

# MIVO CONNECT

## M-BUS EXTENDER 250

The MIVO Connect M-Bus Extender 250 is an add-on module for the MIVO Connect IoT Gateway and expands the system's M-Bus capacity with an additional 256 M-Bus loads. The system is easily expanded with the included expansion cable and can be forwarded with up to 10 expansion units. The module indicates errors and measures nominal bus voltage and current for easier diagnostics both visually and via the MIVO Connect Smart IoT Gateway.



### Technical Specification

#### Mechanics

Dimensions (w x h x d)	70 x 85 x 57 mm (4 DIN-moduler)
Weight	200g
Protection class	IP20

#### Environmental

Storage temperature	-25 till +55 C
Operating temperature	-25 to +55 C
Operating humidity	5 till 90% non-condensing
Max. operating altitude	2000m
Pollution degree	2
Operating environment	Indoors

#### Power

Input voltage	Via expansionsport
Power consumption (max)	<5W (20W)
Overvoltage category	CAT 3 (OVC III)
Connection terminals	Spring loaded terminals 0.75 - 1.5mm <sup>2</sup>

#### M-Bus master

Standard	EN 13757
Speed	300 / 2400 / 9600 Baud
Nominal voltage	40V
Maximum output current	500mA
Unit loads	256
Maximum cable length	5km
Electrical isolation	1500V

#### Other

LED	Status, Error, TX, RX
Error codes	Short circuit, overload, no load
Accuracy current measurement	3%+1mA
Maximum number of nodes	10

#### Approvals

EMC	EN 61000-6-2, EN 61000-6-3
Safety	EN 62368-1 (OVC III)
Environment	RoHS, WEEE





# MIVO Connect

## Smart IoT Gateway

MIVO Connect is a smart data gateway for data collection from up to 2000 meters or sensors. The data is collected using internal or external interfaces which include M-Bus, M-Bus over IP or Modbus RTU/TCP. The collected data can be communicated to one or more user defined services, these include cloud-based services and local building management systems. To prevent data loss in case of network or power failures the device contains local storage. On top of this the device also features router functionality and a user-friendly web interface to simplify the administration and troubleshooting process. The built-in expansion bus provides an easily expandable and future-proof solution.



## Technical Specification

### Mechanics

Dimensions (w x h x d)	70 x 85 x 57 mm (4 DIN-modules)
Weight	200g
Protection class	IP20

### Environmental

Storage temperature	-25 to +55 C
Operating temperature	-25 to +55 C
Operating humidity	5 to 90% non-condensing
Max. operating altitude	2000m
Pollution degree	2
Operating environment	Indoors

### Power

Input voltage	230 VAC (±10%), 50Hz
Power consumption (max)	<5W (20 W)
Overvoltage category	CAT 3 (OVC III)
Connection terminals	Spring loaded terminals 0.75 - 1.5mm <sup>2</sup>

### Ethernet - WAN and LAN

Connection	RJ45
Speed	10/100MBit
Router functionality	Yes

### M-Bus master

Standard	EN 13757
Speed	300 / 2400 Baud
Nominal voltage	30V
Maximum output current	85mA
Unit loads	32**
Maximum cable length	1km
Electrical isolation	1500V

\* Optional

\*\*Can be increased with expansion modules.

### LTE \*

Type	LTE Cat-M
SIM	Mini-SIM (2FF)
Antenna connector	SMA

### RS485 (Modbus RTU)

Type	Non-isolated
Speed	9600 to 115200 baud
Termination	None
Biasing	Weak (1kOhm)
Maximum number of nodes	10**
Maximum cable length	30m
Connection	Spring loaded terminals 0.75 - 1.5mm <sup>2</sup>

### Other connections

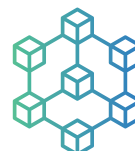
Expansion bus	MIVO-Link
USB connection front	USB-C
USB connection bottom	USB-A

### Other

Maximum number of sensors	2000
Storage examples**	100 sensors, hourly values -> 20 years 1000 sensors, hourly values -> 2 years 2000 sensors, hourly values -> 1 year
Real-time clock drift	<2 s/day
Real-time clock backup time	48 h
Configuration interface	Web interface using USB-C or LAN

### Approvals

EMC	EN 61000-6-2, EN 61000-6-3
RED	EN 301489-1, EN 301489-7
Safety	EN 62368-1 (OVC III)
Environment	RoHS, WEEE



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