



# 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](http://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

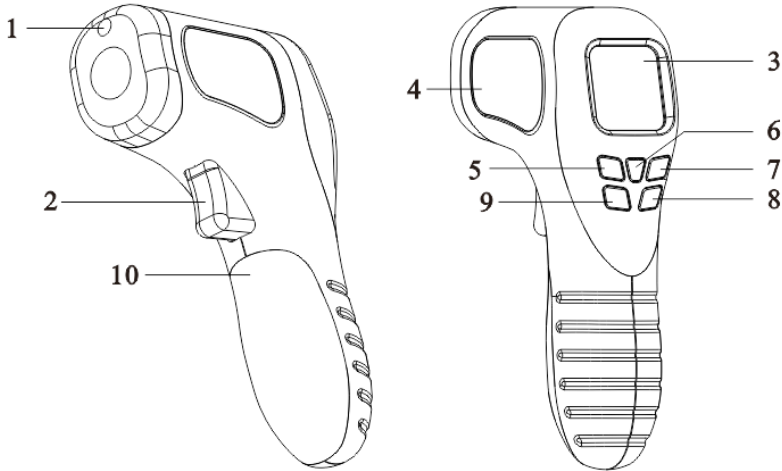
Measurement range	2.5 ... 99,999 rpm (RPM)
Measurement accuracy	$\pm 0.02\% + 1$ digit
Resolution	2.5 ... 999 rpm: 0.1 rpm
	1000 ... 99,999 rpm: 1 rpm
Measuring distance	50 ... 500 mm / 2 ... 19.7 in
Measuring rate	0.5s (over 120 rpm)
Storage	60 individual data storage
Automatic shutdown	After 20 s
Power 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 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.

## 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.





## PCE Instruments contact information

### Germany

PCE Deutschland GmbH  
Im Langel 4  
D-59872 Meschede  
Deutschland  
Tel.: +49 (0) 2903 976 99 0  
Fax: +49 (0) 2903 976 99 29  
info@pce-instruments.com  
www.pce-instruments.com/deutsch

### United Kingdom

PCE Instruments UK Ltd  
Unit 11 Southpoint Business Park  
Ensign Way, Southampton  
Hampshire  
United Kingdom, SO31 4RF  
Tel: +44 (0) 2380 98703 0  
Fax: +44 (0) 2380 98703 9  
info@pce-instruments.co.uk  
www.pce-instruments.com/english

### The Netherlands

PCE Brookhuis B.V.  
Institutenweg 15  
7521 PH Enschede  
Nederland  
Telefoon: +31 (0)53 737 01 92  
info@pcebenelux.nl  
www.pce-instruments.com/dutch

### United States of America

PCE Americas Inc.  
711 Commerce Way suite 8  
Jupiter / Palm Beach  
33458 FL  
USA  
Tel: +1 (561) 320-9162  
Fax: +1 (561) 320-9176  
info@pce-americas.com  
www.pce-instruments.com/us

### France

PCE Instruments France EURL  
23, rue de Strasbourg  
67250 Soultz-Sous-Forets  
France  
Téléphone: +33 (0) 972 3537 17  
Numéro de fax: +33 (0) 972 3537 18  
info@pce-france.fr  
www.pce-instruments.com/french

### Italy

PCE Italia s.r.l.  
Via Pesciatina 878 / B-Interno 6  
55010 Loc. Gragnano  
Capannori (Lucca)  
Italia  
Telefono: +39 0583 975 114  
Fax: +39 0583 974 824  
info@pce-italia.it  
www.pce-instruments.com/italiano

### China

PCE (Beijing) Technology Co., Limited  
1519 Room, 6 Building  
Zhong Ang Times Plaza  
No. 9 Mentougou Road, Tou Gou District  
102300 Beijing, China  
Tel: +86 (10) 8893 9660  
info@pce-instruments.cn  
www.pce-instruments.cn

### Spain

PCE Ibérica S.L.  
Calle Mayor, 53  
02500 Tobarra (Albacete)  
España  
Tel. : +34 967 543 548  
Fax: +34 967 543 542  
info@pce-iberica.es  
www.pce-instruments.com/espanol

### Turkey

PCE Teknik Cihazları Ltd.Şti.  
Halkalı Merkez Mah.  
Pehlivan Sok. No.6/C  
34303 Küçükçekmece - İstanbul  
Türkiye  
Tel: 0212 471 11 47  
Faks: 0212 705 53 93  
info@pce- cihazlari.com.tr  
www.pce-instruments.com/turkish

### Hong Kong

PCE Instruments HK Ltd.  
Unit J, 21/F., COS Centre  
56 Tsun Yip Street  
Kwun Tong  
Kowloon, Hong Kong  
Tel: +852-301-84912  
jyi@pce-instruments.com  
www.pce-instruments.cn