

Features and Benefits

- Cost efficient expansion of physical IOs on a BMS controller
- BACnet MS/TP or Modbus RTU selectable
- 10 Inputs – 10 Outputs
- Automatic baud rate detection and device instance configuration (BACnet)
- Copy and broadcast configuration to other SC-IO-24's (BACnet)
- The on-board override switches for the outputs are supervised, that means the output status is visible on the network
- LED indication of each input and output
- DIN-rail mountable
- Removable 2-part terminal blocks

Product Codes

SC-IO-24 Smart communication IO module

Specification

| | |
|-------------------|---|
| Supply voltage | 24Vac/dc ±10% |
| Supply current | 8VA (331mA @24Vac) |
| Inputs | 8 x Universal (12-bit resolution) |
| | 0-10Vdc |
| | Thermistor, type B (10K4A1) |
| | On/off (VFC) |
| | 4-20mA |
| | 2 x Digital |
| | Normally open/closed or direct/ |
| | reverse |
| | Outputs |
| | 2 x Universal (12-bit resolution) |
| | 0-10Vdc |
| | Pulsed signal (20mA drive) |
| | On/off |
| | 4-20mA |
| | 2 x Analogue (12-bit resolution) |
| | 0-10Vdc |
| | Normally open/closed, independent |
| | common per relay, 5(4) @ 24V |
| BACnet | BACnet MS/TP (BAS-C): 9k6, 19k2, 38k4 or 76k8 bps or auto baud rate detection |
| Modbus | Modbus RTU Slave @ 9k6, 19k2, 38k4 or 57k6 |
| | Selectable parity and stop bit conf |
| | No parity, 2 stop bit |
| | Even parity, 1 stop bit |
| | Odd parity, 1 stop bit |
| Connections: | |
| Communication | 0.2mm ² twisted-shield cable |
| Electrical | 0.8mm ² at least |
| Ambient: | |
| Temperature | 0 to +50°C |
| RH | 5 to 95% non-condensing |
| Housing: | |
| Material | ABS |
| Dimensions | 160 x 126 x 57mm |
| Protection | IP30 |
| Country of origin | Canada |
| Conformity | EMC, CE & UKCA Marked |

WEEE Directive:

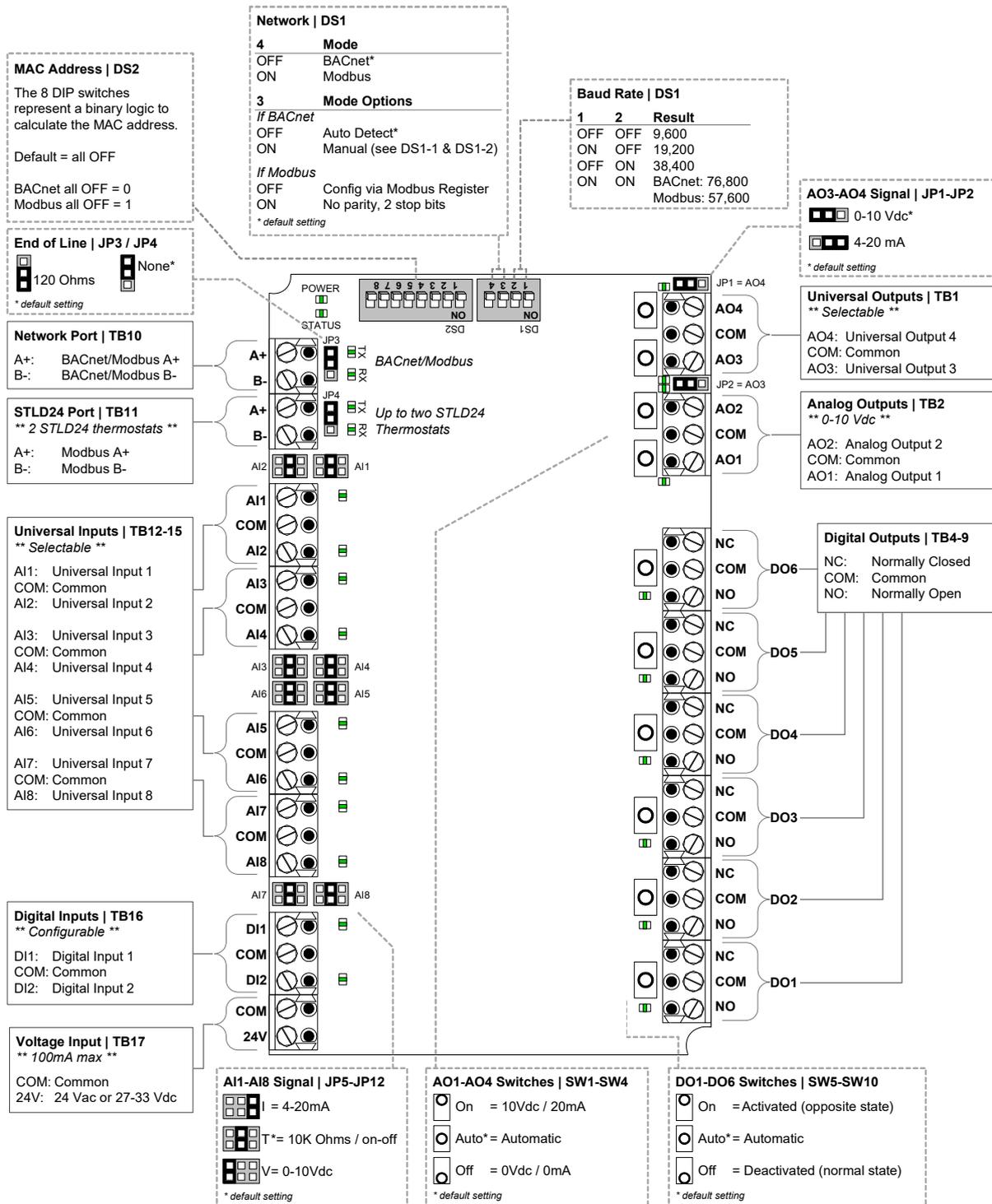


At the end of the products useful life please dispose as per the local regulations. Do not dispose of with normal household waste. Do not burn.



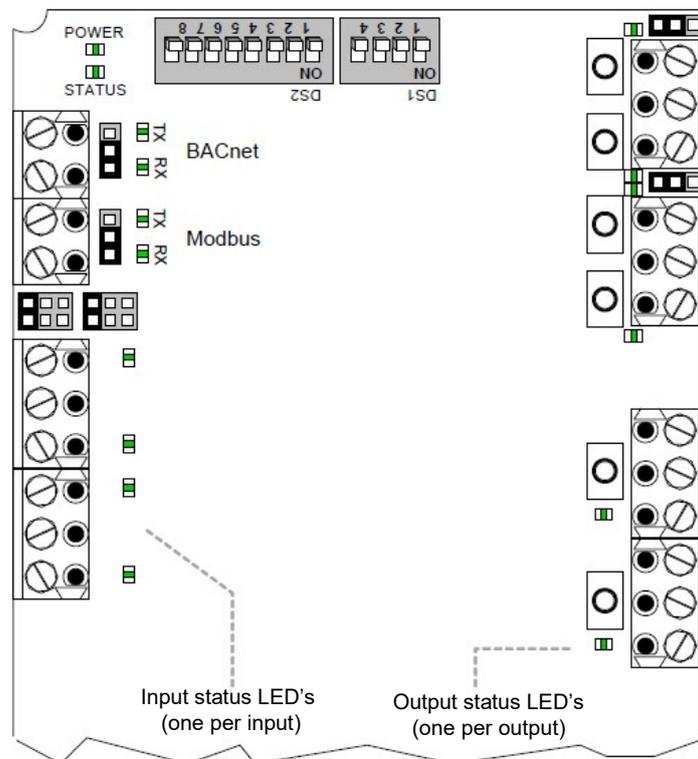
Installation & Configuration

Please make sure that all jumper settings are set to the same values as those in the configurable BACnet objects / Modbus register. Some additional configurations are only available via BACnet (see section Network Conditions)



LED Indication

| Function | LED status | Description |
|---------------------------|------------|---|
| Power | On | Input voltage normal |
| | Off | No power |
| Status | Flashing | Normal operation (watchdog) |
| RX/TX (BACnet and Modbus) | Flashing | Receiving (RX) and/or transmitting (TX) data |
| Input Status | On | Input On |
| | Off | Input Off |
| | Flashing | Input not connected (thermistor setting only) |
| | Analogue | When Universal Inputs are set to analogue values (Vdc, mA, or 10K Ω); the LED intensity corresponds to the input value. For example: At 10Vdc, the LED will be fully on. At 5Vdc, the LED will be at 50% intensity. At 0 Vdc, the LED will be off |
| Output Status | On | Activated |
| | Off | Deactivated |
| | Flashing | Output pulsed |
| | Analogue | When Universal and Analogue outputs are set to analogue values (Vdc or mA); the LED intensity corresponds to the output value. For example: At 10Vdc, the LED will be fully on. At 5Vdc, the LED will be at 50% intensity. At 0Vdc, the LED will be off. |



Network Connections

Please note that all jumper settings must also be set to the same value through BACnet or Modbus. The following is a list of conditions and additional BACnet or Modbus objects.

Universal Inputs (AI1-AI8)

- When the jumper is set to Thermistor, you can select either sensor °C or sensor °F, or you can set the input as a digital on/off input.
- If the universal input is set as a digital on/off input, you can also set the polarity to direct or reverse. For example, in Reverse an "on" signal would be recognized as an "off" signal.
- When the jumper is set to 0-10Vdc, you can also set the range to 0-5Vdc.

Digital Inputs (DI1-DI2)

- You can set the polarity to direct or reverse. For example, in Reverse an "on" signal would be recognized as an "off" signal.

Universal/Analogue Outputs (AO1-AO4)

- You can set the polarity to direct or reverse. For example, in reverse the output range would be 10-0Vdc instead of 0-10Vdc. The polarity applies to all settings 0-10Vdc, 4-20mA, on/off and pulsed.
- You can also set the outputs to pulsed or digital on/off.
- A fixed output value can only be modified via BACnet when the override switch is in the "Automatic" position.

Digital Outputs (DO1-DO6)

- A fixed output (open/closed) can only be modified via BACnet when the override switch is in the "Automatic" position.
- The displayed text can be set to either Open/Closed, On/Off, or Alarm/Normal (BACnet only).

Supervised Outputs

- All outputs are fully supervised via BACnet. This provides the actual state of the output including any manual overrides done using the on-board switches.

A full user manual is available to download from www.sontay.com