SG-AP

Single Channel Strain Gauge Amplifier

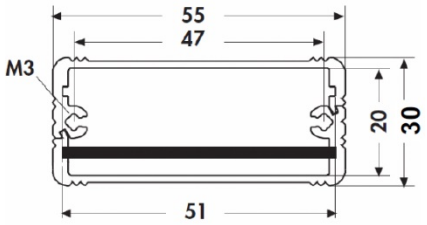
- Supply voltage 10 … 18 VDC / 18 … 30 VDC
- Analogue output 0 … 10 V / ±10 V
- Aluminium profile enclosure (IP20)
- Dimensions (W x H x D) 104 x 55 x 30 mm

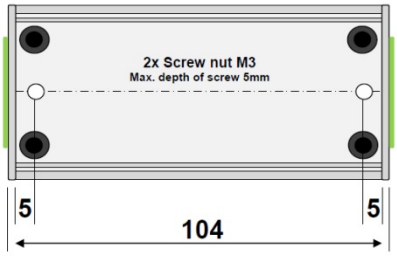
The single channel strain gauge measuring amplifier SG-AP allows the supply and signal evaluation of a transducer with a strain gauge full bridge greater than 300 ohms. Input and output are galvanically isolated. The connection is done in 4-wire technology via a pluggable screw clamp terminal block. For further evaluation standard analogue outputs are available. The measuring amplifier is available in 3 versions with different sensitivity. By means of potentiometer for zero and amplification, a calibration correction can be carried out.

Technical Data

Number of measuring channels:	1 (full bridge resistance >300 Ω)
Supply voltage:	10 … 18 VDC, 18 … 30 VDC, electronics protected against reversal voltage
Isolating proof voltage input to output:	200 V, higher isolated proof voltage on request
Power consumption:	2 W
Strain gauge excitation supply:	2.5 VDC, 5 VDC, 10 VDC (±2 %, max. 35 mA)
Analogue output:	0 … 10 V, ±10 V, max. 1 mA (short-period short-circuit proof)
Limit frequency (-3 dB):	Version **…-GF10Hz** → 10 Hz Version **…-GF1kHz** → 1 kHz
Input resistance:	>3 MΩ
Max. input sensitivity:	Version **…-1**: 1 mV/V (Range of potentiometer G: 0.5 … 1.5 mV/V) Version **…-2**: 2 mV/V (Range of potentiometer G: 1.5 … 2.5 mV/V) Version **…-3**: 3 mV/V (Range of potentiometer G: 2.5 … 3.5 mV/V)
Non-linearity:	±0.05 % FSO
Electrical connection:	Pluggable screw clamp terminal block
Enclosure:	Aluminium profile enclosure
Dimension (W x H x D):	104 x 55 x 30 mm
Weight:	140 g
Temperature, storage:	-20 … +60 °C
Temperature, operating:	+10 … +50 °C

Enclosure Dimensions





Terminal Wiring

Electrical connections are made via a pluggable screw clamp terminal block located at the outside of the board/enclosure. The terminal numbering is stated on the terminal block. The maximum cable cross section amounts 2.5 mm².

Terminal	Description
1	Supply Voltage
2	Supply Ground
3	Supply Voltage
4	Supply Ground
5	Analogue Ground
6	Analogue Output

Terminal	Description
7	+ SG Excitation Transducer
8	- SG Signal Transducer
9	+ SG Signal Transducer
10	- SG Excitation Transducer / GND
11	Screen / Enclosure

The terminals "Supply Ground" and "Analogue Ground" are galvanically isolated. To eliminate galvanic isolation, the terminals 2 and 5 have to be bridged externally.

Ordering Information

SG-AP...	Single channel strain gauge amplifier				
	...-12E-...	Supply voltage: 10 ... 18 VDC			
	...-24E-...	Supply voltage: 18 ... 30 VDC			
		...-010-...	Analogue output: 0 ... 10 V		
		...-B10-...	Analogue output: ±10 V		
			...-1-...	1 mV/V (Range Potentiometer G: 0.5 ... 1.5 mV/V)	
			...-2-...	2 mV/V (Range Potentiometer G: 1.5 ... 2.5 mV/V)	
			...-3-...	3 mV/V (Range Potentiometer G: 2.5 ... 3.5 mV/V)	
				...-GF10Hz	Limit frequency 10 Hz (-3 dB)
				...-GF1kHz	Limit frequency 1 kHz (-3 dB)

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.