

B&R · B&R System 2003

7AI261.7

System 2003 Strain-Gauge Input Module

Technical specifications

Analog inputs	1
Sensor type	Full-bridge strain gauge
Converter resolution	24 bit
Mounting	System 2003 screw-in module
Measurement range	± 1 to ± 16 mV/V, software configurable
Input current	<140 nA
Supported bridge resistance	75 to 5000 Ω
Bridge excitation	4.5 VDC $\pm 3\%$, max. 60 mA
Sensor connection	4-wire connection
Output representation	Physical units, 32-bit representation
Basic accuracy	± 55 ppm ± 11 μ V at 25°C
Operating temperature	0 to 60°C horizontal; 0 to 50°C vertical
Storage temperature	-25 to 70°C
Relative humidity	5 to 95%, non-condensing

Description

B&R 7AI261.7 is a single-channel screw-in analog input module for evaluating a full-bridge strain gauge with 24-bit conversion.

It brings precision strain-gauge measurement into a compatible System 2003 CPU for load, force or weighing functions engineered around a full bridge.

Before installation or replacement, verify the full-bridge sensor type, excitation and signal wiring, shield and ground practice, calibration method, mechanical zero, compatible CPU slot and project scaling.

Applications

- Full-bridge load-cell measurement
- Machine force monitoring using a full-bridge strain gauge
- Weighing or tension measurement integrated into a System 2003 controller

Selection and replacement checks

B&R 7AI261.7 must be matched by complete material number, compatible System 2003 CPU or station, slot and terminal map, power and field wiring, saved project and connected devices. Back up the configuration and perform a controlled functional test after replacement.