SG-2K-IP

Dual Channel Strain Gauge Amplifier

- Supply voltage 10 ... 18 VDC / 18 ... 30 VDC
- Analogue output 0 ... 10 V / ±10 V / 4 ... 20 mA
- EMC Aluminium die-cast enclosure (IP65)
- Dimensions (W x H x D) 220 x 140 x 70 mm
- Galvanically isolated

The dual-channel strain gauge measuring amplifier SG-2K-IP allows supply and signal evaluation of two connected transducers with a strain gauge full bridge greater than 300 ohms. Input and output are galvanically isolated. 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 EMC die-cast aluminium enclosure (IP65) which is suited for application in rough and industrial environments.

The amplification / channel of the amplifier can be adapted by an internal precision resistance.

The potentiometers Zx (Zero) and Gx (Gain) which are accessible after removing the enclosure cover allow a calibration correction for each channel.

By the means of an internal dip switch / channel a change of the range of the potentiometer Zx (zero) can be reached. To allow a zero range shift a basic load / tare can be suppressed by a resistance electrically.

Technical Data

Number of measuring channels:	2 (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:	max. 5 W
Strain gauge excitation supply:	+5 VDC, +10 VDC
Analogue output:	0 ... 10 V, ±10 V max. 1 mA (short-period short-circuit proof) 4 ... 20 mA max. 500 Ω
Limit frequency (-3 dB):	1 kHz, optional up to 30 kHz
Input resistance:	>3 MΩ
Max. input sensitivity:	100 mV/V at ±5 VDC excitation supply
Non-linearity:	±0.05 % FSO
Electrical connection:	EMC-cable gland on internal terminal block
Enclosure:	EMC-aluminium die-cast enclosure (IP65)
Dimension (W x H x D):	220 x 140 x 70 mm
Weight:	approx. 1500 g
Temperature, storage:	-20 ... +60 °C
Temperature, operating:	-20 ... +50 °C

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.

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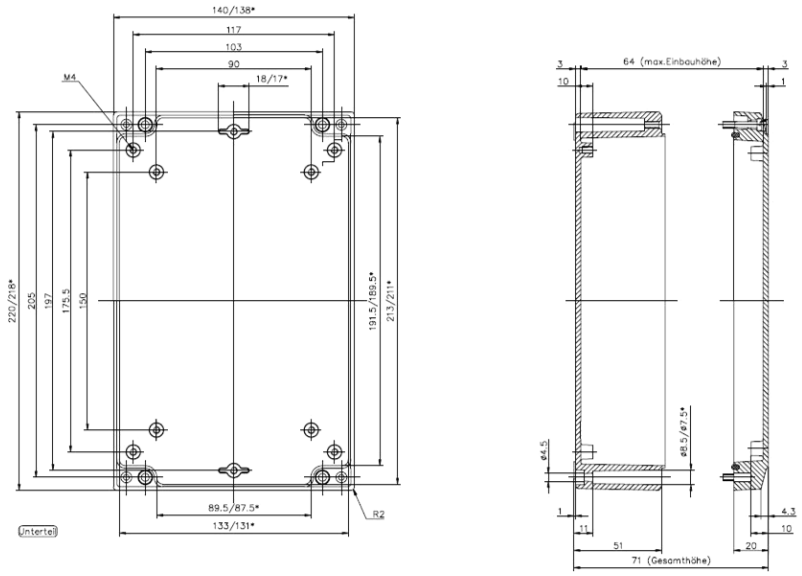
Enclosure Dimensions



Terminal Wiring

Electrical connections are made via cable glands on a terminal block located inside of the enclosure. The terminal numbering is stated on the board. The maximum cable cross section amounts 2.5 mm². EMC installation information must be followed.

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

Terminal	Description
1	Supply Voltage
2	Supply Ground
3	Supply Ground
Galvanic isolation	
4	Analogue Ground
5	Analogue Output 1 (0 ... +10 V, ±10 V / opt. 4 ... 20 mA)
6	Analogue Ground
7	Analogue Output 2 (0 ... +10 V, ±10 V / opt. 4 ... 20 mA)
8	Analogue Ground

Terminal	Description
9	Screen / Enclosure
10	+ SG Excitation Transducer Ch-1
11	- SG Excitation Transducer Ch-1
12	+ SG Signal Transducer Ch-1
13	- SG Signal Transducer Ch-1
14	Screen / Enclosure
15	+ SG Excitation Transducer Ch-2
16	- SG Excitation Transducer Ch-2
17	+ SG Signal Transducer Ch-2
18	- SG Signal Transducer Ch-2

Terminals "Supply Ground" and "Analogue Ground" are galvanically isolated. To eliminate galvanic isolation the terminals 3 and 4 have to be bridged externally.

Ordering Description

SG-2K-IP-...	Dual channel strain gauge amplifier in a EMC aluminium die-cast enclosure (IP65)		
	...-12E-...	Supply voltage: 10 ... 18 VDC	
	...-24E-...	Supply voltage: 18... 30 VDC	
		...-010-...	Analogue output: 0 ... 10 V
		...-B10-...	Analogue output: ±10 V
		...-420-...	Analogue output: 4 ... 20 mA
			...-GFxx Limit frequency optionally up to 30 kHz
			blank Standard version 1 kHz

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.