# X20IF1020

Data sheet
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**Publishing information**

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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 Order data

| Order number | Short description | Figure |
|---|---|---|
| | **X20 interface module communication** |  |
| X20IF1020 | X20 interface module, 1 RS232 interface, max. 115.2 kbit/s, electrically isolated | |
| | **Optional accessories** | |
| | **Others** | |
| 0G0001.00-090 | PC - PLC/PW cable, RS232, online cable | |

Table 1: X20IF1020 - Order data

## 1.3 Module description

The interface module is used for application-specific expansion of the X20 controllers. It is equipped with an RS232 interface.

# 2 Technical description

## 2.1 Technical data

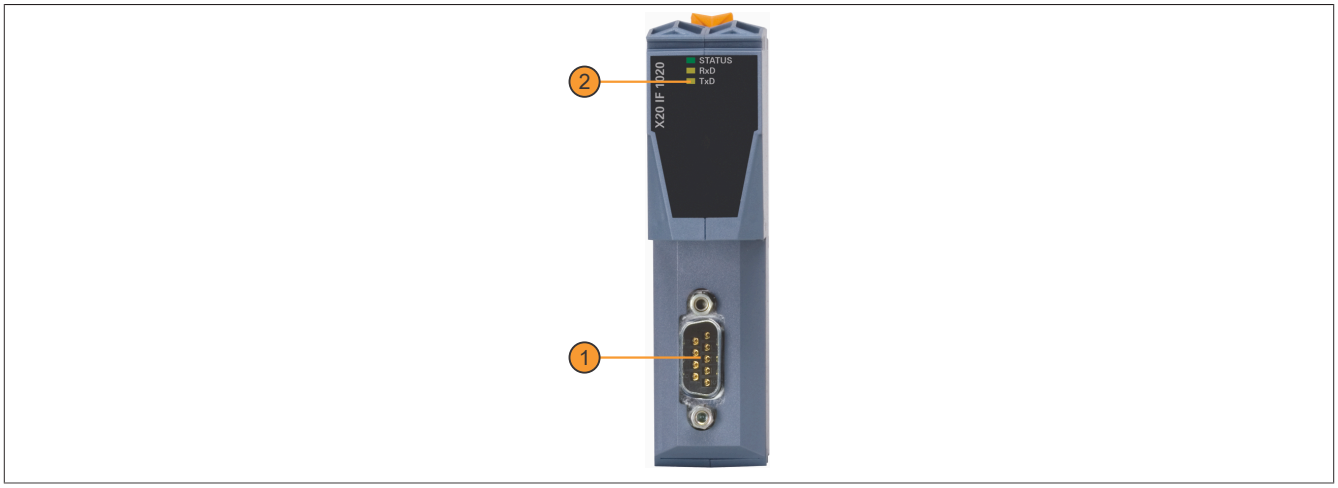
| Order number | X20IF1020 |
|---|---|
| **Short description** | |
| Communication module | 1x RS232 |
| **General information** | |
| B&R ID code | 0x1F27 |
| Status indicators | Module status, data transfer |
| Diagnostics | |
| Module status | Yes, using LED status indicator |
| Data transfer | Yes, using LED status indicator |
| Power consumption | 0.35 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<br>IP20, Ta (see X20 user's manual)<br>FTZÚ 09 ATEX 0083X |
| UL | cULus E115267<br>Industrial control equipment |
| HazLoc | cCSAus 244665<br>Process control equipment<br>for hazardous locations<br>Class I, Division 2, Groups ABCD, T5 |
| DNV | Temperature: **B** (0 to 55°C)<br>Humidity: **B** (up to 100%)<br>Vibration: **B** (4 g)<br>EMC: **B** (bridge and open deck) |
| CCS | Yes |
| LR | ENV1 |
| KR | Yes |
| ABS | Yes |
| BV | **EC33B**<br>Temperature: 5 - 55°C<br>Vibration: 4 g<br>EMC: Bridge and open deck |
| KC | Yes |
| **Interfaces** | |
| Interface IF1 | |
| Signal | RS232 |
| Variant | 9-pin male DSUB connector |
| Max. distance | 900 m |
| Transfer rate | Max. 115.2 kbit/s |
| Network-capable | No |
| FIFO buffer | 16 bytes in the transmit and receive directions |
| Handshake lines | RTS, CTS |
| Controller | UART type 16C550 compatible |
| Data formats | |
| Data bits | 5 to 8 |
| Parity | Yes / No / Even / Odd |
| Stop bits | 1 or 2 |
| **Electrical properties** | |
| Electrical isolation | PLC isolated from RS232 (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 |

Table 2: X20IF1020 - Technical data

| Order number | X20IF1020 |
|---|---|
| **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 |
| Relative humidity | |
| Operation | 5 to 95%, non-condensing |
| Storage | 5 to 95%, non-condensing |
| Transport | 5 to 95%, non-condensing |
| **Mechanical properties** | |
| Slot | In the X20 PLC |

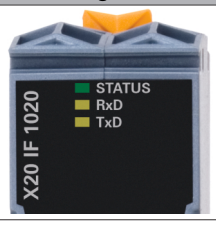
Table 2: X20IF1020 - Technical data

## 2.2 Operating and connection elements

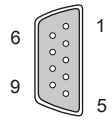



| | | | |
|---|---|---|---|
| 1 | IF1 - RS232 | 2 | LED status indicators |

### 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 receives data via the RS232 interface |
| | TxD | Yellow | On | The module sends data via the RS232 interface |

### 2.2.2 RS232 interface (IF1)

| Interface | Pinout | | |
|---|---|---|---|
| | Pin | RS232 | |
|   9-pin male DSUB connector | 1 | NC | |
| | 2 | RxD | Receive signal |
| | 3 | TxD | Transmit signal |
| | 4 | NC | |
| | 5 | GND | Ground |
| | 6 | NC | |
| | 7 | RTS | Request To Send |
| | 8 | CTS | Clear To Send |
| | 9 | NC | |

# 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).