C200/C210

Version V2 (1/2003)

$C \epsilon$

Table of contents

1 Prior to operation

- This manual contains information and references, necessary for the safe operation and maintenance of the instrument.

- Prior to using the instrument (commissioning / assembly) the user is requested to thoroughly read the instruction manual and comply with it in every points

- The instrument is improper for measuring in alive environment.

- The measuring instrument is only to be used for the specified measuring ranges (overheat can cause irreversible damages)

- The instrument must be stored in dry and closed areas and protected from direct sunshining.

- Adjustment of temperature and humidity is only to be carried out using the proper reference material

- When using the instrument at different temperatures, a

recovery time of a few minutes should be observed before operating the instrument again.

- Technical data, storage and transport conditions are to be found on the technical datasheet.

- Warranty: 12 months

Proper use:

- The instrument may only be used under those conditions and for those purposes for which it was built

- The operational safety is no longer ensured when modifying or opening the instrument.
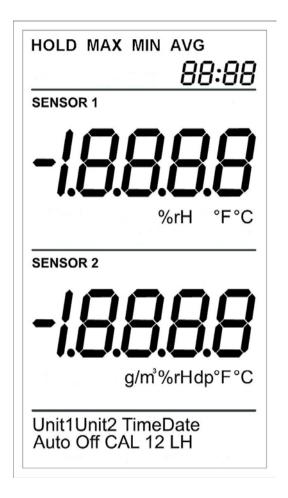
C200

C210

2 C200/C210

The new **C**ompact hand held devices for measuring

temperature and humidity have the following feature:

- Large display with backlight

- thumb wheel operation

- resistant and safe housing

- high accuracy

The C200 is equipped with a fixed probe whereas the

C210 consists of a flexible probe connected to the main body

through a cable.

3 The display

HOLD MAX MIN AVG

88:88

SENSOR 1

-1.8.8.8.8

%rH   °F°C

SENSOR 2

-1.8.8.8.8

g/m³%rHdp°F°C

Unit1Unit2 TimeDate
Auto Off CAL 12 LH

◄ Upper menu with date and clock

◄ Probe 1- temperature

◄Probe 1-Unit (°C, °F)

◄ Probe 2- relative humidtiy

◄ Probe 2-Unit (g/m³, %rH, dp°F, dp°C)

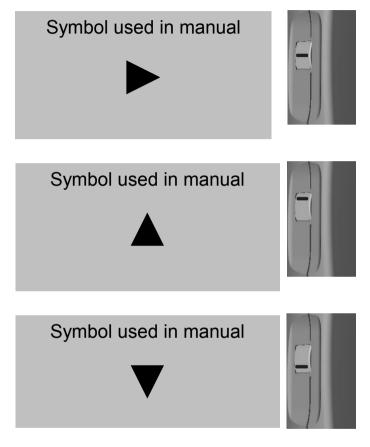◄ Submenu for configuration- und adjustment

4 Operating the instrument

Whereas the traditional hand held devices are usually operated with buttons or knobs, the C200 and C210 have a thumb wheel on the left side.

The thumb wheel turns 15° upwards and downwards and can be pressed when placed in its start position

The upper menu is selected by turning the wheel upwards whereas the low menu (submenu for configuration and adjustment) is selected by turning the wheel downwards.

Press the thumb wheel while keeping it in the start position to switch on, switch off the instrument and enter .

THUMB-WHEEL

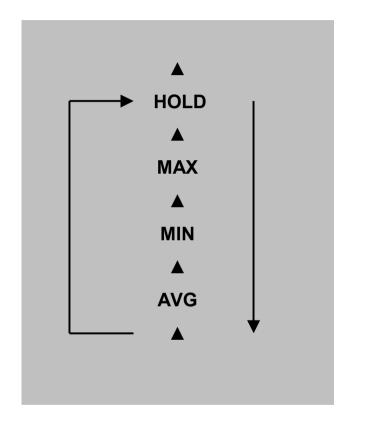The 3 positions of the **THUMB-WHEEL :**

Symbol used in manual

▶

Shortly press to switch on

Press and hold 2 sec. to switch on and activate backlight

Press again and hold 2 sec.to switch off (no menu activated)

Symbol used in manual

▲

Upper menu with **HOLD MAX MIN AVG** activation.

Selection with ▲, enter with ▶, interrupt with ▼ or by not

pressing the thumb wheel 20 sec long.

Symbol used in manual

▼

Activation of submenu for configuration and adjustment

Selection with ▼, enter with ▶, interrupt with ▲ or by not

pressing the thumb wheel for 20 sec.

5 The upper menu

The following functions can be selected in the upper menu:

HOLD MAX MIN AVG

Selection with ▲, the selected function flashes and is entered
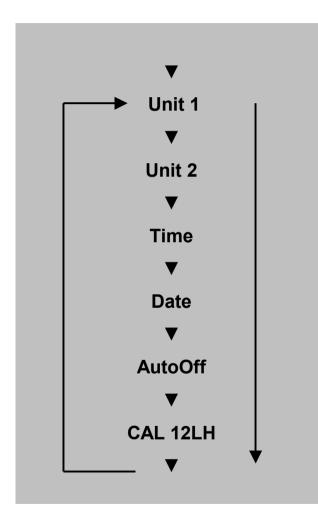with ▶

A function remains displayed once it is entered.

The menu can be interrupted with ▼ or by not pressing the

thumb wheel 20 long.

Hold: value will be held.

MAX: the maximum value is displayed.

MIN: the minimum value is displayed.

AVG: the arithmetical average value is displayed.

▲

HOLD

▲

MAX

▲

MIN

▲

AVG

▲

▼

Unit 1

▼

Unit 2

▼

Time

▼

Date

▼

AutoOff

▼

CAL 12LH

▼

6 The lower menu

The following functions can be selected in the submenu for configuration and adjustment:
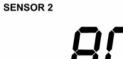
Unit1 Unit2 Time Date AutoOff CAL 12LH

Selection with ▼, the selected function flashes and is entered with ►. The menu can be interrupted with ▲ or by not pressing the thumb wheel 20 sec. long.

SENSOR 1

20.0
°F°C

Unit1: Unit1 is used to select the temperature unity. °C or °F can be selected by using ▲ and ▼

Enter with ►.

SENSOR 2

80.0
g/m³%rHdp°F°C

Unit2: Unit2 is used to select the unity for the relative humidity or the dew point. g/m³, %r.H. dp°C, dp°F can be selected by using ▲ and ▼.

Enter with ►.

12:00

Time: Set time. Hours and minutes are set one after the other by using ▲ and ▼.

Enter with ►.

30. 12

Date: Set date. The day, month and year are set one after the other by using ▲ and ▼.
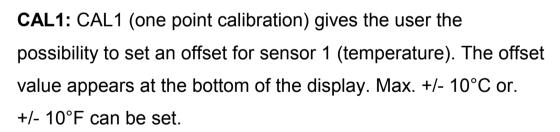
Enter with ►.

00:59

AutoOff: the AutoOff function enables the user to define and set a period of time (in minutes) for the instrument to automatically switch off. The OFF function (<1) deactivates the automatic switch off.

Select with ▲ and ▼; enter with ►.

20.0 °C

One point calibration of temperature and relative humidity

0.0 °C

CAL 1

CAL1: CAL1 (one point calibration) gives the user the possibility to set an offset for sensor 1 (temperature). The offset value appears at the bottom of the display. Max. +/- 10°C or. +/- 10°F can be set.

Factory calibration can be obtained by entering offset 0.0

Important: calibrations should be carried out only by skilled people using an appropriate calibration equipment

CAL2: CAL2 (one point calibration) gives the user the possibility to set an offset for sensor 2 (rel. humidity). The offset will base on the lower adjustment point (11% r.h.). The adjustment point should lay between 30% ... 95% r.h. (see figure).

The offset value appears on the top of the display. Max. +/-10%rH can be set. CAL2 is to be selected in connection with the unity for rel. humidity (%) only.

Factory calibration can be obtained by entering offset 0.0

Two points calibration for relative humidity

0.0

%rH

80.0

%rH

CAL 2 L

CAL2L, CAL2H: the lower adjustment value can be calibrated in menu **CAL2L** whereas the upper adjustment value can be calibrated in menu **CAL2H**. The lower value should lay between 10%...40% r. h. (preferably 33%r.h.) and the higher value should lay between 60...90% r.h. (preferably 76%r.h.). A two points calibration is only possible within the range !. +/-10% rel hum. is the max. offset that can be given per point. It can be set gradually with 0,1%.

Important: Two points calibrations should rather be carried out by accredited calibration laboratories !

Factory calibration can be obtained by entering offset 0.0

open battery case C200/C210

7 Changing the battery

If the symbol „BAT" appears on the display, the batteries have to be changed within the following hours. Open the battery case on the back of the instrument. Remove the old batteries and insert new ones. Respect the correct polarity!

Use only batteries of type IEC LR6 AA.
Don't use accumulators!

Reverse polarity may destroy the instrument ; make sure to place the batteries in the correct position and to use high quality batteries only.

8 Maintenance and adjustment

A yearly calibration is recommended. However it is advisable to recalibrate the instrument at more regular intervals when it is used in severe environments.

The calibration block and the corresponding calibration solutions (available as accessories) are required to carry out the calibration.

Prior to controling or adjusting, the instrument and the calibration block should be kept at a temperature of 20°C to 25°C during 12 hours.

Recalibrations should be exclusively carried out with the calibration block or by an accredited calibration laboratory.

The instrument can be cleaned by using a humid cloth and clear water. Prior to cleaning, ensure that the instrument is switched off. Never use acid detergents or dissolvants for cleaning and avoid any contact with the sensor.