B&R 8BAC0133.000-1

01 Encoder Emulation Module / system role

Product function and operating context

B&R 8BAC0133.000-1 supplies an encoder-style pulse interface to a receiving device while obtaining its power internally from the ACOPOSmulti host.

The three outputs carry the A, B and reference signals with their inverted counterparts. They are isolated from the ACOPOSmulti module but not from one another, and an external ground reference must accompany the signal cable.

Functional path

ACOPOSmulti position source	Emulation software	RS422 A/B/reference pairs	Compatible receiver

Output format	A/B/reference RS422 emulation
Frequency	Up to 1 MHz
Connection	Coded D-sub with receiver termination

The coded nine-pin female D-sub connection assigns A to pin 2, inverted A to 3, B to 4, inverted B to 9, reference to 8 and inverted reference to 7. Pin 6 carries the shared signal-ground reference.

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02 Technical operating envelope

Host slot	ACOPOSmulti slot 2
Signal outputs	3 differential RS422 channels: A, B, reference
Maximum frequency	1 MHz
Maximum cable length	75 m
Receiver termination	120 Ω
Cable impedance	120 Ω, shielded

Switching delay	≤50 ns, both transitions
Power consumption	2 W maximum
Connector	Coded 9-pin female D-sub
Startup output state	High impedance until software initialization
Output-to-host isolation	Yes
Output-to-output isolation	No

8BAC0133.000-1 is a slot-2 ABR encoder-emulation output option. Output isolation, receiver termination and the complete drive operating limits must be respected.

Operating interpretation

The 250 mA peak short-circuit figure is a protection characteristic, not a normal load-current rating. Receiver compatibility must follow the RS422 interface requirements.

Configuration boundary

Preserve slot 2, differential pair assignments, receiver termination, shielding and signal reference when replacing the emulation option.

Where should the 120-ohm termination for 8BAC0133.000-1 be installed?

At the remote receiving station, using the specified 120-ohm characteristic-impedance shielded cable.

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03 System integration and applications

Encoder-style pulse output

Provide A/B/reference emulation to a compatible differential receiver.

Drive-position distribution

Transfer the configured emulation signal from an ACOPOSmulti host to external equipment.

Isolated host interface

Use the output-to-host isolation while establishing the required remote signal reference.

Pulse-channel verification

Check pair polarity, reference pulse and receiver termination during commissioning.

System and supply context

B&R 8BAC0133.000-1 operates within the following defined system context. Verify 8BAC0133.000-1, slot 2 and the receiving pulse-interface arrangement.

Application boundary

The applications below describe its technical role. Select associated hardware and configuration for the actual installation.

Which ACOPOSmulti slot accepts 8BAC0133.000-1?

The option is specified for slot 2. Confirm the compatible host and slot configuration before installation.

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04 Engineering selection decisions

Does 8BAC0133.000-1 read an external encoder or emulate one?

It produces A/B/reference encoder-emulation outputs. It is not an encoder-input module.

Why is a ground-reference conductor needed with 8BAC0133.000-1?

The outputs are isolated from the host and need a reference to the receiving device. Include that reference in the same cable as the signals.

What output state should be expected from 8BAC0133.000-1 before software initialization?

The outputs remain high impedance until software initialization, so an absent pulse train at that stage is not automatically a wiring fault.

How should the shield of the cable connected to 8BAC0133.000-1 be handled?

Use a shielded cable and apply the shield at both ends, following the specified receiver and grounding arrangement.

Verify A/B phase behavior	Use suitable differential instrumentation or receiver diagnostics to check pulse frequency and direction interpretation. Keep the test within the 1 MHz maximum frequency.
Retain the pulse-interface baseline	Save pair wiring, termination, reference connection, configured emulation behavior and test results. Confirm the receiving equipment responds correctly before enabling dependent motion.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and factory-support phase of 8BAC0133.000-1 is unconfirmed. Apter Power availability is assessed separately from manufacturer lifecycle status.

Replacement assessment

Preserve slot 2, differential pair assignments, receiver termination, shielding and signal reference when replacing the emulation option.

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 ACOPOSmulti User's Manual, V1.30.

Related product navigation

- B&R X20AT6402
- B&R X20DO4529

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

Product enquiries