

CMi5110

Wireless M-Bus Receiver



CMi5110 is a wireless M-Bus Receiver, integrated in a CMi-Box, which can be used by any existing wired M-Bus solution or together with Elvaco CMe Series products. CMi5110 communicates with meters via the wireless modes S1, T1 and C1, and is compatible with all widely used wireless M-Bus meters on the market. The product handles up to 800 meters, which can be individually secured by encryption keys.

AUTOMATIC INSTALLATION

By enabling the CMi5110 Automatic installation mode, all wireless M-Bus meters within range can be automatically detected and configured for operation. Installed wireless M-Bus meters can later be edited and configured to use encryption for secure connections.

SIMPLE CONFIGURATION

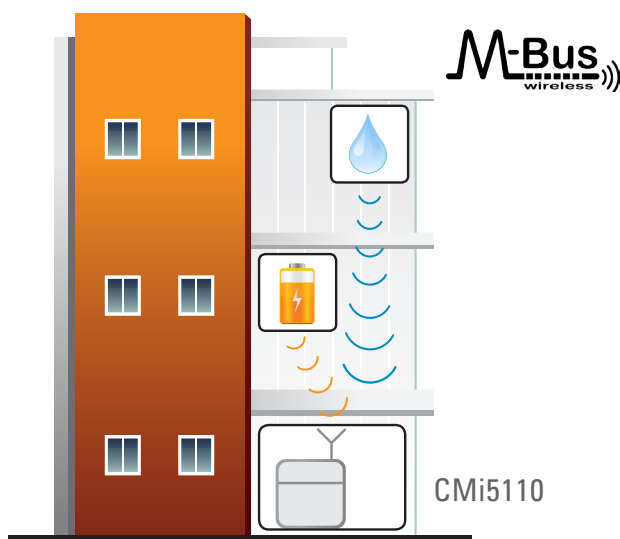
CMi5110 can easily be configured by sending it standard M-Bus commands.

USE IN EXISTING M-BUS SYSTEM

All installed wireless M-Bus meters are easily read by sending standard M-Bus commands to the CMi5110 M-Bus slave port. This functionality makes the CMi5110 fully compatible with any existing wired M-Bus solution.

FUTURE PROOF

The CMi5110 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. By using CMi5110 configured in OMS mode together with CMe Series products, a fully compliant MUC concept can be achieved.



Mechanics

Protection class	IP20
Dimensions (w x h x d)	84 x 37 x 12 mm (CMi-Box: 141 x 157 x 44 mm)
Weight	15 g (CMi Box: 250 g)
Mounting	In CMi-Box module slot

Electrical connections

Power supply	Board connector 2 mm
M-Bus slave port	Screw terminal 0.5-2.5 mm ²
Antenna	Built-in, or optionally external via SMA-f

Electrical characteristics

Nominal voltage	230 V power supply: 100-240 VAC, 24 V power supply: 12-35 VAC or 12-48 VDC, Internal power supply: 4 VAC
Frequency	50/60 Hz
Power consumption	<0.2 W
Installation category	CAT 2

Environmental specifications

Operating temperature	-20 to +55 °C
Operating humidity max	80 % RH at temperatures up to 31 °C, decreasing linearly to 50 % RH at 40 °C
Operating altitude	0-2000 m
Pollution degree	Degree 2
Usage environment	Inside of a CMi-Box
Storage temperature	-40 to +85 °C

M-Bus

Interfaces	Wireless M-Bus Receiver
Maximum number of M-Bus devices (software limit)	Up to 800
Decryption	Yes

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