

CMa10w/11w

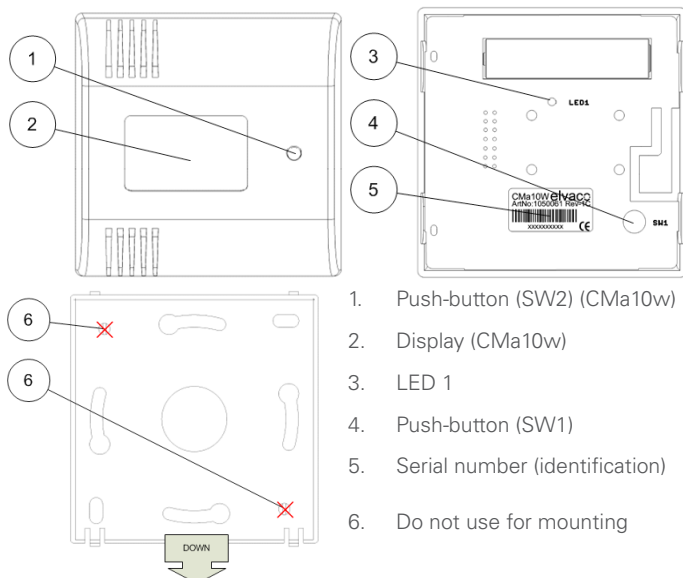
Indoor wireless M-Bus temperature and humidity sensor

INTRODUCTION

The CMa10w/CMa11w is a 1-way wireless M-Bus communicating temperature and humidity sensor for indoor use.

For a complete description of the product or for information in Swedish, visit the Elvaco AB website, www.elvaco.com.

OVERVIEW



MOUNTING

When mounting the CMa10w/CMa11w, avoid rooms with a lot of supplementary heat, such as kitchens or south facing rooms. Position the sensor away from direct sunlight. Avoid placing on an external wall or near an external door. Make sure that the sensor is not positioned closer than 1 m from the nearest radiator and at least 1.5 m above the floor.

The CMa10w/CMa11w can be mounted directly on the wall, or over a mounting box. If the CMa10w/CMa11w is placed over a conduit pipe, it is recommended to fill the pipe to prevent air flow which could affect accuracy of the values.

Remove the rear cover to be able to press the installation button SW1 (4).

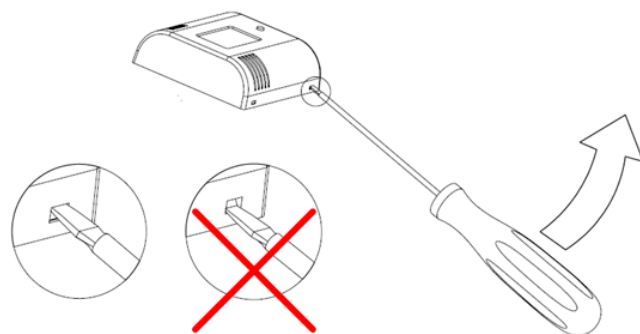
IMPORTANT

- Do not use mounting holes (6) as shown in overview.
- Turn the rear cover as shown in the overview.
- Do not mount the product inside a steel cabinet, which will dramatically lower the possibilities to connect to a master.
- If the product should be demounted from the wall, use a screwdriver to separate the product from the rear cover. The screwdriver should be inserted carefully in the upper part of the holes as shown in the figure.

WIRELESS M-BUS

The product is delivered with the radio turned off. The radio must be manually switched on during the installation procedure.

The product will not be activated until the installation procedure is started.



INSTALLATION

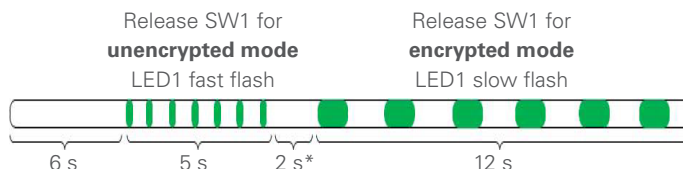
The product can be installed and enabled in two modes. Please advise your project manager which operation mode is used in your project.

Unencrypted mode: Meter data is sent unencrypted and the encryption key is not needed to decrypt the data.

1. Press and hold button SW1 (4) for 6 seconds, until LED1 (3) flashes quickly.
2. Release SW1 (4).

Encrypted mode: Meter data is sent in encrypted mode and the encryption key is needed to decrypt the data.

1. Press and hold button SW1 (4) for 13 seconds, until LED1 (1) flashes slowly.
2. Release SW1 (4).



*** If the button is released in this mode, the CMa10w/CMa11w will return to inactive mode. This also applies if the button is pressed down for longer than 25 seconds.**

IMPORTANT

Make sure that the product is activated by pressing SW1 in normal operation. If the product is activated, LED1 will flash shortly.

OPERATION

The product will automatically, after the installation procedure, send T1 messages every 6th minute containing sensor data, such as instantaneous temperature and humidity. The product will also send product status information, containing battery status and other relevant information.

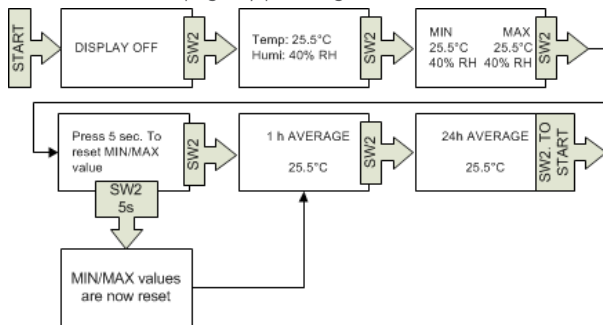
CONFIGURE USING LCD DISPLAY (CMA10W)

The display shows current sensor information when push button SW2 is used. The display is also used to change and view the CMa10w configuration. The display is turned off in normal operation mode. End users only have access to the Standard menu. The Setup menu can only be entered using the push-button SW1 on the rear of the product.



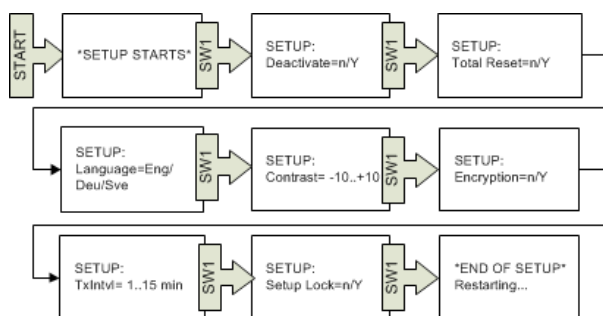
Standard menu

Push-button SW2 is used to change display page and reset average values. Enter next page by pressing SW2.



Setup menu

From the Standard menu, enter the Setup menu by pressing the push-button SW1 for 5 seconds. Change values by pressing push-button SW2. Change page by pressing SW1 for 2 seconds. If more than one option can be set on one page, press SW1 once for a short time to configure the next option.



RESET TO FACTORY DEFAULT

In order to reset the product configuration to factory default, navigate to "Total Reset" in the setup menu and select "y".

TROUBLESHOOTING

Master does not receive any telegram sent from the product

This can be due to the following reasons:

- The product has not been activated during the installation procedure.
- The master is not powered up or not correctly configured.
- The master is not within range of the radio signal.
- The master antenna is not properly mounted for best performance.
- The position of the product is inside a metallic cabinet or is disturbed by other radio equipment.

No information is shown in the display when using push button

This can be due to the following reasons:

- The product has not been activated during the installation procedure.
- The LCD contrast is set to a low value.
- The battery is empty. Check the serial number label of the product when the product is produced. The battery lifetime is up to 12 years depending on usage.

Temperature value is inaccurate

The temperature sensor is very accurate, but incorrect positioning of the product may result in unintended temperature variations. Please take the following in consideration when mounting the product:

- Do not mount the product close to heat sources.
- Do not mount the product in direct sunlight.
- Do not mount the product in the area of a spotlight beam.

TECHNICAL SPECIFICATIONS

Mechanics	
Casing material	ABS UL94-V0, white
Protection class	IP20
Dimensions	80 x 80 x 28 mm
Weight	75 g
Antenna Wireless M-Bus	Internal
Mounting	Wall mounted
Electrical	
Power supply	Internal battery, 12 years
Environmental	
Operating temperature range	CMa10w: 0 °C to +50 °C CMa11w: -20 °C to +55 °C
Storage temperature range	-40 to +85 °C
Operating humidity	0 to 95 %RH No condensation
Sensor accuracy	
Temperature 10 to 30 °C	+/- 0.2 °C
Humidity 10 to 90 % RH	+/- 2 % RH
Wireless M-Bus	
M-Bus standard	EN 13757-4 OMS compliant, mode T1
M-Bus commands	SND_NR
Values	Temperature, humidity, min/max/average
RF power	10 mW
Sensitivity	-104 dBm
Frequency	868 MHz
Approvals	
EMC	EN 61000-6-2, EN 61000-6-3
Factory defaults	
Language	ENG
Transmit interval	6 minutes
Encryption mode	Off
LCD contrast	0
Locked	No

ORDERING INFORMATION

Product	Part number	Description
CMa10w	1050061	Wireless M-Bus communicating temperature and humidity sensor for indoor use. With LCD display.
CMa11w	1050063	Wireless M-Bus communicating temperature and humidity sensor for indoor use.

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.

CONTACT INFORMATION

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Online: www.elvaco.com

EU DECLARATION OF CONFORMITY	
This declaration of conformity is issued under the sole responsibility of the manufacturer: Elvaco AB, Kabelgatan 27, S-43437 Kungälv, Sweden	
Product CMa10w CMa11w CMa12w CMa20w	Year of CE-marking 2016 2016 2016 2016
The object(s) of the declaration listed above is in conformity with the relevant Community harmonization legislation: EMC Directive 2014/30/EU Radio Equipment Directive 2014/53/EU RoHS 2011/65/EU And are in conformity with the following harmonization standards or other normative documents: EN 55022 (Radiated emission) EN 61000-4-6 (Immunity to HF-injection) EN 61000-4-3 (Immunity to RF-field) EN 61000-4-11 (Immunity to voltage variation) EN 61000-4-4 (Immunity to burst) EN 61000-4-5 (Immunity to surge) EN 61000-4-2 (Immunity to ESD) EN 300 220-1 (SRD Low power radio equipment)	
Kungälv, Sweden, 2016-04-16 David Vonasek, CEO	