B&R X20DC2395

01 Channel count checks

1 Allocate the four shared channels

Draw the installed channel map before changing the module. Identify SSI clock/data, AB or ABR signals, event inputs and output channels separately; adding one function can remove a terminal from another function.

2 Check the encoder electrical level

Confirm 24 V asymmetrical encoder signals rather than assuming a differential line-driver interface. Record the encoder supply loading and leave the machine unable to move while the pulse wiring is disturbed.

Channel count	4
Output-capable channels	2
Supply	24 V DC -15%/+20%

X20DC2395

02 SSI coding checks

1 Set SSI word interpretation

Retain the selected Gray or binary coding, word length and clock settings. Compare a known mechanical position with the decoded position to expose a format mismatch that a communications status alone may miss.

2 Preserve incremental direction

Mark A, B and reference signals before disconnecting. After restoration, move the mechanism in a controlled known direction and compare count sign, index behavior and fourfold evaluation with the retained settings.

SSI coding	Gray/Binary
SSI rate	125 kbit/s maximum
Incremental rate	100 kHz maximum

03 Output current checks

1 Limit the output load

Check each output against its 0.1 A nominal rating and the 0.2 A total. Restore the push, pull or push-pull selection only after confirming the connected load and reference wiring.

2 Inspect PWM timing

Verify the configured period and duty with a suitable instrument at the output. A correct software percentage does not prove the terminal waveform when a load is shorted or the channel function is wrong.

Output current	0.1 A each
PWM duty	0 to 100%
PWM period	41.6 us to 1.36 s

04 Time counter checks

1 Exercise event-controlled outputs

Use a controlled input edge and observe the assigned output event. Confirm both setting and clearing behavior so that a retained output state cannot persist unexpectedly after the initiating event disappears.

2 Verify timestamp interpretation

Record the selected internal timing clock and trigger mode with period or edge-offset tests. Compare a known time interval rather than treating a raw counter number as a time value without scaling.

Time counter	16-bit
Time modes	Continuous or triggered
Measurements	Gate, period, edge offset

X20DC2395

05 Acceptance checks

1 Read supply and output faults

Review the encoder-supply and output diagnostics after each test. Isolate a suspected short circuit before retrying; a repeated automatic recovery is a fault symptom, not an accepted operating state.

2 Release the assigned functions

Record the accepted encoder positions, pulse counts, output waveform and timing scale for the functions actually used. Keep unused shared channels in their intended configuration before re-enabling motion.

Technical basis: B&R X20(c)DC2395 Data sheet V3.30.

Related product navigation

B&R X20DO4529

B&R X20AT2222

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