



B+B

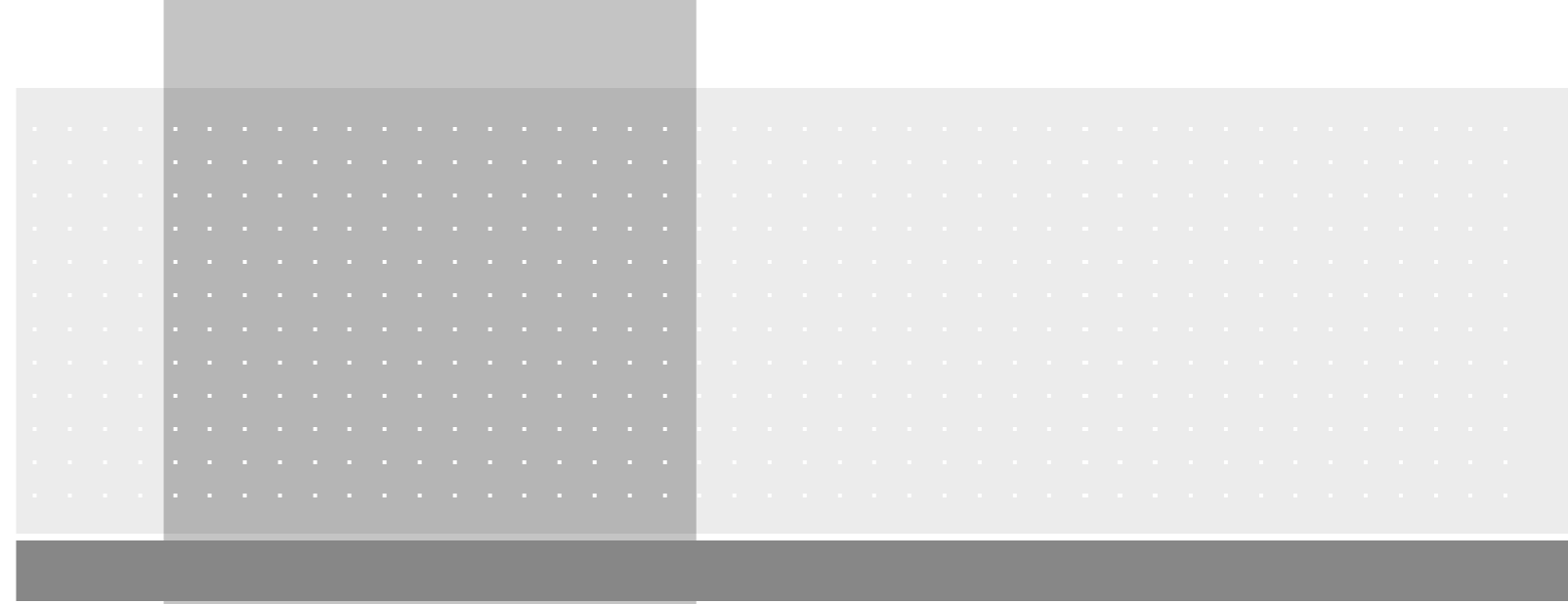
PRODUCTS FOR THE BUILDING AUTOMATION

SENSORS

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TEMPERATURE | HUMIDITY | PRESSURE
WE PROVIDE EVERYTHING FOR YOUR
BUILDING AUTOMATION RANGE!

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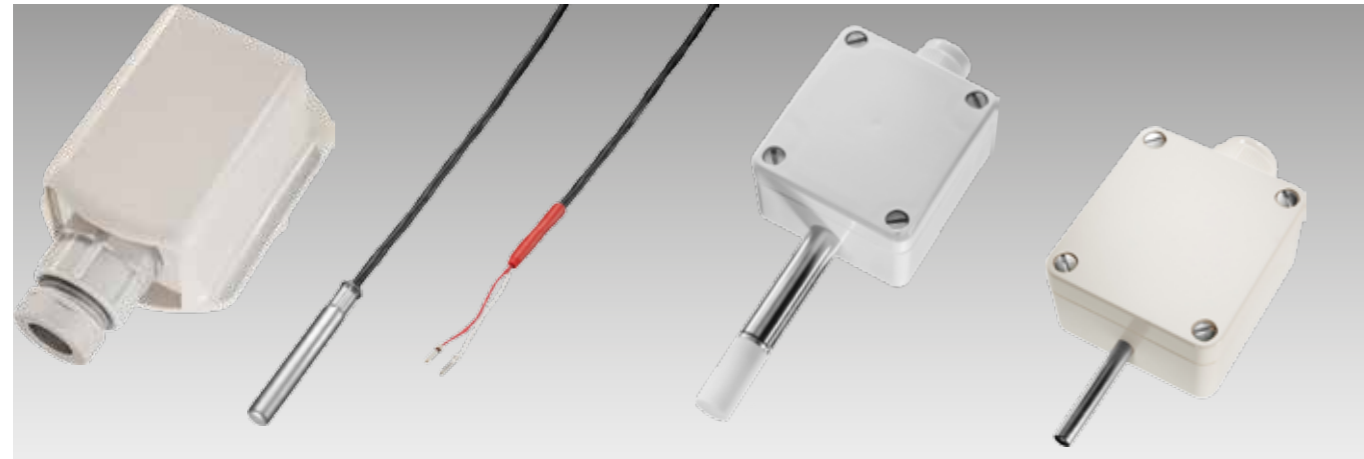
B+B Thermo-Technik GmbH offers you the solution for your temperature, humidity or pressure measurement!

B+B is located in Donaueschingen a city in the southwest of Germany. From there the quality products are sold worldwide.

A clear proof of our Quality Management Policy which you can trust is our Quality Management System according to DIN EN ISO 9001:2008 and DIN EN ISO 13485:2012

Take advantage of B+B Thermo-Technik GmbH's long-term experience in the temperature- and humidity measurement.

In this brochure we put together our standard products which are used in the building automation for you.



Outdoor probes

The term building automation is not only restricted to the interior of buildings but also includes measuring applications around buildings.

Temperature and humidity have to be collected and the values have to be processed outdoors as well as indoors. The robust and resistant products for the outdoor area from B+B Thermo-Technik deliver precise measurement results for the building automation in all kinds of weather.



Outdoor probe Pt100

Description



Technical data

Measuring range	-50...+90 °C
Sensor	Pt100, 2-wire
Accuracy	Class F 0,3 (K1.B) DIN EN 60751 compliant
Housing	Plastics, white
Dimensions	(LxWxH) 64x34x30,5 mm
Connection	Cable connection PG9
Protection category	IP54
Scope of delivery	Screw Pan-Head 3,5x35-A2 and dowel-S 5x25-PA
Environmental data	RoHS 2002/95/EG compliant
Others	Also available with other sensors, e.g. Pt1000, NTC 5 kΩ und KTY81-210

Article

Art.-no.

Outdoor probe Pt100	0627 0900
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Features:

- UV-resistant plastic housing
- Protection class IP54
- Cable gland for connection cable from Ø4,5...Ø7,0 mm
- Also available in following variants:
Pt1000, NTC 5kΩ und KTY81-210

Areas of application:

- Building automation
- Heating/cooling/air-conditioning technology

Dimensions



Humidity and temperature probe for the outdoor area

Description



Technical data

Measuring range humidity	0...100% RH
Sensor	Capacitive humidity sensor
Accuracy	±2% RH
Output scale	0...100% RH as 0...10 V
Measuring range temperature	-30...+70 °C
Sensor	Pt1000
Accuracy	Class F 0,3 (K1.B) DIN EN 60751 compliant
Output scale	-30...+70 °C as 0...10 V
Response time T90	25 s with protection filter
Tube length	45 mm
Tube diameter	12 mm
Tube material	Stainless steel
Protection filter	PE-sintered filter 25 µm, Ø12x30 mm
Housing	Plastic Polyamid, UV-resistant
Dimensions	(LxWxH) 59x65x38 mm
Connection	Screw terminals 0,75 mm ²
Operating voltage	12...24 V DC

Article

Art.-no.

Humidity and temperature probe for the outdoor area	FF-GLT-10V-AF-TE1
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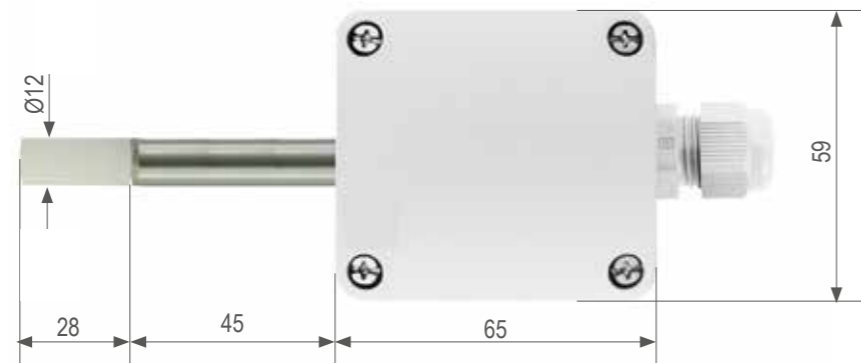
Features:

- Standard output signal 0...10 V
- 3-point calibrated and linearized
- Humidity measuring linearized and temperature compensated
- Probe in stainless steel housing
- Probe head with PE-sintered filter
- High-quality housing made of plastic (IP65)

Areas of application:

- Building automation
- Industrial measuring and control technology
- Climate recording
- Drying technology

Dimensions



Temperature probe for the outdoor area

Description



Technical data

Measuring range	-30...+70 °C
Sensor	Pt1000
Accuracy	Class F 0,3 (K1.B) DIN EN 60751 compliant
Output scale	-30...+70 °C as 0...10 V
Tube length	35 mm
Tube diameter	3 mm
Tube material	Stainless steel
Housing	Plastic Polyamid, UV-resistant
Dimensions	(LxWxH) 59x65x38 mm
Connection	Screw terminals 0,75 mm ²
Operating voltage	12...24 V DC
Overvoltage protection	Varistor and RC-filter

Article

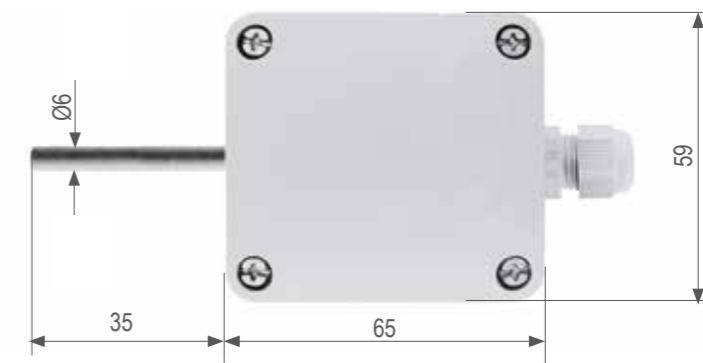
Art.-no.

Temperature probe for the outdoor area	TF-AF
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Features:

- Standard output signal 0...10 V
- 3-point calibrated and linearized
- Probe in stainless steel housing
- High-quality housing made of plastic (IP65)

Dimensions



Collector probe

Pt1000/2

Description



Technical data

Measuring range temperature	-50...+300 °C
Sensor	Pt1000, 2-wire
Accuracy	Class F 0,3 (K1.B) DIN EN 60751 compliant
Tube length	40 mm
Tube diameter	6 mm
Tube material	Stainless steel
Cable construction	Copper cable PTFE/shield/PTFE (Teflon®), white, 2 x 0,14 mm ²
Cable length	2000 mm
Connection	Open ends, 30 mm, End sleeves tin-plated
Environmental data	RoHS 2002/95/EG compliant

Article	Art.-no.
Collector probe	0625 0389

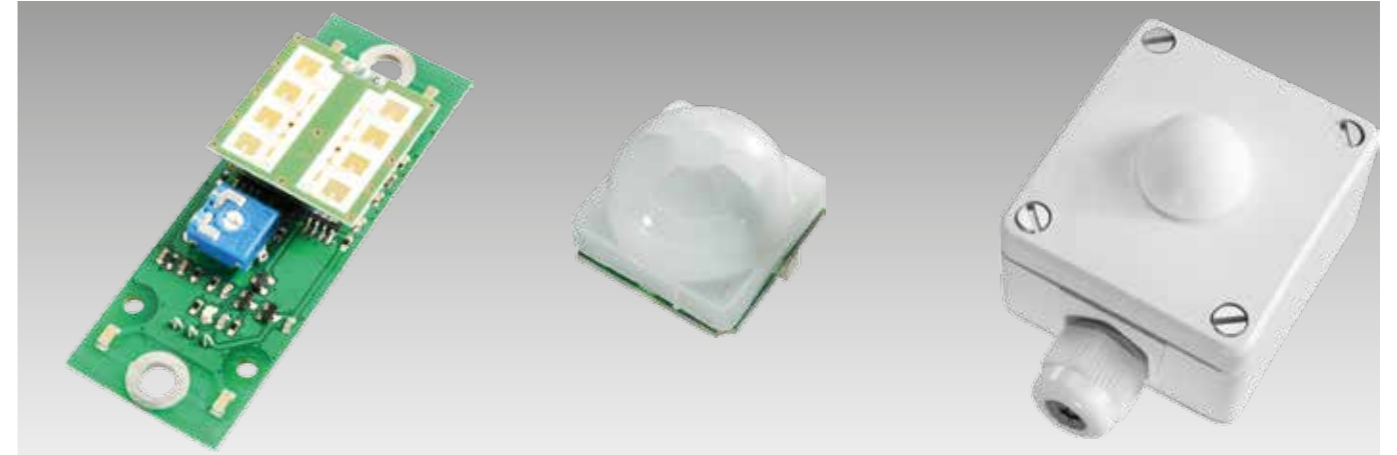
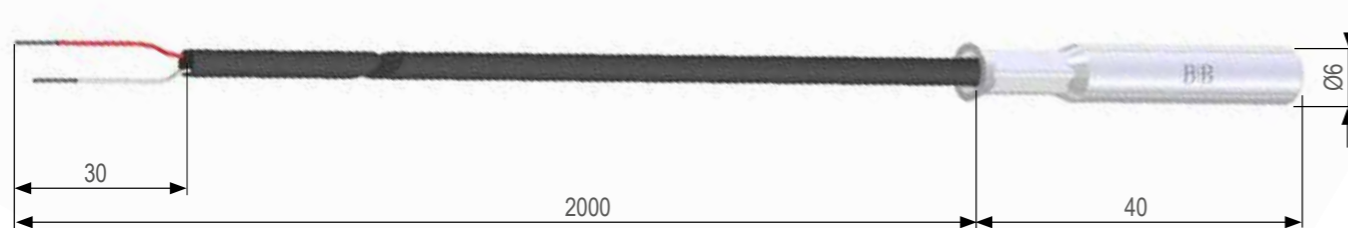
Features:

- Suitable for the most challenging operating conditions on the roof
- The temperature sensor Pt1000 guarantees a long service life
- Heat-resistant due to PTFE-insulated cable
- Waterproof connection between tube and cable
- Dielectric strength 2 kV
- UV-resistant
- Protection sleeve made of high-quality stainless steel

Areas of application:

- Heating technology
- Air-conditioning technology
- Cooling technology
- Solar plants
- Heat pumps
- White goods
- Plant construction

Dimensions



Products for lighting and alarm

The measurement of motion and brightness takes a high priority in the building automation. No matter whether an animal, a burglar or maybe yourself- if something moves in the coverage of our B+B motion detectors, action is triggered!

So our products for lighting and alarm make you feel safe.



Brightness sensor

100000 Lux

Description



Technical data

Measuring range	0...100000 Lux
Sensor	Photodiode
Accuracy	±30%
Operating temperature	-20...+75 °C
Voltage supply	0...10 V DC
Overvoltage protection	Varistor and RC-filter
Protection class	IP54
Dimensions	(LxWxH) 65x59x38 mm

Article	Art.-no.
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Brightness sensor 100000 Lux	0555 3001
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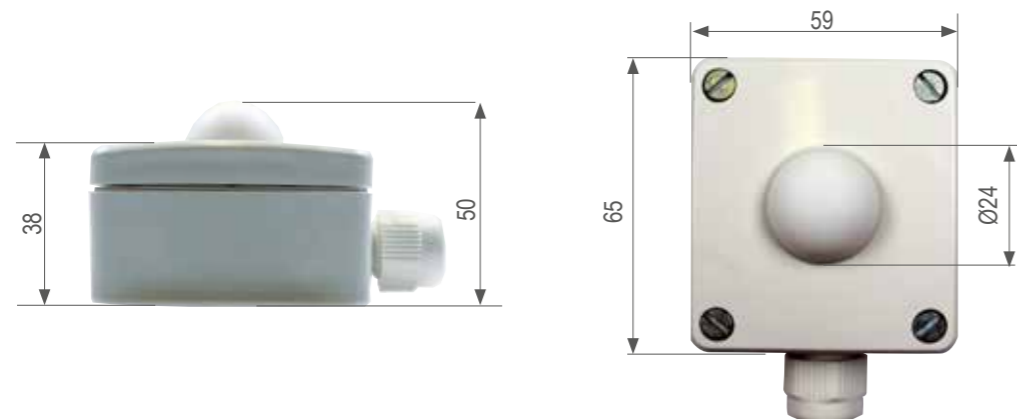
Features:

- Standard output signal 0...10 V
- Customer-specific measuring range up to max. 0...100000 Lux
- 3-point calibrated and linearized
- High long-term stability
- Light sensor and measuring transducer compactly combined in one housing
- High-quality housing made of plastic (IP65)

Areas of application:

- Building automation, bright/dark switching operations
- As a sun sensor
- As a brightness sensor for rain-protected weather stations
- As a brightness sensor for switching solar modules
- As a brightness sensor under strong sun radiation

Dimensions



Motion detector

Passiv infrared motion detector

Description



Technical data

Sensor	Fresnel lens
Range	Up to 12 m, adjustable in 4 steps
Signal bandwidth	0,2...10 Hz
Opening angle	Horizontal ±50°, vertical ±30°
Digital output	Open Collector max. 30 V, 20 mA
Analogue output	0,5 UB ± 0,5 Ub
Operating temperature	-20...+60 °C
Ambient humidity	0...90% RH, Dew not permitted
Voltage supply	3...12 V DC
Operating current	PIR-STD Calm output "H"- 1,0 mA/ active output "L" - 1,4 mA PIR-STD-LP Calm output „H“ 40 µA / active output „L“ 400 µA
Dimensions	(LxWxH) 24x24x27 mm

Article	Art.-no.
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Passiv infrared motion detector	PIR-STD
Passiv infrared motion detector with low power consumption	PIR-STD-LP

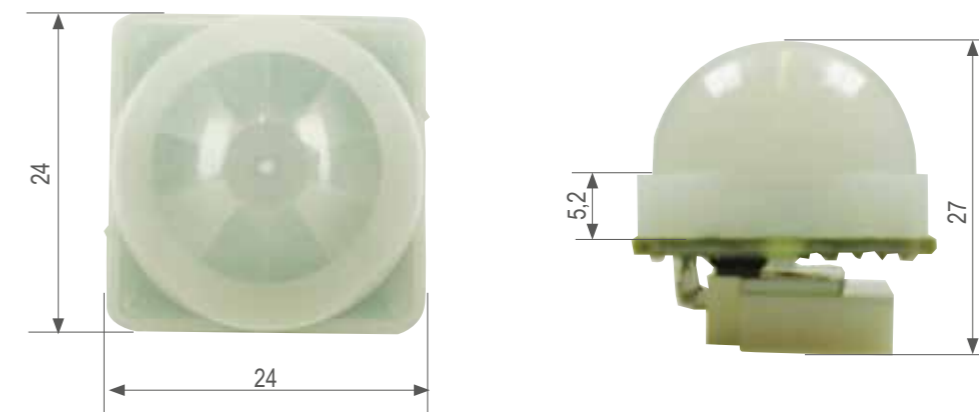
Features:

- Motion detector with high sensitivity
- Very small dimensions
- For wall and ceiling mounting
- Horizontal preference characteristic
- Adjustable sensitivity
- Analogue and digital output
- Wide opening angle
- Interference proof circuit concept
- Simple mounting
- PIR-STD-LP: Low power input, ideal for battery operation

Areas of application:

- Automatic illuminating devices
- Alarm and security applications
- Presence detection
- Contactless hygienic switches for the sanitary facilities
- Building automation
- OEM applications
- PIR-STD-LP: Battery-powered devices

Dimensions



Radar motion detector module with signal evaluation

Description



Technical data

Range	4...15 m
Signal bandwidth	6...600 Hz
Opening angle	Horizontal $\pm 80^\circ$, vertical $\pm 32^\circ$
Transmission frequency	24,0...24,25 GHz
Transmission power	16 dBm
Output	Open Collector switching output with freewheeling diode, switches actively against ground
Operating temperature	-20...+60 °C
Ambient humidity	0..90% RH, Dew not permitted
Voltage supply	8...15 V DC
Operating current	30 mA
Dimensions	(LxWxH) 76x26x16 mm

Article

Art.-no.

Radar motion detector module with signal evaluation	RAD-MOD
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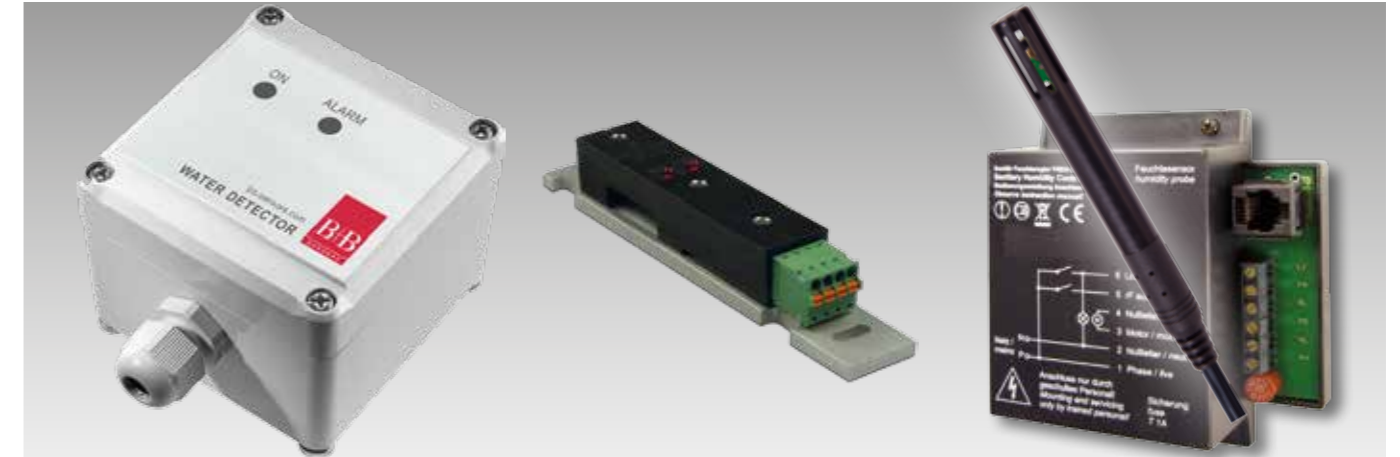
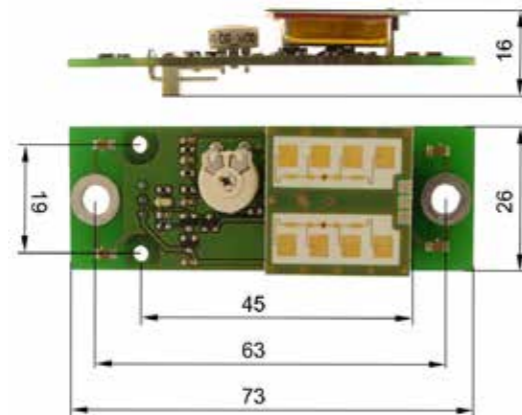
Features:

- Innovative radar operating principle
- High sensitivity in slightest movement
- Covered, invisible mounting possible
- Safe against vandalism
- Adjustable sensitivity
- Universal open collector output
- LED-switch status display

Areas of application:

- Automatic illumination control
- 12 V operation, automotive systems, camping vehicles
- Hygiene switch for sanitary rooms
- Alarm and safety systems
- Presence alarm, building automation
- OEM applications

Dimensions



Humidity protection

Water damages happen without warning. In order to avoid or minimize damages on high quality establishments and buildings it is important to protect your house or flat.

The B+B products for humidity protection help you to take countermeasures in good time. So you can avoid or reduce mould, stink and sustainable damage on the building structure.

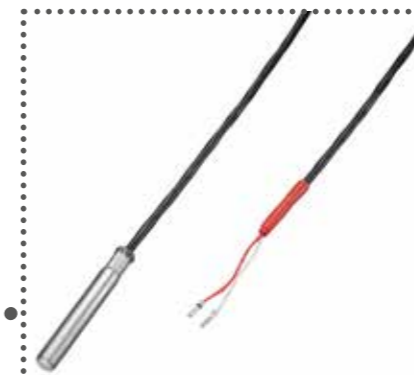




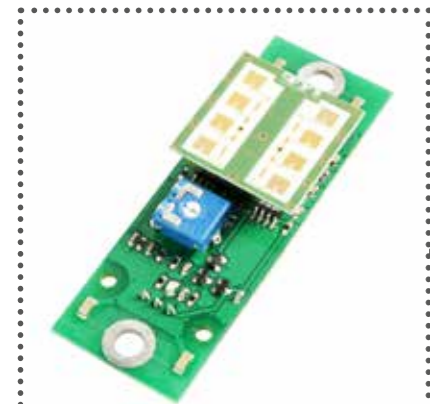
VOC-PROBE



BRIGHTNESS SENSOR



COLLECTOR PROBE



RADAR-MOTION-DETECTOR-MODULE



HUMIDITY CONTROLLER



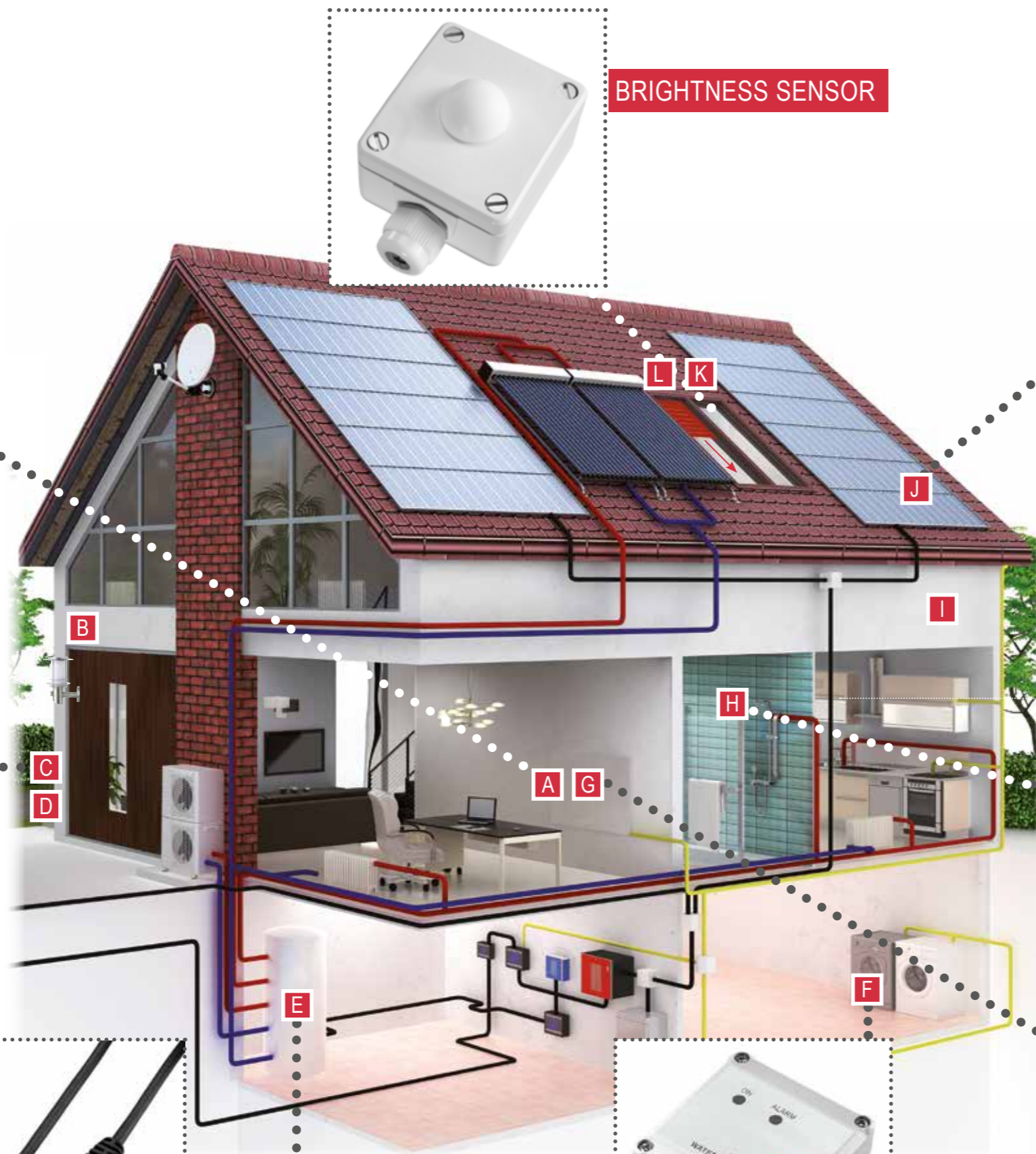
CABLE PROBE



LEAKAGE DETECTOR



INDOOR PROBE



- A** VOC-/HUMIDITY-/TEMPERATURE-PROBE with LED
- B** HUMIDITY AND TEMPERATURE-PROBE for the outdoor area
- C** RADAR-MOTION-DETECTOR-MODULE with signal evaluation
- D** PASSIV-INFRA-RED-MOTION-DETECTOR
- E** CABLE PROBE for permanent temperature measurements
- F** LEAKAGE DETECTOR for electroconductive media
- G** HUMIDITY- AND TEMPERATURE PROBE for the indoor area
- H** HUMIDITY CONTROLLER for sanitary rooms
- I** OUTDOOR PROBE
- J** COLLECTOR PROBE Pt1000/2
- K** RAIN ALARM UNIT
- L** BRIGHTNESS SENSOR 100.000 Lux



Leakage detector for electroconductive media

Description



Technical data

Measuring procedure	Electolytic conductance measurement
Measuring medium	Conductive liquids, building materials
Switching point	2...60 kΩ, (typ. 15 kΩ, 67 μS)
Operating voltage	24 V DC ± 10%, max. 80 mA
Relay contact	Potential free changeover contact max. 36 V / 5 A
Operating display	Green LED at applied operating voltage
Switching display	Red LED at pulled relay contact
Housing	ABS, light grey RAL 7035
Cable gland	M16x1,5
Electrical connection	Clamps 1,5 mm ²
Dimensions	(LxWxH) 82x80x59 mm
Protection class	IP54

Article

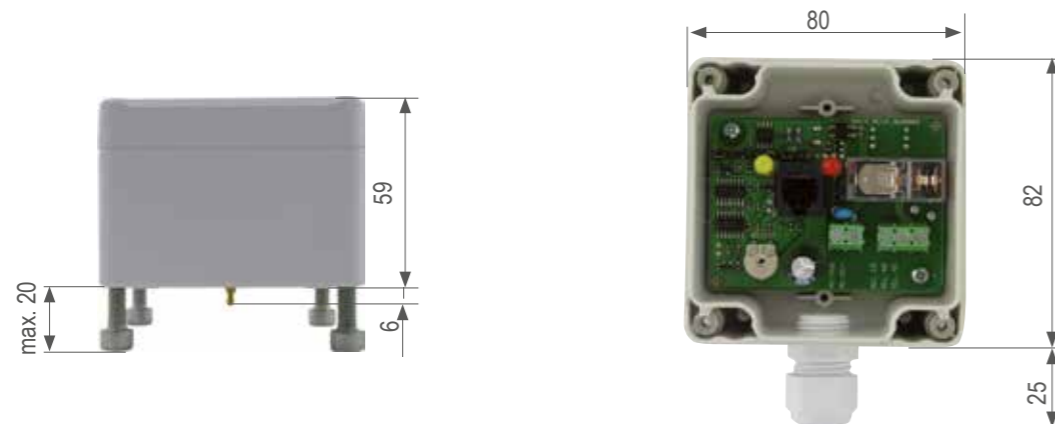
Art.-no.

Leakage detector for electroconductive media	LEME-24V
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Features:

- Safe operation, impedance measuring principle
- Operating voltage 12 V DC/AC
- 2 integrated, gold plated measuring tips
- Potential free switch output (Relay) 30 V / 4 A
- Adjustable sensitivity and switching mode
- Adjustable measuring level 0...15 mm
- Simple mounting
- Optionally with acoustic transducer

Dimensions



Humidity controller for sanitary rooms inclusive probe

Description



Technical data

Measuring procedure	Capacitive humidity sensor
Measuring range humidity	0...100% RH
Operating temperature	0...+40 °C
Switching point	70% RH or strong increase of moisture
Tube length	115 mm with spout
Tube diameter	12 mm
Tube material	Black plastic
Dimensions controller	(LxWxH) 99x88x31 mm
Housing material controller	Black plastic
Cable construction	Copper cable PVC
Cable length	3000 mm
Connection	RJ12-connection plug
Turn-on delay	40 s
Turn-off delay	300 s
Switch output	1 A / 230 V AC (Switch output Triac)
Switch input humidity off	230 V AC/ ca. 1 mA
Switch input light	230 V AC/ ca. 1 mA
Operating voltage	230 V AC
Overvoltage protection	Varistor at mains input and switch output

Article

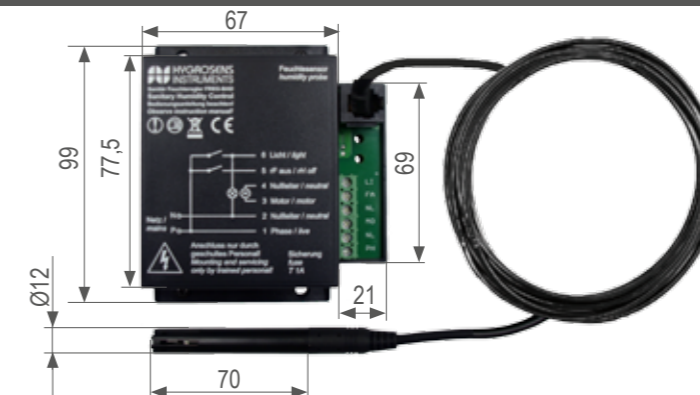
Art.-no.

Humidity controller for sanitary rooms	FREG-BAD
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Features:

- Automatic humidity regulation for bathrooms, sanitary rooms and kitchens
- Direct control of blowers
- Regulation of room climate
- High quality, long term stable humidity probe
- Turn-on delay and time-delay switch
- Switch input for light circuit
- Switch output for Humidity OFF

Dimensions



Temperature probe for the use in sauna areas

Description



Technical data

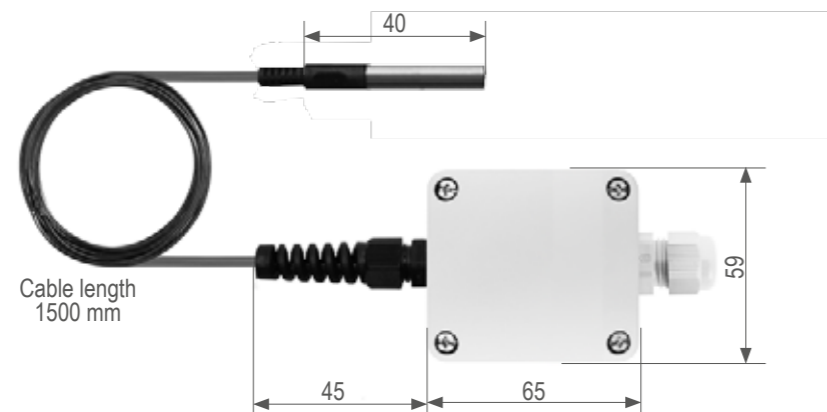
Measuring range temperature	0...120 °C
Sensor	Pt1000
Accuracy	Class F 0,3 (K1.B) DIN EN 60751 compliant
Output scale	-30...+70 °C as 0...10 V
Tube length	40 mm
Tube diameter	6 mm
Tube material	Stainless steel 1.4571/1.4404
Cable construction	Copper cable TPE/shield/TPE, 3x0,14 mm ²
Cable length	1500 mm
Process connection	Cable gland with bend protection M12x1,5
Housing	Plastic Polyamid, UV-resistant
Dimensions	(LxWxH) 65x59x38 mm
Connection	Screw terminals 0,75 mm ²
Operating voltage	12...24 V DC
Overvoltage protection	Varistor and RC-filter
Environmental data	RoHS 2002/95/EG compliant

Article	Art.-no.
Temperature probe for the use in sauna areas	TF-SF

Features:

- Standard output signal 0...10 V
- 3-point calibrated and linearized
- High long term-stability
- Probe in stainless steel housing
- High-quality housing made of plastic (IP65)

Dimensions



Dew point controller for flat surfaces

Description



Technical data

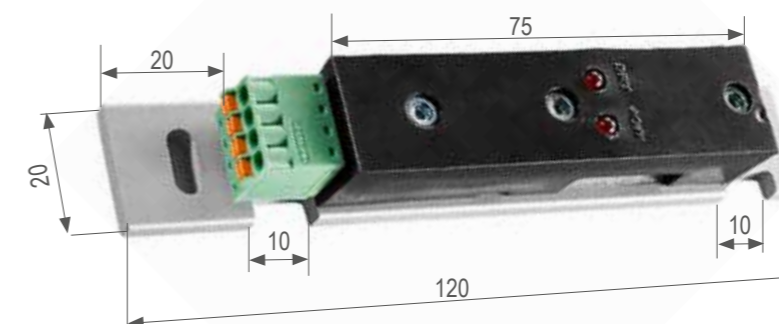
Sensor	Resistive dew formation sensor
Switching point	94% RH, ±4% factory-adjusted
Measuring range humidity	0...100% RH
Hysteresis	Approx. 4%
Operating temperature	0...+60 °C
Dew formation	Allowable
Condensation	Short-time allowable
Measuring medium	Clean ambient air
Response time	Approx. 120 s
Output	Semiconductor relay
Contact rating	Potential free quiescent current contact, closed in normal operation (condensatfree). Open when operating voltage is missing or dew formation.
Contact voltage	Max. 39 Vss
Contact resistance	Closed: <30 Ω, opened: >1 MΩ
Switching display	LED red at closed contact (dry)
Operating voltage	24 V AC ±20%, 50 Hz or 20...28 V DC
Operating current	Max. 25 mA AC/DC
Protective circuit	Transient protection (varistor) and anti-interference capacitor 10 nF
Protection filter	Polyäthylen sintered material
Electrical connection	4-pole, RM 3,5 mm, 0,2 mm ² to 1,5 mm ²
Dimensions	(LxWxH) 120x20x20 mm
Protection class	Electronics: IP20

Article	Art.-no.
Dew point probe for flat surfaces	TPS-FL-BU

Features:

- Condensation monitor for cool ceilings, windows, switch gears
- Switch point 94 % RH on surface
- Operating temperature from 0 to 60 °C
- Potential free static switch contacts
- Operating voltage 20-28 V DC/AC
- Defined behaviour during dew formation or condensation
- Damp proof sensor with dust filter
- Calibrated, reliable device
- Over voltage protection
- Spill waterproof electronics
- Minimum assembly expenses easy mounting
- Minimum wiring expenses (plug)
- Maintenance free, no wearing parts
- High system reliability
- 24 Months guarantee
- German manufacture as per QS ISO 9000

Dimensions





Indoor probes

The air quality in indoor spaces is becoming more and more important nowadays. It contributes significantly to the enhancement of physical and mental power and capacity and to a comfortable indoor climate. The air composition changes when humans, plants or objects are in a room or an apartment. Humans, for example, add humidity and carbon dioxide to the indoor air. Low humidity dries out the mucous membranes, which can cause bacteria and viruses to spread faster and result for example in a cold. Excessive humidity is quickly perceived as being oppressive, and can occur when a room is insufficiently ventilated. With B+B products, you can create just such a healthy indoor climate!



(Humidity and) Temperature probe for the indoor area

Description



Features:

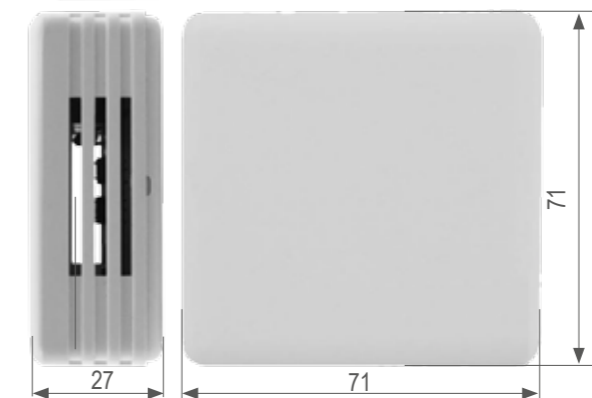
- Standard output signal 0...10 V
- 3-point calibrated and linearized
- Humidity measuring linearized and temperature compensated
- Integrated measuring probe and transducer
- High long-term stability

Technical data

Humidity	
Measuring range humidity	0...100% RH
Sensor	Capacitive humidity sensor
Accuracy	±3% RH
Output scale	0...100% RH as 0...10 V
Temperature	
Measuring range temperature	-30...+70 °C
Sensor	Pt1000
Accuracy	Class F 0,3 (K1.B) DIN EN 60751 compliant
Output scale	-30...+70 °C as 0...10 V
General	
Response time T90	25 s
Housing	Wall housing made of plastic (ABS)
Dimensions	(LxWxH) 71x71x27 mm
Connection	Screw terminals 0,75 mm ²
Operating voltage	12...24 V DC
Overvoltage protection	Varistor and RC-filter

Article	Art.-no.
Humidity and temperature probe for the indoor area	FF-WF
Temperature probe for the indoor area	TF-WF

Dimensions



VOC-(humidity-/temperature-)probe with LED-Display

Description



Technical data

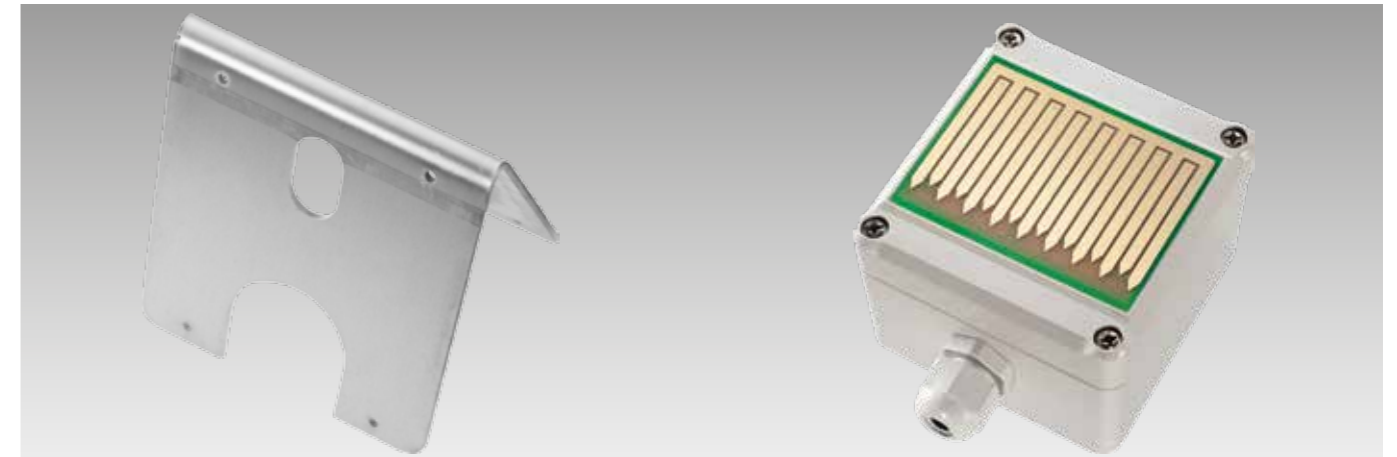
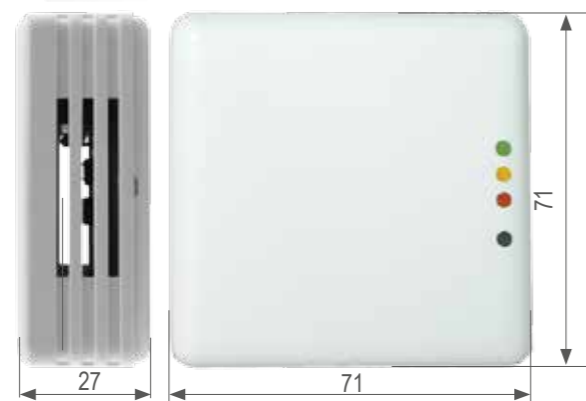
Air quality	
Measuring range	450...2000 ppm, VOC/CO ₂ equivalent
Accuracy	±100 ppm
Output scale	450...2000 ppm as 0...10 V
Air humidity	
Measuring range humidity	0...100% RH
Accuracy	±2% RH
Output scale	0...100% RH as 0...10 V
Ambient temperature	
Measuring range temperature	0...+50 °C
Accuracy	±0,3 °C
Output scale	0...+50 °C as 0...10 V
General	
Display	3 LEDs
Relay	250 V AC, 8 A
Switching threshold relay	Relay 1200 ppm
Voltage supply	14...27 V DC
Power consumption	70 mA at 24 V DC
Housing	Wall housing made of plastic (ABS)
Dimensions	(LxWxH) 71x71x27 mm
Connection	Screw terminals 0,75 mm ²
Mounting	Wall mounting
Protection class	IP20

Article	Art.-no.
VOC-, humidity- and temperature-probe with relay	0565 0003
VOC-probe with LED-display of the VOC concentration	0565 0004

Features:

- Measuring range 450 - 2000 ppm, VOC/CO₂equivalent
- Measuring of air quality, humidity and temperature
- Displays VOC-Concentration (traffic lights)
- 3 Outputs 0...10 V for VOC, temperature and relative humidity
- Easy retrofit of unregulated ventilation systems possible
- In wall housing

Dimensions



Sensors for shadowing and rain protection

An awning transforms your terrace into an additional living room.

Furthermore it protects you- not only in the summer- against the sun and you can sit outside, relax and enjoy the fresh air.

Even in the evenings, when it gets fresh, you can bring the day to a close there, because the awning prevents the quick cooling down of your outdoor area.

Combined with B+B products for the building automation awnings and other sun protection can be operated. If rain arises the shadowing is brought in automatically.

Windows can also be operated through the B+B rain alarm unit, so your living spaces are protected against rain, even when you are not at home.



Rain alarm unit

12 V / 24 V

Description



Technical data

Measuring procedure	Electrolytic AC measurements
Sensor surface	gold-plated
Current consumption	50 mA, Heater 40 - 180 mA (PTC)
Operating voltage	24 V AC/DC ± 10%
Output	Potential free switch output (Relay) 30 V / 4 A, NO/ NC choosable
Housing	ABS, light grey (RAL 7035)
Cable gland	M16x1,5
Electrical connection	Screw terminals 1,5 mm ²
Dimensions	(LxWxH) 80x82x59 mm
Protection class	IP54

Article

Article	Art.-no.
Rain alarm unit 12 V	REGME-12V
Rain alarm unit 24 V	REGME24V

Accessory

Accessory	Art.-no.
Mounting set for B+B rain alarm units incl. all mounting units	REGME-WAHA

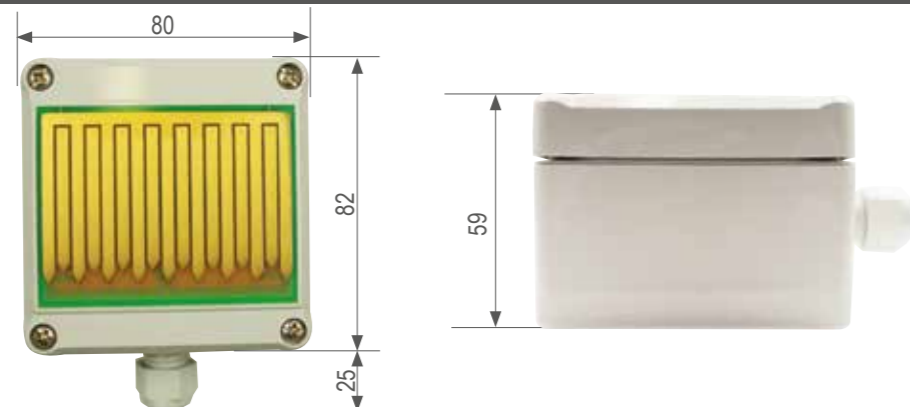


- Universal for wall or mast mounting
- Simple, time-saving mounting
- Reliable operation, stable construction
- Corrosion-proof Aluminium

Features:

- Safe operation, electrolytic measurement principle
- Deposition can be detected as rain or snow
- Large, heated sensor area for fast drying and operation in winter season
- Potential free contact output (Relay) 30 V/4 A
- Sensitivity and switching mode adjustable
- Universal wall/mast mounting bracket as accessory

Dimensions



Heating technology

Nowadays the intelligent use of energy becomes a major concern, because the resources run short and the personal CO₂-consumption occupies lots of people.

Furthermore by energy saving you take care of the environment and therefore of future generations, which ensures a good conscience. With B+B Thermo-Technik GmbH's products for heating technology the energy in buildings can be checked more consciously and the consumption can be controlled.



Cable probe

DS18S20 for permanent measurements of temperature

Description



Technical data

Measuring range temperature	-20...+60 °C
Sensor	DS18S20
Accuracy	±0.5 °C from -10...+85 °C
Tube length	40 mm
Tube diameter	6 mm
Tube material	Stainless steel 1.4571/1.4404
Cable construction	PVC flat cable, unshielded
Cable length	2000 mm
Connection	RJ11 connection plug
Feature	With decoupling capacitor
Environmental data	RoHS 2002/95/EG compliant

Article	Art.-no.
Cable probe DS18S20	DS1820-LC-2M

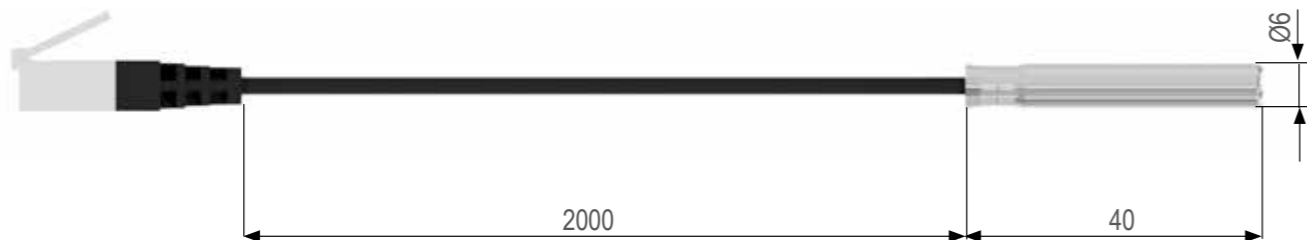
Features:

- Suitable for heating systems and air-conditioners
- Use of a temperature sensor with 1-wire bus
- Direct connection to 1-wire bus coupler, 1-wire controller, 1-wire hub or other controls
- Splash waterproof
- Protection sleeve made of high-quality stainless steel

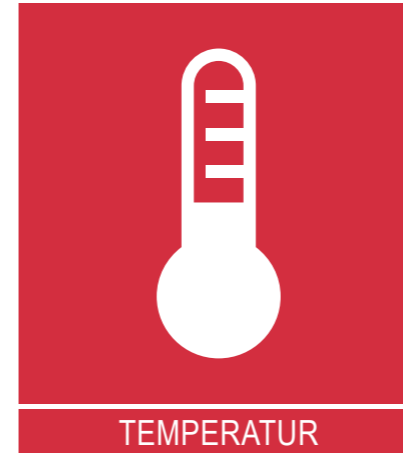
Areas of application:

- Heating technology
- Air-conditioning technology
- Cooling technology
- Solar panels
- Heat pumps
- White goods
- Plant construction

Dimensions



Our product range



Fon +49 771 83160
 Fax +49 771 8316-50
 info@bb-sensors.com
 www.bb-sensors.com
<https://shop.bb-sensors.com>

Our quality assurance

B+B Thermo-Technik has been manufacturing top-quality products since 1984.

Certificates



Certificate DIN EN ISO 9001 : 2008

Since April 2000 B+B Thermo-Technik is certified according to ISO 9001-2000 and has actualized the certificate according to ISO 9001 - 2008.

Therefore our customers are enabled to process more effective product audits in our house.



VDE

Since 2006 B+B Thermo-Technik GmbH is an approved place of manufacture for electronic controls for cooking ranges and ovens.



ESD Certificate

Since April 2013 B+B Thermo-Technik GmbH is also certified according to ESD (part of DIN EN 61340-5-1).

We constantly examine the quality of our products to meet the requirements of our customers.



SENSORS



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