

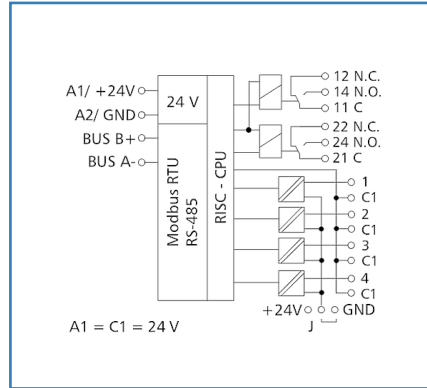
# Data sheet

## MR-DIO4/2 Modbus RTU

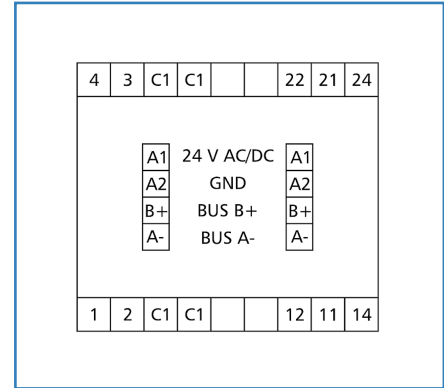
### Illustrations



Principle diagram



Wiring



See enlarged drawings at the end of document


### Product specification

The Modbus module with 4 digital inputs and 2 relay outputs with manual control was developed for decentralized switching tasks. It is suitable for accommodating, for example, light switches and window contacts in a room, switching 2 light strips or controlling louvers. It can also be used to control 2 motorized fire dampers. In this case it is necessary to protect the relay contacts by appropriate load-dependent measures. The inputs can be used as contact or voltage inputs. The inputs and outputs can be switched and scanned by means of standard registers via a Modbus master. Module address, bit rate and parity are set with 2 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-DIO4/2 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.)	200 mA
Power consumption DC (max.)	75 mA
Duty cycle relative	100 %
<b>Inputs</b>	
Digital inputs	4
Voltage input	30 V AC/DC
High signal detection	> 7 V AC/DC
<b>Outputs</b>	
Digital outputs	2
Relay output	2 changeover contacts
Switching voltage	250 V AC
Continuous current	16 A / relay
Switch-on current (max.)	80 A < 20 ms
Total current across all outputs	25 A
Mechanical life	30x10 <sup>6</sup> switching cycles
Electrical life	9x10 <sup>4</sup> switching cycles

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### Technical Data

Insulation coil - contact set	
Nominal voltage of the power supply system	230 / 400 V AC
Overvoltage category	III   II
Pollution degree	2   2
Rated test voltage	4 kV   2.5 kV
Type of insulation	basic insulation   reinforced insulation
Housing	
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.
Total depth with switch/plug	69 mm
Weight	126 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
Indicator	green, red and yellow LED
Terminal blocks	
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

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### Technical Data

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	
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
Classifications	
ETIM 7.0	EC001584
Software and additional documents	
Logiciels et documentation	Further documentation is available for free download at <a href="http://www.metz-connect.com">www.metz-connect.com</a>



## 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

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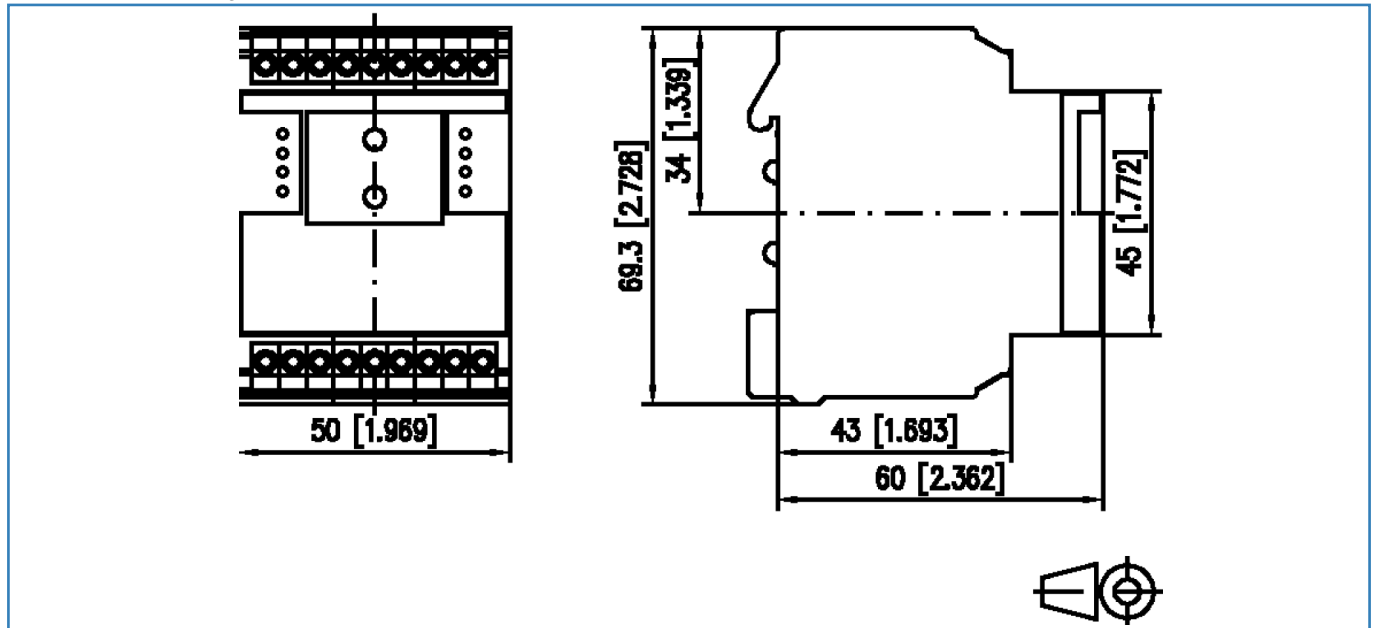
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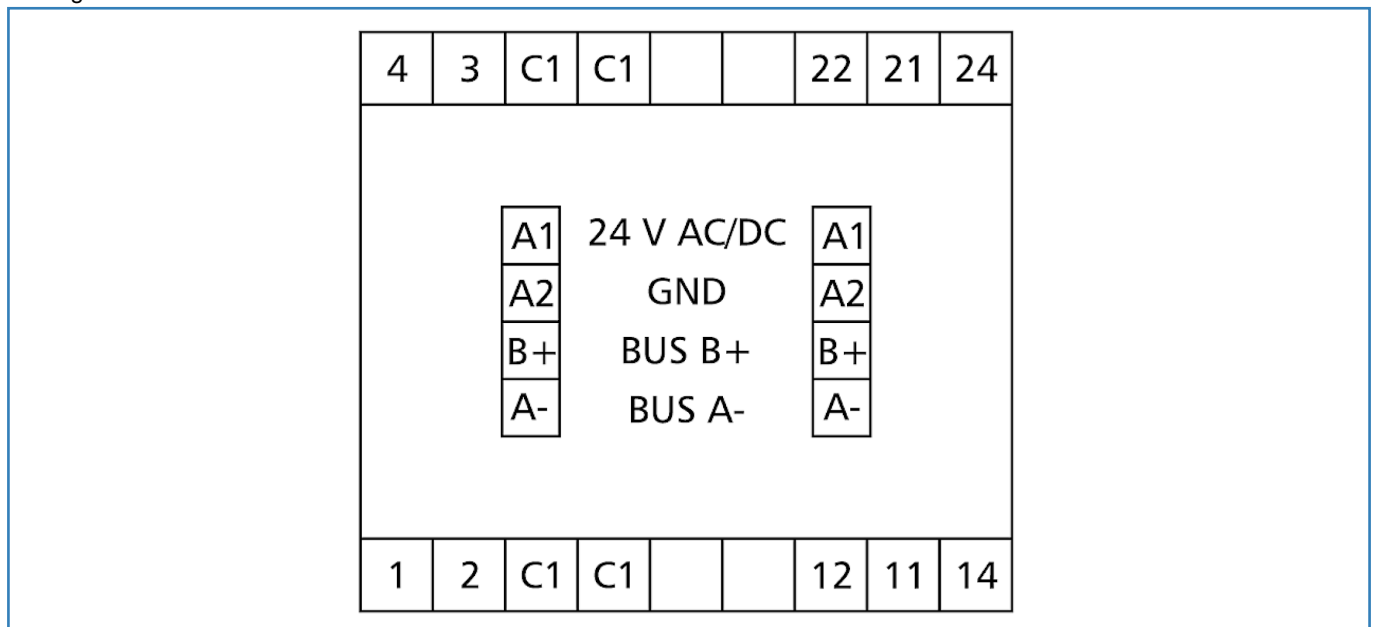
P/N	Designation
11083001	MR-GW Modbus RTU / Modbus TCP Gateway

## Illustrations

Dimensional drawing

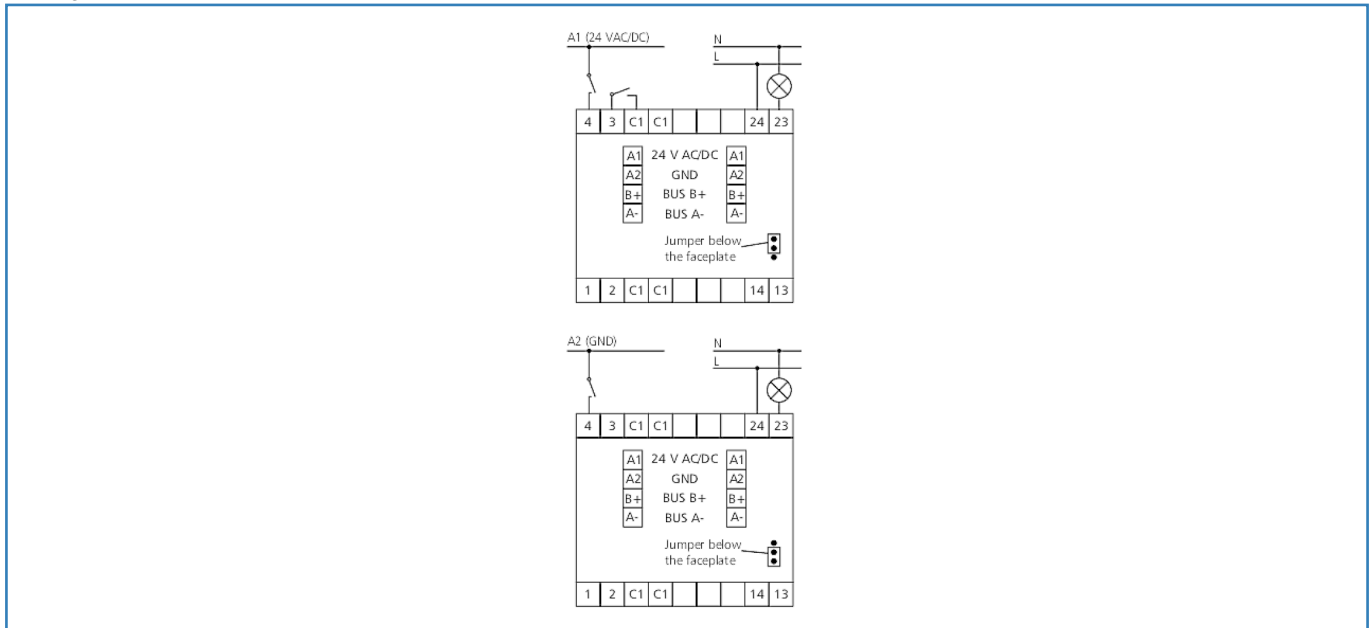


Wiring

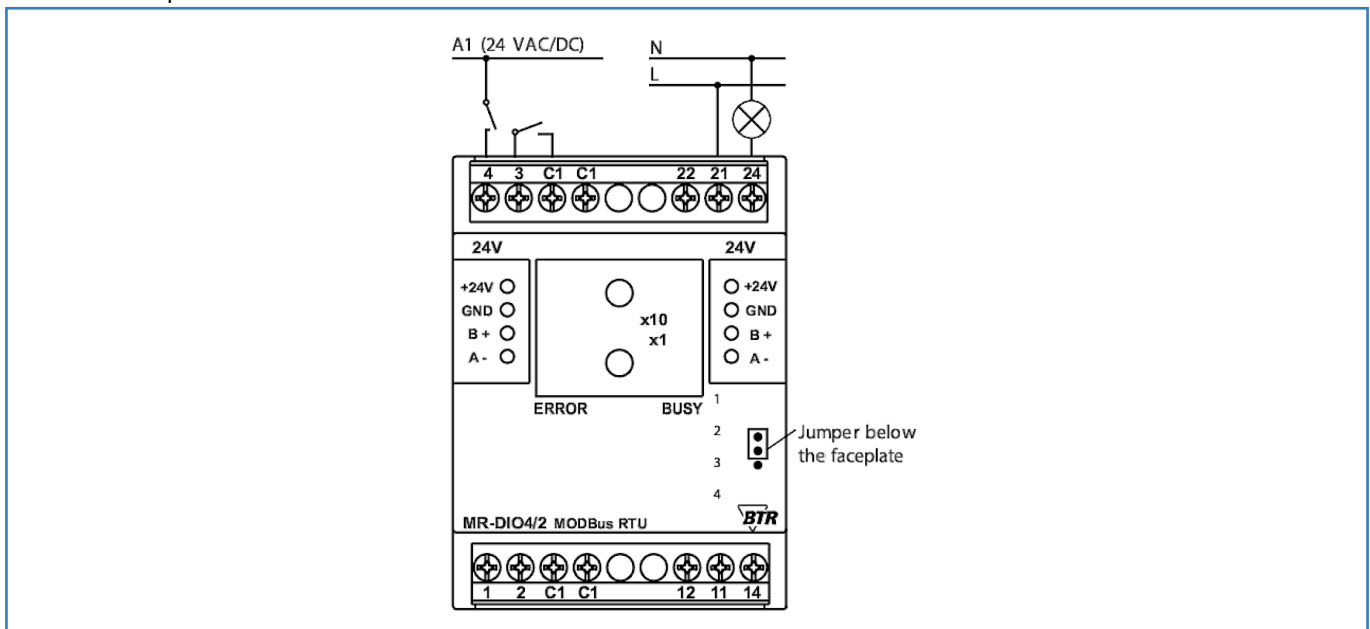


**Illustrations**

Wiring



Anschlussbeispiel

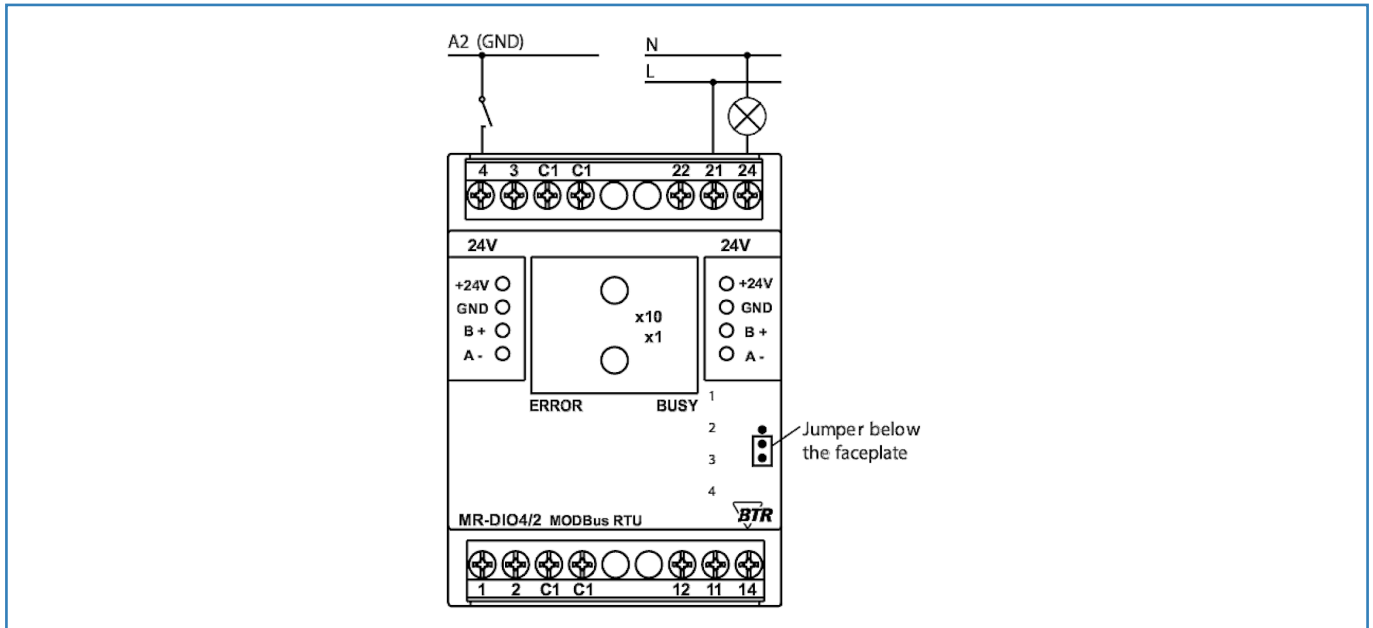




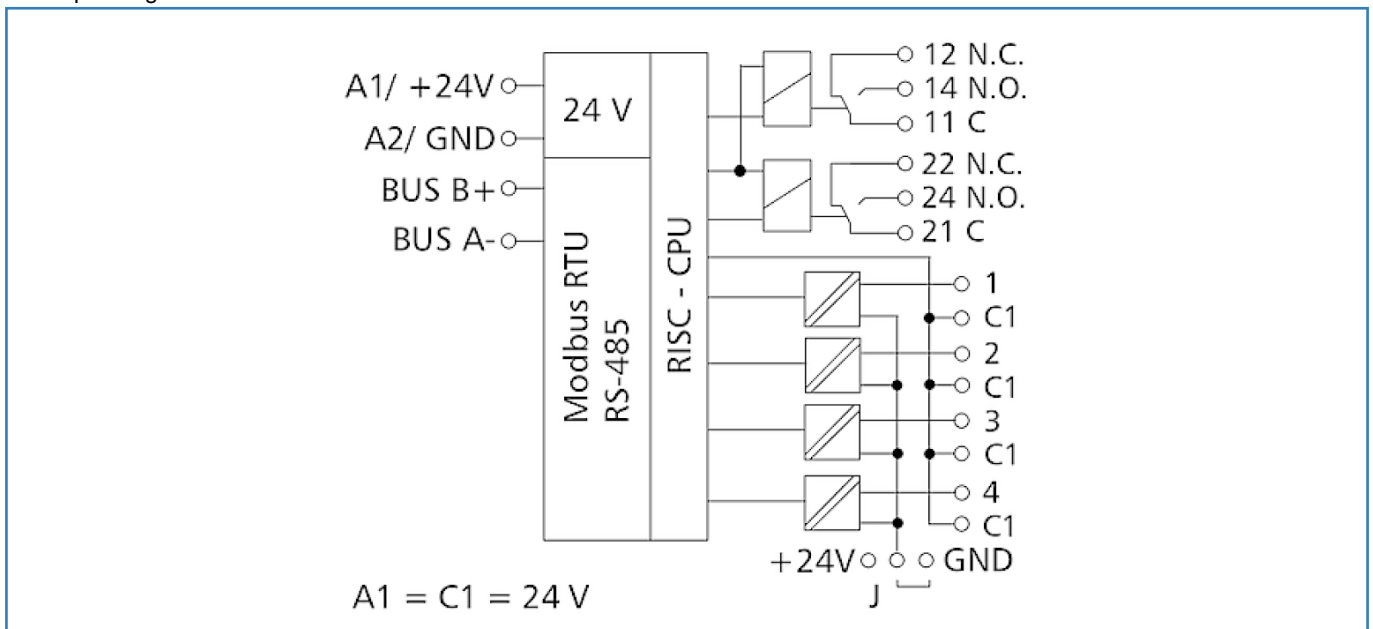
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Illustrations

Anschlussbeispiel



Principle diagram



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