

X20(c)IF1030

Data sheet
2.40 (February 2025)



Publishing information

B&R Industrial Automation GmbH

B&R Strasse 1

5142 Eggelsberg

Austria

Telephone: +43 7748 6586-0

Fax: +43 7748 6586-26

office@br-automation.com

Disclaimer

All information in this document is current as of its creation. The contents of this document are subject to change without notice. B&R Industrial Automation GmbH assumes unlimited liability in particular for technical or editorial errors in this document only (i) in the event of gross negligence or (ii) for culpably inflicted personal injury. Beyond that, liability is excluded to the extent permitted by law. Liability in cases in which the law stipulates mandatory unlimited liability (such as product liability) remains unaffected. Liability for indirect damage, consequential damage, business interruption, loss of profit or loss of information and data is excluded, in particular for damage that is directly or indirectly attributable to the delivery, performance and use of this material.

B&R Industrial Automation GmbH notes that the software and hardware designations and brand names of the respective companies used in this document are subject to general trademark, brand or patent protection.

Hardware and software from third-party suppliers referenced in this document is subject exclusively to the respective terms of use of these third-party providers. B&R Industrial Automation GmbH assumes no liability in this regard. Any recommendations made by B&R Industrial Automation GmbH are not contractual content, but merely non-binding information for which no liability is assumed. When using hardware and software from third-party suppliers, the relevant user documentation of these third-party suppliers must additionally be consulted and, in particular, the safety guidelines and technical specifications contained therein must be observed. The compatibility of the products from B&R Industrial Automation GmbH described in this document with hardware and software from third-party suppliers is not contractual content unless this has been separately agreed in individual cases; in this respect, warranty for such compatibility is excluded in any case, and it is the sole responsibility of the customer to verify this compatibility in advance.

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	
X20IF1030	X20 interface module, 1 RS422/485 interface, max. 115.2 kbit/s, electrically isolated	
X20cIF1030	X20 interface module, coated, 1 RS422/485 interface, max. 115.2 kbit/s, electrically isolated	
	Optional accessories	
	Infrastructure components	
OG1000.00-090	Bus connector, RS485, for PROFIBUS networks	



Table 1: X20IF1030, X20cIF1030 - Order data

1.4 Module description

The interface module is used for application-specific expansion of the X20 controllers. It is equipped with an RS485/RS422 interface.

2 Technical description

2.1 Technical data

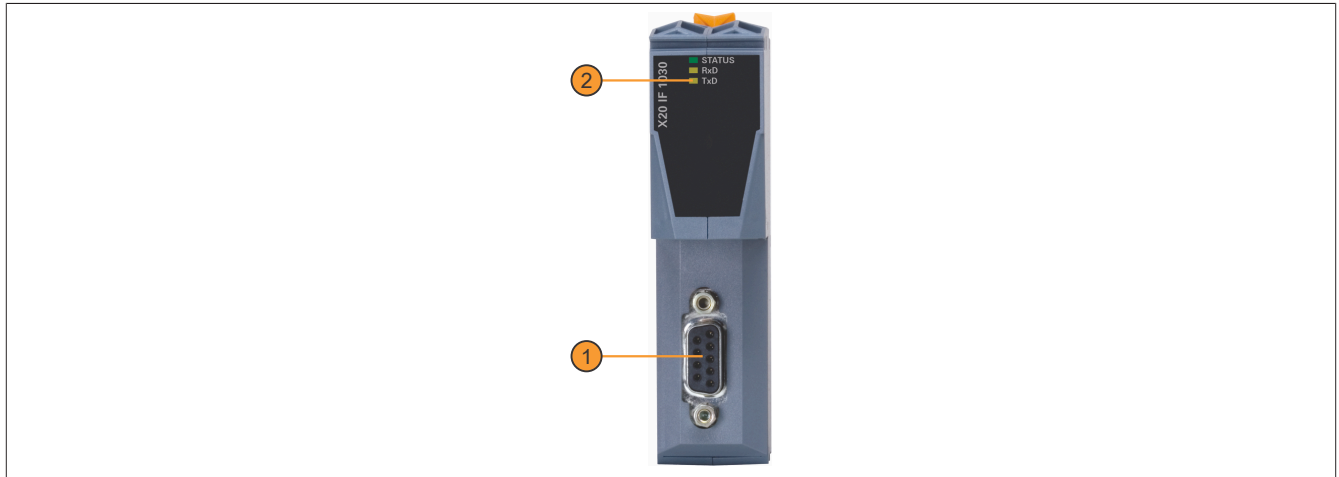
Order number	X20IF1030		X20cIF1030
Short description			
Communication module	1x RS485/RS422		
General information			
B&R ID code	0x1F28		0xE233
Status indicators	Module status, data transfer		
Diagnostics			
Module status	Yes, using LED status indicator		
Data transfer	Yes, using LED status indicator		
Power consumption	0.42 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	RS485/RS422		
Variant	9-pin female DSUB connector		
Max. distance	1200 m		
Transfer rate	Max. 115.2 kbit/s		
FIFO buffer	16 bytes in the transmit and receive directions		
Terminating resistor	External using T-connector (0G1000.00-090)		
Controller	UART type 16C550 compatible		
Electrical properties			
Electrical isolation	PLC isolated from RS485/RS422 (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: X20IF1030, X20cIF1030 - Technical data

Order number	X20IF1030	X20cIF1030
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		
Slot	In the X20 PLC	In the X20c PLC


Table 2: X20IF1030, X20cIF1030 - Technical data

2.2 Operating and connection elements

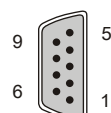


1	IF1 - RS485 / RS422	2	LED status indicators
---	---------------------	---	-----------------------

2.2.1 LED status indicators

Figure	LED	Color	Status	Description
	STATUS	Green	On	Interface module active
		Red	On	The controller is starting up.
	RxD	Yellow	On	The module is receiving data via the RS485/RS422 interface
	TxD	Yellow	On	The module is sending data via the RS485/RS422 interface

2.2.2 RS485/RS422 interface (IF1)

Interface	Pinout		
	Pin	RS485	RS422
User interface RS485/RS422  9-pin female DSUB connector	1	Reserved	Reserved
	2	Reserved	TxD ¹⁾
	3	DATA	RxD
	4	Reserved	Reserved
	5	GND	GND
	6	+5 V / 50 mA	+5 V / 50 mA
	7	Reserved	TXD ¹⁾
	8	DATA\	RXD\
	9	Reserved	Reserved

1) RS422 send data is TRISTATE-capable.

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).