



SG-2K-KS-12E/24E-xxx

Dual channel strain gauge amplifier DIN top hat rail mounting

- ▣ Supply voltage 10 ... 18 VDC / 18 ... 30 VDC
- ▣ Analogue output 0 ... 10 V / ± 10 V / 4 ... 20 mA
- ▣ Plastic enclosure (IP20) for DIN-top hat rail mounting
- ▣ Dimension (B x H x D) 100 x 73.2 x 118.2 mm



The dual-channel SG-Amplifier allows the supply and signal evaluation of two connected transducers with a strain gauge full bridge greater 300 ohms. The connecting of the transducers, which should have a full bridge resistance greater than 300 ohms, can occur in 4-wire-technology or, by using of a long connecting cable or variable length of the connecting cable, in 6-wire-technology. For further evaluation are standard analogue outputs available. The measuring amplifier is installed in a plastic enclosure (IP20) which is intended for the top hat rail mounting. The amplification per channel can be adapted by an internal precision resistance.

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

▣ Technical Data

Number of measuring channels:	2 (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:	max. 5 W	
Strain gauge excitation supply:	± 2.5 VDC / ± 5 VDC	
Analogue output:	0 ... 10 V / ± 10 V 4 ... 20 mA	max. 1 mA (short-period short-circuit proof) max. 500 Ω
Limit frequency (-3 dB):	1 kHz	optionally up to 30 kHz
Input resistance:	>3 M Ω	
Max. input sensitivity:	100 mV/V at ± 5 VDC excitation supply	
Non-linearity:	± 0.05 % FSO	
Electrical connection:	Screw clamps	
Enclosure:	Plastic enclosure for top hat rail mounting (IP20)	
Dimension (B x H x D):	100 x 73.2 x 118.2 mm	
Weight:	450 g	
Temperature, storage:	-20 $^{\circ}$ C ... +60 $^{\circ}$ C	
Temperature, operating:	0 $^{\circ}$ C ... +50 $^{\circ}$ C	

▣ Order Description:

SG-2K-KS... Dual channel strain gauge amplifier in plastic enclosure for top hat rail mounting (IP20)

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

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

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

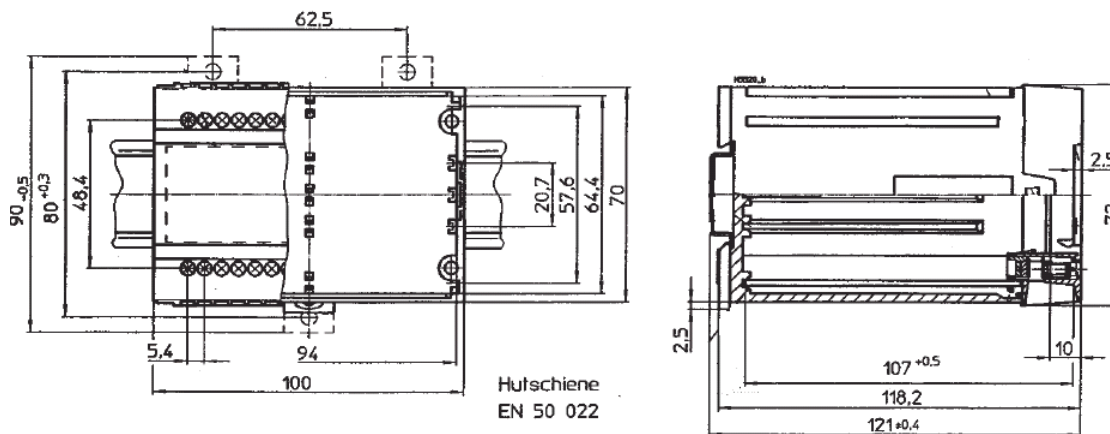
...-B10-... Analogue output: ± 10 V

...-420-... Analogue output: 0 ... 10 V, 4 ... 20 mA

...-GFxx Limit frequency up to 30 kHz

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

Enclosure Dimension



Terminal Wiring

Electrical connections are made via screw clamps located on the frontside and the backside of the enclosure. The terminal numbering is to be found beyond and below the screw clamps. The maximum cable cross section amounts 2.5 mm². The maximum interference immunity is achieved with direct connecting of the cable screen with "clean" and "low resistant" protective ground (PG). A lengthening of the cable screen with a cable makes the interference immunity considerably worse. The connection of the cable screen should occur directly with a cable clamp. If no connecting with protective ground (PG) should be possible, the cable screen can be connected to clamp 30 (Analogue ground/Screen). Anyhow, enough interference immunity is to be ensured.

PIN	Description	PIN	Description
1	Supply voltage	16	Analogue ground/Screen
2	Supply Ground	17	+SG-Signal Transducer Ch-1
3	Supply Ground	18	-SG-Signal Transducer Ch-1
4	Analogue Ground	19	+SG-Excitation Transducer Ch-1
5	n.c.	20	+SG-Excitation Transducer Ch-2
6	n.c.	21	+SG-Excitation
7	n.c.	22	+SG-Sense
8	Analogue Ground	23	Analogue Ground/Screen
9	Analogue output K-2 4 ... 20 mA (Option -420-)	24	-SG-Excitation Transducer Ch-1
10	Analogue Ground	25	-SG-Excitation Transducer Ch-2
11	Analogue output K-2 0 ... 10 V / ±10 V	26	-SG-Excitation
12	Analogue ground	27	-SG-Sense
13	Analogue output K-1 4 ... 20 mA (Option -420-)	28	+SG-Signal Transducer Ch-2
14	Analogue Ground	29	-SG-Signal Transducer Ch-2
15	Analogue output K-1 0 ... 10 V / ±10 V	30	Analogue Ground/Screen

With connection in 4-wire technology, the clamps 21+22 as well as the clamps 26+27 are to be bridged externally. With connection of a transducer which is laid out for 6-wire technology, the connections exits in the transducer. 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.