

1. 5ACPCI.XDNM-00

1.1 General information

The 5ACPCI.XDNM-00 module is a PCI half-size module.

The 5ACPCI.XDNM-00 is equipped with one DeviceNet Master interface and can therefore be used as a master in a DeviceNet network. Data is exchanged via the dual port memory.

1.2 Order data

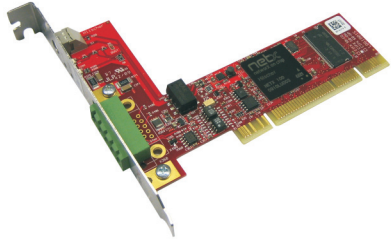
Model number	Short description	Figure
5ACPCI.XDNM-00	PCI DeviceNet master	

Table 1: Order data - 5ACPCI.XDNM-00

1.3 Technical data

Name	5ACPCI.XDNM-00
General information	
B&R ID code	\$B1D3
Configuration software	Automation Studio (version 3.0.81 and higher) / SYCONnet
Controller	
Processor	netX 100
Dual-port memory	64 KB
Interfaces	
Interface Fieldbus Type Design Baud rate Slaves Cyclic data Acyclic communication I/O connections Functions	DeviceNet master Potential-free ISO-11898 interface in accordance with DeviceNet specification 5-pin plug Max. 500 kBaud Max. 63 Max. 7168, 255 bytes/slave Get/Set_Attribute max. 240 bytes/req. Poll, Change-of-State, Cyclic, Bit-Strobe UCMM supported
Electrical characteristics	
Power supply Rated voltage Rated current	+3.3 V $\pm 5\%$ 650 mA
Mechanical characteristics	
Slot	Standard PCI half-size module, ISA Plug & Play
Installation in B&R Automation PC B&R Panel PC Desktop PC	Yes Yes Yes
Outer dimensions Width Height Depth	120 mm 73.2 mm 18.5 mm
Environmental characteristics	
Ambient temperature Operation	0 to 55°C

Table 2: Technical data - 5ACPCI.XDNM-00

1.4 Status LEDs


Figure	LED	Color	Status	Description
	SYS	Green	On	Operating system is running
		Yellow	Blinks cyclically at 1 Hz	Device indicating a boot error
		Yellow	Static	Boot loader waiting for boot procedure
		-	Off	Supply voltage for the device missing or hardware defect
	MNS	Green	On	Device is online and has established one or more connections
		Green	Blinking	Device is online and has not established a connection
		Red	On	Critical connection error; Device detected a network error (double MAC-ID or bus off)
		Red	Blinking	Connection monitoring time has expired
		Red/green	Blinking	Communication failed
		-	Off	After device start-up and while checking for double MAC-ID

Table 3: 5ACPCI.XDNM-00 - Status LEDs

1.5 Slot number switch

The slot number is used to uniquely identify fieldbus cards, particularly if multiple cards are installed in the same PC.

1.5.1 Function

Sets the slot number for the fieldbus card

The value range 1 ... 9 corresponds with the slot numbers 1 ... 9

The value 0 means

- no slot number (i.e. slot number not used)
- for reasons of backward compatibility
- indicates devices that do not have a rotary switch

(i.e. devices are identified by their device number and serial number).

1.5.2 Use

- used to uniquely identify fieldbus cards, particularly if multiples cards are installed in the same PC.
- When exchanging a card (replacement): If the replacement card is installed in the PC using the same slot number as the previous card, then the same Firmware and configuration will be loaded as well
- The application program can request and use the slot number from the cifX device driver

1.6 Operating and connection elements

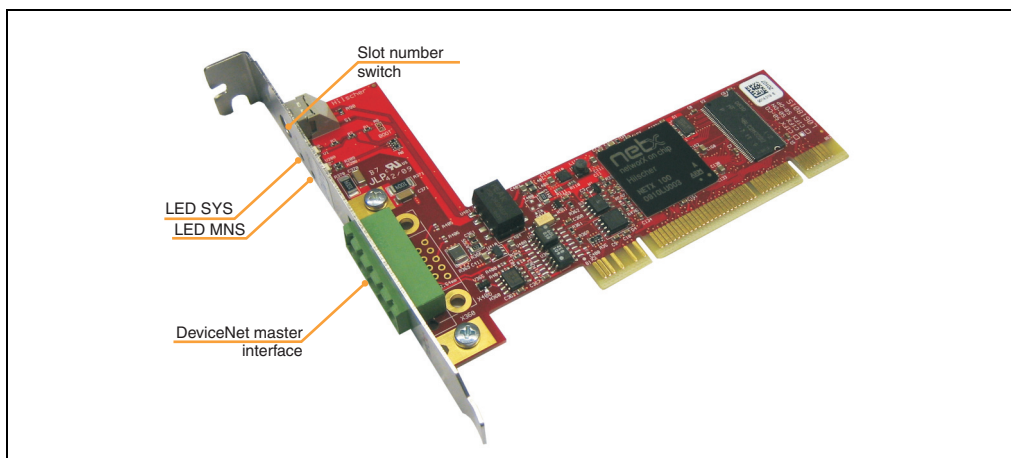


Figure 1: 5ACPCI.XDNM-00 - Operating and connection elements

1.7 DeviceNet master interface

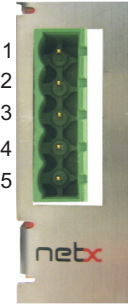
Interface	Description	Pin assignments			
Application interface DeviceNet master  5-pin multipoint connector	The electrically isolated DeviceNet master interface is a 5-pin multipoint connector.	Pin	Signal	Color	ISO-11898 interface in accordance with DeviceNet specification
		1	V-	Black	Reference potential of DeviceNet supply voltage
		2	CAN_L	Blue	CAN low signal
		3	Drain		Shield
		4	CAN_H	White	CAN high signal
		5	V+	Red	+24 V DeviceNet supply voltage

Table 4: 5ACPCI.XDNM-00 - DeviceNet master interface

Keep in mind that there are 120 Ohm terminating resistors on both cable ends.

Additional devices can be connected to the bus cable using branch lines. These can be a maximum of 6 meters long. The total length of the bus cable and all branch lines cannot exceed the max. length in the following table. There are two different types of cable. If these are used together, then the max. length is calculated as follows:

Max. length [m]	Baud rate [kBit/s]
$L_{thick} + 5 \times L_{thin} \leq 500 \text{ m}$	at 125 kBaud
$L_{thick} + 2.5 \times L_{thin} \leq 250 \text{ m}$	at 250 kBaud
$L_{thick} + L_{thin} \leq 100 \text{ m}$	at 500 kBaud

Table 5: DeviceNet segment length depending on the baud rate

1.8 B&R Automation Runtime

B&R Automation Runtime must be installed on the PC. The following runtime systems can be installed:

- ARwin
- ARemb

1.9 Firmware update

The 5ACPCI.XDNM-00 module is not delivered with preinstalled firmware. The firmware is part of the B&R Automation Runtime operating system for the PLC.

The latest 5ACPCI.XDNM-00 firmware is available automatically by updating your B&R Automation Runtime.