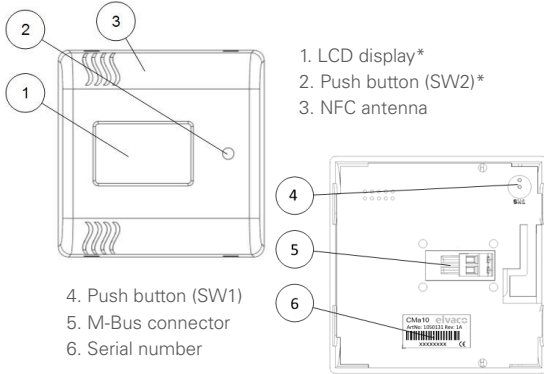


INTRODUCTION

CMa10/CMa11 is a 2-way M-Bus temperature/humidity sensor developed for indoor use. The product is available with (CMa10) or without (CMa11) LCD display.

For more information about the product, please visit the Elvaco AB website, <http://www.elvaco.com>.

OVERVIEW



MOUNTING

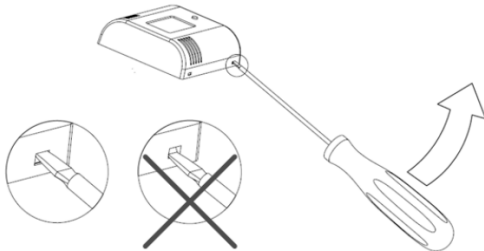
The sensor is mounted on a wall by using the holes on the product rear cover.

IMPORTANT

- Avoid mounting the product near supplementary heat sources, such as kitchen stoves, or in direct sunlight.
- Make sure to mount the product at least 1.5 meters from the floor and at least 1 meter from the nearest radiator.
- Do not mount the product on an external wall or near a door. If mounted over a conduit pipe, make sure that the pipe is filled to prevent air flow.

DEMOUNTING

To demount the sensor device, carefully insert the end of a screwdriver in the upper part of one of the enclosure bottom holes, as illustrated below.



M-BUS

M-Bus is a multi-drop 2-wire bus with no polarity. Use a cable with an area of 0.25-1.5 mm² to connect CMa10/CMa11 to a master device. Remove the rear cover. Slide and hold the M-Bus connector (5) to the right, connect the two wires and slide the terminal back into position.

IMPORTANT

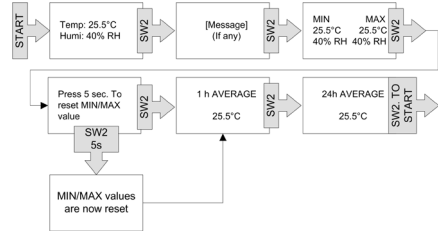
- Each CMa10/11 sensor must use a unique secondary or primary address (depending on the addressing mode set).
- Make sure to measure the voltage over the M-Bus connector to verify that the M-Bus master has been connected properly. The voltage should be in the range of 21-42 VDC.

CONFIGURE SETTINGS VIA LDC DISPLAY*

CMa10 has two different display modes: the standard mode and the setup mode. End-users will only have access to the standard mode, which displays current sensor information. The setup mode is entered using the SW1 push button (4) at the back of the product and can be used to configure settings for the sensor.

Standard mode

Push button SW2 on the front is used to display the next page, and get information about average, maximum and minimum values as well as messages.

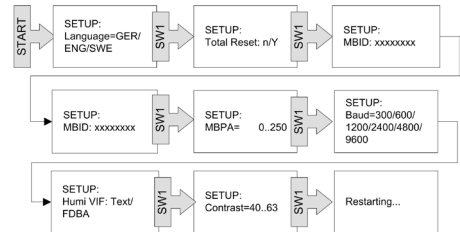


Setup mode

The setup mode is entered by pressing and holding push button SW1 (4) for 5 seconds (when LCD display is off). The next page is displayed by pressing SW1 for 2 seconds. To configure the value of a field, press push button SW2. If there are more than one configurable field on a page, push button SW1 is used to switch between them.

IMPORTANT

- If setup lock is enabled, the device cannot be unlocked again.



CONFIGURE SETTINGS VIA NFC

CMa10/CMa11 is equipped with an NFC antenna, which can be used to read current settings or configure a device. Please refer to the user's manual for more information on how to use NFC.

FACTORY DEFAULT RESET

In order to reset CMa10 to factory default settings, enter the setup mode and navigate to "Total Reset." Select "y".

Both CMa10 and CMa11 can be reset to factory default settings via M-Bus command. Please refer to the "Application reset" command in the user's manual for more information.

Below, the factory default settings for CMa10 and CMa11 are listed.

Factory default settings

M-Bus baud rate	2400 Bit/s
M-Bus primary address	0
M-Bus secondary address	Serial number
LCD contrast*	52

TROUBLESHOOTING

Product does not respond to M-Bus master

Please verify that:

- Voltage over M-Bus connector is in the range of 21-42 VDC.
- The product uses a unique primary/secondary address (depending on addressing mode set).
- The product and the M-Bus master uses the same baud rate.

CMA10 does not display any information

The problem might be a result of the LCD contrast being set too low. The value can be configured by using the M-Bus command "Set LCD contrast" (see user's manual for more information). By performing a factory reset CMA10 will return to its original LCD contrast settings.

Temperature value is inaccurate

Although the temperature sensor is normally very accurate, an incorrect positioning of the product can sometimes result in unintended temperature variations. When mounting the sensor, please verify that:

- The product is not mounted near any heat or cold sources.
- The product is not mounted in direct sunlight
- The product is not mounted in a spotlight beam.

SAFETY

The warranty does not cover damage to the product caused by usage in any other way than described in this manual. Elvaco AB can not be liable for personal injury or property damage caused by usage in any other way than described in this manual.

TECHNICAL SPECIFICATIONS

Mechanics

Protection class	IP30
Dimensions (w x h x d)	80 x 80 x 25 mm
Weight	75 g
Mounting	Wall-mount

Electrical connections

Supply voltage	From M-Bus
M-Bus slave port	Screw terminal/spring terminal solid wire 0.25-1.5 mm ²

Electrical characteristics

Nominal voltage	21-42 VDC
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User interface

Push button SW1	Enter setup mode, next page in setup mode.
Push button SW2*	Next page in standard mode, edit configurable field in setup mode
LCD display	CMA10: Yes, CMA11: No
Momentary values	Temperature, humidity, status
Historic values	Average values over the last hour/day

M-Bus slave interface

M-Bus baud rate, slave port	300 and 2400 bit/s
Nominal voltage, slave port	21-42 VDC
Power consumption	1T/1.5 mA
Addressing modes	Primary, secondary

Approvals

EMC	EN 61000-6-2, EN 61000-6-3
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ORDERING INFORMATION

Item number	Description
1050131	CMA10 Indoor temperature/humidity sensor, M-Bus, with display
1050133	CMA11 Indoor temperature/humidity sensor, M-Bus

CONTACT INFORMATION

Elvaco AB Technical support:

Phone: +46 300 434300

E-mail: support@elvaco.com

Online: www.elvaco.com



EU DECLARATION OF CONFORMITY

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Elvaco AB, Kabelgatan 2T, S-434 37 Kungsbacka, Sweden.

Product Year of CE-marking
CMA10 2016
CMA11 2016
CMA20 2016

The object(s) of the declaration listed above is in conformity with the relevant Community harmonization legislation:
EMC Directive 2014/30/EU
RoHS 2011/65/EU

And are in conformity with the following harmonization standards or other normative documents:
EN55022 (Radiated emission)
EN 61000-4-6 (Immunity to HF-injection)
EN 61000-4-3 (Immunity to RF-field)
EN 61000-4-2 (Immunity to ESD)

Kungsbacka, Sweden, 2016-04-16


David Vonasek, CEO

*Only applicable to CMA10