X20(c)IF1072

Data sheet
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Version history

B&R makes every effort to keep documents as current as possible. The most current versions are available for download on the B&R website (www.br-automation.com).

1 General information

1.1 Other applicable documents

For additional and supplementary information, see the following documents.

Other applicable documents

Document name	Title
MAX20	X20 System user's manual

1.2 Coated modules

Coated modules are X20 modules with a protective coating for the electronics component. This coating protects X20c modules from condensation and corrosive gases.
The modules' electronics are fully compatible with the corresponding X20 modules.

For simplification purposes, only images and module IDs of uncoated modules are used in this data sheet.

The coating has been certified according to the following standards:

- Condensation: BMW GS 95011-4, 2x 1 cycle
- Corrosive gas: EN 60068-2-60, method 4, exposure 21 days

1.3 Order data

Order number	Short description	Figure
	X20 interface module communication	
X20IF1072	X20 interface module, 1 CAN bus interface, max. 1 Mbit/s, electrically isolated, order 1x terminal block TB2105 separately!	
X20cIF1072	X20 interface module, coated, 1 CAN bus interface, max. 1 Mbit/s, electrically isolated, order 1x terminal block TB2105 separately!	
	Required accessories	
	Terminal blocks	
0TB2105.9010	Accessory terminal block, 5-pin, screw clamp terminal block 2.5 mm²	
0TB2105.9110	Accessory terminal block, 5-pin, push-in terminal block 2.5 mm²	

Table 1: X20IF1072, X20cIF1072 - Order data

1.4 Module description

The interface module is used for application-specific expansion of the X20 controllers. It is equipped with a CAN bus interface.

- CAN bus connection
- Integrated terminating resistor

Information:

This module does not support CAN RTR messages with extended CAN identifiers (29-bit) (memory/performance bottleneck).

2 Technical description

2.1 Technical data

Order number	X20IF1072	X20cIF1072
Short description		
Communication module	1x CAN bus	
General information		
B&R ID code	0x1F20	0xE506
Status indicators	Module status, data transfer, terminating resistor	
Diagnostics		
Module status	Yes, using LED status indicator	
Data transfer	Yes, using LED status indicator	
Terminating resistor	Yes, using LED status indicator	
Power consumption	0.79 W	
Additional power dissipation caused by actuators (resistive) [W]	-	
Certifications		
CE	Yes	
UKCA	Yes	
ATEX	Zone 2, II 3G Ex nA nC IIA T5 Gc IP20, Ta (see X20 user's manual) FTZÚ 09 ATEX 0083X	
UL	cULus E115267 Industrial control equipment	
HazLoc	cCSAus 244665 Process control equipment for hazardous locations Class I, Division 2, Groups ABCD, T5	
DNV	Temperature: **B** (0 to 55°C) Humidity: **B** (up to 100%) Vibration: **B** (4 g) EMC: **B** (bridge and open deck)	
CCS	Yes	-
LR	ENV1	
KR	Yes	
ABS	Yes	
BV	**EC33B** Temperature: 5 - 55°C Vibration: 4 g EMC: Bridge and open deck	
KC	Yes	-
Interfaces		
Interface IF1		
Signal	CAN bus [1)]	
Variant	5-pin male multipoint connector	
Max. distance	1000 m	
Transfer rate	Max. 1 Mbit/s	
Terminating resistor	Integrated in module	
Controller	SJA 1000	
Electrical properties		
Electrical isolation	PLC isolated from CAN (IF1)	
Operating conditions		
Mounting orientation		
Horizontal	Yes	
Vertical	Yes	
Installation elevation above sea level		
0 to 2000 m	No limitation	
>2000 m	Reduction of ambient temperature by 0.5°C per 100 m	
Degree of protection per EN 60529	IP20	
Ambient conditions		
Temperature		
Operation		
Horizontal mounting orientation	-25 to 60°C	
Vertical mounting orientation	-25 to 50°C	
Derating	-	
Storage	-40 to 85°C	
Transport	-40 to 85°C	

Table 2: X20IF1072, X20cIF1072 - Technical data

Order number	X20IF1072	X20cIF1072
Relative humidity		
Operation	5 to 95%, non-condensing	Up to 100%, condensing
Storage	5 to 95%, non-condensing	
Transport	5 to 95%, non-condensing	
Mechanical properties		
Note	Order 1x terminal block TB2105 separately.	
Slot	In the X20 PLC	

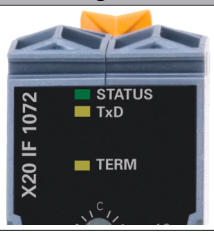
Table 2: X20IF1072, X20cIF1072 - Technical data

1) This CAN bus interface can be configured as a CANopen master in Automation Studio 3.0 and later.

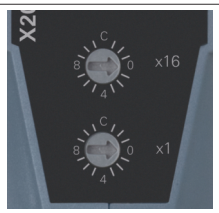
2.2 Operating and connection elements

1	IF1 - CAN bus	2	Node number switches
3	LED status indicators	4	Switch for terminating resistor on the bottom of the module

2.2.1 LED status indicators

Figure	LED	Color	Status	Description
	STATUS	Green	On	Interface module active
		Red	On	The controller is starting up.
	TxD	Yellow	On	The module is sending data via the CAN bus interface
	TERM	Yellow	On	Terminating resistor integrated in the module switched on

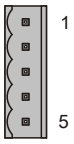
2.2.2 Node number switch



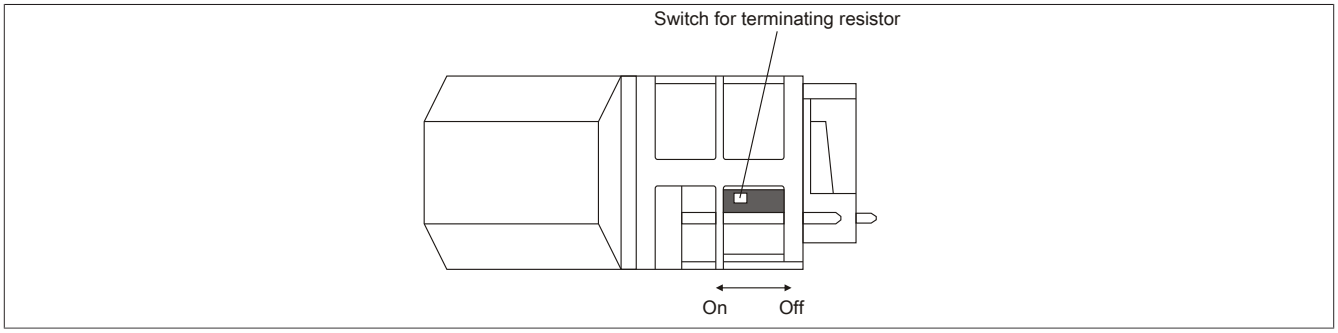
The node number for the interface is set with the two hex switches.

2.2.3 CAN bus interface

The interface is a 5-pin multipoint connector. Terminal block 0TB2105 must be ordered separately.

Interface	Pinout		
	Terminal	Function	
	1	CAN⊥	CAN ground
	2	CAN_L	CAN low
	3	SHLD	Shield
	4	CAN_H	CAN high
	5	NC	
5-pin male multipoint connector			

2.2.4 Terminating resistor



A terminating resistor is integrated in the interface module. It can be switched on or off with a switch on the bottom of the housing. A switched-on terminating resistor is indicated by LED "TERM".

3 Commissioning

3.1 Firmware

The module comes with preinstalled firmware. The firmware is part of the Automation Studio project. The module is automatically brought up to this level.

A hardware upgrade must be performed to upgrade the firmware included in Automation Studio (see Help "Project management - Workspace - Upgrades" in Automation Help).