

Data sheet

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MR-DIO4/2

Part number

Modbus module with digital inputs and outputs

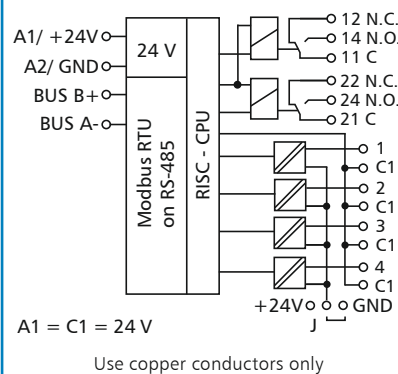
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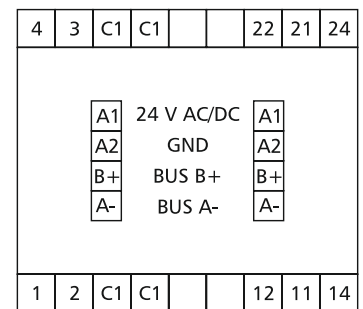
Illustrations



Principle diagram



Wiring



Product description

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 two light strips or controlling louvers. It can also be used to control 2 motorized fire dampers.

With strong inductive loads, we recommend protecting the relay contacts with an RC element.

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 by means of two address switches on the front or by software.

Suitable for decentralized mounting on DIN TH35 rail according to IEC 60715 in electrical distribution cabinets.

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Technical data

Approvals

C-UL Certification	Open Energy Management Equipment 34TZ
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Modbus interface

Protocol	Modbus RTU
Address range	00 to 99
Transmission rate	1200 to 115200 bit/s, factory setting 19200 bit/s Even
Cabling	RS485 two wire bus with potential equalization in bus or line topology terminate with 120 Ohm

Supply

Operating voltage	24 V AC/DC \pm 10 % (SELV)
Current consumption	200 mA (AC) / 75 mA (DC)
Relative duty cycle	100 %

Inputs

Digital inputs	4
Input voltage	30 V AC/DC
High signal recognition	>8 V AC/DC

Outputs

Output contacts	2 changeover contacts
Switching voltage max.	250 V AC
Continuous current max.	16 A per relay (80 A for 20 ms)
Total current for all contacts	25 A

General informations

Rated insulation voltage	230/400 V AC	
Overvoltage category	III	II
Pollution degree	2	2
Rated surge voltage	4 kV	2.5 kV
Type of insulation	basic insulation	reinforced insulation

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Housing	
Dimensions WxHxD	1.969 x 2.728 x 2.362 in. (50 x 69.3 x 60 mm)
Depth including switches	2.717 in. (69 mm)
Weight	126 g
Mounting position	any
Mounting	on TH35 rail per IEC 60715
Side-by-side mounting	Without space 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
Material	
Housing	polyamide 6.6 V0
Terminal blocks	polyamide 6.6 V0
Cover plate	polycarbonate
Type of protection (IEC 60529)	
Housing	IP40
Terminal blocks	IP20
Terminal blocks	
Supply and bus	
Terminal block	4-pole
Solid wire	max. AWG 16 (1.5 mm ²)
Stranded wire	max. AWG 18 (1.0 mm ²)
Wire diameter	0.3 mm to max. 1.4 mm
Module connection, digital inputs and outputs	
Solid wire	max. AWG 12 (4 mm ²)
Stranded wire	max. AWG 14 (2.5 mm ²)
Wire diameter	0.3 mm to max. 2.7 mm
Protective circuitry	Polarity reversal protection of operating voltage Polarity reversal protection of supply and bust du bus
Temperature range	
Operation	23 °F to 131 °F (-5 °C to +55 °C)
Storage	-4 °F to +158 °F (-20 °C to +70 °C)
Display	
Operating and bus activity	green LED
Error indication	red LED
Status of the inputs and outputs	yellow LEDs
Additional documents	
Software description, mounting note, certificates	All additional documents are available for download at www.metz-connect.com



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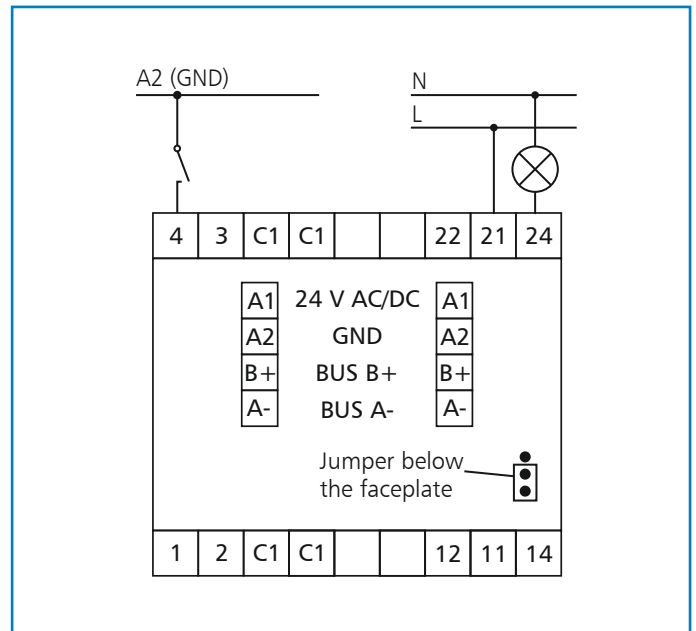
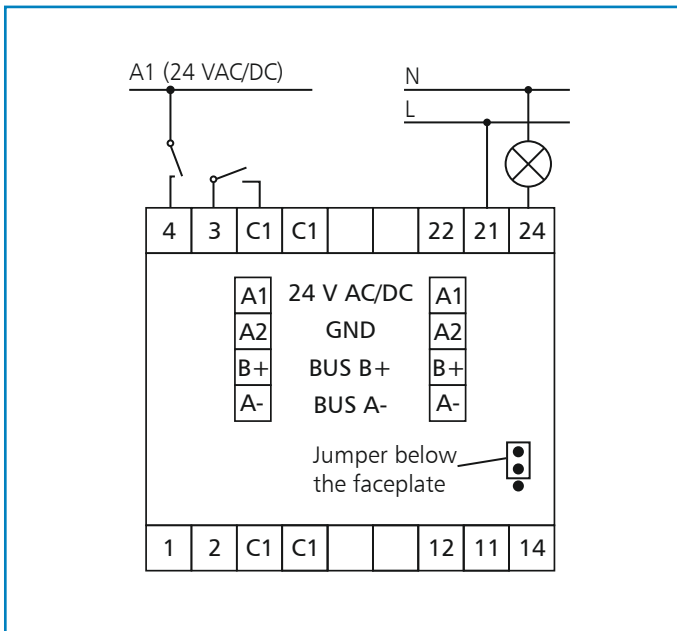
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Connection examples



Dimensional drawing

