B&R X20DO4529

01 Identify the load voltage class

1 Separate mains and SELV

Inspect all circuits that share the terminal block. Use a single permitted voltage class rather than mixing mains and safety extra-low voltage on separate isolated channels.

2 Remove actuator power

Isolate the external load supply before handling the terminal block. Confirm the terminal block is connected before applying any field voltage.

Output topology	Four relay changeover contacts
Terminal module	X20TB12
Bus module	X20BM11 or X20BM15

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02 Check the contact duty

1 Review steady and starting loads

Compare the actual actuator with the DC or AC nominal rating and switching-power curve. A permissible inrush peak does not increase continuous contact current.

2 Add the correct suppressor

Provide external transient suppression suited to the load and voltage class. There is no internal protective circuit to absorb the actuator switching transient.

DC nominal	1 A at 30 VDC
AC nominal	0.5 A at 115 VAC
Inrush	Maximum 2 A per channel

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03 Wire the changeover paths

1 Identify NC, COM and NO

Match each terminal to the channel diagram and intended de-energized state. Keep the four field circuits separate and inspect the common contact connection.

2 Check environmental orientation

Verify horizontal or vertical mounting and its temperature limit. Confirm cabinet protection, non-condensing conditions and any required altitude derating.

Horizontal	-25 to +60 °C
Vertical	-25 to +50 °C
Above 2000 m	Reduce ambient by 0.5 °C per 100 m

04 Map and exercise the outputs

1 Restore the data-point format

For standard function model 0, choose packed USINT or individual output bits to match the existing application. Verify that bit 0 controls channel 1 through bit 3 for channel 4.

2 Allow mechanical response

Observe contact switching rather than accepting the bus-data update alone. Check the actuator response after the relay delay and verify that only the intended channel changes.

Packed range	0–15
Minimum cycle	100 µs
Contact switching	≤4 ms in either direction

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05 Complete load verification

1 Compare indicated and actual states

Check output LEDs and actual NC/NO continuity or actuator response under the approved test conditions. A correct command bit does not prove intact load wiring.

2 Record service conditions

Retain terminal voltage class, suppression type, load ratings and mapping mode with the equipment record. Plan contact maintenance according to electrical switching duty.

Technical basis: B&R X20DO4529 Data Sheet, V3.20, September 2024.

Related product navigation

B&R X20CP1484-1

B&R X20CP1485-1

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