

# Data sheet

## MR-GW

## Modbus RTU / Modbus TCP Gateway

Page 1/9

P/N

11083001

EAN 4251394632391

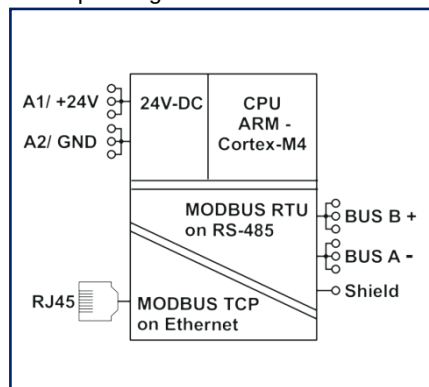
2025/10/14

Version: O

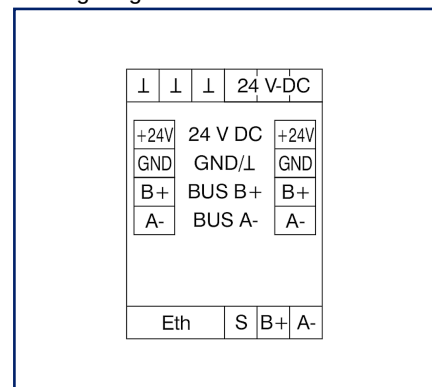
## Illustrations



Principle diagram



Wiring diagram



See enlarged drawings at the end of document

## Product specification

MR-(F)-GW is a compact Modbus RTU / Modbus TCP Gateway. The MR-Gateway enables bidirectional data exchange between Modbus RTU fieldbus devices and a Modbus TCP master (client). The MR-(F)-GW can be operated in two modes. Either as a transparent gateway in Modbus RTU over TCP mode or as a protocol converter (Modbus TCP mode). The MR-Gateway can be connected to METZ CONNECT Modbus RTU devices via two 4-pole terminals on the front of the device and a jumper plug. An integrated web server is used for parameter settings, management and monitoring of the two interfaces (Ethernet / RS485). The web interface is also used to update the firmware. The MR-Gateway is suitable for decentralised mounting in electrical sub-distribution boards or in control cabinets on TH35 mounting rails in accordance with IEC 60715.

- Simultaneous access from 32 Modbus TCP clients
- Bidirectional exchange of data between Modbus RTU Slave devices and a Modbus TCP Master (client)
- Protocol: Modbus RTU over TCP (Transparent gateway), Modbus TCP/IP v1.0b, HTTP 1.0
- Integrated web server
- Intuitive and software-independent TCP configuration via web interface
- Simple device search of METZ CONNECT Modbus RTU devices on the RS485 bus
- Fast connection of METZ CONNECT Modbus RTU devices via proven jumper plug technology
- Galvanic 3-way isolation (RS485- Ethernet-power supply)
- Status monitoring of TCP and RS485 communication



## Data sheet

Page 2/9

## MR-GW

## Modbus RTU / Modbus TCP Gateway

P/N

11083001

EAN 4251394632391

2025/10/14

Version: O

### Technical Data

#### Approvals



Open Energy Management Equipment 34TZ

#### Ethernet interface

|                    |                                                                              |
|--------------------|------------------------------------------------------------------------------|
| Network connection | 1 x Ethernet port (RJ-45 IEC 60603-7-51 (2010))                              |
| Speed              | 10/100 Mbps with auto-negotiation                                            |
| Protocol           | Modbus RTU over TCP (Transparent gateway)<br>Modbus TCP/IP v1.0b<br>HTTP 1.0 |

#### RS485 interface

|                                   |                                               |
|-----------------------------------|-----------------------------------------------|
| Protocol                          | Modbus RTU v1.1b3                             |
| Transmission parameters           |                                               |
| Transmission rate                 | min. 300 Bit/s (Bd)<br>max. 115200 Bit/s (Bd) |
| Transmission rate default setting | 19200 Bit/s (Bd)                              |
| Parity                            | Odd<br>Even (default setting)<br>None         |
| Stopbits                          | 1 (default setting)<br>2                      |
| Galvanic isolation                | 1.5 kV                                        |
| Bus termination resistor          | 120 Ohm switchable                            |
| Number of bus participants        | 32; with 1 unit load per participant          |

#### Supply

|                          |                         |
|--------------------------|-------------------------|
| Operating voltage        | 24 V DC +/- 10 % (SELV) |
| Power consumption (max.) | 50 mA                   |
| Power loss (max.)        | 1.3 W                   |

#### Housing

|                       |                                   |
|-----------------------|-----------------------------------|
| Dimensions            |                                   |
| Dimension (W x H x D) | 35 mm x 69.3 mm x 60 mm           |
| Dimension (W x H x D) | 1.378 in. x 2.728 in. x 2.362 in. |
| Weight                | 64 g                              |
| Mounting style        | Standard rail TH35                |
| Mounting position     | any                               |



## Data sheet

Page 3/9

## MR-GW

## Modbus RTU / Modbus TCP Gateway

P/N

11083001

EAN 4251394632391

2025/10/14

Version: O

## Technical Data

|                                                           |                                                        |
|-----------------------------------------------------------|--------------------------------------------------------|
| <b>Housing</b>                                            |                                                        |
| Apposition                                                | without distance                                       |
| Connection type                                           | Screw type terminal blocks                             |
| <b>Indicator</b>                                          |                                                        |
| Operation "RDY"                                           | green LED                                              |
| LAN connection "LINK 10/100"                              | green LED (100 Mbit), yellow LED (10 Mbit)             |
| RS485 bus "TX" / "RX"                                     | green LED                                              |
| <b>Terminal blocks</b>                                    |                                                        |
| Supply and bus                                            |                                                        |
| Terminal block                                            | 4-pole, pluggable, on front of housing                 |
| Solid wire (AWG)                                          | max. 1.5 mm <sup>2</sup> / max. 16 AWG                 |
| Stranded wire (AWG)                                       | max. 1 mm <sup>2</sup> / max. 18 AWG                   |
| Wire diameter                                             | min. 0.3 mm<br>max. 1.4 mm                             |
| Module connection                                         |                                                        |
| Wire cross section solid                                  | 0.2 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12  |
| Wire cross section multi                                  | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12 |
| Wire cross section with wire ferrule                      | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12 |
| Screw torque (max.)                                       | 0.5 Nm                                                 |
| Stripping length (min.)                                   | 8 mm                                                   |
| Ethernet connection                                       | RJ45-jack                                              |
| <b>Material</b>                                           |                                                        |
| Material - Housing                                        | Polyamid 6.6 V0                                        |
| Color                                                     | gray                                                   |
| Material - Terminal block                                 | Polyamid 6.6 V0                                        |
| Material - Covers                                         | Polycarbonat                                           |
| <b>Protection category according to IEC 60529</b>         |                                                        |
| Protection category - housing (acc. to IEC 60529)         | IP40                                                   |
| Protection category - terminal blocks (acc. to IEC 60529) | IP20                                                   |



Data sheet

Page 4/9

**MR-GW**

**Modbus RTU / Modbus TCP Gateway**

P/N

11083001

EAN 4251394632391

2025/10/14

Version: O

## Technical Data

### Climatic Data

#### Operating

Temperature - Operating °C -5 °C - 55 °C

Temperature - Operating °F 23 °F - 131 °F

Relative humidity max. 85 % non-condensing

#### Storage

Temperature - Storage °C -20 °C - 70 °C

Temperature - Storage °F -4 °F - 158 °F

### Classifications

ETIM 7.0 EC001099

ETIM 8.0 EC001099

ETIM 9.0 EC001099

ETIM 10.0 EC001099

### Software and additional documents

#### Software

MC Search Tool: Windows-based and free tool to configure and search the MR-(F)-GW in a TCP/IP network (free download at [www.metz-connect.com](http://www.metz-connect.com))

### Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way. At METZ CONNECT's request, the Customer shall submit and make available meaningful evidence (e.g. test and laboratory protocols, certifications, etc.).



Data sheet

Page 5/9

**MR-GW**

**Modbus RTU / Modbus TCP Gateway**

P/N

**11083001**

**EAN 4251394632391**

2025/10/14

Version: O

## Accessories

| P/N            | Designation                |
|----------------|----------------------------|
| 110369         | Terminal block Type 259    |
| 110561         | Power supply NG4 24 V DC   |
| 11056170       | Power supply NG4-F 24 V DC |
| 11083013       | MR-TO4 Modbus RTU          |
| 1108301370     | MR-F-TO4 Modbus RTU        |
| 1108311319     | MR-DI10 Modbus RTU         |
| 110831131970   | MR-F-DI10 Modbus RTU       |
| 11083213       | MR-AI8 Modbus RTU          |
| 1108321370     | MR-F-AI8 Modbus RTU        |
| 1108331326     | MR-DIO4/2 Modbus RTU       |
| 110833132601   | MR-DIO4/2S Modbus RTU      |
| 11083313260170 | MR-F-DIO4/2S Modbus RTU    |
| 110833132670   | MR-F-DIO4/2 Modbus RTU     |
| 1108341319     | MR-DI4 Modbus RTU          |
| 110834131970   | MR-F-DI4 Modbus RTU        |
| 1108351302     | MR-AO4 Modbus RTU          |
| 110835130270   | MR-F-AO4 Modbus RTU        |
| 1108361321     | MR-DO4 Modbus RTU          |
| 110836132101   | MR-DOA4 Modbus RTU         |
| 11083613210170 | MR-F-DOA4 Modbus RTU       |
| 110836132170   | MR-F-DO4 Modbus RTU        |
| 1108371302     | MR-AOP4 Modbus RTU         |
| 110837130270   | MR-F-AOP4 Modbus RTU       |
| 11083813       | MR-TP Modbus RTU           |
| 11083813-01    | MR-TPS Modbus RTU          |
| 1108381370     | MR-F-TP Modbus RTU         |
| 1108381370-01  | MR-F-TPS Modbus RTU        |
| 11083913       | MR-SI4 Modbus RTU          |
| 1108391370     | MR-F-SI4 Modbus RTU        |
| 1108401332     | MR-CI4 Modbus RTU          |
| 110840133270   | MR-F-CI4 Modbus RTU        |
| 11084113       | MR-SM3 Modbus RTU          |
| 1108411370     | MR-F-SM3 Modbus RTU        |



Data sheet

Page 6/9

**MR-GW****Modbus RTU / Modbus TCP Gateway****P/N****11083001****EAN 4251394632391**

2025/10/14

Version: O

## Accessories

|            |                         |
|------------|-------------------------|
| 11084313   | MR-Multi I/O Modbus RTU |
| 11084413   | MR-LD6 Modbus RTU       |
| 1108441370 | MR-F-LD6 Modbus RTU     |
| 31135104   | Typ 135 RIACON 135_3.5  |



Data sheet

Page 7/9

**MR-GW****Modbus RTU / Modbus TCP Gateway****P/N****11083001****EAN 4251394632391**

2025/10/14

Version: O

**Accessories from**

| P/N          | Designation                          |
|--------------|--------------------------------------|
| 1108110526IP | MB-DIO2/1-IP Modbus/BACnet 230 V     |
| 1108111326IP | MB-DIO2/1-IP Modbus/BACnet 24V AC/DC |
| 1108120526IP | MB-DIO4/2-IP Modbus/BACnet 230 V     |
| 1108121326IP | MB-DIO4/2-IP Modbus/BACnet 24V AC/DC |



Data sheet

Page 8/9

MR-GW

Modbus RTU / Modbus TCP Gateway

P/N

11083001

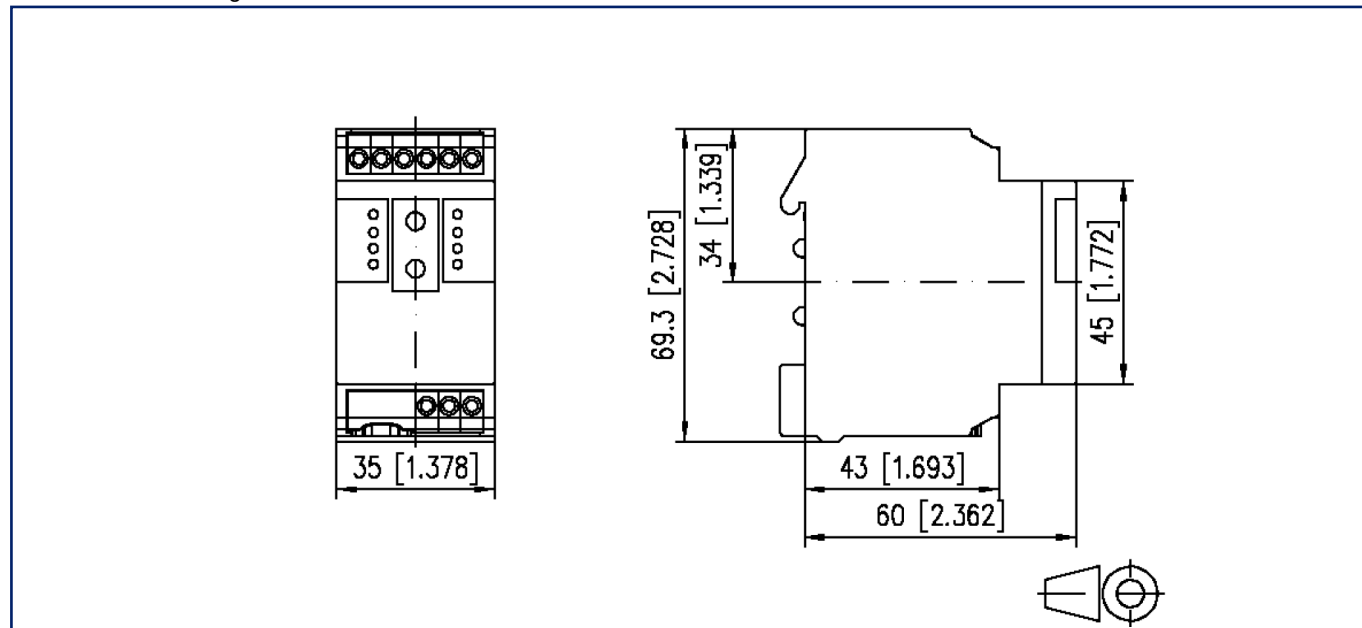
EAN 4251394632391

2025/10/14

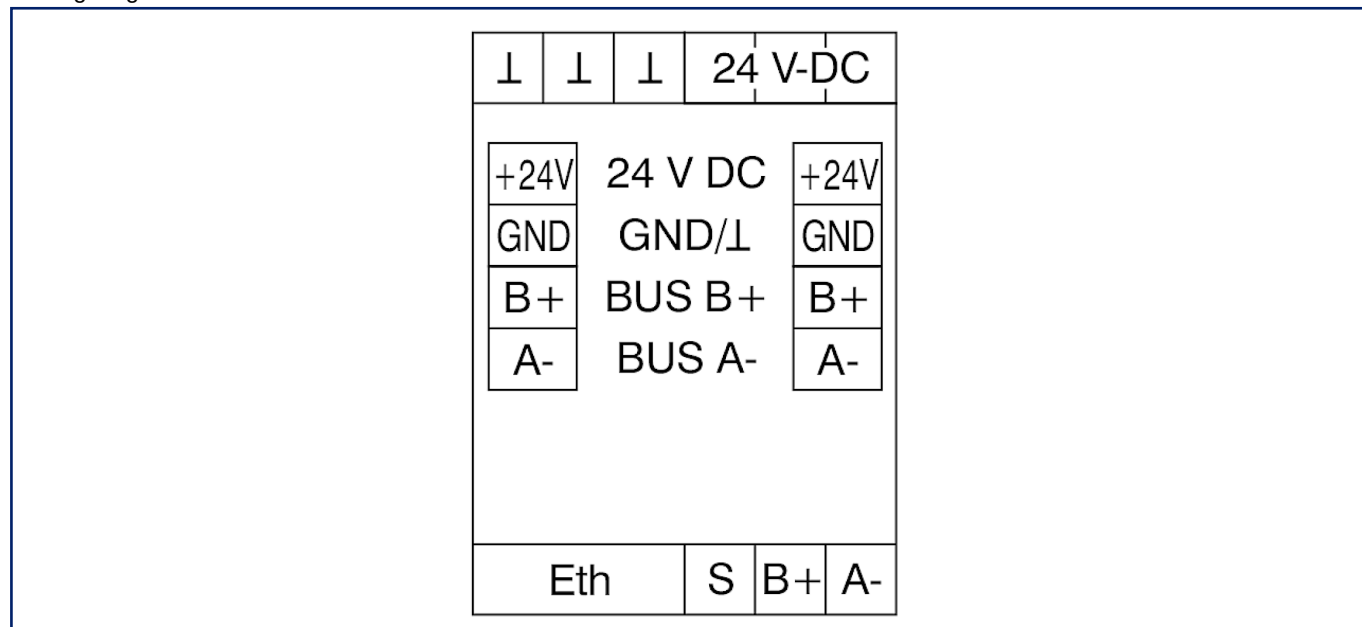
Version: O

## Illustrations

Dimensional drawing



Wiring diagram





Data sheet

Page 9/9

MR-GW

Modbus RTU / Modbus TCP Gateway

P/N

11083001

EAN 4251394632391

2025/10/14

Version: O

## Illustrations

Principle diagram

