C | Logline

Data sheet
MR-AO4
Modbus module with analog outputs

Part number
1108351302

2015-03-17

Illustrations

c(UL)us LISTED
Open Energy Management Equipment 34TZ

Principle diagram

A1/ +24V
A2/ GND
BUS B+
BUS A-

24 V

Modbus RTU on RS-485

Output: Voltage 0-10V

RISC - CPU

D

A

1
C2
2
C2
3
C2
4
C2

A2 = C2 = GND

Use copper conductors only

Wiring

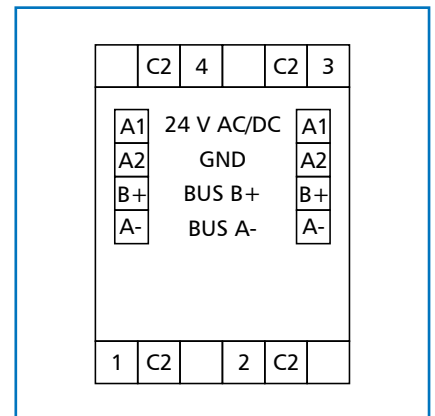| C2	4		C2	3
A1	24 V AC/DC		A1
A2	GND		A2
B+	BUS B+		B+
A-	BUS A-		A-
1	C2		2	C2
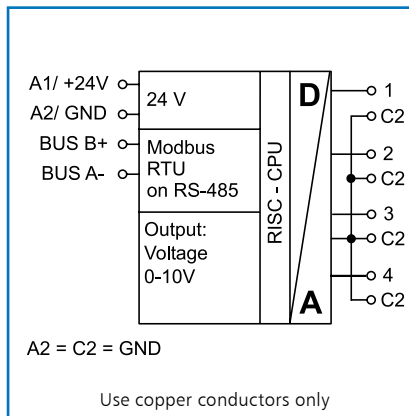
Product description

The Modbus module with 4 analog outputs was developed for decentralized switching tasks.

It is suitable as encoder for control variables, for example for electrical vent and mixing valves, valve positions, etc.

The outputs can be output by means of standard objects via a Modbus master.

The module address, the baud rate and the parity are set by means of two address switches on the front.

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

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Additional documentation see www.metz-connect.com

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Technical data

Approvals

C-UL Certification	Open Energy Management Equipment 34TZ

Modbus interface

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

Supply

Operating voltage range	20 to 28 V AC/DC (SELV)
Current consumption	50 mA (AC) / 20 mA (DC)
Relative duty cycle	100 %

Output

Analog outputs	4
Voltage output	4x 0 to 10 V DC
Output current	5 mA to 10 V DC
Resolution	0.625 mV / Digit
Error	100 mV

Housing

Dimensions WxHxD	1.378 x 2.728 x 2.362 in. (35 x 69.3 x 60 mm)
Weight	72 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

C | Logline

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Page 3/4

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Terminal blocks

Supply and bus	
Terminal block	4-pole
Solid wire	max. AWG 16 (1.5 mm²)
Stranded wire	max. AWG 18 (1.0 mm²)
Wire diameter	0.3 mm to max. 1.4 mm
Module connection, analog outputs	
Solid wire	max. AWG 12 (4 mm²)
Stranded wire	max. AWG 14 (2.5 mm²)
Wire diameter	0.3 mm to max. 2.7 mm
Protective circuitry	Polarity reversal protection of operating voltage
	Polarity reversal protection of supply and 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

Additional documents

Software description, mounting note, certificates	All additional documents are available for download at www.metz-connect.com

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Dimensional drawing

69.3 [2.728]   34 [1.339]   35 [1.378]   45 [1.772]   43 [1.693]   60 [2.362]

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