Anybus®
BY HMS NETWORKS

Anybus Communicator - PROFINET

Order Code: ABC3013
Serial Master – PROFINET IO-Device

Integrate your serial RS-232/485 based industrial devices and equipment to PROFINET control systems without any changes to the device. Just connect, configure and you're done.

The Anybus Communicator can transfer large amounts of data, is fast to configure thanks to its' drag and drop web interface and is built on trusted Anybus technology.

CONVERT ALMOST ANY TYPE OF SERIAL PROTOCOL
The Communicator can convert both standard serial protocols such as Modbus RTU and proprietary serial request/response or produce/consume based protocols.

TYPICAL SERIAL APPLICATIONS
Typical serial applications include variable frequency drives, sensors, actuators, human machine interfaces, barcode readers, RFID readers and industrial scales among others.

FEATURES & BENEFITS
- Transfer up to 1 024 bytes of data in both directions
- Convert standard and proprietary RS-232/485 protocols
- Web-based drag and drop configuration interface
- -25 to +70 °C industrial temperature range
- Powered by award winning NP40 network processor
- Security chip, security switch and secure boot

Transfer up to 1 024 bytes of data
Demand for more data is constantly growing and the Communicator has been equipped to handle the challenge. It can transfer 1 024 bytes from the PLC to the Gateway and 1 024 bytes from the gateway to the PLC, 2 048 bytes in tota. Support for up to 150 Modbus commands means even complex configurations with multiple nodes can be handled with ease.

Drag and drop web interface
To make sure you spend as little time as possible to configure the Communicator, we have built a graphical and responsive web-based user interface. No software need to be install, just open your favorite web browser and get started.

Industrial temperature range
An industrial operating temperature range of -25 to +70 °C ensure the Communicator can excel under harsh conditions.

Powered by proven NP40 technology
The Communicator is built on the award-winning and proven Anybus NP40 network processor. With hundreds of thousands NP40:s used in Embedded applications across the world, it is the industry benchmark for reliable industrial communication.

Security switch
Even with sophisticated security measures, human error is still the main cause of security breaches. To simplify security, we added a physical security switch on the Communicator. It locks your configuration and prevent any access to the web-based configuration interface. Just flip it when your configuration is done and watch the padlock LED on the product light up.

Security chip and secure boot
To meet current and future security challenges, the Communicator is equipped with the latest Anybus security chip. Secure boot ensures the firmware has not been tampered with.

Ethernet configuration port
With a dedicated Ethernet configuration port you don't need any special configuration cable. In addition, it is easy to connect to the gateway to monitor network traffic.

Optimized for DIN-rail mounting
The slim form factor, front facing network connectors, screw in serial cable connector and the neat cable tie ensure it is fast and simple to install and connect the Communicator.

Diagnostics
When open the Communicator web interface you immediately see the status of the PROFINET connection and serial connection. You can even see the status of individual serial nodes. It's also equipped with a serial log and an event log for further analysis.

Support
Sometimes you run into a problem where you need help. That's why we have included a support page in the user interface with contact information. There is even a button to generate a support package to simplify troubleshooting.

SERIAL FEATURES

- Selectable RS-232/485 interface
- 3 ms serial update rate (selectable)
- Visual I/O data map to map serial data to industrial network
- Drag and drop frame builder for custom protocols, no programming required
- Trigger serial transactions from control system with triggers
- Transfer data between serial nodes with general data area
- Monitor and control serial nodes from control system with live list and data exchange control

PROFINET FEATURES

- PROFINET IO-Device (slave)
- Transfer up to 1 024 bytes to and from PROFINET
- 1 ms minimum cycle time
- Conformance class B, Real Time (RT)
- High robustness against network load, Netload Class III
- Dual RJ45 Ethernet ports with 10/100 Mbit full duplex
- Daisy chaining with integrated switch

TECHNICAL SPECIFICATIONS

GENERAL

Dimensions (L x W x H) with serial and power connector	98 x 27 x 144 mm 3.85 x 1.06 x 5,67 in
Weight	150 grams, 0.33 lb
Buttons and switches	Reset button and security switch
LEDs	Gateway, PROFINET and Serial status
IP rating	IP20, NEMA rating 1
Housing material	PC ABS, UL 94 VO
Mounting	DIN rail (35 * 7,5/15), EN50022

ENVIRONMENT

Operating temperature	-25 to 70° C, -13 to 158° F
Storage temperature	-40 to 85° C, -40 to 185° F
Relative humidity	0-95% non condensing
Installation altitude	Up to 2 000 m

POWER

Input voltage	12 - 30 VDC
Current consumption	Typical: 160 mA @ 24V Max: 400 mA @ 12V
Power connector	3-pole Phoenix plug
Protection	Reverse voltage protection and short circuit protection

SERIAL RS232/485 PORT

Ports	1 x RS232/RS485
Baud rate	1200 bps to 128 kbps
Max stations	31
Isolation	Galvanic isolation
Connector	7-pole Phoenix connector
Max nodes	31

MODBUS RTU

Modes	Master
Functions supported	1, 2, 3, 4, 5, 6, 15, 16, 22, 23
Max number of commands	150
Input data size	1 024 bytes
Output data size.	1 024 bytes

ETHERNET PORTS

Ports	2 x Ethernet
Isolation	Galvanic isolation
Bitrate	10/100 Mbit full duplex
Connector	RJ45
Switch.	Dual port cut-through switch

PROFINET

Mode	PROFINET IO-Device (slave)
Class	A, B
Communication channels	Real Time Channel (RT)
Input data size	1 024 bytes
Output data size	1 024 bytes
Minimum cycle time	1 ms
Max number of connections	1 IO Controller Application Relationship + 2 Device Access Application Relationships
Netload class	Class III
I&M records	Manufacturer data (I&M0), Tag information (I&M1), Date/Time (I&M2), Description (I&M3)
SNMP	Available
Certification	Pending

CERTIFICATIONS AND STANDARDS

UL	cULus file number E214107
CE	2014/30/EU
KC	R-R-ABJ-Communicator
EMC	EN 61000-6-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-6-4 EN 55032
Environment	IEC 60068-2-1 Ab IEC 60068-2-2 Bb IEC 60068-2-1 Ab IEC 60068-2-2 Bb IEC 60068-2-14 Nb

	IEC 60068-2-30 Db
	IEC 60068-2-78 Cab
	IEC 60068-2-78 Cab
Vibration and shock	IEC 60068-2-27
	IEC 60068-2-6
Waste certification	WEE

CONFIGURATION

GSDML file	Available
Configuration software	Web based configuration
Configuration ports	Dedicated 10/100 Mbit RJ45 Ethernet configuration port and Ethernet ports

SECURITY

Secure boot	Ensures software authenticity
Security switch	Physical switch that enable/disable access to the web based configuration interface

PRODUCT PACKAGING

Content	Gateway, power connector, serial connector, start-up guide, compliance information sheet
Box material	Cardboard

MEAN TIME BETWEEN FAILURE

MTBF	> 1500000 h, Telcordia Method I Case 3 at 30° C

Ordering information

Order Code	ABC3013
Included components	Anybus Communicator – PROFINET

3 year guarantee. For purchasing instructions and terms and conditions, see: How to buy