B&R X20SL8010

01 Controller functional architecture

Configuration management

The controller supervises the safety-related configuration of the application. Node identities and their approved relationships form part of that configuration.

Parameter management

Replacement safety modules receive the retained parameters for the application. Correct parameter assignment is distinct from the normal execution of the safety program.

Safety-program execution	Central SafeLOGIC task
Node capacity	20 maximum
SafeMOTION	Supported

Technical basis: B&R X20SL8010 product technical data. This Apter Power technical reference organizes applicable manufacturer data.

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02 Engineering software compatibility

Version combination

Automation Studio, Automation Runtime, SafeDESIGNER and Safety Release together form the engineering environment. Verify the supported combination before changing a working project.

Communication scope

Inter-controller communication is available with SL8001 or SL8011. Machine options are not supported by this controller.

Automation Studio	3.0.80 or later
Automation Runtime	3.00 or later
SafeDESIGNER	2.71 through 3.0
Safety Release	1.3 through 1.6

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03 Network and supply interfaces

POWERLINK transport

Two shielded RJ45 ports form an internal two-port hub. The 100 m limit applies between two stations, not as an unlimited aggregate cable allowance.

Supply protection

The 24 V DC input includes reverse-polarity protection and an integrated non-replaceable fuse.

Transfer rate	100 Mbit/s
POWERLINK cycle	20 ms maximum
Segment length	100 m maximum
Supply tolerance	-15% / +20%
Consumption	5.1 W

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04 Safety characteristic boundaries

Component capability

SIL 3 and Category 4 / PL e describe controller capability within an appropriately designed application. They do not establish the safety integrity of unverified field devices or machine logic.

Time-dependent measures

Mission time and proof-test interval are distinct from the shortest task-class cycle. Include them in the applicable lifecycle and maintenance planning.

Maximum mission time	20 years
Proof-test interval	20 years
Shortest task class	1 ms
Diagnostic coverage	Greater than 94%

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05 Application memory and installation envelope

Separate application memory

SafeKEY is ordered separately. The right end cover plate, safety-keyed terminal block and SafeKEY cover are included in the controller delivery arrangement.

Protected cabinet use

Fanless cooling, IP20 protection and non-condensing humidity requirements define a protected cabinet installation. Apply the ambient limit for the actual mounting orientation.

Horizontal operation	0 to 55°C
Vertical operation	0 to 45°C

Related product navigation

B&R 3IF771.9

B&R X20AI4222

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