

Data sheet

MR-DIO4/2-IP65 Modbus RTU

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P/N

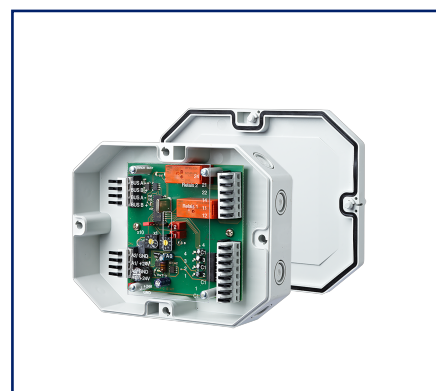
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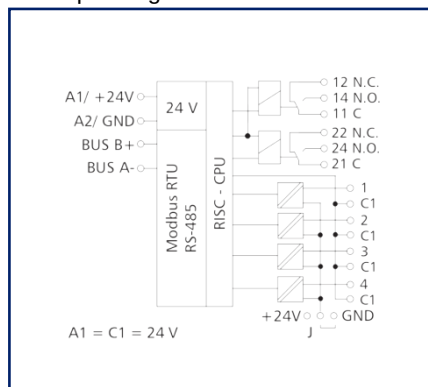
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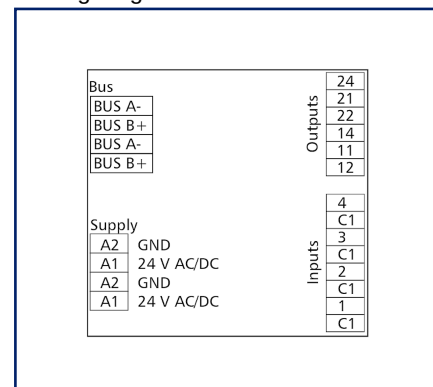
Illustrations



Principle diagram



Wiring diagram



See enlarged drawings at the end of document

Product specification

The Modbus module in an IP65 housing with 4 digital inputs and 2 relay outputs 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. 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 by means of two address switches.

Technical Data

RS485 interface	
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	None, Even (default setting), Odd
Stopbits	1 (default setting), 2
Supply	
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 %
Inputs	
Digital inputs	4
Voltage input	30 V AC/DC
High signal detection	> 8 V AC/DC
Outputs	
Digital outputs	2
Relay output	2 changeover contacts
Switching voltage relay output (max.)	250 V AC
Continuous current relay output	10 A / relay
Switch-on current relay output (max.)	80 A < 20 ms
Total current across all outputs	25 A

Technical Data

Insulation coil - contact set

Nominal voltage of the power supply system	230 / 400 V AC
Overvoltage category	III II
Degree of pollution	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)	160 mm x 40.7 mm x 120 mm
Dimension (W x H x D)	6.299 in. x 1.602 in. x 4.724 in.
Weight	350 g
Mounting style	directly on a flat surface, 8 knock-out openings for M12 and M16 cable glands
Mounting position	any
Connection type	Spring clamp terminal blocks
Indicator	green, red and yellow LED

Terminal blocks

Supply and bus	
Terminal block	4-pole
Solid wire (AWG)	max. 1.5 mm ² / max. 16 AWG
Stranded wire (AWG)	max. 1 mm ² / max. 18 AWG
Wire diameter	max. 1.4 mm - min. 0.3 mm
Module connection	
Wire cross section solid	0.2 mm ² - 1.5 mm ² / AWG 28-18
Wire cross section multi	0.08 mm ² - 0.75 mm ² / AWG 28-18
Wire cross section with wire ferrule	0.08 mm ² - 0.75 mm ² / AWG 28-20
Stripping length (min.)	4 mm
Protection circuit	Polarity reversal protection for DC operating voltage, Protection against interchanging power supply and bus



Technical Data

Material

Material - Housing	ASA + Polycarbonat
Color	gray
Material - Terminal block	Polyamid 6.6 V0
Material - Covers	Polycarbonat

Protection category according to IEC 60529

Protection category - housing (acc. to IEC 60529)	IP65
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
ETIM 8.0	EC001584
ETIM 9.0	EC001584

Software and additional documents

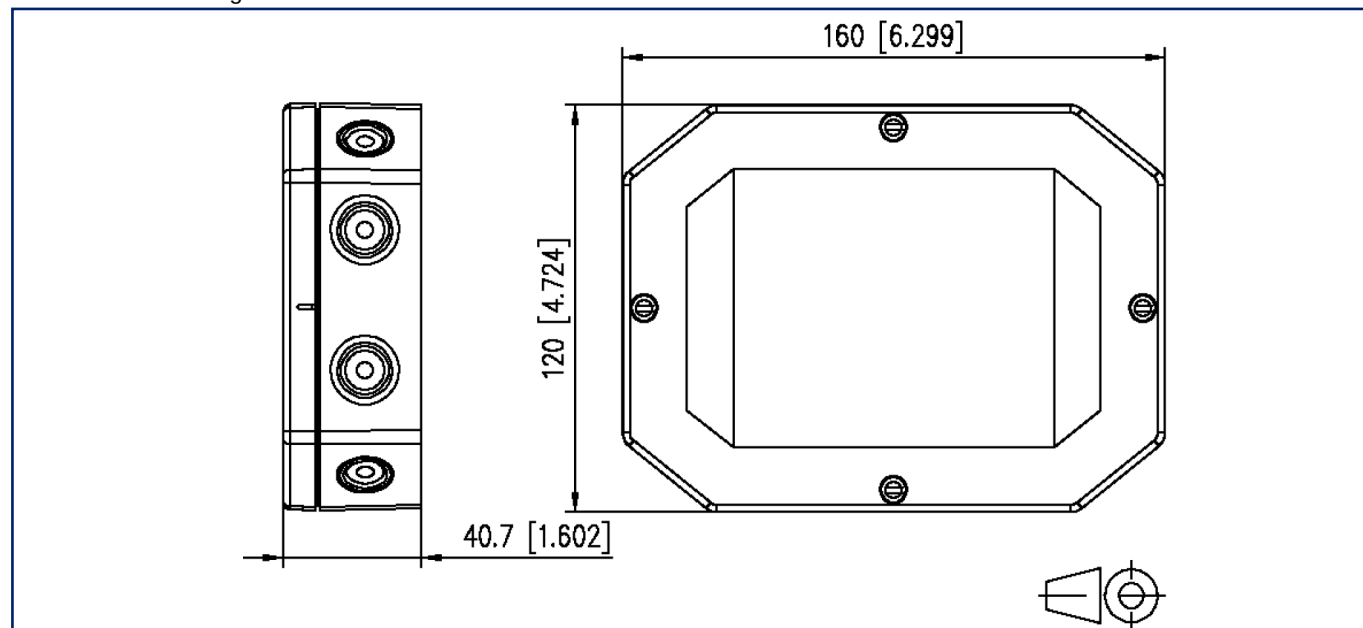
Software and documentation	Further documentation is available for free download at www.metz-connect.com
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Accessories

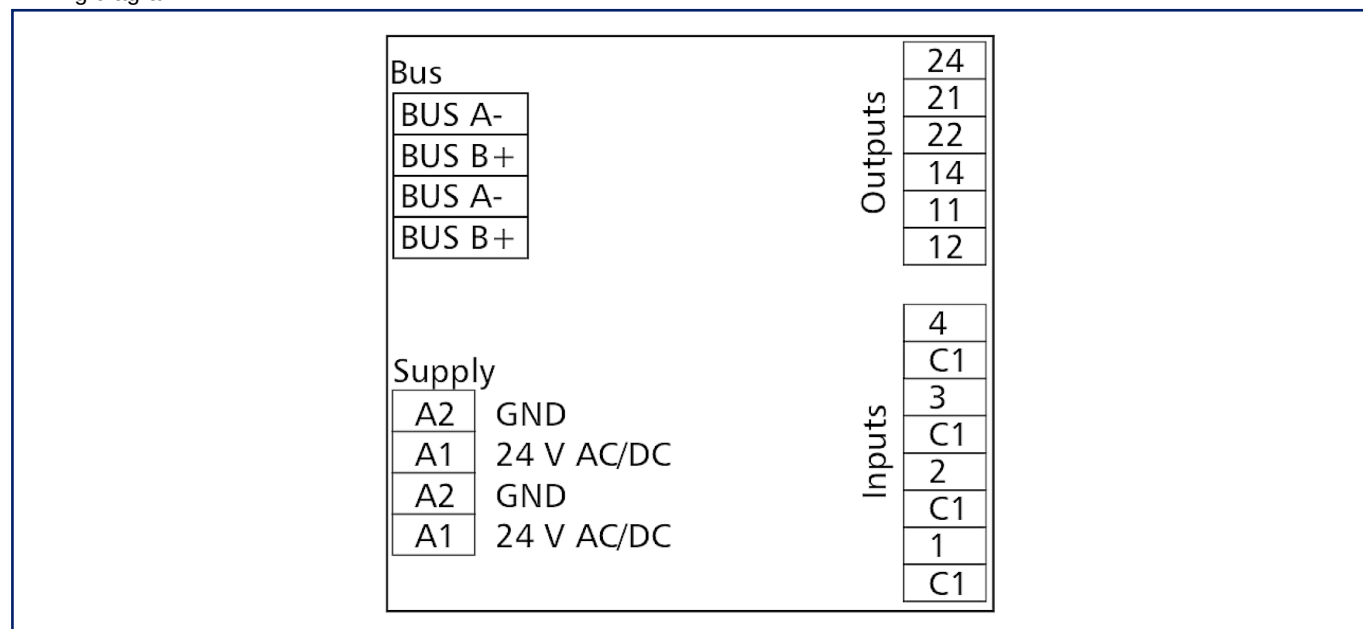
P/N	Designation
110368	TSH 35 Hutschienenhalter für IP65
110486	HUB DC
110561	Power supply NG4 24 V DC
ASP0250404	SP025xxHDNC ASP025

Illustrations

Dimensional drawing

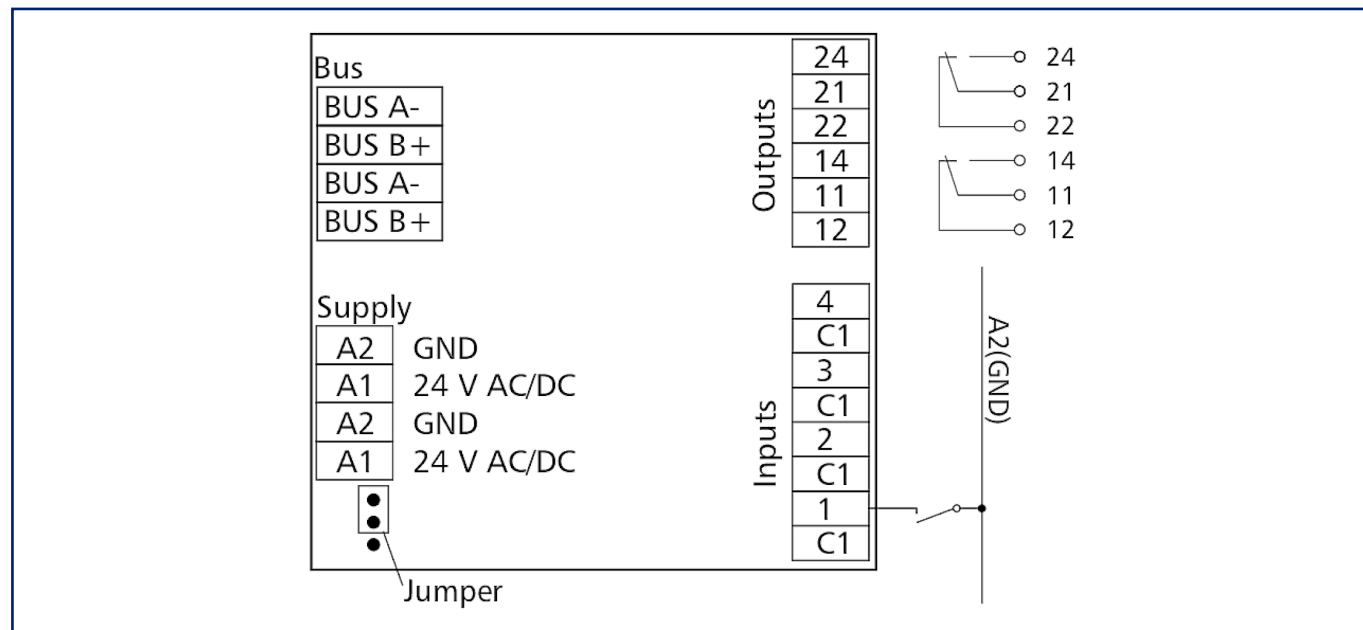


Wiring diagram

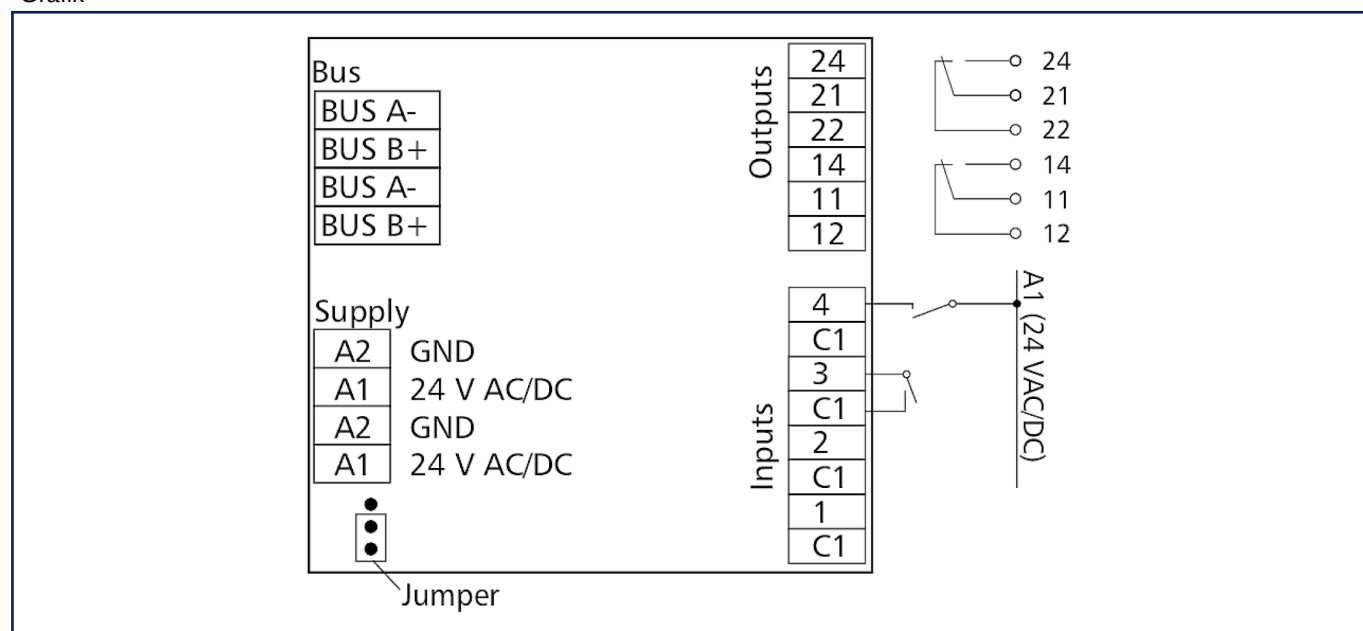


Illustrations

Grafik



Grafik



Illustrations

Principle diagram

