Anybus Communicator CAN - Modbus RTU
INSTALLATION SHEET

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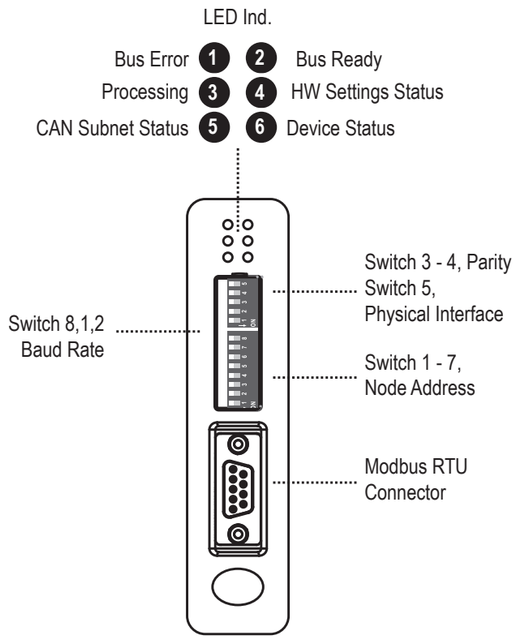
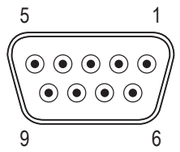
Module Front

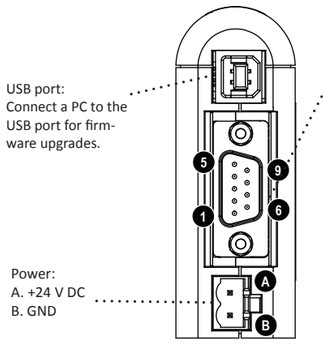


Modbus RTU Connector



Pin no	Name	Function
2	RS232 - Tx	Transmit signal
3	RS232 - Rx	Receive signal
5	GND	Signal ground
6	+5 V	Power supply
7	RS485 D0	
8	RS485 D1	
Casing	PE	
1, 4, 9	-	(not connected)

Bottom View



CAN Connector

Pin no.	Description
2	CAN_L
5	Shield
7	CAN_H
3, 6	CAN_GND
1, 4, 8, 9	(not connected)

LED Indicators

LED no	Indication	Meaning
1 (Bus Error)	Off Red	Normal operation Bus Error
2 (Bus Ready)	Off Green Red	No power Bus ready Bus timeout error
3 (Processing)	Off Flashing green	No query is currently being processed Processing query
4 (HW Settings Status)	Off Red	Using switch settings, normal operation Not configured. Operating at 19200 bps. Will only respond to broadcast messages.
5 (CAN Subnet Status)	Off Green Flashing red Red	Power off/no CAN communication Running with no transaction errors/timeout Transaction error/timeout or subnetwork stopped Fatal error
6 (Device Status)	Off Alternating red/green Green Flashing green Red	Power off/initializing Invalid or missing configuration Run Idle Fatal error

Modbus RTU Switch Settings

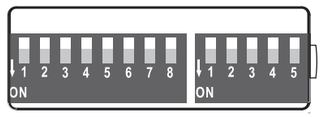
The Node Address is set in binary form with switches 1 - 7. Each module has to have a unique address.

The rest of the switches are used as shown in the tables below.

Baud Rate (Bps)	Sw. 8	Sw. 1	Sw. 2
-	OFF	OFF	OFF
1200	OFF	OFF	ON
2400	OFF	ON	OFF
4800	OFF	ON	ON
9600	ON	OFF	OFF
19200	ON	OFF	ON
38400	ON	ON	OFF
57600	ON	ON	ON

Parity	Stop Bits	Sw. 3	Sw. 4
-	-	OFF	OFF
None (default)	2	OFF	ON
Even	1	ON	OFF
Odd	1	ON	ON

Physical Interface	Sw. 5
RS232	ON
RS485	OFF



Accessories Checklist

The following items are required for installation:

- Anybus Configuration Manager - Communicator CAN (available at www.anybus.com)
- CAN cable (included D-sub can be used)
- USB cable (type B) for configuration download
- Modbus RTU cable (not included)

Modbus Notes:

- Modbus start address for input registers is 1 (data from CAN to Modbus). Modbus start address for holding registers is 1025 (data from Modbus to CAN).
- If the physical interface is RS485, check that the Modbus cables are terminated correctly.

Installation and Startup Summary

- Build the configuration in the Anybus Configuration Manager.
- Set the Modbus switches to the desired values.
- Mount the Communicator at its proper position.
- Connect the USB, Modbus and CAN cables (if needed, use cables with terminations or add terminations).
- Power up the module and download the configuration.
- Remove the USB cable.

Technical Details

- Power supply:
  24 V DC (-10% to +10%).
- Power consumption:
  Maximum power consumption is 250 mA @ 24 V DC.
  Typical power consumption: 100 mA @ 24 V DC.
- Protective Earth (PE):
  Internal connection to PE via DIN-rail.
  Note: Make sure the DIN-rail is properly connected to PE.

Modbus Support

Technical questions regarding the Modbus RTU fieldbus system should be addressed to the Modbus IDA organization.

Online: www.modbus-ida.org

For maintenance and support, contact the HMS support department. Contact information is available at the support pages at www.anybus.com.

Further information and documents about this product can be found at the product pages on www.anybus.com.

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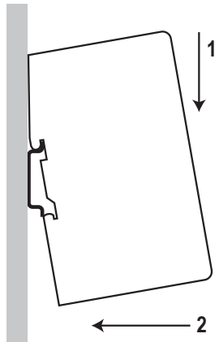
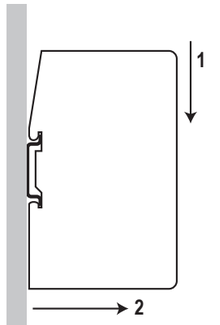
DIN-rail Mounting



To snap the gateway on, first press it downwards (1) to compress the spring in the DIN-rail mechanism, then push it against the DIN-rail as to make it snap on (2).



To snap the gateway off, push it downwards (1) and pull it out from the DIN-rail (2), as to make it snap off from the DIN-rail.

Additional Installation and Operating Instructions

Supply voltage: The X-gateway requires a regulated 24 V (21.6 V to 26.4 V) DC power source.

Field wiring terminal markings (wire type (Cu only, 14-30AWG)
"Use 60/75 or 75°C copper (CU) wire only"
Terminal tightening torque (5-7 lb-in (0.5 - 0.8 Nm)).

Use in Overvoltage Category I Pollution Degree 2 Environment.

Operating temperature/Surrounding temperature:
-25 to +55 degrees C @ 250 mA @ 24 V DC.

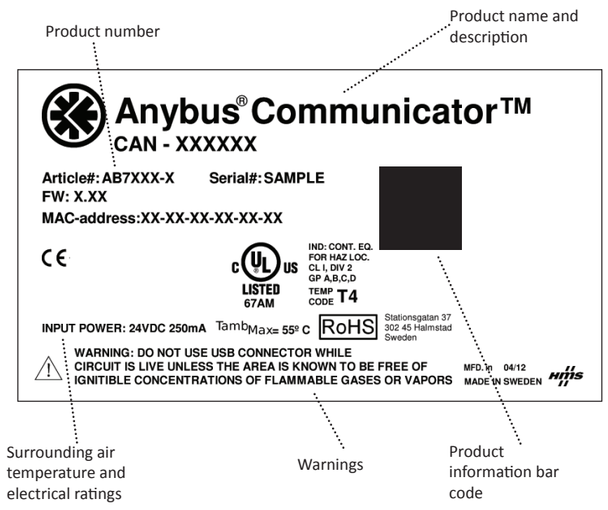
Maximum surface temperature: 135 degrees C.

Pressure: 850 - 1050 millibar.

This product is designed to safely operate in class I, division 2 Hazardous location according to ANSI/ISA 12.12.01-2011.

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.

Label Markings



Warnings

- **WARNING - EXPLOSION HAZARD - SUBSTITION OF ANY COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.**
- **WARNING - EXPLOSION HAZARD - WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES.**
- **WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CURCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.**
- **WARNING - EXPLOSION HAZARD - THE USB CONNECTOR IS NOT FOR USE IN HAZARDOUS LOCATIONS AND FOR TEMPORARY CONNECTION ONLY. DO NOT USE, CONNECT OR DISCONNECT UNLESS THE AREA IS KNOWN TO BE NONHAZARDOUS. CONNECTION OR DISCONNECTION IN AN EXPLOSIVE ATMOSPHERE COULD RESULT IN AN EXPLOSION.**

UL Certification

c UL us LISTED
IND: CONT. EQ.
FOR HAZ LOC.
CL I, DIV 2
GP A,B,C,D
TEMP CODE **T4**
E203225
LISTED 67AM

EMC Compliance (CE)

CE

This product is in accordance with the EMC directive 2004/108/EC through conformance with the following standards:

- **EN 61000-6-4 (2007)**
  Emission standard for industrial environment
  EN 55016-2-3, Class A (2006)
- **EN 61000-6-2 (2005)**
  Immunity for industrial environment
  EN 61000-4-2 (2009)
  EN 61000-4-3 (2006)
  EN 61000-4-4 (2004)
  EN 61000-4-5 (2005)
  EN 61000-4-6 (2007)

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