

CMe3100

M-Bus Metering Gateway for Fixed Network



CMe3100 is a unique M-Bus Metering Gateway for Fixed Network which enables easy and reliable integration between meters and system. CMe3100 has the same functionality as other intelligent M-Bus Metering Gateways from Elvaco, such as full M-Bus decoder, storage functionality, delivery of meter values via e-mail, ftp and http as well as the ability to connect optional accessories from Elvaco via the IR interface.

UNIQUE FEATURES

Unique features for CMe3100 is the ability to connect any M-Bus meter and then, through the different interfaces utilize it in existing systems. Systems can connect to the meters via Modbus TCP, JSON-RPC, REST and two M-Bus slave outputs. The meter can be read virtually or directly transparent.

CONTROLLING BASED ON INDOOR TEMPERATURE

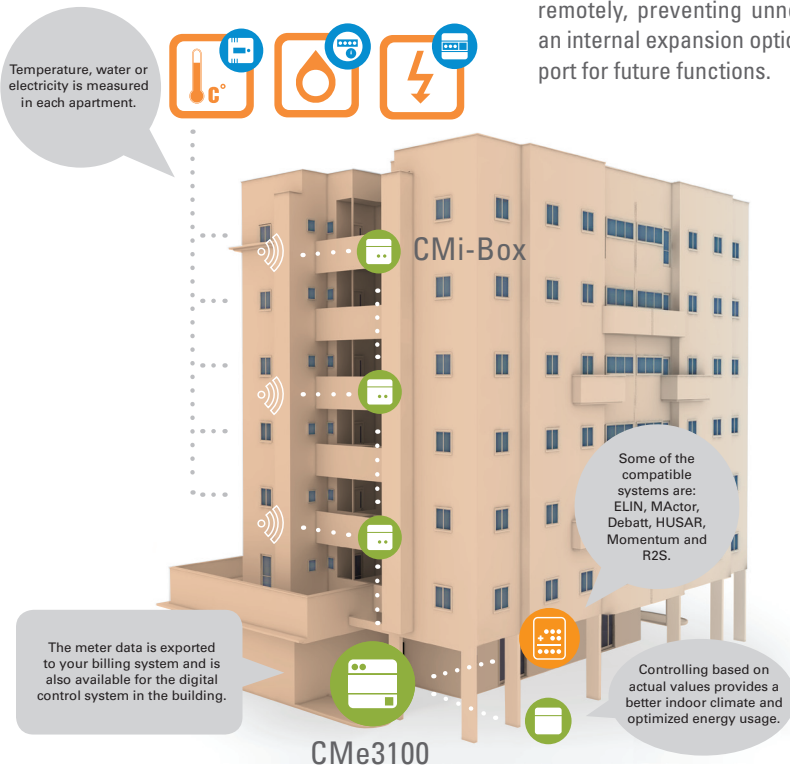
With the function "Measurement series" can CMe3100 connect to temperature sensors and calculate a temperature that can be transmitted via Modbus TCP, JSON-RPC and REST to the building's control system.

FLEXIBLE

The flexible design with the IR optical port makes it possible to add expansion modules on demand. For example, add a CMeX10 Series M-Bus Master to connect up to 256 extra meters. CMe3100 also has double M-Bus slave ports making it possible to share information to different systems. CMe3100 also gives you total control over projects with wireless M-Bus. Of course there is full support for all Elvaco's wireless M-Bus masters.

FUTURE PROOF

The CMe3100 is built on standard SUN Java™ platform technology, a worldwide standard. Core platform and libraries are designed and tested by leading software companies. Updates and patches are performed remotely, preventing unnecessary service calls or visits. CMe3100 has an internal expansion option for e.g. WiFi and also an external USB master port for future functions.



Mechanics

Casing material	Polyamide
Protection class	IP20
Dimensions (w x h x d)	70 x 90 x 64 mm (4 DIN modules)
Weight	190 g
Mounting	Mounted on DIN rail (DIN 50022) 35 mm

Electrical connections

Supply voltage	Screw terminal. Cable 0-2.5 mm ² , 0.5 Nm tightening torque
M-Bus master port	Pin terminal. Solid wire 0.6-0.8 Ø mm
M-Bus slave port 1	Screw terminal. Cable 0.25-1.5 mm ²
M-Bus slave port 2	Screw terminal. Cable 0.25-1.5 mm ²
USB master port	Type A
USB slave port	Type mini B
Network	RJ45 (Ethernet)

Electrical characteristics

Nominal voltage	100-240 VAC (+/- 10%)
Frequency	50/60 Hz
Power consumption (max)	<15 W
Power consumption (nom)	<5 W
Installation category	CAT 3

Environmental specifications

Operating temperature	-20 °C 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	Indoors, can be extended with IP67 enclosure for outdoor use
Storage temperature	-40 °C to +85 °C

User interface

Green LED	Power
Red LED	Error
Yellow LED	Status ethernet
Blue LED	USB active
Push button	Factory reset
Configuration	Web interface (HTTP), Auto configuration (URL), Telnet, REST/JSON
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M-Bus

Interfaces	IR, integrated M-Bus Master, M-Bus slave
Maximum number of M-Bus devices (software limit)	Software licenses for 8, 32, 64, 128 and 256 devices
Transparent M-Bus	TCP/IP and M-Bus 2-wire interface (software limit does not apply to Transparent M-Bus mode)
Virtual M-Bus	TCP/IP and M-Bus 2-wire slave interface
Decryption	Yes

Integrated M-Bus Master

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

M-Bus slave interface

M-Bus standard	EN 13757
M-Bus baud rate	300 and 2400 bit/s
Nominal voltage	21-42 VDC
Addressing modes	Primary, secondary

General

Real time clock backup	24 h
Real time clock accuracy	<2 s/day
Script engine	Intelligent script engine for active content generation
Software/firmware update	Web interface
Measurement reports	HTTP, FTP, SMTP (e-mail)
Continuous Readout Mode	Modbus, REST

Data storage (examples)

Number of meters	15 minute values	Hourly values
1	~15 years	>15 years
32	~4 years	>15 years
128	~1 year	~4 years
256	~0.5 year	~2 years

Fixed network (Ethernet)

Speed and duplex	Auto 10/100 MBit Half/Full duplex
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Approvals

EMC	EN 61000-6-2, EN 61000-6-3
Safety	IEC 60950-1, CAT 3