

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
---------	-----------------

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
---------	-----------------

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
	4 / 400 nF / 4 / 40 / 100 µF	±3 % + 10 dgt.	- 10 pF
Frequency	10 Hz ... 10 MHz	±0.1 % + 2 dgt.	- 10 mHz
	-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	750 V	±0.5 % of reading + 5 dgt	±1.2 % + 5 dgt
	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
Current AC	10 A	±1.0 % of reading + 2 dgt	10 mA
	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
Other measurement ranges	400 mA	±1.3 % of reading + 5 dgt	±1.6 % + 5 dgt
	10 A	±1.5 % of reading + 5 dgt	±1.8 % + 5 dgt
	Resistance: 400 Ω; 4 / 40 / 400 kΩ; 40 MΩ	±0.6 % of reading + 2 dgt	0,1 Ω
	Capacitance: 4/40/400nF; 4/40/400µF; 4/40mF	±1.9 % of reading + 20 dgt	1 pF
	Frequency: 4 / 40 / 400 kHz; 4 / 40 MHz	±0.5 % of reading + 1 dgt	1 Hz
RPM: 4 / 40 kRPM; 4 / 40 / 400 MRPM	±0.5 % of reading + 1 dgt	0.01 RPM	
Temperature: -50 to +1000 °C	±1.0 % of reading + 2°C	1 °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 μF / 600 μF / 6 mF, precision: ±(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	±0.3 % of reading +2 dgt	0.1 mV
	6 V	±0.3 % of reading +2 dgt	1 mV
	60 V	±0.3 % of reading +2 dgt	10 mV
	600 V	±0.3 % of reading +2 dgt	100 mV
	1000 V	±0.5 % of reading +3 dgt	1 V
Voltage AC	600 mV	±0.6 % of reading +5 dgt	0.1 mV
	6 V	±0.6 % of reading +5 dgt	1 mV
	60 V	±0.6 % of reading +5 dgt	10 mV
	600 V	±0.6 % of reading +5 dgt	100 mV
	750 V	±1.2 % of reading +3 dgt	1 V
Current DC	600 μA	±0.5 % of reading +3 dgt	0.1 μA
	6000 μA	±0.5 % of reading +3 dgt	1 μA
	60 mA	±0.5 % of reading +3 dgt	10 μA
	600 mA	±0.8 % of reading +3 dgt	100 μA
	10 A	±1.2 % of reading +3 dgt	10 mA
Current AC	600 μA	±1.0 % of reading +5 dgt	0.1 μA
	6000 μA	±1.0 % of reading +5 dgt	1 μA
	60 mA	±1.0 % of reading +5 dgt	10 μA
	600 mA	±1.0 % of reading +5 dgt	100 μA
	10 A	±2.0 % of reading +6 dgt	10 mA
Resistance	600 Ω; 6/ 60/ 600 kΩ; 6/ 60 MΩ	±0.5 to 1.2 % +2 dgt	
Capacitance	6/ 60/ 600 nF; 6/ 60/ 600 μF; 6 mF	±2.0 to 5.0 % +5 dgt	
Frequency	6/ 60/ 600 kHz; 6/ 60 MHz	±0.1 % +3 dgt	
Temperature	-40 °C to +1000 °C	±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

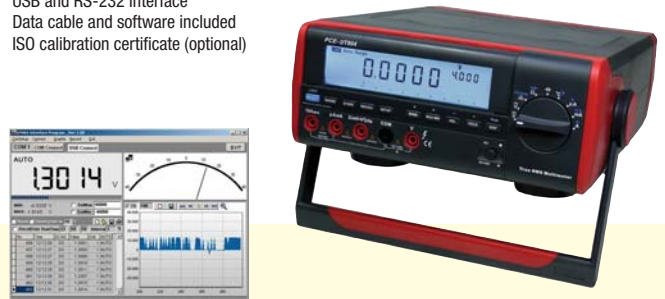
CAL-DMM	ISO certificate
---------	-----------------

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 μF / 40 μF / 400 μF / 4 mF / 40 mF, precision: ±(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	±0.025 % of reading +5 dgt	0.1 mV
	4 V	±0.05 % of reading +5 dgt	1 mV
	40 V	±0.05 % of reading +5 dgt	10 mV
	400 V	±0.05 % of reading +5 dgt	100 mV
	1000 V	±0.05 % of reading +5 dgt	1 V
Voltage AC	4 V	±0.4 % of reading +30 dgt	1 mV
	40 V	±0.4 % of reading +30 dgt	10 mV
	400 V	±0.4 % of reading +30 dgt	100 mV
	750 V	±1.0 % of reading +30 dgt	1 V
	Current DC	400 μA	±0.1 % of reading +15 dgt
	4000 μA	±0.1 % of reading +15 dgt	0.1 μA
	40 mA	±0.15 % of reading +15 dgt	1 μA
	400 mA	±0.15 % of reading +15 dgt	10 μA
	10 A	±0.5 % of reading +30 dgt	1 mA
Current AC	400 μA	±1.0 % of reading +30 dgt	0.01 μA
	4000 μA	±1.0 % of reading +30 dgt	0.1 μA
	40 mA	±1.0 % of reading +30 dgt	1 μA
	400 mA	±1.0 % of reading +30 dgt	10 μA
	10 A	±2.5 % of reading +40 dgt	1 mA
Resistance	400 Ω; 4/ 40/ 400 kΩ; 4/ 40 MΩ	±0.3 to 1.0 % +40 dgt	
Capacitance	40/ 400 nF; 4/ 40/ 400 μF; 4/ 40 mF	±1.0 to 5.0 % +20 dgt	
Frequency	40/ 400 Hz; 4/ 40/ 400 kHz; 4/ 400 MHz	±0.01 % +8 dgt	
Temperature	-40 °C to +1000 °C	±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
---------	-----------------

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
--------	-----------------

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 1/3 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
--------	-----------------

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
--------	-----------------

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

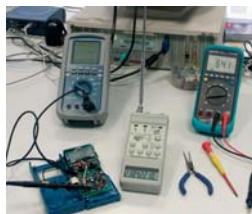
This frequency counter possesses a microprocessor for frequency, period, resolution, data hold, relative measurement and memory (maximum, minimum and average values) functions. Its low consumption and its large display allow you to work comfortably under unfavourable light conditions. The telescopic 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
------------	-----------------

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
Resolution	ohms: 0 to 200 Ω / 200 to 2000 Ω ACV: 1 V DCV: 1 V
Accuracy	ohms: 0,1 Ω / 1 Ω 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
----------	-----------------

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
---------	-----------------

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
---------	-----------------

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
---------	-----------------

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
---------	-----------------

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
----------	-----------------

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
----------	-----------------

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
---------	-----------------

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
-------------	-----------------



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.

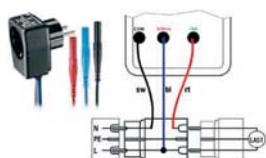
- Auto-ranging
- Direct power measurement through a probe or power clamp
- Data Hold / High / Low alarm functions
- Powered by adaptor or batteries
- RS-232 interface
- ISO calibration certificate (optional)



Technical specifications

Volts measurement (AC)	1 W to 6 kW; 1 W;
True power value	1 W;
Direct measurement	±1.5 % + 1 dgt.
Volts measurement (AC) with external clamp adaptor	1 W to 999.9 kW; 1 W; ±1.5 % + 1 dgt.
VA measurement	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

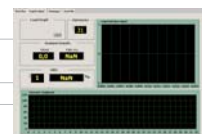
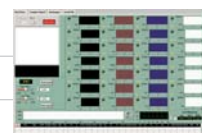
The PCE-360 power analyser is ideal for measuring power in one or three phases. Its large display shows up to 10 values. You can attach, at the same time, up to 4 current sensing clamps. The manual option allows you to store 99 readings directly. In data storage mode you can record up to 20,000 values, 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
Current measurement	Frequency:	50 Hz (not for FU use)
	Range:	phase 1 – 3 (0 to 1000 A) / TRUE RMS range "N" (0 to 250 A) / TRUE RMS
Active power (P)	Resolution:	0.1 A
	Accuracy:	±0.5 % of reading + 15 D ±1 %
	Range:	0 to 999.9 KW
Apparent power (S)	Accuracy:	±1 % of reading + 20 D
	Range:	0 to 999.9 KVA
Reactive power (Q)	Accuracy:	±1 % of reading + 10 D
	Range:	0 to 999.9 KVAR
Energy (true, apparent and reactive work)	Accuracy:	±1 % of reading + 20 D
	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
Power factor (PF)	Accuracy:	±1 % of reading + 20 D
	Range:	0.000 to 1.000
Phase angle	Accuracy:	±1 dgt
	Range:	-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 µs) 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 / ±0,5 % 0,40 to 10,00 A / ±0,5 % 4,0 to 100,0 A / ±0,5 %	0,400 to 10,000 A / ±0,5 % 4,00 to 100,00 A / ±0,5 % 40,0 to 1000,0 A / ±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 / ±0,5 % 20,0 to 600,0 V / ±0,5 %	20,0 to 500,0 V / ±0,5 % 20,0 to 600,0 V / ±0,5 %	20,0 to 500,0 V / ±0,5 % 20,0 to 600,0 V / ±0,5 %
Power factor		0,00 to 1,00 / ±0,04	0,00 to 1,00 / ±0,04	0,000 to 1,000 / ±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 / ±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