



Clamp Meter PCE-PCM 3



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**Digital multimeter for single-phase measurement / NCV measurement / W / VA / Var /Inrush C
Measurement / Bluetooth Interface / Frequency Measurement / Backlight / Voltage measur**

With the digital multimeter AC currents of up to 1000 A AC can be measured easily. At the same time, voltage can be measured with the digital multimeter. Thus, with the power current clamp, apparent power, reactive power, and active power up to 750 KW are possible. Another function of the digital multimeter is the measurement of the inrush current, which is a tremendously high current at the moment of switch-on. With a conventional digital multimeter such a measurement is not possible. With this 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 present without performing a contacting measurement. This makes the work much easier for the user thanks to the digital multimeter. With this measuring function, the digital multimeter can also be connected to a terminal via the Bluetooth interface. The measured data can be transmitted directly from the digital multimeter to the terminal, where it can be logged.

- ▶ Apparent / active / reactive power
- ▶ Measurement up to the 20th harmonic
- ▶ "Not Connected Voltage" function

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

Frequency measurement with

The current measuring function

Measuring range	Resolution	Accuracy
99.99 Hz	0.01 Hz	$\pm 1.5\% + 5 \text{ Dgt}$
999.9 Hz	0.1 Hz	$\pm 1.5\% + 5 \text{ Dgt}$

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	$\pm 1.5\% + 5 \text{ Dgt}$
999.9 Hz	0.1 Hz	$\pm 1.5\% + 5 \text{ Dgt}$
9,999 kHz	0.001 kHz	$\pm 1.5\% + 5 \text{ Dgt}$

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	$\pm 0.3\% + 5 \text{ Dgt}$
99.99 Hz	0.01 Hz	$\pm 0.3\% + 5 \text{ Dgt}$
9,999 kHz	0.1 Hz	$\pm 0.3\% + 5 \text{ Dgt}$
999.9 Hz	0.001 kHz	$\pm 0.3\% + 5 \text{ Dgt}$
99.99 kHz	0.01 kHz	$\pm 0.3\% + 5 \text{ Dgt}$
999.9 kHz	0.1 kHz	$\pm 0.3\% + 5 \text{ Dgt}$
9,999 MHz	0.001 MHz	$\pm 0.3\% + 5 \text{ Dgt}$

Duty cycle with the
Voltage measurement function

Frequency range: 10 ... 1 kHz
Input current: 1 ... 750V AC (rms value)
Input impedance: 1M Ω

Measuring function

Resistivity

Measuring range

Measuring range	Resolution	Accuracy
600 Ω	0.1 Ω	$\pm 0.8\% + 3 \text{ Dgt}$
6 k Ω	0.001 k Ω	$\pm 0.8\% + 3 \text{ Dgt}$
60 k Ω	0.01 k Ω	$\pm 0.8\% + 3 \text{ Dgt}$
600 k Ω	0.1 k Ω	$\pm 0.8\% + 3 \text{ Dgt}$
6 M Ω	0.001 M Ω	$\pm 2\% + 5 \text{ Dgt}$
60 M Ω	0.1 M Ω	$\pm 2\% + 5 \text{ Dgt}$

Measuring voltage: approx. 0.78V

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

Measuring function

Continuity test

Measuring range

Measuring range	Resolution	Accuracy
600 Ω	0.1 Ω	-

Acoustic signal at < 50 Ω

Test voltage: 1.48V

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

Measuring function

Capacitance measurement

Measuring range

Measuring range	Resolution	Accuracy
9.999 nF	0.001 nF	$\pm 3\% + 5 \text{ Dgt}$
99.99 n.f.	0.01 nF	$\pm 3\% + 5 \text{ Dgt}$
999.9 nF	0.1 nF	$\pm 3\% + 5 \text{ Dgt}$
9.999 μ F	0.001 μ F	$\pm 3\% + 5 \text{ Dgt}$
99.99 μ F	0.01 μ F	$\pm 3\% + 5 \text{ Dgt}$
999.9 μ F	0.1 μ F	$\pm 3\% + 5 \text{ Dgt}$

Measuring function

Single phase power measurement

Measuring range	Resolution	Accuracy
3 W / VA / Var	0.01 W / VA / Var	± 3% + 5 Dgt
100 W / VA / Var	0.1 W / VA / Var	± 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

Weight

About 420 g / < 1 lb (with batteries)

Accuracies are given at ambient conditions of 18 ... 28°C / 65 ... 83°F.

*The temperature is the difference between the temperature of the operating conditions and the current ambient temperature.

Example:

Is the current ambient temperature greater than the temperature of the operating conditions

$$(50^{\circ}\text{C} / 122^{\circ}\text{F} \text{ (current ambient temperature)}) - (40^{\circ}\text{C} / 104^{\circ}\text{F} \text{ (operating temperature)}) \\ = 10^{\circ}\text{C} / 50^{\circ}\text{F}$$

Is the current ambient temperature less than the temperature of the operating conditions

$$(0^{\circ}\text{C} \text{ (operating temperature)}) - (-5^{\circ}\text{C} / 23^{\circ}\text{F} \text{ (current ambient temperature)}) \\ = 5^{\circ}\text{C} / 41^{\circ}\text{F}$$