

CMeX50

Wireless M-Bus Receiver



CMeX50 is a wireless M-Bus Receiver which can be easily integrated into an existing M-Bus solution or used together with Elvaco CMe Series products. The CMeX50 communicates with up to 800 wireless M-Bus meters, each one securable through individual encryption keys. CMeX50 also has an integrated M-Bus Master which enables it to drive up to 32 wired M-Bus meters. The number can be extended by using the product together with one of Elvaco's M-Bus Masters from the CMeX10-13S Series.

AUTOMATIC INSTALLATION

CMeX50 will automatically install all selected wireless M-Bus slaves. By enabling the CMeX50 Automatic installation mode, all wireless M-Bus slaves within range can be automatically detected and configured for operation. The installed wireless M-Bus slaves can be configured to use encryption for secure connections.

SIMPLE CONFIGURATION

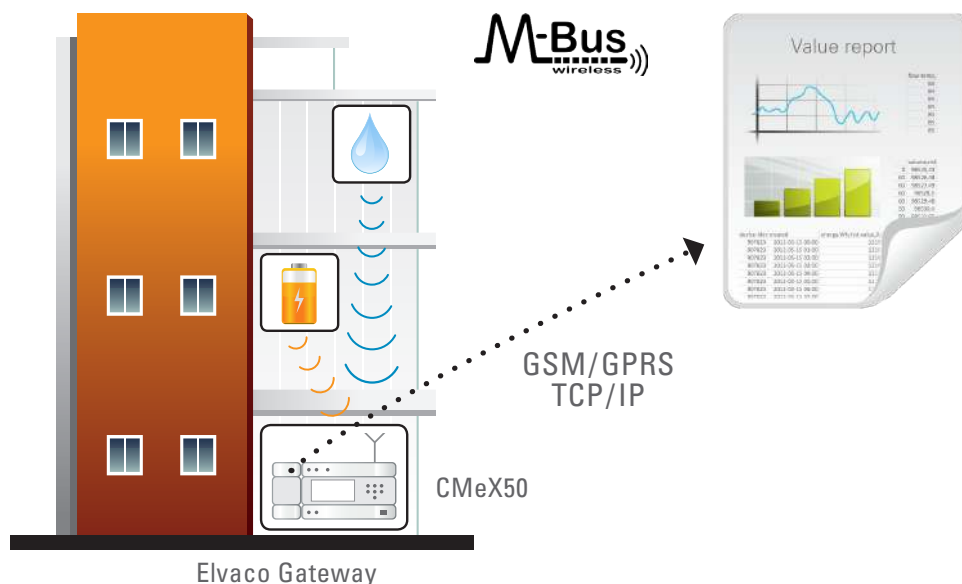
The CMeX50 can easily be configured by using its intuitive display, or by sending M-Bus commands on standard 2-wire M-Bus. There is no need for any extra tools to get the CMeX50 up and running. The display shows current operation, installed wireless slaves, M-Bus operation modes and much more.

USE IN EXISTING 2-WIRE M-BUS SYSTEM

All installed wireless M-Bus slaves can be read using standard 2-wire M-Bus commands on the CMeX50 M-Bus slave port. This functionality makes the CMeX50 fully compatible with any existing wired M-Bus solution.

FUTURE PROOF

The CMeX50 can be remotely configured using standard M-Bus commands. When new M-Bus wireless modes or M-Bus standard updates are available, the firmware can be remotely updated to meet new market demands. Using the CMeX50 configured in OMS mode together with CMe Series products, a fully compliant MUC concept can be achieved.



Mechanics

Casing material	Polyamide
Protection class	IP20
Dimensions (w x h x d)	105 x 90 x 65 mm (6 DIN modules)
Weight	220 g
Mounting	Mounted on DIN rail (DIN 50022) 35 mm

Electrical connections

Power supply	Screw terminal 0.5-2.5 mm ²
M-Bus master port	Screw terminal 0.5-2.5 mm ²
M-Bus slave port	Pin terminal solid wire 0.6-0.8 Ø mm
	RJ45 8/8
Antenna	SMA-f
RS232	RJ45 8/8
USB port	Mini USB type B

Electrical characteristics

Nominal voltage	100-240 VAC (+/- 10%)
Frequency	50/60 Hz
Power consumption	<6 W
Installation category	CAT 2

Environmental specifications

Operating temperature*	-25 °C to +55 °C
Operating humidity max	5 % to 90 %, non-condensing
Operating altitude	0-2000 m
Pollution degree	Degree 2
Usage environment	Indoors, can be extended with IP6x enclosure for outdoor use
Storage temperature	-40 °C to +85 °C

*Reduced response time on LCD at low temperature.

User interface

LCD display	Graphic monochrome
Display resolution	128 x 64 pixels
Keyboard	7 illuminated buttons

M-Bus

Interfaces	IR, Integrated M-Bus Master, Wireless M-Bus Receiver, M-Bus slave
Maximum number of M-Bus devices (software limit)	M-Bus Master: 32 meters, Wireless M-Bus Receiver: 800 meters
Decryption	Yes

Integrated M-Bus Master

M-Bus standard	EN 13757
M-Bus baud rate	300 and 2400 bit/s
Nominal voltage	28 VDC
Maximum unit loads	32T/48 mA (can be extended with the CMeX10-13S Series)
M-Bus search modes	Primary, secondary
Maximum cable length	1000 m (100 nF/km, maximum 90 Ω)

Wireless M-Bus Receiver

M-Bus standard	EN 13757-4
Wireless M-Bus modes	S1, T1, C1
Maximum number of Wireless M-Bus devices	800
Radio frequency band	868 MHz
Encryption	AES-128
RF sensitivity	-105 dBm
OMS compliant	Yes

M-Bus slave interface

M-Bus standard	EN 13757
M-Bus baud rate	300 and 2400 bit/s
Nominal voltage	21-42 VDC
Power consumption	1T/1.5 mA
M-Bus search modes	Primary, secondary, enhanced secondary
M-Bus default address	251

Approvals

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