Modbus to BACnet gateway

The Anybus Modbus to BACnet gateway allows Modbus slave devices to communicate on a BACnet network. The gateway works as a translator between the two networks allowing both Modbus RTU and Modbus TCP signals to show up as individual BACnet objects on any BACnet/IP or BACnet MS/TP network. This enables central control and supervision of Modbus devices from a BACnet BMS in a building.

Data points
Thanks to the variable number of supported data points ranging from 100 to 3,000 signals, this gateway covers all applications from small installations up to very large networks.

Order codes:
- AB9900-100 (100 data points)
- AB9900-250 (250 data points)
- AB9900-600 (600 data points)
- AB9900-1200 (1200 data points)
- AB9900-3000 (3000 data points)

What’s included?
- Gateway
- USB Cable
- Installation sheet

How it works
Modbus RTU and BACnet MS/TP networks are connected to their corresponding serial ports of the gateway, while Modbus TCP and BACnet/IP networks are connected to the Ethernet port. You will need to create a configuration project using the easy and powerful Anybus Configuration Manager (MAPS). You can then do commissioning and troubleshooting also using this tool.

Features and benefits
- Handles conversion between Modbus (RTU & TCP) and BACnet (IP & MS/TP).
- Supports BACnet version 12.
- Manages Modbus TCP and Modbus RTU simultaneously.
- Connects up to 254 Modbus devices to BACnet (processing up to 3000 Modbus registers).
- A simple yet powerful config tool allows commissioning, debugging and troubleshooting.
- Import and export to Excel for further signal processing.
- Comes in a plastic housing that mounts on 35-mm DIN-rail.
- Configuration could be done through IP or USB port.
- LED indicators provide communication status on both the Ethernet and serial ports.

What is BACnet?
BACnet is a data communication protocol mainly used in the building automation and HVAC industry (Heating Ventilation and Air-Conditioning). The most common serial version is called BACnet MS/TP while the dominant Ethernet version is BACnet/IP.
Technical Details

Dimensions (LxWxH): 90x88x56 mm
Protection Class: IP20
Enclosure material: Plastic, Type PC (UL 94 V-0)
Mounting: DIN rail (35 mm)

PORT A:
1 x Serial EIA485 (Plug-in screw terminal block 2 poles)
1 x SGND (Plug-in screw terminal block 2 poles)
1500VDC isolation from other ports

Port B:
1 x Serial EIA232 (SUB-D9 male connector)
Plug-in from a DTE device
1000VDC isolation from other ports (except PORT B: EIA485)
1 x Serial EIA485 (Plug-in screw terminal block 3 poles)
(Reference ground or shield)
1000VDC isolation from other ports (except PORT B: EIA232)

Ethernet port:
1 x Ethernet 10/100 Mbps RJ45
2 x Ethernet LED: port link and activity

Console port:
Mini-USB to connect a PC (to run the Anybus Configuration Manager).
It is also possible to connect via the Ethernet port.

USB port:
For datalogging on an external USB stick

Certifications:
CE and RoHS compliant

Environmental Characteristics

Operating temp: 0 to 60 °C, 32 to 140 °F
Storage temp: -40 to 85 °C, -40 to 185 °F
Relative Humidity: 5-95 % non-condensing

Communication

Ethernet: Modbus TCP/IP
EIA-485 Port A: Modbus RTU
EIA-485 Port B: Bacnet MS/TP

Protocols supported:
Modbus TCP / Bacnet/IP

Data rate:
10 Mbps, 100 Mbps

Physical layer:
10BASE-T, 100BASE-TX
EIA-485, 3-wire isolated
EIA-485, 3-wire isolated

Cable length (max):
100 m
1200 m (1000 at 115.2kbps)

Port connector:
Shielded RJ-45
2-pin + 2-pin removable terminal
3-pin removable terminal

LEDs:
Rx / Tx (Red/Duplex)
Green = 100 Mbps
Green = Full-duplex
Yellow = 10 Mbps
Off = Half-duplex
Flash = Activity Flash = Collision

Configuration is made in the accompanying Anybus Configuration Manager (MAPS)

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