



# Modbus to BACnet Gateway

## INSTALLATION GUIDE

SCM-1202-044/SP2259 1.0 ENGLISH

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# 1 Installation

This document describes how to install the Modbus to BACnet Gateway.

For additional documentation and technical support, please visit the Anybus support website [www.anybus.com/support](http://www.anybus.com/support).

## 1.1 Safety Instructions



This product contains parts that can be damaged by electrostatic discharge (ESD). Use ESD protective measures to avoid equipment damage.



Connecting power with reverse polarity or using the wrong type of power supply may damage the equipment. Make sure that the power supply is correctly connected and of the recommended type.

The Modbus to BACnet Gateway should only be installed by adequately trained personnel and according to applicable safety regulations.

The unit should be mounted on a standard DIN rail or screw-mounted onto a flat surface inside a properly grounded metallic enclosure. The unit should not be mounted outdoors or exposed to direct sunlight, water, high humidity or dust.

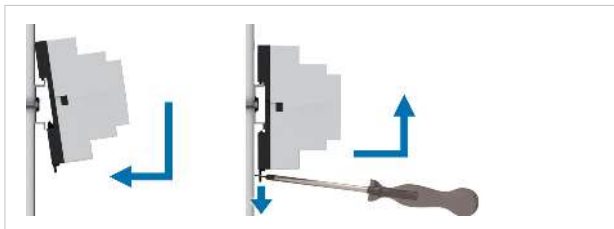
Make sure that you have all the necessary information about the capabilities and restrictions of your local network environment before installation.

## 1.2 Installation Overview

1. Mount the unit on a DIN rail or screw mount it on a flat, stable surface.
2. Connect the communication cables.
3. Connect the power supply and power on the unit.
4. Configure the unit using **Anybus Configuration Manager (MAPS)** as described in the Modbus to BACnet Gateway User Manual.

See [www.anybus.com/support](http://www.anybus.com/support) for more information and download links.

## 1.3 DIN Rail Mount



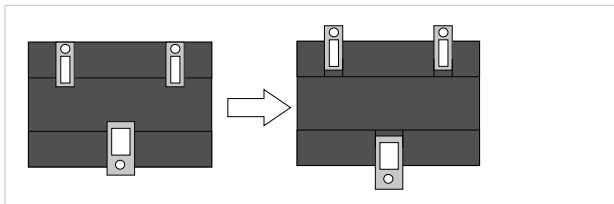
### Mounting

1. Hook the unit onto the upper lip of the rail.
2. Press the unit gently towards the rail until it snaps into place.

### Removing

1. Pull the tab at the bottom of the unit gently downwards.
2. Pull the bottom end free and lift the unit from the rail.

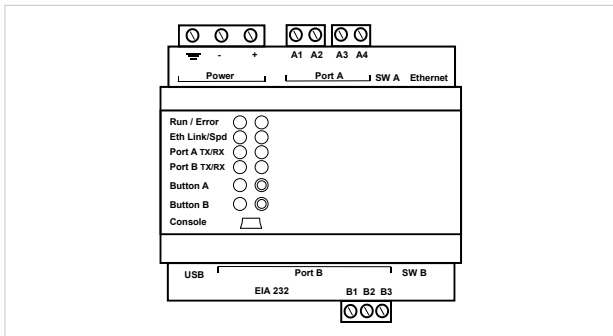
## 1.4 Wall Mount



Push the three mounting clips on the back of the unit from the original position to the outer position. A click indicates when the clip is locked in the outer position.

The holes in the mounting clips can now be used for screw mounting.

## 1.5 LED Indicators, Switches and Connectors



LED	Indication	Meaning
Run	Green	Normal operation
Error	Red	Operating error
Eth Link	Green Yellow Flashing	100 Mbit/s Ethernet 10 Mbit/s Ethernet Ethernet traffic
Eth Spd	Green Off Flashing	Full-duplex Ethernet mode Half-duplex Ethernet mode Packet collision
Port A Tx	Green	Transmitting on Port A
Port A Rx	Green	Receiving on Port A
Port B Tx	Green	Transmitting on Port B
Port B Rx	Green	Receiving on Port B
Button A/B	See User Manual	

### DIP switches

**SW A / SW B** control internal termination and polarization for ports A / B.

Switch	Function
1	ON = 120 $\Omega$ termination enabled
2, 3	ON = line polarization enabled

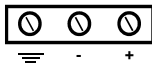




See [Technical Data, p. 7](#) regarding terminal wiring and power supply requirements. Observe the correct polarity of the connections.

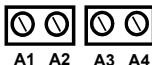
### Power Connector (3-pole terminal block)

Pin	Function
	Protective Earth
-	Power Ground
+	24 VAC or +9 to +36 VDC



### Port A / Modbus RTU EIA-485 (2 x 2-pole terminal blocks)

Pin	Function
A1, A2	Signal Ground
A3	EIA-485 Line A (+)
A4	EIA-485 Line B (-)



### Port B / BACnet MSTP (3-pole terminal block)

Pin	Function
B1	EIA-485 Line B (-)
B2	EIA-485 Line A (+)
B3	Signal Ground



### Ethernet Port (RJ-45)

Pin	Function
1	TD+
2	TD-
3	RD+
6	RD-
4, 5, 7, 8	(reserved)



### USB Port (USB Type A)

Can be used to connect a USB flash storage device for storing logfiles. HDD drives are **not** supported (max. 150 mA load).

### Console Port (USB Type Mini-B)

Used to connect to a PC for configuration. See the User Manual.

## 2 Technical Data

### General Specifications

<b>Model name</b>	<b>Anybus Modbus to BACnet Gateway</b>
Order code	AB9900-nnnn (nnnn = number of datapoints)
Dimensions (L x W x H)	90 x 88 x 56 mm
Operating temperature	0 to +60 °C
Storage temperature	-40 to +85 °C
Humidity range	5 to 95 % non-condensing
Mechanical rating	IP20
Mounting	DIN rail or screw mount
Power supply	Must be NEC Class 2 or LPS and SELV rated AC: 24 VAC ±10 %, max. 127 mA DC: 9 to 36 VDC ±10 %, max. 140 mA (Recommended: 24 VDC)
Terminal wiring	Use solid or stranded wires (twisted or with ferrule) 1 core: 0.5 to 2.5 mm <sup>2</sup> 2 cores: 0.5 to 1.5 mm <sup>2</sup> 3 cores: not permitted
Certifications	CE and RoHS compliant, BTL certification See <a href="http://www.anybus.com/support">www.anybus.com/support</a> for more information.

### Communication

Interface	Ethernet Port	EIA-485 (Port A)	EIA-485 (Port B)
Compliance	IEEE 802.3	Modbus V1.02	BACnet Rev 12
Protocols	Modbus TCP, BACnet/IP	Modbus RTU	BACnet MS/TP
Data rate	10/100 Mbit/s	2.4, 4.8, 9.6, 19.2, 38.4, 57.6, 115.2 kbps	Auto, 9.6, 19.2, 38.4, 57.6, 76.8, 115.2 kbps
Physical layer	10BASE-T, 100BASE-TX	EIA-485, 3-wire isolated	EIA-485, 3-wire isolated
Maximum cable length	100 m	2.4 to 57.6 kbps: 1200 m 115.2 kbps: 1000 m	2.4 to 76.8 kbps: 1200 m 115.2 kbps: 1000 m
Port connector	Shielded RJ-45	2 x 2-pin pluggable terminal blocks	3-pin pluggable terminal block
Isolation	1500 VDC	1500 VDC	1500 VDC (except from D-sub connector)

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