B&R X20HB8884

01 Function and selected configuration

Product function

B&R X20HB8884 maintains a POWERLINK connection through redundant network paths and selects the available line with the better transmission quality.

Selected configuration

The two shielded RJ45 interfaces operate at 100 Mbit/s over 100BASE-TX in half-duplex mode. Autonegotiation and Auto-MDI/MDIX support the physical connection, while the redundant topology remains a POWERLINK system design task.

Functional path

Redundant line 1	Link selector	Expansion interface	POWERLINK device

Network paths	Two shielded RJ45 interfaces
Transmission	100 Mbit/s, half-duplex
Segment limit	100 m between stations

The selector requires an X20PS8002 supply module, a terminal block and a suitable bus base. The expansion arrangement uses one X20HB2880 or two X20HB2885 modules; these parts must be considered when checking an existing installation.

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02 Technical operating envelope

Device type	POWERLINK compact link selector
Network interfaces	2 shielded RJ45 ports
Physical layer	100BASE-TX
Transfer rate	100 Mbit/s
Duplex mode	Half-duplex
Autonegotiation	Supported
Auto-MDI/MDIX	Supported

Segment length	100 m maximum between stations
Hub propagation delay	0.96 to 1 us
Power consumption	2 W
Electrical isolation	Power supply isolated from POWERLINK IF1 and IF2
Protection rating	IP20
Operating temperature	-25 to 60 C horizontal; -25 to 50 C vertical
Required power module	X20PS8002

The 100 Mbit/s rating and half-duplex operation describe the physical interfaces. Redundancy acceptance must include the surrounding POWERLINK equipment.

Signal interpretation

The nominal hub propagation delay is 0.96–1 µs. Account for the complete redundant topology when assessing network timing.

Interface boundary

The power supply is isolated from the two POWERLINK interfaces. Plain X20HB8884 operation requires noncondensing humidity.

What cable length limit applies to B&R X20HB8884?

Each 100BASE-TX segment between two stations is limited to 100 m.

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03 System integration and applications

Redundant machine network

Two cable paths support communication when one path is unavailable.

Link diagnostics

S/E and L/A indicators separate network activity from redundant-path failure.

Cabinet network transition

Shielded RJ45 connections bring redundant paths to the X20 assembly.

Planned path testing

Independent interruption of each route verifies the installed redundancy.

System and supply context

The selector connects a POWERLINK device to redundant network cabling through the required X20 expansion hardware.

Application boundary

Use the selector where alternate physical paths are part of the approved network design; it is not a general full-duplex Ethernet switch.

How many network ports are on B&R X20HB8884?

The module provides two shielded RJ45 interfaces for the redundant 100BASE-TX paths.

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04 Engineering selection decisions

What network function does B&R X20HB8884 provide?

It is a compact link selector that connects a POWERLINK device to a redundant POWERLINK cable system.

Does B&R X20HB8884 use full-duplex Ethernet?

No. It uses half-duplex operation, with autonegotiation and Auto-MDI/MDIX supported.

How does B&R X20HB8884 choose a redundant path?

The integrated link-selector function transfers data over the highest-quality available network line.

How should B&R X20HB8884 redundancy be accepted?

Prove normal traffic first, then interrupt each path independently and verify communication continuity, recovery and the expected status indications.

Status switches	Do not treat the number switches as an operating address setting.
Environment	Apply the uncoated module humidity limits.

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05 Configuration boundary and references

Lifecycle and support

The current production and factory-support status of X20HB8884 is unconfirmed.

Replacement assessment

Preserve the X20 base, power module, expansion arrangement and both network routes.

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; it does not replace manufacturer instructions.

Technical basis

B&R X20(c)HB8884 Data sheet V2.31.

Related product navigation

- B&R 3CP340.60-2
- B&R X20CP1486

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

Product enquiries