Elvaco Edge Wireless M-Bus Gateway

Elvaco's new ground-breaking gateway brings versatile power supply options with best-in-class battery-driven gateway for wired and wireless meters. Elvaco Edge has the potential to read, convert and deliver meter values from all types of M-Bus meters, regardless of manufacturer. This makes the device quick and easy to integrate into an existing M-Bus system. The key features of the product include:

- Integrated M-Bus Master for up to 4 meters (4T).
- Connect an external M-Bus Master for up to 256 meters (256T)
- Over 1000 wireless OMS compatible M-Bus meters
- Connectivity on board (LTE-M and NB-IoT)
- Firmware over the air (FOTA)

Technical specification

Mechanics

Type	Value	Comments
Casing material	ABS	Depending on Elvaco Edge variant.
Ingress protection class	IP55 or IP65	Depending on Elvaco Edge variant.
Dimensions (w x h x d)	165x166x54 mm	
Weight	~550-600 g	Depending on Elvaco Edge variant.
Mounting	Wall mounted	Bayonet mount or tray of the Elvaco Edge. Screws are not included.
Alternative mounting kits	DIN Rail kit Pole mount kit	Can be ordered seperately
Maximum screw diameter	4.5 mm	
Maximum screw head	9 mm	Only applies if mounting the tray of Elvaco Edge directly onto the wall.
External antenna connector for mobile networks	MCX-f	External antenna requires configuring Elvaco Edge to this using Elvaco OTC App. External antenna is not included.
External antenna connector for wireless M-Bus	SMA-f	Requires an Elvaco Edge model prepared for external wireless M-Bus antenna. External antenna is not included.

Electrical connections

Type	Value	Comments
M-Bus master port (screw terminal)	Cable area 0.25 -1.5 mm²	

Electrical characteristics, Battery

Type	Value	Comments
Supply voltage	38000 mAh 3.6 V	
Battery type	2x D-Cells	
Battery weight	220 g	
Battery lifetime	Up to 16 years	Battery lifetime is dependant on gateway settings and radio environment
Mounting of battery	Internally	The battery is replaceable with an Elvaco recommended battery.

Electrical characteristics, PSU

Type	Value	Comments
Nominal voltage	100-240 (+/- 10%) VAC	
Frequency	50/60 Hz	
Power consumption (Max)	3.8 W	
Power consumption (Nom)	1 W	
Ingress protection class of PSU	IP68	
Overvoltage category	CAT III	For PSU variants.
Max fuse rating	10 A	
Pollution degree, PSU	Degree II	

Environmental specifications

Type	Value	Comments
Operating temperature	+5 to +55 ºC	
Operating humidity max.	5 to 90 %	No condensation.
Operating altitude range	0-2000 m	
Pollution degree	3	
Storage temperature	-20 to +60 ºC	

User interface

Type	Value	Comments
LEDs	6 RGB LEDs	
Push button	Activation, deactivation, reg update, restart device	
Remote configuration	LwM2M 1.1	
Local configuration	NFC	ISO/IEC 15693 NFC tag containing NDEF compliant information. See Elvaco NFC specification for detailed information.

Wired M-Bus

Type	Value	Comments
Interfaces	Internal M-Bus Master	
M-Bus standard	EN 13757	
Maximum unit loads (internal M-Bus master)	4T/6mA	Can be extended with CMeX20 and an M-Bus Master from CMeX10-13S series or by buying a pre-assembled Elvaco Wired M-Bus Repeater.
Maximum number of wired M-Bus devices	256	
M-Bus baud rate	300, 2400, 9600 bit/s	
Nominal voltage	26.5 V	
M-Bus search modes	Primary, secondary	
Maximum cable length	50 m	

Wireless M-Bus

Type	Value	Comments
M-Bus standard	EN 13757-4	
Supported modes	T1, C1, S1	
Frequency bands	868 MHz	
Maximum number of wireless M-Bus devices	Over 1000 meters	
OMS compliant	Yes	OMS version 4

General

Type	Value	Comments
Real time clock backup	24 h	
Real time clock accuracy	< 2 s/day	Requires network time support.
Firmware update	FOTA (Firmware-over-the-air)	
Meter data delivery	MQTT-SN or LwM2M 1.1	

Compliance

Type	Value	Comments
RoHS Directive	2011/65/EU	
Electromagnetic Compatibility Directive (EMC)	2014/30/EU	
Low Voltage Directive (LVD)	2014/35/EU	
Radio Equipment Directive (RED)	2014/53/EU	
Environmental	IEC 60529:2013 (Ed 2.2) EN 60529:2014 IEC 62368-1 EN 60950-22:2017	