



# User Manual

Anemometer PCE-ADL 11



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.
- Remove the batteries when the device is not used for more than 60 days.
- Switch off the device when it is not in use.

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 Introduction

The anemometer PCE-ADL 11 is a data logger for wind speed. The configuration of the anemometer is done via the supplied software. The wind speed meter measures various parameters. These include m/s, km/h, knots, mph and ft/min. In addition to the measurement parameters, the measurement intervals can be set in the software. The memory has enough capacity for 60,000 measured values. After completion of the measurement series, the data can be read out on the computer via the software. The measurement results are displayed either graphically as a curve or in tabular form.

## 3 Delivery scope

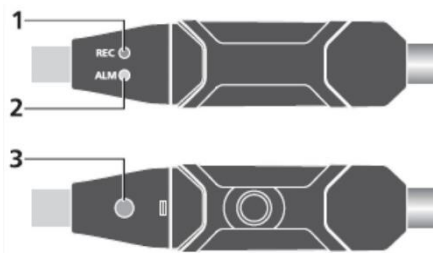
- 1 x anemometer PCE-ADL 11
- 1 x mounting equipment
- 1 x software
- 1 x impeller
- 1 x 3.6 V lithium thionyl chloride battery
- 1 x user manual

## 4 Specifications

Measurement range	1.2 ... 30.0 m/s
	4.3 ... 108.0 km/h
	2.33 ... 58.32 knots
	2.69 ... 67.2 mph
	236 ... 5906 ft/min
Resolution	0.01 m/s
	0.1 km/h
	0.1 knots
	0.1 mph
	1 ft/min
Accuracy	m/s: $\pm(3 \% + 0.20 \text{ m/s})$
	km/h: $\pm(3 \% + 1.0 \text{ km/h})$
	knots: $\pm(3 \% + 0.4 \text{ knots})$
	mph: $\pm(3 \% + 0.4 \text{ mph})$
	ft/min: $\pm(3 \% + 40 \text{ ft/min})$
Memory	for up to 60000 measured values
Data interface	USB for data transfer
PC software	for data evaluation with graphical representation
Selectable recording intervals	3 s, 5 s, 10 s, 30 s, 1 min, 5 min, 10 min, 30 min, 1 h, 2 h, 3 h, 6 h, 12 h
Operating status	indicated by red, yellow and green LED
Alarm when extreme values are exceeded	yes
Measuring modes	automatic and manual start of measurement
Sensor	anemometer
Power supply	lithium thionyl chloride battery, 3.6 V Mignon
Low battery voltage alarm	Yes
Operating conditions	0 ... +50 °C / 32 ... 122°F, <80 % RH
Max. height above sea level	2000 m / 6561 ft
Weight	49 g / <1 lb
Dimensions	145 x 35 x 30 mm / 5.7 x 1.4 x 1.2 in

## 5 Device description










1. LED data recording
2. LED alarm limit / battery status
3. Key to start manual measurement



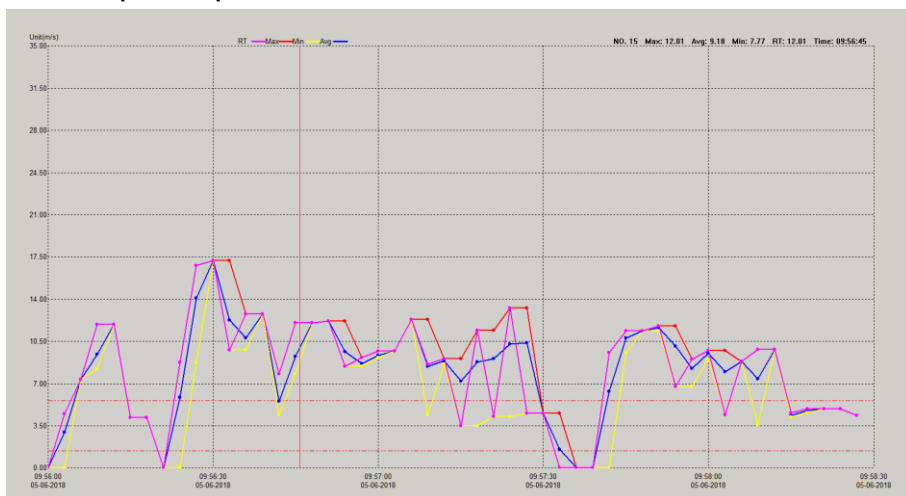
## 6 Software description

To use the PCE-ADL 11, you need the included software. With this software, you can set up the device, download the measured values from the PCE-ADL 11 and evaluate them as you wish in tabular or graphical form.

### 6.1 Icon description

Icon	Description	Explanation
	Download	The measured values from the PCE-ADL 11 can be downloaded here.
	Setting	The PCE-ADL 11 can be configured here.
	Open	Measurement data can be imported from your PC here.
	Save As	The measurement data can be exported here.
	Print	The currently displayed graph can be printed here.
	View all	If you have zoomed into the graph, you can display the whole graph again here.
	Zoom in	Here you can zoom into the graph.
	Move	With this tool the graph can be moved.
	About	Here you can view the software version.

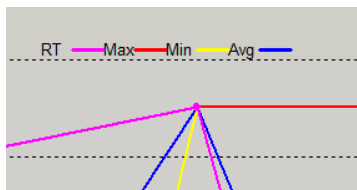
## 6.2 Graph description



On the X-axis you can see the time of measurement. On the Y-axis you can see the measured value.

### 6.2.1 Caption

Abbreviation	Description	Explanation
RT	Realtime	The real measured value in the set storage interval is displayed here
MAX	Maximum value	The highest measured value in the set storage interval is displayed here
MIN	Minimum value	The lowest measured value in the set storage interval is displayed here
AVG	Average	Here the average reading is displayed. The average value refers to all measuring points over the storage interval at a measuring rate of one second, e. g. 10 measured values with a storage rate of 10 seconds



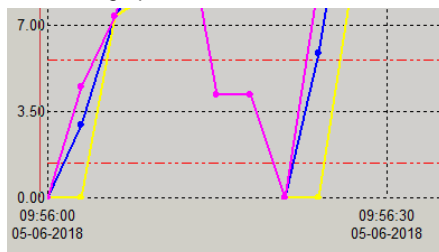
## 6.2.2 Display of the measured values

If you move the mouse over a measuring point, the measured value is displayed directly at the top right of the graph.

**NO. 24 Max: 9.01 Avg: 8.86 Min: 8.58 RT: 9.01 Time: 09:57:12**

## 6.2.3 Alarm limits in the graph

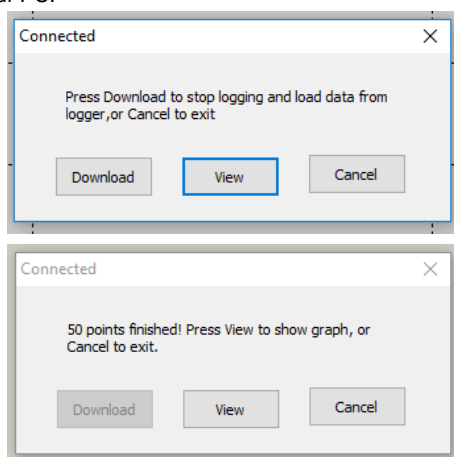
The set alarm limits are shown in the graph as a dashed red line.



## 6.3 Data download

**15** download the data from the PCE-ADL 11, first connect the meter to your PC. Then click on the "Download" icon. Another window appears and the software automatically connects to the meter after a few seconds. Cancel the process with "Cancel".

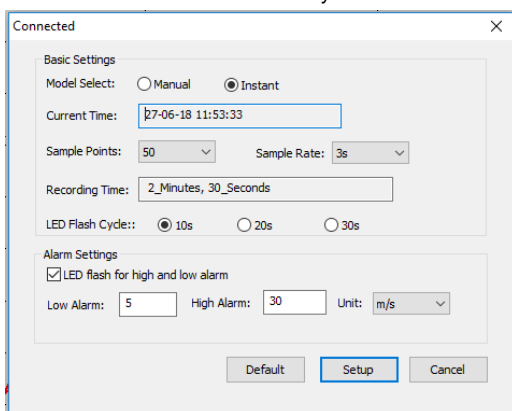
Once the software is connected to the meter, you must click on "Download" to transfer the measurement data to your PC.



Then click on "View" to view the data in graphical form.

## 6.4 Configure meter

To configure the meter, connect the PCE-ADL 11 to the PC. Then click on the "Setting" icon. Another window opens and the software automatically connects to the meter.



Parameter	Meaning
<b>Basic settings</b>	
Model Select	Instant: The meter starts the measurement directly after you confirm the configuration via "Setup". <b>Important:</b> A live view is not possible.  Manual: The meter starts the measurement after you press the start key on the meter.
Current Time	Current time of your PC. This time is also transmitted to the meter.
Sample Point	Number of measuring points to be recorded
Sample Rate	Specification of the storage rate
Recording Time	This indicates how long the meter measures with the settings made until the measurement is finished.
LED Flash Cycle	Here you can specify when the status LED should light up
<b>Alarm settings</b>	
LED flash	Here you can specify whether the alarm LED flashes when the limits are exceeded or not reached.
Low Alarm	Here you can enter the limit value for the lower limit.
High Alarm	Here you can enter the limit value for the upper limit.
Unit	Here you set the unit in which the meter records the data. <b>Important:</b> The unit of the recorded data cannot be changed afterwards.
<b>More buttons</b>	
Default	The configuration is reset here.
Setup	Here the configuration is transferred to the PCE-ADL 11. <b>Attention:</b> The already saved measurement data will be deleted.
Cancel	No data is saved and the window closes.



## 6.5 Zoom into graph

If you have recorded measurements over a long period of time, it can be difficult to analyse the readings accurately. In order to analyse a specific period of time, it is helpful to display this specific range. For this purpose, there is the "Zoom in" function. To use this, click on "Zoom in" and mark the area you want to analyse more precisely. The marked area is enlarged immediately.

### 6.5.1 Move graph

To move the graph now, click on "Move". You can now move the graph within the X- and Y-axes.

### 6.5.2 Normal view

To return from zoom view to normal view, click once on "View all".

## 6.6 Print graph

To print the displayed graph, click on "Print". Now you can print the graph.

**Important:** The current view is always printed. This means that if you have zoomed into the graph, only the zoomed part will be printed.

## 6.7 Export and import data

To export the measurement data, click on "Save As". From here, you can save the measurement data to another storage medium or directly to your PC.

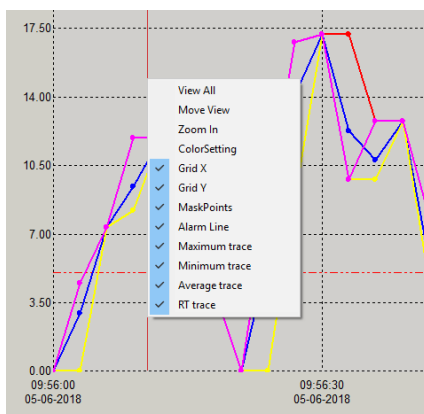
To import the measurement data again, click on "Open". From here, select the measurement data.

## 6.8 Generate CSV file

To generate a CSV file of the measured values, first click on "File". Then click on "Export to Excel". From here, select the storage location.

## 6.9 Further settings for the graphical view

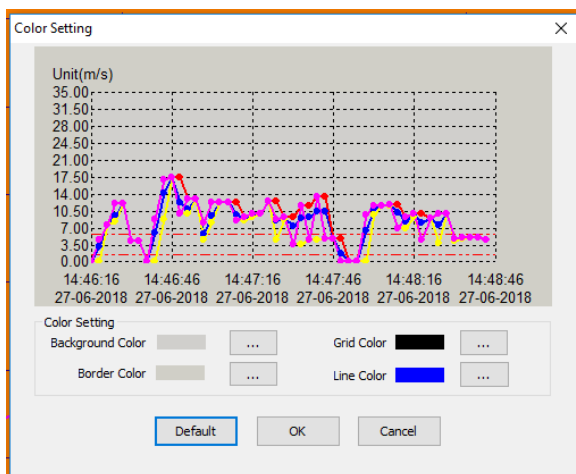
By right-clicking on the graph, you can view further setting options for the graphical view.



Parameter	Meaning
View All	Here you can view the entire graph again
Move View	Here you can move the graph
Zoom in	Here you can zoom into the graph
ColorSetting	Change graph colours
Grid X	Show or hide X-axis lines
Grid Y	Show or hide Y-axis lines
MaskPoints	Show or hide measuring points
Alarm Line	Show or hide alarm line
Maximum trace	Here you can show or hide the line for the highest measured values
Minimum trace	Here you can show or hide the line for the lowest measured values
Average trace	Here you can show or hide the line for the average values
RT trace	Show or hide real-time line

## 6.10 Change graph colours

To change individual graph colours, first right-click on the graph and select "ColorSetting". The following window opens:

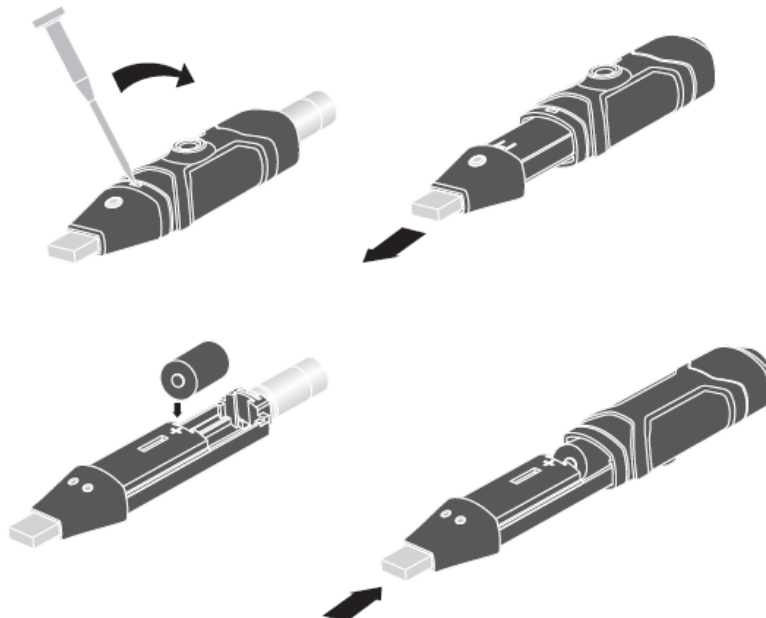


Here you can change individual colours now. The preview shows you every change directly.

Parameter	Meaning
Background Color	Change background colour
Border Colour	Change border colour
Grid Color	Change grid colour
Line Color	Change the colour of the average measurement line
Default	Reset settings
OK	Colours are adopted
Cancel	Discard settings

## 7 Insert/replace battery

When the battery goes flat, you must replace it. The data logger does not lose any saved data when the battery is discharged or replaced. However, the data storage process is stopped and cannot be restarted until the battery has been replaced and the saved data has been downloaded to the PC. Only use 3.6 V lithium batteries.



## 8 LED status display

The PCE-ADL 11 has an LED status display. The following chart explains the meaning of the LED status display.

LEDs	Meaning
No LED flashes	Data recording is not active Battery inserted incorrectly
Green LED flashes every 10, 20 or 30 seconds	Data recording is active No alarm
Green LED flashes twice every 10, 20 or 30 seconds	Meter ready for logging. Press the yellow key on the back.
green LED flashes three times	Data recording started during the manual start-up process
Red LED flashes every 10, 20 or 30 seconds	Data recording active Measured value fallen below
Red LED flashes twice every 10, 20 or 30 seconds	Data recording active Measured value exceeded
Yellow LED flashes twice every 10 seconds	Battery voltage is low
Yellow LED flashes every second or every 5, 10 or 15 seconds	Data recording completed

## 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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