCE-353 LEQ

Sound level meter with LEQ, memory and software

Thanks to the possibility to measure the level of continuous acoustic pressure (LEQ), this sound level meter is suitable for making checks in workplaces, of machines, etc. It has an analogue output that makes it possible to record the values in external places (p.e. for CE certification according to the guidelines for machines). Stored data can be easily transferred to a PC via the RS-232 interface and analyzed using the software (which is in English) and a cable provided.

- According to 89/ 393/ EWG (for machines)
- SPL, Leq, Lmax, Lmin
- Datalogging function records up to 32,000 records
- Interface to transfer data to a PC
- Software for data transfer and assessment
- Min / Max functions
- Bar graph indication (4 dB)
- A and C frequency weighting
- Frequency range from 31.5 Hz to 8 kHz
- Impulse, fast and slow time weighting
- 1/2" Electret microphone
- ISO calibration certificate (optional)



Precision sound calibrator

PCE-DSA 50

Sound level meter in octaves and third octaves in real time

The PCE-DSA 50 sound level meter is a class one device that analyses frequencies in octaves and third octaves in real time. Above all, it is ideal for taking measurements in the industrial sector, in sanitation, security and environmental safety. The device can take measurements over long periods of time and data can be analysed later on a computer. The sound level meter comes with an internal memory, allowing data to be transferred to a computer via a USB cable which is included in the order.

- Frequency analyser for octaves and third octaves
- Frequency weightings: A, C, Z
- Measurement range of 20 to 135dB
- Can be controlled from a computer
- Durable enclosure
- Large digital display
- Displays various measurement ranges
- Tripod connection
- USB cable, software and wind screen included



Technical specifications

Measurement range	30 to 130 dB in 3 ranges
Resolution	0.1 dB
Accuracy	±1.5 dB
Updating	every 0.5 seconds
Frequency	31.5 Hz to 8 kHz
MIN / MAX functions	yes
LEQ	-
Memory	32,000 readings
Outputs	digital (USB)
Software	yes, in English
Frequency weighting	A & C
Indicator	LCD with analogue bargraph
Operating conditions	0 to +40 °C, <80 % r.h.
Power	9 V battery
Dimensions	278 x 76 x 50 mm
Weight	350 g
Applicable standards	IEC 651 type II, EN60651

Contents

PCE-322 A sound level meter, USB cable, software, adjustment screwdriver, mini tripod, battery and user's manual

Model No. Description

PCE-322 A Datalogger sound level meter

Optional accessories

PCE-SC41	Sound calibrator (94 dB)
CAL-SL	ISO Certificate
MIC-3	Microphone extension cable (3 m)
STAT	Tripod mount



Precision sound calibrator

Technical specifications

Measurement range	30 to 130 dB in 5 ranges
Resolution	0.1 dB
Accuracy	±1.5 dB
Updating	every 0.5 seconds
Frequency	31.5 Hz to 8 kHz
MIN / MAX functions	yes
LEQ	yes, automatic
Memory	32,000 readings
Outputs	digital (RS-232) and analogue
Software	yes, in English
Frequency weighting	A & C
Indicator	LCD (35 mm) with analogue bar graph
Operating conditions	0 to +40 °C, <80 % r.h.
Power	9 V battery
Dimensions	257 x 72 x 21 mm
Weight	310 g
Applicable standards	meets EC89/393/EWG, IEC60804, EN60651(for machines) IEC 651 type II

Contents

PCE-353 LEQ sound level meter, RS-232, software, adjustment screwdriver, battery and user's manual

Model No. Description

PCE-353 LEQ LEQ meter with data logger

Optional accessories

PCE-SC41	Sound calibrator (94 dB)
CAL-SL	ISO Certificate
MIC	Microphone extension cable (5 m)
STAT	Tripod mount
NET-300	AC adaptor (300 mA)
RS232-USB	RS-232 to USB adaptor

Technical specifications

Measurement range	20 to 135 dB (A)
Resolution	0.1 dB
Accuracy	± 0.8 dB (A)
Frequency	25 Hz to 16 kHz
Filters	octave: 31.5 Hz to 8 kHz third octave: 25 Hz to 16 kHz
Stored data	more than 20 measurement types, including Leq, Lx, LxFmn, LxFmx, LxS, LxSmn, LF, LS...
Interface	USB
Frequency weighting	A, C, Z
Time weighting	F ("Fast"), S ("Slow"), I ("Impulse")
Indicator	LCD, 128 x 64
Operating conditions	-10 to +50 °C, <90 % r.h.
Power	NiMH 6V rechargeable or mains adaptor
Dimensions	237 x 84 x 50 mm
Weight	600 g
Applicable standards	DIN EN 61672-1, DIN EN 60651, DIN EN 61260, ISO 7196

Contents

PCE-DSA 50 sound level meter, wind shield, data cable, software, rechargeable battery, mains adaptor, carrying case and user's manual

Model No. Description

PCE-DSA 50 Sound level meter, class 1

Optional accessories

QC-10	Sound calibrator, class 1
CAL-SL	ISO calibration certificate



Air Flow Meters

PCE-A420

“Cup style” hand anemometer

This cup anemometer measures wind speed. Probably, the most important feature of this anemometer is that it eliminates completely the need to aim the sensor into the direction of the wind. Unlike conventional rotary vane anemometers that require precise aiming and alignment for good wind speed accuracy, a cup style anemometer can capture the wind in any direction just like the professionals use.

- Data memory: 100 point data logging (recall to display)
- Cup style, very easy to use
- Eliminates the need to aim into the wind
- Selectable units: m/s, km/h, ft/min, nudos y mile/h
- Min, Max and Hold functions
- Auto shut-off
- Large LCD
- ISO calibration certificate (optional)



Technical specifications

Wind speed (m/s)	0.9 to 35.0
(ft/min)	144 to 6895
(km/h)	2.5 to 126.0
(mph)	1.6 to 78.2
(knots)	1.4 to 68.0
(Beaufort)	---
Accuracy	±2 %
Resolution	0.1 m/s; 0.1 km/h; 0.1 knots 0.1 mph; 1 ft/min
Auto shut-off	yes
Min / Max / Peak / Hold	yes
Indicator	large LCD, 28 x 19 mm
Cup probe	Ø 135 mm, plastic
Operating temperature	0 to +50 °C, <80 % r.h.
Power	4 AAA batteries (1.5 V)
Enclosure	plastic
Dimensions	190 x 40 x 32 mm
Weight	180 g



Contents

PCE-A420 cup anemometer, batteries, carrying case and user's manual

Model No. Description

PCE-A420 Cup style anemometer

Optional accessories

CAL-LCA ISO Certificate

PCE-AM81

Digital and pocket-sized anemometer capable of several units of measurement

This pocket anemometer, with rotary vane sensor, is ideal for determining wind speed (air speed) indoors as well as for outdoor environments. With this lightweight portable instrument you can test environmental conditions on the spot and quickly take all your measurements. Its lightweight impeller is highly accurate.

- Light weight impeller
- MAX / MIN functions
- Several Units: m/s, km/h, nudos, millas/h, ft/min
- Data Hold function
- LCD (8 mm)
- Handle with safety cord and user's manual
- ISO calibration certificate (optional)



Technical specifications

Wind speed (m/s)	0.4 to 30.0
(ft/min)	80 to 5910
(km/h)	1.4 to 108.0
(mph)	0.9 to 67.0
(knots)	0.8 to 58.3
(Beaufort)	---
Accuracy	±3 %
Resolution	0.1 m/s; 0.1 km/h; 0.1 knots 0.1 mph; 1 ft/min
Auto shut-off	---
Min / Max / Peak / Hold	yes
Indicator	LCD (8 mm)
Impeller	plastic impeller
Operating temperature	0 to +50 °C
Power	9 V battery
Enclosure	plastic
Dimensions	156 x 60 x 33 mm
Weight	160 g



Contents

PCE-AM81 anemometer, safety cord, battery, user's manual

Model No. Description

PCE-AM81 Anemometer

Optional accessories

CAL-LCA ISO Certificate

PCE-007

Anemometer with external vane sensor, memory and software

With this anemometer you can measure wind speed and temperature of air. When you have adjusted the transverse area, the anemometer also displays directly the volumetric air flow. The measured values can be directly stored in the device and later transfer data to a computer for further analysis. The external vane sensor (connected to a 1.5 m cable) increases the mobility and flexibility for an exact wind speed measurement.

- Measures and displays air volume
- Memory to store up to 2000 values
- Built-in RS-232 interface
- Software and cable included
- Several units of measurement: m/s, ft/min, knots, km/h, mph
- Dual LCD
- Max & Min Hold
- Auto shut-off
- Calibration certificate (optional)



Technical specifications

Measurement ranges	
Wind speed	0.3 to 45 m/s
Air temperature	0.0 to 45.0 °C
Air volume	0.0 to 999,900 m³/min (it's calculated with average value)
Accuracy	±3 %; ±0.1 of reading ±1 °C it's calculated with wind speed and surface
Resolution	0.01 m/s 0.2 °C 0.001 to 100 (depending on range)
Impeller diameter	50 mm
Interface	RS-232
Memory	2000 values
Software	for Windows 95, 98, 2000 and XP Pro
Operating conditions	pressure: 500 mbar to 2 bar temperature: 0 to +60 °C
Indicator	4 digit LCD
Vane sensor	plastic
Power	9 V battery (PP3) for 50 hours of use
Enclosure	ABS plastic
Dimensions	device: 88 x 168 x 26.2 mm sensor: 60 x 130 x 25.5 mm
Weight	350 g



Contents

PCE-007 anemometer with external impeller, software, interface, battery and user's manual

Model No. Description

PCE-007 PCE-007 vane anemometer

Optional accessories

RS232-USB RS-232 to USB adaptor
CAL-LCA ISO Certificate

PCE-008

Thermo anemometer with external vane sensor, interface and software

The PCE-008 thermo anemometer is appealing for its high quality and low price. This device combines wind speed measurement with air temperature. Introducing the diameter of a channel, it also calculates the current volume. Thanks to its internal data logger you can store up to 16,000 values with date and time stamp (e.g. for measurements over a fix period of time).

- Measures wind speed and temperature
- Measure in several units, m/s, knots, km/h, mph / air flow in m³/h
- Temperature in °C or °F
- Data logger (16,000 values)
- Data-Hold function
- MIN / MAX function
- Average function
- RS-232 interface
- ISO calibration certificate (optional)



Technical specifications

Measurement ranges	
Wind speed	0.2 to 25 m/s
Air temperature	0 to 50 °C
Air volume	0 to 9,900 m ³ /min (it's calculated with the average value)
Resolution	
Wind speed	0.1 m/s
Air temperature	0.1 °C
Air volume	0.001 to 100 m ³ /min
Accuracy	
Air volume	±2 % (of reading); +0.2 m/s
Air temperature	±0.8 °C
Impeller diameter	72 mm
Impeller location	precious stone support
Memory	16,000 values
Memory sequence	adjustable between 2 seconds and 9 hours
Interface	
Interface	RS-232
Indicator	dual LCD for simultaneous measurements of air speed and temperature / 37 x 47 mm
Power	
Power	4 AA (Mignon) 1.5 V
Auto power-off	yes, after 20 minutes
Dimensions	200 x 76 x 35 mm
Weight	515 g

Contents

PCE-008 thermo anemometer, carrying case, battery, user's manual, software and RS-232 interface

Model No.	Description
PCE-008	Thermo anemometer

Optional accessories

RS232-USB	RS-232 to USB adaptor
CAL-LCA	ISO Certificate



PCE-424

Professional thermo-anemometer for measurement of air speed

This thermo-anemometer makes accurate air speed and temperature measurements in fan systems. The hot wire heats up with a constant temperature and the current that you must measure cools it down. The combination of hot wire and standard thermistor delivers rapid and precise measurements even at low air velocities.

- Displays air speed and air temperature simultaneously
- Automatic temperature compensation
- Telescopic probe extends up to 1m
- ISO calibration certificate (optional)



Technical specifications

Measurement range	
Speed	0.2 to 20 m/s
Temperature	0 to +50 °C
Accuracy	
Speed	±1 %; ±1 dgt (full range)
Temperature	±0.8 °C
Resolution	0.1 m/s 0.1 °C
Probe lenght	
Probe lenght	280 to 950 mm
Probe diameter	
Probe diameter	minimum - maximum from 8 to 12 mm
Operating conditions	
Operating conditions	barometric pressure: 500 mbar to 2 bar temperature: -10 °C to +50 °C
Indicator	
Indicator	dual LCD
Power	
Power	6 1.5 V batteries
Enclosure	
Enclosure	ABS plastic
Dimensions	
Dimensions	185 x 78 x 38 mm
Weight	
Weight	355 g

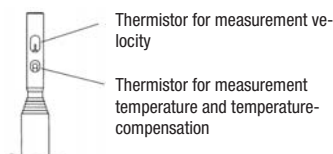
Contents

PCE-424 thermo anemometer, telescopic probe with cable, batteries, carrying case and user's manual

Model No.	Description
PCE-424	Thermo anemometer PCE 424

Optional accessories

CAL-LCA	ISO Certificate
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PCE-009

Thermo-anemometer with memory, RS-232 interface and software

This thermo-anemometer is an economical solution for measuring with high accuracy and for its multiple functions. You can also transfer data to a PC or a portable computer. It can store up to 16,000 in its internal memory.

- Measures air speed and temperature
- Air flow measurement
- Ideal for low air speeds
- Several units of measurement: m/s, km/h, ft/min, knots, miles/h
- Maximum, minimum values are displayed and Data Hold function
- Auto shut-off
- Memory to record up to 16,000 values
- RS-232 interface
- ISO calibration certificate (optional)



Technical specifications

Measurement ranges	
Air speed	0.2 to 20.0 m/s
Air temperature	0.0 to +50.0 °C
Air volume	0 to 36,000 m ³ /min
Resolution	
Air speed	0.1 m/s
Air temperature	0.1 °C
Air volume	0.001 to 1 m ³ /min
Accuracy	
Air speed	±1 % (of reading)
Air temperature	±0.8 °C
Thermocouple	
Thermocouple	removeable telescopic hot wire normal lenght 280 mm extended lenght 940 mm maximum diameter 12 mm minimum diameter (heat) 8 mm
Memory	
Memory	16,000 values
Memory space	adjustable between 2 sec. and 9 hours
Interface	
Interface	RS-232
Indicator	
Indicator	large LCD (58 x 34 mm)
Power	
Power	4 AA batteries 1.5 V
Auto shut-off	
Auto shut-off	after 5 min
Dimensions	
Dimensions	200 x 76 x 38 mm
Weight	
Weight	515 g

Contents

PCE-009 thermo anemometer with logger and thermocouple with 1.5m cable, RS-232 interface, software, 4 batteries, carrying case and user's manual

Model No.	Description
PCE-009	Thermo anemometer PCE-009

Optional accessories

RS232-USB	RS-232 to USB adaptor
CAL-LCA	ISO Certificate



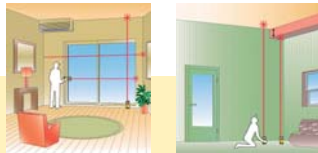
Distance Meters

TLM-300

Laser distance meter (up to 200 m)

This laser distance meter is an ideal device for taking non-contact measurements. Furthermore, it has Pythagoras and trapezoid functions making this unit the complete solution, e.g. it can measure length, width and height in buildings. You can store up to 10 height constants in memory.

- Pythagoras function for remote measurement of high walls
- Telescopic viewfinder x2 magnification
- High accuracy from ± 2.0 mm to 200 m



Technical specifications

Accuracy	± 2.0 mm
Measuring range	from 0.05 to 200 m
Measurement time	short-term measurement from 0.5 sec. to 4 sec., long-term measurement from 0.16 sec. to 1 sec.
Laser	class 2 (635 nm)
Laser diameter	30 mm up to 50 m / 60 mm up to 100 m
Calculations	distance, area, volume
Memory	yes
Tracking	yes
Tracking Min./Max.	yes
Pythagoras	yes
Trigger (automatic)	yes
Last value storage	yes (20)
Interface	-
Software	-
Indicator	LCD, with backlight
Tripod mounting	yes
Telescopic viewfinder	x 2
Bubble for leveling	yes
Power	2 batteries AA of 1,5 V
Ingress protection	IP 54
Dimensions	148 x 66 x 36 mm
Weight	310 g



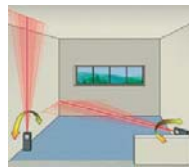
Contents

TLM-300 distance laser meter, batteries, carrying case and user's manual

Model No.	Description]
TLM-300	Laser distance meter (Pythagoras)

Optional accessories

ZT-A4	Target plate A4
LSB-RL	Laser visibility glasses
STAT	Aluminium tripod
CAL-TLM	ISO Certificate



PCE-LRF 600

Laser meter for distances up to 600 m

The PCE-LRF 600 accurately determines the distance to an object using a laser that will not damage eyes and can zoom into the object to a magnification of 6x. It can determine the distance of a building, accurate to within 1m. Visualise the object with the optical device and the press of a button. The laser point can be seen in the optical device. Press the button again and the reading will be displayed.

- For use in agriculture, forestry, sport, hobbies, environmental, traffic, architecture, construction, archeology, hunting, trips, etc.
- Easy to use and set up
- Ingress protection (IP 54)
- Class I laser



Technical specifications

Range	15 to 600 m
Accuracy	± 1 m ± 0.1 %
Resolution	1 m
Magnification	6 x
Lens Ø	24 mm
Lens field of vision	61 m (a 500 m)
Adaptable for glasses	yes
Type of laser	class I
Indicator	in the optics
Enclosure	ABS plastic
Power	1 CR-2 battery (3 V)
Dimensions	39 x 110 x 69 mm
Weight	165 g
Ingress protection	IP 54

Examples of use:

Measurement tasks in the industrial and construction sectors.



Measurement of the distance of a road, a curve's radius or for the transport of loads. For more accurate readings, you can also use the distance meter TLM-300.



Contents

PCE-LRF 600 distance laser meter, battery and user's manual

Model No.	Description
PCE-LRF 600	Laser distance meter

Other examples of use to determine distance are on the golf course and hunting.



PCE-GA3

Pen-sized flammable gas detector

This pen-sized flammable gas detector is very easy to use. It has a visual alarm LCD and an audible alarm with an intense whistle. This device is to be considered as an aid only and must only be used for small gas containers such as lighters, camping-gas containers, cookers, etc. It is not necessary to regulate it manually. It is controlled by a microprocessor that emits an alarm when there are gas concentrations of 100, 1000 and 10,000 ppm. This gas detector is exempt of maintenance except for replacement of its battery. The sensor is calibrated to detect flammable gases in the air.

Applications:

- Gas cars
- Gas heatings
- Combustion engines



Technical specifications

Natural gas	1000 to 6500 ppm
Propane	500 to 6500 ppm
Sensor	catalytic sensor
Alarms	display LED
Power	2 AAA batteries (Mignon cell)
Dimensions	Ø 21 x 180 mm
Weight	46 g



Contents

PCE-GA3 pen-sized gas detector, batteries and user's manual

Model No. Description

PCE-GA3 Pen-size flammable gas detector

PCE-LD 1

Leak detector for refrigerant gases R22, R134a, R410A, R407C...

The PCE-LD 1 leak detector is advanced technology for detecting leaks of refrigerant gases that detects all gases based on CFCs or HFCs. Thanks to its sensitivity, this leak detector can detect all leaks in refrigeration systems although other gases may be present. The device gives off acoustic and visual warnings when leaks have been detected. The sensor extension allows measurements to be taken in places that are difficult to reach.

- Easy to use
- Ideal for refrigerant gases R22, R134a, R410A, R407C, etc.
- Adjustable sensitivity
- Can be used anywhere
- Sensor in a 390mm extension
- Audible and visual alarms
- Multicolor LED display for concentration
- Adapts to concentrations that are already present
- Automatic shut-off after 10 minutes



Technical specifications

Sensitivity	adjustable (high and low)
Response time	approx. 90 seconds
Gases detected	R22, R134a, R404, R407C, R410A...
Test cycle	continuous
Length of sensor	390 mm
Power	4 AA batteries
Operating time	approx. 40 hour of normal use
Dimensions	173 x 66 x 56 mm
Weight	400 g



Contents

PCE-LD 1 leak detector with sensor, test elements, batteries, carrying case and user's manual

Model No. Description

PCE-LD 1 Leak detector

PCE-GA 70

CO₂ detector with data logger and software

The PCE-GA 70 instrument measures carbon dioxide level, temperature and humidity in real time and includes a data logging function for 20,000 values. With the included software and the RS-232 interface you can transfer data to a PC for further analysis. It is the ideal instrument for checking ventilation rates, air changes and performing thermal comfort studies. The stable NDIR sensor guaranteed high accuracy results.

- Range up to 6,000 ppm
- Triple LCD for CO₂, % r.h. humidity and air temperature
- Maintenance free dual wavelength NDIR infrared CO₂ sensor (non-dispersive infrared)
- Continuous or manual data logging (20,000 values)
- Data hold & maximum / minimum with time stamp
- Data Memory and READ function
- Alarm and Time setting
- RS-232 function / software included



Technical specifications

Range CO ₂	0 to 6000 ppm
Resolution	1 ppm
Accuracy	±3 % of reading or ±50 ppm
Temperature	-20 to +60 °C
Resolution	0.1 °C
Accuracy	±0.5 °C
Relative humidity	10 to 95 % r.h.
Resolution	0.1 % r.h.
Accuracy	±3 % r.h. (30 to 95 % r.h.)
Memory	20,000 values (automatic) 99 values (manual)
Operating conditions	+5 to +50 °C / 10 to 95 % r.h.
Power	6 AA batteries (1.5 V)
Dimensions	158 x 72 x 35 mm
Weight	255 g

Contents

CO₂ detector, software, RS-232 data cable, batteries, carrying case and user's manual

Model No. Description

PCE-GA 70 CO₂ Detector

Gas Meters

Gasman N



Personal gas detector with ATEX approval for flammable gases (Ex), oxygen (O₂) and toxic gases (CO, CO₂, H₂S, ... etc.)

This Gasman N personal gas monitor is compact and lightweight yet designed to withstand the toughest of industrial environments. It is easy to use and it emits warnings in the case of danger caused by the presence of dangerous gases. This gas detector includes fully interchangeable i-module sensors and it is operated with one hand. The Gasman N is the most flexible gas detector that is available on the market. The Gasman N possess ingress protection IP65 and IP67 and it sets new standards for personal gas monitors for flammable gases, oxygen and toxic gases.

- Dimensions: **90 x 48 x 24 mm**
- Ultra lightweight: **90 to 130 g** (according to sensor)
- Approval codes: ATEX and UL for USA and Canada
- Continuous indicator in % LEL, vol %, ppm
- Memory for data storage
- Display with backlight: reading, peak and average values
- Multiple alarms sound using a selection of distinctive tones for different alarm levels
- Ingress protection IP65/67
- Battery types: rechargeable Li-ion battery / non rechargeable lithium cell



Technical specifications

Gas type	CH ₄ flammable	O ₂ oxygen	O ₃ ozone	H ₂ S hydrogen sulphide	CO carbon monoxide	CO ₂ carbon dioxide	SO ₂ sulphur dioxide	Cl ₂ chlorine	NO ₂ nitrogen dioxide	H ₂ hydrogen
Range	0 to 100 % LEL	0 to 25 vol%	0 to 1 ppm	0 to 100 ppm	0 to 500 ppm	0 to 3 vol%	0 to 10 ppm	0 to 5 ppm	0 to 10 ppm	0 to 1000 ppm
Alarm	20 % LEL	19 and 23 vol%	0.1 ppm	5 ppm	30 ppm	0.5 a. 1.5 vol%	1 ppm	0.5 ppm	1 ppm	100 ppm
Response time	flammable gases: 20 sec., toxic gases 20 sec., oxygen 10 sec.									
Audible alarm	95 dBA, multiple alarm sounds allow selection of distinctive tones for different alarm levels									
Visible alarm	dual colour red/blue flashing LEDs in gas hazard									
Vibrating alarm	internal vibrating alarm									
Display	custom LCD with backlight, with display of gas concentration. Graphic symbols for battery (with proportional indication of remaining operation time), and display mode. Start up indication when calibration is due within 30 days. Calibration overdue, or service required									
Display mode	normal display for real time gas concentration levels. Display recall for Peak readings and TWA									
Protocol	5000 capacity event logging to record all instrument events including: switch on / off, battery status, alarms activate/clear, peak values, gas test pass or fail. All events are time stamped									
Datalogging (more expensive)	full timed datalogging with adjustable sample rate, set to 1 minute data rate. 900 hours storage at 1 minute interval.									
Battery types	rechargeable Li-ion battery (flammable gases) non rechargeable Lithium cell (toxic gases and oxygen)									
Operating time	rechargeable: 12 hours minimum for flammable unit non rechargeable: up to 1 year									
Sampling	optional manual aspirator									
Operating conditions	-20 to +55 °C / 0 to 99 % r.h.									
Approval codes	ATEX II 1G EEx ia IIC T4 (T amb. -20 °C to +55 °C) toxic gases and oxygen ATEX II 2G EEx iad IIC T4 (T amb -20 °C to +55 °C) flammable gases									
Standards	EN50014, EN50020, EN50018, 94/9/EC, EN50270, EN50271, EN61779 software designed to meet IEC61508									
Ingress protection	IP65 / IP67									
PC interface	RS-232 connection from interface module in charger. RS232 / USB convertor available									
Autocalibrator	Gasman can be routinely calibrated using the autocalibrator II in conjunction with the PC software									
Accessories	Gasman is supplied with an integral pocket clip									
Charger	single way drop in charger with options of UK, European or US style plug in mains supplies, or in line universal supply. Optional PC interface module within the single way charger. Vehicle lighter socket lead available.									

Contents

Personal gas detector, pocket clip, lithium cell or batteries and user's manual

Optional accessories

LADE-G-N	230 V battery charger
LADE12V-G-N	Vehicle lighter socket, 12 volt
INT-G-N	230 V battery charger with interface
SW-G-N	Software for PC PC
RS232-G-N	RS-232 interface
RS232-USB	RS-232 to USB interface adapter
ASP-G-N	Manual aspirator (Handbalg), not for ozone, chlorine and nitrogene dioxide
ESS-G-N-CH ₄	CH ₄ Spare sensor
ESS-G-N-O ₂	O ₂ Spare sensor
ESS-G-N-O ₃	O ₃ Spare sensor
ESS-G-N-H ₂ S	H ₂ S Spare sensor
ESS-G-N-CO	CO Spare sensor
ESS-G-N-CO ₂	CO ₂ Spare sensor
ESS-G-N-SO ₂	SO ₂ Spare sensor
ESS-G-N-Cl ₂	Cl ₂ Spare sensor
ESS-G-N-NO ₂	NO ₂ Spare sensor
ESS-G-N-H ₂	H ₂ Spare sensor
CAL-G-N	Calibration and maintenance (e.g. every 6 months)

Model No.

Description

Gasman-N-CH ₄	Personal CH ₄ detector with accumulator (battery charger nessesary)
Gasman-N-O ₂	Personal O ₂ detector with battery
Gasman-N-O ₃	Personal O ₃ detector with battery
Gasman-N-H ₂ S	Personal H ₂ S detector with battery
Gasman-N-CO	Personal CO detector with battery
Gasman-N-CO ₂	Personal CO ₂ detector with accumulator (battery charger nessesary)
Gasman-N-SO ₂	Personal SO ₂ detector with battery
Gasman-N-Cl ₂	Personal Cl ₂ detector with battery
Gasman-N-NO ₂	Personal NO ₂ detector with battery
Gasman-N-H ₂	Personal H ₂ detector with battery

You cannot use the manual aspirator with chlorine, nitrogen dioxide and ozone.
With the Gasman-N-CH₄ you can select the gas: methane, propane, butane etc.

TETRA



Personal gas detector for the professional sector (ATEX II 2G Eex iad IIC T4)

The TETRA is a unique multigas monitor for the detection of flammable and toxic gases with an audible, visual and vibrating alarm and displays the current value. It detects up to four gases simultaneously, such as, CH₄, H₂S, CO and O₂ (as well as other combinations of gases). Single button operation and intelligent sensor modules guarantee simplicity and flexibility of use. Data can be stored in the unit and be transmitted to a PC for later assessment (optional software and cable). The TETRA has interchangeable intelligent sensor modules which can be changed on the job, it is not necessary to recalibrate the unit each time you change a sensor module. This gas detector can be calibrated according to DIN-ISO and all international standards.

- Audible alarm: 90 dB (A)
- Visual alarm: LED red and blue
- Vibrating alarm
- Single button operation
- Intelligent sensor modules
- Hand aspirator (optional)
- Special ozone model
- Internal electric sampling pump



Technical Data (LEL = flammable gases, such as methane)

Model	TETRA-1 (LEL & O ₂)	TETRA-2 (LEL, O ₂ & H ₂ S)	TETRA-3 (LEL, CO & O ₂)	TETRA-4 (LEL, O ₂ , CO & H ₂ S)	TETRA-5 (O ₂ & O ₃)
Measurement ranges					
LEL	0 to 100 %	0 to 100 %	0 to 100 %	0 to 100 %	
O ₂ / O ₃	0 to 25 % / -	0 to 25 % / -	0 to 25 % / -	0 to 25 % / -	0 to 25 % / 0 to 1.00 ppm
CO	-	-	0 to 500 ppm	0 to 500 ppm	
H ₂ S	-	0 to 100 ppm	-	0 to 100 ppm	
Alarm limits					
LEL	20 %	20 %	20 %	0 %	
O ₂ / O ₃	19.5 and 23.5% / -	19.5 and 23.5 % / -	19.5 and 23.5 % / -	19.5 and 23.5% / -	19.5 and 23.5 % / 0.1 ppm
CO	-	-	30 ppm	30 ppm	
H ₂ S	-	5 ppm	-	5 ppm	
Sensors life	methane and other flammable gases: 5 years / toxic gases: 3 years / oxygen: minimum 2 years				
Response time	T ₉₀ = methane and other flammable gases: 20 sec. / toxic gases: 20 sec. / oxygen: 10 sec.				
Alarm	visual: 2 flashing red and blue LED's; acoustic: 90 dB(A) at 1m distance; vibration				
Display	Graphic LCD (128 x 64) with backlight, battery life indicator				
Memory	event logging (e.g. when limits are exceeded)				
Interface for PC	infrared interface				
Software	yes (optional) which provides configuration control, calibration and access to data files				
Operating cond.	-20 to +55 °C and 0 to 99 % r.h.				
Power	rechargeable Li-ion battery (min. of 12 h continuous use, with internal sampling pump min. 8 h)				
Dimensions	122 x 128 x 57 mm / Weight 500 g				
Ingress protection	Ex zones, protection against water and dust, corrosion, IP 65				
Approvals	ATEX II 2G EEx iad IIC T4 (Tamb -20 to +55°C) BASEEFA 03ATEX0193 EN50014, EN50020, EN50018, 94/9/EC				

Contents

TETRA 1, 2, 3, 4 or 5, rechargeable batteries, user's manual

Model No.

Description

TETRA-1	LEL u. O ₂ Gas detector (with 2 alarm levels)
TETRA-2	LEL, O ₂ and H ₂ S Gas detector (with 3 gas levels)
TETRA-3	LEL, CO and O ₂ Gas detector (with 3 gas levels)
TETRA-4	LEL, O ₂ , CO and H ₂ S Gas detector (with 4 gas levels)
TETRA-5	Gas detector with 2 gas levels O ₂ and O ₃
TETRA-IP	Internal electric sampling pump (not for O ₃)

Optional accessories

TETRA-LS	Battery charger, 230 V / 50 Hz
TETRA-ASP	Aspirator assembly
TETRA-INT	Interface for PC, RS-232, IR adaptor
TETRA-SW	Software
TETRA-ES-CH	CH ₄ Spare sensor
TETRA-ES-O2	O ₂ Spare sensor
TETRA-ES-O3	O ₃ Spare sensor
TETRA-ES-H2S	H ₂ S Spare sensor
TETRA-ES-CO	CO Spare sensor
TETRA-CAL	Calibration / Maintenance (e.g. every 6 months)



Aspirator assembly

TETRA-MINI



Personal multigas detector with ATEX authorization

The Tetra-mini personal multigas detector has a rugged impact resistant design which provides extra shock and vibration protection. It has single button operation for all functions and it can even be operated with gloved hands. The reliable Lithium-ion battery provides over 16 hours of continuous operation from a single charge with no memory effects. It is designed for use in demanding industrial environments (e.g. in tunnels or buildings) and despite its compact size the Tetra Mini is ultra-rugged and waterproof.

- Audible alarm: 95 dB (A)
- Visual alarm: red and blue LED's
- Vibrating alarm
- Single button operation
- Graphic display
- Internal battery and charger



Technical specifications

Model	TETRA-MINI (LEL, O ₂ , CO and H ₂ S)	
Gas	Range	Alarm
LEL	0 to 100 %	20 %
O ₂	0 to 25 %	19.5 and 23.5 %
CO	0 to 500 ppm	30 ppm
H ₂ S	0 to 100 ppm	5 ppm
Sensor life	as Tetra (oxygen: minimum 3 years)	
Response time	as Tetra	
Alarm	as Tetra	
Display	graphic LCD with backlight, battery life indicator	
Memory	event logging (e.g. when limits are exceeded)	
Interface for PC	IR interface	
Software	yes (optional)	
Operating cond.	-20 to +55 °C and 0 to 99 % r.h.	
Power	rechargeable Li-ion battery (minimum of 16 hours of continuous use)	
Dimensions	112 x 72 x 49 mm / Weight 270 g	
Ingress protection	Ex zones, IP 67	
Approvals	ATEX II 2G EEx iad IIC T4 (Tamb -20 to +55°C) BASEEFA 03ATEX0193 EN50014, EN50020, EN50018, /9/EC	

Contents

TETRA-MINI, rechargeable batteries, battery charger (without RS-232 port) and user's manual

Model No.

Description

TETRA-MINI	Gas detector for 4 gases
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Optional accessories

TETRA-ML	Charger and RS-232
TETRA-MRS	RS-232 interface
TETRA-SW	Software
TETRA-ASP	Aspirator assembly
TETRA-ES-CH	CH ₄ Spare sensor
TETRA-ES-O2X	O ₂ Spare sensor
TETRA-ES-HSC	H ₂ S & CO Combi-Sensor
TETRA-CAL	Calibration / Maintenance

Gas Meters

Triple Plus+



Meter for 4 gases, with memory (ATEX I M2: EEX Ib dI, ATEX II 2G, Ex ias IIC T4)

The accuracy, solid design, memory and software, make this gas meter an impressive device for daily use in the factory or in the office. The Triple Plus+ allows connection of up to 4 sensors, which can be ordered separately depending on your needs. If you only require testing of two gases, then another two can be ordered if the need arises. The device shows the actual measurement value on the display and warns the user, with acoustic and visual alarms. One big advantage is its memory, which can save the readings continuously and they can later be transferred to a computer for further evaluation.

- Suitable for use in zone Ex
- Acoustic alarm (85dB(A) at 1m) and visual with flashing LED's
- Light to indicate the function
- Large display that indicates 4 gases
- Memory function / data logger for 6000 values per parameter
- All types of sensors available
- Ingress protection IP 65
- Powered by rechargeable battery



Technical specifications

Ranges	Measurement range	Alarm
Flammable gases (CH ₄)	0 to 100 % LEL	20 % LEL
Oxygen (O ₂)	0 to 25 %	19 % & 23 %
Hydrogen sulphide (H ₂ S)	0 to 50 ppm	10 ppm
Carbon monoxide (CO)	0 to 500 ppm	30 ppm
Sulfur dioxide (SO ₂)	0 to 10 ppm	2 ppm
Hydrogen (H ₂)	0 to 999 ppm	100 ppm
Audible alarm	audible 85 dB(A) and visual with LED	
Data logger	6000 data points per channel	
Power	rechargeable Ni Mh battery (min. of 12 h)	
Dimensions	118 x 167 x 73 mm	
Weight	900 g	

Contents

Triple Plus+ gas meter, rechargeable batteries, carrying strap and user's manual
Sensors and charger can be ordered separately

Model No. Description

Triple Plus+ Triple Plus+ without sensors

Sensors

Triple-IR-LEL	IR-Sensor, 0 ... 100 % LEL
Triple-IR-D-LEL	Dual-Range, IR Sensor, 0 ... 100 % LEL and 0 ... 100 vol%
Triple-ES-O2	Oxygen sensor, O ₂
Triple-ES-H2S	Hydrogen sulphide sensor, H ₂ S
Triple-ES-CO	Carbon monoxide sensor, CO
Triple-ES-SO2	Sulfur dioxide sensor, SO ₂
Triple-ES-H2	Hydrogen sensor, H ₂

Optional accessories

Triple-IP	Internal pump (surcharge)
Triple-INT	Charger / Interface for PC
Triple-SW	Software for Triple Plus+
Triple-CAL	Recalibration (e.g. every 6 months)

Ask for sensors: NO, NO₂, NH₃, O₃, PH₃, Cl₂ etc.

Gaseeker



Gas meter for authorised measurements (ATEX II 2G, EEx ib d IIC T4))

To carry out jobs, such as welding, in installations with gas and pipes, it's important to empty them, and in some cases to flush them with nitrogen, and once the job is completed, fill the pipes with the required gas. The Gaseeker measures the concentration of flammable gases (methane) and the content of oxygen to avoid explosions. The meter automatically changes its indications from LEL to volume in %. Thankfully that the measurement range is 100% of volume, it's possible to check for gas leaks. The alarm levels can be chosen when ordering. In cases where you wish to use the Gaseeker for authorised measurements, we advise you not to set any alarm limit, because the alarms will constantly be going off.

- Easy-to-use and portable
- CH₄: 0 to 100% LEL and 0 to 100% volume
- Oxygen O₂, 0 to 25% volume
- Large display
- Integrated aspirator
- Rechargeable battery, up to 10 hours of operation, low battery indicator



Technical specifications

Ranges	Measurement range	Alarm
Flammable gases (CH ₄)	0 to 100 % LEL a. vol%	optional
Oxygen (O ₂)	0 to 25 %	optional
Response time	methane 10s, oxygen 10s	
Sensor life span	flammable gases 3 years oxygen 2 years	
Aspirator	electrical, for aspiration of gases	
Alarm	audible 85 dB(A) and visual LEDs	
Power	rechargeable NiMH battery (8-10 h of power)	
Dimensions	118 x 167 x 73 mm	
Weight	900 g	

Contents

Gaseeker with sensors, carrying bag, charger, water hatch for the aspiration system, 1m aspiration tube

Model No. Description

Gaseeker Gaseeker with sensors

Sensors

S011375	Replacement sensor 0 to 100 % LEL
S01423	Replacement sensor 0 to 100 % vol.
S011371	Replacement oxygen sensor, O ₂



Optional accessories

GSK-CAL	Recalibration (e.g. every 6 months)
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CellarSafe

Fixed CO₂ detector with alarm and electrical relay

This device is mainly used in the food industry, mainly at drinks outlets. Besides CO₂ detection, this device emits an alarm when legal limits are exceeded, both a bright flashing LED and an audible alarm. You can also use the relay input to connect ventilation fans in the area being monitored. Remote repeater units are used to alert personnel in the safe area to the presence of a hazardous situation in the area being protected. The CO₂ detector is powered by 240 VAC, but you can install a battery so that the system continues working in case of a power outage.

- Easy to use and easy installation
- Dual-band infrared sensor for CO₂ (at least 5 years)
- Alarms: bright LEDs and audible alarm (82 dB)
- Relay output for ventilation fan adjustment
- Ingress protection IP 65; against dust and water
- Optional O₂ sensor
- Remote repeater with 9 m cable (alerts personnel in a safe area to the presence of a hazardous situation in the area being protected)



Technical specifications

Alarm levels	1.5 and 3.0 % CO ₂ with oxygen sensor: 19.5 and 18 % of O ₂
Accuracy	3 %
Resolution	0.1 %
Status indicators	2 gas level alarm LEDs red, 1 fault alarm LED yellow, 1 power LED green, 1 sounder of > 82 dB (if alarm levels are exceeded)
Display	backlight LCD (13.5 mm)
Relay outputs	2 pieces: 10A (240 VAC / 30 VDC) for ventilation fan adjustment (automatically turned on when ventilation is required)
Remote repeater	western pin and 9 m cable
Power	220 to 240 VAC, 50 to 60 Hz
Dimensions	210 x 150 x 40 mm
Weight	1300 g

Contents

CellarSafe fixed CO₂ detector, calibration certificate, remote control, 9 m cable and user's manual

Model No. Description

99F38006	CellarSafe I Standard
99F38007	CellarSafe II with battery (for emergency power supply)
99F38008	CellarSafe III and oxygen sensor
99F38005	CellarSafe IV with oxygen sensor and emergency battery

Optional accessories

CAL-CS	Recalibration of sensors (e.g. every 6 months)
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Electricity Meters

PCE-DM12

Digital multimeter with auto-ranging

This digital multimeter is a new device with a rugged double plastic enclosure equipped with a large LCD with high contrast. It meets CAT III / 600 V / IN 61010-1 standard. The PCE-DM12 has an automatic ranging selection and it has a basic AD accuracy of 0.5 %. Its durability and reliability makes it capable of being used in laboratories, in research and development or in technical service.

- Large easy to read LCD, even in adverse conditions
- Several functions
- Auto-ranging
- Data Hold function
- Auto shut-off
- Safety design
- Diode test
- Continuity check
- ISO calibration certificate (optional)



Technical specifications

DCV	600 V; $\pm 0.5\%$
ACV	600 V; $\pm 1.2\%$
DCA	10 A; 600 V; $\pm 2.5\%$
ACA	10 A; 600 V; $\pm 3.0\%$
Ohm	2 / 20 / 40 M Ω ; $\pm 0.8\%$
Capacitance	200 μ F; $\pm 3.0\%$
Frequency	10 MHz; $\pm 1.5\%$
Temperature	760 $^{\circ}$ C; $\pm 3.0\%$
Duty Cycle	9.99 %; $\pm 1.2\%$
Power	9 V battery
Dimensions	150 x 70 x 48 mm
Weight	255 g
Approvals	EN61010-1; CAT III / 600V



Contents

PCE-DM12 multimeter, test leads, type-K thermo-element, battery and user's manual

Model No.	Description
PCE-DM12	Digital multimeter

Optional accessories

CAL-DMM	ISO certificate
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PCE-DM32

Digital multimeter with CAT III 1000 V

This meter is an automatic digital multimeter meeting the CAT III / 1000 V security standard. It has a high contrast LCD with an illumination key. The warning and security indications displayed on the display helps you detect negative polarity, faulty fuses and lower tension connections. It also indicates if voltage must be disconnected in the case of passive functions.

- Several functions: AC/DC V, AC/DC A, Ohm, Frequency, Capacitance and Temperature, measuring duty cycle, diode test and continuity check
- Rugged enclosure with ingress protection against water jet and impact
- Maintenance of value / relative value
- Auto shut-off
- Diode test
- Overload protection
- ISO calibration certificate (optional)



Technical specifications

DCV	400 mV / 4 / 40 / 400 / 1000 V; $\pm 0.5\%$; +2 dgt. - 100 μ V
ACV	400 mV / 4 / 40 / 400 / 750 V; $\pm 0.8\%$; +3 dgt. - 100 μ V
DCA	400 μ A / 4 / 40 / 400 mA / 20 A; $\pm 1.2\%$; +8 dgt. - 100 nA
ACA	400 μ A / 4 / 40 / 400 mA / 20 A; $\pm 1.5\%$; +10 dgt. - 100 nA
Ohm	400 Ω / 4 / 40 / 400 k Ω / 4 / 40 M Ω ; $\pm 1.0\%$ +2 dgt. - 100 m Ω
Capacitance	40 / 400 nF / 4 / 40 / 100 μ F; $\pm 3.5\%$ +5 dgt. - 10 pF
Frequency	10 / 100 Hz / 1 / 10 / 100 kHz / 1 / 10 MHz; $\pm 1.2\%$ +2 dgt. - 1 mHz
Temperature	-20 to +1000 $^{\circ}$ C; $\pm 3\%$ +2 dgt. - 0.1 $^{\circ}$ C
Power	9 V battery
Dimensions	88 x 197 x 41 mm
Weight	390 g
Approvals	IEC1010-1, UL1244, CATIII 1000V/CATIV 600V

Contents

PCE-DM32 multimeter, soft case, test leads, battery, type-K thermoelement, cable, software and user's manual

Model No.	Description
PCE-DM32	Digital multimeter

Optional accessories

RS232-USB	RS-232 to USB adaptor
CAL-DMM	ISO certificate

DM-9960

Multimeter with Peak measurements and frequency up to 40 MHz

This digital multimeter possesses automatic and manual ranging selection, as well as a dual indicator with a maximum value up to 3999 and an analogical bar graph with 40 segments. It offers you several possibilities in your measurements, like Peak value for impulses of >1 ms. This multimeter has protection against complete input and it meets CAT III 1000 V standard. It has an automatic ranging selection for: DCV, ACV, DCA, ACA, ohms, diode measurements, continuity check, capacity, frequency and temperature.

- Analogue bar graph display with 40 segments
- Battery life indicator
- Peak, Data Hold, minimum and maximum values
- Measures relative value
- Diode test
- Auto-ranging
- ISO calibration certificate (optional)



Technical specifications

DCV	400 mV / 4 / 40 / 400 / 1000 V $\pm 0.8\%$ +1dgt.; 100 μ V
ACV	400 mV / 4 / 40 / 400 / 1000 V $\pm 1.0\%$ +2 dgt.; 100 μ V
DCA	0.4 / 4 / 40 / 400 mA / 10 A $\pm 1.5\%$ +2 dgt.; 0.1 μ A
ACA	0.4 / 4 / 40 / 400 mA / 10 A $\pm 1.5\%$ +2 dgt.; 0.1 μ A
Ohm	400 Ω / 4 / 40 / 400 k Ω / 4 / 40 M Ω $\pm 1.5\%$ +2 dgt.; 0.1 Ω
Capacitance	4 / 40 / 400 nF / 4 / 40 / 400 μ F / 4 / 40 mF $\pm 3\%$ +1 dgt.; 1 pF
Frequency	4 / 40 / 400 kHz / 4 / 40 MHz $\pm 0.5\%$ +2 dgt.; 1 Hz
Temperature	-20 to +750 $^{\circ}$ C; $\pm 1\%$ +2 $^{\circ}$ C
Power	2 AAA batteries (1.5 V)
Dimensions	88 x 185 x 40 mm
Weight	350 g
Approvals	IEC-1010-1; CAT III 1000 V

Contents

DM-9960 digital multimeter, test leads with alligator clips, batteries and user's manual

Model No.	Description
DT-9960	Digital multimeter

Optional accessories

CAL-DMM	ISO certificate
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W-20-TRMS

Multimeter with RS-232 interface, software and effective value measurement

This digital multimeter indicates to you the test leads that you will need to take your measurement depending on the measurement range selected. This meter has a display with symbols for each function, a warning symbol for faulty fuses and a discharge warning symbol. As an additional function it has an audible alarm which indicates all errors that occur. It also offers you the possibility to measure capacity, frequency and temperature.

- Large, high contrast, 3½ digit LCD
- RS-232 C interface and software for Windows 95/98/2000/NT/ME/XP
- Ingress protection for dust and water
- Overload protection
- Effective value measurement
- Relative value
- Data Hold
- Audible alarm
- Diode test
- Manual or automatic ranging
- Measures operating cycle in %



Technical specifications

Voltage DC	400 mV	±0.3 % + 5 dgt.	100 µV
	4 V	±0.1 % + 5 dgt.	1 mV
	40 V	±0.1 % + 5 dgt.	10 mV
	400 V	±0.1 % + 5 dgt.	100 mV
	1000 V	±0.5 % + 5 dgt.	1 V
Voltage AC	400 mV	±1.5 % + 5 dgt.	100 µV
	4 V	±1.0 % + 5 dgt.	1 mV
	40 V	±1.0 % + 5 dgt.	10 mV
	400 V	±1.0 % + 5 dgt.	100 mV
	700 V	±1.0 % + 5 dgt.	1 V
Current DC	400 µA	±1.2 % + 10 dgt.	0,1 µA
	4 mA	±1.2 % + 10 dgt.	1,0 µA
	40 mA	±1.5 % + 10 dgt.	10 µA
	400 mA	±1.5 % + 10 dgt.	100 µA
	20 A	±2.0 % + 10 dgt.	10 mA
Current AC	400 µA	±1.5 % + 10 dgt.	- 0,1 µA
	4 mA	±1.5 % + 10 dgt.	- 1 µA
	40 mA	±1.5 % + 10 dgt.	- 10 µA
	400 mA	±1.5 % + 10 dgt.	- 100 µA
Resistance	400 Ω / 4 / 40 / 400 kΩ / 4 / 40 MΩ		
		±1 % + 5 dgt. - 100 mΩ	
Capacitance	4 / 400 nF / 4 / 40 / 100 µF		
Frequency	10 Hz ... 10 MHz		
		±0.1 % + 2 dgt. - 10 mHz	
Temperature	-20 to +1370 °C		
		±3 % + 5 dgt. - 0.1 °C	
Overcurrent safety	CAT II 1000 V / CAT III 600 V		
Power	9 V battery		
Dimensions	88 x 178 x 33 mm		
Weight	315 g		

Contents

W-20-TRMS multimeter, software, RS-232 interface, battery, soft case, test leads, type-K thermo-element, spare fuse and user's manual

Model No.	Description
W-20-TRMS	W-20-TRMS multimeter

Optional accessories

RS232-USB	RS-232 to USB adaptor
CAL-DMM	ISO certificate

PCE-DM 22

TRUE RMS multimeter with memory, RS-232 interface and software

This handheld multimeter is an instrument which will cover almost all your needs. It determines DCV, ACV, DCA, ACA and resistance values with great precision, as well as capacitance, frequency, revolutions and temperature. It also has diode test and continuity check functions. You will be able to transfer the readings to a PC or portable via the software that is included in the delivery. The integrated data logger allows you make long-term measurements of machines and electric systems. This handheld multimeter is delivered with factory calibration and if you want, you can purchase a laboratory calibration and an optional ISO certificate (with your order or with your annual recalibration).

- Auto-ranging
- High basic DC Voltage accuracy
- DCV, ACV, DCA, ACA, resistance, capacity, frequency, temperature, revolutions
- Diode test, continuity check
- Peak function (1 ms)
- Relative value / Min / Max / Hold
- Internal memory (32,000 values)
- RS-232 interface, cable, software
- ISO calibration certificate (optional)



Technical specifications

Voltage DC	400 mV	±0.3 % of reading + 2 dgt	0.1 mV
	4 V	±0.3 % of reading + 2 dgt	1 mV
	40 V	±0.3 % of reading + 2 dgt	10 mV
	400 V	±0.3 % of reading + 2 dgt	100 mV
	1000 V	±0.5 % of reading + 2 dgt	1 V
Voltage AC		45 to 500 Hz	500 Hz to 1 kHz
	400 mV	±0.5 % of reading + 5 dgt	±1 % + 5 dgt
	4 V	±0.5 % of reading + 5 dgt	±1 % + 5 dgt
	40 V	±0.5 % of reading + 5 dgt	±1 % + 5 dgt
	400 V	±0.5 % of reading + 5 dgt	±1 % + 5 dgt
Current DC	400 µA	±0.8 % of reading. + 2 dgt	0.1 µA
	4000 µA	±0.8 % of reading + 2 dgt	1 µA
	40 mA	±0.8 % of reading + 2 dgt	10 µA
	400 mA	±0.8 % of reading + 2 dgt	100 µA
	10 A	±1.0 % of reading + 2 dgt	10 mA
Current AC		45 Hz to 500 Hz	500 Hz to 1 kHz
	400 µA	±1.3 % of reading + 5 dgt	±1.6 % + 5 dgt
	4000 µA	±1.3 % of reading + 5 dgt	±1.6 % + 5 dgt
	40 mA	±1.3 % of reading + 5 dgt	±1.6 % + 5 dgt
	400 mA	±1.3 % of reading + 5 dgt	±1.6 % + 5 dgt
Other measurement ranges	Resistance:	400 Ω; 4 / 40 / 400 kΩ; 40 MΩ	±0.6 % of reading + 2 dgt
	Capacitance:	4/40/400nF; 4/40/400µF; 4/40mF	±1.9 % of reading + 20 dgt
	Frequency:	4 / 40 / 400 kHz; 4 / 40 MHz	±0.5 % of reading + 1 dgt
	RPM:	4 / 40 kRPM; 4 / 40 / 400 MRPM	±0.5 % of reading + 1 dgt
	Temperature:	-50 to +1000 °C	±1.0 % of reading + 2°C
Memory / Interface	internal, up to 32,000 values / RS-232		
Software	included in the delivery		
Power	9 V battery		
Dimensions / Weight	198 x 86 x 38 mm / 430 g		
Approvals	IEC 1010-1, CAT III 1000 V		

Contents

PCE-DM 22 multimeter, test leads, type-K temperature probe, battery, soft case, RS-232 cable, software and user's manual

Model No.	Description
PCE-DM 22	Multimeter with data logger

Optional accessories

USB-DM 22	USB cable for the PCE-DM 22 multimeter
CAL-DMM	ISO certificate

Electricity Meters

PCE-UT803

True RMS bench multimeter with several functions, USB- / RS-232 interface and software

The PCE-UT803 is a high performance and low cost multimeter. It comes with LCD display, shows the information. It is designed by a high-tech team. This instrument combines the bench-top and system features which provides a versatile solution for your testing requirements now and in the future. The capacitance is 6 nF / 60 nF / 600 nF / 6 μ / 60 μ F / 600 μ F / 6 mF, precision: $\pm(2\% +5)$. There is USB interface.

- Auto-ranging
- Several functions: AC/DC V, AC/DC A, Ohm, Frequency, Capacitance and Temperature, measuring duty cycle, diode test and continuity check
- Effective value measurement
- Min- / max- / hold-function
- USB and RS-232 interface
- Data cable and software included
- Frequency range up to 60 MHz
- ISO calibration certificate (optional)



Technical specifications

Voltage DC	600 mV	$\pm 0.3\%$ of reading +2 dgt	0.1 mV
	6 V	$\pm 0.3\%$ of reading +2 dgt	1 mV
	60 V	$\pm 0.3\%$ of reading +2 dgt	10 mV
	600 V	$\pm 0.3\%$ of reading +2 dgt	100 mV
	1000 V	$\pm 0.5\%$ of reading +3 dgt	1 V
Voltage AC	600 mV	$\pm 0.6\%$ of reading +5 dgt	0.1 mV
	6 V	$\pm 0.6\%$ of reading +5 dgt	1 mV
	60 V	$\pm 0.6\%$ of reading +5 dgt	10 mV
	600 V	$\pm 0.6\%$ of reading +5 dgt	100 mV
	750 V	$\pm 1.2\%$ of reading +3 dgt	1 V
Current DC	600 μ A	$\pm 0.5\%$ of reading +3 dgt	0.1 μ A
	6000 μ A	$\pm 0.5\%$ of reading +3 dgt	1 μ A
	60 mA	$\pm 0.5\%$ of reading +3 dgt	10 μ A
	600 mA	$\pm 0.8\%$ of reading +3 dgt	100 μ A
	10 A	$\pm 1.2\%$ of reading +3 dgt	10 mA
Current AC	600 μ A	$\pm 1.0\%$ of reading +5 dgt	0.1 μ A
	6000 μ A	$\pm 1.0\%$ of reading +5 dgt	1 μ A
	60 mA	$\pm 1.0\%$ of reading +5 dgt	10 μ A
	600 mA	$\pm 1.0\%$ of reading +5 dgt	100 μ A
	10 A	$\pm 2.0\%$ of reading +6 dgt	10 mA
Resistance	600 Ω ; 6/ 60/ 600 k Ω ; 6/ 60 M Ω	± 0.5 to 1.2 % +2 dgt	
Capacitance	6/ 60/ 600 nF; 6/ 60/ 600 μ F; 6 mF	± 2.0 to 5.0 % +5 dgt	
Frequency	6/ 60/ 600 kHz; 6/ 60 MHz	$\pm 0.1\%$ +3 dgt	
Temperature	-40 $^{\circ}$ C to +1000 $^{\circ}$ C	$\pm 1.0\%$ +3 dgt	
Sampling rate	2 to 3 / s		
Continuity check	< 30 Ω		
Diode test	< 2,7 V / 1 mA		
Interface	USB and RS-232		
Software	included		
Display	LCD with backlight		
Power	230 V / 50 Hz or 6 batteries (1.5 V)		
Dimensions / Weight	240 x 105 x 310 mm / 2000 g		
Approvals	IEC 1010-1, CAT I 1000 V / CAT II 600 V		

Contents

PCE-UT803 multimeter, test leads, alligator clips (large and small), temperature probe (type K), adaptor, batteries, USB cable, RS-232 cable, Software and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-UT803	Bench multimeter

Optional accessories

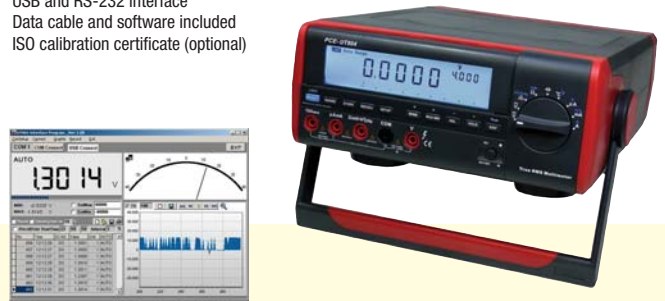
CAL-DMM	ISO certificate
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PCE-UT804

High precision True RMS bench multimeter with several functions, datalogger, USB- / RS-232 interface and software

The PCE-UT804 is a high performance and low cost clamp multimeter. It comes with LCD display, shows the information. It is designed by a high-tech team. This instrument combines the bench-top and system features which provides a versatile solution for your testing requirements now and in the future. The capacitance is 40 nF / 400 nF / 4 μ F / 40 μ F / 400 μ F / 4 mF / 40 mF, precision: $\pm(1\% +20)$. There is USB interface.

- Highest precision
- Auto-ranging
- Several functions: AC/DC V, AC/DC A, Ohm, Frequency, Capacitance and Temperature, measuring duty cycle, diode test and continuity check
- Effective value measurement up to 100 kHz
- Relative value
- Datalogger for 9,999 values with sampling rate from 1 s to 255 s
- Frequency range up to 400 MHz
- USB and RS-232 interface
- Data cable and software included
- ISO calibration certificate (optional)



Technical specifications

Voltage DC	400 mV	$\pm 0.025\%$ of reading +5 dgt	0.1 mV
	4 V	$\pm 0.05\%$ of reading +5 dgt	1 mV
	40 V	$\pm 0.05\%$ of reading +5 dgt	10 mV
	400 V	$\pm 0.05\%$ of reading +5 dgt	100 mV
	1000 V	$\pm 0.05\%$ of reading +5 dgt	1 V
Voltage AC	4 V	$\pm 0.4\%$ of reading +30 dgt	1 mV
	40 V	$\pm 0.4\%$ of reading +30 dgt	10 mV
	400 V	$\pm 0.4\%$ of reading +30 dgt	100 mV
	750 V	$\pm 1.0\%$ of reading +30 dgt	1 V
Current DC	400 μ A	$\pm 0.1\%$ of reading +15 dgt	0.01 μ A
	4000 μ A	$\pm 0.1\%$ of reading +15 dgt	0.1 μ A
	40 mA	$\pm 0.15\%$ of reading +15 dgt	1 μ A
	400 mA	$\pm 0.15\%$ of reading +15 dgt	10 μ A
	10 A	$\pm 0.5\%$ of reading +30 dgt	1 mA
Current AC	400 μ A	$\pm 1.0\%$ of reading +30 dgt	0.01 μ A
	4000 μ A	$\pm 1.0\%$ of reading +30 dgt	0.1 μ A
	40 mA	$\pm 1.0\%$ of reading +30 dgt	1 μ A
	400 mA	$\pm 1.0\%$ of reading +30 dgt	10 μ A
	10 A	$\pm 2.5\%$ of reading +40 dgt	1 mA
Resistance	400 Ω ; 4/ 40/ 400 k Ω ; 4/ 40 M Ω	± 0.3 to 1.0 % +40 dgt	
Capacitance	40/ 400 nF; 4/ 40/ 400 μ F; 4/ 40 mF	± 1.0 to 5.0 % +20 dgt	
Frequency	40/ 400 Hz; 4/ 40/ 400 kHz; 4/ 400 MHz	$\pm 0.01\%$ +8 dgt	
Temperature	-40 $^{\circ}$ C to +1000 $^{\circ}$ C	$\pm 1.0\%$ +30 dgt	
TRMS Frequency range	up to 100 kHz		
Memory	9999 values		
Sampling rate	1 to 255 s (adjustable)		
Data readout	about Display or Software		
Interface	USB and RS-232		
Software	included in the delivery		
Display	triple LCD with bargraph and backlight		
Power	230 V / 50 Hz or 6 batteries (1.5 V)		
Dimensions / Weight	240 x 105 x 310 mm / 3000 g		
Approvals	IEC 1010-1, CAT I 1000 V / CAT II 600 V		

Contents

PCE-UT804 multimeter, test leads, alligator clips (large and small), temperature probe (type K), adaptor, batteries, USB cable, RS-232 cable, Software and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-UT804	High precision bench multimeter

Optional accessories

CAL-DMM	ISO certificate
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PCE-DC4

1000 A AC digital clamp meter

This digital clamp meter measures currents without contact and it has a rugged unbreakable rubber enclosure with ingress protection against fire. Its special design allows you use it in areas with difficult access. All its functions have an overload protection.

- Large 3 1/4 digit LCD (17 mm), maximum indicator: 3999
- Data Hold freeze the current value
- AC current up to 1000 A
- Voltage measurement up to 600 V AC/DC
- Resistance, frequency, capacitance, duty cycle, and temperature measurements
- Diode test and continuity check
- Manual and automatic ranging
- Maximum diameter of 31 mm
- Auto shut-off
- ISO calibration certificate (optional)



Technical specifications

DCV	400 mV / 4 / 40 / 400 / 600 V; ±0.8 % + 3 dgt. - 100 µV
ACV	400 mV / 4 / 40 / 400 / 600 V; ±1.8 % + 5 dgt. - 100 µV
ACA	40 / 400 / 1000 A; ±2.5 % + 5 dgt. - 10 mA
Ohmios	400 Ω / 4 / 40 / 400 kΩ / 4 / 40 MΩ; ±1.0 % + 4 dgt. - 100 mΩ
Capacitance	40/400 nF / 4/40/100 µF; ±3 % + 5 dgt - 10 pF
Frequency	5/50/500 Hz /5/50/500 kHz /5/10 MHz; ±1.2 % + 2 dgt. - 1 mHz
Temperature	-50 to +1000 °C; ±3 % + 5 °C - 0.1 °C
Clamp opening	31 mm maximum diameter
Dimensions	80 x 229 x 49 mm
Weight	303 g
Approvals	IEC-1010-1; CAT III 600 V



Contents

PCE-DC4, carrying case, test leads, type-K temperature probe, 9 V battery and user's manual

Model No.	Description
PCE-DC4	1000 A AC digital clamp meter

Optional accessories

CAL-MZ	ISO certificate
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PCE-DC3

2/80 A AC/DC mini clamp meter with high resolution

This mini clamp meter is ideal for non-contact AC/DC voltage measurements. It has a built-in white flashing LED to illuminate the area being measured. Its small dimensions make it useful in areas with difficult access. The large illuminated display guarantees values can be read even in dark areas, like in distribution frames.

- 3 1/4 digit LCD with backlight
- AC / DC current measurement up to 80 A
- Data logger
- DCA Zero function
- Non-contact AC voltage detector
- Auto-ranging
- Auto shut-off
- 18 mm clamp opening
- ISO calibration certificate (optional)



Technical specifications

ACA	2 A; ±3 % + 8 dgt. - 1 mA 80 A; ±3 % + 8 dgt. - 100 mA
DCA	2 A; ±2.8 % + 8 dgt. - 1 mA 80 A; ±2.8 % + 8 dgt. - 100 mA
Voltage control (without contact)	100 to 600 VAC
Clamp opening	18 mm maximum diameter
Dimensions	65 x 164 x 32 mm
Weight	175 g



Contents

PCE-DC3, battery and user's manual

Model No.	Description
PCE-DC3	80 A AC/DC mini clamp meter

Optional accessories

CAL-MZ	ISO certificate
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CM-9940

600 A AC/DC digital clamp meter

With our digital clamp meter you will be able to measure continuous and alternating current besides using the basic functions of continuous and alternating voltage, resistance, frequency, continuity check and diode tests. It is ideal in the technical sector due to its reduced diameter of 30 mm. It has overload protection for all measurement ranges.

- 4 digit LCD, 11 mm maximum 5000 (frequency range)
- Measurements up to 600 A AC/DC
- Data Hold, continuity check and relative value
- 30 mm clamp opening
- ISO calibration certificate (optional)



Technical specifications

DCV	400 mV / 4 / 40 / 400 / 600 V ±1.0 % + 2 dgt. - 0.1 mV
Overload protection	DC 600 V
ACV	400 mV / 4 / 40 / 400 / 600 V ±1.2 % + 5 dgt. - 0.1 mV
Overload protection	AC 600 V
DCA	400 / 600 A; ±2 % + 8 dgt. - 0.1 A
Overload protection	DC 600 V
ACA	400 / 600 A; ±2 % + 8 dgt. - 0.1 A
Overload protection	AC 600 V
Ohm	400 Ω / 4 / 40 / 400 kΩ / 4 / 40 MΩ ±1 % + 5 dgt. up to 400 kΩ, if not ±3.5 % + 5 dgt. - 0.1 Ω
Overload protection	AC/DC 400 V
Frequency	5 / 50 / 500 Hz / 5 / 50 100 kHz ±1 % + 5 dgt. - 0.001 Hz
Overload protection	AC/DC 250 V
Audible alarm	yes
Diode test	yes
Power	2 batteries (1.5 V)
Dimensions	178 x 64 x 33 mm
Weight	230 g
Approvals	IEC-1010-1, CAT III 600 V

Contents

CM-9940, carrying case, test leads, batteries and user's manual

Model No.	Description
CM-9940	600 A AC/DC digital clamp meter

Optional accessories

CAL-MZ	ISO certificate
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Electricity Meters

CM-9930

2000 A AC/DC clamp meter

This clamp meter is a versatile instrument with a modern design and modern technology. It has a rugged enclosure with ingress protection against breaking and fire and the handle is also protected which prevents the user from touching the clamp or the internal lead (it offers maximum security to the user). All measurement ranges have overload protection.

- 4 digit LCD (15 mm), 5000 maximum (frequency range)
- Measurements up to 2000 A AC/DC
- 60 mm clamp opening
- Data Hold, valor efectivo real
- Continuity check
- ISO calibration certificate (optional)



Technical specifications

DCV	400 mV / 4 / 40 / 400 / 1000 V ±1.0 % + 2 dgt. - 0.1 mV
Overload protection	DC 1000 V
ACV	400 mV / 4 / 40 / 400 / 1000 V ±1.2 % + 5 dgt. - 0.1 mV
Overload protection	AC 1000 V
DCA (direct)	400 µA / 4 / 40 / 400 mA; ±1.2 % + 5 dgt. (with clamp) 400 / 2000 A; ±2.0 % + 8 dgt.
Overload protection	DC 500 mA direct; DC 1000 V clamp
ACA (direct)	400 µA / 4 / 40 / 400 mA; ±1.2 % + 5 dgt. (with clamp) 400 / 2000 A; ±2.0 % + 8 dgt.
Overload protection	AC 500 mA direct; AC 1000 V clamp
Ohms	400 Ω / 4 / 40 / 400 kΩ / 4 / 40 MΩ ±1 % + 5 dgt. up to 400 kΩ, or ±3.5 % + 5 dgt. - 0.1 Ω
Overload protection	AC/DC 400 V
Frequency	5 / 50 / 500 Hz / 5 / 50 100 kHz ±1 % + 5 dgt. - 0.001 Hz
Overload protection	AC/DC 1000 V
Capacitance	50 / 500 nF / 5 / 50 µF; ±3 % + 5 dgt.
Effective current value	yes
Audible alarm / diodes	yes / yes
Power	9 V battery
Dimensions	255 x 73 x 38 mm
Weight	380 g
Approvals	IEC-1010-1, CAT III 1000 V

Contents

CM-9930, test leads, battery and user's manual

Model No. Description

CM-9930 2000 A AC/DC digital clamp meter

Optional accessories

CAL-MZ ISO certificate

PCE-EI-3000

Flexible clamp meter for leads up to 170 mm in diameter and 3000 A

This special digital clamp meter has a flexible AC current probe for big lead cables with a diameter up to 170 mm, something that you could not measure up to now with a normal digital clamp meter. Its special flexible probe allows it to be used in areas with difficult access in which it's impossible to use a typical clamp. It measures net frequencies, currents up to 3000 A AC and voltages up to 600 V AC like real effective value.

- True RMS
- 3000 A AC direct current / 600 V AC Voltage
- 4+4 digit LCD
- Auto-ranging
- Frequency indicator
- Fast Peak function (30 µs)
- MAX / MIN functions
- Auto shut-off
- Cable length from probe to instrument: maximum 170 mm
- ISO calibration certificate (optional)



Technical specifications

ACA Trms	300 A / 0,1 A 1000 A / 0,1 A 3000 A / 1 A; ±1 % of measurement range
ACV Trms	4.0 to 600 V / 0.1V; ±0.5 % ±5 digit
Frequency	45 to 65 Hz / 0.1 Hz; ±0.2 Hz
Cable length dimensions	maximum 170 mm
Minimum bending diameter	minimum 35 mm
Cable probe diameter	14 mm
Display	4+4 digit LCD
Operating conditions	-10 to +85 °C
Power	2 AA batteries (1.5 V)
Dimensions	130 x 80 x 43 mm
Weight	430 g



Contents

PCE-EI-3000 flexible clamp meter, batteries and user's manual

Model No. Description

PCE-EI-3000 3000 A AC digital clamp meter

Optional accessories

CAL-MZ ISO certificate

PCE-UT232

3 Phase Power Clamp / Meter / Analyzer with Computer Interface (USB) and Software

The product is tri-phasic three lines and tri-phasic four lines. This high effective tool is the best choice for machine analyzing technicians and electricians in a wide field of industrial applications. The clamp can store the measured data (upto 99) and can be transferred to a PC or Portable later on. There are many special functions such as auto measure, large LCD display etc.

- Measures active / apparent / reactive power, power factor, phase angle, active energy
- Self calibration function
- Max / Min data capture / data hold display
- Store / recall saved data
- ISO calibration certificate as option



Technical specifications

ACV TRMS	20 / 100 / 300 / 600 V; ±1.2 % + 5 dgt.
ACV TRMS	40 / 100 / 400 / 1000 A; ±2.0 % + 5 dgt.
Active power (P)	0.01 kW to 600 kW; ±3.0 % + 5 dgt.
Apparent power (S)	0.01 kVA to 600 kVA; ±3.0 % + 5 dgt.
Reactive power (Q)	0.01 kVAR to 600 kVAR; ±4.0 % + 5 dgt.
True energy	1 to 9999 kWh; ±3.0 % + 2 dgt.
Power factor (PF)	0.3 to 1.00; ±0.02 + 2 dgt.
Phase angle	0 to 360°; ±1.0°
Frequency	20 to 500 Hz
Temperature	-50 to +1300 °C
Memory	99 values
Display	4 digit LCD with analog bargraph
Power	4 batteries (1.5 V)
Dimensions	112 x 39 x 303 mm
Weight	600 g



Contents

PCE-UT232 power analyser, 4 x test leads, 4 x alligator clips, USB cable, software, batteries, carrying case and user's manual

Model No. Description

PCE-UT232 Power analyser

Optional accessories

CAL-MZ ISO certificate

PCE-FC25

10 Hz to 2.6 GHz Frequency counter with telescopic RF pickup antenna

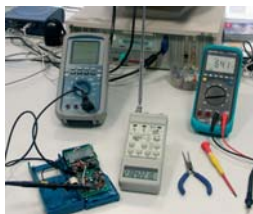
This frequency counter possesses a microprocessor for frequency, period, resolution, data hold, relative measurement and memory (maximum, minimum and average values) functions. Its low consumption and its large display allow you to work comfortably under unfavourable light conditions. The telescopic antenna, which is included in the delivery, makes it possible to measure (only frequency) without cables, a mobile or stationary transmitter.

- Telescoping RF pickup antenna with BNC connector
- Measurement range of 5 to 30 cm
- Auto shut-off
- It can be connected to a 9 V Dc adaptor
- ISO certificate (optional)



Technical specifications

Measurement range	2500 MHz: 50 MHz ... 2500 MHz (max. 2600 MHz) 500 MHz: 10 MHz ... 500 MHz 10 MHz: 10 Hz ... 10 MHz
Sensitivity	2500 MHz: <50 mVeff 500 MHz: <50 mVeff 10 MHz: <50 mVeff
Period range	10 Hz to 10 MHz
Sensitivity	<50 mVeff
Time base	4.194 MHz Quartz Crystal
Power	4 batteries (1.5 V)
Dimensions	80 x 173 x 35 mm
Weight	340 g



Contents

PCE-FC25 frequency counter, telescopic antenna, control cables, batteries and user's manual

Model No.	Description
PCE-FC25	Frequency counter

Optional accessories

CAL-PCE-FC	ISO certificate
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PCE-FC27

10 Hz to 2.7 GHz Frequency counter with RS-232 interface

We offer you a bench type frequency counter with 8 digit display, a measurement range from 10 Hz to 2.7 GHz and a time base of 10 MHz with a quartz oscillator controlled by the temperature. Frequency counter connection guarantees great measurement results with high accuracy and high sensitivity. Its ease of use and its versatility makes it very attractive for scientific, laboratory technicians, communications technicians and engineers. All the functions are selected through the keypad.

- RS-232 serial interface (protocol included)
- Self-testing function
- Minimum, maximum and average data storage
- Input for external frequency
- 8 digit LCD
- Relative period measurements
- ISO calibration certificate (optional)



Technical specifications

Ranges	10 Hz to 10 MHz 10 MHz to 500 MHz 100 MHz to 2700 MHz
Sensitivity	10 MHz: 30 mVeff 500 MHz: 50 mVeff 2.7 GHz: 50 mVeff
Period ranges	10 Hz to 10 MHz
Sensitivity	10 Hz a 9 MHz: 15 mVeff
Time base	16.777216 MHz
Time base stability / temperature	±1.5 PPM (+10 to +30 °C)
Frequency accuracy	±(2 PPM +1 dgt); +23.5 °C
Input connector	10 MHz + period: 15 Veff 500 MHz: 4 Veff 2.7 GHz: 4 Veff
Power	6 AA batteries or a 9 V adaptor
Dimensions	280 x 210 x 90 mm
Weight	1200 g

Contents

PCE-FC27 frequency counter, 1 test cable kit, 6 batteries and user's manual

Model No.	Description
PCE-FC27	Frequency counter

Optional accessories

SOFT-LUT	Software and RS-232 cable
CAL-PCE-FC	ISO certificate

PCE-IT55

Insulation tester with three test leads

This insulation meter determines the insulation resistance up to 2000 MΩ (for 250, 500 and 1000 V auxiliary voltages). It also offers the possibility to measure continuous and alternating currents up to 750 V / 1000 V, as well as resistance up to 2 kΩ. It has a continuity check function and a beep tone for insulation measurements. Measurement values can be adjusted by pressing a key. This unit meets DIN 57 411 part 1 / VDE 0411 part 1 standards, which are measurement protection for electronic meters (IEC1010-1) and DIN VDE 0413 (insulation meters).

- Meets IEC1010-1, CAT III 1000 V
- Large dual display with backlight
- Short-term and long-term measurements with "LOCK"
- Over range and battery life indicators
- Beep tone for insulation measurements
- Auto shut-off
- ISO calibration certificate (optional)



Technical specifications

Ranges	insulation: 0 to 200 MΩ / 200 to 2000 MΩ ACV: 0 ... 750 V DCV: 0 ... 1000 V ohms: 0 to 200 Ω / 200 to 2000 Ω
Resolution	insulation: 100 kΩ to 1 MΩ ACV: 1 V DCV: 1 V ohms: 0,1 Ω / 1 Ω
Accuracy	insulation: ±3.5 % ±5 dgts ACV: ±1.2 % ±10 dgts DCV: ±0.8 % ±3 dgts ohms: ±1.0 % ±2 dgts
Test voltage	250 V - 200 MΩ 500 V - 200 MΩ 1000 V - 2000 MΩ
Continuity test	beep: <40 Ω, test current 200 mA
Power	6 AA batteries
Operating conditions	0 to +40 °C / <80 % r.h.
Dimensions	200 x 92 x 50 mm
Weight	700 g
Approvals	IEC10101, CAT III 1000 V

Contents

PCE-IT55 insulation tester, cables, test leads, jaw alligator clips, batteries, carrying case and user's manual

Model No.	Description
PCE-IT55	Insulation tester

Optional accessories

CAL-5500	ISO certificate
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Electricity Meters

PCE-IT111

Insulation meter (up to 8 GΩ) with a compact enclosure

The insulation meter detects the resistance of insulation up to a maximum of 8 GΩ (in auxiliary power of 250, 500 and 1000V). The insulation meter also measures direct current and alternative current up to a maximum of 950 VDC and 700 VAC, and resistance up to a maximum of 2 kΩ. It has a tester for energy flow with integrated acoustic signal. Readings can be retained with the touch of a button. The device meets these standards: DIN 57 411 part 1/VDE 0411 part 1, counter measures for electronic measuring instruments (IEC1010-1) and DIN VDE 0413 (insulation meters).

- 2 line and 16 digit LCD
- Automatic polarity indication, range selection and zero reset
- Acoustic signal when there is a discharge to the insulation meter
- Overcharge protection in continuity tests
- Safety function, power is maintained for only 10 seconds (can be deactivated)
- Hold function
- ISO calibration certificate (optional)



Technical specifications

Measurement ranges	2 GΩ / 250 V 4 GΩ / 500 V 8 GΩ / 1000 V DCV: 0 ... 700 V ACV: 0 ... 950 V ohms: 0,01 ... 1999 Ω
Resolution	insulation: 1 / 10 / 100 MΩ DCV: 1 V ACV: 1 V ohms: 0,01 / 0,1 / 1 Ω
Accuracy	insulation: ±3 % DC: ±1,5 % AC: ±1,5 % ohms: ±2,0 %
DC test voltage	250 / 500 / 1000 V
Short circuit current	4,0 mA
Operating conditions	0 to +55 °C/ 5 to 95 % r.h.
Power	8 x batteries 1.5 V
Dimensions	175 x 85 x 75 mm
Weight	655 g
Approvals	IEC- 1010- 1; EN 61010- 1; CAT III 700; EN 50081- 1; EN 50082- 1

Included in the delivery

PCE-IT111, test cables with alligator clips, shoulder strap, batteries and user's manual

Model No.	Description
PCE-IT111	Insulation meter

Recommended Accessories

CAL-HSI	ISO certificate
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PCE-DI 6300

Professional insulation tester

This PCE-DI 6300 professional insulation tester is a device with high insulation measurement performances (according to standard VDE 0413 part 1) in electrical systems, lead tubes and machines with 100, 250, 500 or 1000V AD voltages.

- Measures according to VDE 0413 part 1
- Multi ranges MΩ
- High voltage insulation measurements; 2.8 mA short circuit current
- Several voltage insulation measurements
- Insulation / continuity test currents
- Battery life and over range indicators
- Auto-zeroing and automatic discharge
- ISO calibration certificate (optional)



Technical specifications

Insulation	200 MΩ / 100 V 200 MΩ / 250 V 200 MΩ / 500 V 1000 MΩ / 1 kV
Accuracy insulation:	±3 % +1 un / dgt DC: ±2 % +1 un / dgt AC: ±1 % +2 un / dgt resistance: ±4 % +1 un / dgt
DC insulation test voltage	100 / 250 / 500 / 1000 V
Short circuit current	approx. 2.6 to 2.8 mA
AC Voltage	600 V
Input resistance	4.5 MΩ
Resistance	200 Ω
Measurement interval	0.4 s
Operating conditions	0 to 50 °C/ 5 to 95 % r.h.
Power	6 batteries (1.5 V)
Dimensions	160 x 120 x 85 mm
Weight	575 g
Approvals	IEC- 1010- 1; EN 61010- 1; CAT III 600; EN 50081- 1; EN 50082- 1

Contents

PCE-DI 6300, test leads, large jaw clips, belt, batteries and user's manual

Model No.	Description
PCE-DI 6300	Insulation tester

Optional accessories

CAL-HSI	ISO certificate
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PCE-IT413 & PCE-IT414

High voltage insulation tester up to 10,000V

The PCE-IT413 and PCE-IT414 high voltage insulation testers belong to a series of very durable meters which are highly accurate and display 6 digits. It's ideal for technical employees indoors and outdoors. One of its advantages is the integral protection circuit which avoids measurement errors due to current leaks. It has an audible and visual alarm.

- Measures according to VDE 0413 part 1
- Insulation test voltage up to 5,000V (model PCE-IT413) and up to 10,000V (model PCE-IT414)
- High quality and great price
- ISO calibration certificate (optional)



Technical specifications

Models	PCE-IT413	PCE-IT414
DC insulation test voltage	500 / 1,000 / 2,500 / 5,000 V	1,000 / 2,500 / 5,000 / 10,000 V
Insulation ranges	30 GΩ / 500 V 60 GΩ / 1,000 V 150 GΩ / 2,500 V 300 GΩ / 5,000 V	60 GΩ / 1,000 V 150 GΩ / 2,500 V 300 GΩ / 5,000 V 600 GΩ / 10,000 V
Accuracy	±3 %	
Voltage output	1 W max.	
Insulation resistance between circuit and housing	2000 MΩ / 2000 V	
Static voltage between circuit and enclosure	7,000 V AC for max. 1 min	
AC circuit warning	voltages > 450 V AC	
Power	8 batteries (1.5 V)	
Dimensions	250 x 110 x 190 mm	
Weight	1.5 kg	
Approvals	IEC-1010-1; CAT III ; IEC- 1010-1; EN61010-1; EN50081-1; EN50082-1	

Contents

PCE-IT413 or PCE-IT414, silicone control cable, high voltage probe with integrity protection and coaxial relay, batteries and user's manual

Model No.	Description
PCE-IT413	High voltage insulation tester (5,000 V)
PCE-IT414	High voltage insulation tester (10,000 V)

Optional accessories

CAL-HSI	ISO certificate
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PCE-ET 3000

Earth resistance voltage tester for building checks and controls

Earth resistance voltage tester measures the lightning rods or lightning rod earth resistance in buildings. It possesses a hermetically sealed enclosure and meets security standard VDE 0413, which is necessary for technicians who work outdoors. It is ideal for measuring ground and lightning rod electrodes, as well as small ground systems, resistance voltage and continuity leads measurements. The most modern computation systems reduces to a minimum voltage and ground electrodes influences.

- Frequency test of 820 Hz
- Battery life indicator
- Overload protection
- Data Hold
- Security: IEC-1010-1 and CAT III 300 V
- 3½ digit LCD (max. 2000)
- 15 m red wire with red plug, 10 m yellow wire, 5 m green wire; auxiliary earth spikes, batteries and user's manual
- ISO calibration certificate (optional)



Technical specifications

	Range	Resolution	Accuracy
Earth resistance	20 / 200 / 2000 Ω	10 / 100 mΩ / 1 Ω	±2% / +2 pos.
AC voltage	0 to 200 V AC 50/60 Hz	-	±3% / + 2 pos.
Minimum voltage		0.01 Ω	
Current		2 mA / rms	
Resistance indication	indicates if electrode resistance is into the range parameters		
Operating conditions	0 to 50°C/ 5 to 95% r.h.		
Power	8 batteries (1.5V)		
Dimensions	250 x 190 x 120 mm		
Weight	1.5 kg		
Approvals	IEC-1010-1; CAT III 300 V		

Contents

PCE-ET 3000, 15 m red control wire, 10 m yellow control wire, 5 m green control wire, earth spikes and user's manual

Model No.	Description
PCE-ET 3000	Earth resistance voltage tester

Optional accessories

CAL-ERD	ISO certificate
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PCE-MO 2001

Waterproof miliohms tester

This miliohms tester has ingress protection against water jets and can measure resistance from 100 μΩ to 2000 Ω. Measurement values are displayed on the 3½ digit LCD. To obtain the measurement value you must place the tester on the object you wish to measure a continuous current and the miliohms tester measures the voltage load.

- Engine coils, generators, transformers, e.g. in parallel, contiguous or compact computation circuits, switching equipments and relay measurements
- Chemical binding energy in mines, on planes, tracks, boats, as well as home and industrial systems
- Cyclic system (Ringbus) pitch controls in home and industrial environments
- Overhead line checks, maintenance or testing of switchboards, etc.
- ISO calibration certificate (optional)



Technical specifications

Measurement ranges	0 to 200 mΩ in steps of 100 μΩ / 0 to 2000 mΩ: 1 mΩ / 0 to 20 Ω: 10 mΩ / 0 to 200 Ω: 100 mΩ / 0 to 2000 Ω: 1 Ω
Accuracy	±0.75% of reading ±2 pos. full range temperature range of -15 to 55°C (for measure with control cable included in the delivery)
Control current	1 mA (range: 2000 Ω) 10 mA (ranges: 200 / 20 Ω)
Accuracy	±0.1%
Power	230 V AC, 50 / 60 Hz
Dimensions	250 x 180 x 200 mm
Weight	1.35 kg
Approvals	IEC-1010-1; CAT IV 20 V

Contents

PCE-MO 2001, test and power leads and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-MO 2001	miliohms tester

Optional accessories

CAL-2001	ISO certificate
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PCE-MO 2002

Highly accurate, battery powered miliohm tester in a water resistant enclosure

This battery powered milli-ohm tester in a water resistant enclosure (sealed by a O-ring joint) allows measurement of resistance from 100 μΩ to 2000 Ω. It's ideal for on-site technicians thanks to it being battery powered. To detect the measurement value, a constant current is put through the object being measured and the fall in power of the object is then determined by the device.

- Measurement system of 4 conductors
- 5 measurement ranges
- 3 test currents with fuse
- Overload protection
- Large display
- Information about the resistance of the line being tested
- Auto-Hold and Auto shut-off functions
- LED to indicate permitted overload limits for Rp, Rc and temperature
- ISO calibration certificate (optional)



Technical Data

Measurement ranges	0 ... 200 mΩ in steps of 100 μΩ / 0 ... 2000 mΩ: 1 mΩ / 0 ... 20 Ω: 10 mΩ / 0 ... 200 Ω: 100 mΩ / 0 ... 2000 Ω: 1 Ω
Accuracy	±0.5 % of reading ±2 pos. full range temperature range of -15 ... +55 °C (for measure with control cable included in the delivery)
Control current	1 mA (range: 2000 Ω) 10 mA (ranges: 200 / 20 Ω) 100 mA (ranges: 2000 mΩ / 200 mΩ)
Accuracy	±0.1 %
Power supply	8 batteries of 1,5 V
Dimensions	250 x 190 x 110 mm
Weight	1.5 kg
Approvals	IEC-1010-1; CAT IV 20 V

Contents

PCE-MO 2001, test leads, 8 batteries and user's manual

Model No.	Description
PCE-MO 2002	miliohms tester

Optional accessories

CAL-2002	ISO certificate
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Electricity Meters

TM-10

TV and satellite signal level meter

This TV and satellite signal level meter measures the quality of TV VHF / UHF signals from an antenna to the customer's IRD. It is compact, portable and very easy to use, making it the ideal test instrument for satellite installers. It is very useful for optimising the placement or orientation of installations. Its large LCD with bar graph shows the reading of several values, such as frequency, field value, operative option and the unit of measurement. The metal enclosure provides good protection of internal systems or outdoor applications.

- TV and satellite signal level measurements
- PLL tuning control for frequency selection
- Audio level measurement of 4.5 / 5.5 / 6 and 6.5 MHz
- Line voltage measurement (70 V)
- Rechargeable battery / Auto shut-off
- 99 favourite channel memory
- Peak holder function for detecting maximum input level
- Buzzer for acoustic signal strength monitoring
- Automatically records selected adjustment



Technical specifications

Frequency range	5 to 862 MHz; 250 kHz
Tuning control	PLL control
for frequency	(tuning control of frequency)
Input level range	30 to 120 dB μ V; ± 3 dB (0 to +40 °C) -0.1 dB
HF input	F connector
Audio	A: +4.5 MHz / B: +5.5 MHz C: +6 MHz / D: +6.5 MHz
Frequency range	frequency
resolution	(5 to 862 MHz in steps of 250 kHz)
Memory	video, audio, peak value
Units	dB, μ V, DCV, ACV
Power	12 V / 1200 mA rechargeable batteries
Battery life	3 hours
External power supply	12 V DC, 500 mA
Indicators	frequency, channel, level, dB, μ V, ACV, DCV function, battery level, audio level (bandwidth) and bar graph
Dimensions	180 x 75 x 150 mm
Weight	1500 g



Contents

TM-10 TV and satellite signal level meter, carrying case, battery charger, internal batteries and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
TM-10	TV and satellite signal level meter

PCE-123

Multifunction calibrator for thermocouple and frequency inputs

This precision multifunction calibrator is a device that doesn't need mains connection and it has a frequency source of 1 Hz to 62.5 kHz in over 700 steps. You will be able to simulate phase regulation signals and individual signals in your technical checks and adjustments (MSR). You will be able to check and calibrate all the measurement parameters. The nominal value indicator allows you to prepare an electrical output signal. This calibrator also possesses an automatic graduation, set output percentage steps (0 to 100%) and a direct indication of the output value.

- 4 to 20 mA (1 k Ω , 24 V power supply)
- 0 to 100 mV / 0 to 1 V / 0 to 12 V
- K, J, E, T thermocouples (°C and °F)
- Frequency range: 1 to 62500 Hz
- Basic accuracy: 0.025 %
- Easy to use
- Step and auto-ramp features
- Output 0 to 100 %
(mA, mV, V)
- ISO calibration certificate (optional)



Technical specifications

mA DC Current (1 k Ω max. load , 24 V power supply)	
Range	4 to 20 mA / 0 to 20 mA / 0 to 24 mA
Resolution	1 μ A
Accuracy	± 0.025 % ± 3 μ A
mV, V DC Voltage (1 mA power supply)	
Ranges / Resolution	0 to 100.00 mV / 10 μ V 0 to 10.000 V / 1 mV 0 to 1.0000 V / 100 μ V
Accuracy	± 0.05 % ± 30 μ V ± 0.05 % ± 3 mV ± 0.05 % ± 300 μ V
K, J, E, T Thermocouples	
Ranges	-200 to 0 °C and 0 to +1370 °C
Resolution	1 °C
Accuracy	± 1.1 °C and ± 0.8 °C
Frequency	
Ranges	1 to 125 Hz and 126 to 62.5 kHz
Resolution	1 to 125 Hz / 1 Hz 126 to 62.5 kHz in 604 steps
Accuracy	± 0.04 Hz
Power	9 V battery or 6 batteries (1.5 V)
Dimensions	88 x 168 x 26 mm
Weight	330 g

Contents

PCE-123 precision multifunction calibrator, carrying case, type-K adaptor, batteries, test cables with alligator clips and user's manual

Model No.	Description
PCE-123	Multifunction calibrator

Optional accessories

CAL-123	ISO certificate
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PCE-OC 1

Handheld Digital Storage Scope Meter / Oscilloscope with USB-Interface

This programmable universal oscilloscope offers enhanced features that similar types test instruments on the market today don't have. The most frequent use of the oscilloscope is troubleshooting malfunctioning electronic equipment. One of the advantages is that the oscilloscope can be used in a frequency range of 5 MHz in real 2-channel-use and shows the signals graphically: where a single voltmeter may show a totally unexpected voltage, the scope may reveal that the circuit is oscillating.

- Dual channel and auto calibration
- DC to 5 MHz, 1 MHz oscilloscope band width
- Built-in auto ranging true RMS multimeter
- PC interface for transferring measurement data and waveform
- Backlight display, 132 x 128 pixels
- Data hold and run mode
- Low battery indicator
- ISO calibration certificate (optional)



Technical specifications

Oscilloscope	
Input channels	2
Band width frequency	5 MHz DC
Sampling rate	25 MS/s (dual) / 50 MS/s (single)
Input	AC, DC
Input impedance	1 M Ω
Accuracy	± 3.0 % vertical / ± 0.01 % horizontal
Waveform memory	16 curves
Multimeter	
Ranging	auto, manual
Voltage DC	1000 V DC / ± 0.3 % +3 dgt.
Voltage AC	750 V AC (TRUE RMS) / ± 0.75 % +5 dgt. (50 to 450 Hz)
Resistance	5 / 50 / 500 k Ω / 5 M Ω / ± 0.5 % +5 dgt.
Continuity buzzer	1.7 V test voltage
Frequency	100 Hz / 1 / 10 / 100 kHz / 1 / 10 MHz ± 0.05 % +5 dgt.
Revolutions	240 to 60,000 r.p.m.
General specifications	
Display	132 x 128 pixels
Power	3.7 V Li-Ion battery or mains power adaptor
Interface	USB
Dimensions / Weight	90 x 195 x 40 mm / 460 g
Approvals	DIN 57 411 / VDE 0411; IEC 1010; EN 61010; CAT III / 600 V

Contents

PCE-OC 1 oscilloscope, software, USB cable, test leads, case, holster, batterie charger, Li-Ion battery and user's manual

Model No.	Description
PCE-OC 1	Oscilloscope

Optional accessories

CAL-PCE-OC 1	ISO certificate
PCE-CA 502	Amp clamp adaptor to 1000 A

Serie PCE-UT

Digital storage 2 channel oscilloscopes

High performance, 2 channel oscilloscopes with colour display (PCE-UT2025B monochrom display) that are an ideal replacement for analogue scopes in service, quality testing, repair and education environments. The Serie are 2-channel oscilloscopes with 25 MHz up to 250 MHz bandwidth, 250 MS/s up to 500 MS/s sampling rate. With the software you can carry out communication between a computer and an oscilloscope through serial or USB, and in turn perform remote control. This software also provides testing, waveform and sampling data reading functions to facilitate further signal testing and analysis.

- Up to 500 MS/s real time or 25 GS/s ET sampling rate (depending on model)
- PC interface for transferring measurement data, waveform and sampling data reading
- 5,7 " colour display, 320 x 240 pixels (PCE-UT 2025B monochrom display)
- FFT, ADD, SUB, MULT, DIV and REV maths functions
- Extensive cursor measurements
- USB and RS-232 interface
- Comes with 2 x probes, software and user manual
- ISO calibration certificate (optional)



Technical specifications

Model	PCE-UT 2025B	PCE-UT 2042C	PCE-UT 2082C	PCE-UT 2152C	PCE-UT 2202C
Band width frequency	25 MHz	40 MHz	80 MHz	150 MHz	200 MHz
Rise Time	<14 ns	<8.7 ns	<4.5 ns	<2.3 ns	<2.3 ns
Sample rate	250 MS/s	500 MS/s to 1 GS/s	500 MS/s to 1 GS/s	500 MS/s to 1 GS/s	500 MS/s to 1 GS/s
Vertical sensitivity	2 mV to 5 V/div	2 mV to 5 V/div	2 mV to 5 V/div	2 mV to 5 V/div	2 mV to 5 V/div
Record length (max)	1 M	1 M	1 M	1 M	1 M
Sample rate	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s
Scan time base	20 ns to 50 s/div	10 ns to 50 s/div	5 ns to 50 s/div	2 ns to 50 s/div	2 ns to 50 s/div
Trigger type	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate
Automatic waveform measurements	28	28	28	28	28
Ports	RS-232	USB Device, USB Host, RS-232	USB Device, USB Host, RS-232	USB Device, USB Host, RS-232	USB Device, USB Host, RS-232
Mathematics	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT
Memory	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings
Display	Monochrome LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm
Power	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz
Dimensions	320 x 150 x 130 mm	320 x 150 x 130 mm	320 x 150 x 130 mm	320 x 150 x 130 mm	320 x 150 x 130 mm
Weight	4.1 kg	4.1 kg	4.1 kg	4.1 kg	4.1 kg
Approvals	CAT II	CAT II	CAT II	CAT II	CAT II

Contents

PCE-UT oscilloscope (one of these models), probe x 2 (1x, 10x switchable), software, power cord and english user's manual

Model No.

Description

PCE-UT 2025B	25 MHz Oscilloscope, monochrom Display
PCE-UT 2042C	40 MHz Oscilloscope, colour Display
PCE-UT 2082C	80 MHz Oscilloscope, colour Display
PCE-UT 2152C	150 MHz Oscilloscope, colour Display
PCE-UT 2202C	200 MHz Oscilloscope, colour Display

Optional accessories

CAL-PCE-UTO	ISO certificate
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Electricity Meters

PCE-PA6000

Power meter with RS-232 interface

PCE-PA6000 power meter is designed for bench use and measures power, power factor, current, alternating voltage and current, current and continuous voltage, resistance and frequency. This device has an RS-232 interface, and with software you will be able to transfer data to a PC to check and manipulate readings more comfortably.

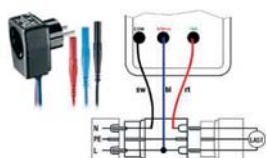
- Auto-ranging
- Direct power measurement through a probe or power clamp
- Data Hold / High / Low alarm functions
- Powered by adaptor or batteries
- RS-232 interface
- ISO calibration certificate (optional)



Technical specifications

Volts measurement (AC)	1 W to 6 kW;
True power value	1 W;
Direct measurement	±1.5 % + 1 dgt.
Volts measurement (AC) with external clamp adapter	1 W to 999.9 kW; 1 W;
VA measurement	±1.5 % + 1 dgt.
	0.01 VA to 9.999 kVA; 0.01 VA;
	±1.5 % + 1 dgt.
Power factor (cos φ)	0.00 to 1.00; 0.01; ±1.5 % + 2 dgt.
KWh counter	0.001 Wh to 9999 kWh; 0.001 Wh;
	±1 % + 1 dgt.
ACV / DCV	0.1 V to 600 V; 0.1 / 1V; ±1 % + 1 dgt.
ACAeff/rms	direct max 10 A; 10 mA, probe
DCAeff/rms	max. 1000 A; 1 A
	±1 % + 1 dgt.
ACA with clamp	up to 2000 A (depending on clamp)
Frequency	10.0 ... 999 Hz; 0.1 Hz; 1 % + 1 dgt.
Ohm	1 Ω ... 19.99 kΩ; 1 / 10 Ω; ±1 % + 1 dgt.
Power	6 AA batteries (1.5 V) or adaptor
Dimensions	280 x 210 x 90 mm
Weight	1100 g

PCE-PA-ADP power adaptor (optional)



Contents

PCE-PA6000 power meter, control cable, software, RS-232 interface and user's manual

Model No.	Description
PCE-PA6000	Power meter

Optional accessories

PCE-PA-ADP	Power adaptor
NET-300	Adaptor
RS232-USB	RS-232 to USB adaptor
CAL-2535	ISO certificate

PCE-360

3-Phase power analyser (in real time) with data logger, PC interface and software

The PCE-360 power analyser is ideal for measuring power in one or three phases. Its large display shows up to 10 values. You can attach, at the same time, up to 4 current sensing clamps. The manual option allows you to store 99 readings directly. In data storage mode you can record up to 20,000 values, making the 3-phase power analyser ideal for long-term analysis. You can transfer the measurements to a PC for later analysis (includes software and USB cable).

- Real time control, record and assess one or three systems
- Current and power measurements
- Power factor and phase angle
- Active, apparent and reactive power
- Harmonics measurements
- Connectors for 4 current sensing clamps
- 512K Data logger (20,000 readings)
- Memory to record up to 99 measurements
- RS-232 interface, cable for PC and software included
- LCD can display 10 readings
- ISO certificate (optional)



Technical specifications

Power measurement	Range:	0 to 999.9 Veff / TRUE RMS three inputs with the same "N" reference point
	Resolution:	0.1 V
	Accuracy:	±0.3 % of reading + 10 D for >80V powers
	Frequency:	50 Hz (not for FU use)
Current measurement	Range:	phase 1 – 3 (0 to 1000 A) / TRUE RMS range "N" (0 to 250 A) / TRUE RMS
	Resolution:	0.1 A
	Accuracy:	±0.5 % of reading + 15 D ±1 %
Active power (P)	Range:	0 to 999.9 KW
	Accuracy:	±1 % of reading + 20 D
Apparent power (S)	Range:	0 to 999.9 KVA
	Accuracy:	±1 % of reading + 10 D
Reactive power (Q)	Range:	0 to 999.9 KVAR
	Accuracy:	±1 % of reading + 20 D
Energy (true, apparent and reactive work)	Ranges:	0.0 to 9999 MWh / 0.0 to 9999 Mvarh / 0.0 to 9999 MVAh
	Resolution:	0.1 KWh / 0.1 Kvarh / 0.1 KVAh
	Accuracy:	±1 % of reading + 20 D
Power factor (PF)	Range:	0.000 to 1.000
	Accuracy:	±1 dgt
Phase angle		-0 to 90 °
Frequency measurement	Range:	40 to 100 Hz / U1 power
	Accuracy:	±1 % of reading + 2 D
Memory	data logger:	max. 20,000 readings (512 k), in and out time adjustable
	manual memory:	99 readings
Measurement interval		5 s, 30 s, 1 min, 2 min (adjustable)
Data transfer / Interface		RS-232 interface with optic insulator
Software / USB cable		in English, included
Display		multi-function display
Frequency range		42 to 63 Hz
Power		8 batteries (1.5 V) or 12 V / 300 mA adapter
Enclosure		ABS plastic
Dimensions		235 x 116 x 54 mm
Weight		730 g
Approvals		CAT III/600 V; DIN VDE 0411/ EN 61010 / IEC 61010; class II; IP 30; degree 2

Contents

PCE-360 3-phase power analyser, 4 test leads with alligator clips, 4 current clamp transducers, 4 safe measurement cables, 8 batteries, adaptor, carrying case, RS-232 cable for PC, software and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-360	3-Phases power analyser

Optional accessories

RS232-USB	RS-232 to USB adaptor
CAL-PCE-360	ISO certificate

PCE-830

Power and harmonics analyser with 3 phases as well as an energy meter (real time) and harmonics analyser with memory, PC port and software

The PCE-830 energy and harmonics analyser is used to measure one of three phases of electrical magnitudes for alternative current. Also, to detect the magnitudes of "normal" measurements like voltage, current, frequency, power, energy and also indicates, according to standard EN50160, harmonic, inter-harmonic and asymmetrical values. Interference in power such as interruptions, shortages, temporary surges (from 16 μ s) are detected with their corresponding values. The LCD, that has good contrast, a points matrix and backlight, shows up to 35 simultaneous parameters. It can incorporate up to 3 current clamps at the same time. In data registration mode, it can save up to 17,470 readings (3 phases / 4 conductors), or more simple, up to 52,400 readings (1 phase / 2 conductors), divided between 85 inspections. All of this makes the PCE-830 energy and harmonics analyser ideal for measurements over extended periods of time. The readings obtained can be transferred to a computer and be analysed with the corresponding software. Included with the analyzer are all the things required to measure and analyse the readings, including the software and data cable. Although the analyzer comes calibrated at the factory, and optional laboratory calibration certificate which meets ISO standards, can be ordered (with the first order for annual recalibrations).

- Analysis of power networks of 3 phases/4 conductors, 3 phases/3 conductors, 1 phase/2 conductors or 1 phase/3 conductors
- Measurement of active energy (W, KW, MW, GW)
- Potency factor (PF), phase angle (Φ)
- Measurement of current of 0.1 mA to 3000 A, permitting, for example, an analysis of the needs of reserve energy in a factory
- The conditions CT (1 to 600) and PT (1 to 3000) programmable
- Average power (AD en W, KW, MW)
- Indication of wave forms, performance parameters and harmonic distortion
- Maximum potency (MD en W, KW, MW) with programmable time periods
- Indication on the display up to a 50 form of harmonic wave
- Analysis of absolute distortion (%THD-F)
- Detects up to 28 transistors (time and cycles) with a programmable threshold (%)
- Factor of 3 phases of energy or asymmetrical current (d0%, d2%)
- Programmable time intervals and integrated calendar to record data
- Measurement of Real Effective Value (V 123 and I 123)
- Measurement of apparent and reactive energy (KVA, KVARh)
- Measurement of energy and work (Wh, KWh, KVARh, PFh)
- Large LCD that shows up to 35 parameters simultaneously (3P4W [=3 phases/4 conductors])
- Indication of superimposed current wave forms and voltage
- 512 KB of memory with programmable intervals for readings (measurement intervals of 2 to 3000 seconds, 17,470 readings using a system of 3 phases / 4 conductors)
- Analysis of harmonic distortion up to 99 types of waves lengths
- Indication of the wave form with maximum value (1024 readings/period)
- Diagram of grafic equilibrium with parameters of a 3 phase system
- Relation of 3 phases of energy or asymmetrical current (VUR)
- USB port, optically insulated
- ISO calibration certificate (optional)



Set 1:

Range: up to 100 A
Dia. electrical conductor: max. 30 mm

Set 2:

Range: up to 1000 A
Dia. electrical conductor: max. 55 mm

Set 3:

Range: up to 3000 A
Dia. electrical conductor: max. 170 mm

Technical specifications

		Set 1 (incl. PCE-6801)	Set 2 (incl. PCE-6802)	Set 3 (incl. PCE-3007)
Watts AC (50 or 60 Hz, PF 0,5 up to 1,0)	Range / accuracy	5,0 to 999,9 W / ± 1 % 1,000 to 9,999 kW / ± 1 % 10,00 to 99,99 kW / ± 1 % 100,0 to 999.9 kW / ± 1 % 1000 to 9999 kW / ± 1 %	5,0 to 999,9 W / ± 1 % 1,000 to 9,999 kW / ± 1 % 10,00 to 99,99 kW / ± 1 % 100,0 to 999.9 kW / ± 1 % 1000 to 9999 kW / ± 1 % 0,000 to 9,999 MW / ± 1 %	5,0 to 999,9 W / ± 1 % 1,000 to 9,999 kW / ± 1 % 10,00 to 99,99 kW / ± 1 % 100,0 to 999.9 kW / ± 1 % 1000 to 9999 kW / ± 1 %
Current AC	Range / accuracy	0,040 to 1,000 A / $\pm 0,5$ % 0,40 to 10,00 A / $\pm 0,5$ % 4,0 to 100,0 A / $\pm 0,5$ %	0,400 to 10,000 A / $\pm 0,5$ % 4,00 to 100,00 A / $\pm 0,5$ % 40,0 to 1000,0 A / $\pm 0,5$ %	0,0 to 300,0 A / ± 1 % 300,0 to 999,9 A / ± 1 % 1000 to 3000 A / ± 1 %
Voltage AC	Range / accuracy (measurement between phase and neutral) (measurement between two phases)	20,0 to 500,0 V / $\pm 0,5$ % 20,0 to 600,0 V / $\pm 0,5$ %	20,0 to 500,0 V / $\pm 0,5$ % 20,0 to 600,0 V / $\pm 0,5$ %	20,0 to 500,0 V / $\pm 0,5$ % 20,0 to 600,0 V / $\pm 0,5$ %
Power factor		0,00 to 1,00 / $\pm 0,04$	0,00 to 1,00 / $\pm 0,04$	0,000 to 1,000 / $\pm 0,04$
Gap angle		-180,0° to +180,0° / ± 1 °	-180,0° to +180,0° / ± 1 °	0 to 180,0° / ± 1 °

General specifications

Maximum measurement of AC current and voltage	50 + 60 Hz / ± 5 %
Measurement of peak value of AC current and voltage	1,00 to 99,99 / ± 5 %
Frequency range	45 to 65 Hz / $\pm 0,1$ Hz
Memory	512 kB (memory is not volatile) up to 52,420 readings carrying out a 1 phase/2 conductor measurement
Interface	USB (optically isolated)
Display	grafic LCD with backlight
Power	8 AA batteries 1.5 V
Dimensions / Weight	257 x 155 x 57 mm / 1160 g
Operating conditions	-10 to +50 °C / max. 85 % r.h.
Approvals	IEC 61010, 600 V / CAT III

Contents

PCE-830 energy and harmonics analyser, 3 amp clamps (according to the model ordered), 4 insulated terminals, 4 safe test lines, 8 batteries, mains adaptor, case, USB cable, software and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description	Optional accessories
PCE-830-1	Energy analyser Set 1 (incl. PCE-6801)	PCE-6801 Set of clamps 1 (for replacement or extension)
PCE-830-2	Energy analyser Set 2 (incl. PCE-6802)	PCE-6802 Set of clamps 2 (for replacement or extension)
PCE-830-3	Energy analyser Set 3 (incl. PCE-3007)	PCE-3007 Set of clamps 3 (for replacement or extension)
		CAL-PCE-830 ISO certificate

Refractometers

PCE-010

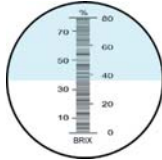
Refractometer for 0 to 10 % Brix



Technical specifications

Measurement range	0 to 10 % Brix
Accuracy	±0.1 %
Resolution	0.1 %
Applications	fruit, fruit juice, oil, lubricants
Temperature compensation	+10 to +30 °C

Scale view



Dimensions	200 x 29 mm
Weight	280 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

Model No.	Description
PCE-010	Refractometer 0 to 10 %

PCE-018

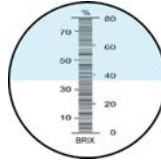
Refractometer for 0 to 18 % Brix



Technical specifications

Measurement range	0 to 18 % Brix
Accuracy	±0.1 %
Resolution	0.1 %
Applications	fruit juice, soft drinks, beers
Temperature compensation	+10 to +30 °C

Scale view



Dimensions	200 x 29 mm
Weight	280 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

Model No.	Description
PCE-018	Refractometer 0 to 18 %

PCE-032

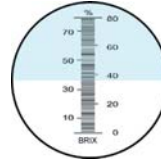
Refractometer for 0 ... 32 % Brix



Technical specifications

Measurement range	0 to 32 % Brix
Accuracy	±0.2 %
Resolution	0.2 %
Applications	fruit juice, soft drinks, beers
Temperature compensation	+10 to +30 °C

Scale view



Dimensions	172 x 29 mm
Weight	260 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

Model No.	Description
PCE-032	Refractometer 0 to 32 %

PCE-2862

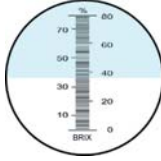
Refractometer for 28 to 62 % Brix



Technical specifications

Measurement range	28 to 62 % Brix
Accuracy	±0.2 %
Resolution	0.2 %
Applications	concentrated fruit juice, liquid for human consumption
Temperature compensation	+10 to +30 °C

Scale view



Dimensions	172 x 29 mm
Weight	260 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

Model No.	Description
PCE-2862	Refractometer 28 to 62 %

PCE-4582

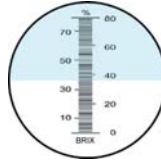
Refractometer for 45 to 82 % Brix



Technical specifications

Measurement range	45 to 82 % Brix
Accuracy	±0.5 %
Resolution	0.5 %
Applications	compact fruits, condensed milk, jams
Temperature compensation	+10 to +30 °C

Scale view



Dimensions	147 x 29 mm
Weight	240 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

Model No.	Description
PCE-4582	Refractometer 45 to 82 %

PCE-Oe

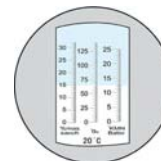
Wine refractometer for °Oe and 0 to 44 % Brix



Technical specifications

Measurement range	0 to 190 °Oe 0 to 44 % Brix, 0 to 38 KMN
Accuracy	±2 °Oe, ±0.2 %, ±0.5 KMN
Resolution	2 °Oe, 0.2 %, 0.5 KMN
Applications	wines
Temperature compensation	+10 to +30 °C

Scale view



Dimensions	172 x 29 mm
Weight	260 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual


Model No.	Description
PCE-Oe	Refractometer Oechsle

PCE-5890

Refractometer for apiculture: H₂O and 58 to 90 % Brix



Technical specifications

Measurement range	12 to 27 H ₂ O, 58 to 90 % Brix, 35 to 43 B
Accuracy	±1 % H ₂ O, ±0.5 %, ±0.5 B
Resolution	1 % H ₂ O, 0.5 %, 0.5 % B
Applications	honey
Temperature compensation	+10 to +30 °C
Scale view	

Dimensions	147 x 29 mm
Weight	240 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

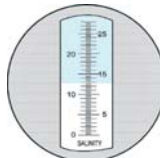
Model No.	Description
PCE-5890	Refractometers for apiculture

PCE-0100 & PCE-028

Salt refractometer for 0 to 100 % or 0 to 28 % of salt content



Technical specifications

Measurement range	PCE-0100: 0 to 100 %, PCE-028: 0 to 28 %
Accuracy	±1 % / ±0.2 %
Resolution	1 % / 0.2 %
Applications	drinks, water
Temperature compensation	+10 to +30 °C
Scale view	

Dimensions	PCE-0100: 200 x 29 mm / PCE-028: 170 x 29 mm
Weight	240 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

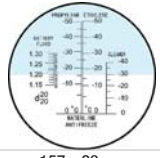
Model No.	Description
PCE-0100	Refractometer 0 to 100 %
PCE-028	Refractometer 0 to 28 %

PCE-SG

Refractometer for antifreeze and liquid batteries



Technical specifications

Measurement range	-50 to 0 °C antifreeze -40 to 0 °C cleaning products 1.15 to 1.30 SG liquid batteries
Accuracy	±5 °C, ±5 °C, ±0.01 SG
Resolution	5 °C, 5 °C, 0.01 SG
Applications	antifreeze, liquids
Temperature compensation	-
Scale view	

Dimensions	157 x 29 mm
Weight	230 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual

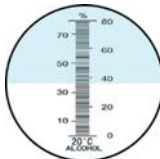
Model No.	Description
PCE-SG	Refractometer for antifreeze

PCE-ALK

Alcohol refractometer for 0 to 80 %



Technical specifications

Measurement range	0 to 80 % alcohol
Accuracy	±1 %
Resolution	1 %
Applications	industrial alcohol, alcoholic solutions
Temperature compensation	+10 to +30 °C
Scale view	

Dimensions	203 x 29 mm
Weight	280 g

Contents

Refractometer, test tube, calibration screwdriver, case and user's manual


Model No.	Description
PCE-ALK	Refractometer for alcohol

ABBE-2WAJ

The ABBE-2WAJ refractometer measures refraction between 1.300 and 1.700 such as in the content of sugar in liquids and other substances. It can determine the refracton index in a range of 0 to +70 °C using the thermometer that comes included. You can regulate the temperature of the device by way of an external thermostat with adaptors for tubes of water that are incorporated above and beneath the prisms.



Technical specifications

Measurement range	1.3000 to 1.7000 nD (refraction index) 0 to 95 % Brix
Accuracy	±0.0002 nD, ±0.25 %
Resolution	0.0002 nD, 0.25 %
Applications	almost all applications
Temperature compensation	with external thermometer between 0 to +70 °C
Scale view	

Dimensions	235 x 180 x 90 mm
Weight	3000 g

Contents

Refractometer, thermometer, test tube, calibration block, oil, calibration screwdriver, user's manual

Model No.	Description
ABBE-2WAJ	Refractometer Abbe

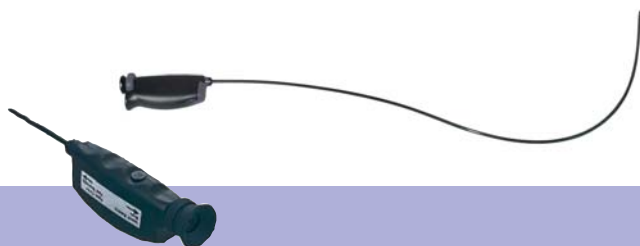
Endoscopes

Serie PCE-E

Endoscopes for technical inspections, such as engine blocks, or machines, with an optional adjustable digital camera ring

Endoscopes offer new perspectives of the inside of machines and installations. They are the ideal tool for inspection and maintenance in the industrial sector, in workshops, or for private use, such as in research or university laboratories. Insert the flexible cable into a space close to the area you wish to view and in this way you will be able to see what is happening inside. Thanks to its flexible cable, its light weight and its quality optical components, you will clearly see problem points and be able to assess the situation without the cost of having to dismantle the machine. The water resistant tube and lense allow for inspection of submerged components without any problem.

- ABS enclosure (waterproof)
- Powerful halogen lamp illuminates dark locations for clear viewing
- The PCE-E 122 and the PCE-E 240 flexible cable maintains its fixed position until readjusted
- The PCE-E 45 and PCE-E 130 cable reach deep into tubes, walls, drains, etc.
- Integrated focus ring
- A digital camera can be connected using an optional adaptor
- **Not to be used for medical purposes**



Technical specifications

Endoscope model	PCE-E 45	PCE-E 122	PCE-E 130	PCE-E 240
Length of flexible cable	450 mm	1220 mm	1220 mm	2400 mm
Diameter	4.0 mm	8.0 mm	6.0 mm	8.0 mm
Diameter with mirror of 45°	4.6 mm	8.6 mm	6.6 mm	8.6 mm
Operating temperature	-10 to +50 °C	-10 to +50 °C	-10 to +50 °C	-10 to +50 °C
Total length	595 mm	1365 mm	1365 mm	2545 mm
Field / angle of vision	40 °	40 °	40 °	40 °
Minimum view distance	2 mm	2 mm	2 mm	2 mm
Light	halogen bulb	halogen bulb	halogen bulb	halogen bulb
Power	3 batteries AA	3 batteries AA	3 batteries AA	2 batteries AA
Weight	340 g	450 g	450 g	800 g
Optional	camera adaptor	camera adaptor	camera adaptor	camera adaptor

Contents

PCE-E xxx endoscope (one of our models), carrying case and operator's manual

Model No. Description

PCE-E 45	Endoscope (450 x 4,0 mm)
PCE-E 122	Endoscope (1220 x 8,0 mm)
PCE-E 130	Endoscope (1220 x 6,0 mm)
PCE-E 240	Endoscope (2400 x 8,0 mm)

Optional accessories

PV-KA-I	Digital camera adaptor The adaptor is attached to the endoscope. You will find the rings you require in specialized shops.
ES-ER-E45	45° mirror for the PCE-E 45 endoscope
ES-45-E122	45° mirror for the PCE-E 122 endoscope
ES-45-E130	45° mirror for the PCE-E 130 endoscope
ES-45-E240	45° mirror for the PCE-E 240 endoscope



Applications



Endoscope with the digital camera adapted



Digital camera photography

PCE-VE 110

Endoscope with USB port to allow for images to be displayed on computer monitors

The endoscope has a similar structure to the PCE-E 122. Of course, the PCE-VE 110 has no screen to view the image unless it's connected to a computer. It lets you see the interior, in spaces, tubes, etc. comfortably from your computer. With the help of the software, you can save images (.jpg) and take videos (.avi). This is advantageous if you require graphical documents for presentations. The USB cable is 180 cm long.

- USB connection and software to view images on a computer (images can only be viewed in this way)
- ABS enclosure resistant to water
- High bright LED
- The endoscope cable maintains a curved shape (until it is put into another form)
- **Note: Not suitable for medical use**



Technical specifications

Length of flexible cable	930 mm
Diameter	10.5 mm
Resolution	352 x 288 pixels
	704 x 576 interpolated pixels
Operating temperature	-10 to +50 °C
Total length	1090 mm
Field / angle of vision	40 °
Minimum view distance	2 mm
Light	LED
Power	via USB
Weight	450 g

Contents

PCE-VE 110 endoscope, software, 1.8 m USB cable, carrying case and user's manual

Model No. Description

PCE-VE 110	Endoscope with software
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Optional accessories

ES-45-VE110	45° mirror
MAG-VE110	Magnet (to stick on end of the endoscope)



PCE-V220

Endoscope powered by rechargeable batteries and with a 5.6" display and 20 m retractable cable

The PCE-V220 endoscope / videoscope offers new perspectives of the interior of machines and installations, through openings, such as ventilation shafts, chimneys, drainage systems, etc. This endoscope is the perfect tool for inspection and maintenance in any professional sector or type of workshop. Optical analysis has never been easier with an endoscope / videoscope. This innovative series offers access to professional video inspection. You can inspect areas of interest with diameters of 30 to 150 mm, for up to 2 hours without using a power adaptor. The solid sensor head contains a camera, is resistant to water and has a diameter of only 26 mm and can be passed through a curve of a tube that has only 40 mm diameter. The endoscope's retractable cable has length marking to assist in precisely locating the area of damage. The TFT can be removed from the case to allow for easy viewing in places of limit space and has a 2 m cable. The videoscope have also a video output and allows for images to be saved to a computer or a DVD recorder for further analysis.

- 26 mm sensor head containing camera
- Camera is water proof
- Clearly illuminated LED
- Light sensitivity: 0.5 lux
- 5.6" TFT display (14.22 cm)
- 20m retractable cable
- 2 Rechargeable batteries (2 hours)
- Batteries included



Technical specifications

Camera	
Camera head	color
Type	1/3 " COLOR CMOS
Light sensitivity	0.5 lux
Lense	f = 2.5 mm, F = 2.0
Angle of perception	120°
Illumination	12 white LEDs
Ingress protection	IP68, water resistant up to 3 bar
Dimensions (camera head)	Ø 26 x 38 mm
Monitor	
Dimensions (Monitor)	165 x 127 x 38 mm
TFT display	5,6" (14,22 cm)
Output	FBAS (Chinch)

Other specifications

Dimensions of retractable cable	Ø 6 mm x 20 m
Power	2 rechargeable batteries 12V / 1.2 Ah
Carrying case	510 x 430 x 170 mm
Total weight	7 kg

Contents

TFT colour monitor, 2 m extension cable, 20 m retractable cable, miniature camera head, 2 rechargeable batteries, charger, carrying case and user's manual

Model No.	Description
PCE-V220	V220 endoscope with colour camera

Optional accessories

PCE-V3827	Slide ring for the camera head, increases movement round curves
PCE-V3847	Slide ring for the camera head, increases movement round curves while protecting the lense
PCE-V3857	740g weighted guide, guarantees a better vertical descent
PCE-V3854	Centring star, this can help centre the camera in pipes and has a diameter of 200 mm
PCE-V3853	Centring star, extension version with distance ring
PCE-V53649	Battery charger will recharge to batteries in only 30 minutes

PCE-TDE 150

Flexible color video borescope with a 3.5 " display, 1.5 m retractable cable and rechargeable battery

The high-quality flexible color video borescope is supplied as a complete, fully portable system specially designed for search professionals to use in areas that are difficult to access such as inside tube, tanks and behind concealed panels. The endoscope has diameter 6 mm, length 1.5 meter, oil/waterproof, illuminated crush-resistant Endoflex vertebrae core, and tough polymer outer with stainless covered tip bending section. The endoscope has 2-way remote end tip with 120 ° left / right articulation. A full color video camera ship is connected to the tip, and the image can be viewed on the color LCD monitor supplied.

- Flexible cable length 1500 mm
- Diameter of only 6 mm
- Operates with rechargeable battery
- The flexible cable allows access to tight spaces
- 2-way remote end tip with 120 ° left / right articulation
- 3.5 " color display
- Waterproof
- Video out



Technical specifications

Length of flexible cable	1500 mm
Diameter	6 mm
Angle of view	55 °
Bending ways	2 ways (120 ° / 120 °)
Protection	waterproof
Light	LED
Operating temperature	0 to +60 °C
Display	3.5 " color LCD
White balance	auto or manual
Function	Video output
Power	Li-ion rechargeable battery
Weight	450 g

Contents

PCE-TDE 150 endoscope with LCD display, insert tube, light source, rechargeable battery, charger and user's manual

Model No.	Description
PCE-TDE	Endoscope



Endoscopes

Serie PCE-VE

Videoscopes with internal display, memory, software and 1 m or 2 m cable

The endoscope has been designed for use in laboratories and in testing the production of components. You can operate this system accurately and rapidly with your gloves on. This video endoscope combines a high resolution CMOS image with an integrated 3.5" TFT Display and a strong LED lighting. It can be connected to a Computer via the USB cable for image and video captures. The borescope is equipped with a high capacity battery. It can work and record for 4 hours continuously after being charged for 2 hours.

- Quick snap and video recording
- The flexible cable allows access to tight spaces
- Flexible cable length 1,000 mm, 2,000 mm or 10,000 mm
- Diameter of only 5.5 mm
- Clearly illuminated LED
- 512 MB memory card included
- **Note: Not suitable for medical use**



Technical specifications

Model	PCE-VE 320	PCE-VE 330	PCE-VE 340
Length of flexible cable	1,000 mm	2,000 mm	10,000 mm
Diameter		5.5 mm	
Radial curve		90 mm	
Sensor		CMOS	
Resolution		320 x 240 / 640 x 480	
Frame rate		30 / s	
Field / angle of vision		67 °	
Optimum view distance		15 to 100 mm	
Light		4 x LED	
Display		3.5 " TFT	
Interface		USB	
Memory		512 MB SD card	
Video output		NTSC and PAL	
Operating temperature		-10 to +50 °C	
Power		3,7 V battery	
Weight		450 g	

Contents

PCE-VE 320, PCE-VE 330 or PCE-VE 340 videoendoscope, SD card (512 MB), software, USB cable, carrying case and user's manual

Model No.	Description
PCE-VE 320	Videoendoscope (1,000 mm)
PCE-VE 330	Videoendoscope (2,000 mm)
PCE-VE 340	Videoendoscope (10,000 mm)

Optional accessories

ES-45-VE300	45° mirror (to stick on end of the endoscope)
PCE-VE-SC1	1 m spare cable with optic
PCE-VE-SC2	2 m spare cable with optic
PCE-VE-SC10	10 m spare cable with optic



PCE-CLE 150

Cold light endoscope with flexible optics and powered by mains adaptor

The cold light endoscope has been designed for use in laboratories and in testing the production of components. The endoscope comes with a cold light bulb and a flexible optic cable, which allows for a field of vision of up to 80°. The endoscope cable is equipped with markings, allowing the user to determine the depth of penetration making it easier to locate the observed area. The brightness of the field of vision can be adjusted with an external dial. This endoscope also comes with a handle to move the end point up, down, left and right allowing the field of vision to be amplified to 80°.

- Flexible cable length 1000 mm
- Diameter of only 8 mm
- High optics thanks to its 10,000 optic fibres
- Adjustable flexible optics thanks to its handle
- Cold light potency of 100 W
- The flexible cable allows access to tight spaces
- The external dial allows the user to adjust the brightness in the field of vision
- Connection cable between the endoscope and the light source is 1.5 m



Technical specifications

Flexible cable length	1000 mm
Diameter	8 mm
Pixels	10,000
Radial curve / flexible point	120 °
	(up, down, left and right)
Field of vision	80 °
Handle length	85 mm
Total length	1350 mm
Distance of optimum visibility	3 to 100 mm
Light production	cold light
Capacity	100 W
Operating temperature	-10 to +40 °C
Power	230 V / 50 Hz
Weight	4900 g

Contents

PCE-CLE 150 endoscope, cold light source with regulator, mains cable, 1.5m connecting cable, replacement cold light bulb, 2 replacement fuses, carrying case and user's manual

Model No.	Description
PCE-CLE 150	Cold light endoscope

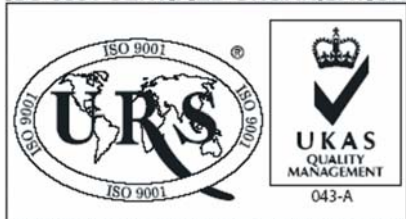


Examples for partners of calibration services

calibración de analizadores de gas S.L.



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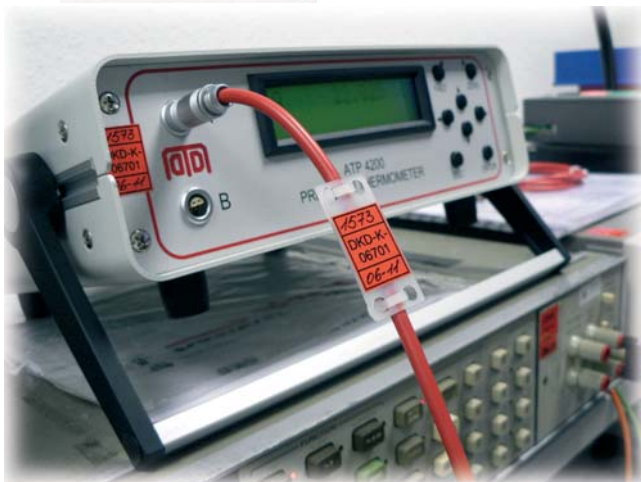
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Microscopes

PCE-MM 200

Microscope with USB connection and software for images and video, magnifies up to 200x

This digital microscope, equipped with a USB interface, is specifically designed for viewing and inspecting all types of very small elements and components. The microscope comes with a wide, adjustable magnification range of between 10 and 200x and has four white LEDs situated around the lens in such a way as to allow for optimal illumination of the object being observed at all possible angles. Its easy to use: Connect to a USB port, adjust the magnification and press the button to capture the image. Images and video sequences are easily captured by a computer directly, and can be used later in presentations or for analysis (allowing the user to incorporate a projector for effective presentation of data to a group of people).

- Adjustable magnification range from 10 to 200x
- High illumination from integrated white LEDs
- USB port to power the microscope and transfer data to a computer
- Allows image and video capture in conjunction with software which is included
- Transmission of up to 30 frame per second
- Display resolution up to 1280 x 1024 pixels
- Tripod included



Technical specifications

Resolution	1280 x 1024 pixels
Magnification	10 to 200x (continuous adjustment)
Colours	24 bit RGB
Focus	4 x LED
Image transfer rate	up to 30 frames per seconds
Video format	AVI
Interface	USB 2.0
System requirements	Windows 98
Power	via USB interface
Dimensions	110 x 33 mm
Weight	90 g

Contents

PCE-MM 200 microscope, tripod, software, USB cable and user's manual

Model No.	Description
PCE-MM 200	Microscope with USB connection



PCE-ME 100

Eyepiece microscope with USB connection for using with a microscope

Using the eyepiece microscope, it is possible to connect a microscope to a computer via a USB port and as such, document an analysis or make a visible presentation for a wider audience, such as in classrooms or meetings. The eyepiece microscope utilizes the microscope's eyepiece to produce an image resolution of 1280 x 1024 pixels. The eyepiece microscope allows for an actual microscope to be economically fitted with a videomicroscope as a technical upgrade. This eyepiece microscope is one of the most innovative devices in the range of microscopes available on the market today. Thanks to its adaptor, the eyepiece microscope can be used with any microscope that has an eyepiece diameter of 23 or 30mm. With the software package, which comes included, it's possible to save, edit or make notes on a computer, of observations that have been made.

- Quick and easy to set up
- Connects to a computer via the USB port
- It can be used with any microscope that has an eyepiece diameter of 23mm or 30mm
- Captures individual images or video sequences
- Resolution of 1280 x 1024 pixels
- Software is included



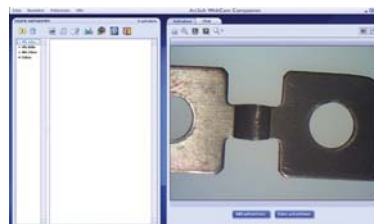
Technical specifications

Resolution	1280 x 1024 pixels
Magnification	10x
Colours	24 bit RGB
Compatible eyepiece diameters	23 mm & 30 mm
Image transfer rate	30 / s
Video format	AVI
Interface	USB 2.0
System requirements	Windows 98 or higher
Power	USB interface
Dimensions	90 x 50 mm
Weight	150 g

Contents

PCE-ME 100 eyepiece microscope, adaptor, software, USB cable and user's manual

Model No.	Description
PCE-ME 100	Eyepiece microscope



PCE-BM 200

Professional microscope with display and magnification of up to 1600x

This microscope replaces traditional eyepieces with an LCD Screen for easy and comfortable viewing for yourself and to share with others. The microscope also features a built-in digital camera for quick and easy snapshots or short videos. Store captured photos and clips on the optional SD card or transfer them to your personal computer via included USB cable. This innovative product combines advanced professional grade microscope features and an easy to use point and shoot camera. The microscope is an ideal tool for up close examination of everything from stamps, coins and other common objects to specimen slides of yeasts, molds, cultures, fibers, bacteria and insects.

- Magnification from 40 to 400x, up to 1600x with Digital Zoom
- Vertical adjustment for larger objects
- Reflected and transmitted light
- Data transmission via USB
- Image shown directly on 3,5 " display
- Image store function (SD card)
- Top and bottom LED illumination
- Six position color filter wheel
- USB cable for transferring images to a PC



Technical specifications

Resolution	2 MP
Magnification	from 40 to 1600x
Eyepieces	10x
Lenses	4x, 10x, 40x
Light source	transmitted and reflected light
Display	3,5 "
Picture format	JPG
Video format	AVI
Interface	USB 2.0
System requirements	Windows 98 or higher
Power	230 V / 50 Hz
Weight	4500 g

Contents

PCE-BM 200 microscope, cross table, color filter disc, duration preparations, slides and cover glasses, yeast, seasalt, bag and user's manual

Model No.	Description
PCE-BM 200	Microscope with monitor

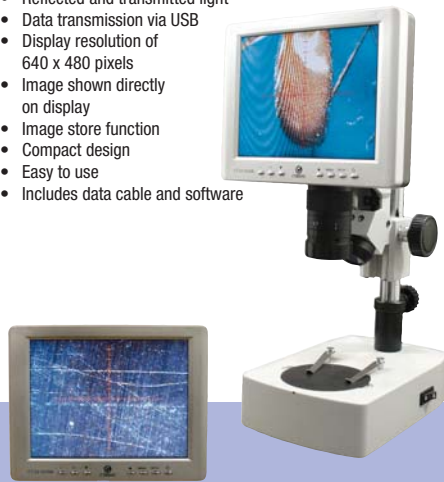


PCE-VMS 200

Workshop microscope with display and magnifies up to 100x

The workshop microscope is composed of an optical microscope, a CCD camera and an LCD. Thanks to its 100x magnification, it is easy to visualize very small objects and is a very useful device in workshops for inspecting soldering joints or surface defects or damage to metal. The images that can be seen on the LCD can also be transferred to a computer via the USB cable for further analysis. Also, thanks to its vertical adjustment, it is possible to investigate larger objects. It has the ability to use reflected light or transmitted light allowing for inspection of transparent materials, non-transparent materials or solids. It is an attractive device due to being easy to use and for its versatility.

- Continuous magnification from 10x to 100x
- Vertical adjustment for larger objects
- Reflected and transmitted light
- Data transmission via USB
- Display resolution of 640 x 480 pixels
- Image shown directly on display
- Image store function
- Compact design
- Easy to use
- Includes data cable and software



Technical specifications

Resolution	640 x 480 pixels
Magnification	from 10 to 100x
Light source	transmitted and reflected light
Interface	USB 2.0
System requirements	Windows 98 or higher
Power	230 V / 50 Hz
Measurement distance	100 mm
Weight	4500 g

Contents

PCE-VMS 200 microscope, software, USB cable, case and user's manual

Model No.	Description
PCE-VMS 200	Microscope with monitor



PCE-TM 2000

Triple eyepiece microscope with optional camera, magnifies up to 2000x

The PCE-TM 2000 laboratory microscope is a durable device. This laboratory microscope magnifies up to 2000x and can be adjusted by rotating the lens mechanism. This triple eyepiece microscope allows for an optional USB camera to be connected with a dioptic correction of up to 5. Samples are illuminated by this microscope by way of transmitted light using a powerful halogen bulb. The combination of accuracy and durability make this laboratory microscope an ideal tool for daily use. We also offer an optional micro lens which attaches to the eyepiece of the microscope allowing images to be viewed directly on a computer display allowing them to be processed and documented for later use.

- Magnification from 80x to 2000x
- Four lenses on a rotating mechanism
- Uses reflected light
- Transmits data via a USB 2.0 connection
- 45° binocular tube
- Distance between eyepieces can be adjusted
- The stage has graduations marked for object placement and location
- Includes protective hood
- Optional USB camera to capture and transfer images



Technical specifications

Magnification	80x, 200x, 800x, 2000x
Eyepieces	20x
Lenses	4x, 10x, 40x, 100x
Light source	reflected light
Illumination	6V / 20W halogen bulb
Tube	angle 45° / rotation 360°
Power	230 V / 50 Hz
Weight	7.5 kg

optional USB camera

Resolution	1600 x 1200 pixels (2 MP)
Interface	USB 2.0

Contents

PCE-TM 2000 laboratory microscope, one graduated platform, two eyepieces, four lenses, hood and user's manual

Model No.	Description
PCE-TM 2000	Microscope

Optional accessories

PCE-ME 2000	USB camera
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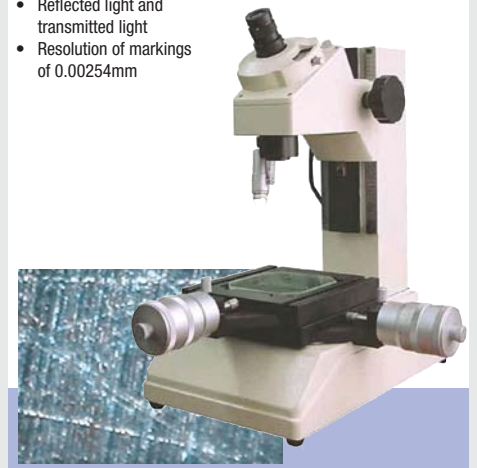


PCE-XM 100

Durable microscope with integrated micrometer, magnifies up to 150x

This microscope has a mechanism to aim the lens over the area to be viewed (crosshairs in the eyepiece) and a positioning tool with a system of measurement to help locate a specific area (x-y markings on the plate). This allows the user to focus upon a single point on the surface of the plate and to continue moving the image until the next reference point appears under the crosshairs and to read and record the distance. This allows for perpendicular distances to be tracked with the eyepiece. This micrometer is attractive for its high measurement resolution, because it is easy to use and for its durable design. This device can be used in practically all types of industries.

- Standard magnification of 30x (with an optional lens this can be increased to 150x)
- Measurements with an integrated micrometer
- Reflected light and transmitted light
- Resolution of markings of 0.00254mm



Technical specifications

Magnification	30x (150x with optional 10x lens)
Eyepieces	15x
Lenses	2x (10x optional)
X-Y markings on the plate	50 x 50 mm
Resolution of markings	0.00254 mm
Angle of resolution	1°
Maximum measurement distance	67 mm
Scribing block	152.4 mm
Illumination	reflected light / transmitted light (24V)
Power	230 V / 50 Hz
Weight	19 kg

Contents

PCE-XM 100 microscope, lens 2x, eyepiece 15x, light bulb, replacement light bulb, plate, micrometer, replacement fuse, mains adaptor, carrying case and user's manual

Model No.	Description
PCE-XM 100	Microscope

Optional accessories

PCE-OB 10X	Lens 10x
PCE-ME 100	Eyepiece microscope



Water Analyzers

PCE-PH 22

pH pocket pH meter

The PCE-PH 22 is a pocket pH meter which is resistant to water. The pH probe is protected by a removable hood. It's ideal for quickly testing pH in both the industrial sector or for private use.

- Simultaneous measurement of pH and temperature
- Automatic temperature compensation
- Saves up to 100 values, at the push of a button
- Minimum, maximum and Hold functions
- Automatic shut-off to conserve batteries
- Automatic calibration for pH of 4, 7 or 10
- Large display with graphic bars
- Compact unit
- Water resistant (IP 67)



Technical specifications

Ranges	pH	0 to 14
	Temperature	-5 to +80 °C
Resolution	pH	0.01
	Temperature	0.1 °C
Accuracy	pH	±0.02
	Temperature	±0.8 °C
Calibration	pH	automatic for pH 4, 7 or 10
	Temperature	- - -
Temperature compensation		-5 to +80 °C
Operating conditions		0 to +60 °C / <80 % r.h.
Power		4 AAA batteries 1.5 V (incl.)
Dimensions		186 x 40 mm
Weight		130 g

Contents

PCE-PH 22 with pH electrode, calibration solution pH 4 + pH 7, batteries and user's manual

Model No.	Description
PCE-PH 22	PCE-PH 22 pH meter

Optional accessories

PCE-PH-47 Calibration solution (75 ml bottles), pH 4.01 and pH 7.01



PCE-CM 41

Conductivity meter with two ranges

The electric conductivity meter shows the amount of solid material dissolved in a liquid. Units of measurement are S/cm. The PCE-CM 41 conductivity meter is available with two ranges that guarantee highly accurate readings.

- 2 Ranges with high accuracy
- Automatic calibration at 1413 µS/cm
- Measures conductivity (EC), Total Dissolved Solids (TDS) and temperature
- Solid construction
- Auto shut-off to save batteries
- Probes connect via the BNC connector
- Water resistant (IP 67)



Technical specifications

Ranges	Conductivity	0 to 2,000 µS/cm
		0 to 20 mS/cm
	TDS	2,000 ppm
		20,000 ppm
	Temperature	0 to +60 °C
Resolution	Conductivity	1 µS/cm
		0.01 mS/cm
	TDS	1 ppm (<1320 ppm)
		10 ppm (>1320 ppm)
	Temperature	0.1 °C
Accuracy	Conductivity	±3 % of measurement range
	TDS	±3 % of measurement range
	Temperature	±0.8 °C
Calibration	Conductivity	1413 µS/cm
	Temperature	- - -
Operating conditions		0 to +60 °C / <80 % r.h.
Power		4 AAA batteries 1.5 V (incl.)
Dimensions		186 x 40 mm
Weight		130 g

Contents

PCE-CM 41, batteries, user's manual

Model No.	Description
PCE-CM 41	PCE-CM 41 conductivity meter

Optional accessories

HI 7031 L Calibration solution (460 ml bottle), 1413 µS/cm



PCE-SM 11

Salinity meter for determining salt content up to 12%

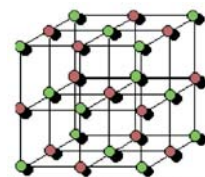
The PCE-SM 11 is a salinity meter for salt content in liquids. The maximum measurement range is 12% of weight with a resolution of 0.01%.

- Measurement range up to 12% of weight
- Automatic temperature compensation
- Minimum, maximum and Hold functions
- Auto shut-off to conserve batteries
- Compact and easy to use
- Powered by 4 AAA batteries
- Water resistant (IP 67)



Technical specifications

Range	0.0 to 12.0 % of weight (weight percentage)
Resolution	0.01 %
Accuracy	±0.5 %
Temperature compensation	automatic for 0 to +50 °C
Power	4 AAA batteries 1.5 V (incl.)
Operating conditions	0 to +60 °C / <80 % r.h.
Dimensions	190 x 40 mm
Weight	171 g



Contents

PCE-SM 11, batteries and user's manual

Model No.	Description
PCE-SM 11	PCE-SM 11 salinity meter



PCE-228PH

pH, Redox and temperature meter with optional RS-232 cable software

The PCE-228PH meter is a handheld device which is very easy to use and suitable for pH / mV / °C measurements. The pH and temperature values can be transferred to a computer via the optional RS-232 cable and PC software which are available as accessories. Temperature compensation can be manual or automatic through the temperature sensor which is included in the delivery.

- Optimal quality / price relationship
- RS-232 interface for data transfer
- Measures pH, Redox and temperature
- Electrode for pH included, PE-03 electrode and temperature electrode
- Manual calibration
- Automatic temperature compensation (through the temperature sensor)
- Optional REDOX electrode



Technical specifications

Measurement ranges	0.00 to 14.00 pH -1999 to 0 to 1999 mV (only with optional REDOX electrode) 0.0 to +100.0 °C (only with temp. probe)
Resolution	0.01 pH 1 mV 0.1 °C
Accuracy (at 20°C)	±0.02 pH ±0.5 mV ±0.5 °C
Calibration	manual at 2 points
Temperature compensation	automatic 0 to +65 °C or manual 0 to +100 °C
Electrode	PE-03 pH electrode, gel-filled, 1 m cable and BNC plug
Interface	RS-232
Software	optional
Power	9 V battery
Operating conditions	0 to +50 °C, max. 80 % r.h.
Dimensions	195 x 68 x 30 mm
Weight	250 g

Contents

PCE-228PH meter, PE-03 electrode, temperature probe, battery and user's manual

Model No. Description

PCE-228PH PCE-228PH pH meter

Optional accessories

PE-03 Spare pH PE-03 electrode
ORP-14 REDOX ORP-14 electrode
SOFT-LUT-B02 Software
RS232-USB RS-232 to USB adaptor
HI 70300L Storage solution, 460 ml
PCE-PH-47 Calibration solution (bottles of 75 ml),
pH 4.01 and pH 7.01
BOX-LT1 Carrying case



PCE-228M

pH meter for food applications with optional cable and software

The PCE-228 M pH meter measures the pH level in foods. You will be able to read pH and temperature values on the large LCD. This pH meter is delivered with a special electrode with a stainless steel probe, which make its introduction into foods, like meat, cold meat or cheese, easier. Temperature compensation can be manual or automatic through its temperature sensor, which is included

- pH electrode with stainless steel slide
- RS-232 interface for data transfer
- Measures pH and temperature simultaneously
- High accuracy
- CPC-OSH-12-01 pH electrode and temperature probe in stainless steel
- Manual calibration
- Automatic temperature compensation
- BNC plug



Technical specifications

Measurement ranges	0.00 to 14.00 pH -1999 to 0 to +1999 mV (only with optional Redox electrode) 0.0 to +100.0 °C (only with temp. probe)
Resolution	0.01 pH 1 mV 0.1 °C
Accuracy (at 20°C)	±0.02 pH ±0.5 mV ±0.5 °C
Calibration	manual at 2 points
Temperature compensation	automatic 0 to +65 °C or manual 0 to +100 °C
Electrode	CPC-OSH-12-01 with stainless steel slide, 1 m cable and BNC plug
Interface	RS-232
Software	optional
Power	9 V battery
Operating conditions	0 to +50 °C; max. 80 % r.h.
Dimensions	195 x 68 x 30 mm
Weight	250 g

Contents

PCE-228M pH meter, CPC-OSH-12-01 electrode, temperature probe, battery and user's manual

Model No. Description

PCE-228M PCE-228M pH meter

Optional accessories

CPC-OSH-12-01 Spare pH electrode
ORP-14 REDOX ORP-14 electrode
SOFT-LUT-B02 Software for PCE-228
RS232-USB RS-232 to USB adaptor
HI 70300L Storage solution, 460 ml
PCE-PH-47 Calibration solution (bottles of 75 ml)
pH 4.01 & pH 7.01
BOX-LT1 Carrying case

PCE-PHD 1

pH, conductivity, oxygen and temperature meter with memory and software

The PCE-PHD 1 pH meter measures the pH value and conductivity. The Instrument is ideal for water quality measurement. The delivery is including a pH probe and a conductivity probe. This instrument is delivered with a pH electrode and a conductivity probe. Temperature compensation can be manual or automatic through its optional temperature sensor.

- measurement pH value and conductivity
- with optional sensor also oxygen and temperature measurement possible
- internal memory for 16,000 values with clock and date
- RS-232 interface
- automatical temperature compensation with optional temperature probe
- Software optional available



Technical specifications

Range	pH	0.00 to 14.00 pH
	EC	0 to 200.0 µS/cm; 0 to 2.000 mS/cm 0 to 20.00 mS/cm; 0 to 200.0 mS/cm
	O ₂	0 to 20.0 mg/l
	Temperature	0 to 60.0 °C
Resolution	pH	0.01 pH
	EC	0.1 µS/cm; 0.001 mS/cm; 0.01 mS/cm; 0.1 mS/cm
	O ₂	0.1 mg/l
	Temperature	0.1 °C
Accuracy	pH	±0.02 pH
	EC	±2 % of measurement range
	O ₂	±0.4 mg/l
	Temperature	±0.8 °C
Calibration	pH	2 points calibration (pH4 + pH7)
	EC	at 1413 µS/cm
	O ₂	in the air
Temperature compensation		0 to 60 °C (with connected Temperature probe)
Temperature probe		stainless steel, optional
Memory		16,000 values
Interface		RS-232
Software		optional
Operating conditions		0 to +50 °C / <80 % r.h.
Power		4 AA batteries (1.5 V)
Dimensions		203 x 76 x 38 mm
Weight		365 g

Contents

PCE-PHD 1 pH / conductivity meter with pH probe and conductivity probe, batteries, carrying case and user's manual

Model No. Description

PCE-PHD 1 PCE-PHD 1 pH / conductivity meter

Optional accessories

SOFT-PCE-PHD Software incl. RS-232 cable
RS232-USB RS-232 to USB adaptor
TP-07 Temperature probe
OXPB-11 Oxygen probe
PCE-PH-47 Calibration solution pH4 and pH7
PCE-CD-14 Calibration solution 1413 µS/cm
NET-300 Power supply (300 mA)

Laboratory Balances

Symbols



Internal adjustment (calibration):
Quick accuracy setting of the balance with internal adjusting weight (motor-driven).



External adjustment (programme):
For quick accuracy setting of the balance. External adjusting weight required.



Piece counting:
Reference quantities selectable. Display can be switched from piece count to weight.



Data interface:
RS-232, to connect a printer or PC. The cable is included with the optional printer or software.



Net-total weight:
Weight of tare cup and weight of components stored as two separate values.



Animal weighing programme:
Filters abrupt movements, vibrations or if you weigh animals.



Units:
Measurement units can be selected through the keypad, each scale has a different combination of units to choose from.



Percentage determination:
Displays the deviation from the reference weight (= 100 %) in % instead of grammes.



Weighing with tolerance range:
Upper and lower limiting can be programmed individually e.g. dosing / sorting.



Protection against dust and water:
The degree of protection is specified in the symbol.



Stainless steel:
Stainless steel scale for harsh industrial operating conditions.



Fused aluminium:
Scale with fused aluminium housing, rugged and very stable.



Power:
Rechargeable battery



Mains adaptor:
230 V / 50 Hz, serial, country specific.



Mains part:
Integrated in the scale, 230 V / 50 Hz.



Tare:
Reset displayed value to "0" during weighing process.

PCE-JS 50

Highest resolution and carat switch

- Cover to protect the scale from damage
- Tare for full weighing range
- Overload indicator
- Auto shut-off after 1 minute of inactivity
- Pan Ø 38 mm, scoop, tweezers, bag and control weight included in the delivery (the control weight is only to check the balance)



10 g control weight included (not for calibration)



Technical specifications

Model	Range Max.	Readability d	Repeat-ability	pan size
PCE-JS 50	50 g / 250 ct	0.001 g / 0.01 ct	0.002 g / 0.02 ct	Ø 22 mm
Tara			full range	
Units			g, ct, dwt, oz	
Display			LCD with backlight	
Calibration			with external test weight (50 g)	
Power			3 batteries LR44	
Dimensions			145 x 95 x 40 mm	
Weight			170 g	
Contents			10 g control weight, batteries scoop, tweezers, bag	

Model No.	Description
PCE-JS 50	PCE-JS 50 pocket balance

Optional accessories

CW-F2-50	Calibration weight 50 g, class F2, incl. plastic box
CAL-PCE-JS	Calibration certificate

PCE-DMS 200

Scale for flat surfaces up to 20,000 g/m² and a resolution of 1 g/m²

- Displays in g/m² when a 100 cm² sample is placed on the scale
- Draught shield included
- Conversion from g/m² into g via the keypad
- Powered by 230V mains or batteries
- Auto shut-off
- Large LCD
- Round probe cutter of 100 cm² (optional)



MPC-3
100cm² round mechanical sample cutter for paper and fabric

- Maximum thickness: 5mm
- Cutter dimensions: 100cm²
- Weight: 1700g
- Dimensions: 165mm x 115mm
- 4 blades



Technical specifications

Model	Maximum Range g	Readability d g	Linearity g	Pan size mm
PCE-DMS 200	200 g 20,000 g/m ²	0.01 g 1 g/m ²	±0.02	Ø 100
Units				g/m ² , g, oz y oz/m ²
Display				LCD with backlight
Calibration				with external test weight (not included)
Power				mains adaptor or 6 AA batteries
Dimensions				145 x 210 x 40 mm
Weight				500g

Contents
PCE-DMS 200 paper scale, draught shield, mains adaptor and operator's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-DMS 200	Paper scale

Optional accessories

CAL-PCE-BS	ISO certificate
MPC-3	Round sample cutter; for materials up to 5mm thick
MPC-UL	Rubber plates for round sample cutter (10 units)
MPC-EK3	Spare blades for the MPC-3 (50 units)

Serie PCE-MB

Moisture analysis balance with several functions



The PCE-MB moisture analysis balance is ideal for industrial and laboratory applications. The moisture balance is an accurate device for the determination of moisture content in small samples of materials by drying the sample with halogen heaters. The moisture analyser balance is used as a moisture measurement tool as well as determining dryness content. You will find several examples in the user's manual. The moisture analyzer uses heaters (2 x 200 Watts) to dry the sample in conjunction with a precision balance to measure the minute changes in weight as the sample dries. In general, these units can be used in research, development and quality control. You only need to place a small sample into the balance, close the cover, press the key and read the result (content of moisture or dryness). It can also work as a standard mg-balance. You will be able to determine the moisture of several materials such as granulates, plastics, wood, pharmaceutical substances, tobacco, tea, cereals, etc. The drying process is carried out in only a few minutes depending on the humidity of materials (extreme samplings: residual water / powdered substances).

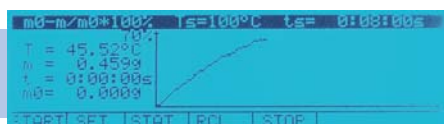
Moisture and dryness control can be carried out in three different ways:

- Automatic: drying to constant weight
- Semi-automatic: drying stops when loss per unit of time goes below theoretical value
- Manual: by preset time (between 2 min and 9 h 59 min)

Moisture analysis balance includes:

- RS-232 interface for data transfer to a PC
- External calibration function
- 230 V mains adaptor

To the right, the image shows the balance open allowing the material to be placed inside for drying. The moisture process begins when you close the cover and press the start button.



Technical specifications

Model	Weight range Max	Readability d	Verification value e g	Minimum load Min g	Repeatability	Weighing plate mm
PCE-MB 50	50 g 0 to 100 % absolute moisture 100 to 0 % dryness weight	0.001 g 0.01 %	-	-	0.001 g 0.02 %	Ø 90
PCE-MB 100	100 g 0 to 100 % absolute moisture 100 to 0 % dryness weight	0.001 g 0.01 %	-	-	0.001 g 0.02 %	Ø 90
PCE-MB 200	200 g 0 to 100 % absolute moisture 100 to 0 % dryness weight	0.001 g 0.01 %	-	-	0.001 g 0.02 %	Ø 90
Tare range	full range					
Heating unit	2 quartz halogen heaters (200 W each)					
Temperature range	+50 to +160 °C					
Sampling interval	2 min to 9 h 59 min (in increments of 1 sec.)					
Work mode / Drying sequence	automatic, semi-automatic, manual					
Drying mode	you can watch it in the screen through a diagram					
Displayed units	humidity [%] / weight loss, dry mass [%] ATRO / residual weight, date and hour					
Memory	160 (to memorize user programmable drying curves)					
Display	Large graphic display with menu in several languages					
Calibration	external calibration (with external calibration weight)					
Interface	RS-232					
Operating temperature	+18 to +30 °C					
Power	230 V / 50 Hz					
Enclosure / Ingress protection	die cast aluminium / IP 54					
Dimensions / Weight	235 x 245 x 260 mm / approx. 8 kg					



Included in the delivery

PCE-MB moisture analysis balance (one of our models), 10 aluminium sample plates, mains adapter and operator's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-MB 50	PCE-MB 50 Moisture analysis balance
PCE-MB 100	PCE-MB 100 Moisture analysis balance
PCE-MB 200	PCE-MB 200 Moisture analysis balance

Optional accessories

CAL-PCE-MB	ISO certificate
PCE-SOFT-MB	Software with RS-232 interface
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable
PCE-MB-PS	Aluminium sample plates, Pack of 50 units
PCE-MB-GF	Glass fiber filters, Pack of 100 units
CW-F2-50	Calibration weight of 50 g, class F2, tolerance ±1.0 mg with plastic box for PCE-MB 50 model
CW-F2-100	Calibration weight of 100 g, class F2, tolerance ±1.5 mg with plastic box for PCE-MB 100 model
CW-F2-200	Calibration weight of 200 g, class F2, tolerance ±3.0 mg with plastic box for PCE-MB 200 model



PCE-BP1 printer
(optional)

Laboratory Balances

Serie PCE-BS

Cheap and accurate series of balances with RS-232 interface and a lot of accessories



The PCE-BS series of tabletop balances has a good price/quality relationship. The removable stainless steel weighing pan allows the balance to be cleaned easily. It's accurate to within 0.01g (the PCE-BS 300 model) which makes this an attractive balance. As standard equipment, it comes with a piece counting function (PCE-BS 300 / 3000 models). If the balance is used in a laboratory, it can be powered by the external mains adaptor. In cases where the balance is mainly used as a mobile weighing instrument, it can be powered by AA batteries. All the balances in this series have four adjustable levelling feet for optimal results and a water level to setup the balance on a flat surface. A plastic windshield is also included in the delivery to protect the balance against the influence of wind currents. You can also purchase optional calibration weights for a quick adjustment or check of the tabletop balance. The balance can be sent to us if you require an ISO calibration certificate or a regular recalibration. This can also be done in an accredited laboratory.

- Programme to quickly set the balance accurately using external adjusting weights
- Piece counting function adjustable between 10, 20, 50 or 100 pieces, piece / weight conversion (only for PCE-BS 300 and PCE-BS 3000 models)
- RS-232 interface for connection to a computer or printer
- Tare function in the middle of the range (you can use it repeatedly)
- Automatic display backlight (if the balance is stable, the display will show the stability symbol and the light brightens)
- Several weighing units that you can select through the keypad (g, oz, lb, ozt, ct, gn, for the PCE-BS 3000 and PCE-BS 6000 models / g, kg, lb, oz for the PCE-BS 300 models)
- 230 V serial mains adaptor included
- It can also be powered by batteries
- Removable stainless steel weighing pan (it fits over the plastic pan support)
- ISO calibration certificate is optional (e.g. to meet with DIN ISO 9000)

Plate: Ø 95 mm

Pan: 160 x 135 mm



Technical specifications

Model	Weight range Max	Readability d	Verification value e	Minimum load Min	Repeatability	Linearity	Piece counting weight minimum	Weighing pan
	g	g	g	g	g	g	g	mm
PCE-BS 300	300	0.01	-	-	0.01	±0.03	0.02	Ø 95
PCE-BS 3000	3000	0.1	-	-	0.1	±0.2	0.2	160 x 135
PCE-BS 6000	6000	1	-	-	1	±2	- - -	160 x 135
Tare range					50 % of weighing range			
Response time					3 sec.			
Weight units					g, kg, oz, lb			
Display					15 mm LCD with backlight			
Calibration					automatic (with optional external weight)			
Interface					RS-232			
Operating temperature					+10 to +30 °C			
Power					230V / 50 Hz (12 V adaptor) or 6 AA batteries			
Enclosure					ABS plastic			
Windshield					plastic / 145 x 145 x 120 mm (only for PCE-BS 300)			
Ingress protection					IP 54			
Dimensions					165 x 245 x 70 mm			
Weight					600g			

Contents

PCE-BS balance (one of our models), weighing pan, mains adaptor and user's manual; PCE-BS 300 balance includes a plastic windshield (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-BS 300	PCE-BS 300 Precision balance
PCE-BS 3000	PCE-BS 3000 Precision balance
PCE-BS 6000	PCE-BS 6000 Precision balance

Optional accessories

CAL-PCE-BS	ISO calibration certificate
PCE-SOFT-BS	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable
CW-M1-200	Calibration weight of 200 g, class M1, tolerance ±10 mg, with plastic box for PCE-BS 300
CW-M1-2000	Calibration weight of 2000 g, class M1, tolerance ±100 mg, with plastic box for PCE-BS 3000
CW-M2-6000	Calibration weight of 6000 g (1000 g and 5000 g into a box), class M2, tolerance ±1 g, for PCE-BS 6000



PCE-BP1 printer (optional)

Serie PCE-BSH

Up to 10,000 g



The PCE-BSH series balance has a good price/quality relationship. In comparison with the PCE-BS series, this balance possesses a higher weighing range. The PCE-BSH 6000 series is accurate to within 0.1 g and the PCE-BSH 10000 series to within 0.2 g which makes these balances uniquely accurate tools. All the balances from this series have levelling feet and a water level to ensure the unit is level. With optional calibration weights you can adjust the balance whenever you want.

- Programme to quickly set the balance's accuracy. External adjusting weight required
- Piece counting function: reference quantities selectable. Display can be switched from piece (pcs) to weight.
- RS-232 interface for data transfer
- Tare function in the middle of the range (you can use it several times)
- Automatic backlight
- Stability indication
- Selectable weighing units through the keyboard
- Protection against dust and water jet (IP 54)
- 230 V serial adaptor included in the delivery
- Removable stainless steel plate
- It can be powered by batteries
- ISO certificate (optional)

Weighing pan: 170 x 180 mm



Technical specifications

Model	Weight range Max	Readability d	Repeatability	Linearity	Piece counting weight minimum
	g	g	g	g	g
PCE-BSH 6000	6000	0.1	0.1	±0.2	0.3
PCE-BSH 10000	10000	0.2	0.2	±0.4	0.6
Tare range	50 % of weighing range				
Response time	3 sec.				
Units	g, kg, oz, lb				
Display	LCD of 15 mm with backlight				
Calibration	automatic (with external test weight)				
Operating conditions	+10 to +30 °C				
Power	230 V / 50 Hz (12 V adaptor) or 6 AA batteries				
Enclosure	ABS plastic				
Ingress protection	IP 54				
Weighing pan	170 x 180 mm				
Dimensions	180 x 245 x 70 mm				
Weight	680 g				

Contents

PCE-BSH balance (one of our models), weighing plate, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-BSH 6000	PCE-BSH 6000 Precision balance
PCE-BSH 10000	PCE-BSH 10000 Precision balance

Optional accessories

CAL-PCE-BSH	ISO calibration certificate
PCE-SOFT-BSH	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable
CW-M1-5K	5000 g calibration weight, class M1, tolerance ±250 mg, for the PCE-BSH 6000 and PCE-BSH 10000

Serie PCE-BT

Balance with high resolution



PCE-BT series precise technical scales are intended for wide use in laboratories, production control, sorting plants, etc. Aesthetic design and easy handling are their primary advantages. Despite their small size and low price, these scales ensure high weighing accuracy required in practice. The scale has numerous special functions: automatic reset, calculation in changed mass units (ct and lb), counting identical pieces, calculation of percentage mass changes, recipe making, remembering entered tare weight. PC interface allows connecting a computer or a printer for printing notes, reports or for for archiving weighing results on the computer.

- Two models are available
- clearly visible LCD
- Percentage determination, displays the deviation from the reference weight
- Tare function
- Piece counting
- RS-232 interface for data transfer
- Powered by battery or mains
- Plastic windshield included in the delivery
- ISO certificate and calibration weight (optional)



Technical specifications

Model	Weight range Max	Readability d	Repeatability	Piece counting weight minimum	Weighing pan
	g	g	g	g	mm
PCE-BT 200	200	0.001	0.001	0.003	Ø 115
PCE-BT 2000	2000	0.01	0.01	0.03	145 x 125
Tare range	full range				
Response time	3 s				
Display	LCD				
Calibration	automatic (with external test weight)				
Operation conditions	+18 to +33 °C				
Power	230 V / 50 Hz (12 V adaptor) or 6 AAA batteries				
Enclosure	ABS plastic				
Ingress protection	IP 54				
Dimensions	75 x 245 x 80 mm				
Weight	1000 g				

Contents

PCE-BT balance (one of our models), weighing plate, plastic windshield, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-BT 200	PCE-BT 200 Precision balance
PCE-BT 2000	PCE-BT 2000 Precision balance

Optional accessories

CAL-PCE-BT	ISO calibration certificate
PCE-SOFT-BT	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
K-CW-F2-200	Calibration weight of 200 g, class F2, tolerance ±3.0 mg
K-CW-F2-2000	Calibration weight of 2000 g, class F2, tolerance ±30 mg

Laboratory Balances

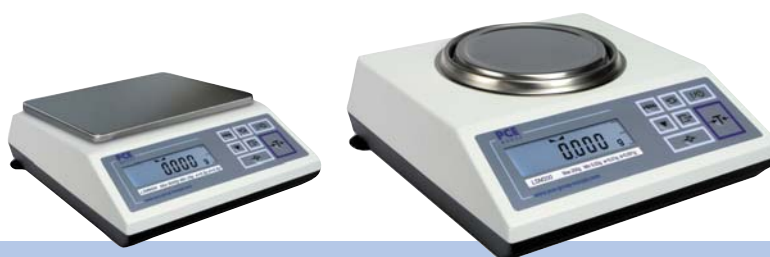
Serie PCE-LSM

High quality, verifiable balance for laboratory applications, three models available



You have no doubt experienced the situation that you have needed a verifiable laboratory balance on occasion. The LSM laboratory balance is suited for these occasions. It has a windshield (for the PCE LSM 200) to protect against exterior elements. The capacity indicator which is on the left side of the display, allows you visualize the available weighing range by way of a graphic band. With this precise balance you are able to weigh and value jewels and precious stones, you will also be able to use it as a classic laboratory balance in production or in research and development.

- Programme to quickly set the balance accurately using external adjusting weights
- Aluminium enclosure with levelling feet and a water level
- Stainless steel weighing plate which can be removed for cleaning
- Weight, net-total weight, doses, piece count
- 18 mm LCD with backlight
- Tare in the full range (you can use it repeatedly)
- Vibration absorption
- RS-232 interface/ Software (optional)
- Ingress protection IP 54 against dust and water jet
- 230 V serial mains adaptor
- ISO certificate (optional) (to meet with DIN ISO 9000 standard)
- Verification in place (through the official organism)



PCE-LSM 6000
Weighing plate: 225 x 165 mm

Technical specifications

Model	Weight range Max g	Readability d g	Verification value e g	Minimum load Min g	Reproducibility g	Linearity g	Piece count weight minimum g	Weighing pan mm
PCE-LSM 200	200	0.001	0.01	0.02	0.001	±0.002	0.006	∅ 120
PCE-LSM 2000	2000	0.01	0.1	0.2	0.01	±0.02	0.06	∅ 150
PCE-LSM 6000	6000	0.5	0.5	25	0.1	±0.2	0.6	225 x 165
Tare range	full range							
Response time	5 sec.							
Units	g, kg, %							
Display	18 mm LCD with backlight							
Interface	RS-232							
Calibration	automatic (with external test weight)							
Operating temperature	+18 to +33 °C							
Power	230 V/ 50 Hz (12 V mains adaptor)							
Enclosure	die cast aluminium							
Windshield	included in the PCE-LSM 200 and PCE-LSM 2000 models (∅ 130 x 60 mm or ∅ 160 x 60 mm)							
Ingress protection	IP 54							
Dimensions	240 x 275 x 90 mm							
Weight	4 kg							

Contents

PCE-LSM laboratory balance (one of our models), weighing plate, mains adaptor and user's manual; PCE-LSM 200 and PCE-LSM 2000 models with windshield (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-LSM 200	PCE-LSM 200 Laboratory balance
PCE-LSM 2000	PCE-LSM 2000 Laboratory balance
PCE-LSM 6000	PCE-LSM 6000 Laboratory balance

Optional accessories

VER-PCE-LSM	M class II Legal for trade verification
CAL-PCE-LSM	ISO certificate
PCE-LSM-TOL	Option: Balance with weight tolerance function, with acoustic signal to reset the upper or lower value limits that can be established independently (an installation of these option isn't possible later)
PCE-SOFT-LSM	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable
PCE-AB-DB	Density determination kit (only for PCE-LSM 200)
CW-F2-200	200 g calibration weight, class F2, tolerance ±3.0 mg, plastic box for the PCE-LSM 200 model
CW-F2-2000	2000 g calibration weight, class F2, tolerance ±30 mg, plastic box for the PCE-LSM 2000 and PCE-LSM 6000 models



PCE-BP1 printer
(optional)

Serie PCE-LS

Verifiable laboratory balance



The LS series balance is an attractive product due to its high accuracy, its multiple functions and its low price. It is an exceptional instrument. Its well designed die cast aluminium enclosure provides durability. The graphic display with capacity indicator allows the results to be read easily. With the help of optional software you will be able to transfer data to a computer. If your computer only has a USB interface, you can request an optional RS-232 to USB adaptor. All LS models can be calibrated / adjusted automatically at the touch of a key, or can measure at a pre-set time, or triggered by temperature changes. Without the need to handle expensive external weights, these functions support integration in quality management systems. You can also verify your balance by an official authority. Other accessories like a density determination set make this balance valuable.

- Piece counting for the PCE-LS model: user can select number of reference pieces, display can be switched from piece to weight
- Programme to quickly adjust settings if there are some oscillations of ± 1 °C or after an period of time. This adjustment is made using an internal adjusting weight (motor-driven)
- Date and time adjustment (user password can be entered)
- RS-232 interface for PC. It allows you connect the balance to a PC
- Capacity indicator: the display with backlight shows available ranges
- Die cast aluminium enclosure guarantees high stability
- Water level to properly setup the balance
- IP 54 protection against dust and water jet
- Calibration certificate (optional) (e.g. to meet DIN ISO 9000 standard)
- Verifiable (through the regulating body)



PCE-LS 500
Weighing plate: Ø 120 mm

PCE-LS 1000 & PCE-LS 3000
Plate: 165 x 165 mm

Technical specifications

Model	Weight range Max g	Readability d g	Verification value e g	Minimum load Min g	Repeatability g	Linearity g	Piece count weight minimum g	Weighing plate mm
PCE-LS 500	500	0.001	0.01	0.02	0.0015	± 0.002	0.006	Ø 120
PCE-LS 1000	1000	0.01	0.1	0.5	0.015	± 0.03	0.06	165 x 165
PCE-LS 3000	3000	0.01	0.1	0.5	0.015	± 0.03	0.06	165 x 165
Tare range	full range							
Response time	< 5 sec.							
Units	g, kg, lb							
Display	graphic LCD with backlight, capacity display							
Calibration	- internal calibration (with internal, motor driven, calibration weight) - external calibration (using optional external calibration weights)							
Interface	RS-232							
Piece counting	yes, selectable reference quantities							
Vibration absorption	internal vibration dampening							
Operating temperature	+18 to +30 °C							
Power	230 V / 50 Hz (12 V adaptor)							
Enclosure	die cast aluminium							
Ingress protection	IP 54							
Dimensions	210 x 320 x 90 mm							
Weight	approx. 5 kg							



Contents

PCE-LS laboratory balance (one of our models), weighing plate, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-LS 500	PCE-LS 500 Laboratory balance
PCE-LS 1000	PCE-LS 1000 Laboratory balance
PCE-LS 3000	PCE-LS 3000 Laboratory balance

Optional accessories

VER-PCE-LS	M class II Legal for trade verification
CAL-PCE-BS	ISO certificate
PCE-LS-TOL	Option: Balance with weight tolerance function, with acoustic signal to reset the upper or lower value limits that can be established independently (an installation of these option isn't possible later)
PCE-SOFT-LS	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable
CW-F1-500	Calibration weight of 500 g, class F1 tolerance ± 2.5 mg, plastic box for PCE-LS 500 model
CW-M1-500	Calibration weight of 500 g, class M1, tolerance ± 25 mg, plastic box for PCE-LS 1000 model
CW-F2-2000	Calibration weight of 2000 g, class F2, tolerance ± 30 mg, plastic box for PCE-LS 3000 model



PCE-BP1 printer
(optional)

Laboratory Balances

Serie PCE-ABZ C

Balance with high resolution and multiple functions



The PCE-ABZ series analytical balance is a laboratory balance that accurately determines weight in grams and in milligrams. With the windshield, which is included in the delivery, external influences such as air currents will be eliminated. The die cast aluminium enclosure is of solid design. With the help of optional software and cable, data can be transferred directly to a computer, which saves time and ensures reading accuracy.

- With windshield and two sliding doors
- PCE ABZ analytical balance piece counting: user selectable number of reference pieces, display can be switched from piece to weight
- RS-232 interface to connect the balance to a computer to further assess data
- Capacity indicator (at the right side of the display and indicates the weight range that is available)
- Tare range across the entire weight range
- Rugged die cast aluminium enclosure
- Water level to properly setup the analytical balance
- Internal vibration suppression
- ISO certificate (optional) (to meet DIN ISO 9000 standard)



Technical specifications

Model	Weight range Max g	Readability d mg	Verification value e mg	Minimum load Min mg	Repeatability mg	Linearity mg	Piece count weight minimum mg	Weighing plate mm
PCE-ABZ 100C	100	0.1	-	-	0.15	±0.2	0.6	Ø 90
PCE-ABZ 200C	200	0.1	-	-	0.15	±0.2	0.6	Ø 90
Tare range	full range							
Response time	< 5 sec.							
Units	g, kg, oz, lb							
Display	LCD with backlight							
Calibration	external calibration (with external calibration weight)							
Interface	RS-232							
Piece counting	yes, selectable reference quantities							
Vibration dampening	internal vibration suppression							
Operating temperature	+18 to +30 °C							
Power	230 V / 50 Hz							
Enclosure	die cast aluminium							
Ingress protection	IP 54							
Weighing plate dimensions	175 x 140 x 230 mm							
Overall dimensions	235 x 345 x 350 mm							
Weight	approx. 6.0 kg							



Contents

PCE-ABZ C analytical balance (one of our models), weighing plate, glass windshield, mains cable and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-ABZ 100C	PCE-ABZ 100C Analytical balance
PCE-ABZ 200C	PCE-ABZ 200C Analytical balance

Optional accessories

CAL-PCE-ABZ	ISO certificate
PCE-SOFT-ABZ	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable
PCE-SJA	Antivibration table, 450 x 450 x 100 mm
CW-E2-100	Calibration weight of 100 g, class E2, tolerance ±0.15 mg, plastic box for PCE-ABZ 100 C model
CW-E2-200	Calibration weight of 200 g, class E2, tolerance ±0.30 mg, plastic box for PCE-ABZ 200C model



PCE-BP1 printer (optional)

Serie PCE-AB

Verifiable analytical balance with internal adjustment control



This PCE AB analytical balance is a verifiable device that can determine weight in grams and milligrams. With the windshield, which is included, external influences such as air current can be decreased. We also offer an optional antivibration table that minimizes the influence of strong vibrations on the balance (e.g. if it is placed near machines in the production area). The graphic display with capacity indication facilitates the reading of results. With the help of the optional software set, you will be able to transfer data to a computer. As well as automatic internal calibration, you can do an external calibration with the optional calibration weights (only if the balance is not verified).

- With windshield and two sliding doors
- Piece counting with the PCE AB analytical balance: user selectable number of reference pieces by user, display can be switched from piece to weight
- RS-232 interface for connection to a computer
- Capacity indicator: the display with backlight indicates the weight range available
- Tare range across 100 % of weight range
- Rugged die cast aluminium enclosure
- Water level to setup the analytical balance
- Internal vibration suppression
- 230 V serial mains adaptor
- ISO certificate (e.g. to meet DIN ISO 9000 standard)
- Optional M class I verification



Technical specifications

Model	Weight range Max g	Readability d mg	Verification value e mg	Minimum load Min mg	Repeatability mg	Linearity mg	Piece count weight minimum mg	Weighing plate mm
PCE-AB 100	100	0.1	1	10	0.15	±0.2	0.6	Ø 90
PCE-AB 200	200	0.1	1	10	0.15	±0.2	0.6	Ø 90
Tare range	full range							
Response time	< 5 sec.							
Units	g, kg, oz, lb							
Display	graphic LCD with backlight and capacity indicator							
Calibration	- internal calibration (with internal, motor driven, calibration weight) - external calibration (using optional external calibration weights)							
Interface	RS-232							
Piece counting	yes, user selectable reference quantities							
Vibration dampening	internal vibration suppression							
Operating temperature	+18 to +30 °C							
Power	230 V / 50 Hz (12 V adaptor)							
Enclosure	die cast aluminium							
Ingress protection	IP 54							
Weighing plate dimensions	175 x 140 x 230 mm							
Dimensions	235 x 345 x 350 mm							
Weight	approx. 6.5 kg							



also available as PCE-AB 100C / PCE-AB 200C without graphical display



Graphical display with load bargraph (capacity indicator)

Contents

PCE-AB analytical balance (one of our models), weighing plate, glass wind shield, mains cable and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-AB 100	PCE-AB 100 Analytical balance
PCE-AB 200	PCE-AB 200 Analytical balance
PCE-AB 100C	PCE-AB 100C Analytical balance, same as PCE-AB 100 but without graphical LCD
PCE-AB 200C	PCE-AB 200C Analytical balance, same as PCE-AB 200 but without graphical LCD

Optional accessories

VER-PCE-AB	M class I Legal for trade verification
CAL-PCE-AB	ISO certificate
PCE-SOFT-AB	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable
PCE-SIA	Antivibration table, 450 x 450 x 100 mm
CW-E2-100	Calibration weight of 100 g, class E2, tolerance ±0.15 mg, plastic box for PCE-AB 100 model
CW-E2-200	Calibration weight of 200 g, class E2, tolerance ±0.30 mg, plastic box for PCE-AB 200 model



PCE-BP1 printer (optional)

Industrial Balances

PCE-WS 30

Economical industrial balance for up to 30 kg and highly accurate



Compact balance for professional use with memory function. This compact balance is the perfect tool when you need to determine large weights up to 30kg. For levelling, all the balances of this range come with adjustable feet and a water level integrated into its casing. Via the keypad, a preset tare weight can be input. The compact balance has an RS-232 port. Using optional software, readings can be transferred to a computer. The balance is powered by a 230V mains adaptor or by an internal rechargeable battery. This allows the compact balance to be mobile.

- Economical balance with quality accessories
- Weight tolerance with programmable limits
- Preset tare weight input using keypad
- Tara across entire range and can be repeated numerous times
- Memory for 99 readings
- External calibration
- Easy to clean
- Powered by an internal rechargeable battery or a 230V mains adaptor
- RS-232 interface
- Optional: software and ISO calibration certificate



Technical specifications

Model	Weight range Max kg	Readability d g	Verification value e g	Minimum load Min g	Repeatability g	Linearity g	Piece count weight minimum g	Weighing plate mm
PCE-WS 30	30	0.5	-	-	0,5	±1	1	230 x 310
Tara range	full range							
Response time	2 sec.							
Units	g, kg, lb							
Function	99 storage values, weighing with tolerance range preset tare weight via keypad							
Display	6 digit LCD with backlight							
Interface	RS-232							
Calibration	automatic (with optional external calibration weights)							
Operating temperature	0 to +40 °C							
Power	230 V / 50 Hz (via 12 V adaptor) or rechargeable battery							
Enclosure	ABS plastic							
Weighing plate	stainless steel (removable)							
Protection	IP 54							
Dimensions	320 x 320 x 125 mm							
Weight	2.8 kg							

Contents

PCE-WS 30 industrial balance, weighing pan, internal rechargeable battery, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-WS 30	PCE-WS 30 industrial balance

Optional accessories

CAL-PCE-WS	ISO certificate
PCE-SOFT-WS	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor

Serie PCE-PCS

Programmable counting balance with numeric keypad and a three line display, available in two models



Professional balance for weighing and counting. The memory positions and that it can be powered by rechargeable batteries, make this balance valuable. It is the ideal tool for accurate piece counting such as for inventory. To obtain a piece count, first the weight of a predetermined quantity is taken, or the value is input via the keypad. Then an undetermined quantity is placed on the balance and the weight, the reference weight and the quantity of pieces is shown. The counting balance has an RS-232 port for data transmission. Optional software allows the user to transfer data to a computer.

- Two models available
- Memory for 99 readings for reference weights
- Display separated by weight, quantity and reference weight
- Tara across entire weight range
- Preset tare can allow for input of a quantity or reference weight
- Powered by battery or rechargeable
- Powered by 230V mains adaptor
- ISO certification optional



Technical specifications

Model	Weight range Max kg	Readability d g	Verification value e g	Minimum load Min g	Repeatability g	Linearity g	Piece count weight minimum g	Weighing plate mm
PCE-PCS 6	6	0.1	-	-	0.1	±0.2	0.1	230 x 310
PCE-PCS 30	30	0.5	-	-	0.5	±1	0.5	230 x 310
Tara range	full range							
Response time	2 sec.							
Units	g, kg							
Function	99 storage values preset tare weight and reference weight via keyboard							
Display	triple 6 digit LCD with backlight							
Interface	RS-232							
Calibration	automatic (with optional external calibration weights)							
Operating temperature	0 to +40 °C							
Power	230 v / 50 Hz (via 12 V adaptor) or rechargeable battery							
Enclosure	ABS plastic							
Weighing plate	stainless steel (removable)							
Protection	IP 54							
Dimensions	320 x 320 x 125 mm							
Weight	2.8 kg							

Contents

PCE-PCS industrial balance (one of the models), weighing pan, internal rechargeable battery, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-PCS 6	PCE-PCS 6 industrial balance
PCE-PCS 30	PCE-PCS 30 industrial balance

Optional accessories

CAL-PCE-PCS	ISO certificate
PCE-SOFT-PCS	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor

Industrial Balances

Serie PCE-PB

Industrial balance with RS-232 interface



We offer you a low cost parcel balance. This scale is ideal for shipping departments, e.g. with the PCE-PB 60 series weighing range of 0 to 60 kg you will be able to accurately weigh all the packages that you want to send with DHL, UPS or GLS. The 230 V mains adaptor is included in the delivery, although it can also be powered by Mignon type batteries, making the balance completely autonomous. Furthermore, this scale has an auto shut-off function after 3 minutes without changes in the load, allowing conservation of battery power. If you want, you can acquire an optional software kit to transfer data to a computer.

- 15 mm digital display
- Battery operation possible (6 1.5 V Mignon cells)
- Powered by mains adaptor (230 V 50 Hz / 12 V)
- RS-232 interface
- Wall mounting device
- Easy to use with only 4 keys
- Automatic shut-off after 3 minutes without a change in load (function can be disabled)
- Overload indicator to protect the balance from damage
- Display device, cable length approx. 1000 mm
- Rugged stainless steel weighing plate with non-skid sides
- Optional software kit (includes cable for PC connectivity)
- ISO certificate (optional)



Technical specifications

Model	Weighing range Max kg	Readability d g	Verification value e g	Minimum load Min g	Repeatability g	Linearity g	Piece count weight minimum g	Weighing plate mm
PCE-PB 60	60	20	-	-	20	±50	-	325 x 315
PCE-PB 150	150	50	-	-	50	±100	-	325 x 315
Tare range					full range			
Response time					2 sec.			
Units					kg, lb			
Functions					Data Hold			
Display					15 mm LCD/ backlight, 1m cable			
Interface					RS-232			
Calibration					automatic (with optional external calibration weights)			
Operating temperature					0 to +40 °C			
Power					230 V / 50 Hz (adapter) or 6 AA batteries of 1,5 V			
Enclosure					weighing plate: stainless steel, base: mild steel			
Ingress protection					IP 54			
Display dimensions					220 x 90 x 43 mm			
Weighing plate dimensions					325 x 315 x 55 mm			
Weight					4.5 kg			



Contents

PCE-PB parcel balance (one of our models), display with 1 m cable, wall mount for display, mains adaptor and user's manual
(For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-PB 60	PCE-PB 60 Parcel balance
PCE-PB 150	PCE-PB 150 Parcel balance

Optional accessories

CAL-PCE-PB 60	ISO certificate for PCE-PB 60 parcel balance
CAL-PCE-PB 150	ISO certificate for PCE-PB 150 parcel balance
PCE-SOFT-PB	Software with RS-232 cable
PCE-BP1	Thermal printer with RS-232 data cable
RS232-USB	RS-232 to USB adaptor



PCE-BP1 printer (optional)



Serie PCE-TS

Industrial balance with large display and RS-232 interface



This balance has a stainless steel platform, an RS-232 interface and a large display with backlight. Furthermore, it is delivered with a stand to elevate the display. The display is mounted at the back of the balance and if you want, you can remove it by removing its two mounting screws and mount it somewhere else. The display is connected to the balance by a 1.5 m cable and it can be placed on the stand for elevate the display up to 800 mm (according to a height that the user wants). This balance is powered by a 230 V mains adaptor which is included in the delivery, If you want, you can acquire an optional software kit which includes a USB cable.

- Powered by a rechargeable battery or mains adaptor
- Large 35 mm high display
- Automatic shut-off after 5 minutes to protect battery life
- Weighing with tolerance range (upper and lower limiting can be programmed)
- Alarm (audible beep in case of overload or low battery)
- Tare function across full weighing range
- Stand to elevate display up to 800 mm
- ISO certificate (optional)



Technical specifications

Model	Weighing range	Readability	Verification value	Minimum load	Repeatability	Linearity	Piece count weight minimum	Weighing plate mm
	Max kg	d g	e g	Min g	g	g	g	
PCE-TS 60	60	10	-	-	10	±20	-	560 x 460
PCE-TS 150	150	20	-	-	20	±40	-	560 x 460
Tare range	full range							
Response time	2 to 4 sec.							
Units	kg, lb							
Functions	Data Hold, weighing with tolerance range							
Display	35 mm LCD / backlight, 1.5m cable							
Interface	RS-232							
Calibration	automatic (with external optional calibration weights)							
Operating temperature	0 to +40 °C							
Power	230 V / 50 Hz (adaptor) and internal rechargeable battery							
Enclosure	weighing plate: stainless steel, base: mild steel							
Ingress protection	IP 54							
Display dimensions	260 x 155 x 70 mm							
Scale dimensions	560 x 460 x 75 mm							
Weight	16 kg							

Contents

PCE-TS industrial balance (one of our models), display with 1.5 m cable and internal rechargeable battery, stand to elevate the display, protection for display, mains adaptor and user's manual
(For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-TS 60	PCE-TS 60 Industrial balance
PCE-TS 150	PCE-TS 150 Industrial balance

Optional accessories

CAL-PCE-TS 60	ISO certificate for PCE-TS 60 industrial balance
CAL-PCE-TS 150	ISO certificate for PCE-TS 150 industrial balance
PCE-SOFT-TS	Software with RS-232 cable
PCE-BP1	Thermal printer with RS-232 data cable
RS232-USB	RS-232 to USB cable



PCE-BP1 printer
(optional)



Industrial Balances

Serie PCE-PM

Industrial balances with verification, three models available (up to 300 kg)



The PCE-PM platform balance is a verifiable industrial balance with a rugged, stainless steel base and platform. The built-in display can be mounted on a wall or on the stand which is included. This series of balances are verified and can be used as a commercial scale. The verification is carried out by a calibration authority according to the M class III legal for trade standard. We also offer an optional ISO certificate. This calibration certificate gives you the possibility to save data according to a national pattern.

- Adjustment programme to quick set the accuracy of the balance (using external weight)
- Piece counting with variable reference: 5, 10, 20, 50, 100 or 200 pieces
- Stability indicator
- Can be integrated and connected to DHL, UPS or GLS shipping systems
- Large LED
- RS-232 interface for data transfer
- Bubble level to adjust the balance
- Tare function across full weighing range
- Rugged stainless steel weighing plate
- Stand to elevate display up to 730 mm
- Optional M class III Legal for trade verification
- ISO certificate (optional)



Technical specifications

Model	Weighing range Max kg	Readability d g	Verification value e g	Minimum load Min g	Repeatability g	Linearity g	Piece count weight minimum g	Weighing plate mm
PCE-PM 30	30	10	10	200	10	±10	5	400 x 490
PCE-PM 62	60	20	20	400	20	±20	10	400 x 400
PCE-PM 150	150	50	50	1000	50	±50	25	600 x 490
PCE-PM 300	300	100	100	2000	100	±100	50	600 x 490
Tare range	full range							
Response time	<3 sec.							
Units	kg							
Functions	piece counting function							
Display	20 mm LED							
Interface	RS-232							
Calibration	automatic (with optional external calibration weight)							
Operating temperature	-10 to +40 °C							
Power	230 V / 50 Hz (via adaptor)							
Enclosure	stainless steel weighing plate, plastic display							
Ingress protection	IP 54							
Display dimensions	280 x 190 x 96 mm, stand height: 730 mm							
Weighing plate dimensions	PCE-PM 30: 400 x 490 x 130 mm,							
	PCE-PM 62: 400 x 400 x 100 mm,							
	PCE-PM 150 & PCE-PM 300: 600 x 490 x 145 mm							
Weight	PCE-PM 30 & PCE-PM 62: 12 kg; PCE-PM 150 & PCE-PM 300: 24 kg							

Contents

PCE-PM industrial balance (one of our models), display, stand to mount display, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-PM 30	PCE-PM 30 Industrial balance
PCE-PM 62	PCE-PM 62 Industrial balance
PCE-PM 150	PCE-PM 150 Industrial balance
PCE-PM 300	PCE-PM 300 Industrial balance

Optional accessories

VER-PCE-PM	M class III Legal for trade verification
CAL-PCE-PM	ISO certificate
PCE-SOFT-PM	Software with RS-232 cable
PCE-PM-RS232	RS-232 cable (for connectivity to DHL, UPS or GLS shipping systems)
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable



PCE-BP1 printer (optional)

PCE-PS 75XL

Balance with large weighing platform



Portable and very economical platform balance for everyday use. Simply move it into place and weigh an object, it couldn't be easier. Its flat design, light weight and the ability to power the balance with batteries or by an mains connection, make this balance very flexible. It can also be transported and placed in different locations. It has a good relation between price and quality.

- Extractable display with 2m cable
- RS-232 interface
- Powered by rechargeable battery or mains adaptor
- Tara across entire range
- Quick response time (3 seconds)
- Adjustable feet
- Stainless steel weighing platform
- Laquered steel base
- ISO certification available separately



Technical specifications

Model	Weighing range	Readability	Verification value	Min. load	Repeat.	Linearity
	Max	d	e	Min		
	kg	g	g	g	g	g
PCE-PS 75XL	75	20	-	-	20	±50
Tare range			full range			
Response time			3 sec.			
Units			kg and lb			
Functions			Data Hold, overload protection indicator			
Display			25 mm LCD, backlight, 2 m cable			
Interface			RS-232			
Calibration			automatic (with optional external calibration weight)			
Operating temperature			0 to +40 °C			
Power			230 V / 50 Hz (mains adaptor) or rechargeable batteries			
Enclosure			stainless steel weighing plate, mild steel base			
Ingress protection			IP 54			
Display dimensions			225 x 95 x 55 mm			
Weighing plate dimensions			900 x 600 x 90 mm			
Weight			17 kg			

Contents

PCE-PS 75XL platform balance, display with rechargeable battery and 2 m cable, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.

Description

PCE-PS 75XL PCE-PS 75XL Industrial balance

Optional accessories

CAL-PCE-PS Calibration certificate
 PCE-SOFT-PS Software with RS-232 cable
 RS232-USB RS-232 to USB adaptor



Industrial Balances

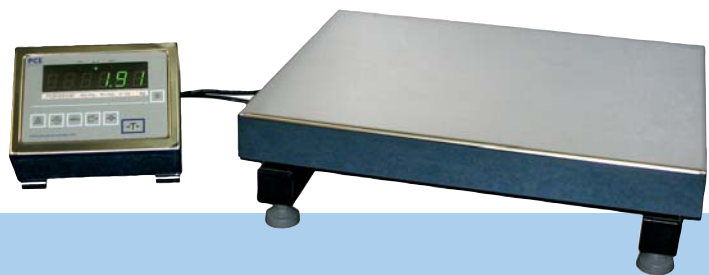
Serie PCE-PM SST

Stainless steel scale for use in unfavourable environments and for hygienic use



This is an impermeable industrial balance with verification and made of stainless steel with separate display. The scale has ingress protection IP 67, so is resistant to dust and can be temporarily submerged to a depth of 1 meter. It can be cleaned with jets of water. This scale is ideal for whichever application in humid conditions and for the food industry, thanks to its smooth surfaces and rounded edges. The scale is powered by mains of 230 V. Also, this impermeable scale has an RS-232 interface that is protected to allow use in humid conditions. Together with the optional software, data can be transmitted to a computer. The scale can be calibrated according to ISO standards or verified according to commercial class M III. If you wish, you can request an ISO calibration or an official verification with your order at additional cost. You can also send the balance to a laboratory that is accredited to do calibrations or to the official verification body in your community.

- Steel platform with protected cell resistant to dust and water according to IP 67
- Resistant to dust and water according to IP 65
- Programme to adjust the accuracy by way of adjustment weight
- Piece calculation function with references of 5, 10, 20, 50, 100 or 200 pieces
- Stability indicator
- Large LED with high illumination
- RS-232 interface for data transmission
- Level to accurately adjust the balance
- External calibration (note: this is only possible with scales that are not verified)
- Verifiable according to commercial class M III
- Optional ISO certificate



Technical specifications

Model	Weighing range Max kg	Readability d g	Verification value e g	Minimum load Min g	Repeatability g	Linearity g	Piece count weight minimum g	Weighing plate mm
PCE-PM 30SST	30	10	10	200	10	±10	5	400 x 490
PCE-PM 60SST	60	20	20	400	20	±20	10	400 x 490
Tare range	full range							
Response time	<3 s							
Units	kg							
Functions	piece counting							
Indicator	20 mm LED							
Interface	RS-232							
Calibration	automatic (with optional external calibration weight)							
Operating temperature	-10 to +40 °C							
Power	230 V / 50 Hz (via net adaptor)							
Enclosure	stainless steel							
Ingress protection	platform: IP 67, indicator: IP 65							
Dimensions indicator	200 x 150 x 80 mm							
Dimensions platform	400 x 490 x 130 mm							
Weight	approx. 23 kg							

Contents

Stainless steel balance PCE-PM SST (one of our models), indicator, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-PM 30SST	Stainless steel balance PCE-PM 30SST
PCE-PM 60SST	Stainless steel balance PCE-PM 60SST

Optional accessories

VER-PCE-PM	M class III Legal for trade verification
CAL-PCE-PM	ISO certificate
PCE-SOFT-PM	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor



Perfect for industry- and food applications.



PCE-HS 150

Hanging scale up to 150 kg



The hanging scale is especially suitable for rough use in different industries, as well as for a wide variety of other applications. The scale has an internal mechanism to ensure that the received and indicated value is identical to the transmitted value. The lightweight hanging scale is powered by batteries, what ensures a continuous work period of 150 h before it has to be changed batteries again.

- Powered by batteries
- Very easy to use
- High accuracy through strain band
- Tare across full range
- Data Hold function (value adjustment)
- ISO certificate (optional)



Technical specifications

Weighing range	0 to 150 kg
Readability	100 g
Probe link	S-hook
Hook	stainless steel
Display	3 digit LCD
Power	2 x CR2032 battery
Enclosure	ABS plastic
Dimensions	365 x 335 x 180 mm
Weight	400 g

Contents

PCE-HS 150 hanging scale, batteries and user's manual

Model no.	Description
PCE-HS 150	Hanging scale

Optional accessories

CAL-PCE-HS 150	ISO certificate
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PCE-AFG Serie

Analogue load crane with ranges of 30 and 120 kN and a large display



The PCE-AFG series are analogue load crane for measuring traction in Newton. There are two shackles included with the device. This durable model can be used in adverse industrial conditions. These load cranes come calibrated from the manufacturer. If an ISO calibration certificate is required for a load crane, one can be ordered separately.

- Analogue, no power supply required
- Easy to use
- Light weight for easy transport
- Drag needle to maintain the maximum weight
- Resistant to impacts
- Comes with two shackles (above and below)
- Type of protection: IP 54
- Maximum overload allowed is 200%, K = 2
- ISO certificate (optional)



Technical specifications

Model	PCE-AFG 30	PCE-AFG 120
Weighing range	0 ... 30 kN	0 ... 120 kN
Accuracy	class 2	class 2
Readability	0,5 kN	2 kN
Minimum load	0,5 kN	2 kN
Units	Newton	Newton
Tara	full range	
Overload protection	up to 200% above nominal maximum	
Display	analogue dial with drag needle	
Ingress protection	IP 54	
Power	---	

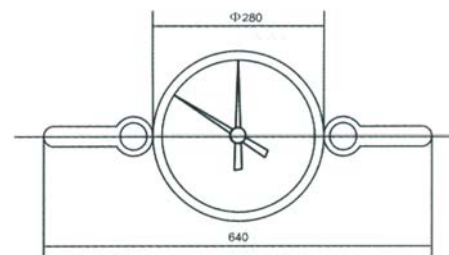
Contents

PCE-AFG hanging scale (various models), 2 x shackle, case and user's manual

Model No.	Description
PCE-AFG 30	Hanging scale up to 30 kN
PCE-AFG 120	Hanging scale up to 120 kN

Optional accessories

CAL-PCE-AFG	ISO certificate
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Industrial Balances

Serie PCE-CS

Low cost crane scale for indoor applications



We offer you a portable and compact crane scale that is powered by an internal rechargeable battery. It has tare function and accumulator function for high accuracy. This scale includes a hook, hanging loop, rechargeable battery, loader and a remote control with batteries. Its rugged design makes it ideal for daily use in the industrial sector and in the trade, transport or food sectors. This crane scale is delivered factory calibrated. You can purchase a laboratory calibration with an ISO certificate (at additional cost) to meet DIN ISO 9000 standard.

- 30 mm LED with
- Infrared remote control: all functions are selectable
- Powered by an internal rechargeable battery (battery charger is included in the delivery)
- Data Hold function, the weight display can be "frozen" using the HOLD key
- Stainless steel hanging loop, zinc hook
- Overload protection 400 %, (K= 4)
- Special "sum up" function
- ISO certificate (optional)



Technical specifications

Model	Weighing range Max kg	Readability d g	Minimum load Min kg	Repeatability kg	L mm	A mm	B mm	C mm	Weight kg
PCE-CS 300	300	50	2.0	0.1	335	20	65	20	4.0
PCE-CS 1000	1000	200	10.0	0.5	360	25	75	20	4.2
Tare range					full range				
Response time					<10 sec.				
Units					kg				
Display					30 mm LED				
Maximum overload					400 %				
Calibration					automatic (with optional external calibration weight)				
Operating temperature					0 to +40 °C				
Power					internal rechargeable battery for 50 hours operating time (230 V / 50 Hz battery charger included in the delivery)				
Remote control					usable for all functions (included)				
Ingress protection					IP 54				

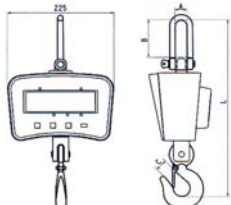
Contents

PCE-CS crane scale (one of our models), internal rechargeable battery, charger, infrared remote control (batteries included), shackle, hook and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-CS 300	PCE-CS 300 Crane scale
PCE-CS 1000	PCE-CS 1000 Crane scale

Optional accessories

CAL-0.5T	ISO certificate for PCE-CS 300 crane scale
CAL-1T	ISO certificate for PCE-CS 1000 crane scale



Serie PCE-CS HD

Rugged crane scale for indoor applications



We offer you a rugged crane scale for indoor use that is powered by an internal rechargeable battery. It has a tare function for high accuracy. The scale includes a hook and remote control. Its rugged enclosure makes it ideal for daily use in the industrial sector and in the trade, transport or food sectors. You can purchase a laboratory calibration with an ISO certificate, at additional cost, to meet with the DIN ISO 9000 standard. In conclusion, it is a low cost instrument for industrial and commercial applications.

- 30 mm LED with backlight
- Infrared remote control: all functions are selectable
- Powered by internal rechargeable battery (battery charger included in the delivery)
- Data Hold function, the weight display can be "frozen" using the HOLD key
- Stainless steel hanging loop, zinc hook
- Overload protection 400 %, (K=4)
- Special "sum up" function
- ISO certificate (optional)



Technical specifications

Model	Weighing range Max kg	Readability d kg	Minimum load Min kg	Repeatability kg	A mm	B mm	C mm	Weight kg
PCE-CS 3000 HD	3000	0.5	20	1	600	80	45	14
PCE-CS 5000 HD	5000	1	40	2	730	100	55	24
PCE-CS 10000 HD	10000	2	100	5	850	120	70	44
Tare range					full range			
Response time					<10 sec.			
Units					kg			
Indicator					30 mm LED			
Maximum overload					400 %			
Calibration					automatic (with optional external calibration weight)			
Operating temperature					0 to +40 °C			
Power					internal rechargeable battery for 80 hours operating time (230 V / 50 Hz battery charger included in the delivery)			
Enclosure					metal			
Remote control					usable for all functions (included)			
Ingress protection					IP 54			

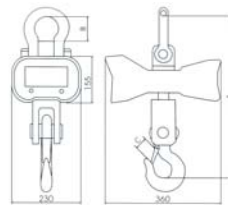
Contents

PCE-CS HD crane scale (one of our models), internal rechargeable battery, charger, remote control (batteries included), shackle, hook and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-CS 3000 HD	PCE-CS 3000 HD Crane scale
PCE-CS 5000 HD	PCE-CS 5000 HD Crane scale
PCE-CS 10000 HD	PCE-CS 10000 HD Crane scale

Optional accessories

CAL-10T	ISO certificate for crane scale
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Serie PCE-SW

Low cost pallet scale



This PCE-SW 1500 / PCE-SW 3000 pallet scale is low cost, accurate and very easy to use. It can be used in any place thanks to its two wheels. The display is connected to the balance by a 4 m cable. This balance is powered by arechargeable battery or a 230 V mains adaptor which is included in the delivery. If you want, you can acquire an optional software kit which includes a USB cable.

- Repeatability ± 0.5 kg
- Large 25 mm LCD
- Automatic calculation of the tare and manual tare input
- U shaped scale for easy access
- Powered by a rechargeable battery or mains adaptor
- RS-232 interface for data transmission
- Wheels and handle for a easy transport
- Adjustable levelling feet to set the balance
- Auto shut-off to protect battery life
- ISO certificate (optional)



Technical specifications

Model	Weighing range Max kg	Readability d kg	Repeatability kg
PCE-SW 1500	1500	0.5	0.5
PCE-SW 3000	3000	1.0	1.0
Tare range	full range		
Response time	3 to 5 s		
Units	kg		
Indicator	25 mm LCD with backlight		
Maximal overload	125 %		
Calibration	automatic (with optional external calibration weight)		
Operating temperature	-10 to +40 °C		
Interface	RS-232		
Power	rechargeable battery or mains adaptor 230 Hz / 50 Hz		
Enclosure	coated steel		
Ingress protection	IP 54		
Dimensions	(2x) 1260 x 120 x 95 mm		
Weight	50 kg		

Contents

PCE-SW 1500 / PCE-SW 3000 pallet scale, indicator with rechargeable battery, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-SW 1500	PCE-SW 1500 pallet scale
PCE-SW 3000	PCE-SW 3000 pallet scale

Optional accessories

CAL-PCE-SW	ISO certificate
PCE-SOFT-SW	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor
PCE-BP1	Thermal printer with RS-232 data cable



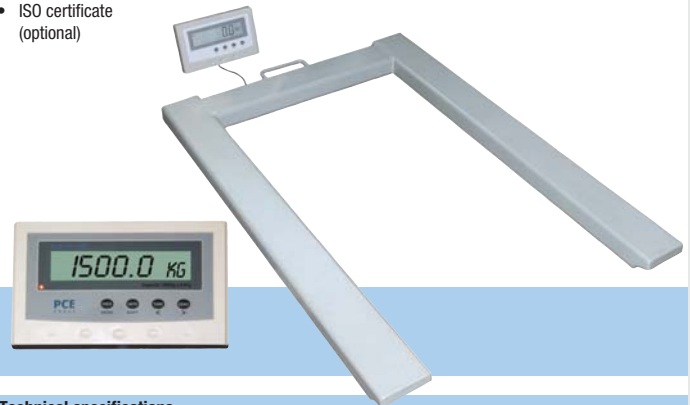
PCE-EP 1500

Low cost pallet scale



This PCE-EP 1500 pallet scale is low cost, accurate and very easy to use. It can be used in any place thanks to its two wheels. The display is connected to the balance by a 3 m cable. This balance is powered by arechargeable battery or a 230 V mains adaptor which is included in the delivery. If you want, you can acquire an optional software kit which includes a USB cable.

- Repeatability ± 0.5 kg
- Large 25 mm LCD
- Automatic calculation of the tare and manual tare input
- U shaped scale for easy access
- Powered by a rechargeable battery or mains adaptor
- RS-232 interface for data transmission
- Wheels and handle for a easy transport
- Adjustable levelling feet to set the balance
- Auto shut-off to protect battery life
- ISO certificate (optional)



Technical specifications

Model	Weighing range Max kg	Readability d kg	Repeatability kg
PCE-EP 1500	1500	0.5	0.5
Tare range	full range		
Response time	3 to 5 s		
Units	kg		
Indicator	25 mm LCD with backlight		
Maximal overload	125 %		
Calibration	automatic (with optional external calibration weight)		
Operating temperature	0 to +40 °C		
Power	- rechargeable battery - mains adaptor 230 Hz / 50 Hz		
Enclosure	coated steel		
Accessories	wheels and handle, levelling feet		
Ingress protection	IP 54		
Dimensions	1260 x 840 x 95 mm		
Weight	50 kg		

Contents

PCE-EP 1500 pallet scale, indicator with rechargeable battery, mains adaptor and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
PCE-EP 1500	PCE-EP 1500 pallet scale

Optional accessories

CAL-PCE-EP	ISO certificate
PCE-SOFT-EP	Software with RS-232 cable
RS232-USB	RS-232 to USB adaptor



ISO Certificate

Certificate according to DIN ISO

Companies that have a management system according to the ISO 9000 are required to calibrate their measuring instruments regularly. Because of this, we offer you this optional ISO certificate. We will send, on your behalf, the measuring instrument to an accredited laboratory, where they are checked and calibrated. The certificate includes the values with deviations, the serial number of the device and the client name. In this way your device and the results are based on the international patterns.



Verification

Class M I, M II and M III Verifications

According to UE 90/384/EWG guidelines all the scales must be verified for:

- Commercial relationships where the price of good is determined by its weight, e.g. foods like cold meat, meat or cheese, as well as gold or precious stones.
- Medicine production and analysis in medical and pharmaceutical laboratories.
- Rates, tariff and official fines determination.
- Industrial packing production.



If you want, we can carry out the verification for you. We can send the scale to the corresponding accredited organisation. They will check the scale and include a verification mark and a conforming document. The first verification has a period of availability of 2 years. The scale is sealed so that it cannot be manipulated or calibrated by anybody.

This verification has validity across the entire European Union.

Software

Software for data transfer

We offer you software for data transfer for almost all our instruments and scales with USB cable. With the help of the software you will be able to transmit the measurement values / load data to your computer. You can acquire an adaptor for your computer if they only have a USB interface.

- For Windows NT, 2000, XP
- It includes RS-232 cable (d-sub, of 9 pins)
- You can store the measurement data
- You can transfer the data to Excel
- Possibility to generate all types of reports
- Optional RS-232 to USB adaptor



Customer support services

Technical support carried out by our engineers

We provide you with high quality services to support our products (measuring instruments and balances) for all your applications. We can help you purchase the most appropriate device according to your needs. Don't hesitate to contact our specialists from Monday to Friday.

