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Manual

Dew point scanner PCE-DPT 1



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1 Introduction

Thank you for purchasing a PCE-DPT 1 dew point scanner from PCE Instruments.

This device can be used anywhere where there is a certain risk of mould formation. This device is basically an infrared thermometer with an integrated humidity meter. The two sensors measure the parameters relevant for the determination of dew points. If the dew point is reached or fallen below, mould formation can occur. When the dew point sensor starts, the room temperature and atmospheric humidity can be measured. The dew point then serves as a reference for infrared measurements at places with a high risk of mould. The energy saving detector then indicates the places with poor insulation possibly causing damp stains and possible mould formation.

Delivery content: 1 x dew point scanner PCE-DPT 1, 1 x case, 1 x 9 V block battery 1 x manual

2 Safety information

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 in approved temperature and humidity ranges as stated in the specifications. Extreme temperatures, direct exposure to sunlight, extreme atmospheric humidity or moisture (e. g. wet hands) must be avoided.
- The case must only be opened by qualified personnel of PCE Instruments.
- The instrument should never be placed with the user interface facing an object (e.g. keyboard side on a table).
- You should 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.
- Only use the device along with PCE accessories or equivalent.
- The appliance must not be used in potentially explosive atmospheres.
- Before any measurement, check the device by measuring a known factor.
- The measurand set points laid down in the specifications may under no circumstances be exceeded.
- Never target at people / people's eyes.
- The laser pointer must not be targeted in the direction of explosive gases.
- Always check whether the correct measurement range has been set before you start the measurement.
- The device is for indoor use.

This manual is published by PCE Instruments without any guarantee.

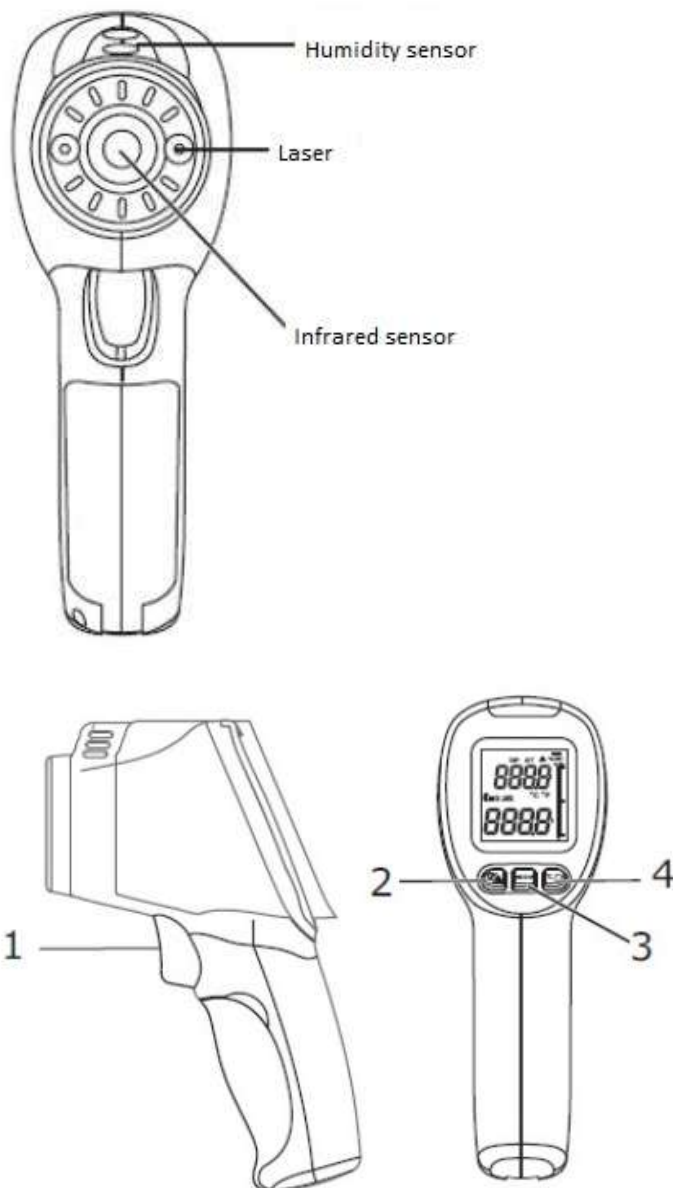
We expressly refer to our general guarantee terms, they can be found in our general terms of business.

If you have any questions please contact PCE Instruments.

3 Specifications

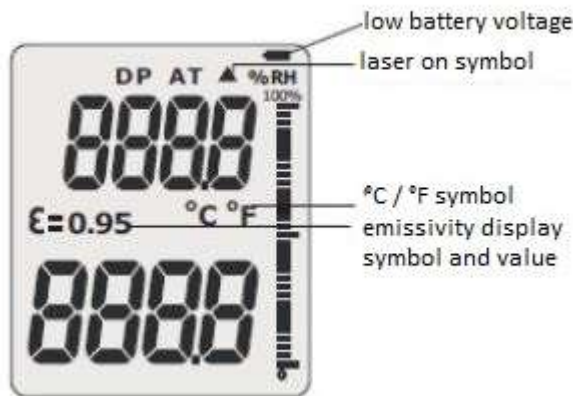
Temperature range	-50 ... 350 °C / -58 ... 662 °F
Resolution	0.1
Emissivity	fixed at 0.95
Temperature accuracy	±3.5 °C @ -50 ... 20 °C / -58 ... 32 °F 1% ±1.5 °C @ 20 ... 350 °C / 32 ... 662 °F
Wavelength range	8 ... 14 μm
Humidity range	0 ... 100 % RH
Humidity accuracy	±3.5 % (20 % ... 80 %)
Dew point temperature	(-30 ... 100) °C / (-22 ... 212) °F
D:S	12:1

4 Device description



- (1) Function trigger
- (2) Key for backlight / laser
- (3) MODE key
- (4) °C / °F key

5 Instructions



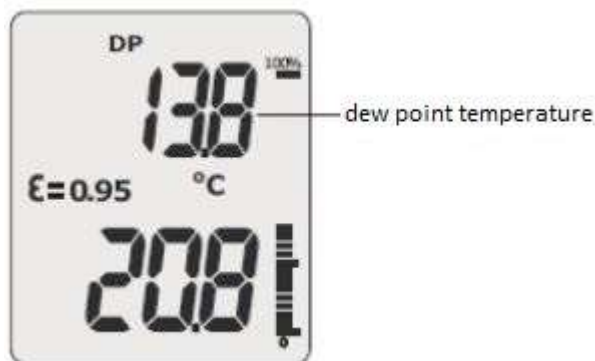
DP = dew point

The dew point or dew point temperature is defined as the temperature at which condensing and evaporating water on an object (when there is humidity) are at equilibrium or, in other words, at which condensation starts.

AT = ambient temperature

The device measures the ambient temperature in your environment and indicates it on the display.

After you switch on the device, ambient temperature, humidity and dew point temperature are measured and indicated on the display. Press the MODE key to switch between temperature, humidity and dew point temperature.



Target at the spot you wish to measure. Remove the detector slowly to determine the temperature of the object to be measured. If the measured temperature is between the ambient temperature and the dew point temperature, the meter will show the simulated D value with the ambient temperature.

The meter can detect mould if the measured temperature value is in the first third of the range between ambient temperature and dew point temperature. The green LED indicates that temperature and humidity are within the normal range.

If the measured temperature value is in the second third of the range between ambient temperature and dew point temperature, the yellow LED indicates that mould may form at this spot.

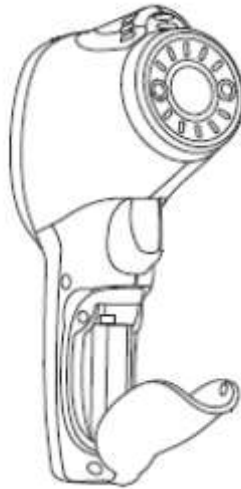
If the measured temperature value is above the second third of the range between ambient temperature and dew point temperature, the red LED indicates that mould has already formed at this spot.

For example:

When the device has just been switched on, the measured ambient temperature is 25 °C, relative humidity is 50 % and the dew point temperature is 13.8 °C	
green LED	measured temperature is between 25 °C ... -21.2 °C
yellow LED	measured temperature is between 21.3 °C ... -17.4 °C
red LED	measured temperature is between 25 °C ... -13.8 °C

6 Maintenance

Battery replacement: When the battery symbol flashes on the display, you should replace the battery. To do so, open the battery compartment cover and replace the battery by a new 9 V battery.

**7 Disposal**

For the disposal of batteries, 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.

If you have any questions, please contact PCE Instruments.



All products are CE and RoHs approved.

8 Contact

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

8.1 PCE Instruments UK

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You can find an overview of our measuring instruments here: <http://www.industrial-needs.com/measuring-instruments.htm>

You can find an overview of our scales here <http://www.industrial-needs.com/balances.htm>