USER MANUAL

NON-CONTACT TACHOMETER

PCE-T 220

ENGLISH



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

INTRODUCTION

Tachometer is one of the necessary instruments for machinery industry, which is used to detect rotate speed, linear velocity or frequency of motor. It can precisely measure rotate speed of impeller blade, expansion cylinder and spindle and can be widely used in motor, fan, washing machine, textile, automobile,airplane, ship and other industries.

Features

1.Hold the maximum value, minimum value, average value and the last measured value.
2.Fully display operation instruction and unit symbol, which is concise and explicit.
3.Wide measuring range and high resolution.
4.Battery low power indication, LCD backlight display, and auto shutdown.
5.Adopt the latest microprocessor technology and laser technology, which enables the instrument to be more intelligent and reliable.
6.Oversized screen LCD display, with clear indication.
7.Solid and delicated structure. The entire machine adopts durable and optimized electronic elements, and the shell adopts light and solid ABS plastic, with beautiful appearance and convenient use.

SAFETY INSTRUCTION

1. Warning:

In order to avoid potential harm to users, please comply with the following instructions:

» Laser product: please do not watch directly, which may cause blindness. Do not let children play with it.

2. Precautions:

In order to ensure measuring precision, please pay attention to the following points:

» The best measuring distance between instrument and measured object is 50-500mm, and the best angle for instrument aiming at measured object is within 30 degrees, which can effectively multiple reflections on surface of the measured object.

» If there is no reflection tag, it is necessary to make sure that reflection point on measured object has sufficient reflection. Under this circumstance, the instrument has to be vertically aligned to the measured object to inspect whether the instrument can read.

» Non-reflection area has to be larger than reflection area.

» Before posting reflection tag, the spindle surface has to be clean and smooth.

» If the instrument has not been used for a long time, please take out the battery to avoid being damaged due to battery decomposition.

OPERATING INSTRUCTIONS

1.Firstly stop the rotating body to be measured, cut down a small section of reflection tag, post that on the rotating body to be measured, and then start the rotation.

2.Press the power to start the machine after putting on battery, and long press the button to start laser measurement. Align to the reflection point during measurement, and measurement signal will appear. After the display value is stable, release the power to stop the measurement.

3.Press MEM to switch among MAX, MIN, LAST and AVG memory value.

4.Press backlight to start the backlight, and press it again to shut down the backlight.

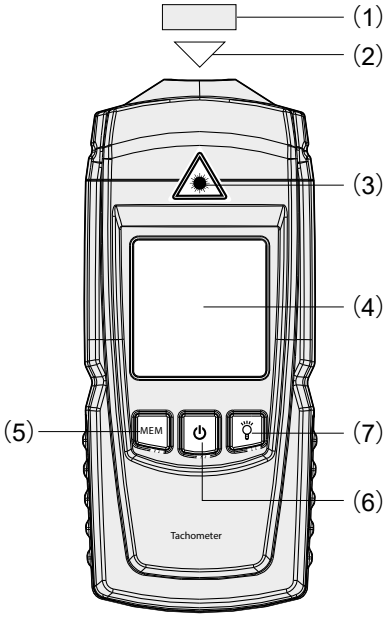
5. Press POWER button to turn off the machine.

BATTERY REPLACEMENT

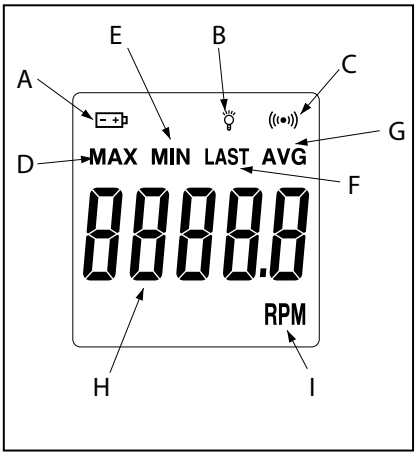
When the power is low, battery symbol will be displayed, andplease replace battery timely.
1. Open up the battery cover and take out the battery.
2. Correctly install the battery as indicated on the battery box.

KEYS AND LCD DISPLAY NAME

1. Key function:
(1) Reflection point
(2) Light path
(3) Triangle laser warning mark
(4) Display
(5) Memory
(6) Power
(7) Backlight



2. LCD display:
A. Low power display
B. Backlight opening
C. Measurement
D. Maximum value
E. Minimum value
F. Last value
G. Average value
H. Rotate speed measurement reading
I. Rotate speed unit: revolution/min



LOW ROTATE SPEED MEASUREMENT

In order to increase measurement precision, when measuring quite low rotate speed, users are recommended to evenly post more reflection tags on the measured objects.
At the same time,the actual rotate speed value can be obtained by dividing the readings on the display by the reflection tag quantity.

MEMORY FUNCTION

After shutting down, the measured maximum value, minimum value, last measured value and average value will be automatically stored in the instrument. After starting up, press MEM only, and the previously measured memory value will be displayed, wherein MAX represents the maximum value, MIN represents the minimum value, LAST represents the last value and AVG represents the average value. It will display another memory value by pressing MEM each time.

TECHNICAL PARAMETER

LCD display	5-digit large screen LCD display, with word height of 18mm
Unit	rpm
Range	2.5 ... 99999 rpm
Resolution ratio	0.1 rpm (2.5 ... 999.9 rpm) / 1 rpm (1000 ... 99999 rpm)
Basic precision	± (0.1%n + 5d) rpm ; (2.5 ... 999.9 rpm) / ± (1%n + 5d) rpm ; (1000 ... 99999 rpm)
Laser power	CLASS IIIA 2 5mW
Sampling ratio	Once/second
Measurement distance	50 ... 500mm
Time base	Quartz crystal
Automatic shutdown	The instrument will shut down after 60 seconds without any pressing.
Operation environment	0 ... 50°C ; 32 ... 122°C ; 10% ... 90% RH
Storage environment	-10 ... 80°C ; -14 ... 176°C ; 10% ... 75% RH
Power supply	2x 1.5 V AAA Battery
Dimension	55. 7* 29. 9* 127mm
Weight	106g

Equipped with 3 bars of silver reflection tag (200mm*12mm)

***Please contact the sales department of our company if you need more reflection tags.**

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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