Data sheet

MB-DIO4/2-IP Modbus/BACnet 230 V

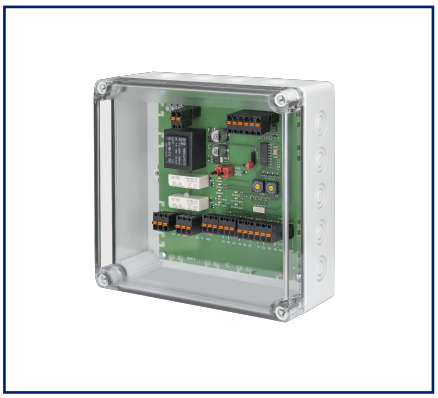
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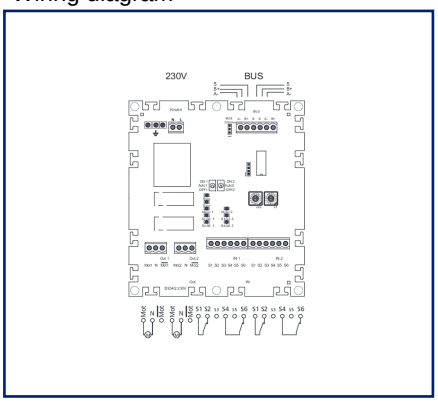
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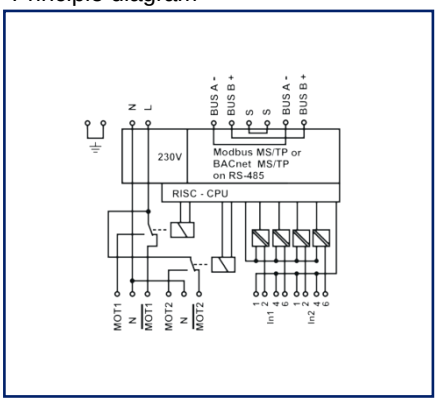
Illustrations



Wiring diagram



Principle diagram



See enlarged drawings at the end of document

Product specification

The MB-DIO4/2-IP 230 V module in IP65 housing with 4 digital inputs and 2 relay outputs is developed for decentralized switching tasks. Suitable, for example, to accommodate light switches and window contacts in a room, and to switch light strips or to use as blinds control. Motor-driven actuators (e.g. ventilation or fire dampers) can be controlled. Depending on the operating mode, the module can be switched or requested with Modbus standard registers or with BACnet objects. For manual control, the relay outputs are equipped with switches. The settings of the operating mode, bit rate and parity are made via two rotary switches. Operating mode, bit rate and parity also adjustable via software.

- for the control of up to two actuators, e.g. fire dampers
- Connection options for actuators with open connection lines with pluggable push-in technology
- Supply voltage is also switching voltage
- Relay output suitable for inrush current 65 A < 20 ms (NO), continuous current 6A, total current 8 A
- generous space for installation - no additional distribution box required

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Approvals

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RS485 interface

Protocol	Modbus RTU / BACnet MS/TP
Address range	00 - EF
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 Even (default setting) None
Stopbits	1 (default setting) 2

Supply

Operating voltage	230 V AC -10% ... +10%
Duty cycle relative	100 %

Inputs

Digital inputs	4

Outputs

Digital outputs	2
Relay output	2 changeover contacts
Switching voltage relay output (max.)	230 V AC
Continuous current relay output	6 A / relay
Switch-on current relay output (max.)	65 A < 20 ms (NO)
Total current across all outputs	8 A
Mechanical life	$10x10^6$ switching cycles
Electrical life	$10x10^4$ switching cycles

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Insulation coil - contact set	
Nominal voltage of the power supply system	230 V AC = Operating voltage
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)	175 mm x 175 mm x 75 mm
Dimension (W x H x D)	6.89 in. x 6.89 in. x 2.953 in.
Weight	703.8 g
Mounting style	directly on a flat base, knock-out openings for screw connections 4 x M16/25 + 14 x M12/20
Mounting position	any
Indicator	green, red and yellow LED
Terminal blocks	
Connection type 1	Pluggable spring clamp terminal block
Terminal block (bus)	6-pole
Terminal block (motor)	2 x 3-pole
Connection terminal (digital inputs, potential-free limit switches)	2 x 6-pole
Solid wire (AWG)	max. 12 AWG
Stranded wire (mm²)	max. 2.5 mm²
Stranded wire (AWG)	max. 12 AWG
Wire diameter	min. 0.25 mm max. 2.5 mm
Wire cross section solid	0.2 mm² - 2.5 mm² / AWG 22-12
Wire cross section multi	0.2 mm² - 2.5 mm² / AWG 22-12
Wire cross section with wire ferrule	0.2 mm² - 2.5 mm² / AWG 22-12
Stripping length (min.)	10 mm
Connection type 3	screw type terminal block
Terminal block (protective conductor)	3x 1-pole
Wire cross section solid	0.2 mm² - 1.5 mm² / AWG 22-16
Wire cross section multi	0.2 mm² - 1.5 mm² / AWG 22-18
Wire cross section with wire ferrule	0.2 mm² - 1.5 mm² / AWG 22-18

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Technical Data

Terminal blocks	
Screw torque (max.)	0.5 Nm
Stripping length (min.)	6 mm
Material	
Material - Housing	Polycarbonat
Color	gray
Material - Terminal block	Polyamid 6.6 V0
Protection category according to IEC 60529	
Protection category - housing (acc. to IEC 60529)	IP65 (without screw fittings)
Protection category - terminal blocks (acc. to IEC 60529)	IP20
Climatic Data	
Operating	
Temperature - Operating °C	-5 °C - 55 °C
Temperature - Operating °F	23 °F - 131 °F
Relative humidity	max. 85 % non-condensing
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
ETIM 10.0	EC001584
Software and additional documents	
Software and documentation	Further documentation is available for free download at www.metz-connect.com

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Technical Data

Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way.

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Accessories

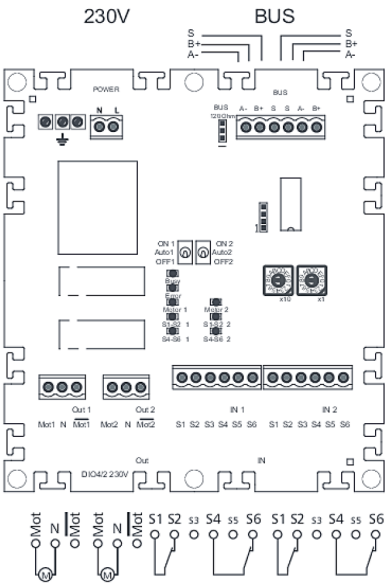
P/N	Designation
11083001	MR-GW Modbus RTU / Modbus TCP Gateway
1108300170	MR-F-GW Modbus RTU / Modbus TCP Gateway
11088001	BMT-RTR BACnet-Router
1108800170	BMT-F-RTR BACnet-Router
11088101	BMT-RTR/SC BACnet/SC Router
1108810170	BMT-F-RTR/SC BACnet/SC Router

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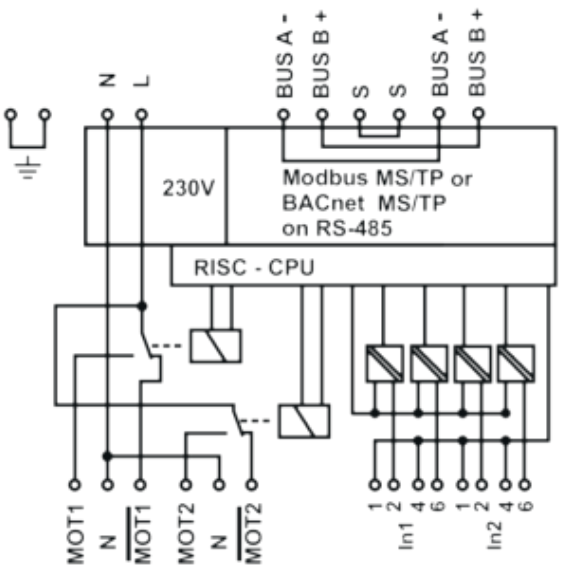
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Illustrations

Wiring diagram



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