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Data sheet

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

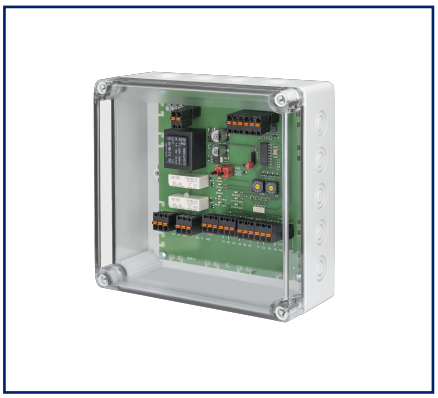
P/N 1108120526IP

EAN 4251394658377

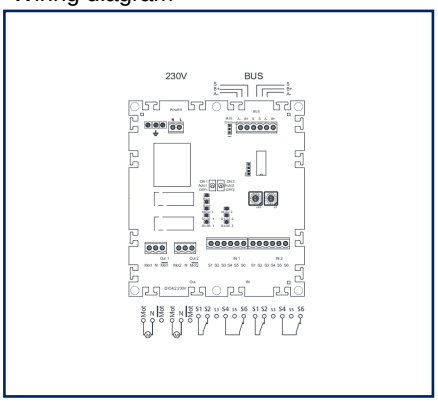
2023/06/23

Version: B

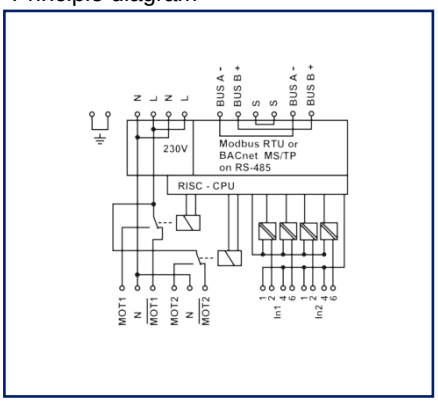
Illustrations



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 10 A
- generous space for installation - no additional distribution box required

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Weitere Dokumentation siehe / additional documentation see / documentation supplémentaire voir www.metz-connect.com

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Technical Data

Approvals	
	BACnet is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of listed products to the requirements of ASHRAE Standard 135 is the responsibility of BACnet International (BI). BTL is a registered trademark of BI.
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	None, Even (default setting), Odd
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 75 mm x 175 mm
Dimension (W x H x D)	6.89 in. x 2.953 in. x 6.89 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	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
Screw torque (max.)	0.5 Nm

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Terminal blocks	
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)	IP66 / IP67 (without screw fittings)
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
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

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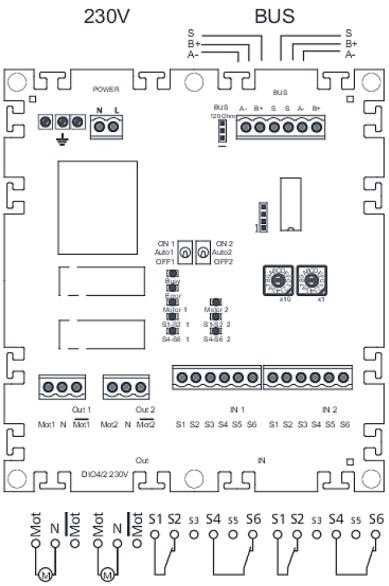

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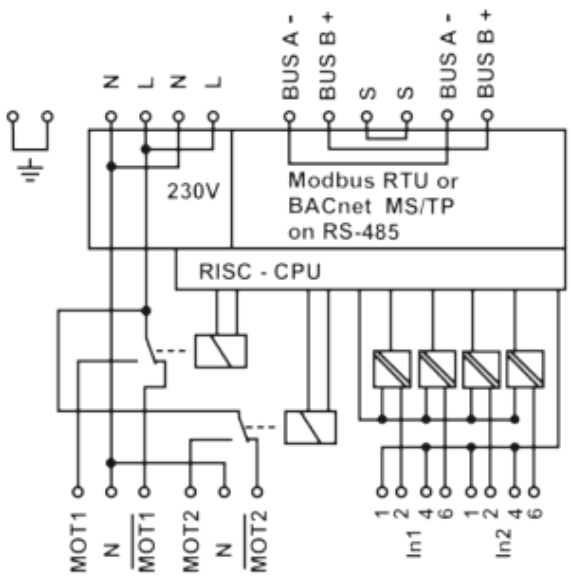

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