PHYWE

Cobra SMARTsense Temperature -40…125 °C

12903-00

PHYWE Systeme GmbH & Co. KG
Robert-Bosch-Breite 10
D–37079 Göttingen

Telefon +49 (0) 551 604–0
Fax   +49 (0) 551 604–107
E-mail   info@phywe.de
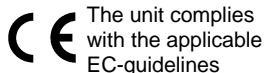Internet www.phywe.com

Operating instructions

(€ The unit complies with the applicable EC-guidelines

Fig. 1: 12903-00 Cobra SMARTsense Temperature -40…125 °C

TABLE OF CONTENTS

1 SAFETY PRECAUTIONS

⚠ **Caution!**

- Carefully read these operating instructions completely before operating this instrument. This is necessary to avoid damage to it, as well as for user-safety.
- Only use the instrument for the purpose for which it was designed.
- Only use the instrument in dry rooms in which there is no risk of explosion.
- Protect the instrument from dust, moisture and vapours. Use a slightly moist lint-free cloth to clean the instrument. Do not use aggressive cleaning agents or solvents.
- Take care that no liquid penetrates in through the housing openings, as such penetration would result in damage to Sensor.
- Do not open the unit.

2 PURPOSE AND CHARACTERISTICS

The sensor is used for measuring temperature values and for transferring the values to a terminal device, e.g. a tablet computer, smartphone, etc., via Bluetooth.

3   FUNCTIONAL AND OPERATING ELEMENTS

3.1 Operating elements

The sensor has an on-button and two LEDs for indicating the Bluetooth and battery charge status.

On-Button ⏻

Pressed for longer 3s	Switch sensor on/off
Pressed 3x quickly	Start offline measurement
Pressed 2x quickly	Stop offline measurement

Bluetooth-LED ✳

Flashing red every 2 seconds	Not connected
Flashing green every 2 seconds	Connected to the terminal device
Flashing green every 4 seconds	Running measurement

Battery charge LED 🔋

Flashing red every 5 seconds	Low battery

3.2 Functional elements

The temperature-sensitive element is located at the tip of the 15 cm long, corrosion-resistant sensor rod.

4   NOTES ON OPERATION

The device fulfils all of the technical requirements that are compiled in current EC guidelines. The characteristics of this product qualify it for the CE mark.

This instrument is only to be put into operation under specialist supervision in a controlled electromagnetic environment in research, educational and training facilities (schools, universities, institutes and laboratories).

The individual connecting leads are each not to be longer than 2 m.

The instrument can be so influenced by electrostatic charges and other electromagnetic phenomena (HF, bursts, indirect lightning discharges) that it no longer works within the given specifications. Carry out the following measures to reduce or eliminate the effect of such disturbance: Ensure potential equalization at the PC (especially with Laptops). Use screening. When a total failure of the instrument occurs, unplug it and plug it back in again for a reset.

5   HANDLING

This section describes the start-up of the sensor and the recording of measurement data. Please read this section thoroughly in order to avoid failures or operating errors.

5.1 Start-up

Switch the sensor on by pressing the on-button for more than 3 seconds. The Bluetooth LED lights up red. Start the software and select the sensor.

There is a 9-digit code on the back of the sensor (Fig.2). The last 4 digits of the code corresponds to the last four digits of the sensor name in the software (Fig.3). This allows an exact assignment of the sensors with the software.
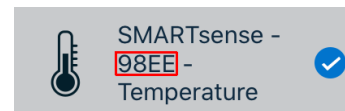

Fig. 2

Fig.3

After the sensor has been selected in measureApp, the LED flashes green to indicate a correct connection.
If the sensor is switched on and not connected, it switches off automatically after 5 minutes.

5.2 Recording of temperature measurement data

Hold the sensor into the medium to be measured down to a maximum depth of 15 cm. Take the response time of the system due to the metallic sensor rod into consideration.

5.3 Offline measurement

Switch the sensor on by pressing the on-button for more than 3 seconds. To start an offline measurement, press the power button 3 times in quick succession. The Bluetooth LED then flashes green 3 times in rapid succession to acknowledge the successful start. To stop a measurement, press the switch-on button 2x in quick succession. The Bluetooth LED also acknowledges this by flashing quickly.

Offline measurements can be read out via the measureAPP or measureLAB software. Furthermore, offline parameters such as data rate and measurement duration can be set. After the set measurement duration has elapsed, the offline measurement is automatically terminated. However, the measurement can always be ended prematurely by pressing the switch-on button.
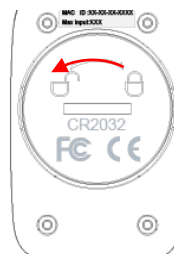
5.3 Replacing the battery

Remove the battery

Fig. 4

Open the sensor by turning the screw cap on the back of the sensor counterclockwise, e.g. with a coin.

Fig. 5

Lever the battery sensitively, e.g. with the help of a small screwdriver or a small pair of scissors, out of its socket. Insert the screwdriver as shown in Fig. 5.

Insert new battery

Slide the battery under the golden metal nose (Fig.6-1). Make sure that the battery is completely under the metal nose and completely pushed to the upper edge.
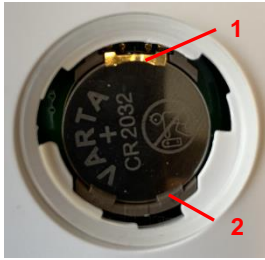

Push the battery into the socket by pressing lightly on the opposite side.

The battery slips under the two plastic lugs (Fig. 6-2), which is also noticed by a short "click".

Fig. 6

Before closing, make sure that the seal in the lid is not bent and lies neatly on the edge of the lid. Then tighten the cover clockwise.

Fig. 7

6 TECHNICAL DATA

Operating temperature range: 5 - 40°C
Rel. humidity < 80%

Sensor sheath	Stainless steel, $\varnothing$ 5 mm
Measuring range	-40...+125°C
Absolute accuracy	± 0.5°C
Resolution	0.01°C
Max. data transfer rate	10 Hz
Battery type	CR2032
Max. wireless range (open field)	30 m
IP category	IP67
Dimensions (width x height x depth)	230 x 35 x 15 mm
Weight	34 g

7 SCOPE OF DELIVERY

- The extent of delivery is as follows
- Cobra SMARTsense Temperature   12903-00
- Operating instructions

8 ACCESSORIES

- Button Cell CR2032, 3V   07922-15
- Cobra SMARTlink   12999-99
- USB-Bluetooth-Adapter   07936-00
- Software measureLAB   14580-61
- Free measureApp available from supplier portals

iOS	Android	Windows

9 CONFORMITY

PHYWE Systeme GmbH & Co.KG hereby declares that the radio system type 12903-00 complies with the 2014/53/EU directive. The complete text of the EC Declaration of Conformity is available at the following Internet address:

www.phywe.com/en/ec-declaration

10 DISPOSAL

The packaging mainly consists of environmentally-friendly materials that should be returned to the local recycling stations.

Do not dispose of this product with normal household waste. If this unit needs to be disposed of, please return it to the address that is stated below for proper disposal

PHYWE Systeme GmbH & Co. KG
Abteilung Kundendienst
Robert-Bosch-Breite 10
D–37079 Göttingen

Telefon	+49 (0) 551 604-0
Fax	+49 (0) 551 604-107