

Data sheet

BMT-Multi I/O BACnet MS/TP

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P/N
11089313

EAN 4251394600901

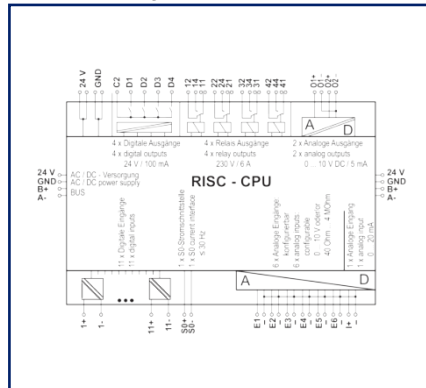
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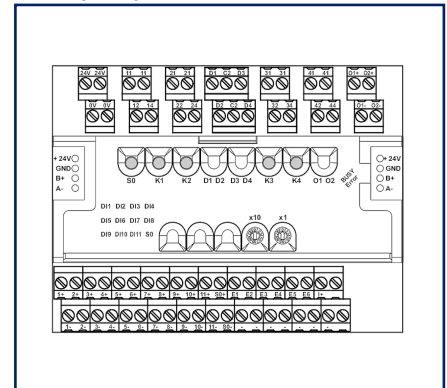
Illustrations



Principle diagram



Wiring diagram



See enlarged drawings at the end of document

Product specification

The BACnet module BMT-Multi I/O is a compact and rapidly to install solution to connect digital and analog signals from the actor and sensor level directly to a control unit in building automation via BACnet MS/TP protocol. 29 I/Os, some of them are configurable, are available for different tasks. The inputs and outputs can be controlled and scanned by standard objects via a BACnet Client. Module address and bit rate are set with two rotary switches on the front or by software. The relays K1 to K4 are equipped with a manual control and allow manual intervention. In this case it is necessary to protect the relay contacts by appropriate load-dependent measures. Suitable for decentralized mounting on DIN TH35 rail according to IEC 60715 in electrical distribution cabinets.



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	BACnet MS/TP
Address range	00 - F9
Bus interface	RS485 two wire bus with potential equalization in bus or line topology terminate with 120 Ohm
Transmission parameters	
Transmission rate	min. 9600 Bit/s (Bd) max. 115200 Bit/s (Bd)
Transmission rate default setting	9600 Bit/s (Bd)

Supply

Operating voltage	24 V AC/DC +/- 10 % (SELV)
Power consumption	
Power consumption AC (max.)	220 mA
Power consumption DC (max.)	110 mA
Duty cycle relative	100 %

Inputs

Analog inputs	7
Current input	
Current input	1
Current range	0 (4) - 20 mA DC (adjustable)
Resolution current input	15 Bit
Error current input	20 µA
Resistance / temperature / voltage input	
Resistance range	40 Ohm - 4 MOhm
Resolution resistance input	15 Bit
Error resistance input < 12 kOhm	0.1 %
Error resistance input >= 12 kOhm	1 %
Temperature range (-50 °C to 150 °C)	PT100, PT500, PT1000, NI1000-TC5000, NI1000-TC6180, BALCO500, KTY81_110, KTY81_210, NTC1k8-T, NTC5k-T, NTC10k-T, NTC20k-T
Temperature range (-40 °C to 120 °C)	LM235Z sensor



Technical Data

Inputs

Voltage range	0 V - 10 V DC
Resolution voltage input	15 Bit
Error voltage input	10 mV
Digital inputs	11 x optocoupler, galvanically isolated
High signal detection	> 7 V AC/DC < 30 V AC/DC
S0 inputs acc. to DIN EN 62053-31 Class A	1

Outputs

Analog outputs	2, potential-free
Voltage range	0 V - 10 V DC
Resolution voltage output	10 mV / digit
Continuous current voltage output	5 mA at 10 V DC
Digital outputs	8
Relay output	4 changeover contacts
Switching voltage relay output (max.)	250 V AC
Continuous current relay output	6 A / relay
Semiconductor output	4
Switching voltage semiconductor output (max.)	24 V AC/DC
Continuous current semiconductor output	100 mA

Isolation

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 4 kV
Type of insulation	basic insulation reinforced insulation

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Housing	
Dimensions	
Dimension (W x H x D)	125 mm x 93 mm x 60.81 mm
Dimension (W x H x D)	4.921 in. x 3.661 in. x 2.394 in.
Weight	385 g
Mounting style	Standard rail TH35
Mounting position	any
Apposition	without distance
Connection type	Screw type 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	min. 0.3 mm max. 1.4 mm
Module connection	
Wire cross section solid	0.34 mm ² - 2.5 mm ² / AWG 22-12
Wire cross section multi	0.34 mm ² - 2.5 mm ² / AWG 22-12
Wire cross section with wire ferrule	0.34 mm ² - 2.5 mm ² / AWG 22-12
Wire diameter	min. 0.66 mm max. 1.78 mm
Screw torque (max.)	0.5 Nm
Stripping length (min.)	8 mm
Protection circuit	Polarity reversal protection for DC operating voltage Protection against interchanging power supply and bus

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Material

Color	gray/black
Material - Terminal block	Polyamid 6.6 V0
Material - Covers	Polycarbonat

Protection category according to IEC 60529

Protection category - housing (acc. to IEC 60529)	IP20
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	-25 °C - 70 °C
Temperature - Storage °F	-13 °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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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. At METZ CONNECT's request, the Customer shall submit and make available meaningful evidence (e.g. test and laboratory protocols, certifications, etc.).

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Accessories

P/N	Designation
110369	Terminal block Type 259
110486	HUB DC
110561	Power supply NG4 24 V DC
31135104	Typ 135 RIACON 135_3.5



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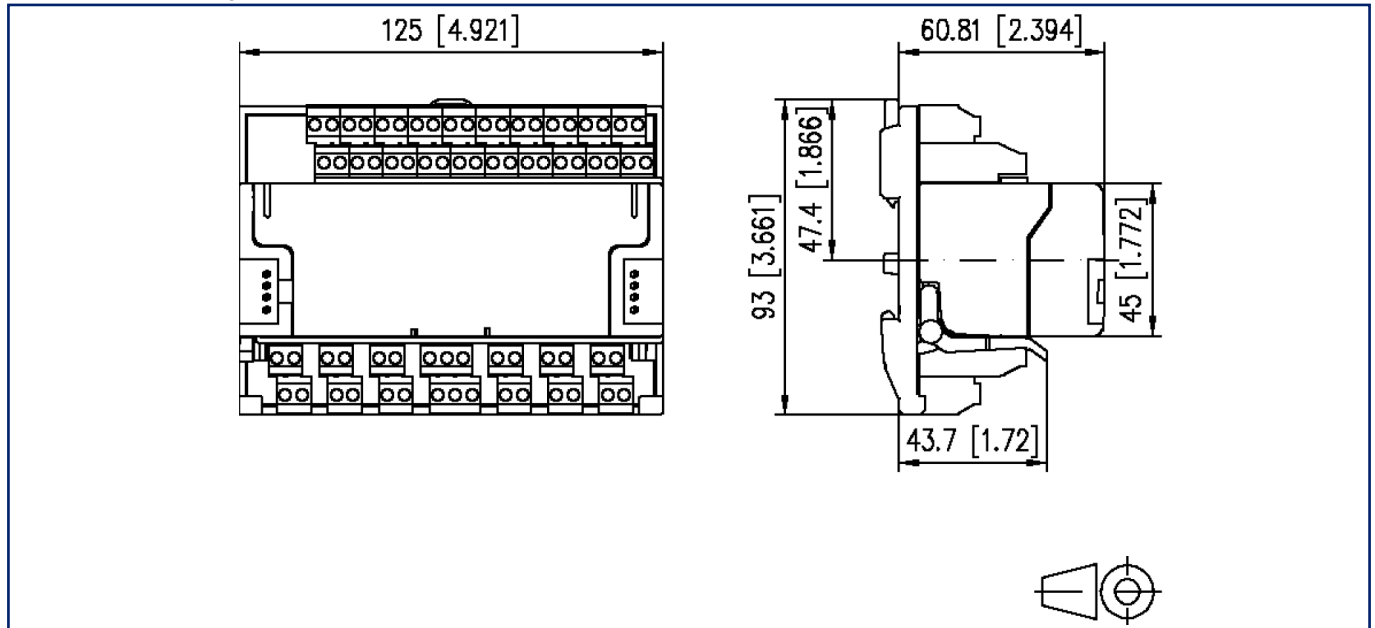
Accessories from

P/N	Designation
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

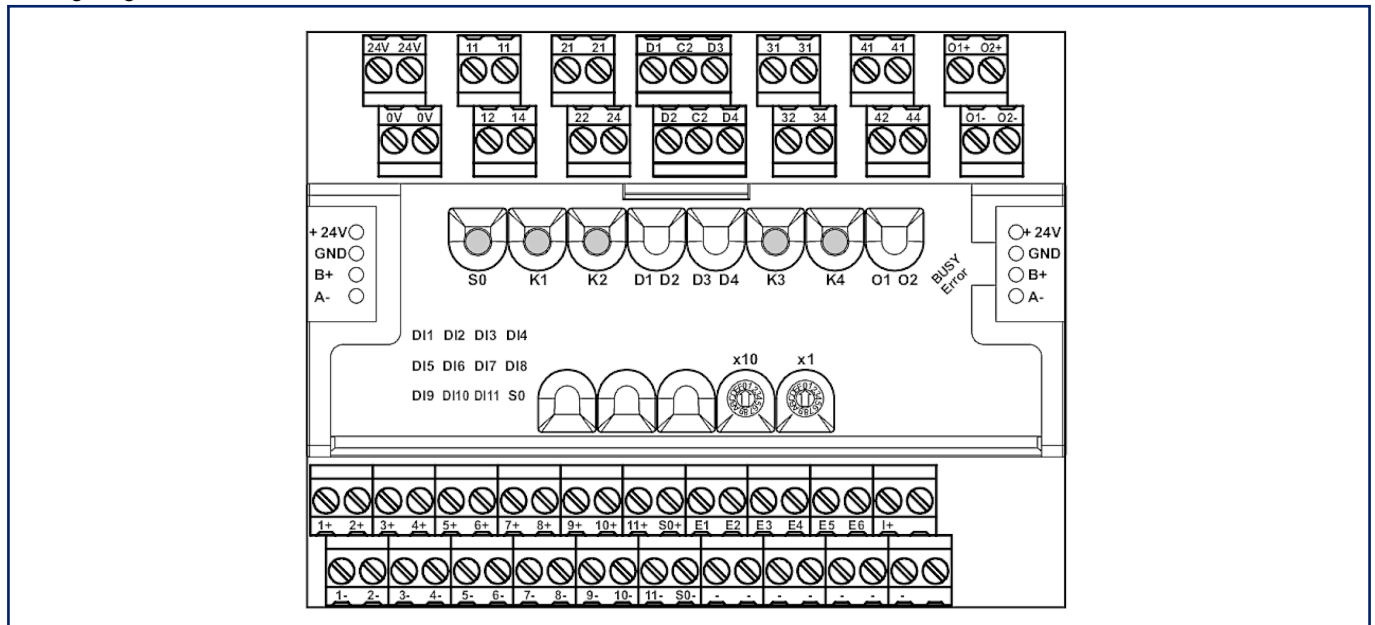


Illustrations

Dimensional drawing



Wiring diagram



Illustrations

Principle diagram

