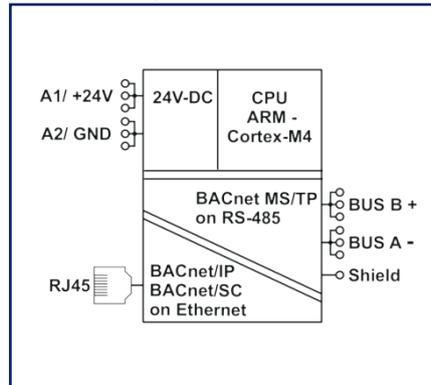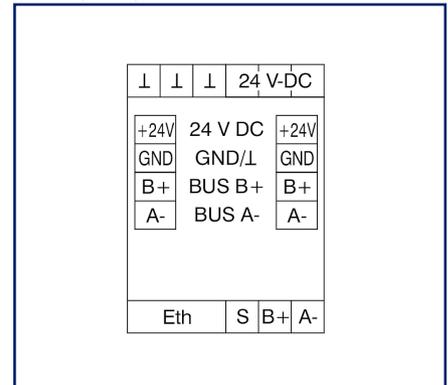# Data sheet
BMT-F-RTR/SC BACnet/SC Router

Illustrations

Principle diagram

Wiring diagram

See enlarged drawings at the end of document

Product specification

BMT-F-RTR/SC is a compact Router and enables bidirectional data exchange between BACnet/IP and BACnet MS/TP fieldbus devices. It supports encrypted BACnet/SC data communication (Secure Connect) as a BACnet/SC node with the routing functions: Routing from BACnet MS/TP to BACnet/SC, from BACnet/IP to BACnet/SC and from BACnet MS/TP to BACnet/IP. The BMT-F-RTR/SC can be connected to METZ CONNECT BACnet MS/TP devices via two 4-pole terminals on the front of the device and a jumper plug. An integrated web server is used for parameter settings, management and monitoring of the two interfaces (Ethernet / RS485). The web interface is also used to update the firmware. The BMT-F-RTR/SC is suitable for decentralised mounting in electrical sub-distribution boards or in control cabinets on TH35 mounting rails in accordance with IEC 60715.

- Connection with spring clamp terminal blocks (push-in)
- Access to 32 devices on the BACnet MS/TP bus
- Bidirectional exchange of data between BACnet/SC, BACnet/IP and BACnet MS/TP devices
- Protocol: BACnet MS/TP, BACnet/IP, BACnet Ethernet, HTTP 1.0, BACnet/SC
- Integrated web server
- Intuitive and software-independent TCP configuration via web interface
- Recording and analysis of IP and RS485 communication
- Simple device search of METZ CONNECT BACnet MS/TP devices on the RS485 bus
- Fast connection of METZ CONNECT BACnet MS/TP devices via proven jumper plug technology

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BMT-F-RTR/SC BACnet/SC Router

Technical Data

Approvals

cULus LISTED	Open Energy Management Equipment 34TZ
BTL	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.

Ethernet interface

Network connection	1 x Ethernet port (RJ-45 IEC 60603-7-51 (2010))
Speed	10/100 Mbits with auto-negotiation
Protocol	BACnet/IP BACnet Ethernet HTTP 1.0 BACnet/SC
Protocol BACnet/SC	BACnet/SC Node

RS485 interface

Protocol	BACnet MS/TP
Transmission parameters	
Transmission rate	min. 9600 Bit/s (Bd) max. 115200 Bit/s (Bd)
Transmission rate default setting	9600 Bit/s (Bd)
Parity	None
Stopbits	1
Galvanic isolation	1.5 kV
Bus termination resistor	120 Ohm switchable
Number of bus participants	32; with 1 unit load per participant

Supply

Operating voltage	24 V DC +/- 10 % (SELV)
Power consumption (max.)	50 mA
Power loss (max.)	1.3 W

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BMT-F-RTR/SC BACnet/SC Router

Technical Data

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	64 g
Mounting style	Standard rail TH35
Mounting position	any
Apposition	without distance
Connection type	Spring clamp terminal blocks

Indicator

Operation "RDY"	green LED
LAN connection "LINK 10/100"	green LED (100 Mbit), yellow LED (10 Mbit)
RS485 bus "TX" / "RX"	green LED

Terminal blocks

Supply and bus	
Terminal block	4-pole, pluggable, on front of housing
Solid wire (AWG)	max. 1.5 mm² / max. 16 AWG
Stranded wire (AWG)	max. 1 mm² / max. 18 AWG
Wire diameter	min. 0.3 mm max. 1.4 mm
Module connection	
Wire cross section solid	0.2 mm² - 2.5 mm² / AWG 24-14
Wire cross section multi	0.25 mm² - 2.5 mm² / AWG 24-12
Wire cross section with wire ferrule	0.25 mm² - 1.5 mm² / AWG 24-16
Stripping length (min.)	8 mm
Ethernet connection	RJ45-jack

Material

Material - Housing	Polyamid 6.6 V0
Color	gray
Material - Terminal block	Polyamid 6.6 V0
Material - Covers	Polycarbonat

Data sheet
BMT-F-RTR/SC BACnet/SC Router

Technical Data

Protection category according to IEC 60529

Protection category - housing (acc. to IEC 60529)	IP40
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
Storage	
Temperature - Storage °C	-20 °C - 70 °C
Temperature - Storage °F	-4 °F - 158 °F

Classifications

ETIM 7.0	EC000673
ETIM 8.0	EC000673
ETIM 9.0	EC000673
ETIM 10.0	EC000673

Software and additional documents

Software	MC Search Tool: Windows-based and free tool to configure and search the BMT-F-RTR/SC in a TCP/IP network (free download at www.metz-connect.com)

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.).

Data sheet
BMT-F-RTR/SC BACnet/SC Router

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P/N
1108810170
EAN 4251394675497
2025/08/20
Version: D

Accessories

P/N	Designation
110561	Power supply NG4 24 V DC
11056170	Power supply NG4-F 24 V DC
11088013	BMT-TO4 BACnet MS/TP
1108801370	BMT-F-TO4 BACnet MS/TP
1108811319	BMT-DI10 BACnet MS/TP
110881131970	BMT-F-DI10 BACnet MS/TP
11088213	BMT-AI8 BACnet MS/TP
1108821370	BMT-F-AI8 BACnet MS/TP
1108830526IP	BMT-DIO4/2-IP65 BACnet MS/TP 230 V
1108831326	BMT-DIO4/2 BACnet MS/TP
110883132670	BMT-F-DIO4/2 BACnet MS/TP
1108831326IP	BMT-DIO4/2-IP65 BACnet MS/TP
1108841319	BMT-DI4 BACnet MS/TP
110884131970	BMT-F-DI4 BACnet MS/TP
1108841319IP	BMT-DI4-IP65 BACnet MS/TP
1108851302	BMT-AO4 BACnet MS/TP
110885130270	BMT-F-AO4 BACnet MS/TP
1108861321	BMT-DO4 BACnet MS/TP
110886132170	BMT-F-DO4 BACnet MS/TP
1108871302	BMT-AOP4 BACnet MS/TP
110887130270	BMT-F-AOP4 BACnet MS/TP
1108871303	
110887130370	
11088813	BMT-TP BACnet MS/TP
1108881370	BMT-F-TP BACnet MS/TP
11088913	BMT-SI4 BACnet MS/TP
1108891370	BMT-F-SI4 BACnet MS/TP
1108901332	BMT-CI4 BACnet MS/TP
110890133270	BMT-F-CI4 BACnet MS/TP
11089313	BMT-Multi I/O BACnet MS/TP

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BMT-F-RTR/SC BACnet/SC Router

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P/N
1108810170
EAN 4251394675497
2025/08/20
Version: D
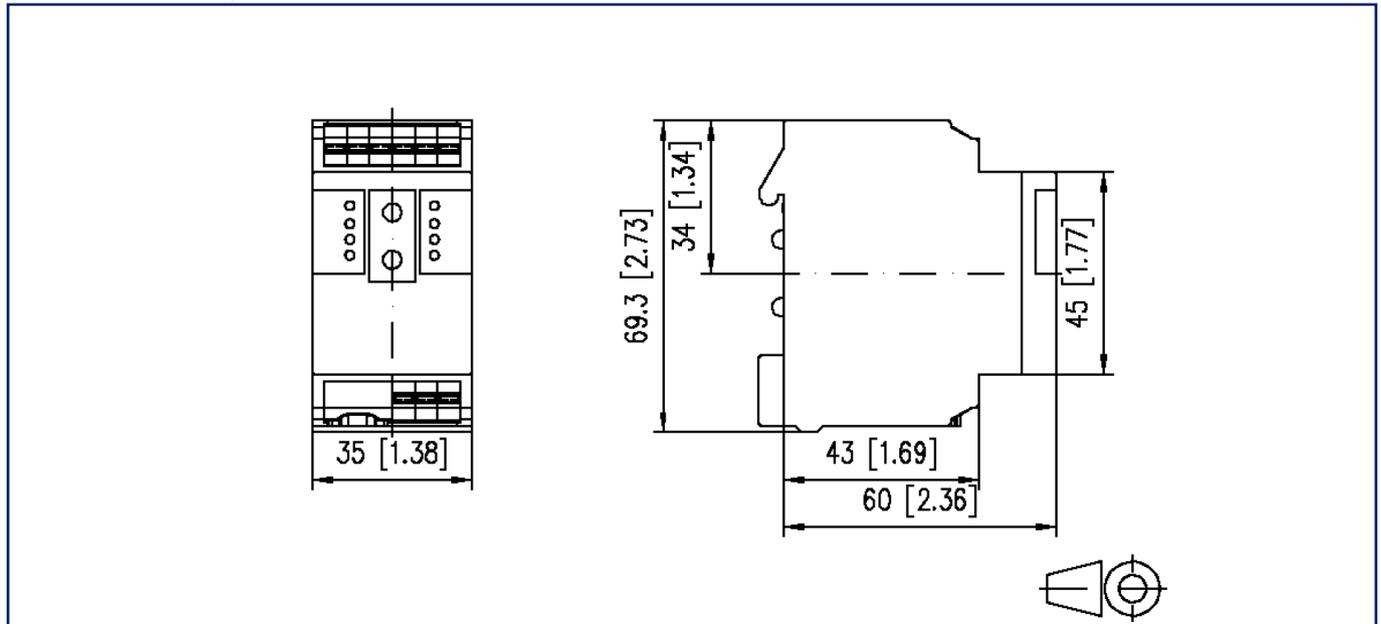
Accessories from

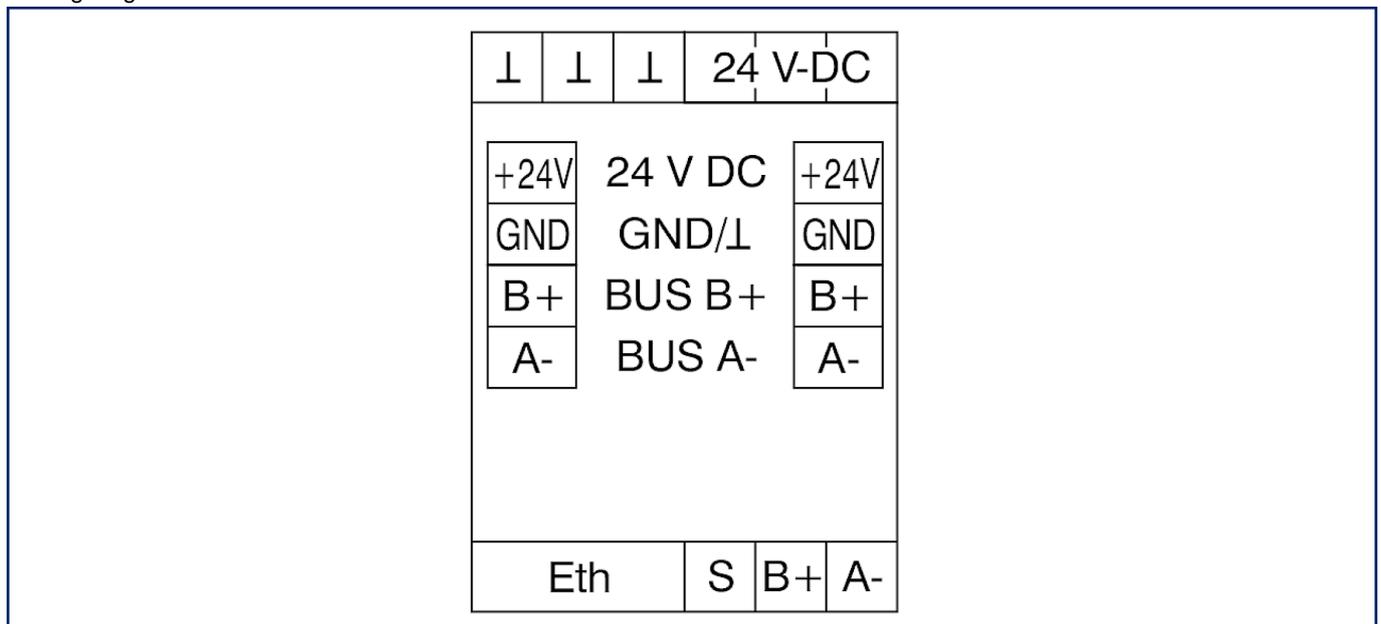| P/N	Designation
1108110526IP	MB-DIO2/1-IP Modbus/BACnet 230 V
1108111326IP	MB-DIO2/1-IP Modbus/BACnet 24V AC/DC
1108120526IP	MB-DIO4/2-IP Modbus/BACnet 230 V
1108121326IP	MB-DIO4/2-IP Modbus/BACnet 24V AC/DC

Data sheet
BMT-F-RTR/SC BACnet/SC Router

Illustrations

Dimensional drawing

Wiring diagram

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Illustrations

Principle diagram