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## Operating instructions

### CAPBs<sup>®</sup> base handle STm



Read instructions before using device!



Observe all safety information!



Keep instructions for future use!

# 1 About these operating instructions

The operating instructions describe the CAPBs base handle STm. The CAPBs base handle STm cannot be operated without a sensor module. The CAPBs base handle STm and a CAPBs sens sensor module form a measuring instrument (also referred to as "CAPBs" in these operating instructions). Read and understand the operating instructions for the CAPBs sens sensor module which you use together with the base handle.

These operating instructions are part of CAPBs base handle STm.

- ▶ You may only use the measuring instrument if you have fully read and understood these operating instructions.
- ▶ Verify that these operating instructions are always accessible for any type of work performed on or with the measuring instrument.
- ▶ Pass these operating instructions as well as all other related documents on to all owners of the measuring instrument.
- ▶ If you feel that these operating instructions contain errors, inconsistencies, ambiguities or other issues, contact the manufacturer prior to using the measuring instrument.

These operating instructions are protected by copyright and may only be used as provided for by the corresponding copyright legislation. We reserve the right to modifications.

The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe these operating instructions or from failure to comply with directives, regulations and standards and any other statutory requirements applicable at the installation site of the measuring instrument.

## 2 Information on safety

### 2.1 Safety messages and hazard categories

These operating instructions contain safety messages to alert you to potential hazards and risks. In addition to the instructions provided in these operating instructions, you must comply with all directives, standards and safety regulations applicable at the installation site of the measuring instrument.

Verify that you are familiar with all directives, standards and safety regulations and ensure compliance with them prior to using the measuring instrument.

Safety messages in these operating instructions are highlighted with warning symbols and warning words. Depending on the severity of



a hazard, the safety messages are classified according to different hazard categories.

**WARNING  
WORD**



Type and source of the hazard are shown here.

► Precautions to take in order to avoid the hazard are shown here.

Consequences of failure to observe the instructions are shown here.

## 2.2 Intended use

The intended use is determined by the CAPBs sens sensor module that you use with the CAPBs base handle. See the operating instructions of the corresponding CAPBs sens sensor module for details.

When using the measuring instrument, perform all work and all other activities in conjunction with the measuring instrument in compliance with the conditions specified in the operating instructions, as well as with all directives, standards and safety regulations applicable at the operation site of the measuring instrument.

## 2.3 Predictable incorrect application

Incorrect use is determined by the CAPBs sens sensor module that you use with the CAPBs base handle. See the operating instructions of the corresponding CAPBs sens sensor module for details.

## 3 Product description

CAPBs are measuring instruments for different applications. CAPBs can be used to extend BlueLine measuring instruments by the measured variables provided by the CAPBs. CAPBs can also be operated without a BlueLine measuring instrument.

The BlueLine measuring instrument or an app or a smartphone or tablet are used to display, evaluate and log the measured values. The measured values are transferred via Bluetooth Smart technology.

**WARNING**



**MEASURING INSTRUMENTS WITHOUT DEDICATED DISPLAY**

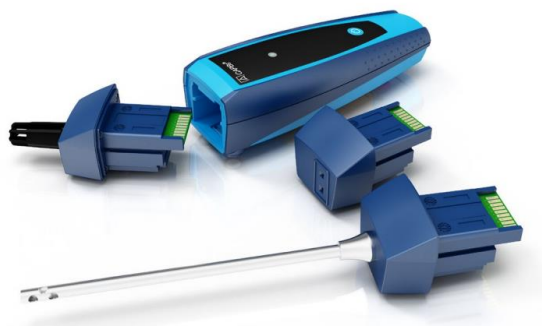
► Verify that the selected display devices have an active connection to the measuring instrument prior to the measurement, during the measurement and up to termination of the measurement.

Failure to follow these instructions can result in death, serious injury and equipment damage.

The following BlueLine measuring instruments can be paired with the CAPBs: BLUELYZER ST, EUROLYZER STx, MULTILYZER STe, S4600 ST series and TMD9.

The various CAPBs allow you to measure pressure, differential pressure, flow, temperature and humidity as well as detect gas leakage.

CAPBs are modular. This way, various sensor modules can be connected via different connection types. This results in numerous application solutions.



### 3.1 Modular system with base handle STm

The 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.

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 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 by means of different colours and flashing frequencies.



### 3.2 Overview



|   |   |
|---|---|
| 1 | LED   |
| 2 | Multi-purpose key                           |
| 3 | Magnets                                     |
| 4 | Unlocking mechanism for removing CAPBs sens |
| 5 | Battery compartment                         |
| 6 | Snap-in mechanism for CAPBs sens            |

### 3.3 LED status, visual and audible signals

| LED status                              | Meaning  |
|---|--|
| Flashing blue                           | The measuring instrument is searching for a Bluetooth Smart connection   |
| Flashing green                          | The measuring instrument is connected  |
| Flashing green, fast                    | Measurement finished, measured data available, Hold mode   |
| Flashing yellow, fast                   | Settling phase   |
| Flashing yellow                         | Measuring mode   |
| Flashing white                          | Measurement finished, measured data available  |
| Flashing magenta                        | Data logger active   |
| Flashing red                            | Sensor error   |
| Flashing red, fast                      | Base handle connected, no CAPBs sens plugged in  |
| Flashing magenta, fast                  | Base handle not connected and no CAPBs sens plugged in   |
| Flashing red and beep, every 10 seconds | Low battery  |
| Audible signal (beep)                   | Depending on the application (GS10, CO30), the CAPBs base handle STm emits audible signals.<br>The audible signal can be activated or deactivated in the main menu of the measurement program of the display device. |



## 3.4 Assignment of the multi-purpose key

You can assign a function to the multi-purpose key of the CAPBs base handle in the Settings menu of the BlueLine measuring instrument or the EuroSoft live app. Press the "Enter" key to open the main menu in the measurement program. Select "Settings → Bluetooth Smart → CAPBs Key" and select the function to be assigned to the key:

| CAPBs sens   | Function of key and meaning   |
|--|---|
| CO30, GS10   | <u>Acknowledge</u> : Acknowledge audible alarm<br><u>Hold</u> : Hold measured values<br><u>Reset Max/Min</u> : Clear maximum/minimum values<br><u>Data logger (BlueLine device option)</u> : Start/stop data logger<br><u>Zero point</u> : Set zero point at current gas concentration  |
| PS10, PS20, PS22, PS33, PS35, PS40, PS41, PS42, PS60, PS61, PS62, PT70, FP10 | <u>Start/Stop</u> : Start or terminate measurement (for measurement programs which comprise this function)<br><u>Hold</u> : Hold measured values<br><u>Zero point</u> : Set zero point at current pressure<br><u>Reset Max/Min</u> : Clear maximum/minimum values<br><u>Data logger (BlueLine device option)</u> : Start/stop data logger |
| AQ20, RH80, FT20, TK10, TK11, TK20, TK30, TK35, TK40, TK50                   | <u>Start/Stop</u> : Start or terminate measurement (for measurement programs which comprise this function)<br><u>Hold</u> : Hold measured values<br><u>Reset Max/Min</u> : Clear maximum/minimum values<br><u>Data logger (BlueLine device option)</u> : Start/stop data logger   |

## 4 Operation with BlueLine devices and EuroSoft live app

### 4.1 CAPBs measurement menu


The BlueLine measuring instrument displays, evaluates and logs the measured CAPBs values.

You can also use a smartphone or tablet with Bluetooth Smart to display, evaluate and log the measured CAPBs values.

The "EuroSoft live" app required for this is available in the Google Play Store (Android) and the App Store (Apple). The app provides program menus which depend on the CAPBs sens sensor module used.



## 4.2 Initial commissioning with BlueLine measuring instrument

1. Plug the CAPBs sens sensor module required for your application into the base handle.
2. Press and hold down for approximately two seconds the multi-purpose key of the measuring instrument in order to switch it on.
3. Start the required CAPBs program on the measuring instrument, designated by the Bluetooth symbol: .
4. Press the "Enter" key to open the main menu in the measurement program.
5. Select the Bluetooth Smart search for CAPBs under "Settings → Bluetooth SMART".

The Bluetooth Smart search takes approximately 10 to 15 seconds. The CAPBs must be on while the search is running.

The CAPBs measuring instruments found are displayed with the serial number of the base handle and the designation of the CAPBs sens sensor module.

6. Select the required CAPBs and press the "Enter" key to establish the connection.

When the connection is established, the colour of the LED at CAPBs base handle changes from blue to green. The selected CAPBs is now paired with the BlueLine measuring instrument. In the future, it will connect automatically.

After initial commissioning, it is sufficient to switch on the CAPBs before you start the required measurement program on the BlueLine device.

## 4.3 Initial commissioning with EuroSoft live app





1. Plug the CAPBs sens sensor module required for your application into the base handle.
2. Press and hold down for approximately two seconds the multi-purpose key of the measuring instrument in order to switch it on.
3. Start the EuroSoft live app on the mobile device.
4. Tap the button "Search for devices".


The CAPBs measuring instruments found are displayed with the serial number of the base handle and the designation of the CAPBs sens sensor module.

5. Tap the required CAPBs in the list to establish the connection.

When the connection is established, the colour of the LED at CAPBs base handle changes from blue to green. The app opens

the application menu which provides the application programs for the plugged in CAPBs sens sensor module. Navigate with the following buttons:

|   |       |
|---|-------|
|  | Up    |
|  | Down  |
|  | Back  |
|  | Enter |

Tap the Share button (top right) to send or save the measurement logs: 

## 4.4 CAPBs settings

You can assign a function to the key of the multi-purpose key of the CAPBs base handle via the menu item "Settings → Bluetooth SMART → CAPBs Key".

The following functions are available (depending on the measurement program): Start/Stop, Hold, Zero, Reset Max/Min and Data Logger (option).

In the Direct Access menu, you can switch between different CAPBs devices via the menu item "CAPB".

## 4.5 Measurement

Plug the CAPBs sens sensor module for the measuring task and the measuring range at hand into the CAPBs base handle. Before taking measurements, you must establish the connection between the CAPBs and the display device (for example, BlueLine measuring instrument).

Switch on the CAPBs and start the required measurement program on the BlueLine measuring instrument or the smartphone or the tablet. Once you have established the connection, measurements can be taken.

**Note:** You can only connect to a single display device at a time.





## 4.6 Terminating the measurement

If you terminate the measurement program on the BlueLine measuring instrument or the smartphone or the tablet, the Bluetooth connection is automatically disconnected. After a period of approximately one minute without Bluetooth connection, the CAPBs is automatically switched off. If you hold down the multi-purpose key of the CAPBs base handle for approx. 2 seconds, the CAPBs is immediately switched off and the Bluetooth connection is disconnected.

# 5 Technical specifications

## 5.1 Approvals, conformities

CAPBs STm:

RED (Radio Equipment Directive) - 2014/53/EU

## 5.2 CAPBs STm:



|                       | CAPBs STm  |
|-----------------------|--|
| Dimensions            | Housing (W x H x D) 140 x 45 x 39 mm   |
| Housing               | Polyamide (PA)   |
| Degree of protection  | IP 40 with plugged in CAPBs sens sensor module                                       |
| Operating temperature | 0 °C to +40 °C   |
| Storage temperature   | -20 °C to +60 °C   |
| Supply                | Batteries 2 x AAA (micro), battery life depends on the CAPBs sens sensor module used |



|   | CAPBs STm  |
|---|--|
| Compatible BlueLine measuring instruments | BLUELYZER ST, EUROLYZER STx, MULTILYZER STe, S4600 ST series, TMD9 firmware V2.00.0 and higher   |
| Compatible display units                  | Smartphone or tablet with Bluetooth 4.0 and Android version 4.3 and higher or Apple iOS version 7.1 and higher<br>Free app "EuroSoft live" available from App Store (Apple) or Google Play Store (Android)   |
| Data communication                        | Bluetooth Smart interface<br>Bluetooth type: Broadcom Corporation BCM20737S BLE SoC<br>Qualified Design ID: D022301<br>Bluetooth radio class: class 2<br>Bluetooth specification: 4.1  |
| Frequency band                            | 2.4 GHz  |
| Transmission power                        | Max. 2.5 mW / 4 dBm  |
| Range                                     | Up to 10 m in buildings, up to 50 m outdoor<br>The actual range depends on the environment and can be reduced by, for example, walls and other obstacles   |
| Bluetooth certification                   | EU countries:<br>Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Republic of Cyprus, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom<br>EFTA countries:<br>Iceland, Liechtenstein, Norway, Switzerland |

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## INFO

### BLUETOOTH CERTIFICATION

- The Bluetooth module may only be used in countries for which a Bluetooth certification has been obtained.
-



## 6 Troubleshooting

Repairs may only be performed by specially trained, qualified staff.

| Problem   | Possible reason    | Repair  |
|---|--------------------|---|
| Measuring instrument cannot be switched on      | Batteries empty    | ► Replace batteries                                 |
| Display device shows dashes, no measured values | Sensor inoperative | ► Send the measuring instrument to the manufacturer |
| Other malfunctions                              | —                  | ► Send the measuring instrument to the manufacturer |

## 7 Decommissioning, disposal



Dispose of the product in compliance with all applicable directives, standards and safety regulations.

Electronic components and batteries must not be disposed of together with the normal household waste.

## 8 Warranty

See our terms and conditions at [www.afriso.com](http://www.afriso.com) or your purchase contract for information on warranty.

## 9 Addresses

The addresses of our worldwide representations and offices can be found on the Internet at [www.systronik.com](http://www.systronik.com).

# 10 Declaration of Conformity

## EG-Konformitätserklärung

Messtechnik für Industrie und Umwelt

## SYSTRONIK

Messtechnologie

EC Declaration of Conformity \* Certificat de conformité CE \* Dichiarazione di conformità CE

Als Hersteller erklären wir hiermit, dass unser Produkt  
We declare that our product \* Nous déclarons que notre produit \* Dichiariamo che nostro prodotto

### CAPBs®

TK10\_TK11\_TK20\_TK30\_TK35\_TK40\_TK50\_FP10\_AQ20\_AQ21\_PT70  
PS10\_PS20\_PS22\_PS33\_PS35\_PS40\_PS41\_PS42\_PS60\_PS61\_PS62  
GS10\_RH80\_CO30\_FT20 (FlowTemp ST) & ST/STm (BG10)

mit den Vorschriften folgender europäischer Richtlinien übereinstimmt  
conforms to \* conforme avec \* conforma a

2014/30/EU  
2014/30/EU

**Elektromagnetische Verträglichkeit**  
EC directive electromagnetic compatibility

EN 301 489-17 V2.2.1  
EN 60950-1:2006 +A11:2009 +A12:2011 +A1:2010 +A2:2013  
EN 62479:2010  
EN 61000-6-1  
EN 61000-6-3:2007+A1:2011 +AC:2012  
EN 50270-1

2011/65/EU  
2011/65/EU

**Beschränkung der Verwendung gefährlicher Stoffe (RoHS)**  
Restriction of the use of certain hazardous substances (RoHS)

2012/19/EU  
2012/19/EU

**Elektro- und Elektronik-Altgeräte (WEEE)**  
Waste Electrical and Electronic Equipment (WEEE)

### CAPBs®

ST/STm (BG10)

2014/53/EU  
2014/53/EU

**ETSI EN 300 328 V.1.9.1**  
ETSI EN 300 328 V.1.9.1

**Funkgeräte-Richtlinie (RED)**  
Radio Equipment Directive (RED)

Illmensee, den 21.02.2017

Dipl.-Ing. (FH) Richard Skoberla  
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