% RH

44.77

16.57 °C

MAX
MIN

°F-°C-WBT
Dew Point

TROTEC

BC21

EN

OPERATING MANUAL
HUMIDITY / AIR
TEMPERATURE
MEASURING INSTRUMENT

TROTEC

AT WORK.

TROTEC

Table of contents

Notes regarding the operating manual

Symbols

⚠ **Danger!**
Warns of a hazard which can lead to injuries.

⚠ **Caution!**
Warns of a hazard which can lead to damage to property.

The current version of the operating manual can be found at:
www.trotec.de

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Changes to construction in the interests of constant improvements to the product, as well as changes to the shape and colour are reserved.

The scope of delivery may vary from product images. This document was created with all due care. TROTEC® accepts no liability whatsoever for possible mistakes or omissions.

The only party responsible for determining measured results to be valid, drawing conclusions and deriving actions is the user! TROTEC® accepts no claims of warranty for the correctness of the determined measured values or measured results. Further, TROTEC® accepts no liability whatsoever for possible mistakes or damage which have been caused by utilising the determined measured results. © TROTEC®

Information about the device

### Description of the device

By use of the humidity / air temperature measuring instrument the temperature and humidity indoors can be determined.

Further available for the assessment of the measurements is a MAX /MIN function (minimum and maximum value). The display illumination can be switched on as needed.

Device depiction
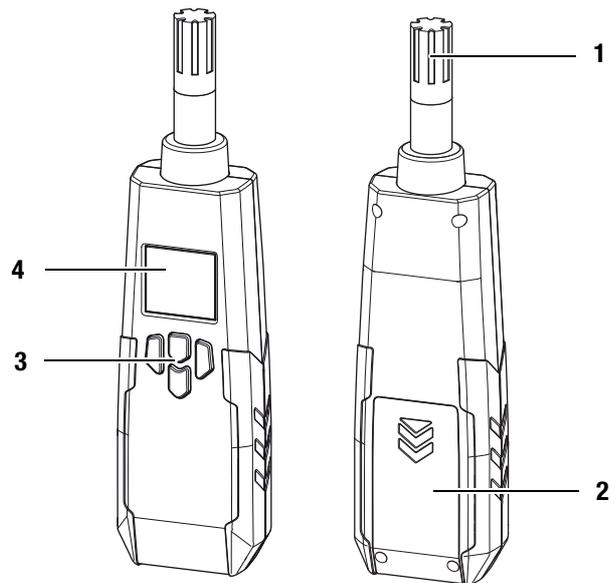
No.	Operating element
1	Measuring sensor
2	Battery compartment with cover
3	Operating elements
4	Display

Operating elements
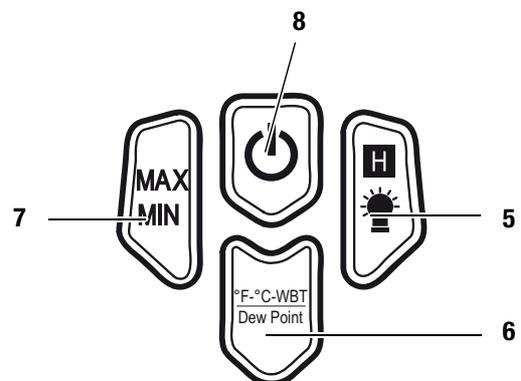
No.	Operating element
5	HOLD/lamp button
6	Dew Point button
7	Max/Min button
8	On/Off key

Display
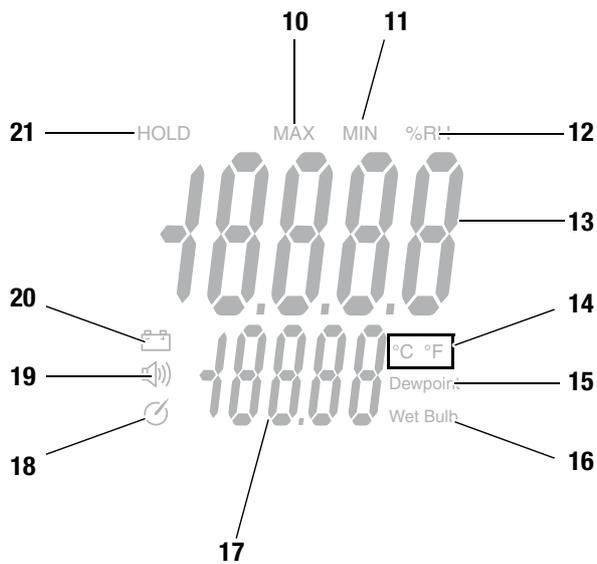
No.	Display element
10	MAX indication
11	MIN indication
12	% RH indication
13	Measurement value display
14	Indication of the temperature unit
15	Dew point indication
16	Wet bulb indication
17	Measurement value display bottom
18	Indication for automatic switch-off
19	Alarm indication
20	Battery indication
21	HOLD indication

Technical data

Model:	BC21
Weight:	210 g
Dimensions (H x W x D):	230 mm x 55 mm x 32 mm
Temperature	
Measuring range:	-30 to 100 °C (-22 to 199 °F)
Accuracy:	± 1 °C (± 1.5 °F)
Measuring range resolution:	0.1 °C (0.1 °F)
Dew point temperature	
Measuring range:	-30 to 100 °C (-22 to 199 °F)
Accuracy:	± 1 °C (± 1.5 °F)
Measuring range resolution:	0.1 °C (0.1 °F)
Wet-bulb temperature	
Measuring range:	-30 to 100 °C (-22 to 199 °F)
Accuracy:	± 1 °C (± 1.5 °F)
Measuring range resolution:	0.1 °C (0.1 °F)
Humidity	
Measuring range:	0 to 100 % RH (specified 5 to 95 %)
Accuracy:	±2 % RH (at 25 °C and 5 - 95 % RH)
Measuring range resolution:	0.1 % RH
Measuring rate:	2.5 measurements per second
Reaction time:	10 seconds (90 % RH / 25 °C calm)
Operating temperature:	0 to 50 °C with < 80 % RH, non-condensing
Storage temperature:	-10 to 60 °C with < 80 % RH, non-condensing
Power supply:	1 x Alkaline 9 V battery
Automatic switch-off of the device:	After approx. 15 minutes of non-use

Scope of delivery

- 1 x Humidity / Air Temperature Measuring Instrument BC21
- 1 x Alkaline 9 V battery
- 1 x Getting started guide

Safety

Carefully read the operating manual before using the device and keep it within reach!

- Do not use the device in atmospheres containing oil, sulphur, chlorine or salt.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Observe the storage and operating conditions (see chapter Technical data).

Intended use

Only use the device for indoor temperature and humidity measurements within the measuring range specified in the technical data.

To use the device for its intended use, only use accessories and spare parts which have been approved by TROTEC®.

Improper use

Do not use the device in potentially explosive atmospheres, for measurements in liquids and at live parts. TROTEC® accepts no liability for damages resulting from improper use. In such a case, entitlements to a warranty are forfeited. Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Personnel qualifications

People who use this device must:
- have read and understood the operating manual, especially the Safety chapter.

Residual risks

⚠ **Danger!**
Ensure sufficient ear protection when there are sources of loud sound. There is a danger of hearing damage.

⚠ **Danger!**
Do not leave the packaging lying around. Children may use it as a dangerous toy.

⚠ **Danger!**
The device is not a toy and does not belong in the hands of children.

⚠ **Danger!**
Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way. Observe the personnel qualifications.

⚠ **Caution!**
To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

⚠ **Caution!**
Do not use abrasive cleaners or solvents to clean the device.

Transport and storage

Transport

For transporting the device use a suitable bag to protect it from external influences.

Storage

When the device is not being used, observe the following storage conditions:
- dry,
- protected from dust and direct sunlight,
- with a plastic cover to protect it from invasive dust, if necessary.
- The storage temperature is the same as the range given in the chapter Technical data.
- When storing the device for a long time, remove the batteries.

Operation

Inserting the battery

⚠️ **Caution!**
Make certain that the surface of the device is dry and the device is switched off.
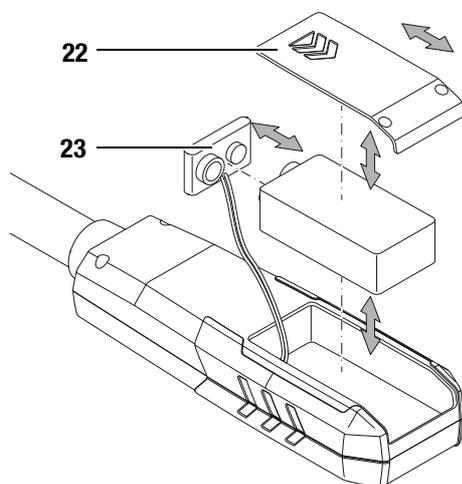
1. Remove the cover (22) from the device by sliding it in the direction of the arrow.
2. Use the battery clip (23) to connect the new battery with correct polarity.
3. Slide the cover (22) back on the device.

Switch-on and measurements

1. Press the on/off key (8).
   – The display is switched on and the device is ready for operation.
2. Point the device at the area to be measured.
   – The measured values will be displayed.

Note:

Note that moving from a cold area to a warm area can lead to condensation forming on the device's circuit board. This physical and unavoidable effect can falsify the measurement. In this case, the colour display shows either no measured values or they are incorrect. Wait a few minutes until the device has become adjusted to the changed conditions before carrying out a measurement.

Switching the display illumination on and off

1. Press the HOLD/lamp button (5) for approx. 3 seconds.
   – The display illumination goes on.
2. Press the HOLD/lamp button (5) again for approx. 3 seconds.
   – The display illumination switches off.

Setting the MAX/MIN function

1. Press the MAX/MIN button (7).
   – MAX (10) appears on the display.
   – The maximum value of the current measurement interval is displayed.
2. Press the MAX/MIN button (7) again.
   – MIN (11) appears on the display.
   – The minimum value of the current measurement interval is displayed.
3. Press the MAX/MIN button (7) for approx. 2 seconds to terminate the function.
   – The measurement interval is reset.
   – The current measured value is indicated.

Setting the HOLD function

1. Press the HOLD/lamp button (5).
   – The current value will be held.
2. Press the HOLD/lamp button (5) again.
   – The display again indicates the current measured value.

Setting of the measuring functions

Here the unit for the lower measurement value display (17) can be set.

1. Press the Dew Point button (6).
   – The displayed unit (14, 15, 16) changes.
   – Possible display values are:

Unit	Description
°C	Temperature indication in degrees Celsius
°F	Temperature indication in degrees Fahrenheit
Wet Bulb	Indication of the wet-bulb temperature
Dew Point	Indication of the dew point temperature

Switch-off

The device switches off when not in use for 15 minutes.

1. Press the On/Off key (8).
   – The device will be switched off.

Maintenance and repair

Battery change

A battery change is required, when the Battery indication (20) lights up in the display or the device can no longer be switched on. See Inserting the battery on page 4.

Cleaning

Clean the device with a soft, damp and lint-free cloth. Ensure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners. Only use clean water to moisten the cloth.

Repair

Do not modify the device. Never open the device housing or install any spare parts. For repairs or device testing, contact the manufacturer.

Disposal

In the European Union, electronic equipment must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2002/96/EC of the European Parliament and Council of 27th January 2003 concerning old electrical and electronic equipment. At the end of its life, please dispose of this instrument in a manner appropriate to the relevant legal requirements.

Declaration of conformity

in accordance with the EC Low Voltage Directive 2006/95/EC and the EC Directive 2004/108/EC about electromagnetic compatibility.

Herewith, we declare that the humidity / air temperature measuring instrument BC21 was developed, constructed and produced in compliance with the named EC directives.

The $C \epsilon$ marking is found on the rear of the device.

Manufacturer:
Trotec GmbH & Co. KG
Grebbener Straße 7
D-52525 Heinsberg

Phone: +49 2452 962-400
Fax: +49 2452 962-200
E-mail: info@trotec.com

Heinsberg, 31/03/2014

Managing Director: Detlef von der Lieck