600-256-7AA01



Strain gauge weighing module

- Adjustable sample rates
- Measuring inputs with overvoltage protection against 24V potential
- 24-bit channel resolution

Info

The weighing module serves the purpose of measuring and processing signals from weight, torque, or force sensors. The weighing module enables the direct connection of a load cell in the strain gauge full bridge circuit (voltage-fed bridge circuit). The feed voltage of the bridge is generated from the back wall bus of the TB20 and amounts to 5 V with a maximum 70 mA load. The voltage output is protected with an internal, reversible fuse against overload and short circuit. Weighing cells with a maximum of 72 Ω can be connected. The external bridge feed of the load cell is possible.The bridge voltage can be measured on the load cell with 6-wire connection. The measured value is incorporated into the calculation of the measurement value. Controlled by the application, wire break detection can also take place by feeding test current into the measurement channel.The input channels have a resolution of 24 bits. Measurement values are issued configurable in mV/V or in kg.With adjustable sample rates, interference voltages and mechanical fluctuations in the measurement can be suppressed. Disruptions from a series of measurement values can be smoothed out using a moving mathematical average. A zero point comparison of the load cell can be carried out with the offset, or measurement with a definite value can be commenced with. Linearity deviations of the measuring instruments can be linearized with up to 5 sampling points.The measurement inputs have overvoltage protection relating to the 24 V potential and possess electrical isolation with 500 V dielectric strength. Note: Individual modules cannot be combined with the IO systems of other manufacturers.

Technical data

General information	
Order number	600-256-7AA01
Article name	Strain gauge weighing module
Scope of delivery	Strain gauge weighing module
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 70 g
Measuring ranges	4 mV/V, 2 mV/V
Load cell terminal	6-Conductor technology, 4-conductor technology with two bridges
Average filter	Arithmetical average with nmax=255
Issuing of measurement value	mV/V or kg configurable
Characteristic linearization	Max. 5 sampling points
Access protection of the works parameters/data	no
Testing of line break	Feeding of test current into the measurement channel
Internal bridge feed	5 V 70 mA Ri ca. 6.5 Ohm internal, reversible fuse
Diagnoses	Error response via status bits
Power supply for modules	DC 5V, max. 130 mA, Voltage supply via back wall bus, irrespective of voltage to be measured
Isolation voltage	500 V
Power dissipation	Max. 0.7 W
Hot-swap capable	Yes
Measurement error	
Measurement error	0.1 %
With reference to the measuring range end value	for conversion rates with 50 Hz suppression
Ambient conditions	
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-20 °C ... +80 °C
Relative air humidity	95 % r H without condensation
Protection rating	IP 20
Certifications	CE, UL
UL	
Surrounding Air Temperature	0 °C ... +60°C
Pollution degree	2
CE	
Noise immunity	DIN EN 61000-6-2 "EMC Immunity"
Interference emission	DIN EN 61000-6-4 "EMC Emission"
Vibration and shock resistance	DIN EN 60068-2-6:2008 „Vibration", DIN EN 60068-2-27:2010 „Shock"