B&R X20AT2222

01 Define the service boundary

1 Capture sensor and mode assignments

Record each channel sensor type and the module-wide two-/three-wire setting. Preserve the resistance or temperature operating mode, filter and assigned process point.

2 Check the terminal arrangement

Match X20TB06 or X20TB12 and the approved X20 bus module. Label the sensor and sense conductors before disconnecting them.

Input channels	2
Sensor types	Pt100 / Pt1000
Sensor range	-200.0 to 850.0 degrees C

X20AT2222

02 Prepare the installation

1 Put temperature-dependent control in maintenance

Prevent the affected loops from acting on disconnected-sensor fault values. Use the approved machine maintenance state and module exchange procedure.

2 Inspect the sensor circuit

Check for open circuits, damaged leads and incorrect two-/three-wire routing. Channel-to-channel isolation is not available to correct a wiring-reference error.

Temperature resolution	0.1 degrees C
Converter	16-bit sigma-delta
Measurement current	250 microamps +/-1.25%

X20AT2222

03 Restore connections and settings

1 Restore the configuration

Load the retained sensor types, connection method and filter setting. Do not select Pt1000 solely to compensate for an incorrect resistance reading.

2 Reconnect by function

Connect sensor and sense leads according to the original wiring scheme. Maintain the intended lead-compensation arrangement for three-wire measurement.

Filter time	1-66.7 ms; configurable
Resistance ranges	0.1-4500 ohms /0.05-2250 ohms
Input filter	First-order; 500 Hz

04 Verify the operating response

1 Test with known sensor values

Apply an approved resistance or temperature reference and compare both channel values. Use the configured range and 0.1 degree temperature resolution when assessing results.

2 Test error interpretation

Check the application response to an approved open-circuit or range simulation. Confirm that status and substitute values do not become valid process temperatures.

Functional test	Known input or controlled output
Error response	Status and application reaction agree

X20AT2222

05 Release and retain the evidence

1 Confirm timing and stable readings

Allow the selected filter and conversion cycle to settle. Compare both channels under stable input rather than assuming the controller cycle equals conversion time.

2 Retain the measurement baseline

Record sensor types, wire configuration, filter, test values and fault-response result. Restore temperature-dependent control only after both channels pass.

Technical basis: B&R X20AT2222 Data Sheet V3.32.

Related product navigation

B&R X20CP1584

B&R X20SL8000

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