B&R X20BB22

01 Function and selected configuration

Product function

B&R X20BB22 provides the mechanical and electrical base of a compact X20 controller assembly, including its supply routing and serial-interface connection.

Selected configuration

The base accommodates an X20 Compact CPU and its compact CPU power supply module. Left and right X20 locking plates are included. The base provides connection infrastructure; processor and supply functions belong to the associated modules.

Functional path

Compact supply	X20BB22 base	Compact CPU	RS232 equipment

Base function	X20 Compact CPU and compact CPU supply module
Serial connection	1 x RS232
Nominal I/O supply	24 V DC

Nominal I/O supply voltage is 24 V DC, with a permissible contact load of 10 A. Bus power consumption is 0.32 W. The bus is not electrically isolated from the RS232 connection, so serial-device reference potentials require consideration.

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02 Technical operating envelope

Base function	X20 Compact CPU and compact CPU supply module
Serial connection	1 x RS232
Nominal I/O supply	24 V DC
Permissible contact load	10 A
Bus power consumption	0.32 W
RS232 isolation	Bus not isolated from RS232

Protection degree	IP20
Horizontal operating temperature	-25 to 60°C
Vertical operating temperature	-25 to 50°C
Altitude derating above 2000 m	0.5°C per 100 m
Storage temperature	-40 to 85°C
Operating humidity	5 to 95%, non-condensing

The technical values apply to this model in the specified installation and configuration.

Signal interpretation

Nominal I/O supply voltage is 24 V DC, with a permissible contact load of 10 A. Bus power consumption is 0.32 W. The bus is not electrically isolated from the RS232 connection, so serial-device reference potentials require consideration.

Interface boundary

Horizontal installation permits -25 to 60°C operation; vertical installation permits -25 to 50°C. Above 2000 m, reduce the ambient temperature limit by 0.5°C per additional 100 m. The IP20 base requires a suitable protected installation environment.

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03 System integration and applications

Compact controller assembly

Provide the base for an X20 Compact CPU and its matching compact supply module.

Serial equipment integration

Bring the integrated RS232 connection into the controller assembly with appropriate potential-reference checks.

Backplane replacement

Restore a damaged base while preserving the installed CPU, supply module and locking-plate arrangement.

Elevated-site installation

Apply orientation and altitude temperature limits to a protected X20 controller installation.

System and supply context

The compact cpu base is applied in the Compact supply / X20BB22 base / Compact CPU / RS232 equipment arrangement. Select associated equipment for the actual channel or installation.

Application boundary

The technical values apply to this model in the specified installation and configuration. The examples below address the stated product function.

Which serial connection is provided by X20BB22?

The base provides the connection for the compact CPU's integrated RS232 interface.

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04 Engineering selection decisions

Does X20BB22 contain the controller CPU itself?

No. It is the base for an X20 Compact CPU and compact CPU power supply module; the processor and supply modules are separate functional components.

Is the RS232 connection on X20BB22 isolated from the bus?

No. The bus is not isolated from RS232, so connected-device reference potentials must be considered.

What altitude correction applies to X20BB22 above 2000 m?

Reduce the permissible ambient temperature by 0.5°C for each additional 100 m above 2000 m.

Can X20BB22 be exposed to condensing humidity?

No. The specified operating humidity is 5 to 95%, non-condensing, and the protection degree is IP20.

Check the contact-current budget	Compare the connected supply loading with the 10 A permissible contact load.
Review serial reference potentials	The bus is not isolated from RS232.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and factory-support phase of X20BB22 is unconfirmed.

Replacement assessment

Preserve base function X20 Compact CPU and compact CPU supply module, serial connection 1 x RS232, nominal i/o supply 24 V DC. Check base function and serial connection against the installed configuration.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; use it together with the applicable manufacturer instructions.

Technical basis

B&R X20BB22 Data sheet V2.22.

Related product navigation

- B&R 8V1022.001-2
- B&R 8V1090.001-2

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries