





Single Channel Inline Strain Gauge Amplifier

- Supply voltage 10 ... 18 VDC / 18 ... 30 VDC
- Analogue output 0 ... 10 V / \pm 10 V
- Aluminium enclosure (IP20)
- Dimensions (W x H x D) 92 x 38 x 31 mm



The single-channel inline strain gauge measuring amplifier SG-INL allows supply and signal evaluation of a transducer with a strain gauge full bridge greater than 300 ohms. The connection is done in 4-wire technology. For further evaluation standard analogue outputs are available. The measuring amplifier is built-in into a robust aluminium enclosure (IP20) which is suited for applications in rough and industrial environments.

The amplification can be adapted by an internal precision resistance.

The potentiometers Z (Zero) and G (Gain) accessible after removing the enclosure cover, allow a correction of the calibration.

By means of an internal dip switch a change of the potentiometer Z (zero) range can be achieved.

Technical Data

Number of measuring channels:	1 (full bridge resistance >300 Ω)
Supply voltage:	10 18 VDC,18 30 VDC, electronics protected against voltage reversal
Isolating proof voltage input to output:	200 V, higher isolated proof voltage on request
Power consumption:	3 W max.
Strain gauge excitation supply:	2.5 VDC, 5 VDC or 10 VDC
Analogue output:	0 10 V, ±10 V, max. 1 mA (short-period short-circuit proof)
Limit frequency (-3 dB):	1 kHz
Input resistance:	>3 MΩ
Max. input sensitivity:	25 mV/V at 10 VDC excitation supply
Non-linearity:	±0.05 % FSO
Electrical connection:	3 m connecting cable type LiYCY (TP) 2 x 2 x 0.25 mm ² 5 pin bead male connector Binder Series 712/423 / Series 712/423 depending on the cable diameter of the connected strain gauge sensor
Enclosure:	EMC aluminium die-cast enclosure (IP65)
Dimension (W x H x D):	92 x 38 x 31 mm
Weight:	150 g
Temperature, storage:	-20 +60 °C
Temperature, operating:	0 +50 °C

🔤 Terminal Wiring

The connection of the measuring amplifier is made by a 3 m connecting cable (Lapp, type 2x2x0.25 mm², screened). The connection of the sensor is made by a connector Binder Series 712 / Series 423, depending on cable diameter of the sensor.

Note: The amplifier has to be operated with closed cover only.

Connecting cable:

Colour	Description		
White	Supply Voltage		
Brown	Supply Ground		
Galvanic isolation			
Yellow	Analogue Output		
Green	Analogue Ground		

Connector Binder Series 712 / Series 423:

PIN	Description
1	+ SG Excitation
2	- SG-Excitation
3	+ SG Signal
4	- SG Signal
5	Not connected

Enclosure Dimension

(Note: Figure shows enclosure without electrical connections)



Ordering Description

SG-INL	Single channel Inline-strain gauge amplifier in an EMC aluminium die-cast enclosure (IP20)			
	12E	Supply voltage 10 18 VDC		
	24E	Supply voltage 18 30 VDC		
		010	Analogue output 0 10 V	
		B10	Analoque output ±10 V	

📴 Alignment / Calibration

On request, a pre-setting of the measuring system or a factory calibration certificate with traceable references can be carried out for an extra charge.

🔁 Customized Requirements

Technical modifications according to customized requirements are available on request. Moreover, we deliver customized special solutions for a lot of measuring tasks in the section pressure, force, position and tilt measuring using our measuring transducers. Do not hesitate to contact us.

Due to continuous product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.

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