

CAPBs®

From a simple measuring instrument to an all-rounder with CAPBs®



Seda

Modular sensor system with Bluetooth® Smart technology

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If you have questions: Please feel free to get in touch with us!

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Welcome to the future

Cutting edge measuring technology – CAPBs® measuring units.

+ Comprehensive

Easy extension of BlueLine measuring instruments* by a great variety of applications such as pressure measurement, temperature measurement, humidity measurement, volume flow and Pitot measurement, gas leak detection, flow measurement, etc

+ Wireless

Wireless, immediate transmission of the measurement data to your measuring instrument, smartphone or tablet with Bluetooth® Smart technology

+ Flexible

Multi-purpose key with customisable function assignment for ease of use and consistent operation of the CAPBs®, regardless of site

+ Accurate

Position-independent, temperature-compensated sensor technology for maximum precision in all measuring scenarios

+ Modular

Numerous, versatile application thanks to modular design with universal base handle for all sensor modules

+ Universal

Compatible with our proven BlueLine measuring instruments* or your smartphone and tablet



+ Proven

Easy documentation of measurement results on site via IR or Bluetooth® Smart interface

+ Error-free

Simultaneous storage of all measured data to the measuring instrument or the mobile devices avoids errors, for example caused by incorrect readings

+ Ergonomic

Light-weight, ergonomic handle made of robust, high-quality plastic with integrated magnet for hands-free operation

+ Ready for measurement

Free firmware update for BlueLine measuring instruments* with pre-installed measurement menus for all available CAPBs®

+ Independent

Free app for iOS and Android for operation of all CAPBs® via smartphone and tablet. With pre-installed measurement menus for special applications (for example, gas line checks) and graphical representation of the measurement results

+ Quality

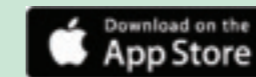
100 % made in Germany

+ Energy-saving

Automatic switching off of the CAPBs® when the Bluetooth® Smart connection is closed ensures low energy consumption

+ Revolutionary

Continuous, simultaneous flow and temperature measurement in water applications with the new, TÜV-tested flow rate/temperature measuring instrument FlowTemp® ST



i The following measuring instruments can be immediately used with the CAPBs®:

* BLUELYZER ST, EUROLYZER STx, MULTILYZER STe, pressure measuring instrument series S4600 ST and temperature measuring instrument TMD 9

Simply powerful:

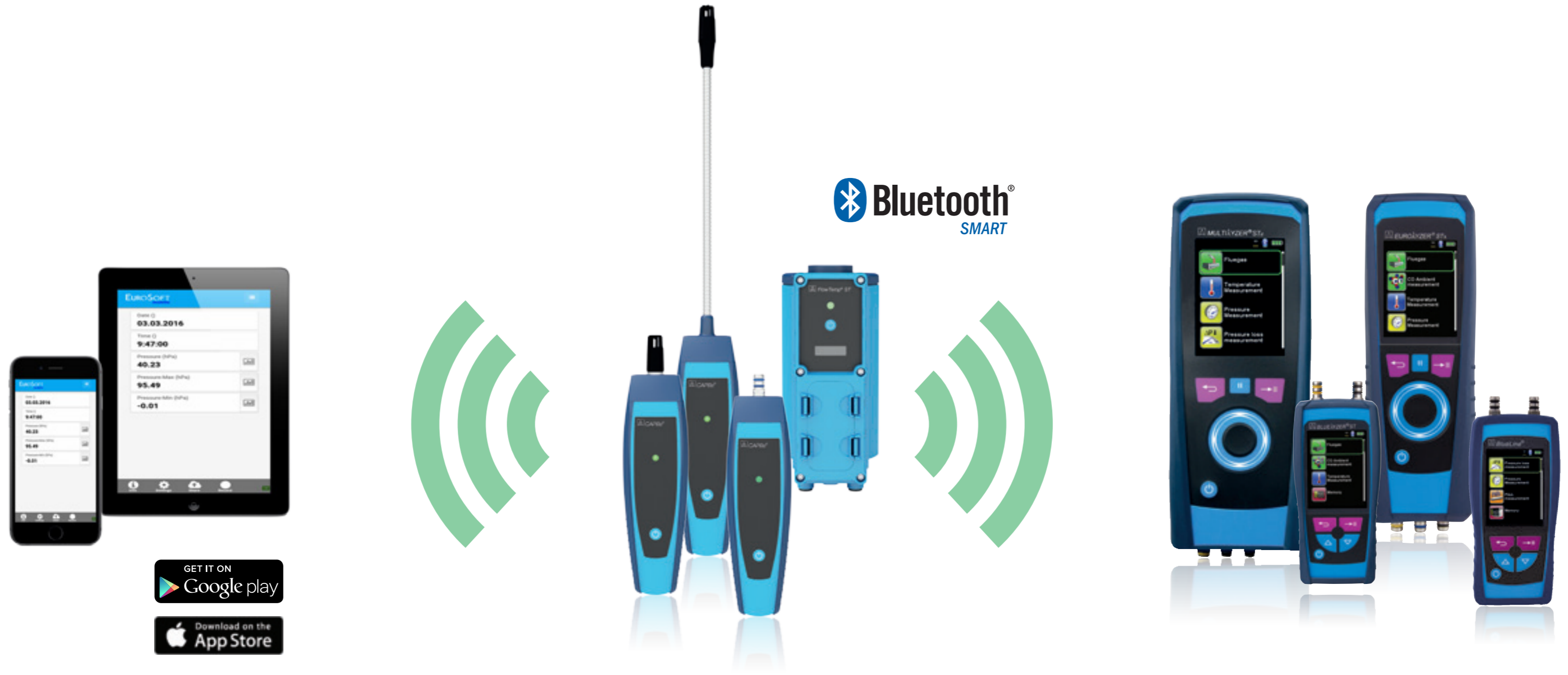
From a simple measuring instrument to an all-rounder.

You already own a BlueLine measuring instrument* and want to use it for the majority of your daily measuring tasks, for example, tightness test, gas leak detection, flow rate measurement or 4 Pa test? No problem with your measuring instrument. In conjunction with the new CAPBs® for pressure, temperature, humidity and further applications, the most important tasks of heating system technicians and chimney sweeps can be performed easily and with high accuracy. The compact CAPBs® can be connected wirelessly via Bluetooth® Smart to all measuring instruments of the BlueLine series*. Measurement data can be transmitted directly to

the measuring instruments or, by means of a free app, to your smartphone or tablet. The measurement logs can be further transmitted from the measuring instrument as a QR code or, with the free iOS or Android app, as an Excel (CSV) file.

The CAPBs® excel with an unprecedented diversity of measuring possibilities with a single system. Numerous sensor modules CAPBs® sens can be easily plugged into the modular base handle STM. The ergonomic handle itself is made of high-quality plastic. It contains the power supply (battery, optionally rechargeable), a multi-purpose key and a multi-colour LED. The multi-purpose key features customisable function assignments. For example, it can be used for zero calibration regardless of the measuring site. In addition, a device for audible signals is integrated into the handle. The unit and the measuring instrument of the mobile device are paired once;

after that, a wireless connection is available for undelayed transmission via Bluetooth® Smart. The measuring instrument or the free app for smartphone and tablet provide numerous pre-installed measurement menus for the CAPBs®. They include, for example, tightness test, pressure loss measurement, gas leak detection, flow rate measurement, etc.



i The following measuring instruments can be immediately used with the CAPBs®:

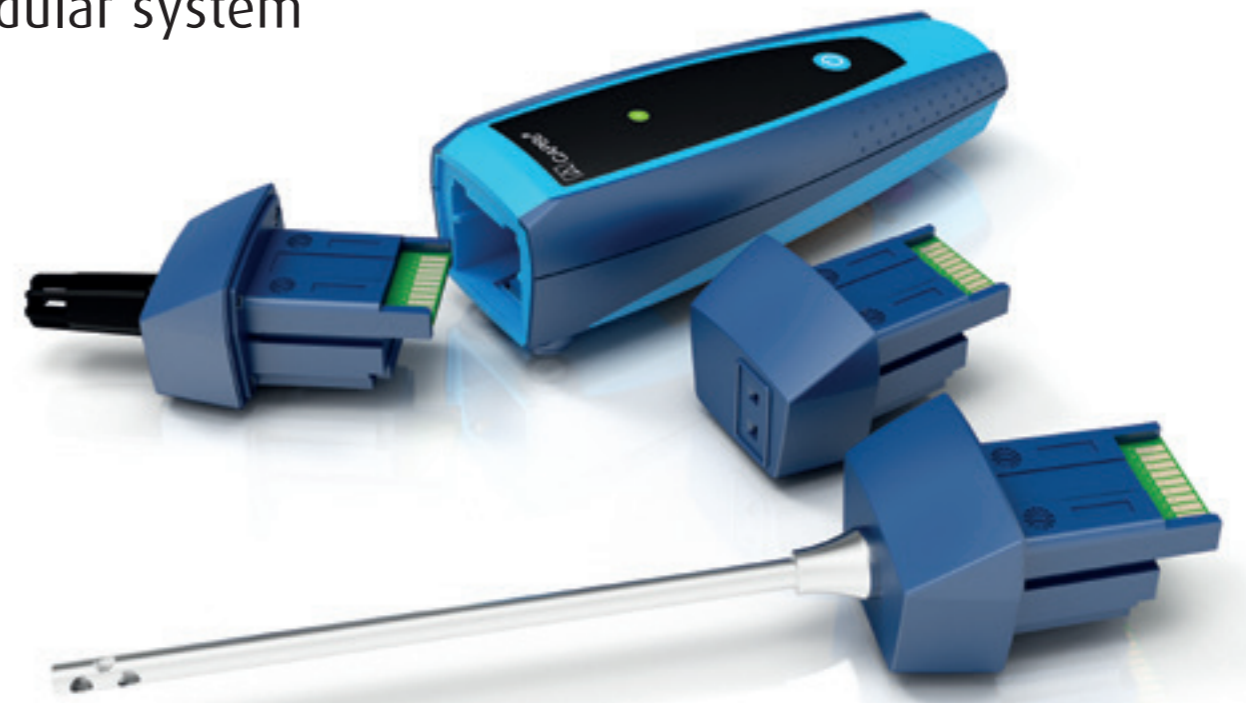
* BLUELYZER ST, EUROLYZER STx, MULTILYZER STe, pressure measuring instrument series S4600 ST and temperature measuring instrument TMD 9



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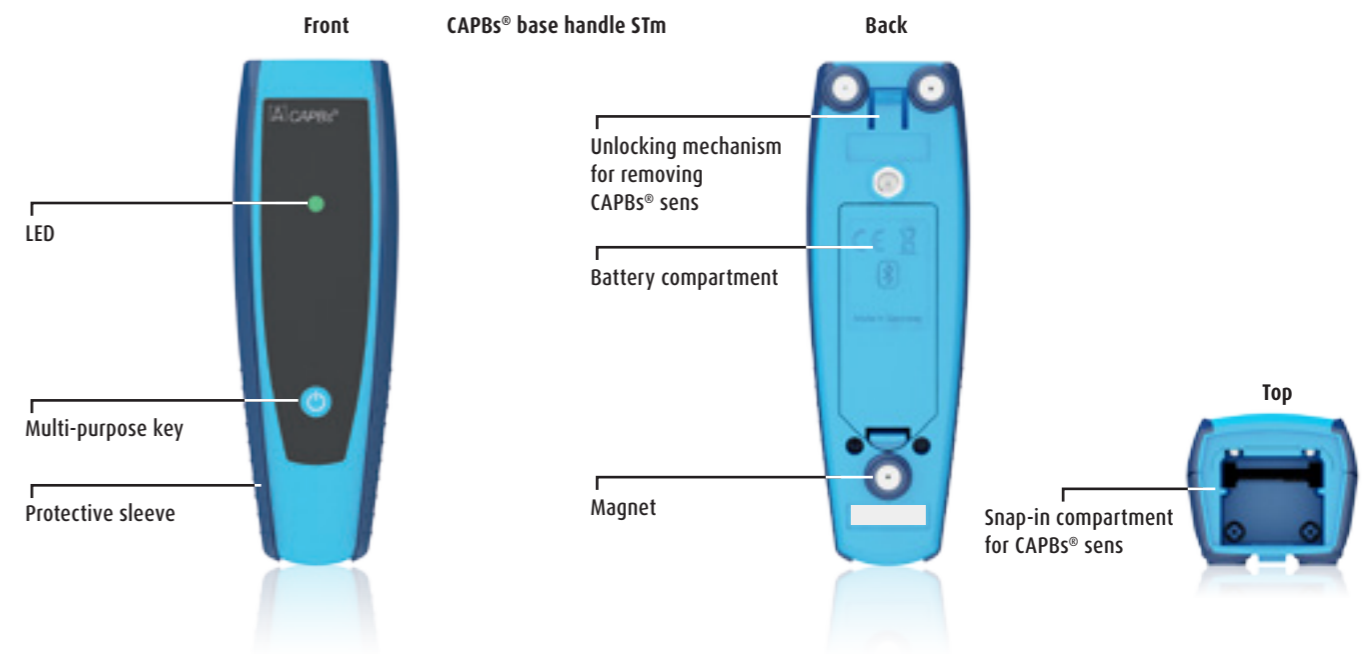
Universal. Accurate. Flexible. Modular system














The new CAPBs[®] constitute a modular system consisting of the universal base handle CAPBs[®] STM and an application-specific sensor module CAPBs[®] sens for a wide variety of measured variables such as pressure, temperature, humidity. The base handle CAPBs[®] STM holds the various sensor modules CAPBs[®] sens. The base handle can be combined with any sensor module to form a complete CAPBs[®] measuring unit. Each measuring unit can transmit the measured data immediately and without a delay to a BlueLine measuring instrument via Bluetooth[®] Smart and, via a free app for different operating systems, also to a smartphone or tablet. This results in a vast array of measuring units – all tasks of, for example, a heating system engineer or a chimney sweep can be performed with a single measuring instrument.

A multi-purpose key is located at the front; it is used for switching the unit on and off, for zero adjustment, for activating the Hold mode or for starting the data logger function. The multi-colour LED displays the status of the CAPBs[®] measuring unit by means of different colours and flashing frequencies. For example, BLUE means "Establishing Bluetooth[®] Smart connection" or GREEN "Connected to an evaluation unit". The base handle also contains a device which indicates excess concentrations or limit values by means of audible signals with different frequencies.

The ergonomic base handle CAPBs[®] STM is equipped with three magnets at the rear side. The battery compartment and the unlock button for exchanging the CAPBs[®] sens are also located at the rear. The snap-in mechanism on top of the base handle is standardised for all CAPBs[®] sens.



CAPBs® overview

											
	Humidity/ temperature	Gas leak detection	Pressure measurement	Pressure measurement	Pressure measurement	Pressure measurement	Pressure transmitter	Pressure/ temperature	Air quality	Temperature	Flow rate/temperature
CAPBs®	RH 80	GS 10	PS 10 (20 mbar)	PS 20 (180 mbar)	PS 40/41 (6 bar)	PS 60/61 (20 bar)	PT 70	FP 10	AQ 20	TK 10 – TK 50	FlowTemp® ST
Application examples	Monitoring or humidity in closed rooms	Detection of leaking flammable gases (e.g. methane)	Measurement of ultra-fine pressure (Pitot measure- ment)	Check of connection and flow pressure in gas fired heating systems	Tightness and load test of gas lines	Stress pressure test at pipe systems	Inspection of water pipes and oil pres- sure tests	Determination of flow rate (4 Pa test)	Fast and reliable detection of VOCs (volatile organic compounds) and CO ₂	Determination of temperatures on surfaces, in liquids and in gases	Function tests of drinking water heaters and connected pipe systems

CAPBs® Base handle STm

Description

Universal base handle for all CAPBs® sensor modules. Ergonomic handle with three magnets and battery compartment at the rear of the housing. Multi-colour LED and multi-purpose key on the front. With integrated device for audible signals and Bluetooth® Smart module.



Technical specifications

Dimensions (H x W x D):	140 x 45 x 39 mm
Weight:	113 g
Supply voltage:	2 x 1.5 V AAA alkaline batteries or 2 x AAA NiMH batteries (1.2 V / 900 mAh)
Interface:	Bluetooth® Smart

DG: H, PG: 4	Part no.
CAPBs® base handle STm	M091000017

CAPBs® Humidity/temperature RH 80

Description

Sensor module for measurement of temperature and relative humidity in ambient air.

Application

- Checks of the climatic conditions in rooms
- Mould prevention

Technical specifications

Dimensions (H x W x D):	82 x 42 x 35 mm
Weight:	51 g
Interface:	Bluetooth® Smart
Measuring ranges:	0 / 100 % rH -40 / +80 °C
Accuracy:	±2 % rH ±1 digit ±0.5 °C ±1 digit
Resolution:	0.1 % rH 0.1 °C

DG: H, PG: 4	Part no.
CAPBs® base handle STm	M091000017
Humidity CAPBs® sens RH 80	M090111210



CAPBs® Gas leak detection GS 10

Description

Sensor module for fast and reliable gas leak detection. The flexible probe allows for use in spaces difficult to access. The gas concentration is displayed by the evaluation unit in ppm; the CAPBs® measurement unit provides visual and audible signals. The alarm threshold can be adjusted as required. The base calibration for methane

ensures that a broad range of flammable gases can be detected. The anti-poisoning protection function for the sensor ensures a service life.

Application

- Gas leak detection
- Detection of gas leaks (flammable gases) in gas pipes as well as connection pieces and fittings, gas meters, gas burners and gas tanks

Technical specifications

Dimensions (H x W x D):	290 x 42 x 35 mm
Weight:	51 g
Interface:	Bluetooth® Smart
Measuring range (methane):	0 / 2,000 ppm
Accuracy:	±200 ppm
Resolution:	10 ppm

DG: H, PG: 4	Part no.
CAPBs® base handle STm	M091000017
Gas leak detection CAPBs® sens GS 10	M090131410

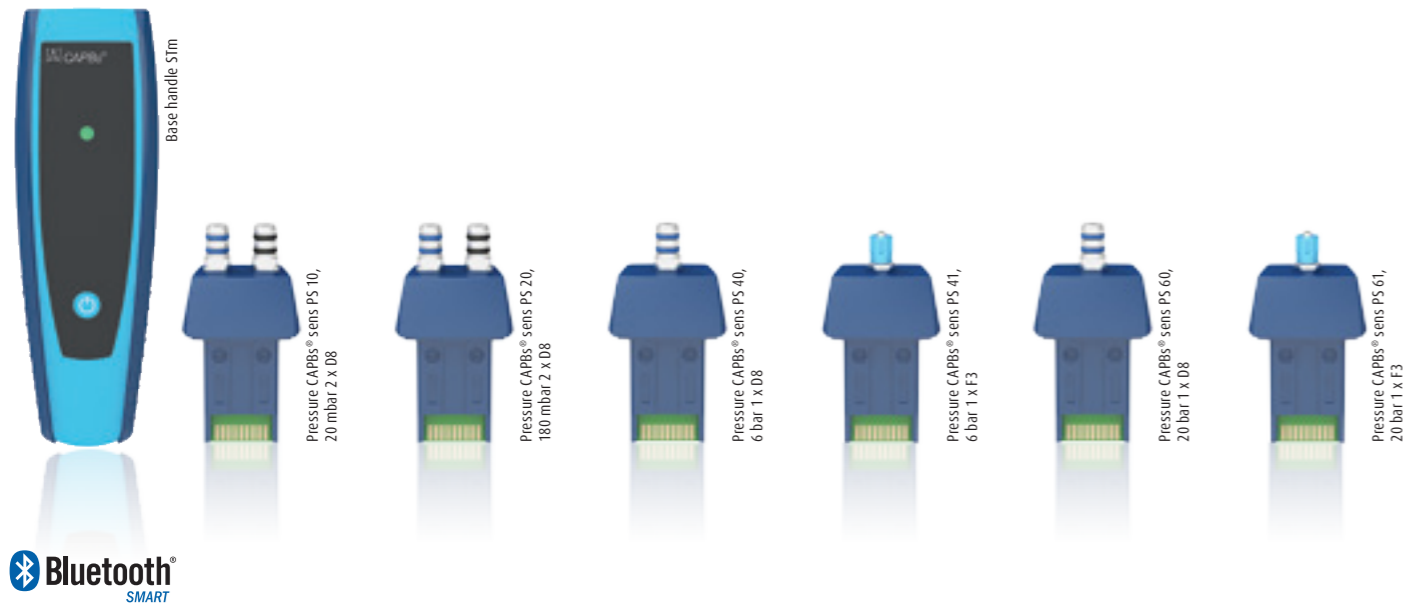


CAPBs® Pressure PS

Description

Sensor module for measurement of pressure, vacuum and differential pressure of non-corrosive, gaseous, dry media. The pressure sensors are available in four measuring ranges from 20 mbar to 20,000 mbar. Manual shifting of the zero point allows you to double the measuring

range. The high-quality sensors are extremely accurate, orientation-independent and temperature-compensated.



Application

	PS 10 (20 mbar)	PS 20 (180 mbar)	PS 40 / PS 41 (6 bar)	PS 60 / PS 61 (20 bar)
Differential pressure	•	•	•	•
Pressure loss	•	•	•	•
Connection pressure/flow pressure	•	•	•	•
Flow rate	•	•	•	•
Stress pressure test	•	•	•	•
4 Pa test	•	•	•	•
Test of gas pipes	•	•	•	•
Tightness test	•	•	•	•
Test of drinking water systems	•	•	•	•
Tightness test	•	•	•	•
Strength test	•	•	•	•
Test of heating systems	•	•	•	•
Tightness test	•	•	•	•
Test of solar systems	•	•	•	•
Pressure test	•	•	•	•
Strength test	•	•	•	•
Test of oil pipes	•	•	•	•
Tightness test	•	•	•	•
Pressure test	•	•	•	•

Technical specifications

Dimensions (H x W x D):	74 x 42 x 35 mm	74 x 42 x 35 mm	74 x 42 x 35 mm	74 x 42 x 35 mm
Weight:	34 g	34 g	30 g	26 g
Interface:	Bluetooth® Smart	Bluetooth® Smart	Bluetooth® Smart	Bluetooth® Smart
Measuring range:	-20 / +20 mbar 0.5 / 50 m/s	-180 / +180 mbar 0.5 / 50 m/s	-1 / +6 bar	-1 / +20 bar
Accuracy:	±0.003 mbar 0.5 % displayed value ±1 digit	±0.03 mbar 0.5 % displayed value ±1 digit	±0.3 mbar 0.5 % displayed value ±1 digit	±1 mbar 0.5 % displayed value ±1 digit
Resolution:	0.001 mbar 0.1 m/s	0.01 mbar (< 99.99) 0.1 mbar (> 100.0) 0.1 m/s	0.1 mbar (< 999.99) 1 mbar (> 1,000)	0.1 mbar (< 999.99) 1 mbar (> 1,000)
Hose connection:	Ø 8 mm	Ø 8 mm	Ø 8 mm or Ø 3 mm (Festo)	Ø 8 mm or Ø 3 mm (Festo)



DG: H, PG: 4	Part no.
CAPBs® base handle STm	M091000017
Pressure CAPBs® sens PS 10, 20 mbar 2 x D8	M090050110
Pressure CAPBs® sens PS 20, 180 mbar 2 x D8	M090010110
Pressure CAPBs® sens PS 40, 6 bar 1 x D8	M090082910
Pressure CAPBs® sens PS 41, 6 bar 1 x F3	M090083010
Pressure CAPBs® sens PS 60, 20 bar 1 x D8	M090102910
Pressure CAPBs® sens PS 61, 20 bar 1 x F3	M090103010

CAPBs® Pressure transmitter PT 70

Description

Pressure transmitter for measurements in liquids and corrosive media.

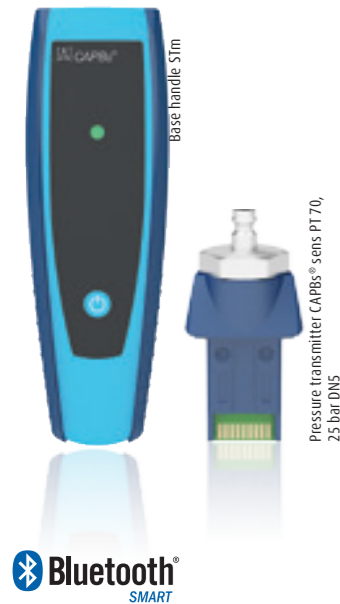
Application

- Pressure tests of oil pipes
- Tightness test/strength test of drinking water installations
- Pressure loss test
- Pressure test at pipe systems
- Stress pressure test at pipe systems

Technical specifications

Dimensions (H x W x D):	76 x 42 x 35 mm
Weight:	55 g
Interface:	Bluetooth® Smart
Measuring range:	0 / +25 bar
Accuracy:	0.5 % of full scale ±1 digit
Resolution:	0.1 bar
Hose connection:	Plug connection DN 5

DG: H, PG: 4	Part no.
CAPBs® base handle STm	M091000017
Pressure transmitter CAPBs® sens PT 70, 25 bar	M090142810



CAPBs® Pressure and temperature FP 10

Description

Sensor module for simultaneous, continuous measurement of temperature and pressure. The CAPBs® features a barometric pressure sensor and allows for convenient measurement with a stable zero point.

Application

- Flow rate measurement (Pitot tube)
- Barometric pressure
- Surface loss
- 4 Pa measurement (hose kit)

Technical specifications

Dimensions (H x W x D):	74 x 42 x 35 mm
Weight:	33 g
Interface:	Bluetooth® Smart
Measuring ranges:	-20 / +20 mbar 0.2 / 20 m/s -50 / +600 °C
Accuracy:	±0.003 mbar 0.5 % displayed value ±1 digit ±0.1 m/s or ±5 % displayed value ±1.5 °C
Resolution:	0.0001 mbar / 0.01 m/s / 0.1 °C

DG: H, PG: 4	Part no.
CAPBs® base handle STm	M091000017
Pressure/temperature CAPBs® sens FP 10	M090053210



CAPBs® air quality AQ 20

Description

Sensor module for fast and reliable detection of VOCs (volatile organic compounds) and CO₂ in ambient air. The gas concentration is displayed by the evaluation unit as CO₂ (ppm) and TVOC (ppb); the CAPBs® measurement unit provides visual and audible signals. The alarm threshold can be adjusted as required.

Application

- Evaluation of the air quality in rooms
- Inspection of filters
- Redundant measurement in conjunction with PID measurements
- Evaluation of the air quality in closed rooms (e.g. in schools, offices, conference rooms, libraries, etc)

Technical specifications

Dimensions (H x W x D):	58 x 42 x 35 mm
Weight:	30 g
Interface:	Bluetooth® Smart
Measuring ranges:	450 / 2,000 ppm CO ₂ equivalent (relative) 125 / 500 ppb TVOC equivalent
Resolution:	1 ppb (TVOC) / 1 ppm (CO ₂)

DG: H, PG: 4	Part no.
CAPBs® base handle STm	M091000017
Air quality CAPBs® sens AQ 20	M090120010



CAPBs® Temperature TK 10, type K

Description

Temperature transmitter with standardised temperature socket type K. This allows for the connection of all type K two-pole thermocouples and temperature probes.

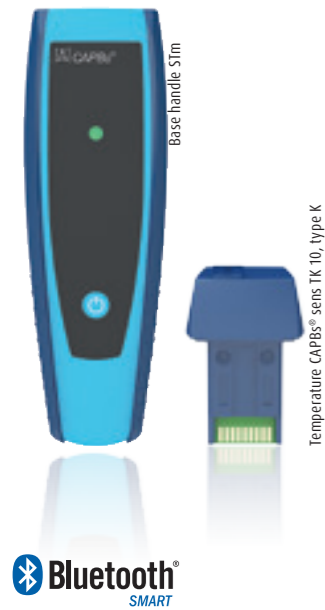
Application

- Temperature measurement

Technical specifications

Dimensions (H x W x D):	58 x 42 x 35 mm
Weight:	22 g
Interface:	Bluetooth® Smart
Measuring range:	-50 / +1,150 °C (depends on thermocouple used)
Accuracy:	±1.5 °C
Resolution:	0.1 °C

DG: H, PG: 4	Part no.
CAPBs® base handle STM	M091000017
Temperature CAPBs® sens TK 10, type K	M090000810



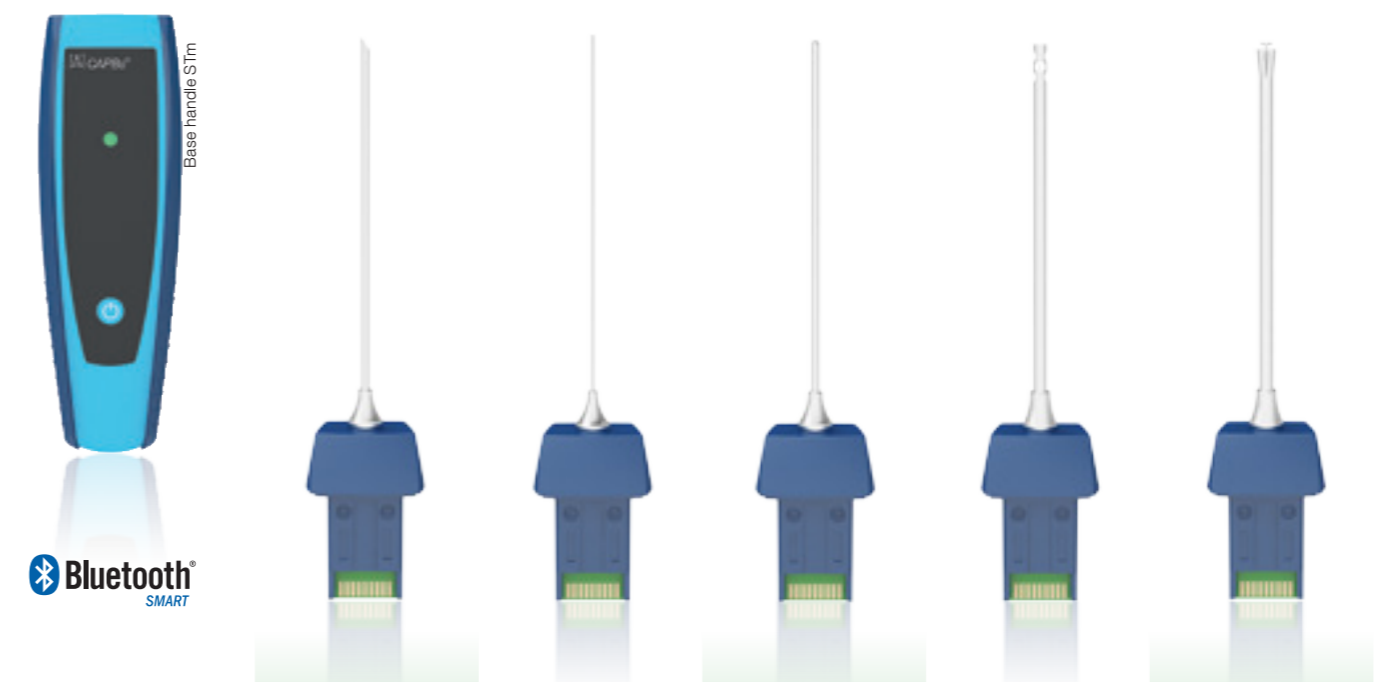
CAPBs® Temperature TK

Description

Sensor module for measurement of the temperature on surfaces, in liquids, soft plastic media or in air with different, application-specific temperature probes.

Application

- Temperature measurement



Technical specifications

	Spike probe TK 20	Liquid probe TK 30	Liquid probe TK 35	Air probes TK 40	Surface probe TK 50
Dimensions (H x W x D):	186 x 42 x 35 mm	187 x 42 x 35 mm	190 x 42 x 35 mm	187 x 42 x 35 mm	187 x 42 x 35 mm
Weight:	32 g	28 g	32 g	32 g	34 g
Interface:	Bluetooth® Smart	Bluetooth® Smart	Bluetooth® Smart	Bluetooth® Smart	Bluetooth® Smart
Measuring ranges:	-50 / +800 °C	-50 / +1,100 °C	-50 / +1,100 °C	-50 / +400 °C	-50 / +400 °C
Accuracy:	±1.5 °C 1 % displayed value	±1.5 °C 1 % displayed value	±1.5 °C 1 % displayed value	±1.5 °C 1 % displayed value	±1.5 °C 1 % displayed value
Resolution:	0.1 °C	0.1 °C	0.1 °C	0.1 °C	0.1 °C

DG: H, PG: 4	Part no.
CAPBs® base handle STM	M091000017
Insertion probe CAPBs® sens TK 20 D3	M090002210
Liquid probe CAPBs® sens TK 30 D1.5	M090002310
Liquid probe CAPBs® sens TK 35 D3	M090002410
Air probe CAPBs® sens TK 40 D4.7	M090002510
Surface probe CAPBs® sens TK 50 D4	M090002610



CAPBs®

Flow rate and temperature measurement

FlowTemp® ST



Description

Sensor module for continuous, simultaneous determination of flow rate (l/min) and temperature (°C) in water applications. The flow rate is measured with a high-precision capacitance flow sensor, the temperature with a PT1000 module. Both sensors are integrated in a robust housing made of high-quality plastic with degree of protection IP 67. Thanks to the compact design, measurements at low water fittings are very convenient. The device is tested as per TÜV report S1217-00/15. The measured data is transmitted to a BlueLine measuring instrument or a mobile device via the integrated Bluetooth® Smart interface.

Application

- Verification of performance key "NL" of accumulator and continuous capacity
- Function checks of decentralised drinking water heaters
- Checking the output capacity of heat exchangers
- Inspection of heat exchangers
- Function tests of circulation lines
- Inspection of fittings (minimum volume flow)
- Determination of the water temperature at water taps
- Inspection of thermal mixing valves
- Acceptance tests of newly installed drinking water installations

Dimensions (H x W x D):	158 x 71 x 97 mm	
Weight:	370 g	
Interface:	Bluetooth® Smart	
Measuring ranges:	Flow rate: 1.5 / 17.5 l/min	Temperature: 0 / +100 °C
Accuracy:	Flow rate: ±0.3 l/min or ±5 % of measured value	Temperature: ±2 °C or ±3 % of measured value
Resolution:	Flow rate: 0.1 l/min	Temperature: 0.1 °C

DG: H, PG: 4	Part no.
FlowTemp® ST	502001



The application counts.

BlueLine measuring instruments for CAPBs®



	Flue gas analyser BLUELYZER ST	Flue gas analyser EUROLYZER STx	Flue gas analyser MULTILYZER STx	Pressure measuring instru- ment S4600 ST	Temperature measuring instrument TMD 9
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	Flue gas analysis, pressure measurement 40 mbar (draft) and (differential) temperature measurement with a single instrument	All-in-one: Flue gas analysis, (differential) pressure measurement 150 mbar and (differential) temperature measurement	All-in-one: Flue gas analysis, (differential) pressure measurement 150 mbar and (differential) temperature measurement	For measuring pressure, vacuum and differential pressure	For temperature measurement on surfaces, in liquids, soft plastic media or in air and gases.
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Application	Micro SD/SDHC card	Max. 16 GB	Max. 16 GB	Max. 16 GB	Max. 16 GB	Max. 16 GB
	Flue gas measurement	•	•	•	•	•
	Draft/chimney draft measurement	•	•	•	•	•
	Pressure measurement	•	•	•	•	•
	Differential pressure measurement	•	•	•	•	•
	Vacuum measurement	•	•	•	•	•
	Temperature measurement	•	•	•	•	•
	Pitot measurement	•	•	•	Max. 150 mbar	•
	Particulate matter measurement	•	•	•	•	•

- | | | | | |
|---|--|---|---|--|
| <ul style="list-style-type: none"> ■ The world's smallest, fully-featured HVAC all-rounder with TFT colour display ■ CO ambient measurement with two freely adjustable alarm thresholds ■ Fully-fledged temperature measurement program, differential temperatures (e.g. flow/return) can also be determined | <ul style="list-style-type: none"> ■ ECO sensor: Lead-free O₂ sensor with long service life and optimised calibration phase, short response time, resistant to biogenous fuels ■ 5 years warranty on O₂ measuring cell ■ H₂-compensated CO cell (measuring range up to 10,000 ppm) ■ NO cell can be retrofitted | <ul style="list-style-type: none"> ■ ECO sensor: Lead-free O₂ sensor with long service life and optimised calibration phase, short response time, resistant to biogenous fuels ■ 7 years full warranty in connection with a service contract ■ Sensor equipment with a combination of up to six measuring cells: O₂, CO_{H2}, NO, SO₂, NO₂ and CO_{20,000} | <ul style="list-style-type: none"> ■ Six (differential) pressure measuring ranges ■ Barometric pressure sensor and temperature compensation for highly accurate measured value ■ Also available as measuring instrument for ultra-low pressure (20 mbar) and version for very high pressure (18 bar) | <ul style="list-style-type: none"> ■ Short response time for measurements at cycles of a second ■ Multifunctional use of temperature probes with type K connection ■ Very long battery life due to lithium-ion battery (up to 35 h) ■ Data logger included |
|---|--|---|---|--|



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