



PCE Instruments PCE-THB 38 Air Humidity Meter User Manual

[Home](#) » [PCE Instruments](#) » PCE Instruments PCE-THB 38 Air Humidity Meter User Manual 

Contents

- 1 PCE Instruments PCE-THB 38 Air Humidity Meter
- 2 Product Information
- 3 Product Usage Instructions
- 4 FEATURES
- 5 SPECIFICATIONS
- 6 FRONT PANEL DESCRIPTION
- 7 MEASURING PROCEDURE
- 8 BATTERY REPLACEMENT
- 9 OPTIONAL CARRYING CASE
- 10 Documents / Resources
 - 10.1 References
- 11 Related Posts



PCE Instruments PCE-THB 38 Air Humidity Meter



Product Information

The PCE-THB 38 is a manual air humidity meter manufactured by PCE Instruments. The device is designed to measure relative humidity, temperature, and atmospheric pressure. The device comes with a large, easy-to-read LCD display and is equipped with a data hold function, as well as a MAX/MIN function. The device is powered by two 1.5V AAA batteries.

Product Usage Instructions

1. Remove the device from its packaging.
2. Insert two 1.5V AAA batteries into the battery compartment.
3. Press the power button to turn on the device.
4. Select the measurement unit for temperature and atmospheric pressure using the UNIT button.
5. Hold the device in the desired location and wait for the readings to stabilize.
6. Read the temperature, relative humidity, and atmospheric pressure values from the device's LCD display.
7. To freeze the current readings, press the HOLD button.
8. To view the maximum and minimum values recorded since turning on the device, press the MAX/MIN button.
9. To turn off the device, press and hold the power button until the display turns off.

Note: Keep the device away from direct sunlight, water, and extreme temperatures. Clean the device with a soft

cloth and avoid using chemicals or solvents that may damage the device.

FEATURES

- Barometer, Humidity, Temperature meter, three in one, professional.
- Barometer unit : hPa, mmHg, inHg.
- Humidity with Dew point measurement
- Temperature measurement with °C, °F unit.
- Fast response time for humidity measurement.
- Barometer measurement with high accuracy.
- Two displays can select the four modes (functions) :
 - Humidity/Temp., Humidity/Dew point, Barometer/Temp., Barometer/Humidity.
- Bright LCD display.
- Microprocessor circuit ensures high accuracy and provides special functions and features.
- Records Maximum and Minimum readings with recall.
- Auto power off saves battery life.
- Operates from DC 1.5V (UM4/AAA) x 4 PCs batteries.
- Durable, long-lasting components, enclosed in strong, compact ABS-plastic housing

SPECIFICATIONS

General Specification

Display	LCD size : 28 mm x 19 mm.	
Temp. unit	°C, °F	
Barometer unit	hPa, mmHg, inHg.	
Humidity unit	%RH	
Dew point	°C, °F	
Circuit	Custom one-chip of microprocessor LSI circuit.	
Sensor Structure	Barometer	Semiconductor
	Humidity	Capacitance humidity sensor, semiconductor
	Temperature	Semiconductor
Data Hold	Freeze the display reading.	
Memory Recall	Maximum & Minimum value.	
Sampling Time	Approx. 1 second.	
Power off	Auto shut off saves battery life or manual off (REC function).	
Operating Temperature	0 to 50 °C.	
Operating Humidity	Less than 80% R.H.	

Power Supply	DC 1.5 V battery (UM4/AAA) x 4 PCs,
Power Current	Approx. DC 3.0 mA
Weight	157 g/ 0.35 LB. @ Battery is included.
Dimension	210 x 40 x 40 mm (8.3" x 1.6" x 1.6")
Accessories Included	Instruction manual.....1 PC
Optional Accessory	Soft carrying case with sash (210 x 80 x 50 mm), Model : CA-52A

Electrical Specifications

Humidity/ Dew point

- Humidity

Range	10 % to 95 % R.H.
Resolution	0.1 % R.H.
Accuracy	:70% RH
	± (3% reading+ 1% RH).
	< 70% RH – 3% RH.
	± 3% RH.

- Dew Point

		Range	0.01 F.
		Resolution	
‘	.j”	Range	
		Resolution	

Remark:

:J. Dew Point display value is calculated from the

Humidity/Temp. measurement automatically.

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Humidi & Tem erature measuren1ent..

Barometer

Measurement	Range	Resolution	Accuracy
hPa	10.0 to 999.9	0.1	± 1.5 hPa
	1000 to 1100	1	± 2 hPa
mmHg	7.5 to 825.0	0.1	± 1.2 mmHg
inHg.	0.29 to 32.48	0.01	± 0.05 inHg

Temperature

Measuring Range	0 °C to 50 °C/32 °F to 122 °F
Resolution	0.1 °C/0.1 °F
Accuracy	± 0.8 °C/1.5 °F

Above specification tests under the environment RF Field Strength less than 3 V/M & frequency less than 10 MHz only.

FRONT PANEL DESCRIPTION

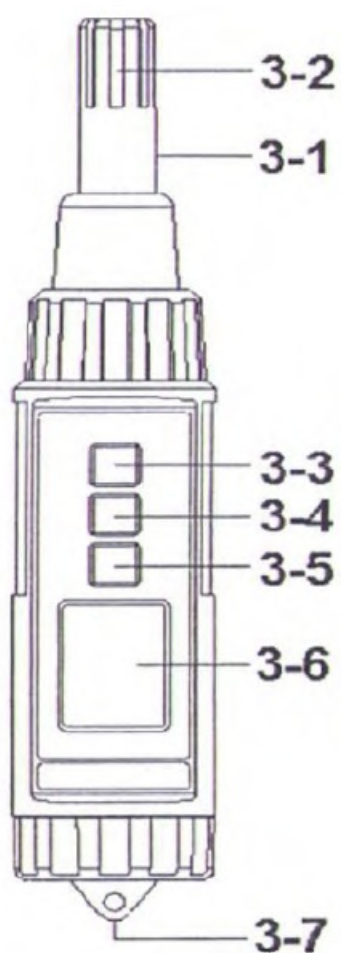


Fig. 1

1. Probe head
2. Humidity/Temp. Sensor
3. Power Button
4. Hold Button, Unit Button
5. REC Button, Mode Button

6. LCD Display
7. Battery Compartment/ Cover

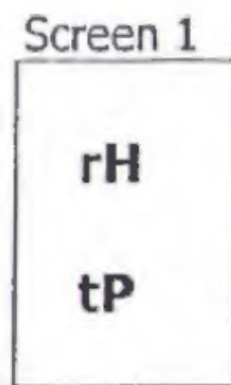
MEASURING PROCEDURE

Mode {Function} selection

1. Turn on the meter by pressing the " Power Button 11 (3-3, Fig. 1) momentarily.
Pressing the "Power Button " (3-31 Rg. 1) momentarily again will turn off the meter.
2. The meter can select 4 kinds of modes (functions):
 - Humidity /Temp.
 - Humidity/Dew point
 - Barometer /Temp.
 - Barometer/ Humidity

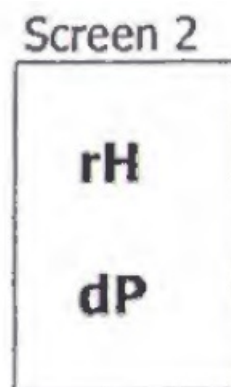
Pressing the " Mode Button " (3-5, Fig. 1) continuously (not releasing the button), the Display will show the following 4 kinds of screens in sequence :

Humidity /Temp. measurement



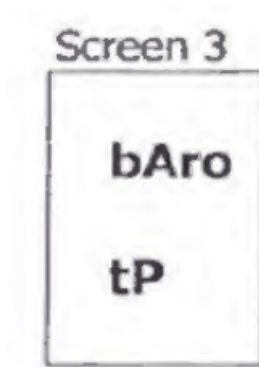
- The upper Display shows the Humidity value
- Lower Display show Temp. value

Humidity/ Dew point measurement



- The upper Display shows the Humidity value
- Lower Display shows Dew point Temp. value

Barometer /Temp. measurement



- The upper Display show the Barometer value
- Lower Display show Temp. value

Barometer/Humidity measurement



- Upper Display show Barometer value
- Lower Display show Humidity value

Until the Display show the desired model (Function), just release the " Mode Button " (3-5, Fig. 1), the meter will execute this function with default.

Unit selection

1. The Unit selection only available for the upper Display Barometer mode.
2. Turn on the meter by pressing the II Power Button 11 (3-3, Fig. 1) momentarily.
3. Under the Barometer mode, pressing the " Unit Button 11 (3-4, Fig. 1) continuously (not release the button), the upper Display will show the following indicator in sequence:

hPa, mmHg, inHg.

Until the Display shows the desired unit, just release the II Unit Button " (3-4, Fig. 1), the meter will execute this measuring unit with default.

Temp. Unit { 'C, "F} selection

1. Power off the meter.
2. Use one finger to press (not release) the " Hold Button " (3-4, Fig. 1), turn on the meter by pressing the "

Power Button " (3-3, Fig. 1) momentarily, until the temperature unit (0c, °F) of Display is lit, then release the
II Hold Button II will change the Temp. unit from °C to °F or °F to °C with default.

Humidity measurement

1. Turn on the meter by pressing the II Power Button " (3-3, Fig. 1) momentarily.
2. For the above 4-1 mode (function) selection, please set to :
 1. **Humidity /Temp.**
(Upper display show humidity value , lower display show Temp. value)
 2. **Barometer/Humidity**
(Upper display show Barometer value , lower display show humidity value)

Barometer measurement

1. Turn on the meter by pressing the II Power Button" (3-3, Fig. 1) momentarily.
2. For the above 4-1 mode (function) selection, please set to :
 1. **Barometer /Temp.**
(Upper display show Barometer value , lower display show Temp. value)
 2. **Barometer/ Humidity**
(Upper display show Barometer value , lower display show humidity value)

Dew point measurement

1. Turn on the meter by pressing the II Power Button 11 (3-3, Fig. 1) momentarily.
2. For the above 4-1 mode (function) selection, please set to :
 1. **Humidity/ Dew point**
(Upper display show humidity value, tower display show dew point value)

Data Hold

- During the measurement, press the " Hold Button " (3-4, Fig. 1) momentarily to hold the measured value. The LCD will show a II HOLD" symbol.
- Press the11 Hold Button " once again to release the data hold function.

Data Record { Max., Min. reading}

1. The data record function records the maximum and minimum readings. Press the II REC Button " (3-5, Fig. 1) momentarily to start the Data Record function, shows II REC " on the display.
2. With the II REC II symbol on the display.
 1. Press the II REC Button " (3-5, Fig. 1) momentarily, the " REC MAX 11 symbol along with the maximum value will appear on the display.
 2. Press the" REC Button 11 (3-5, Fig. 1) momentarily again, the II REC MIN II symbol along with the minimum value will appear on the display
When the display shows "REC MAX II or "REC MIN " ; press the" Hold Button " (3-4, Ag. 1) momentarily

will delete the max. (min.) value/ the display will show the “REC “only and execute the memory function continuously.

3. To exit the memory record function, press the ” REC ” button for 2 seconds at least. The display will revert to the current reading, not show ” REC “

Auto power off management

1. The instrument has a built-in “Auto Power Shut-off” function in order to prolong battery life. The meter will switch off automatically if none of the buttons are pressed within 10 min ..
2. To deactivate this feature, Select the memory record function during measurement, by pressing the ” REC Button ” (3-5, Fig. 1).

BATTERY REPLACEMENT

- Replace the batteries when of the LCD displays the low battery icon ” “, using 4 fresh 1.5 V (UM4, AAA) batteries.
- To change the batteries, open (rotate clockwise direction) the ” Battery Cover ” (3-7, Fig. 1) .
- Make sure the II Battery cover” (3-7, Flg 1) is secured after changing the batteries.

OPTIONAL CARRYING CASE



- Soft carrying case with sash.
- **Size** : 210 x 80 x 50 mm
- **Model** : CA-52

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Documents / Resources

	PCE Instruments PCE-THB 38 Air Humidity Meter [pdf] User Manual PCE-THB 38, PCE-THB 38 Air Humidity Meter, Air Humidity Meter, Humidity Meter
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References

-  [Computer Instruments | Home](#)
-  [Industrial Measurement Products and Solutions | PCE Instruments](#)
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