



SG-1K/2K-KA/EK-15B-xxx SG-1K/2K-KA/EK-12E/24E-xxx

Single or Dual channel strain gauge amplifier as plug-in unit or euroboard

- ▣ Supply voltage ± 15 VDC regulated / 10 ... 18 VDC / 18 ... 30 VDC
- ▣ Analogue output 0 ... 10 V / ± 10 V
- ▣ Version -EK: Euroboard-design
- ▣ Version -KA: Cartridge case with EMC-frontplate



The 1(2)-Channel strain gauge amplifier in a 19"-plug-in module is planned for the installation in a 19"-Rack and allows the supply and signal amplification of 1 or 2 strain gauge transducers. 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 / channel available. For the additional measuring value presentation, the amplifier has in version -DA a 3 1/2 digit display/channel. The amplification of the amplifier can be adapted by an internal precision resistance. The potentiometer Z(x) (Zero) and G(x) (Gain), which are accessible above the frontplate, allows a correction of the calibration for each channel.

With the help of an internal dip counter / channel (-2K-), 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 electrically with a resistance.

▣ Technical Data

Number of measuring channels:	1 (SG-1K-...) Full bridge resistance >300 Ω 2 (SG-2K-...) Full bridge resistance >300 Ω	
Supply voltage:	± 15 VDC regulated (-15B-) 10 ... 18 VDC (-12E-) 18 ... 30 VDC (-24E-)	Electronic protected against reversal voltage (only with version -12E- and -24E-)
Isolating proof voltage input to output:	200 V	Higher isolated proof voltage on request
Power consumption:	max. 8 W	
Strain gauge excitation supply:	± 2.5 VDC / ± 5 VDC	
Analog output:	0 ... 10 V / ± 10 V	max. 1 mA (short-period short-circuit proof)
Limit frequency (-3 dB):	1 kHz	optional 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:	VG-pinboard 64-pin, a+c, DIN 41612 (German Institute for Standardization) BNC-connector on front-plate	
Enclosure:	Euroboard-design (Version -EK-), 19"-plug-in module (Version -KA-)	
Installation depth:	160 mm	Installation depth:
Frontplate:	7TE/3HE 10TE/3HE 14TE/3HE	(Version -15B-) (Version -12E, Version -24E-) (Version -DA)
Weight:	max. 500 g, depending on FP-Version	
Temperature, storage:	-20 $^{\circ}$ C ... +60 $^{\circ}$ C	
Temperature, operating:	0 $^{\circ}$ C ... +50 $^{\circ}$ C	

Order Description:

SG-1K-...	Single channel strain gauge amplifier as plug-in unit
SG-2K-...	Dual channel strain gauge amplifier as plug-in unit
...-EK-...	Euroboard design
...-KA-...	Cartridge case
...-15B-...	Supply voltage: ± 15 VDC regulated (None galvanic input/output isolation)
...-12E-...	Supply voltage: 10 ... 18 VDC (Galvanic input/output isolation)
...-24E-...	Supply voltage: 18 ... 30 VDC (Galvanic input/output isolation)
...-010-...	Analogue output: 0 ... 10 V
...-B10-...	Analogue output: ± 10 V
...-GFxx	Limit frequency optionally up to 30 kHz No declaration (GFxx) for standard version (1 kHz)
...-DA	3½ digit LCD-display/channel

Terminal Wiring

Electrical connections are made above the 64-pin.VG-pinboard (a+c, DIN 41612). Additional, the analogue output can be picked off above the BNC-Connectors on the front-plate. The PIN numbering is on the provided pinboard.

PIN	Description
1	Analogue ground /Screen
2	not connected
3	+SG-Signal Transducer Ch-1
4	not connected
5	-SG-Signal Transducer Ch-1
6	not connected
7	+SG-Sense Transducer Ch-1
8	+SG-Excitation Transducer Ch-1
9	not connected
10	-SG-Sense Transducer Ch-1
11	-SG-Excitation Transducer Ch-1
12	not connected
13	Analogue output Ch-1 (0 ... 10 V/ ± 10 V)
14	not connected
15	not connected
16	not connected

PIN	Description
17	Analogue ground /Screen
18	not connected
19	+SG-Signal Transducer Ch-2
20	not connected
21	-SG-Signal Transducer Ch-2
22	not connected
23	+SG-Sense Transducer Ch-2
24	+SG-Excitation Transducer Ch-2
25	not connected
26	-SG-Sense Transducer Ch-2
27	-SG-Excitation Transducer Ch-2
28	not connected
29	Analogue output Ch-2 (0 ... 10 V/ ± 10 V)

Version -15B-	
30	Supply voltage (+15 VDC)
31	Analogue ground
32	-Ub (-15 VDC)

Version -12E/24E-	
30	Supply voltage (10...18 VDC / 18...30 VDC)
31	not connected
32	Analogue ground

Alignment/Calibration:

If requested, a pre-setting of the measuring system or a calibration certificate with traceable references is carried out against surcharge.

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.