

Data sheet

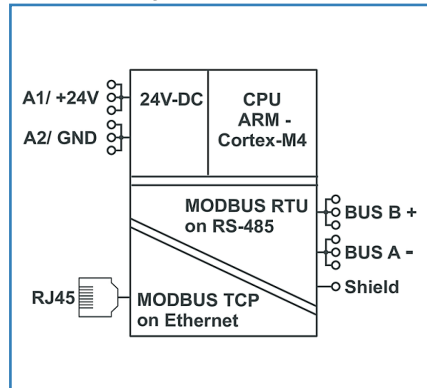
MR-GW

Modbus RTU / Modbus TCP Gateway

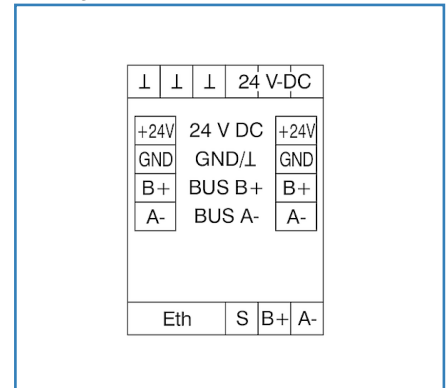
Illustrations



Principle diagram



Wiring



See enlarged drawings at the end of document

Product specification

MR-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-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, Telnet, 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

Technical Data

Ethernet interface	
Network connection	1 x Ethernet port (RJ-45 IEC 60603-7-51 (2010))
Speed	10/100 Mbits with auto-negotiation
Protocol	Modbus TCP/IP v1.0b, Modbus RTU over TCP (Transparent gateway), HTTP 1.0
RS485 interface	
Protocol	Modbus RTU v1.1b3
Transmission parameters	
Transmission rate	min. 300 Bit/s (Bd) - max. 115200 Bit/s (Bd)
Transmission rate default setting	19200 Bit/s (Bd)
Parity	Odd, None, Even (default setting)
Stopbits	1 (default setting), 2
Galvanic isolation	1.5 kV
Bus termination resistor	120 Ohm switchable
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
Built-in	any
Apposition	without distance
Connection type	Screw type terminal blocks
Indicator	
Operation "RDY"	green LED
LAN connection „LINK 10/100“	green LED (100 Mbit), yellow LED (10 Mbit)
RS485 bus „TX“ / „RX“	green LED

Technical Data

Terminal blocks	
Supply and bus	
Terminal block	4-pole, pluggable, on front of housing
Solid wire	max. 1.5 mm ² / max. 16 AWG
Stranded wire	max. 1 mm ² / max. 18 AWG
Wire diameter	min. 0.3 mm - max. 1.4 mm
Module connection	
Wire cross section solid	0.2 mm ² - 2.5 mm ² / AWG 22-12
Wire cross section multi	0.25 mm ² - 2.5 mm ² / AWG 22-12
Wire cross section with wire ferrule	0.25 mm ² - 2.5 mm ² / AWG 22-12
Screw torque (max.)	0.5 Nm
Stripping length (min.)	8 mm
Ethernet connection	RJ45-jack
Material	
Material - Housing	Polyamid 6.6 V0
Color	gray
Material - Terminal block	Polyamid 6.6 V0
Material - Covers	Polycarbonat
REACH - substance (SVHC)	Lead / 7439-92-1
Protection category according to IEC 60529	
Protection category - housing (acc. to IEC 60529)	IP40
Protection category - terminal blocks (acc. to IEC 60529)	IP20
Temperature range (min. - max.)	
Operating	
Temperature - Operating °C	-5 °C - 55 °C
Temperature - Operating °F	23 °F - 131 °F
Storage	
Temperature - Storage °C	-20 °C - 70 °C
Temperature - Storage °F	-4 °F - 158 °F

Data sheet

Page 4/7

MR-GW

P/N

Modbus RTU / Modbus TCP Gateway

11083001

EAN 4251394632391

2020/03/16

Version: A

Technical Data

Classifications

ETIM 7.0

EC001099

Software and additional documents

Software

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

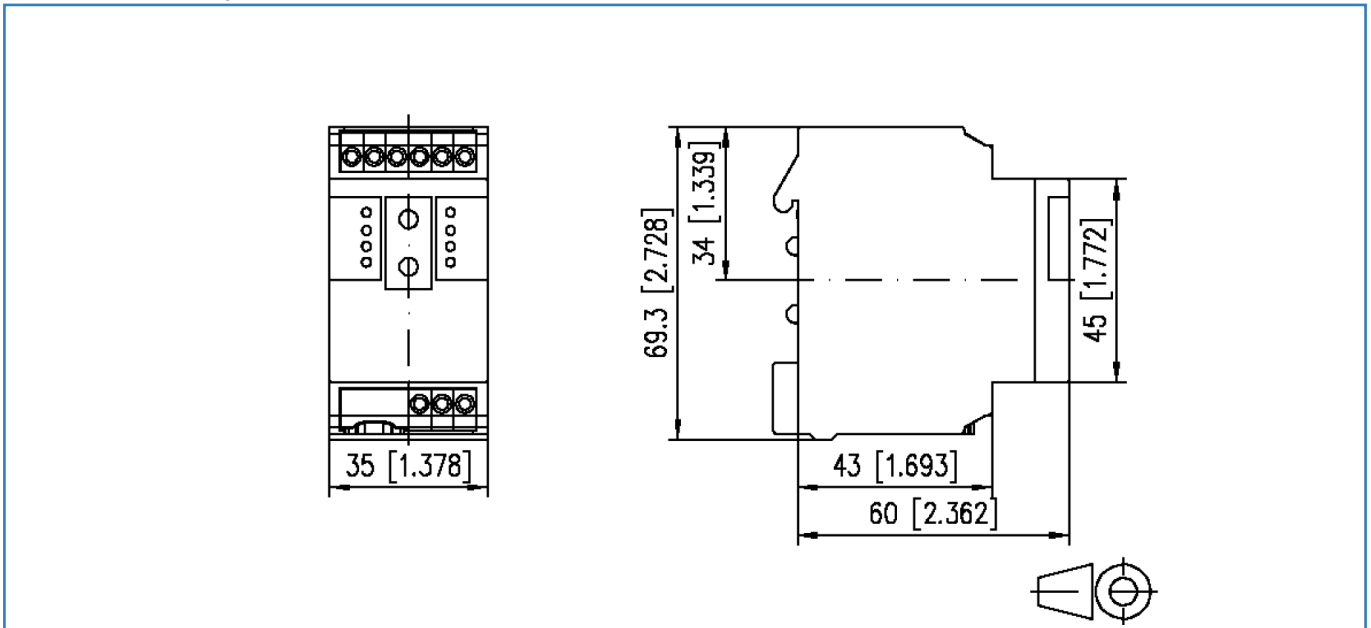


Accessories

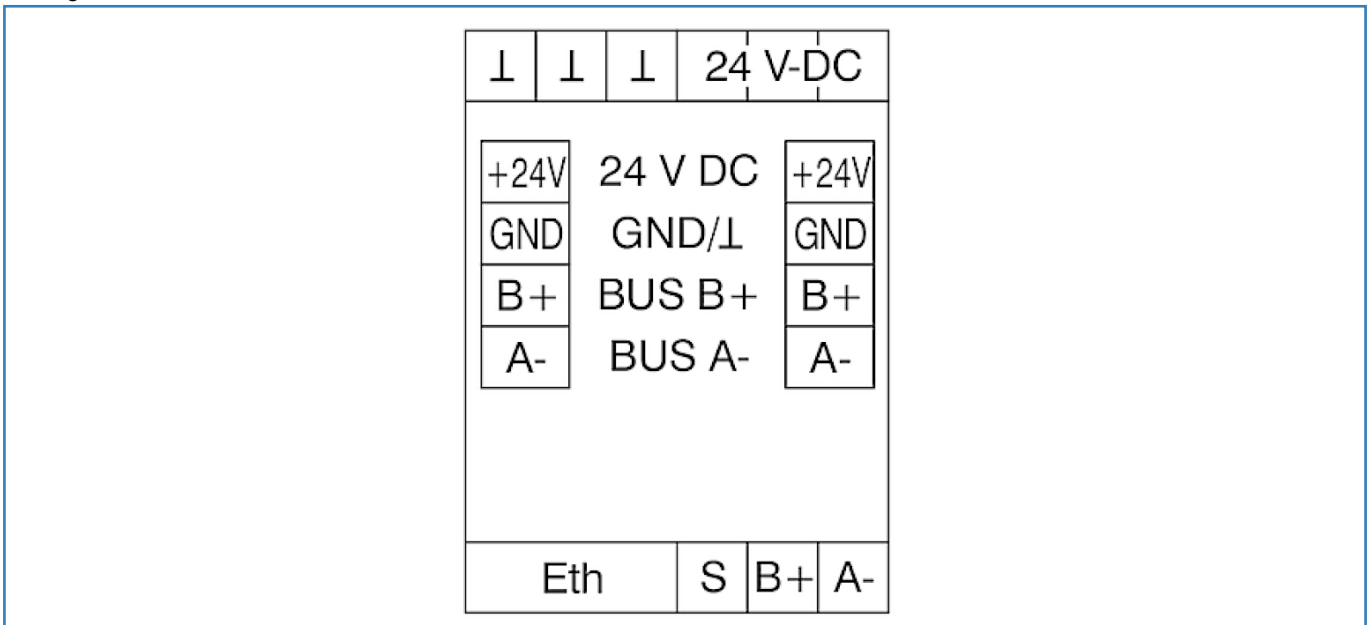
P/N	Designation
110369	Terminal block Type 259
110561	Power supply NG4 24 V DC
11083013	MR-TO4 Modbus RTU
1108301370	MR-F-TO4 Modbus RTU
1108311319	MR-DI10 Modbus RTU
110831131970	MR-F-DI10 Modbus RTU
11083213	MR-AI8 Modbus RTU
1108321370	MR-F-AI8 Modbus RTU
1108331326	MR-DIO4/2 Modbus RTU
110833132601	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
1108381370	MR-F-TP 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
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

Illustrations

Dimensional drawing

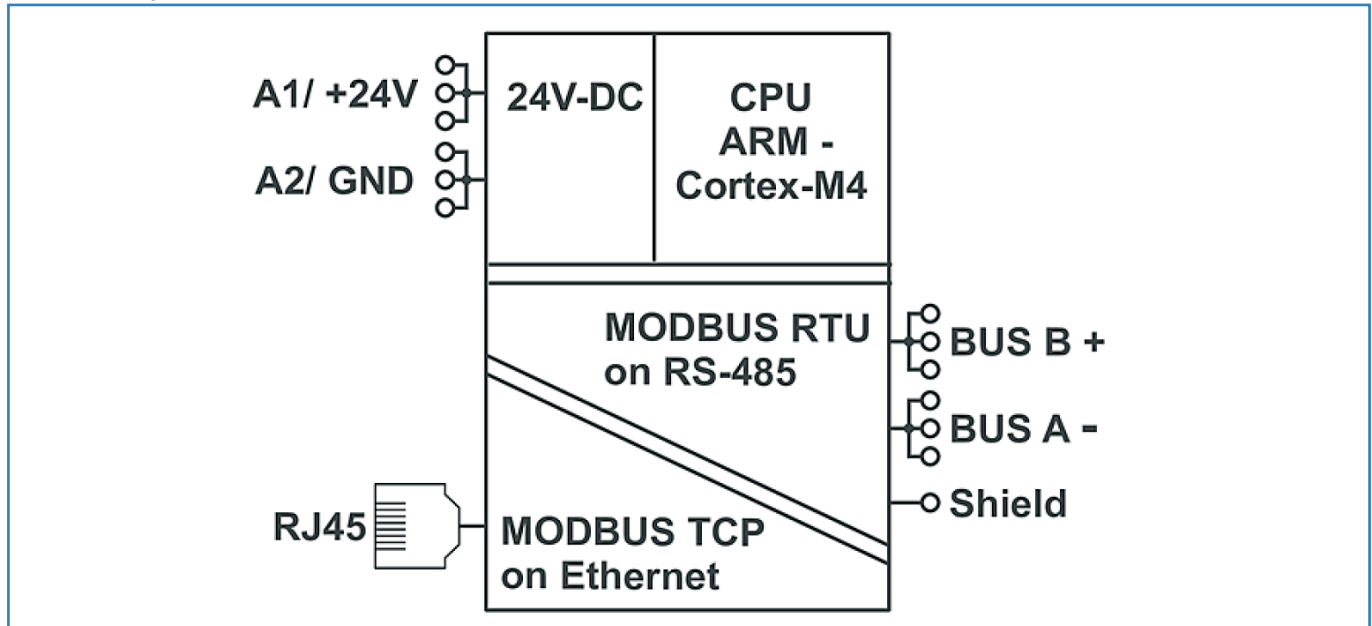


Wiring



Illustrations

Principle diagram



© 2020 METZ CONNECT - Technische Änderungen vorbehalten! Subject to modifications! Sous réserve de modifications techniques!