

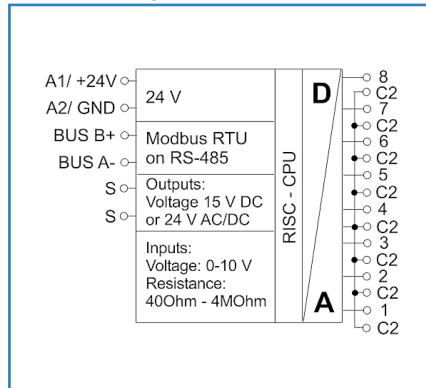
# Data sheet

## MR-AI8 Modbus RTU

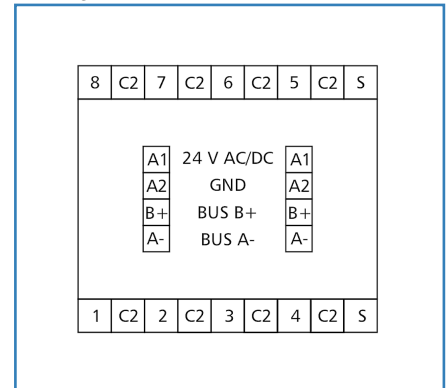
### Illustrations



Principle diagram



Wiring



See enlarged drawings at the end of document


### Product specification

The Modbus module with 8 individually configurable resistance or voltage inputs was developed for decentralized switching tasks. It is suitable for detecting resistances and voltages of, for example, passive and active temperature sensors, electrical vent and mixing valves, valve positions, etc. The inputs can be configured universally by means of standard registers via a Modbus master. Module address, bit rate and parity are set with two rotary switches on the front or by software. Suitable for decentralized mounting on DIN TH35 rail according to IEC 60715 in electrical distribution cabinets.

- Connection with screw type terminal blocks

**Data sheet**  
**MR-AI8 Modbus RTU**

**Technical Data**

<b>Approvals</b>	
	Open Energy Management Equipment 34TZ
<b>RS485 interface</b>	
Protocol	Modbus RTU
Address range	00 - 99
Bus interface	RS485 two wire bus with potential equalization in bus or line topology, terminate with 120 Ohm
Transmission parameters	
Transmission rate	min. 1200 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
<b>Supply</b>	
Operating voltage	24 V AC/DC +/- 10 % (SELV)
Power consumption	
Power consumption AC (max.)	65 mA
Power consumption DC (max.)	25 mA
Duty cycle relative	100 %
<b>Inputs</b>	
Analog inputs	8, individually configurable
Voltage range	0 V - 10 V DC
Resistance range	40 Ohm - 4 MOhm
Resolution	15 Bit
Error	approx. +/- 100 mV
<b>Housing</b>	
Dimensions	
Dimension (W x H x D)	50 mm x 69.3 mm x 60 mm
Dimension (W x H x D)	1.969 in. x 2.728 in. x 2.362 in.
Weight	104 g
Mounting style	Standard rail TH35
Built-in	any
Apposition	without distance, The maximum quantity of Modbus modules connected side-by-side is limited to 15 or to a maximum power consumption of 2 Amps (AC or DC) per connection to the power supply. For any similar block of additional modules a separate connection to the power supply is necessary.
Connection type	Screw type terminal blocks

**Data sheet**  
**MR-AI8 Modbus RTU**

Page 3/9

**P/N**  
**11083213**  
**EAN 4250184135616**  
2020/11/26  
Version: E

**Technical Data**

<b>Housing</b>	
Indicator	green and red LED
<b>Terminal blocks</b>	
Supply and bus	
Terminal block	4-pole
Solid wire	max. 1.5 mm <sup>2</sup> / max. 16 AWG
Stranded wire	max. 1 mm <sup>2</sup> / max. 18 AWG
Wire diameter	min. 0.3 mm - 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
Protective circuit	Polarity reversal protection for DC operating voltage, Protection against interchanging power supply and bus
<b>Material</b>	
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
<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
<b>Temperature range</b>	
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 MR-AI8 Modbus RTU

Page 4/9

P/N  
11083213

EAN 4250184135616

2020/11/26

Version: E

### Technical Data

#### Classifications

ETIM 7.0 EC000794

#### Software and additional documents

Logiciels et documentation Further documentation is available for free download at [www.metz-connect.com](http://www.metz-connect.com)



## Accessories

P/N	Designation
110369	Terminal block Type 259
110486	""HUB DC""
110561	Power supply NG4 24 V DC
31135104	Typ 135 RIACON 135_3.5



## Data sheet MR-AI8 Modbus RTU

Page 6/9

P/N  
11083213

EAN 4250184135616

2020/11/26

Version: E

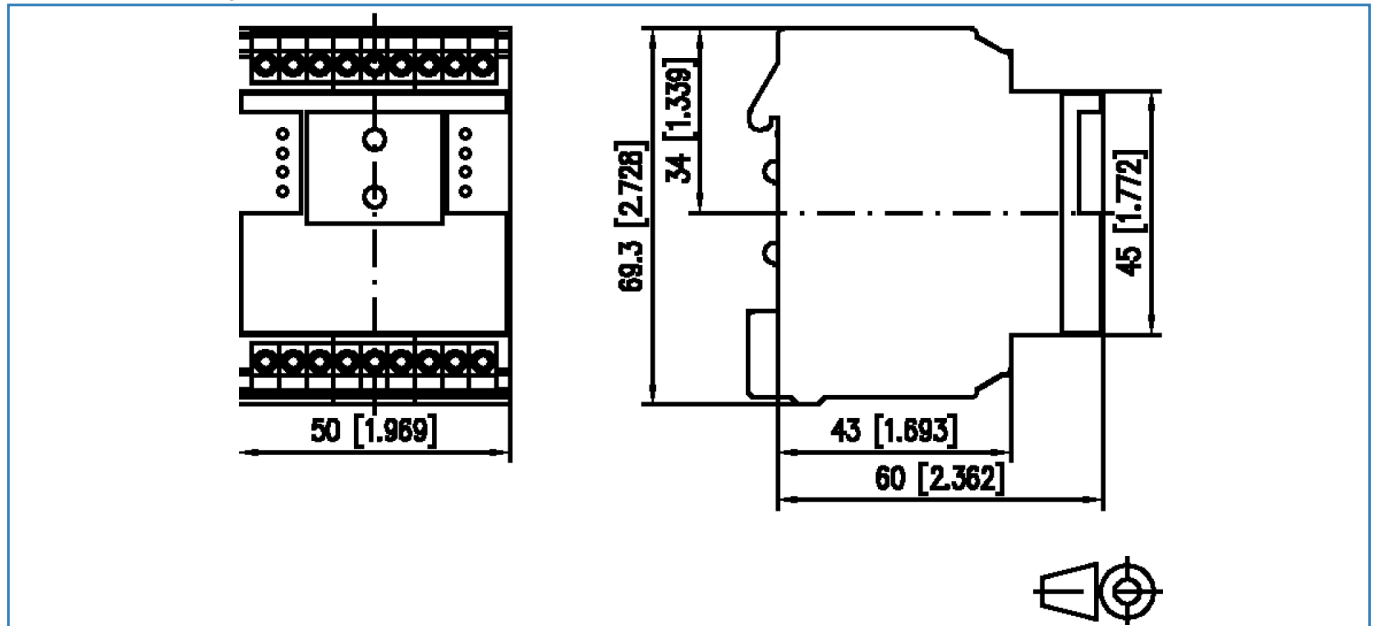
### Zubehör von

P/N	Designation
11083001	MR-GW Modbus RTU / Modbus TCP Gateway

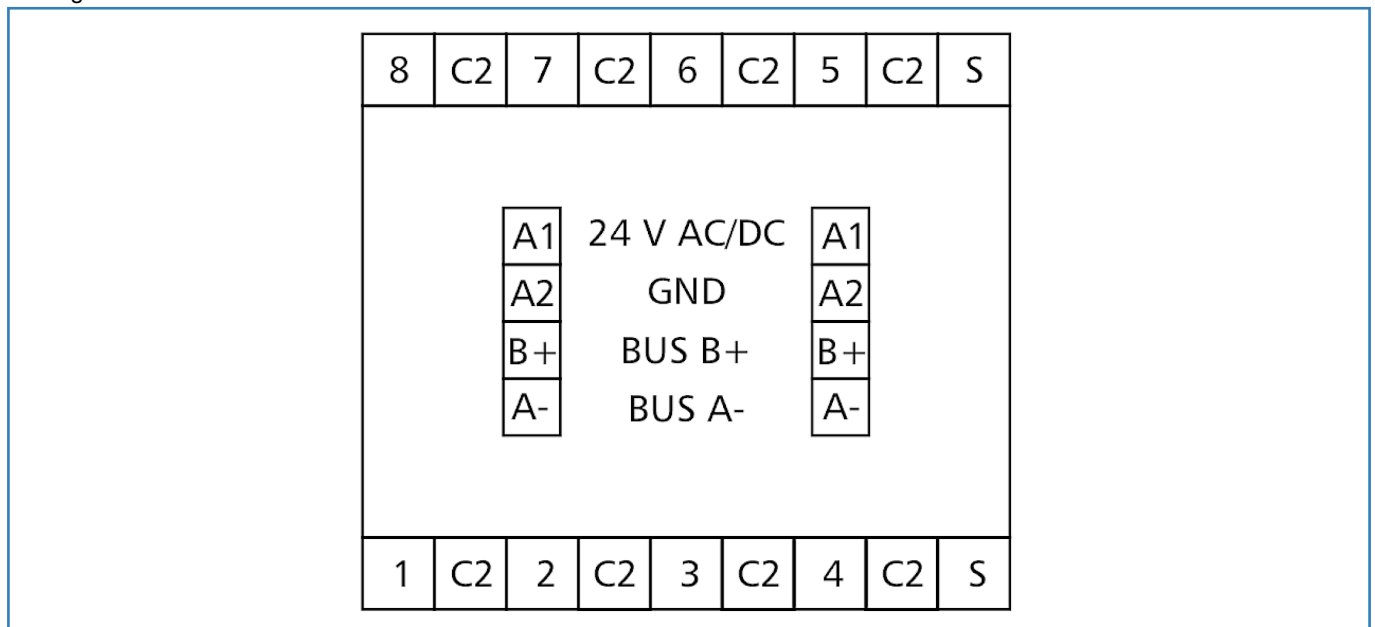


## Illustrations

### Dimensional drawing

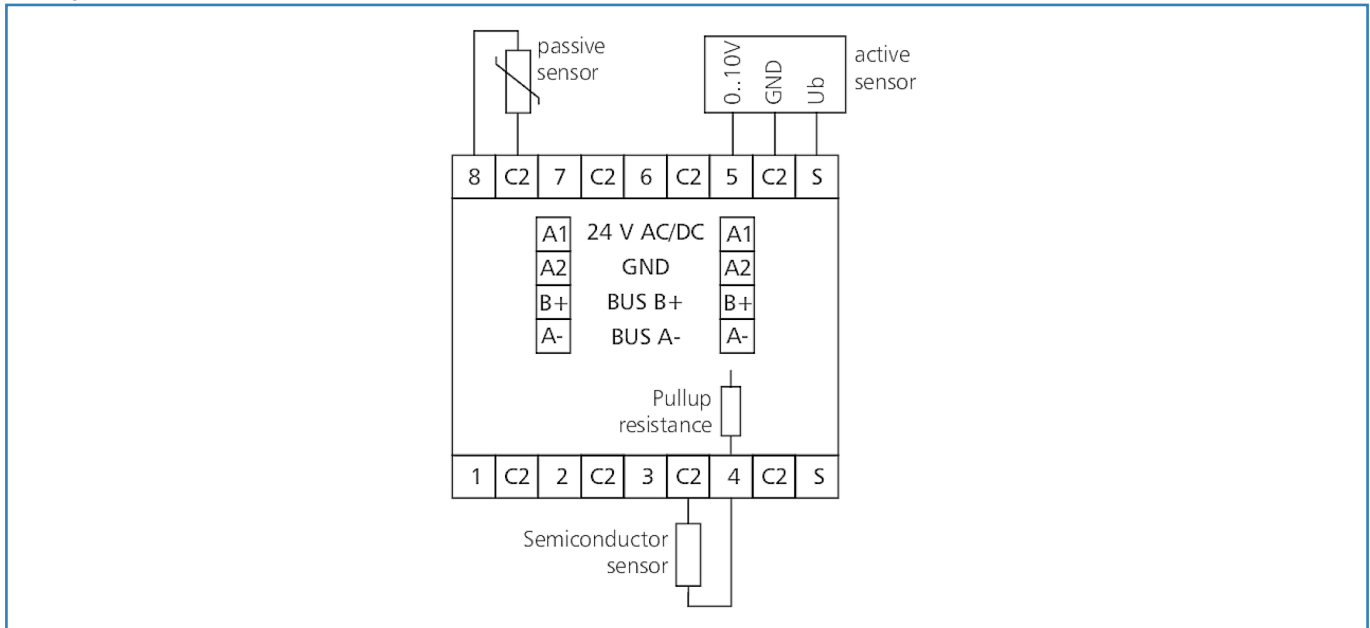


### Wiring

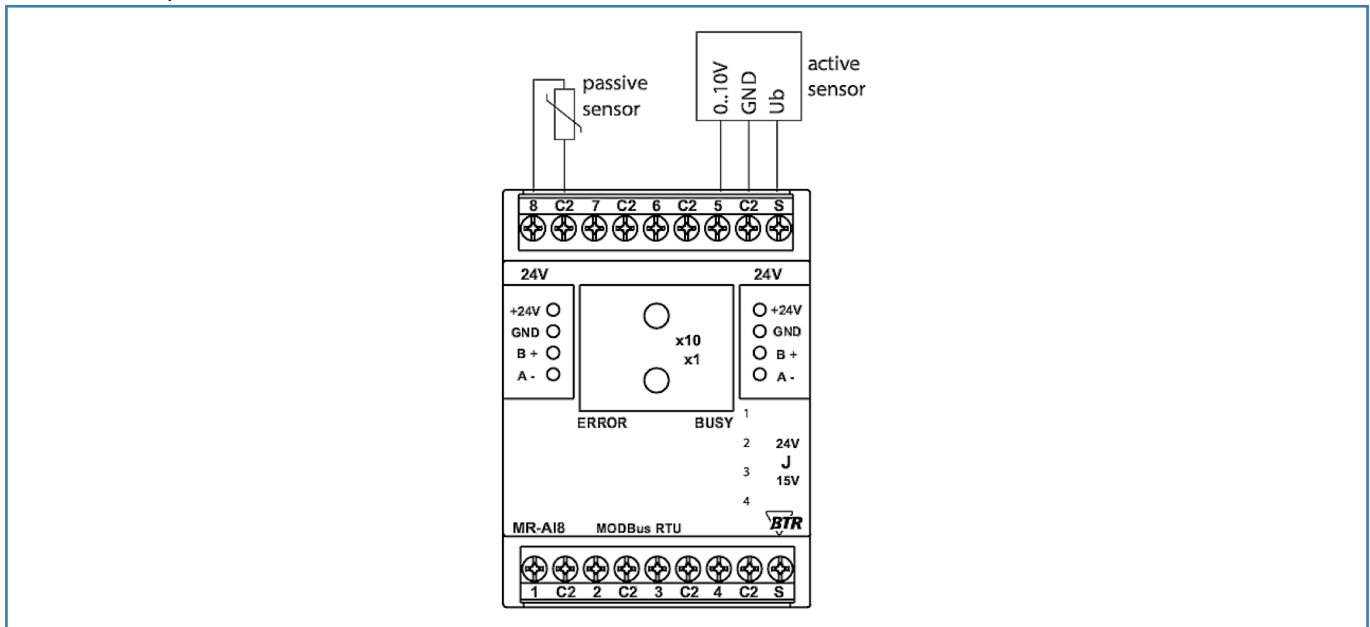


**Illustrations**

Wiring



Anschlussbeispiel

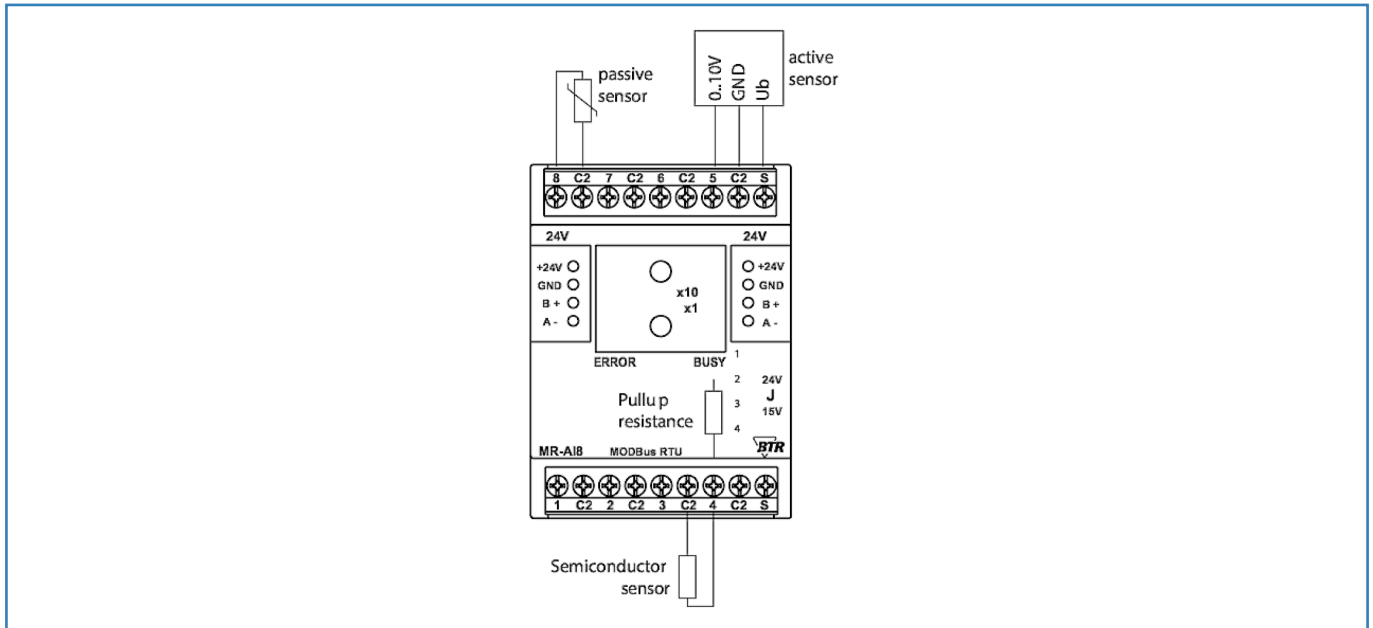




**Data sheet**  
**MR-AI8 Modbus RTU**

**Illustrations**

Anschlussbeispiel



Principle diagram

