

Strain gauge measurement amplifier

for clamp rail assembly

standard output: 0...10 VDC 3 wire technology
Model ZE10.002.001
or 4...20mA 3 wire technology
Model ZE10.002.002



Description

Measurement amplifiers are used to make the output signal of strain gauge force transducers suitable for an attached control system.

This design is available for terminal rail fitting in a control cubicle as specified in EN 50 022. All strain gauge force transducers which can be operated with a dc voltage can be attached. The measuring range and any overload that may be available (tare) can be set on site. To monitor the assessment unit a check signal can be generated. Interference signals can be reduced by means of the input low pass filter.

The supply voltage of between 10 and 30 Volts guarantees a direct connection to an SPS control system, since these generally have 24 Volt supply systems. The analogue outputs of 0..10 Volt or 0(4) 20 mA enable the signal to be processed directly by the SPS control system.

Features


- 10 V dc or 20 mA standard signal
- Can be directly connected to SPS
- Compact design
- Simple assembly
- Assembly in the control cubicle on standard rails as specified in DIN EN 50 022
- Input filter for reducing interference
- Galvanic separation

Field of application

Industrial weighing processes
Force measurement in automated processes

Model: ZE10.002.001
ZE10.002.002

Technical data

Model	Clamp rail model	
Symbol		
Part No.	ZE10.002.001	ZE10.002.002
Out put signal	0...10 V dc 3 wire technology	4.. 20 mA 3 wire technology
Temperatuer effect		
Zero point	0.02% / 10 K	0.04% / 10 K
Working range	0.02% / 10 K	0.04% / 10 K
Check	100 % (for force transducer with 100% resistance)	
Load	> 2 kΩ	< 500Ω
Sensor supply	10 V DC; ≤ 30 mA	
Temperature effect	25ppm / K	
Input signal	0.4 ... 30 mV	
Input resistance	10 ⁹ Ω	
Input filter	10 Hz to 1 kHz (adjustable)	
Zero point setting	± 10 %	
Maximum amplification	2 000 times	
Limit frequency	1 kHz (3 dB)	750Hz (3 dB)
Auxiliary energy	>10...30V DC	
Current consumption	< 150 mA	
Electrical connection:	Terminals from 0.14mm ² to 1.5mm ²	
Method of protection	IP 20 EN 60529 / IEC 529	
Temperature range		
Nominal temperature	+10 + 40 °C	
Temperature of use	0 .. + 60 °C	
Storage temperature	-10 + 70 °C	
Housing	Clamp rail DIN EN 50 022	
Dimensions	23 x 111 x 76 mm (B x H x D)	

Subject to technical changes