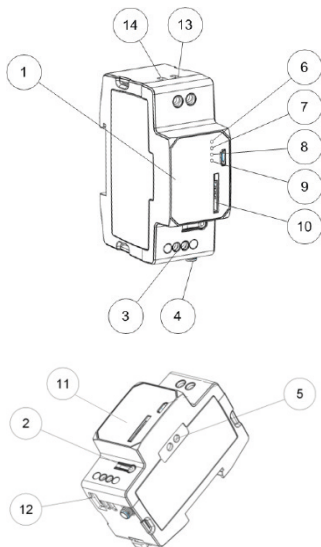


CMe2100 LTE G2

M-Bus Metering Gateway for mobile network

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. Meter installation / Reboot LED (blue)
10. SIM card holder
11. Elvaco Play QR code
12. USB master connector
13. Power supply L
14. Power supply N

MOUNTING

The CMe2100 LTE G2 should be mounted on a 35 mm DIN-rail. The plastic clip on the bottom is used to mount and remove the unit from the DIN-rail. Ensure that terminals are covered by a DIN rail enclosure.

SIM CARD

Install the SIM card into the SIM card holder (10). Save the SIM card phone number, as it is required during configuration.

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.
- The SIM card must support normal SMS communication.

POWER SUPPLY

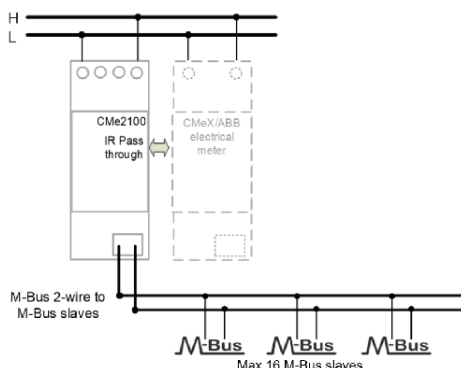
Installation should be performed by a qualified electrician or installer with required knowledge. The power supply should be connected via a clearly marked, easily accessible and close switch so the unit can be switched off during service work. The main supply should be connected to screw terminal (13)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

M-BUS

M-Bus is a multi-drop 2-wire bus with no polarity. Use a cable with area of 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

All connected M-Bus slaves must have unique primary or secondary M-Bus addresses depending on addressing mode.



ANTENNA

An external antenna is required for CMe2100 LTE G2. The antenna is ordered separately, visit www.elvaco.com to find a suitable antenna.

Mount the antenna and connect it 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

- Connect the antenna cable to the SMA connector only after the antenna wiring has been completed. Handle the SMA connector carefully to avoid mechanical damage.
- Do not mount the antenna close to the M-Bus cable.

INSTALLATION

CMe2100 LTE G2 no longer supports normal SMS commands due to increased security regulatory requirements. The gateway is configured using Elvaco Play app or by sending encrypted SMS. Responses from the gateway are also encrypted. By using Elvaco Play app, Elvaco Play handles the encryption and decryption for the user in the background.

USING ELVACO PLAY APP (recommended solution)

A prerequisite for installing CMe2100 LTE G2 using Elvaco Play is to have both an account and an organization, and to have the Elvaco Play app downloaded on your smartphone.

1. Download Elvaco Play app from App Store or Google Play
2. Open Elvaco Play app or go to <https://play.elvaco.com/>
3. Log in to your account (or create an account if you are not already an Elvaco Play user)
4. Ask your admin to invite you to an existing organization (or create an organization if there is none)

Before you start the installation process, make sure that you are in the correct organization. Use Elvaco Play app to install your gateway

1. Press Install
2. Scan the QR code on the gateway (11) to claim it to your Elvaco Play organization, and press continue.
3. Manually enter the phone number and, if required, the APN. Alternatively, confirm the pre-filled information. Then press Continue.
4. [Recommended] Assign a location (i.e facility name) to your device to know where it is located
5. Configure your gateway as usual by pressing Configure via SMS to setup the gateway with the configuration commands needed.

USING ENCRYPTED SMS (advanced users only)

If Elvaco Play is not used, the first thing to do is to set a new communication key using the factory communication key. Read the factory communication key via NFC using a suitable NFC reader or NFC application.

common.security.product.communication.password=<new 16 character key>, e.g.:

common.security.product.communication.
password=abcdefghijkl2346789

All configuration commands need to be encrypted before being sent, including the first command to set a new key. The manual for encryption and integration is available at <https://support.elvaco.com>.

CONFIGURATION COMMANDS

Function	Configuration commands
New installation of meter	install n [profile]
Change of meter	install n [profile] clean
Add meter on the bus	install n [profile] keep
Check signal strength/gateway status	status



Function	Configuration commands
Check mobile data connection	timesync
Send momentary report to set e-mail	momreport
Send momentary meter values to a specific recipient	momreport email.to=name@domain.se
Send meter values once in excel files to specific recipient	report 1day 1104 email.to=name@domain.se
Schedule report with 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).

[secondary address]: secondary address of the meter to be read. If only one meter is connected, the secondary address can be omitted.

An encrypted response from the product should be received within a minute with information that the installation has started. The product will also send an encrypted SMS with information if the installation was successful or not.

IMPORTANT

- For a successful installation, the signal strength should be at least 3.
- Elvaco strongly recommends using all available product security features to help protect communications with the device and all data in transit, and to support applicable security and regulatory requirements.

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
Blue LED	Install and reboot
Push button	Factory reset
Configuration	Elvaco Play, encrypted SMS, HTTPS. HTTP and Telnet are supported but should only be used where security requirements allow it.

Integrated M-Bus Master

M-Bus baud rate	2400 and 9600 bit/s
Nominal voltage	28 VDC
Maximum unit loads	16T/24 mA. Up to 256T are supported when using external M-Bus master(s)
Maximum cable length	1000 m (100 nF/km, maximum 90 Ω)

ORDERING INFORMATION

The integrated M-Bus master supports up to 16T. To support more than 16T, use an external M-Bus master. See www.elvaco.com for compatible products.

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.

TROUBLESHOOTING

All LEDs are permanently off

There is a problem with the supply voltage. Please verify 100-240 VAC.

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 briefly or with a 50/50 duty cycle

This indicates a network or SIM card error. Please verify:

- The 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 a new antenna location.

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 an incorrect APN. 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

Please verify settings below, when a customer specific profile is not used:

- No SMTP server is detected, or the detected SMTP server is incorrect. 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 valid recipients are configured. Set recipients with command `qset email [recipient]`.
- Report is not correctly activated, please configure e-mail reports with command `sch` (see table).

CONTACT INFORMATION

E-mail: support@elvaco.com

To read more about CMe2100 LTE G2 or Elvaco Play, go to:

<https://support.elvaco.com>

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)
2014/53/EU (RED)
2011/65/EU + 2015/863 (RoHS)

UK:

2016 No. 1091
2016 No. 1101
2017 No. 1206
2012 No. 3032

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

