

Anybus X-gateway CANopen - ControlNet INSTALLATION SHEET



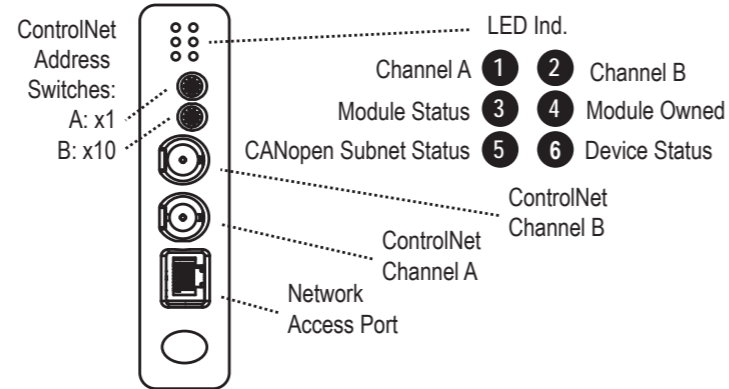
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SP1193, Rev 2.10, AB7303.

www.anybus.com

Module Front

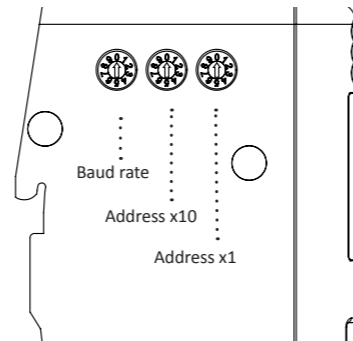


ControlNet Address Switches

Rotary switch	Meaning
A	Address x1
B	Address x10

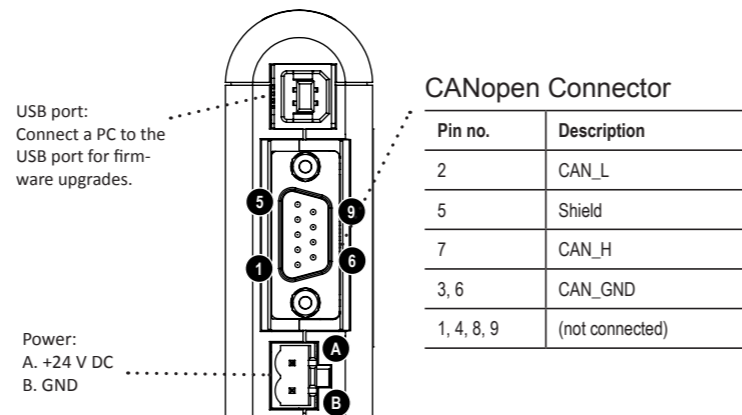
Side View

Setting	Baud Rate (kbit/s)
0	20
1	50
2	125
3	250
4	500
5	800
6	1000
7	Auto
8, 9	Not available



Allowed node address range is 1 - 127. Addresses 1 - 99 are available using the address rotary switches. To set e.g. node address 42, set the left address switch to 4 and the right address switch to 2. Cover the switches with the enclosed switch covers to ensure EMC compliance.

Bottom View



CANopen Connector

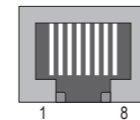
Pin no.	Description
2	CAN_L
5	Shield
7	CAN_H
3, 6	CAN_GND
1, 4, 8, 9	(not connected)

LED Indicators

LED no	Indication	Meaning
1 (Channel A) AND 2 (Channel B)	Off Red Alternating red/green Flashing red	Module not initialized Fault, module must be restarted or repaired Bus controller selftest Incorrect node configuration, e.g. duplicate Mac ID
1 (Channel A) OR 2 (Channel B)	Off Green Flashing green Flashing red Flashing red/green	Channel disabled (depends on network configuration) Normal operation of channel Temporary error or node not configured to go online Media fault or no other nodes on the network Incorrect network configuration
3 (Module Status)	Flashing green Green Flashing red Red	Waiting for initialization Initialized Minor fault, recoverable Major fault, unrecoverable
4 (Module Owned)	Off Green	A connection has been opened towards the module No connection has been opened
5 (CANopen Subnet Status ¹)	Off Flickering green/red Blinking green Single flash, green Green Blinking red Single flash, red Double flash, red Triple flash, red Quadruple flash, red Red	Power off The LSS services are in progress Pre-operational state Stopped state Operational state Configuration error Warning limit reached Error control event Sync error Data communication timeout Bus off
6 (Device Status)	Off Single flash, green Green Single flash, red Double flash, red Triple flash, red Quadruple flash, red Red	Power off Bootup Running Initialization error Timeout Hardware failure General error Fatal error

1. This LED shows the status of the CANopen subnet that is controlled by the X-Gateway CANopen.

Network Access Port



Pin no	Signal	Description
1	GND	Signal ground
3	Tx_H	Transmit Data, positive
4	Tx_L	Transmit Data, negative
5	Rx_L	Receive Data, negative
6	Rx_H	Receive Data, positive
8	Shield	Connected to PE
2, 7	-	(not connected)

Accessories Checklist

The following items are required for installation:

CANopen:

- CANopen configuration tool (available at www.anybus.com)
- CANopen adapter for configuration tool (not included)
- CANopen cable (not included)
- EDS file, available at www.anybus.com

ControlNet Interface:

- LAN cable (not included)
- ControlNet cables (not included)
- ControlNet configuration tool (not included)
- EDS file, available at www.anybus.com

Installation and Startup Summary

- Select baud rate and an unused node address for the interface. (Cover the switches with the enclosed switch covers.)
- Connect the gateway to the CANopen network.
- Install the EDS file in the CANopen configuration tool.
- Power up and (if required) configure the module.
- Restart the module after the CANopen interface has been configured.
- Connect the gateway to the ControlNet network.
- Select an unused MacID for the adapter interface.
- Install the EDS in the ControlNet configuration tool.
- Power up and (if required) configure the module.

Please note that the module will start up as a CANopen slave. The module can be reconfigured as a CANopen master during configuration.

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.

CANopen Support

Technical support regarding the CANopen fieldbus system should be addressed to CAN in Automation (CiA).
Online: www.can-cia.org

ControlNet Support

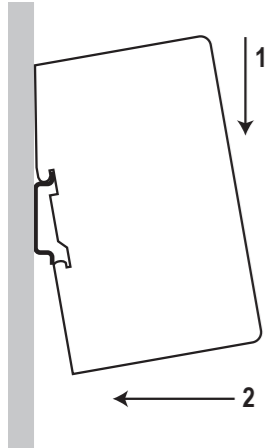
Technical questions regarding the ControlNet fieldbus system should be addressed to the ODVA.
Online: www.odva.com

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

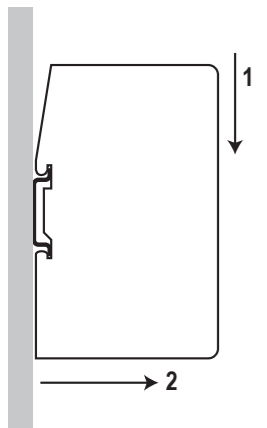
Further information and documents about this product can be found at the product pages on www.anybus.com.

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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.

Install in an enclosure considered representative of the intended use. 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.

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 and category 3, zone 2 according to EN 60079-0, EN 60079-11, and EN 60079-15.

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

ODVA Compliance



ControlNet CONFORMANCE TESTED™ is a certification mark of ODVA.



DeviceNet CONFORMANCE TESTED™ is a certification mark of ODVA.



EtherNet/IP CONFORMANCE TESTED™ is a certification mark of ODVA.

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. 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.**

UL Certification



LISTED 67AM

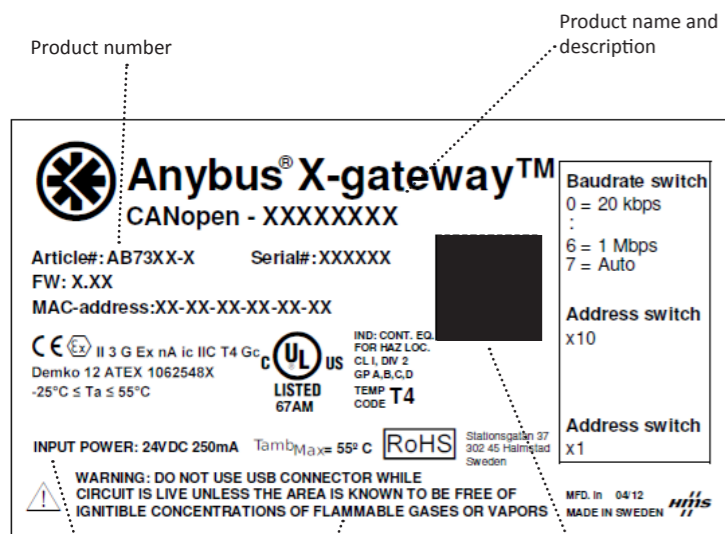
Atex Certification

EX nA ic IIC T4 Gc



DEMKO 12 ATEX 1062548X

Label Markings



Surrounding air temperature and electrical ratings

Warnings

Product information bar code

EMC Compliance (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)

HMS Industrial Networks AB
Stationsgatan 37
302 45 Halmstad
Sweden



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Warnings

- **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 NE PEUT ÊTRE UTILISÉ MÊME POUR UN USAGE OCCASIONNEL EN ZONE EXPLOSIVE, BRANCHER ET DÉBRANCHER IMPÉRATIVEMENT HORS ZONE, LE BRANCHEMENT ET LE DÉBRANCHEMENT EN ZONE EST SUSCEPTIBLE DE PROVOQUER UNE EXPLOSION.**
- **ATTENTION – L'INSTALLATION DOIT ÊTRE CONFORME AUX EXIGENCES FIXÉES PAR LES DIRECTIVES ATEX, L'ÉQUIPEMENT DOIT IMPÉRATIVEMENT ÊTRE INSTALLÉ DANS UN COFFRET IP54 ET DONT L'ALIMENTATION NE DOIT PAS DÉPASSER 140% (33,6 V DC) DE LA TENSION NOMINALE.**