



User Manual

PCE-CM 40 clamp meter



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski, русский, 中文) can be found by using our product search on: www.pce-instruments.com

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1 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. Damage or injuries caused by non-observance of the manual are excluded from our liability and not covered by our warranty.

- The device must only be used as described in this instruction manual. If used otherwise, this can cause dangerous situations for the user and damage to the meter.
- The instrument may only be used if the environmental conditions (temperature, relative humidity, ...) are within the ranges stated in the technical specifications. Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not expose the device to shocks or strong vibration. Never touch live components when measuring. There is a danger to life!
- Never touch the bare measuring tips, otherwise electric shocks may occur.
- Before each measurement, make sure that the correct measurement range is set and that the test leads are connected correctly.
- Resistance, capacitance and temperature measurements as well as diode tests (if applicable) must only be carried out in de-energised condition.
- Before replacing the batteries or the fuses, all test leads must be removed from the meter.
- The case should only be opened by qualified PCE Instruments personnel.
- Never use the instrument when your hands are wet.
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth. Use only pH-neutral cleaner, no abrasives or solvents.
- The device must only be used with accessories from PCE Instruments or equivalent.
- Before each use, inspect the case for visible damage. If any damage is visible, do not use the device.
- Do not use the instrument in explosive atmospheres.
- The measurement range as stated in the specifications must not be exceeded under any circumstances.
- Non-observance of the safety notes can cause damage to the device and injuries to the user.

	<p>General warning sign Non-observance can cause damage to the device and injuries to the user.</p>
	<p>Warning: electrical voltage Non-observance can cause electric shock.</p>

We do not assume liability for printing errors or any other mistakes in this manual.

We expressly point to our general guarantee terms which can be found in our general terms of business.

2 Specifications

Alternating current 50 ... 400 Hz TRMS		
Measurement range	Resolution	Accuracy
30 A AC	0.01 A	±(3 % of rdg. + 8 digits)
300 A AC	0.1 A	±(3 % of rdg. + 5 digits)
3000 AAC	1 A	±(3 % of rdg. + 5 digits)
General technical data of the measuring clamp PCE-CM 40		
Loop diameter Rogowski coil	approx. 170 mm x 5 mm / 6.7 x 0.2 in	
Display	4-digit LCD with backlight	
Operating conditions	5 ... 40 °C / 41 ... 104 °F max. 80 % RH, non-condensing	
Storage conditions	-20 ... 60 °C / -4 ... 140 °F, max. 80 % RH, non-condensing	
Operating height	max. 2000 m	
Power supply	2 x 1.5 V AAA battery	
Automatic power off	after approx. 15 minutes	
Security conditions	EN61010-1, EN61010-2-032, EN61326-1	
Overvoltage category	CAT III, 1000 V; CAT IV, 600 V	
Degree of pollution	2	

3 Scope of delivery

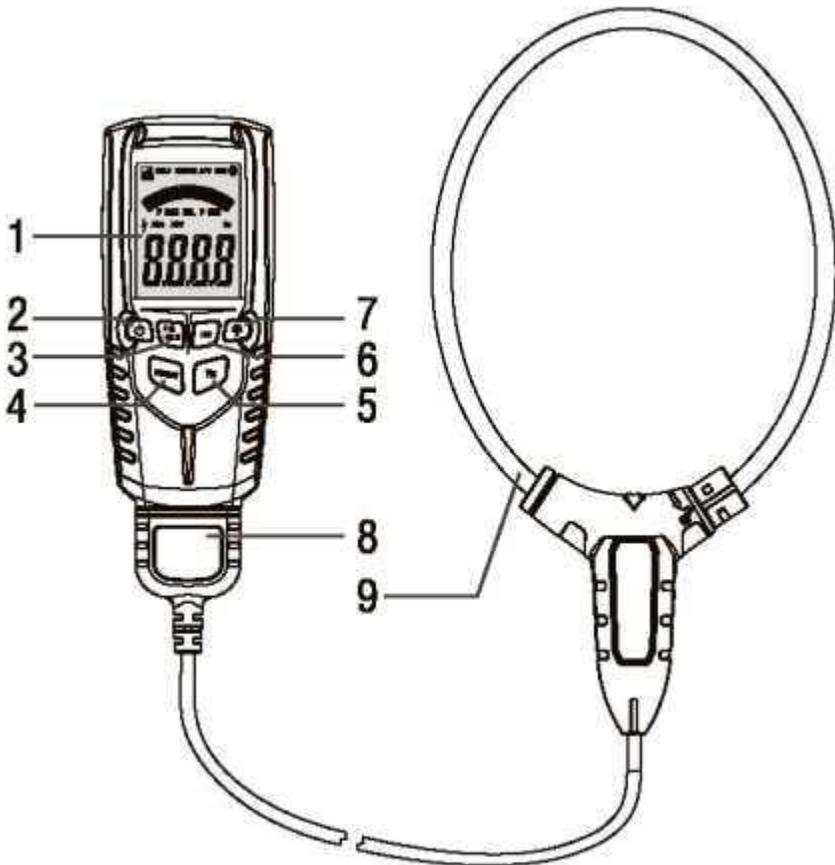
1 x clamp meter PCE-CM 40 (display unit and Rogowski coil)

2 x 1.5 V AAA battery

1 x user manual

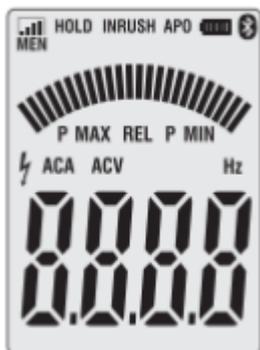
1 x carrying bag

4 System description



- ① Display
- ② "On" key
- ③ "HOLD / Bluetooth" key
- ④ "Inrush" key
- ⑤ "Hz" key

- ⑥ "LOG" key
- ⑦ "Backlight" key
- ⑧ Rogowski coil plug
- ⑨ Rogowski coil



HOLD
 0 to 3000
AC A

Hz
INRUSH

MEN



HOLD
Reading
Alternating current
Low battery
Hertz (frequency)
Inrush current
Memory
Bluetooth transmission
Auto Power Off

5 Operation

5.1 Preparation

- Unpack the meter completely.
- Remove the protective foils if necessary.
- Insert the batteries, as described in chapter 7.
- Insert the Rogowski coil connector into the base of the display unit.

5.2 Current measurement AC

- Switch on the meter.
- Open the Rogowski coil and place it around the conductor to be measured. Pay attention to the direction of flow (arrow on the coil handle), close and lock the coil.
- Position the coil so that the conductor is as central as possible in the coil.
- The measurement error may increase if the conductor is not centred.
- The measurement range selection is automatically controlled by the meter.
- After the measurement, switch off the meter by pressing and holding the "On" key.

5.3 Measuring the inrush current

- Switch on the meter.
- Open the Rogowski coil and place it around the conductor to be measured. Pay attention to the direction of flow (arrow on the coil handle), close and lock the coil.
- Position the coil so that the conductor is as central as possible in the coil.
- The measuring error may increase if the conductor is not centred.
- Press the "INRUSH" key.
- Press and hold the "INRUSH" key to change the measurement range from 3000 A to 30 A. For changing the measurement range from 30 A to 300 A and from 300 A to 3000 A, repeat the procedure.
- Switch on the consumer load to be measured.
- The inrush current is shown and held on the display.
- Repeat the procedure for a new measurement.
- Press the "INRUSH" key to return to normal measuring mode.
- After the measurement, switch off the meter by holding down the "ON" key.

5.4 Frequency measurement

- Switch on the meter.
- Open the Rogowski coil and place it around the conductor to be measured. Pay attention to the direction of flow (arrow on the coil handle), close and lock the coil again.
- Position the coil so that the conductor is as central as possible in the coil.
- The measuring error may increase if the conductor is not centred.
- Press the "Hz" key.
- The frequency is shown on the display.
- Press the "Hz" key to return to normal measuring mode.
- After the measurement, switch off the meter by holding down the "ON" key.

5.5 Hold function

This function allows you to freeze the value currently shown on the display.

- Press the "HOLD" key during the current or frequency measurement.
- Press the "HOLD" key again to return to measuring mode.

5.6 Data logger

With the logger function, you can save the measured values to the device and transfer them to the app (Meterbox Pro) via Bluetooth.

- Press the "LOG" key to start data recording.
- Press the "LOG" key once more to end data recording.
- Press and hold the "HOLD (Bluetooth)" key until the Bluetooth icon appears at the top right of the display.
- To transfer the saved data to the app, press and hold the "LOG" key until the display shows "Send". The saved data is transmitted.
- **Attention!** After the data transfer, the Bluetooth mode is automatically exited.
- To exit Bluetooth mode manually, press and hold the "HOLD (Bluetooth)" key once more.

5.7 Backlight

- Press the "Backlight" key to switch on the backlight.
- Press the key again to switch off the backlight.

5.8 Automatic power off

To save battery capacity, the device is automatically switched off after 15 minutes. During use of the data logger, automatic power off is deactivated.

6 Cleaning / storage

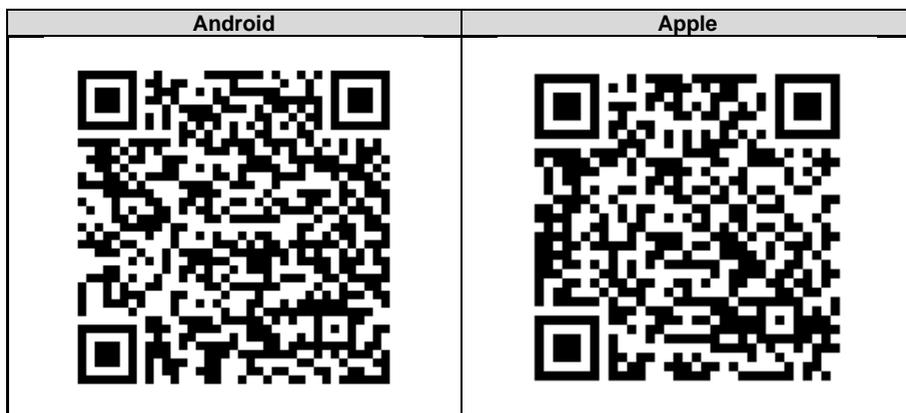
- Use a damp cloth and mild cleaners to clean the meter. Never use cleaners that contain solvents or abrasives.
- If you do not use the meter for more than 60 days, remove the batteries to prevent leakage.

7 Battery change

- Open the battery compartment on the back using a screwdriver.
- Replace the two 1.5 V AAA batteries. Ensure correct polarity.
- Close the battery compartment.

8 APP Meterbox Pro

- Download the Meterbox Pro app from the App Store (iOS) or Google Play (Android) to your mobile device or use the QR code below.
- You can find the instructions for Meterbox Pro in the app under Setting - Help.



9 Contact

If you have any questions, suggestions or technical problems, please do not hesitate to contact us. You will find the relevant contact information at the end of this user manual.

10 Disposal

For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.

If you have any questions, please contact PCE Instruments.





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