

Data sheet

MR-F-CI4 Modbus RTU

Page 1/8

P/N

110840133270

EAN 4251394620756

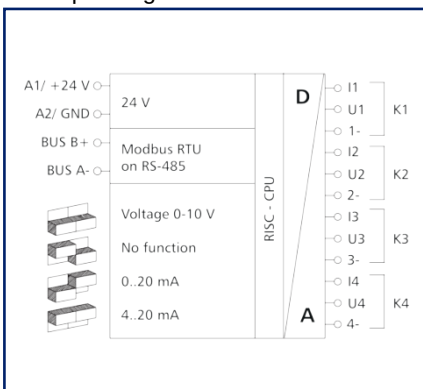
2023/06/23

Version: E

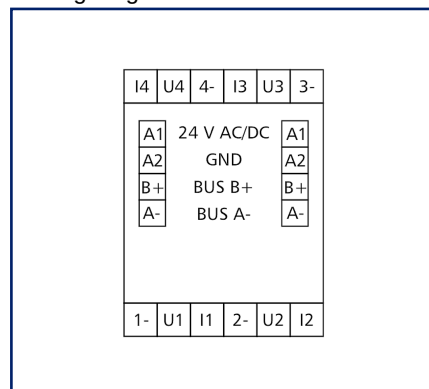
Illustrations



Principle diagram



Wiring diagram



See enlarged drawings at the end of document

Product specification

The Modbus module with 4 analog inputs was developed for decentralized switching tasks. It is suitable for detecting currents and voltages of, for example, active temperature sensors, electrical vent and mixing valves, valve positions, etc. Each input can be set as current or voltage input by DIP switches on the front. The inputs can be scanned with standard registers via a Modbus master. The module address, the baud rate and the parity are set with 2 rotary switches on the front or by software. Suitable for decentralized mounting on TH35 rails according to IEC 60715 in electrical distribution cabinets.

- Connection with spring clamp terminal blocks (push-in)



Data sheet

MR-F-CI4 Modbus RTU

Page 2/8

P/N
110840133270
EAN 4251394620756
2023/06/23
Version: E

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.)	25 mA
Power consumption DC (max.)	10 mA
Duty cycle relative	100 %
Inputs	
Analog inputs	4, individually configurable
Current range	0 (4) - 20 mA DC (adjustable)
Resolution current input	2 µA
Error current input	20 µA
Voltage range	0 V - 10 V DC
Resolution voltage input	1 mV
Error voltage input	10 mV
Housing	
Dimensions	
Dimension (W x H x D)	35 mm x 69.3 mm x 60 mm
Dimension (W x H x D)	1.378 in. x 2.728 in. x 2.362 in.
Weight	95 g
Mounting style	Standard rail TH35
Mounting position	any
Apposition	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., without distance

Data sheet

MR-F-CI4 Modbus RTU

Page 3/8

P/N
110840133270
EAN 4251394620756
2023/06/23
Version: E

Technical Data

Housing	
Connection type	Spring clamp terminal blocks
Indicator	green and red 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 - 2.5 mm ² / AWG 24-14
Wire cross section multi	0.25 mm ² - 2.5 mm ² / AWG 24-12
Wire cross section with wire ferrule	0.25 mm ² - 1.5 mm ² / AWG 24-16
Stripping length (min.)	8 mm
Protection circuit	Polarity reversal protection for DC operating voltage, Protection against interchanging power supply and bus
Material	
Material - Housing	Polyamid 6.6 V0
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)	IP40
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

Data sheet
MR-F-CI4 Modbus RTU

Page 4/8

P/N
110840133270
EAN 4251394620756
2023/06/23
Version: E**Technical Data****Classifications**

ETIM 7.0	EC000794
ETIM 8.0	EC000794
ETIM 9.0	EC000794

Software and additional documents

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



Accessories

P/N	Designation
110369	Terminal block Type 259
11056170	Power supply NG4-F 24 V DC
11080101	USB/RS485 Converter
31135104	Typ 135 RIACON 135_3.5



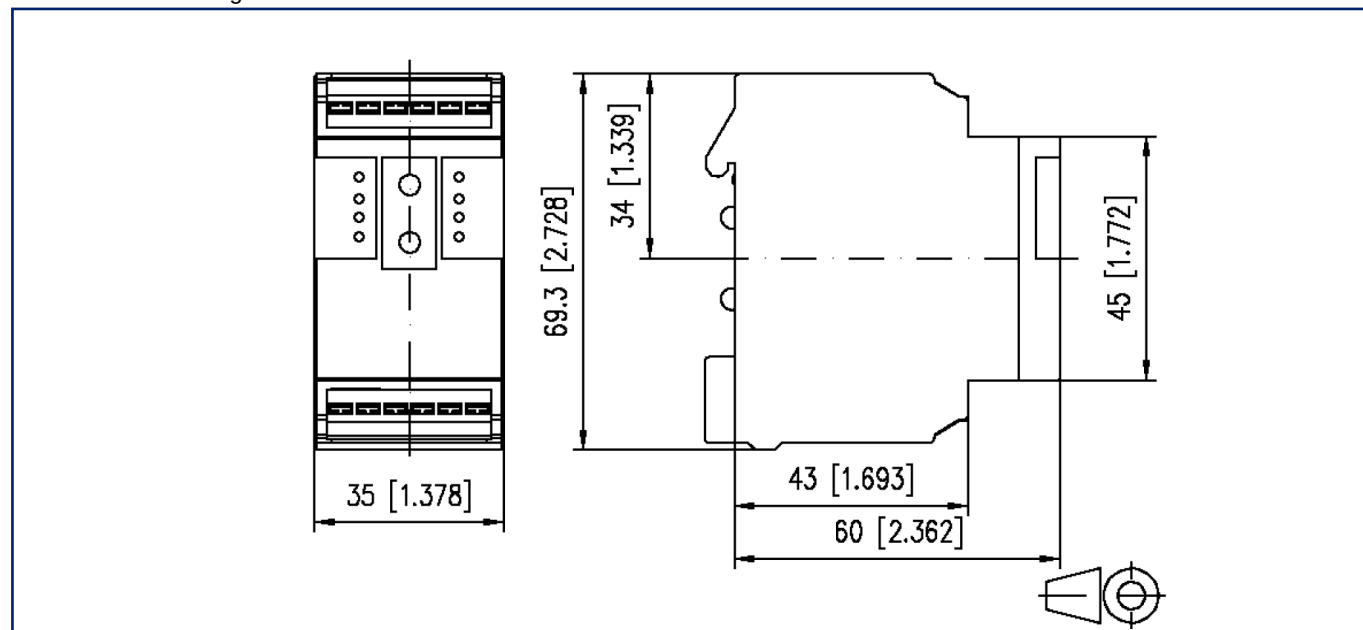
Accessories from

P/N	Designation
11083001	MR-GW Modbus RTU / Modbus TCP Gateway
1108300170	MR-F-GW Modbus RTU / Modbus TCP Gateway

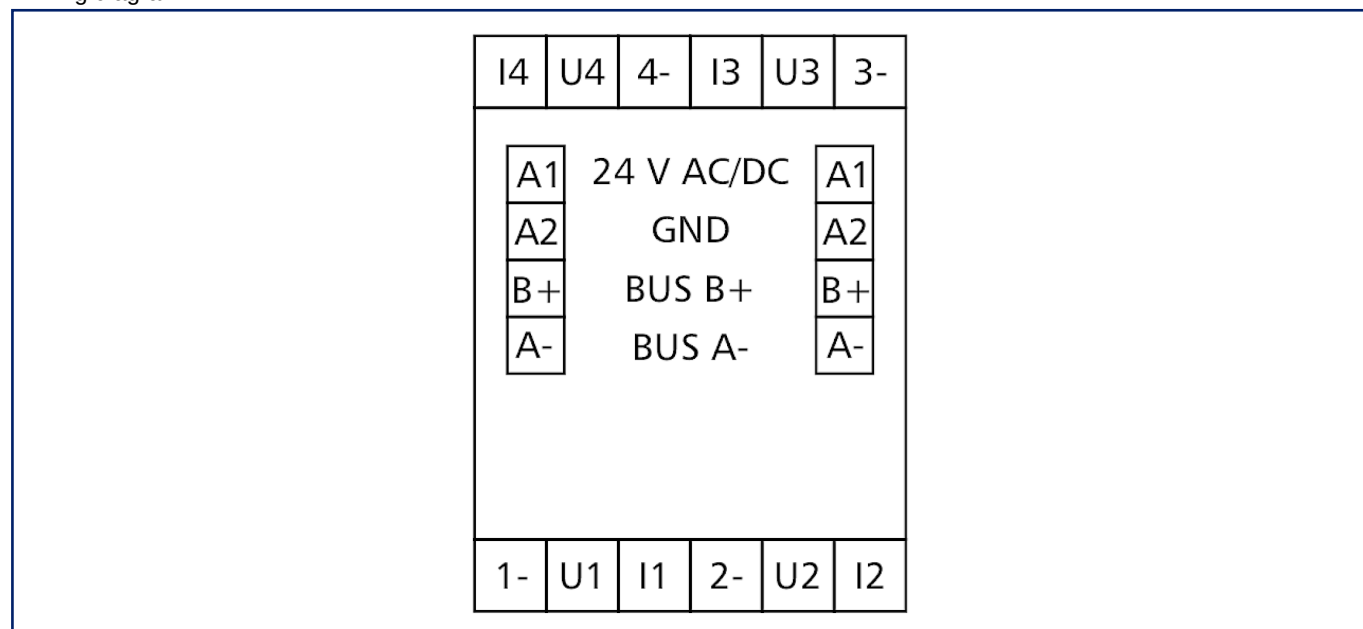


Illustrations

Dimensional drawing



Wiring diagram



Illustrations

Principle diagram

