



User Manual

PCE-DT 50 Tachometer



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 vibrations.
- 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.

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.

If you have any questions please contact PCE Instruments. The contact details can be found at the end of this manual.



2 Specifications

2.1 Technical specifications

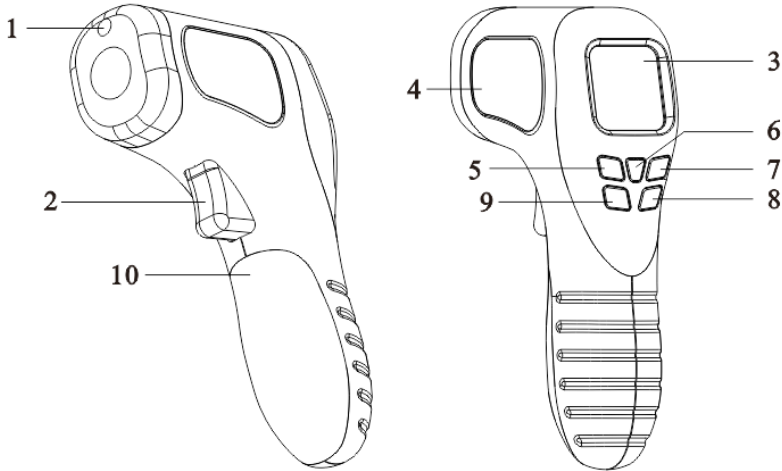
| | |
|----------------------|--|
| Measurement range | 2.5 ... 99,999 rpm (RPM) |
| Measurement accuracy | $\pm 0.02\% + 1$ digit |
| Resolution | 2.5 ... 999 rpm: 0.1 rpm |
| | 1000 ... 99,999 rpm: 1 rpm |
| Measuring distance | 50 ... 500 mm / 2 ... 19.7 in |
| Measuring rate | 0.5s (over 120 rpm) |
| Storage | 60 individual data storage |
| Automatic shutdown | After 20 s |
| Power supply | 9V block battery |
| Operating conditions | 0 ... 50°C / 32 ... 122°F, 10 ... 90% rh |
| Storage conditions | -10 ... 60°C / 14 ... 140°F, 10 ... 75% rh |
| Dimensions | 145 x 90 x 35 mm / 5.7 x 3.5 x 1.4 in |
| Weight | Approx. 120 g / < 1 lb incl. battery |

2.2 Delivery contents

- 1 x Tachometer PCE-DT 50
- 1 x 9V block battery
- 1 x User manual

3 System description

3.1 Device



1. Laser
2. Measuring/trigger key
3. LC display
4. Product name
5. Display backlight
6. On/off key
7. Auto key
8. Max/Min/Avg key
9. Recording key
10. Battery compartment

3.2 Display description



1. Measurement indicator
2. HOLD icon
3. Laser icon
4. Battery level indicator
5. MAX/MIN/average value
6. Measured value
7. Measuring unit
8. Number of data recordings
9. Automatic mode
10. Recording icon
11. Data view

4 Operation

5.1 Switching the meter on and off:

- Press the on/off key (6) to switch on the unit.
- After approx. 20 s without use, the device switches off automatically.
- Press the on/off key (6) to switch off the unit.

5.2 Measurement

- Apply approx. 1-2 cm reflective tape to the test object that is not yet rotating.
- A bright environment has a negative effect on the reflection and the measurement result. Therefore, if necessary, shade the area to be measured and avoid direct sunlight.
- For a measurement, press the measuring/trigger key (2) and point the laser at the rotating object.
- **Be careful!** Rotating components are dangerous!

5.3 Hold function

- The instrument automatically switches to the hold function after the measurement.

5.4 Max/Min/Avg measured value

- Press the Max button (8) once to read the maximum value of the measurement.
- Press the Max button (8) twice to read the minimum value.
- Press the Max button (8) three times to read the average value (AVG).

5.5 Switching the backlight on and off

- Press the backlight key (5) to switch on the display backlight.
- Press the backlight key (5) again to switch off the display backlight.

5.6 Auto measurement function

- Press the auto key (7) to start an automatic measurement. Press the key again to exit Auto mode.
- **Note:** The laser is permanently active in auto mode, the trigger key (2) does not need to be pressed.

5.7 Recording function

- In Auto mode, press the REC key (9) to start recording.
- A maximum of 60 measured values can be stored.
- Press the REC key (9) again to pause the measurement.

5.8 Measuring interval in recording mode

- Press and hold the REC key (9) and turn on the power to set the recording interval.
- While holding down the REC key (9), press the backlight key (5) to decrease the interval time or the auto key to increase the time.
- The time interval can be set from 1-99 s.

5.9 Battery

- If the meter does not turn on or the battery indicator is lit, replace the 9 V battery as soon as possible.
- To do this, press the arrow icon of the battery compartment and slide it down. After inserting a new battery, close the cover again. Make sure the polarity is correct.

5 Warranty

You can read our warranty terms in our General Business Terms which you can find here: <https://www.pce-instruments.com/english/terms>.

6 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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