

## Manual

### Air Speed Meter PCE-VA 10



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## 1 Introduction

Thank you for purchasing a PCE-VA 10 from PCE Instruments.

The PCE-VA 10 is an essential tool for any technician dealing with air conditioners and ventilation systems, but also in fundamental research and development, the air speed meter can be a useful device. This favourably priced anemometer is highly accurate and has several functions which makes it suitable for various applications and competitive on the market. One special feature is the possibility to calculate the mean value of the measured data. The large LC display with backlight makes the data easily readable even under poor lighting conditions. The device can measure the wind speed as well as the air flow rate and air temperature. Since the instrument can determine the air velocity within less than a second, the data stay up to date and the results are always in real time. Its robust vane ensures precise and repeatable measurement results. When you define the area of measurement manually, the meter is also able to calculate the air flow rate in m<sup>3</sup>/min, which enables you to control the capacity of an air conditioner. The device is calibrated and thus immediately ready for operation. Moreover, it is easy to operate and lightweight.

### Delivery content:

1 x PCE-VA 10  
1 x 9 V battery  
1 x instruction manual

### Optional:

tripod

## 2 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. There is no warranty of damages or injuries caused by non-observance of the manual.

- The device may only be used within the approved temperature and humidity range:
  - 10 °C ... 60 °C
  - ≤90 % relative humidity
- The case should only be opened by qualified personnel of PCE Instruments.
- The instrument should only be repaired, serviced and calibrated by trained personnel. The device is calibrated and is recommended to be recalibrated after a year.
- The instrument should never be placed with the user interface facing an object (e. g. keyboard side on a table).
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a dry cloth / use only pH-neutral cleaner, no solvents or abrasives.
- The "CE" safety symbol means that the conditions in line with EMC are fulfilled.

This manual is published by PCE Instruments without any guarantee.

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

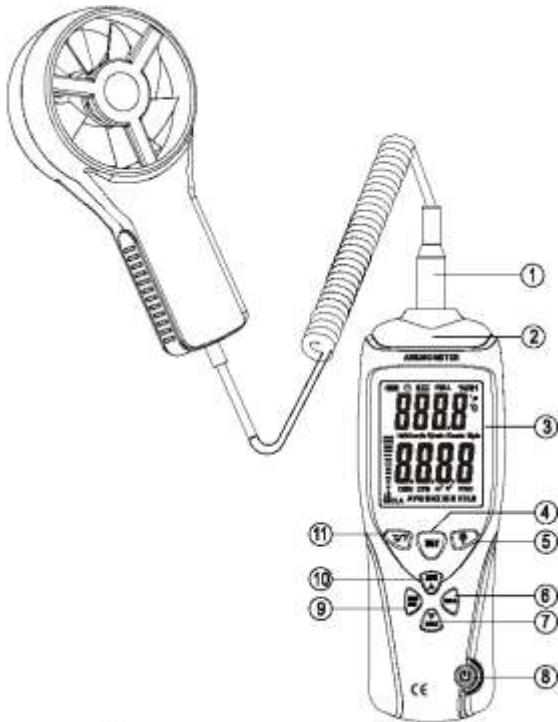
If you have any questions please contact PCE Instruments.

### 3 Specifications

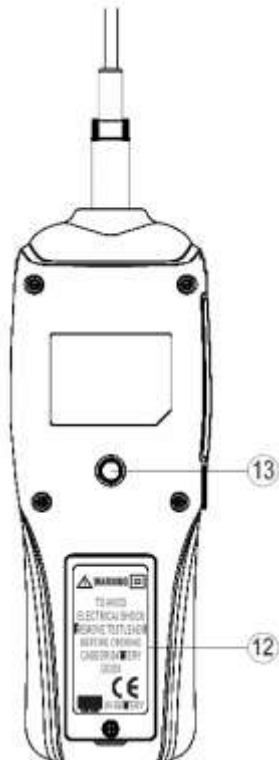
<b>Measurement range</b>	
Flow velocity	0.3 ... 45 m/s
Volume flow	0.001 ... 9999 m <sup>3</sup> /min
Temperature	-30 ... +60 °C / -22 ... +140 °F
<b>Accuracy</b>	
Flow velocity	±3 % + 0.1 m/s
Temperature	±1.5 °C / ±2.7 °F
<b>Resolution</b>	
Flow velocity	m/s: 0.01, km/h: 0.1, ft/min: 1, knots: 0.1 mph: 0.1
Volume flow	cmm: 0.001, cfm: 0.001
Temperature	0.1 °C
<b>General technical data</b>	
Operating / storage temperature	-10 ... +60 °C / -14 ... +140 °F
Max. operating humidity	≤ 90 % RH (non-condensing)
Sampling rate	1 s
Average measurement	every 30 measurement values
Power supply	9 V block battery
Auto Power Off	after 15 minutes
Dimensions	185 x 66 x 33 mm (L x H x W)
Weight	311 g

## 4 System description

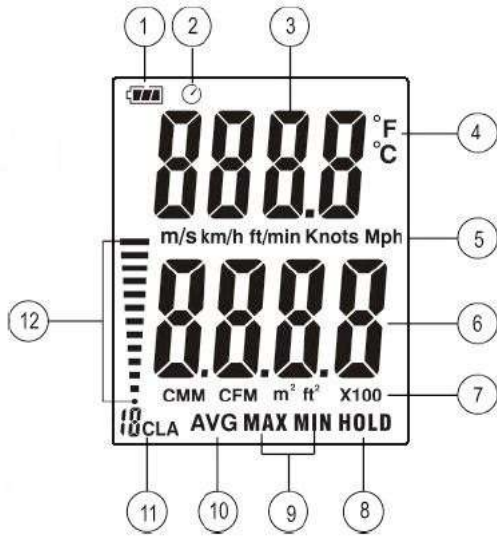
### 4.1 Device



- 1 air velocity sensor
- 2 sensor interface
- 3 LC display
- 4 Set key
- 5 Backlight key
- 6 Hold key
- 7 speed unit selector / down
- 8 On / Off key
- 9 MAX / MIN
- 10 AVG / up
- 11 temperature unit selector
- 12 battery compartment cover
- 13 tripod thread














4.2 LCD

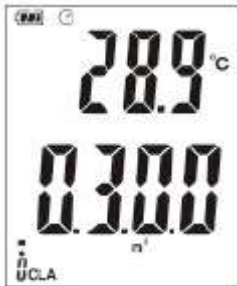


- 1 battery level indication
- 2 Auto Power Off icon
- 3 temperature reading
- 4 temperature units
- 5 air velocity units: m/s, km/h, ft/min, knots (nautical miles per hour), Mph
- 6 air velocity reading
- 7 air flow and area units  
air flow: CMM (cubic metres per minute), CFM (cubic feet per minute), X100 (display data x 100)  
area: m<sup>2</sup>, ft<sup>2</sup>
- 8 HOLD icon
- 9 MAX / MIN icon
- 10 AVG icon
- 11 wind speed scale, level indication
- 12 bar graph, wind speed scale

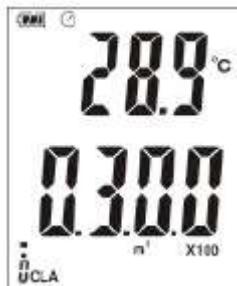
## 5 Instructions

1. Open the battery compartment cover and insert a 9 V block battery.
2. Switch on the anemometer by pressing and holding the  key for a second. Release the key as soon as you can see some digits in the LC display.
3. Switch off the device by pressing and holding the  key for three seconds. You can release the key when the display is switched off.
4. After switching on the device, press the  key to switch the backlight on or off. The backlight will switch off automatically after 30 minutes of inactivity.
5. After selecting the mode of measurement, press the  key to choose the desired unit for determination of the wind velocity.
6. Press the  key once to hold values. The HOLD icon will appear in the LC display, indicating that the values have been held. To exit HOLD mode, press this key again.
7. To read out maximum values, press the  key once until the MAX icon appears in the display. To read out minimum values, press this key again. The MIN icon will appear in the LC display. To disable this function, press the same key again.
8. Press the  key once. The AVG icon will appear in the display. The device will then display the average measurement values of the last 30 seconds.
9. Press the  key to select between °C and °F.

10. To select the area unit, press the  key and switch on the device. Release the  key when the LC display is switched on. The device will now show the following: (**Note:** The unit for the area can be selected by means of the  key.)



Area indicated in square metres



When the area exceeds 9999 square metres, the display will show = display data x 100



Area indicated in square feet



When the area exceeds 9999 square feet, the display will show = display data x 100



## **6 Contact**

If you have any questions about our range of products or measuring instruments please contact PCE Instruments.

### **6.1 PCE Instruments UK**

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