

Elvaco Edge M-Bus and wM-Bus Gateway

The Elvaco Edge platform delivers a versatile and future-ready M-Bus and wireless M-Bus gateway designed to meet the evolving market needs. With its modular architecture, the solution can be adapted to a wide range of different applications.

The gateway offers multiple power source options, either PSU or battery, and can operate on battery power for up to 16 years. It supports the collection of data from all OMS-compliant M-Bus and wireless M-Bus meters. Meter data delivery and device management use standard protocols such as MQTT-SN and LwM2M for seamless integration into existing systems. Using Elvaco Edge together with Elvaco Play, meter data can be sent using MQTT or HTTP via Elvaco Play. One integration needed for all your devices in Elvaco Play. Commission devices in minutes using guided workflows presented in Elvaco Play App.

With included connectivity and support for LTE-M and NB-IoT, Elvaco Edge is connected instantly after activation. It supports remote device management and Firmware-Over-The-Air (FOTA). Thanks to its modularity, the Elvaco Edge can be ordered specifically to meet the needs of your project.

- Ingress protection: IP55 or IP65
- Power supply: Mains (PSU) or battery
- Wired M-Bus capacity: 4 (4T) devices or 128 (128T) devices
- Data collection: Wired M-Bus, or wired M-Bus & wireless M-Bus
- Wireless M-Bus antenna: Internal or external
- Mobile networks antenna: Internal or external



Technical specification

Elvaco Edge can be ordered for either Elvaco Play or Elvaco Evo. For Elvaco Play variants called Elvaco Edge Play, installation can be done using the Elvaco Play App. For Elvaco Edge with Elvaco Evo, the Elvaco Evo onboarding process is used for installation of Elvaco Edge. For more information on the different Elvaco Edge variants, see below table.

Elvaco Edge Play variants

Item no	M-Bus master	Power source	wM-Bus 868 MHz	IP rating
3000051	4T	Battery		IP55
3000067	4T	Battery		IP65
3000053	4T	Battery	Internal antenna	IP55
3000060	4T	Battery	Internal antenna	IP65
3000055	4T	Battery	External antenna	IP55
3000062	4T	Battery	External antenna	IP65
3000057	4T	PSU 3W3.3V		IP55
3000058	4T	PSU 3W3.3V	Internal antenna	IP55
3000059	4T	PSU 3W3.3V	External antenna	IP55
3000064	128T	PSU 20W36V/3.3V		IP55
3000065	128T	PSU 20W36V/3.3V	Internal antenna	IP55
3000066	128T	PSU 20W36V/3.3V	External antenna	IP55
3000061	*	PSU 3W3.3V	Internal antenna	IP65
3000063	*	PSU 3W3.3V	External antenna	IP65

*To keep the ingress protection rating of IP65, no M-Bus cable can be routed out of the enclosure for these variants.

Elvaco Edge variants for Elvaco Evo

Item no	M-Bus master	Power source	wM-Bus 868 MHz	IP rating
3000001	4T	Battery		IP55
3000025	4T	Battery		IP65
3000003	4T	Battery	Internal antenna	IP55
3000010	4T	Battery	Internal antenna	IP65
3000005	4T	Battery	Internal or External antenna	IP55
3000012	4T	Battery	Internal or External antenna	IP65
3000007	4T	PSU 3W3.3V		IP55
3000008	4T	PSU 3W3.3V	Internal antenna	IP55
3000009	4T	PSU 3W3.3V	Internal or External antenna	IP55
3000014	128T	PSU 20W36V/3.3V		IP55
3000015	128T	PSU 20W36V/3.3V	Internal antenna	IP55
3000016	128T	PSU 20W36V/3.3V	Internal or External antenna	IP55
3000011	*	PSU 3W3.3V	Internal antenna	IP65
3000013	*	PSU 3W3.3V	Internal or External antenna	IP65

*To keep the ingress protection rating of IP65, no M-Bus cable can be routed out of the enclosure for these variants.

The technical specification for Elvaco Edge depends on which variant that is of interest. For instance, electrical characteristics depend on if your are using battery driven gateway, or which kind of PSU that is included in the product. See above table to understand what specification to read.

Mechanical	Indoor enclosure	Comments
Enclosure material	ABS	
Enclosure color	White	
Ingress protection class	IP55	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.
Maximum screw diameter	4.5 mm	
Maximum screw head	9 mm	Only applies if mounting the tray of Elvaco Edge directly onto the wall.
Alternative mounting kits	DIN Rail kit (1100516), Pole mount kit (1100517)	Pole mount kit for pole diameter 50-250 mm. Can be ordered seperately.
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.

Mechanical	Outdoor enclosure	Comments
Enclosure material	PC/ASA	
Enclosure color	RAL 7035 (grey)	
Ingress protection class	IP65	Do not alter the enclosure or hardware, as this may impair the IP65 protection rating.
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.
Maximum screw diameter	4.5 mm	
Maximum screw head	9 mm	Only applies if mounting the tray of Elvaco Edge directly onto the wall.
Alternative mounting kits	DIN Rail kit (1100516), Pole mount kit (1100517)	Pole mount kit for pole diameter 50-250 mm. Can be ordered seperately.
External antenna connector for mobile networks	N/A	
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.

General	Elvaco Edge	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	
Meter data delivery (via Elvaco Cloud)	MQTT, HTTP (webhook), FTP & Email	Support for CMe2100/3100 push reports format using the mentioned protocols.

Cellular network	Elvaco Edge	Comments
Mobile network	LTE-M and NB-IoT	LTE-M as default

Cellular network	Elvaco Edge	Comments
Supported radio bands	3, 8 & 20	
SIM card size	Nano (4FF)	Slide to insert

Electrical characteristics	Battery	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	CMip2110 (EoL)	Comments
Mains power supply	Premounted cable	
Nominal voltage	100-240 (+/- 10%) VAC	
Frequency	50/60 Hz	
Power consumption (Max)	3.8 W	
Power consumption (Nom)	1 W	
Overvoltage category	OVC II	
Max fuse rating	10 A	
Pollution degree	Degree II	

Electrical characteristics	WM PSU 3W3.3V	Comments
Mains power supply	Spring terminal (0.75-1.5 mm ²)	
Nominal voltage	100-240 (+/- 10%) VAC	
Frequency	50/60 Hz	
Power consumption (Max)	4.7 W	
Power consumption (Nom)	0.5 W	
Overvoltage category	OVC III	
Max fuse rating	10 A	
Pollution degree	Degree II	

Integrated M-Bus master	M-Bus Master 4T	Comments
Interfaces	M-Bus Master	Screw terminal block (A-B)
M-Bus standard	EN 13757	
Maximum unit loads (internal M-Bus master)	4T/6mA	For applications with requiring more than 4 meters, see subsection Option module 128T .
Maximum number of wired M-Bus devices	4*	Theoretically 256 meters, but the internal M-Bus master only drives 4 M-Bus loads.
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	
M-Bus Master port (screw terminal)	Cable area 0.25-1.5 mm ²	*N.b! For maintaining IP65 compliance on Elvaco Edge Outdoor, the M-Bus cable must be routed through protective cable gland with an increased outer diameter of 3-6 mm.

Electrical characteristics	WM PSU 20W36V/3.3V	Comments
Mains power supply	Spring terminal (0.75-1.5 mm ²)	

Electrical characteristics	WM PSU 20W36V/3.3V	Comments
Nominal voltage	100-240 (+/- 10%) VAC	
Frequency	50/60 Hz	
Power consumption (Max)	25 W	
Power consumption (Nom)	7.5 W	Power consumption at 128T.
Overvoltage category	OVC III	
Max fuse rating	10 A	
Pollution degree	Degree II	

Environmental	Elvaco Edge	Comments
Operating temperature	-20 to +55 °C	
Operating humidity max.	5 to 90 %	No condensation.
Operating altitude range	0 - 2000 m	
Pollution degree	Degree 3	
Storage temperature	-20 to +60 °C	Prolonged exposure to high temperature reduces battery capacity.

Type	Elvaco Edge	Comments
LEDs	6 RGB LEDs	
Push button	Activation, deactivation, reg update, restart device	
Remote configuration	LwM2M 1.1	
Local configuration	Elvaco OTC App (via NFC)	ISO/IEC 15693 NFC tag containing NDEF compliant information.

Option module	M-Bus Master 128T	Comments
Interfaces	M-Bus Master	Screw terminal block (C-D)
M-Bus standard	EN 13757-4	
Maximum unit loads (internal M-Bus master)	128T/192mA	
Maximum number of wired M-Bus devices	256*	*Supports up to 256 wired M-Bus meters if connecting an external M-Bus master, see Elvaco Wired M-Bus Repeater at www.elvaco.se .
M-Bus baud rate	300, 2400, 9600 bit/s	
Nominal voltage	36 V	
M-Bus search modes	Primary, secondary	
Maximum cable length	5 km (max 90 Ohm)	
M-Bus master port (screw terminal)	Cable area 0.25-1.5 mm ²	

Option module	Wireless M-Bus 868 MHz	Comments
M-Bus standard	EN 13757-4	
Supported modes	T1, C1, S1	Default configuration: T1 + C1.
Frequency bands	868 MHz	434 MHz available for testing.
Maximum number of wireless M-Bus devices	Over 1000 meters	
OMS compliant	Yes	OMS v.4

Compliance	Elvaco Edge	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	



Compliance	Elvaco Edge	Comments
Environmental	IEC 60529:2013 (Ed 2.2)	
	EN 60529:2014	
	IEC 62368-1	
	EN 60950-22:2017	