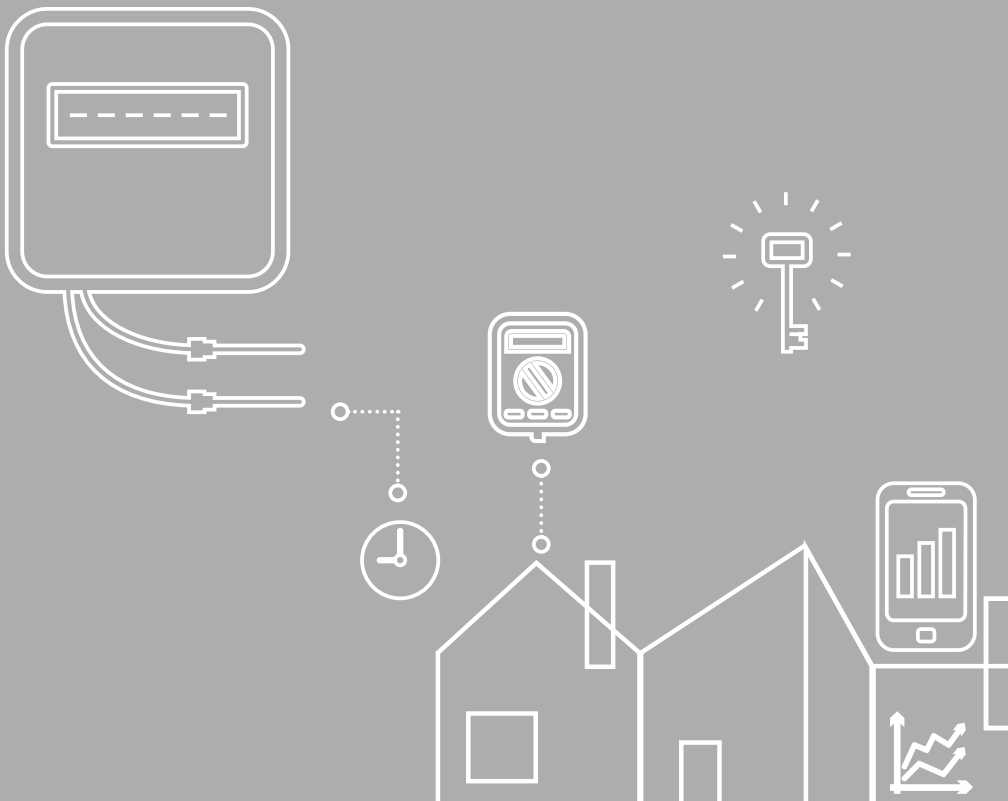
SYCOUS®

M-Bus wireless

Wireless MBus Network & Data Logger Installation Guide



Introduction

This document is designed to provide guidance on the installation of a Wireless MBus network and suitable data logger. The guide will support in selecting the most appropriate set up for your Wireless MBus network and available product details of Wireless MBus accessories.

What is Wireless MBus?

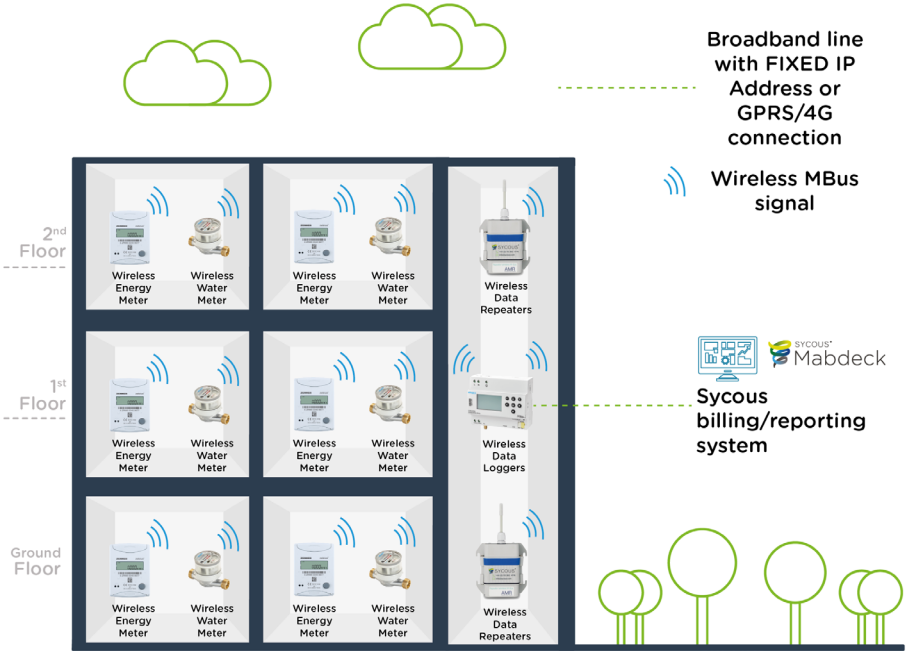
The Wireless MBus protocol is mainly used for communication between consumption meters and data loggers, as the technology enables remote and wireless readings of meters.

Wireless MBus can be used for electricity, gas, water, and heat meters. Meters with Wireless MBus transmit data to the data logger on a regular basis – typically a few seconds or minutes between each transmission.

The secure and encrypted Wireless MBus data can provide reliable billing data, as well as near real time visualisation data to the user.

The Wireless MBus protocol is a low power consumption protocol and is therefore very useful for battery-powered devices. Wireless M-Bus follows the European standard (EN 13757-4).

Advised Installation of Wireless MBus Network



Sycous provide an on-site radio frequency (RF) survey to check signal strength from meter locations to communal areas for data collection equipment. This report is designed to be used by 3rd party installers or Sycous engineers for installation and commissioning of a wireless network. Sycous highly recommend an RF survey is carried out by Sycous to ensure a robust and reliable metering network is implemented.

Our systems are designed to work with any open-protocol (OMS) heat, water, electric or gas meters. Sycous can provide the full range of metering and data collection hardware as required.

A suitable 4G/GRPS connection is needed to be able to remotely read meters. Please ensure that signal is available in the location of the data logger. Sycous can provide a signal test on site. Please contact our sales team for further information.

Elvaco Dataloggers

Getting the right meter is only half the challenge, making sure the meter can be remotely read ensures you will have a robust metering solution.

Sycous are the UK's largest partner of Elvaco and as a Premium Partner can ensure you receive the best solutions at the most competitive prices.

Elvaco CMe2100LTE

- Communicates with a CMeX50 expander to read Wireless MBus devices.
- Software meter licensed from 1-256 meters (LTE version only).
- Meter communication through expanders via Infrared. The CMeX50 is a Wireless MBus Expander.
- Communicates via 4G/LTE and GSM via a sim card.

Elvaco CMe3100

- Communicates with a CMeX50 expander to read Wireless MBus devices.
- Software meter licensed from 1-512 meters.
- Meter communication through expanders via Infrared. The CMeX50 is a Wireless MBus Expander
- Communicates via TCP/IP.

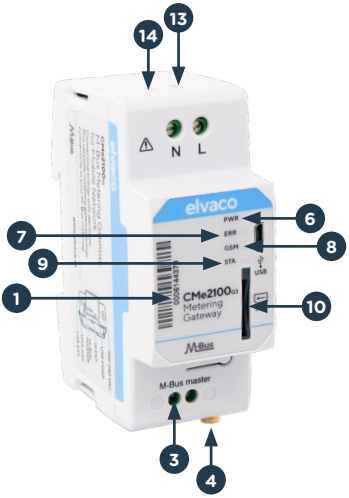
Elvaco CMeX50

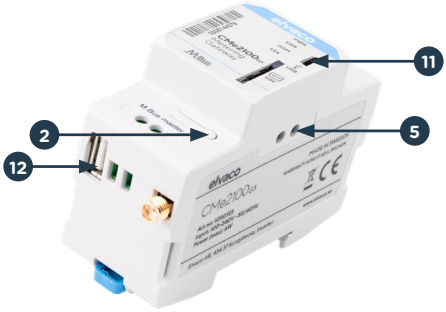
CMeX50 is a Wireless M-Bus Receiver which enables a Gateway from Elvaco's CMe Series to communicate with Wireless M-Bus meters. CMeX50 handles up to 800 Wireless M-Bus meters and guarantees safe data transmissions through individual encryption keys (subject to a suitable gateway being used). The product is equipped with an IR interface which makes it easy to connect to other CMe/CMeX products without having to use any cables.

With its durable housing made of robust polyamide, the wireless M-Bus receiver is safe from external influences. Thanks to its compact size and low weight, it is also easy and simple to install. The user interface is an LCD display, which provides information about the current status of the CMeX50. The graphics are clearly laid out and the keyboard is equipped with seven illuminated keys that can be used to control the various functions of the CMeX50. In addition, the model is equipped with various electrical connections, such as an M-Bus master port, M-Bus slave port and a USB slave port.

CMe2100LTE

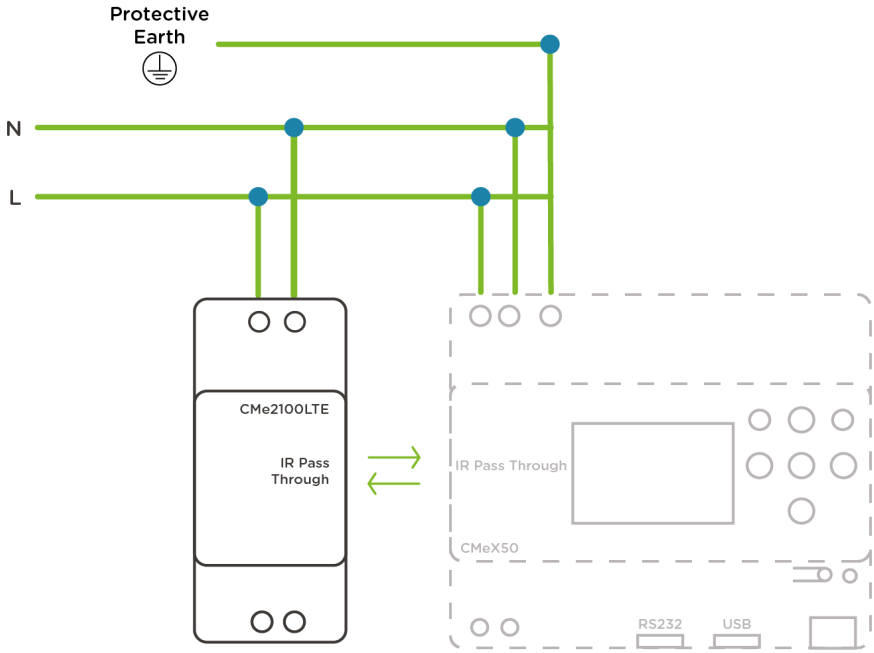
1. Serial Number
2. Push Button
3. MBus Connector
4. Antenna SMA Connector
5. IR interface
6. Status LED (green)
7. Error LED (red)
8. Network LED (yellow)
9. Blue LED (not used)
10. SIM Card Holder
11. USB Slave Connector
12. USB Master Connector
13. Power Supply L
14. Power Supply N





Important Information

The CMe2100LTE handles up to 256 meters depending on the software license ordered this must be combined with a CMeX50 to collect wireless MBus metering data.



Power Supply

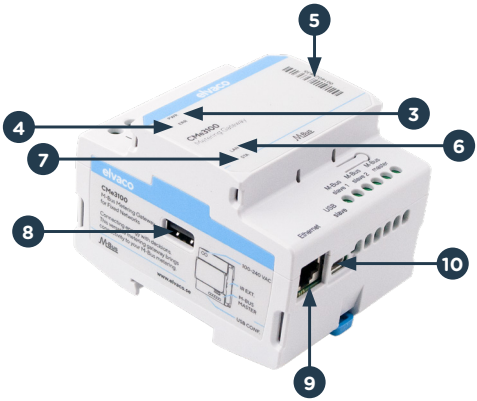
The installation should be performed by a qualified electrician or installer with required knowledge and training. The power supply connected should be clearly labelled, easily accessible and within close proximity of the data logger. The power supply should be of an unswitched type. The main supply should be connected to screw terminal (13) and (14). Main supply voltage should be in the range of 100-240 VAC, 50/60 Hz.

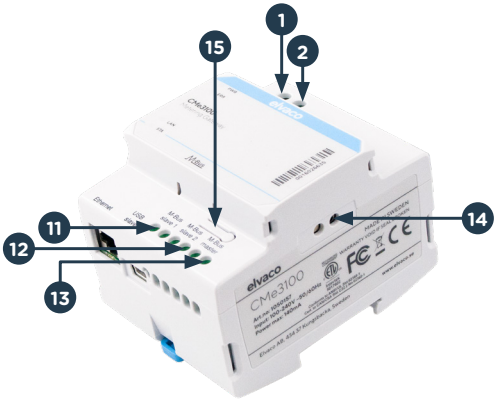
General Notes

Please always read the manufacture instructions for installation details. This document is designed as a guide only.

CMe3100

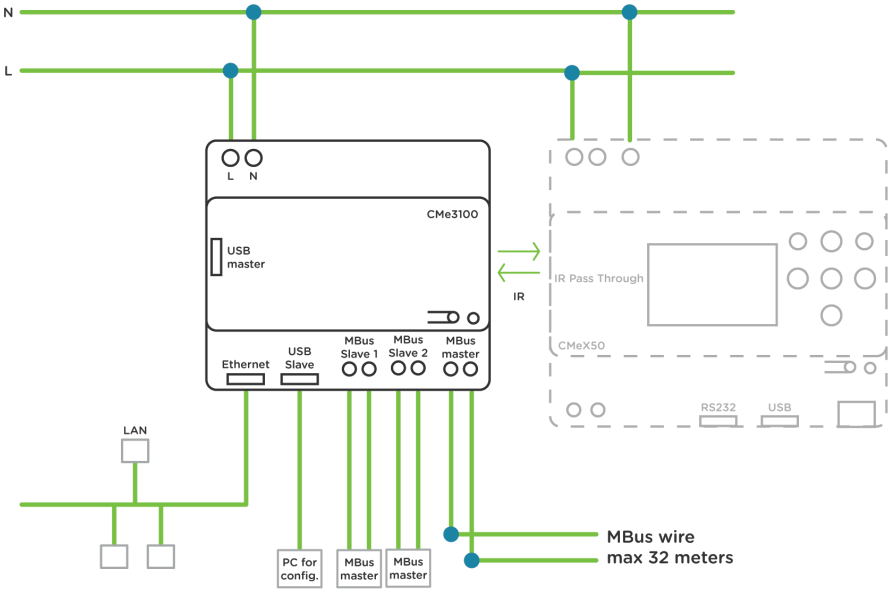
1. Power Supply L
2. Power Supply N
3. Power LED (green)
4. Error LED (red)
5. Serial Number
6. LAN LED (yellow)
7. Blue LED
8. USB Master
9. Ethernet Connection
10. USB Slave
11. MBus slave 1
12. MBus slave 2
13. MBus Master Port
14. IR interface
15. Push Button





Important Information

The CMe3100 handles up to 512 meters depending on the software license ordered. Use a CMeX50 to collect wireless MBus meters.



Power Supply

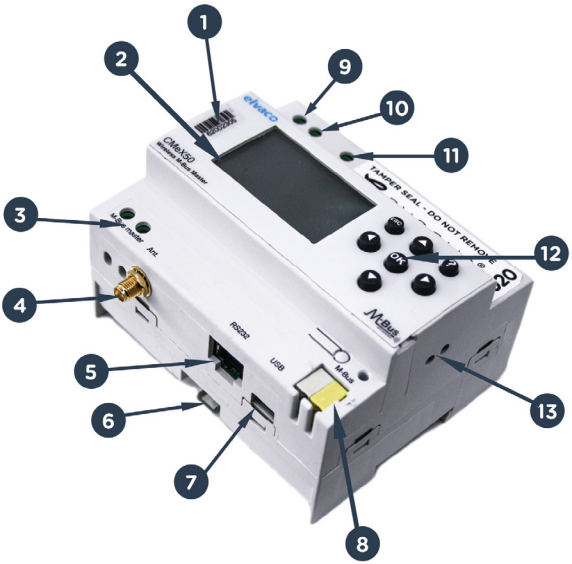
The installation should be performed by a qualified electrician or installer with required knowledge and training. The power supply connected should be clearly labelled, easily accessible and within close proximity of the data logger. The power supply should be of an unswitched type. The main supply should be connected to screw terminal (13) and (14). Main supply voltage should be in the range of 100-240 VAC, 50/60 Hz.

General Notes

» Please always read the manufacture instructions for installation details. This document is designed as a guide only.

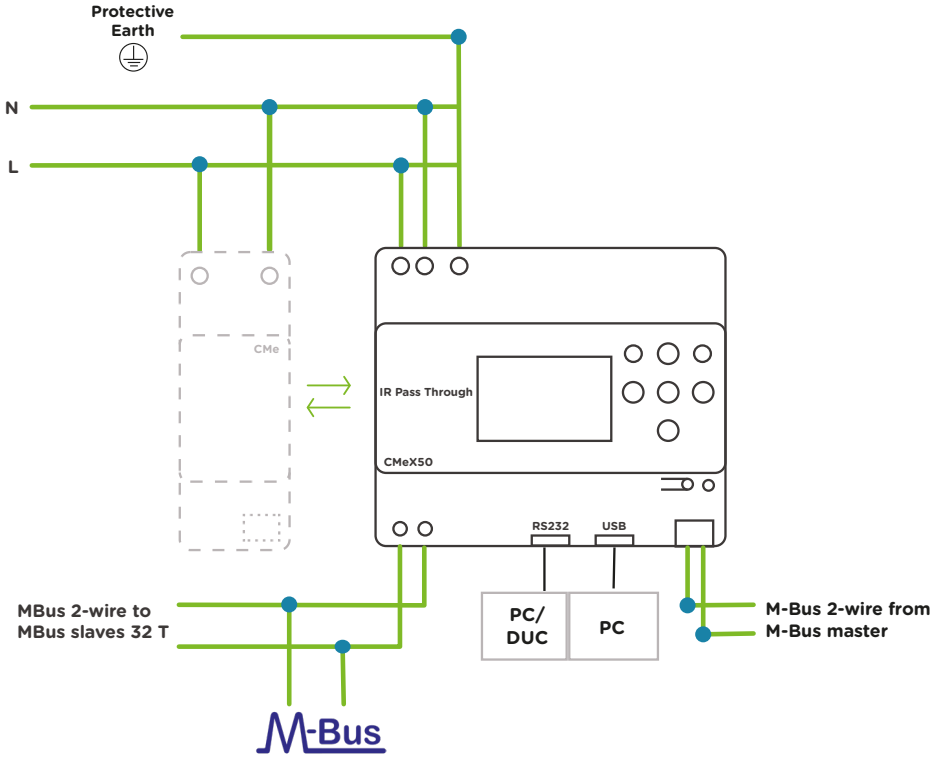
CMeX50

1. Serial Number
2. Display
3. M-Bus Master
4. Antenna Connector
5. Rs232 Connector
6. Din-Rail Lock
7. Usb Connector
8. M-Bus Slave
9. Power Supply L
10. Power Supply
11. Protective Earthing
12. Keypad
13. Ir Interface Right



Important Information

The CMeX50 wireless MBus expander is designed to be used with either the CMe2100LTE or CMe3100 to enable remote reading of wireless MBus meters.



General Notes

- CMeX50 should be connected to the antenna after the antenna wiring is done. Otherwise the SMA connector can be damaged!
- Do not mount the antenna close to any metallic objects.
- Do not mount the antenna close to the M-Bus 2-wire bus.
- Do not mount the antenna inside a metallic cabinet.

Wireless MBus Repeater

General Notes

The Wireless MBus repeater AMR (Automatic Meter Reading) from Sycous is a ready-to-use system allowing to repeat radio frames from Wireless MBus meters. This repeater can double the range of Wireless MBus meters and thus ensure a seamless transmission of radio frames when the data concentrator is located a fair distance from the furthest meter point. By combining several Wireless MBus repeaters, the Sycous Wireless MBus repeater extends the transport of transmitted frames over several kilometers. This product is available as a mains power version, allowing repetition of data transmitted in T+C, R and S modes. The combination of products in the Sycous AMR range allows you to create an independent wireless network for the collection of metering data for reporting or billing purposes. Our Wireless MBus solution provides a full compatibility with EN 13757-4: 2005 standard.

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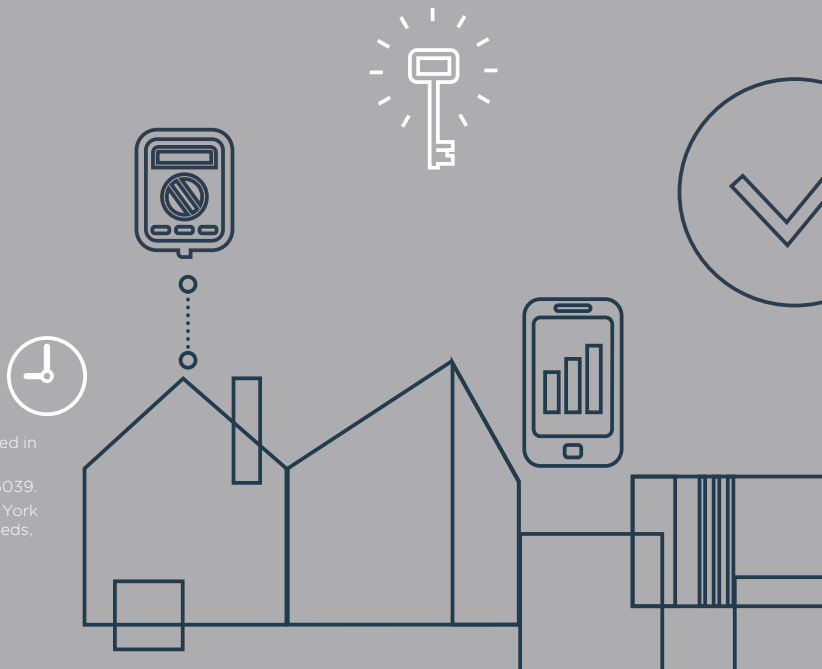
Need Help?

Contact our team on **01133604776** or email **info@sycous.com**

Our offices are open Monday to Friday 8:30 am to 5:30pm excluding bank holidays.



Sycous Limited is registered in England and Wales.

Company Number 08836039.

Registered Address: New York House, 1 Harper Street, Leeds, LS2 7EA

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