

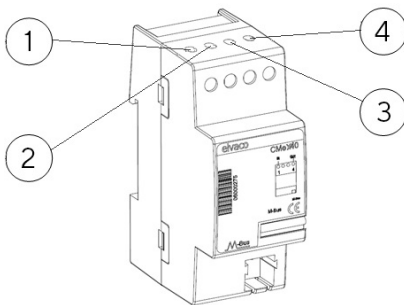
CMeX40

DIN-mounted M-Bus I/O module

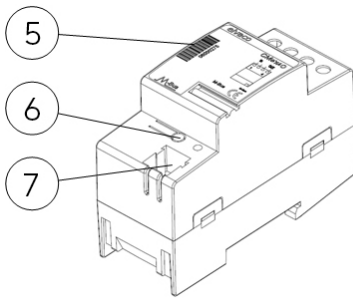
INTRODUCTION

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 product CMeX40. For a complete description of the product or for information in Swedish, visit the Elvaco AB website, www.elvaco.com.

OVERVIEW



1. Input GND
2. Input +
3. Relay output
4. Relay output



5. Serial number (secondary address)
6. Push button
7. M-Bus connector

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.

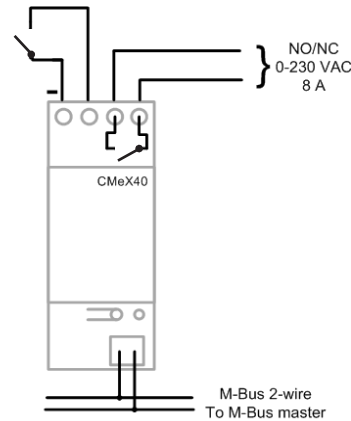
The installation should be performed by a qualified electrician, or installer with required knowledge, if the relay in the product (3, 4) controls voltage over 48V. The power supply should be connected via a clearly marked, easily accessible and close switch so the unit can be switched off during service work. If the product is installed and can be exposed for voltage transients higher than OVC II (overvoltage category 2) use an external transient protection.

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 mm², e.g. a standard telephone cable (EKKX 2x2x0.5). Connect the wiring to the connector (7).

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

The product can switch on and off loads from different types of consuming devices. Connect the power source to screw terminal (3) which should be switched by the product and the output to screw terminal (4). The relay output control can handle currents up to 8 A (240 VAC).

INPUT SIGNAL

Connect input signal to the screw terminals (1, 2). The switch must be of a passive type (Relay output, position switch etc.) and isolated from Mains voltage.

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

SIMPLIFIED DECLARATION OF CONFORMITY

Hereby, Elvaco declares that the product is in compliance with the following directives:

EU:

- 2014/30/EU (EMC)
- 2014/35/EU (LVD)
- 2011/65/EU + 2015/863 (RoHS)

UK:

- 2016 No. 1091
- 2016 No. 1101
- 2012 No. 3032

The complete Declaration of Conformity can be found at www.elvaco.se/en > Search on product or article number.

TECHNICAL SPECIFICATIONS

Mechanics	
Protection class	IP20
Dimensions	90x65x36 mm
Weight	85 g
Connection M-Bus	Spring terminal
Cable M-Bus	Solid wire 0.6-0.8 Ø mm, e.g. EKX 2x2x0.5
Mounting	DIN mounted
Connection I/O	Screw terminal. Use 0.5 Nm tightening torque
Cable I/O	Wire 0.75-2.5 mm ² , e.g. MK450/750V 1 mm ²
Electrical	
Power consumption	1.5 mA M-Bus 1T
Installation category (OVC)	CAT II (extend protection with external transient protection if higher OVC)
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
Safety	EN 62368-1

CONTACT INFORMATION

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