

# Anybus® Communicator™ CAN - Modbus RTU INSTALLATION SHEET



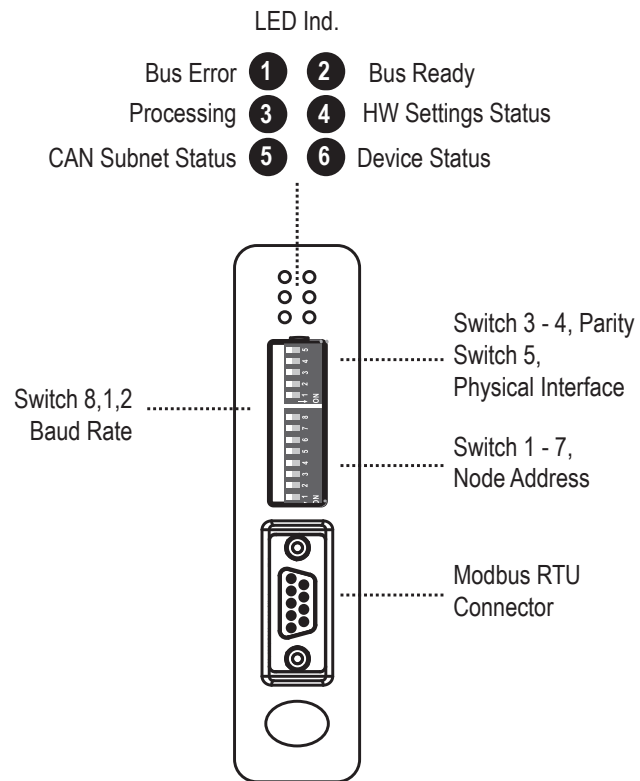
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SP1311, rev 2.20, AB7316

www.anybus.com

## Module Front



## 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

## Accessories Checklist

The following items are required for installation:

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

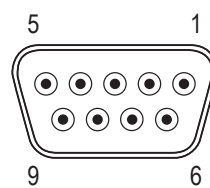
### Modbus Notes:

- 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.

## 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)

## Configuration Switches

**NOTE:** Changes to the configuration switches will only take effect after the gateway has been restarted.

The first 7 switches are used to set the node ID, using binary format.

Sw. 1	Sw. 2	Sw. 3	Sw. 4	Sw. 5	Sw. 6	Sw. 7	Node ID
64	32	16	8	4	2	1	
OFF	OFF	OFF	OFF	OFF	OFF	OFF	(invalid)
OFF	OFF	OFF	OFF	OFF	OFF	ON	1
...	...	...	...	...	...	...	...
ON	ON	ON	ON	ON	ON	ON	127 (64+32+16+8+4+2+1)

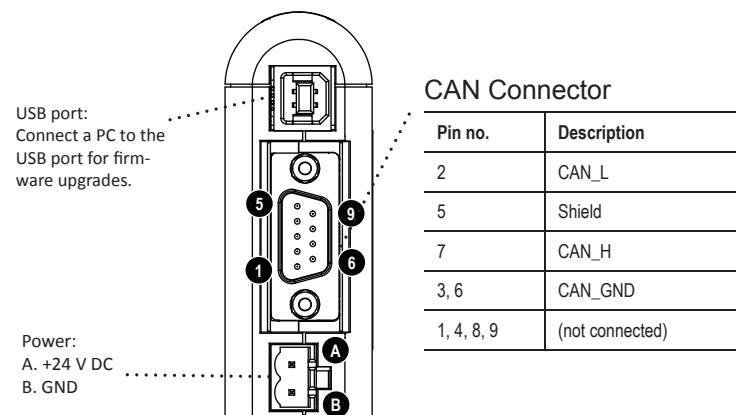
The remaining switches are used to set the baud rate, the parity and stop bits, and the physical interface type. **Bold text** = default value.

Sw. 8	Sw. 1	Sw. 2	Baud rate
OFF	OFF	OFF	(invalid)
OFF	OFF	ON	1200 bps
OFF	ON	OFF	2400 bps
OFF	ON	ON	4800 bps
ON	OFF	OFF	9600 bps
ON	OFF	ON	<b>19200 bps</b>
ON	ON	OFF	38400 bps
ON	ON	ON	57600 bps

Sw. 3	Sw. 4	Parity	Stop bits
OFF	OFF	(invalid)	(invalid)
OFF	ON	<b>None</b>	<b>2</b>
ON	OFF	Even	1
ON	ON	Odd	1

Sw. 5	Interface
OFF	RS485
ON	RS232

## 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)

## 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.

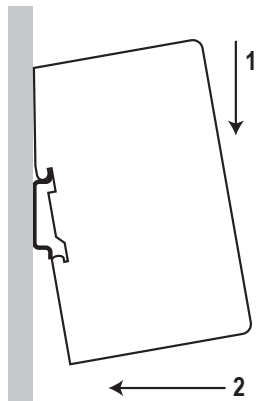
Online: [www.modbus-ida.org](http://www.modbus-ida.org)

For maintenance and support, contact the HMS support department. Contact information is available at the support pages at [www.anybus.com](http://www.anybus.com).

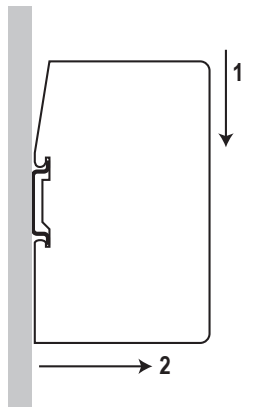
Further information and documents about this product can be found at the product pages on [www.anybus.com](http://www.anybus.com).

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## DIN Rail Mounting



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



To dismount the gateway, push it downwards (1) and pull it out from the rail (2).

## Additional Installation and Operating Instructions

This equipment requires a regulated 24 V (21.6 V to 26.4 V) DC power source

Field wiring terminal markings (wire type (Cu only, 14-30 AWG))  
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 conforming to EN 60664-1.

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

Maximum surface temperature: 135 °C

Pressure: 850–1050 millibar (85–105 kPa)

This product is designed to safely operate in class I, division 2 Hazardous location according to ANSI/ISA 12.12.01-2013 and category 3, zone 2 according to EN 60079-0:2012 and EN 60079-15:2010.

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

To comply with ATEX directives, the equipment must be installed within an IP54 enclosure and must be installed with a transient suppressor on the supply that does not exceed 140 % (33.6 V DC) of the nominal rated supply voltage.

## Warnings

- **WARNING - EXPLOSION HAZARD - SUBSTITUTION 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 CIRCUIT 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.**
- **WARNING - INSTALL IN AN ENCLOSURE CONSIDERED REPRESENTATIVE OF THE INTENDED USE.**

## Attention!

- **ATTENTION – RISQUE D'EXPLOSION – LE REMPLACEMENT DE TOUT COMPOSANTS INVALIDE LA CERTIFICATION CLASS I, DIVISION 2.**
- **ATTENTION – RISQUE D'EXPLOSION – EN ZONE EXPLOSIVE, VEUILLEZ COUPER L'ALIMENTATION ÉLECTRIQUE AVANT LE REMPLACEMENT OU LE RACCORDEMENT DES MODULES.**
- **ATTENTION – RISQUE D'EXPLOSION – NE PAS DÉCONNECTER L'ÉQUIPEMENT TANT QUE L'ALIMENTATION EST TOUJOURS PRÉSENTE OU QUE LE PRODUIT EST TOUJOURS EN ZONE EXPLOSIVE ACTIVE.**
- **ATTENTION – RISQUE D'EXPLOSION – LE CONNECTEUR USB N'EST PAS FAIT POUR UN USAGE EN MILIEU EXPLOSIF. NE PAS, BRANCHER ET DEBRANCHER SANS SAVOIR SI LA ZONE N'EST PAS IDENTIFIÉE NON EXPLOSIVE. BRANCHER OU DEBRANCHER EN ZONE EXPLOSIVE PEUT ENTRAINER UNE EXPLOSION.**
- **AVERTISSEMENT – INSTALLER DANS UNE ARMOIRE VERROUILLEE VALIDANT L'ACTE VOLONTAIRE D'UTILISATION.**

## UL Certification



LISTED 67AM

## ATEX Certification

EX nA ic IIC T4 Gc



DEMKO 12 ATEX 1062548X

## EMC Compliance (CE)



This product is in accordance with the EMC directive 2014/30/EU through conformance with the following standards:

- **EN 61000-6-4 (2007)**  
**Emission standard for industrial environment**  
EN 55016-2-3, Class A (2010)  
EN 55022, Class A (2011)
- **EN 61000-6-2 (2005)**  
**Immunity for industrial environment**  
EN 61000-4-2 (2009)  
EN 61000-4-3 (2006)  
EN 61000-4-4 (2012)  
EN 61000-4-5 (2014)  
EN 61000-4-6 (2014)

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