

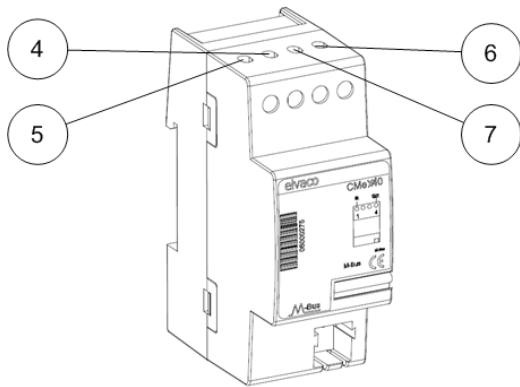
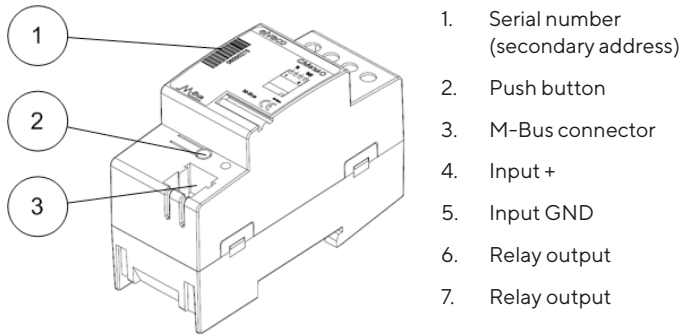
# CMeX40

## DIN-mounted M-Bus I/O module

### INTRODUCTION

The CMeX40 is a stand-alone, DIN-mounted M-Bus slave module equipment with one input and one output. The input has a counter functionality and the output can operate up to 8 A 230 V. This manual provides the information needed to get started with the CMeX40 product. For a complete description of the product or for information in Swedish, visit the Elvaco AB website, [www.elvaco.com](http://www.elvaco.com).

### OVERVIEW



### MOUNTING

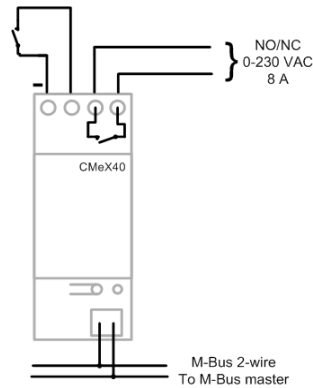
The CMeX40 should be mounted on a DIN-rail. The metallic clip on the bottom is used to mount and demount the unit from the DIN-rail. DIN-rail enclosure must cover the terminals.

### M-BUS 2-WIRE BUS

M-Bus is a multi-drop 2-wire bus with no polarity. Use a cable of area 0.25-1.5 mm<sup>2</sup>, e.g. a standard telephone cable (EKKX 2x2x0.5). Connect the wiring to the connector (3).

#### IMPORTANT

- All connected M-Bus slave devices must have unique M-Bus secondary or primary addresses depending on addressing mode.
- Measure voltage over M-Bus slave connection to verify M-Bus master connection. Voltage should be between 21-42 VDC.



### RELAY OUTPUT

Connect the power source, which should be managed by the product, to screw terminal (6) and (7). The relay output control can handle currents up to 8 A (240 VAC).

### INPUT SIGNAL

Connect to input signal (normally open), which should be monitored by the product, to the screw terminal (4) and (5).

### LED INDICATIONS

The product is equipped with a single LED, which can show the colors green and red in combinations. The green LED shows current input status and the red LED shows current relay output status.

#### Red LED

Mode	Product state	Visual
1000 ms off/10 ms on	Short flash every second. Charging of capacitor is taking place.	
4000 ms off/10 ms on	Short flash every 4 second. Relay output is off.	
4000 ms off/100 ms on/300 ms off/100 ms on	2 short flashes every second. Relay output is on.	

#### Green LED

Mode	Product state	Visual
4000 ms off/10 ms on	Short flash every 4 second. Input is off (open).	
4000 ms off/100 ms on/300 ms off/100 ms on	2 short flashes every second. Input is activated.	

## TROUBLESHOOTING

Pressing push-button does not toggle relay output

Verify relay output control configuration. See M-Bus command "Relay output control" in the complete manual.

There is a delay when toggling relay output

There is an internal process for toggling the relay which takes approximately 10 seconds, i.e. toggling relay output cannot be done faster than 10 seconds. This also applies to when pushing the push-button.

Product does not respond to M-Bus master commands

Please verify your M-Bus slave configuration and connection:

- Voltage over M-Bus connection should be between 21 VDC and 42 VDC.
- All M-Bus slaves connected to the M-Bus master must have unique primary addresses or secondary addresses depending on addressing mode.
- Verify M-Bus slave baud rate used by M-Bus master. M-Bus master baud rate must be identical to M-Bus slave baud rate.

## 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.

## ORDERING INFORMATION

Product	Part number	Description
CMeX40	1050002	DIN-Mounted M-Bus I/O module

## CONTACT INFORMATION

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## TECHNICAL SPECIFICATIONS

Mechanics	
Protection class	IP20
Dimensions	90x65x36 mm
Weight	80 g
Connection M-Bus	Pin terminal solid wire 0.6- 0.8 Ø mm
Mounting	DIN mounted
Screw terminal I/O	Screw terminal. Cable 0.75-2.5 mm <sup>2</sup> , 0.5 Nm tightening torque
Electrical	
Power consumption	1.5 mA M-Bus 1T
Installation category	CAT 2
Output relay current (max)	8 A
Output relay voltage (max)	240 VAC
Input loop max resistance	1 kΩ
Input type	Normally open
Input minimum open/close time for pulse detection	20 ms
Environmental	
Operating temperature range	-30 °C to +55 °C
Storage temperature range	-40 °C to +85 °C
Pollution	Degree 2
Operating altitude	0-2000 m
M-Bus	
M-Bus standard	EN 13757
M-Bus baud rate	300, 2400 Bit/s
M-Bus commands	SND_UD, SND_NKE, REQ_UD2
Addressing modes	Secondary, primary
Approvals	
EMC	EN 61000-6-2, EN 61000-6-3

### EU DECLARATION OF CONFORMITY

This declaration of conformity is issued under the sole responsibility of the manufacturer:  
Elvaco AB, Kabelgatan 2T, S-43437 Kungälv, Sweden

Product Year of CE-marking  
CMeX40 2016

The object(s) of the declaration listed above is in conformity with the relevant Community harmonization legislation:  
LVD Directive 2014/35/EU  
EMC Directive 2014/30/EU  
RoHS 2011/65/EU

And are in conformity with the following harmonization standards or other normative documents:

IEC 61010-1 (ed.3)  
EN55022 (Radiated emission)  
EN 61000-4-6 (Immunity to HF-injection)  
EN 61000-4-3 (Immunity to RF-field)  
EN 61000-4-4 (Immunity to burst)  
EN 61000-4-5 (Immunity to surge)  
EN 61000-4-2 (Immunity to ESD)

Kungälv, Sweden, 2016-04-16

  
David Vonasek, CEO