



## SG-2K-IP-12E/24E-xxx

### Dual channel strain gauge amplifier

- ▣ Supply voltage 10 ... 18 VDC / 18 ... 30 VDC
- ▣ Analogue output 0 ... 10 V /  $\pm 10$  V / 4 ... 20 mA
- ▣ EMC-Aluminium-diecast enclosure (IP65)
- ▣ Dimension (B x H x D) 220 x 70 x 140 mm



The described dual-channel strain gauge measuring amplifier allows the supply and signal evaluation of two connected transducers with a strain gauge full bridge greater 300 ohms. The input and the output are galvanic isolated. The connection occurs in 4-leading 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/channel of the amplifier can be adapted by an internal precision resistance.

The potentiometer Zx (Zero) and Gx (Gain), which are accessible after removing the enclosure lid, allow a correction of the calibration for each channel.

With the help of an internal dip switch/channel, a change of the range of the potentiometer Zx (zero) can be reached.

To allow a possible movement of the zero range, a possible basic load / tare can be suppressed with a resistance electrically.

#### ▣ Technical data:

Number of measuring channels:	2 (full bridge resistance >300 $\Omega$ )	
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:	max. 5 W	
Strain gauge excitation supply:	+5 VDC / +10 VDC	
Analogue output:	0 ... 10 V / $\pm 10$ V 4 ... 20 mA	max. 1 mA (short-period short-circuit proof) max. 500 $\Omega$
Limit frequency (-3 dB):	1 kHz	optional up to 30 kHz
Input resistance:	>3 M $\Omega$	
Max. input sensitivity:	100 mV/V at $\pm 5$ VDC excitation supply	
Non-linearity:	$\pm 0.05$ % FSO	
Electrical connection:	EMC-cable gland on internal terminal block	
Enclosure:	EMC-aluminium diecast enclosure (IP65)	
Dimension (B x H x D):	220 x 70 x 140 mm	
Weight:	approx. 1500 g	
Temperature, storage:	-20 $^{\circ}$ C ... +60 $^{\circ}$ C	
Temperature, operating:	-20 $^{\circ}$ C ... +50 $^{\circ}$ C	

## Order Description:

**SG-2K-IP-...** Dual channel strain gauge amplifier in a EMC-aluminium diecast enclosure (IP65)

**...-12E-...** Supply voltage: 10 ... 18 VDC

**...-24E-...** Supply voltage: 18... 30 VDC

**...-010-...** Analogue output: 0 ... 10 V

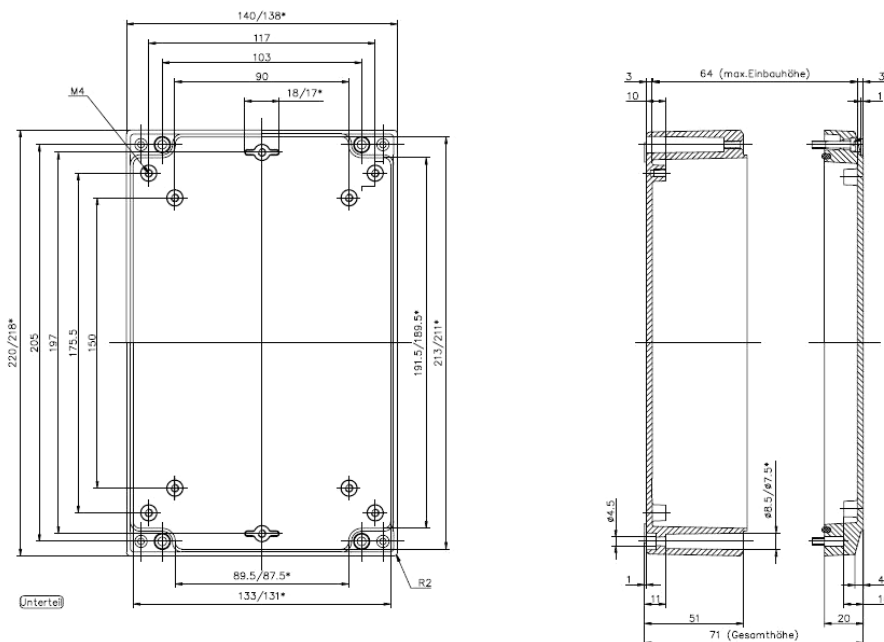
**...-B10-...** Analogue output:  $\pm 10$  V

**...-420-...** Analogue output: 4 ... 20 mA

**...-GFxx** Limit frequency optionally up to 30 kHz

**No declaration (GFxx) for standard version 1 kHz**

## Enclosure Dimension



## Terminal wiring

Electrical connections are made via cable gland on terminal block located in the inside of the enclosure. The terminal numbering is to be found on the board. The maximum cable cross section amounts 2.5 mm<sup>2</sup>. The EMC- installation information is to be followed.

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

Clamp	Description	Clamp	Description
1	Supply voltage	9	Screen/Enclosure
2	Supply Ground	10	+SG-Excitation Transducer Ch-1
3	Supply Ground	11	-SG-Excitation Transducer Ch-1
<b>Galvanic isolation</b>		12	+SG-Signal Transducer Ch-1
4	Analogue Ground	13	-SG-Signal Transducer Ch-1
5	Analogue output 1 (0 ... +10 V, $\pm 10$ V / opt. 4 ... 20 mA)	14	Screen/Enclosure
6	Analogue Ground	15	+SG-Excitation Transducer Ch-2
7	Analogue output 2 (0 ... +10 V, $\pm 10$ V / opt. 4 ... 20 mA)	16	-SG-Excitation Transducer Ch-2
8	Analogue Ground	17	+SG-Signal Transducer Ch-2
		18	-SG-Signal Transducer Ch-2

The clamps 3 and 4 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.

