

CMEx50

The wireless M-Bus Master



CMEx50 is a wireless M-Bus master which can be used by any existing wired M-Bus solution or together with Elvaco CMe Series products. The CMEx50 communicates with wireless M-Bus slaves via the wireless modes S1, T1 and C1 and is compatible with all widely used M-Bus slaves on the market. The CMEx50 handles up to 500 wireless M-Bus slaves, which can be individually secured by encryption keys. It also has a built-in M-Bus master for 32 wired M-Bus slaves.

AUTOMATIC INSTALLATION

The CMEx50 can automatically install 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 later be edited and configured to use encryption for secure connections.

SIMPLE CONFIGURATION

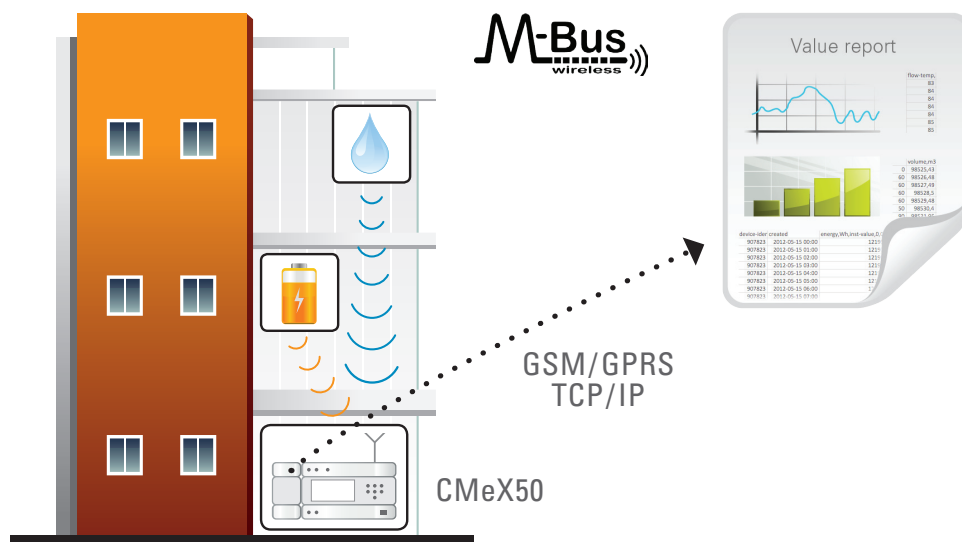
The CMEx50 can easily be configured by using the intuitive display, or by using standard M-Bus commands on standard 2-wire M-Bus. The display shows current operation, installed wireless slaves, M-Bus operation modes and much more. There is no need for any extra tools to get the CMEx50 up and running.

USE IN EXISTING 2-WIRE M-BUS SYSTEM

All installed wireless M-Bus slaves can be readout 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. The wireless M-Bus slaves can be individually readout using secondary or primary addressing mode with standard readout command REQ_UD2.

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	90 x 65 x 107 mm
Weight	220 g
Mounting	DIN-enclosure
Connection M-Bus master	Screw terminal cable 0.5-2.5 mm ² , 0.5 Nm tightening torque
Connection M-bus slave	Pin terminal solid wire 0.6-0.8 ø mm
Connection power supply	Screw terminal cable 0.5-2.5 mm ² , 0.5 Nm tightening torque
Connection antenna	SMA-f
Connection RS232	RJ45 8/8
Connection USB	Mini USB type B
Connection IR communication	CMe-, CMeX Series, ABB electricity

Electrical

Nominal voltage	100-240 VAC
Voltage range	-10 % to +10 % of nominal voltage
Frequency	50/60 Hz
Power consumption	6 W
Installation category	CAT 2 (overvoltage category)

Environmental

Operating temperature range	-30 to +55 °C
Storage temperature range	-40 to +85 °C
Operating humidity max	80 % RH temperatures up to 31 °C, decreasing linearly to 50 %RH at 40 °C
Pollution	Degree 2
Operating altitude	0-2000 m
Usage	Indoor use only, can be extended with IP6X enclosure for outdoor use

User interface

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

Wired M-Bus master

M-Bus standard	EN 13757
Maximum connected M-Bus meters	32 T
Maximum cable length	1000 m
Break signal length M-Bus 2-wire and right IR interface	45 ms
Nominal voltage	28 VDC
Baud rate	300, 2400 baud

Wireless M-Bus master

M-Bus standard	EN 13757-4
OMS-compliant	Yes
Wireless M-Bus modes	S1 T1 C1
Radio frequency band	868 MHz
RF output power	N/A
RF sensitivity	-105 dBm
Maximum slaves	500
Encryption	AES-128

Wired M-Bus slave

M-Bus standard	EN 13757
M-Bus voltage	21-42 VDC
Power consumption	1.5 mA 1T
M-Bus baud rate	300, 2400 Bit/s
M-Bus commands	SND_UD, SND_NKE, REQ_UD2
M-Bus address default	251
Addressing modes	Secondary, primary

Approvals

Safety	EN 61010-1
Electromagnetic compatibility (EMC)	EN 61000-6-2
Electromagnetic compatibility (EMC)	EN 61000-6-3