



SGM-IP-12/24-xxx-03m

Miniature single channel strain gauge amplifier

- ▶ Supply voltage 12 VDC / 24 VDC**
- ▶ Analogue output 0 ... 10 V / ±10 V**
- ▶ EMC Aluminium diecast enclosure (IP65)**
- ▶ Dimension (B x H x D) 97 x 35 x 63 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 connection occurs in 4-wire technology. For further evaluation are standard analogue outputs available. The measuring amplifier is built-in in a robust EMC diecast aluminum enclosure (IP65), which is suited for the application in rough and industrial surroundings.

The amplification can be adapted by an internal precision resistance.

The potentiometer Z (Zero) and G (Gain), which are accessible after removing the enclosure lid, allow a correction of the calibration.

With the help of 4 jumpers, a change of the range of the potentiometer Z (zero) can be reached.

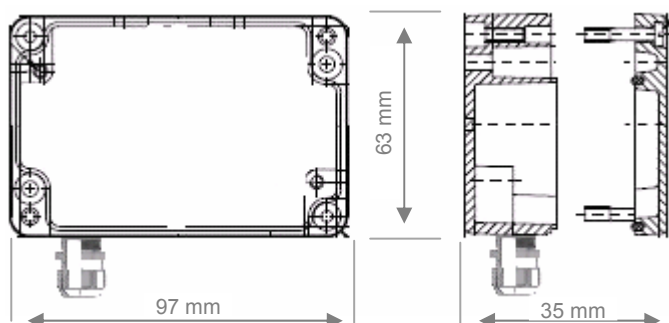
▶ Technical data

Number of measuring channels:	1 (full bridge resistance >300 Ω)	
Supply voltage:	Version ...-24-... → 24 VDC ±5 % Version ...-12-... → 12 VDC ±5 %	Electronic protected against voltage reversal
Isolating proof voltage input to output:	200 V	Higher isolated proof voltage on request
Power consumption:	max. 3 W	
Strain gauge excitation supply:	2.5 VDC / 5 VDC / 10 VDC	
Analogue output:	0 ... 10 V / ±10 V	max. 1 mA (short-period short-circuit proof)
Limit frequency (-3 dB):	100 Hz	
Input resistance:	>3 MΩ	
Max. input sensitivity:	25 mV/V at 10 VDC excitation supply	
Non-linearity:	±0.05 % FSO	
Electrical connection:		
<i>Supply voltage/Analogue output:</i>	3 m connecting cable Typ LiYCY (TP) 2 x 2 x 0.25 mm ²	
<i>Transducer:</i>	Connection about a 5-pin. connector Typ: Binder Serie 423	
Enclosure:	EMC-aluminium diecast enclosure (IP65)	
Dimension (B x H x D):	97 x 35 x 63 mm	
Weight:	500 g includes connecting cable	
Temperature, storage:	-20 °C ... +60 °C	
Temperature, operating:	-20 °C ... +50 °C	

Order Description

SGM-IP-...	Miniature single channel strain gauge amplifier in a EMC-aluminium diecast enclosure (IP65)
...-12-...	Supply voltage: 12 VDC $\pm 5\%$
...-24-...	Supply voltage: 24 VDC $\pm 5\%$
...-010-...	Analogue output: 0 ... 10 V
...-B10-...	Analogue output: ± 10 V
...-03m	3 m connecting cable Typ LiYCY (TP) 2 x 2 x 0.25 mm ²

Enclosure Dimension



Terminal wiring

Electrical connections are made about a 3 m connecting cable (Typ LiYCY Length 2x2x0.25 mm², screened) as well as a 5-pin connector Typ: Binder Serie 423. The terminal numbering is to be found on the board. The maximum cable cross section amounts 2.5 mm². The EMC-installation information is to be followed.

Notice: The amplifier may be pursued only with closed lid.

Colour	Description	PIN	Description
White	Supply voltage	1	+SG-Excitation Transducer
Brown	Supply Ground	2	-SG-Excitation Transducer
	Galvanic isolation	3	n.c.
Yellow	Analogue output (0 ... +10 V, ± 10 V)	4	+SG-Signal Transducer
Green	Analogue Ground	5	-SG-Signal Transducer

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.