

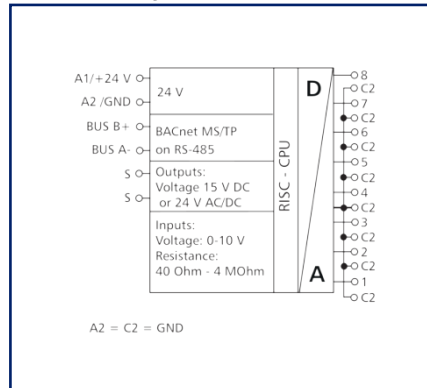
# Data sheet

## BMT-AI8 BACnet MS/TP

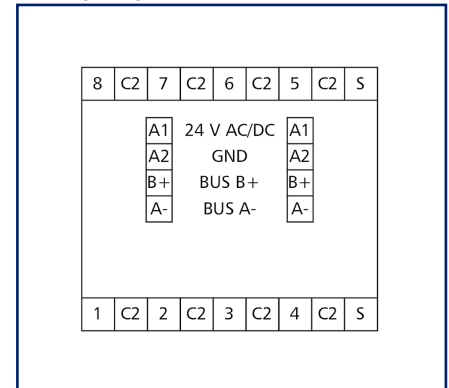
### Illustrations



Principle diagram



Wiring diagram



See enlarged drawings at the end of document

### Product specification

The BACnet MS/TP module with 8 individually configurable resistance or voltage inputs was developed for decentralized switching tasks. It is suitable for detecting resistances and voltages of, for example, passive and active temperature sensors, electrical vent and mixing valves, valve positions, etc. The inputs can be configured universally by means of standard objects via a BACnet client. The module is addressed and the baud rate is 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.

- Connection with screw type terminal blocks

### Technical Data

| Approvals   |                                       |
|---|---------------------------------------|
|  | Open Energy Management Equipment 34TZ |

|   |   |
|---|---|
|  | 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)  |
| Parity                            | None   |
| Stopbits                          | 1  |

| Supply                      |                            |
|-----------------------------|----------------------------|
| Operating voltage           | 24 V AC/DC +/- 10 % (SELV) |
| Power consumption           |                            |
| Power consumption AC (max.) | 65 mA                      |
| Power consumption DC (max.) | 25 mA                      |
| Duty cycle relative         | 100 %                      |

| Inputs                            |                              |
|-----------------------------------|------------------------------|
| Analog inputs                     | 8, individually configurable |
| Resistance range                  |                              |
| Resistance range                  | 40 Ohm - 4 MOhm              |
| Error resistance input < 12 kOhm  |                              |
| Error resistance input < 12 kOhm  | 0.1 %                        |
| Error resistance input >= 12 kOhm |                              |
| Error resistance input >= 12 kOhm | 1 %                          |
| Voltage range                     |                              |
| Voltage range                     | 0 V - 10 V DC                |
| Resolution voltage input          |                              |
| Resolution voltage input          | 10 mV / digit                |
| Error voltage input               |                              |
| Error voltage input               | 10 mV                        |

### Technical Data

| Housing                              |   |
|--------------------------------------|---|
| Dimensions                           |   |
| Dimension (W x H x D)                | 50 mm x 69.3 mm x 60 mm   |
| Dimension (W x H x D)                | 1.969 in. x 2.728 in. x 2.362 in.   |
| Weight                               | 104 g   |
| Mounting style                       | Standard rail TH35  |
| Mounting position                    | any   |
| Apposition                           | The maximum quantity of BACnet 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 |
| Connection type                      | Screw type terminal blocks  |
| Indicator                            | green and red LED   |
| Terminal blocks                      |   |
| Supply and bus                       |   |
| Terminal block                       | 4-pole  |
| Solid wire (AWG)                     | max. 1.5 mm <sup>2</sup> / max. 16 AWG  |
| Stranded wire (AWG)                  | max. 1 mm <sup>2</sup> / max. 18 AWG  |
| Wire diameter                        | max. 1.4 mm - min. 0.3 mm   |
| Module connection                    |   |
| Wire cross section solid             | 0.34 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12  |
| Wire cross section multi             | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12  |
| Wire cross section with wire ferrule | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12  |
| 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  |
| Material                             |   |
| Material - Housing                   | Polyamid 6.6 V0   |
| Color                                | gray  |
| Material - Terminal block            | Polyamid 6.6 V0   |
| Material - Covers                    | Polycarbonat  |

### 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 |

#### 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 | EC000794 |
| ETIM 8.0 | EC000794 |
| ETIM 9.0 | EC000794 |

#### Software and additional documents

|                            |  |
|----------------------------|--|
| Software and documentation | Further documentation is available for free download at <a href="http://www.metz-connect.com">www.metz-connect.com</a> |
|----------------------------|--|

### 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   |

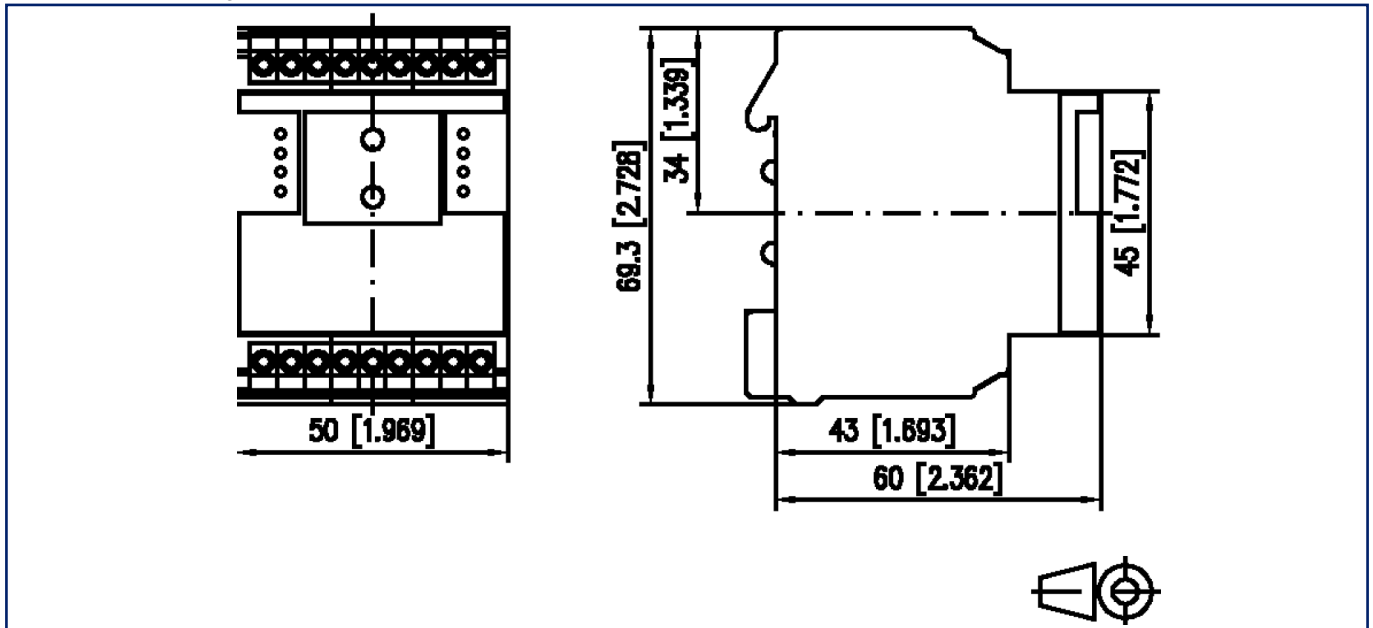
### Accessories from

| P/N        | Designation             |
|------------|-------------------------|
| 11088001   | BMT-RTR BACnet-Router   |
| 1108800170 | BMT-F-RTR BACnet-Router |

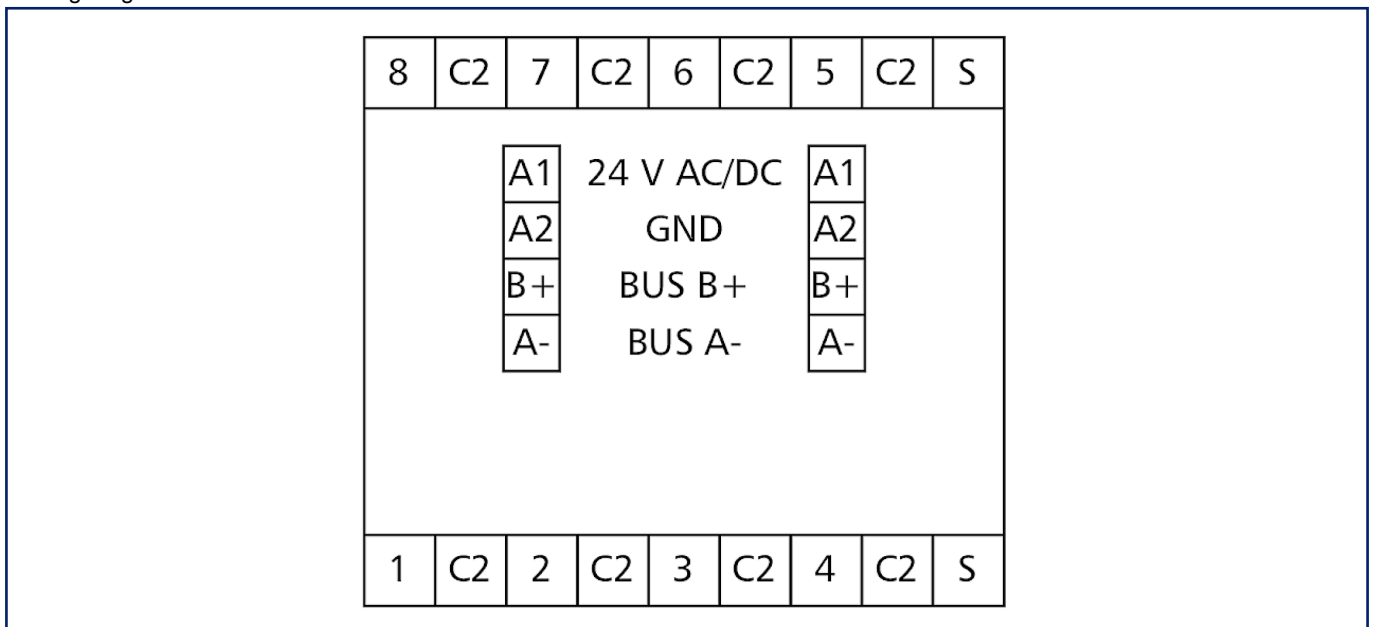


### Illustrations

Dimensional drawing

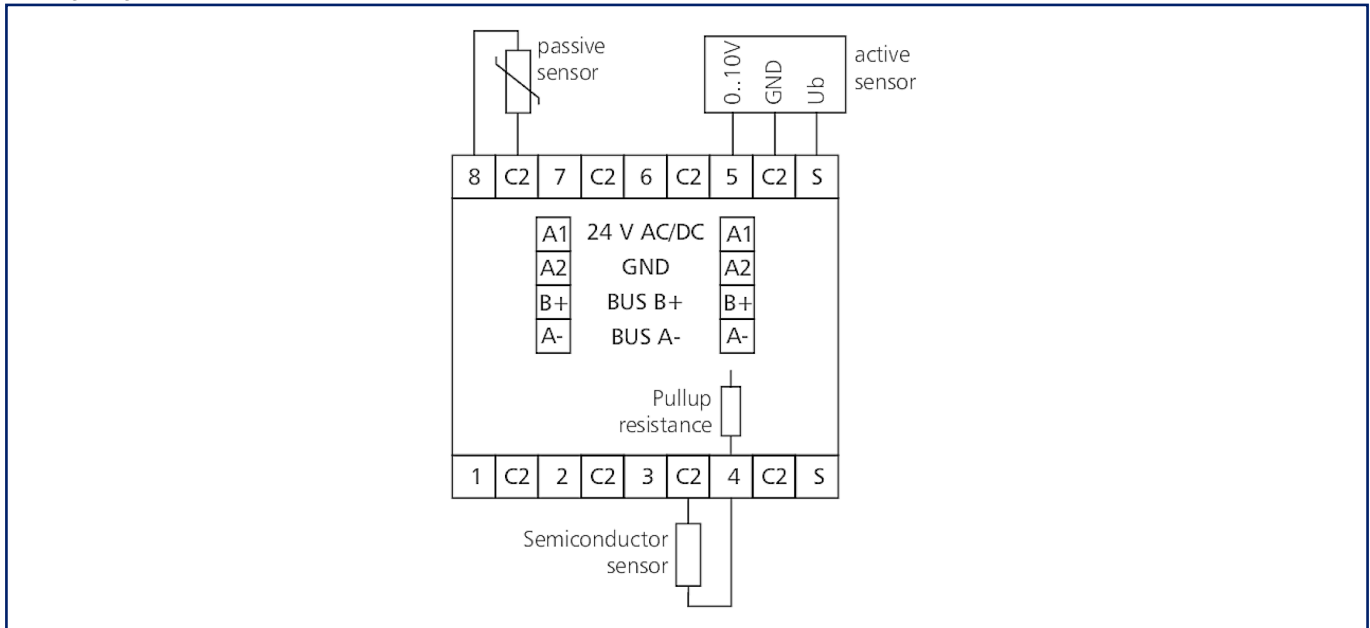


Wiring diagram

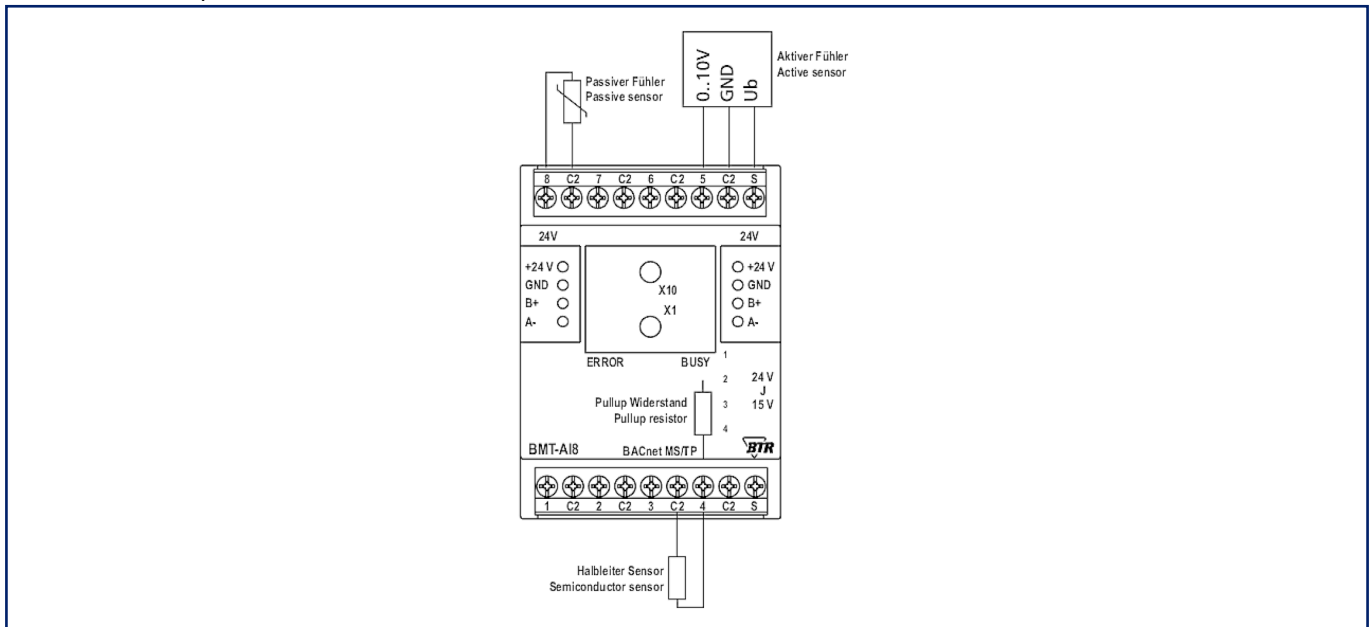


**Illustrations**

Wiring diagram



Connection example





**Illustrations**

Principle diagram

