

## Single Phase Power Clamp meter PCM 3

### Voltmeter PCE-PCM 3

**Digital multimeter for single-phase measurement / NCV measurement / W / VA / Var / Inrush Current / 1000 A AC Current Measurement / Bluetooth Interface / Frequency Measurement / Backlight / Voltage measurement / 750 kW power**

With the digital multimeter AC currents of up to 1000 A AC can be measured easily. At the same time, voltages of up to 1000V AC / DC can be measured with the digital multimeter. Thus, with the power current clamp, apparent power, reactive power and active power measurements up to 750 KW are possible. Another function of the digital multimeter is the measurement of the inrush current. Many consumers have a tremendously high current at the moment of switch-on. With a conventional digital multimeter such a measurement is not possible. For the digital multimeter this is not a problem.

With the NCV (Not Connected Voltage) function of the digital multimeter, it can be checked whether a voltage is applied to a line without performing a contacting measurement. This makes the work much easier for the user thanks to the digital multimeter. In addition to the measuring function, the digital multimeter can also be connected to a terminal via the Bluetooth interface. Via this Bluetooth interface, the measured data can be transmitted directly from the digital multimeter to the terminal, where it can be logged, analyzed and sent.

- Apparent / active / reactive power
- Measurement up to the 20th harmonic
- "Not Connected Voltage" function
- Inrush current measurement
- Current measurement up to 1000 A AC
- Bluetooth interface

### Specifications:

Ambient conditions 23°C / 73.4°F ± 5°C / 41°F, < 75% RH

#### Measuring function

##### Current measurement AC

Measuring range	Resolution	Accuracy
60 A	0.01 A	± 2% + 8 Dgt
600 A	0.1 A	± 2% + 8 Dgt
1000 A	1 A	± 2% + 8 Dgt

Maximum input current: 1000 A AC

Frequency range: 40 .... 400 Hz

#### Measuring function

##### Inrush current AC

Measuring range	Resolution	Accuracy
60 A	0.01 A	For reference only
600 A	0.1 A	± 5% + 60 Dgt
1000 A	1 A	± 5% + 60 Dgt

Integral time: 100 ms

Measuring range: 20 ... 1000 A

Frequency range: 40 .... 400 Hz

**Measuring function****Voltage measurement DC**

Measuring range	Resolution	Accuracy
6V	0.001V	± 0.5% + 5 Dgt
60V	0.01V	± 0.5% + 5 Dgt
600V	0.1V	± 0.5% + 5 Dgt
1000V	1V	± 0.8% + 4 Dgt

Input impedance: 10 MΩ

Maximum input voltage: 750V AC (rms value) or 1000V DC

**Measuring function****Voltage measurement AC**

Measuring range	Resolution	Accuracy
6V	0.001V	± 0.6% + 4 Dgt
60V	0.01V	± 0.6% + 4 Dgt
600V	0.1V	± 0.6% + 4 Dgt
1000V	1V	± 0.8% + 4 Dgt

Input impedance: 10 MΩ

Maximum input voltage: 750V AC (rms value) or 1000V DC

Frequency range: 40 ... 400 Hz

**Measuring function****Frequency measurement with  
The current measuring function**

Measuring range	Resolution	Accuracy
99.99 Hz	0.01 Hz	± 1.5% + 5 Dgt
999.9 Hz	0.1 Hz	± 1.5% + 5 Dgt

Measuring range: 10 ... 1 kHz

Measuring range of the input signal: > 20 AAC (rms value)

The input current increases with the measuring frequency.

Maximum input current: 1000 AAC (rms value)

**Measuring function****Frequency measurement with the  
Voltage measurement function**

Measuring range	Resolution	Accuracy
99.99 Hz	0.01 Hz	± 1.5% + 5 Dgt
999.9 Hz	0.1 Hz	± 1.5% + 5 Dgt
9,999 kHz	0.001 kHz	± 1.5% + 5 Dgt

Measuring range: 10 ... 10 kHz

Measuring range of the input signal: > 1V AC (rms value)

The input current increases with the measuring frequency.

Maximum input voltage: 1000V AC (rms value)

**Measuring function****Frequency measurement**

Measuring range	Resolution	Accuracy
9,999 Hz	0.001 Hz	± 0.3% + 5 Dgt
99.99 Hz	0.01 Hz	± 0.3% + 5 Dgt
9,999 kHz	0.1 Hz	± 0.3% + 5 Dgt
999.9 Hz	0.001 kHz	± 0.3% + 5 Dgt
99.99 kHz	0.01 kHz	± 0.3% + 5 Dgt
999.9 kHz	0.1 kHz	± 0.3% + 5 Dgt
9,999 MHz	0.001 MHz	± 0.3% + 5 Dgt

Overvoltage protection: 1000V DC or 750V AC (rms value)

Range of voltage input > 2V

(as the input voltage increases, so does the frequency)

**Measuring function**

**Duty cycle****Measuring range**

0.1 ... 99.9%

**Resolution**

0.1%

**Accuracy**

± 0.3% + 5 Dgt

Frequency range: 10 ... 10 kHz

Voltage range: 2 ... 250V AC (rms value)

(The voltage increases with the frequency)

Duty cycle with the  
Current measurement function

Frequency range: 10 ... 1 kHz

Input current: 20 ... 1000 AAC (rms value)

Duty cycle with the  
Voltage measurement function

Frequency range: 10 ... 1 kHz

Input current: 1 ... 750V AC (rms value)

Input impedance: 1MΩ

**Measuring function****Resistivity****Measuring range**

600 Ω

6 kΩ

60 kΩ

600 kΩ

6 MΩ

60 MΩ

**Resolution**

0.1 Ω

0.001 kΩ

0.01 kΩ

0.1 kΩ

0.001 MΩ

0.1 MΩ

**Accuracy**

± 0.8% + 3 Dgt

± 0.8% + 3 Dgt

± 0.8% + 3 Dgt

± 0.8% + 3 Dgt

± 2% + 5 Dgt

± 2% + 5 Dgt

Measuring voltage: approx. 0.78V

Overvoltage protection: 750V DC, 1000V AC (rms value)

**Measuring function****Continuity test****Measuring range**

600 Ω

**Resolution**

0.1 Ω

**Accuracy**

-

Acoustic signal at &lt; 50 Ω

Test voltage: 1.48V

Overvoltage protection: 750V DC, 1000V AC (rms value)

**Measuring function****Capacitance measurement****Measuring range**

9.999 nF

99.99 n.f.

999.9 nF

9.999 μF

99.99 μF

999.9 μF

9,999mF

99.99 mF

**Resolution**

0.001 nF

0.01 nF

0.1 nF

0.001 μF

0.01 μF

0.1 μF

0.001 mF

0.01 mF

**Accuracy**

± 3% + 5 Dgt

± 3% + 5 Dgt

± 3% + 5 Dgt

± 3% + 5 Dgt

± 3% + 5 Dgt

± 3% + 5 Dgt

± 3% + 5 Dgt

± 3% + 5 Dgt

Overvoltage protection: 750V DC, 1000V AC (rms value)

**Measuring function****Diode measurement****Measuring range**

3V

**Resolution**

0.001V

**Accuracy**

-

DC anode side: approx. 1-mA

DC cathode side: approx. 3.2V

Overvoltage protection: 750V DC, 1000V AC (rms value)

**Measuring function****Single phase power measurement****Measuring range**

3 W / VA / Var

100 W / VA / Var

**Resolution**

0.01 W / VA / Var

0.1 W / VA / Var

**Accuracy**

± 3% + 5 Dgt

± 3% + 5 Dgt

4000 W / VA / Var	1 W / VA / Var	± 3% + 5 Dgt
10 kW / VA / var	0.01 kW / VA / Var	± 3% + 5 Dgt
100 kW / VA / var	0.1 kW / VA / Var	± 3% + 5 Dgt
750 kW / VA / var	1 kW / VA / Var	± 3% + 5 Dgt

Smallest measuring current: 1-mA

Smallest measuring voltage: 1V

### Measuring function

#### Power factor capacitive / inductive

Measuring range	Resolution	Accuracy
0.1 ... 1	0.001	± 5% + 5 Dgt

Smallest measuring current: 1-mA

Smallest measuring voltage: 1V

### Measuring function

#### Harmonics measurement

Measuring range	Resolution	Accuracy
1	-	± 3% + 10 Dgt
2 ... 6	-	± 3.5% + 10 Dgt
7 ... 8	-	± 4.5% + 10 Dgt
9 ... 10	-	± 5% + 10 Dgt
11 ... 15	-	± 7% + 10 Dgt
16 ... 20	-	± 10% + 10 Dgt

Smallest measuring current: 1-mA

Smallest measuring voltage: 1V

The resolution depends on the voltage measuring range

### General specifications

Measuring range	Automatically and manually adjustable
Maximum voltage range	1000V DC or 750V AC
Maximum working height	2000 m / 6561 ft
Display	LCD
Maximum display	5999 Dgt.
Overrange	"OIL"
Measuring range underflow	"-OL"
Measuring rate	3 Hz
Automatic shutdown	After 30 minutes
Power supply	9V block battery
Battery indicator	Icon if the battery voltage is too low
Temperature coefficient	0.1 x accuracy x °C / °F*
Operating conditions	0 ... 40°C, 32 ... 104°F
Storage conditions	-10 ... 60°C, 14 ... 140°F
Dimensions	238 x 92 x 50 mm / 9.4 x 3.6 x 2 in
Weight	About 420 g / < 1 lb (with batteries)

### Delivery scope:

- 1 x Voltmeter PCE-PCM 3
- 1 x Transport bag
- 1 x Test lead set
- 1 x 9V block battery
- 1 x User manual