

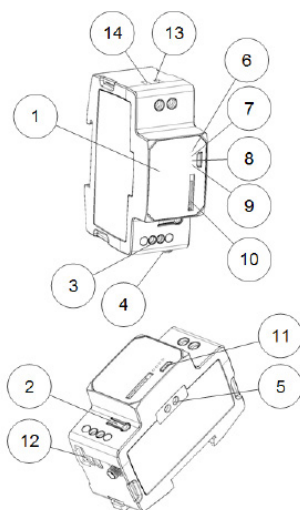
CMe2100 LTE

M-Bus Metering Gateway for mobile network

INTRODUCTION

CMe2100 LTE is a flexible and cost-effective DIN-mounted M-Bus Metering Gateway for Mobile Network. It is compatible with all meters following the M-Bus standard. For a complete description of the product, visit the Elvaco AB website, www.elvaco.com.

OVERVIEW



1. Serial number
2. Push button
3. M-Bus connector
4. Antenna SMA connector
5. IR interface
6. Status LED (green)
7. Error LED (red)
8. Network LED (yellow)
9. Blue LED (not used)
10. SIM card holder
11. USB slave connector
12. USB master connector
13. Power supply L
14. Power supply N

MOUNTING

The CMe2100 LTE should be mounted on a DIN-rail. The plastic clip on the bottom is used to mount and demount the unit from the DIN-rail. For safety reasons, a DIN-rail enclosure must cover the terminals.

SIM CARD

Install the SIM card into the SIM card holder (10). Remember the phone number for later use.

IMPORTANT

- The SIM card shall not have any PIN code activated.
- The SIM card must have 2G/3G/LTE internet access activated for full functionality.
- If a prepaid SIM card is used, ensure that enough credits are available.

POWER SUPPLY

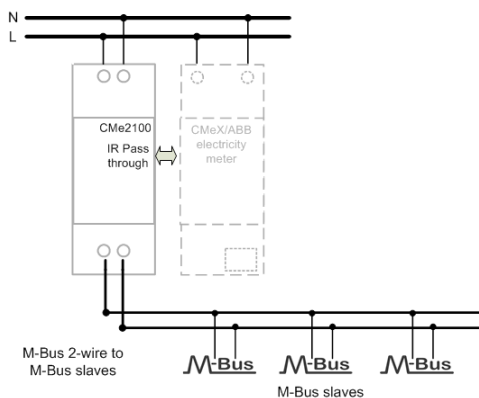
The installation should be performed by a qualified electrician or installer with required knowledge. The power supply should be connected via a clearly marked, easily accessible and close switch so the unit can be switched off during service work. The main supply should be connected to screw terminal (13) and (14). Main supply voltage should be in the range of 100-240 VAC, 50/60 Hz.

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 (3). Do not exceed the maximum cable length of 1000 m.

IMPORTANT

The product handles up to 256 meters. Use an M-Bus extender for installations with more meters than the product limit. All connected M-Bus slaves must have unique primary or secondary M-Bus addresses depending on addressing mode.



ANTENNA

An external antenna is needed for CMe2100 LTE, this is ordered separately. Please visit www.elvaco.com to find a suitable antenna option.

The antenna should be connected to the SMA connector (4). If the unit is mounted in a metal cabinet, the external antenna should be mounted outside the metal cabinet.

IMPORTANT

- CMe2100 LTE should be connected to the antenna when the antenna wiring is done. Otherwise the SMA connector can be damaged.
- Do not mount the antenna close to the M-Bus 2-wire bus.
- Do not mount the antenna inside a metallic cabinet.

INSTALLATION/SEND SMS COMMAND

CMe2100 LTE is configured with SMS commands. Send any command from the table below in a text message to the phone number of the product.

Function	SMS command
New installation of meter	install n [profile]
Change of meter	install n [profile] clean
Add meter on the bus	install n [profile] keep
Signal strength/is the terminal alive?	status
Is mobile data working?	timesync
Send momentary values via e-mail	momreport
Send momentary values to a specific recipient	momreport email.to=name@domain.se
Receive meter values via sms	momreport 101 [secondary address]
Receive meter values as excel files	report 1day 1104 email.to=name@domain.se
Receive hourly values once every day as excel files	sch report1 1day 1104

n: the number of meters to be installed

[profile]: customer specific profile with custom settings (contact Elvaco to order a profile). Default settings will be used if no customer specific profile is set.

[secondary address]: secondary address of the meter to be read. If only one meter is connected, the secondary address can be omitted. An SMS from the product should be received within a minute with information that the installation has started. The product will also send an SMS with information about if the installation was successful or not.

For a successful installation, the signal strength should be at least 3.

TROUBLESHOOTING

All LEDs are permanently off

There is a problem with the supply voltage. Please verify 100-240 VAC. If the problem persists, the product may be malfunctioning. Please contact Elvaco support.

Red LED is permanently on

This indicates an error on the M-Bus 2-wire bus. Please verify no short-circuit of the M-Bus bus. The voltage of the bus should be between 24 VDC and 30 VDC.

Red LED is flashing shortly or 50/50

This indicates an error on the networks or SIM card.

Please verify:

- SIM card has no PIN code activated.
- SIM card is activated.
- SIM card contact areas are clean.
- Antenna installation. Installation with bad network coverage sometimes requires an external antenna.

The product does not respond to SMS requests

Please verify:

- Product is powered up.
- LEDs are showing normal operation and network coverage.
- Security access codes may be used; verify correct access code.
- If a prepaid SIM card is used, balance may be zero.

Install command does not find any meters

Please verify your M-Bus slave configuration:

- Voltage over M-Bus slave should be between 24 VDC and 30 VDC.
- All M-Bus slaves must have unique primary or secondary M-Bus addresses depending on addressing mode.
- M-Bus slave baud rates.

Timesync command does not work

This may be due to wrong APN is set. Set the correct APN with the command: `qset net [APN][user][password]`. Please contact your network provider for information about APN, APN username and APN password.

E-Mail reporting is configured but no e-mails are sent

This may be due to the following reasons, when customer specific profile is not used:

- No or wrong SMTP server is auto detected. Please verify with command status. If the SMTP server is not set, please set the SMTP server manually by using command `qset email [recipient] [SMTP-server] [SMTP-port]`.
- No/no valid recipients are set. Set recipients with command `qset email [recipient]`.
- Report is not correctly activated, please configure e-mail reports with command `sch` (see table).

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.

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TECHNICAL SPECIFICATIONS

Mechanics	
Protection class	IP20
Mounting	Mounted on DIN rail (DIN 50022) 35 mm
SIM card	Push-push type

Electrical connections	
Supply voltage	Screw terminal. Cable 0.5-2.5 mm ² , 0.5 Nm tightening torque
M-Bus master port	Screw terminal. Cable 0.2-1.5 mm ²

Electrical characteristics	
Nominal voltage	100-240 VAC (+/- 10%)
Frequency	50/60 Hz
Power consumption (max)	<6 W
Power consumption (nom)	<1 W
Installation category	CAT 3

User interface	
Green LED	Power
Red LED	Error
Yellow LED	Network status
Push button	Factory reset
Configuration	SMS, HTTP, Telnet

Integrated M-Bus Master	
M-Bus baud rate	2400 and 9600 bit/s
Nominal voltage	28 VDC
Maximum unit loads	16T/24 mA
Maximum cable length	1000 m (100 nF/km, maximum 90 Ω)

Approvals	
EMC	EN 61000-6-2, EN 61000-6-3, EN 301489-1, EN 301489-7
Safety	EN 61010-1, CAT 3

ORDERING INFORMATION

Product	Item number	Description
CMe2100 LTE	1100386	1 M-Bus meter
CMe2100 LTE	1100363	16 M-Bus meter (16T)
CMe2100 LTE	1100364	32 M-Bus meters (16T)
CMe2100 LTE	1100365	64 M-Bus meters (16T)
CMe2100 LTE	1100366	128 M-Bus meters (16T)
CMe2100 LTE	1100367	256 M-Bus meters (16T)


CONTACT INFORMATION

Elvaco AB Technical support:

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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 21, S-434 37 Kungälv, Sweden.	
Product CMe2100 LTE	Year of CE-marking 2019
The object(s) of the declaration listed above is in conformity with the relevant Community harmonization legislation: LVD Directive 2014/35/EU EMC Directive 2014/53/EU Radio Equipment Directive 2014/53/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 61000-4-8 (Immunity to RF-injection) EN 61000-4-3 (Immunity to RF-field) EN 61000-4-11 (Immunity to voltage variation) EN 61000-4-4 (Immunity to surge) EN 61000-4-5 (Immunity to surge) EN 61000-4-2 (Immunity to ESD) EN 300 220-2 (SRD Low power radio equipment) EN 300220-2 EN 301 511: v.12.5.1 (Gemalto)	
Kungälv, Sweden, 2019-11-29  David Vonnasch, CEO	