



SG-AP-12E/24E-xxx-x

Single-Channel strain gauge amplifier



- Supply voltage 10 ... 18 VDC / 18 ... 30 VDC**
- Analogue output 0 ... 10 V / ±10 V**
- Aluminium profile enclosure (IP20)**
- Dimension (W x H x D) 125 x 30 x 55 mm**

The described single channel strain gauge measuring amplifier allows the supply and signal evaluation of one transducer with a strain gauge full bridge greater 300 ohms. The input and the output are galvanically isolated. The connection occurs in 4-wire technology about pluggable screw clamp terminal block. For further evaluation are standard analogue outputs available. The measuring amplifier is available in 3 different sensitivity versions. With the help of a potentiometer in each case for the zero as well as a potentiometer for the amplification, a correction of the calibration can be carried out.

Technical data:

Number of measuring channels:	1 (full bridge resistance > 300 Ω)	
Supply voltage:	10 ... 18 VDC 18 ... 30 VDC	Electronic 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 Potentiometer G: 0.5 ... 1.5 mV/V) Version...-2: 2 mV/V (Range Potentiometer G: 1.5 ... 2.5 mV/V) Version...-3: 3 mV/V (Range 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 (B x H x D):	104 x 30 x 55 mm	
Weight:	140 g	
Temperature, storage:	-20 °C ... +60 °C	
Temperature, operating:	+10 °C ... +50 °C	

Order Description:

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)	

Enclosure Dimension

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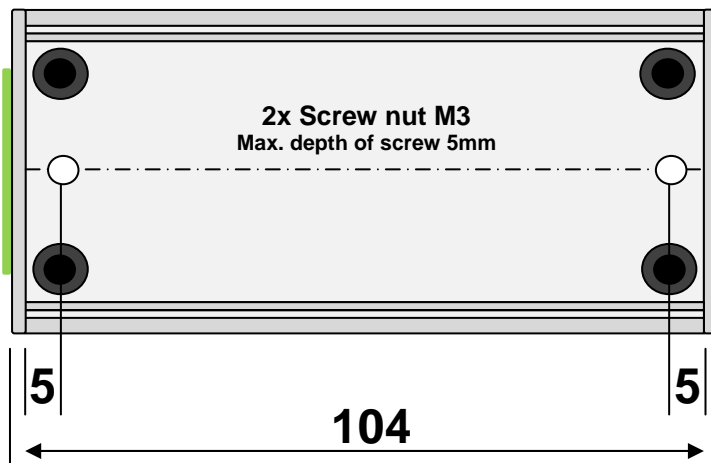
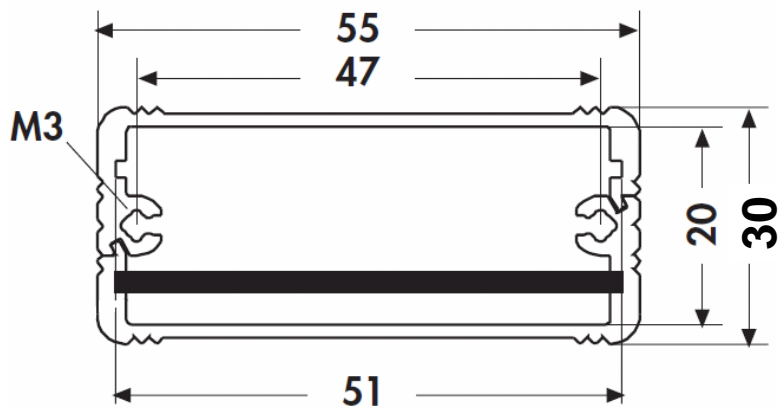
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Terminal wiring

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

Clamp	Description
1	Supply voltage
2	Supply Ground
3	Supply voltage
4	Supply Ground
5	Analogue Ground
6	Analogue output

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

The clamps 2 and 5 are galvanically isolated. To lift the galvanic isolation, the clamps are to be bridged externally.

Alignment/Calibration:

If requested, 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 modification according customized requirement are possible on request. Moreover, we deliver Customized special solutions for a lot of measuring tasks in the section pressure-, force-, distance - and tilt-measuring using our offered measuring transducer. Do not hesitate to contact us.

Our policy is to improve specification of our products continuously, so technical and production details can be changed without any notice.