B&R 3IF771.9

01 aPCI CAN Interface / system role

Product function and operating context

B&R 3IF771.9 adds a CAN communication path to a compatible aPCI controller while separating the CAN interface electrically from the PLC.

The interface uses an SJA1000 CAN controller with transmit and receive buffering. Two hexadecimal switches set the node address, and orange TXD/RXD indicators show transmit and receive activity.

Functional path

aPCI controller	CAN interface	Terminated CAN trunk	Addressed participant

Configuration	One isolated CAN interface
Interface	SJA1000 controller with transmit/receive buffering
Operating feature	500 kbit/s at up to 60 m

Network speed and cable reach must be selected together: 500 kbit/s is specified for up to 60 m, 250 kbit/s for 200 m, and 50 kbit/s for 1000 m. These limits do not eliminate the need for correct topology and termination.

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02 Technical operating envelope

CAN interfaces	1
CAN controller	SJA1000
Host interface	aPCI
Maximum CAN bit rate	500 kbit/s
Cable length at 500 kbit/s	60 m maximum
Cable length at 250 kbit/s	200 m maximum

Cable length at 50 kbit/s	1000 m maximum
CAN termination	120 Ω
Power consumption	1.3 W total
Operating temperature	0–60 °C
Protection	IP20
Pin allocation	1 CAN_H; 2 CAN ground; 3 CAN_L; 4 shield

CAN bit rates and line lengths apply to this interface. Protocol services depend on the Automation Runtime application.

Operating interpretation

CAN_H, CAN_L, ground and shield have distinct terminal positions.

Configuration boundary

Match host compatibility, address, bit rate and termination before restoring communication.

How is the node address selected on 3IF771.9?

Two hexadecimal switches provide the node-address setting. Retain the address required by the controller project and avoid duplicating another participant.

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03 System integration and applications

Controller CAN expansion

A compatible aPCI host gains one CAN interface without using a separate external gateway.

Machine network exchange

CAN participants transfer application data at a bit rate selected for the installed cable reach.

Longer CAN trunks

A reduced bit rate supports longer cable routes within the specified 250 or 50 kbit/s limits.

Network service diagnostics

Address switches and activity indicators assist identification and fault tracing during controlled maintenance.

System and supply context

B&R 3IF771.9 operates within the following defined system context. Match the aPCI host, node switches and four-pin CAN connection.

Application boundary

CAN bit rates and line lengths apply to this interface. Protocol services depend on the Automation Runtime application.

Where is the terminating resistor fitted on 3IF771.9?

The 120-ohm resistor connects between CAN_H and CAN_L, pins 1 and 3, when this interface occupies a termination position in the CAN network.

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04 Engineering selection decisions

What is connected to pin 2 of 3IF771.9?

Pin 2 is the CAN ground reference. Pin 4 is the shield connection; the two positions have different functions and should follow the approved wiring arrangement.

Can 3IF771.9 operate a 200 m cable at 500 kbit/s?

The specified 500 kbit/s length limit is 60 m. A 200 m line corresponds to the 250 kbit/s rating and still requires a suitable network layout.

Which isolation boundary is provided by 3IF771.9?

The CAN interface is electrically isolated from the PLC. This does not remove the need to wire CAN ground and the shield correctly.

How is interface firmware loaded for 3IF771.9 in an SG4 system?

It is part of Automation Runtime and is loaded automatically during restart. SG3 is not supported by this interface.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and factory-support phase of 3IF771.9 is unconfirmed. Apter Power availability is assessed separately from manufacturer lifecycle status.

Replacement assessment

Match host compatibility, address, bit rate and termination before restoring communication.

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 3IF771.9 Data Sheet, version 1.0.

Related product navigation

- B&R 5AC901.LSD3-00
- B&R 8BAC0133.000-1

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

Product enquiries