

## Sensor box with two **NG-Inclinometers** and two Amplifiers each with 2.5Volt / +/-2Volt output signal



### Special features

- Strong stable aluminium housing (IP65), in sea water coated finish
- Torsion free four fixing points of the 3,2mm motherboard
- Integrated 0...5VDC amplifier for signal output
- Temperature compensation beyond the sensors own compensation data
- No extra power required
- SEIKA- type NG Sensor are utilised in this SB2G box
- The output signal of the SB2G is calibrated to custom specs. In connection with the respective sensor required
- Sensor and amplifier are galvanic separated from the housing
- Extensive EMC protected
- High stable sensor supply voltage
- 8 to 30 Volt unregulated power supply
- Dynamics parameters is programmable
- Strong mechanical design in housing
- High overload resistance
- 5V reference voltage is available
- Low-pass signal filter with optional max. Frequency filter for suppression of interference frequencies

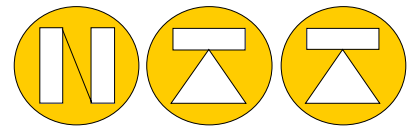
### Description

The **SB2G** sensor box is a pressure-cast aluminium box (IP65) with integrated sensor for twin axis Inclination.

The **SB2G** contains two amplifier part each with 0...5VDC output signal possibility, also as a separate part on the board there is a high-stable power supply for supplying the actual sensor (this can also be taken out as an ref. Voltage! ). The amplifier for the Signal output contains also a low-pass filter for upper frequencies limitation. Rise-time constant as a specific value, + a max. Current output limitation, can also be a part of the custom built unit. Supply noise suppression filter and Diode Bridge for guarantee of the Electromagnetic Compatibility are also a standard part in this unit. Sensor and amplifier are galvanic isolated from the housing.

In the **SB2G** box the **NG** type sensor are implemented, which means a very high degree of accuracy on the measuring of inclination and an considerably reduced temperature drift over the whole temperature range, this as the highest degree of accuracy of all **SEIKA** products.

A strong metal PG cable gland and the solid and compact housing for the whole Sensor box in connection with the high voltage signal output gives al together a high-quality system for use under many types of difficult working conditions.



## Applications

The **SB2G** is used everywhere, where inclination or acceleration measurements are wanted together with a high level DC voltage output. In particular in cars, lorries, radar systems, bridges, ships, in agricultural machinery and in all types of process machinery, just name it, and **SB2G** can be for very good use everywhere, where very high accuracy is asked for.

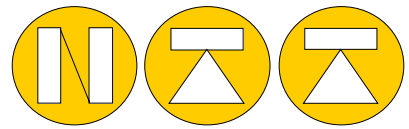
## Technical Data

Termination	Max.: 2 x 1,5 mm <sup>2</sup>
Cable gland	PG7 (Metal with integrated stress relief)
Measuring ranges	In accordance with NG Sensor
Protection degree	IP65
Mounting	Any direction
Working planes sensor (NG..Sensor)	Parallel and 90° to the base of housing
Supply voltage to the box	+8 ... +30 Volt
Operating current	Max. 5mA
Measuring range of the output signal	<b>+0,5 to +4,5 Volt = factory set-up</b>
Maximum range of the output signal	+0,05 to +4,95 Volt
Reference initial voltage	( 5+/-0,005) Volt ( max.10mA)
Output impedance	100Ω
Output signal zero	+2,5 Volt
Adjustable working range via pot.-meters	Signal-zero (2,5V), Span
Low-pass filter	Active, 3 <sup>th</sup> order, minimal ripple
Working temperature	-40 ... +85°C
<b>NG sensor temp. Drift span &amp; zero</b>	<b>-40 ... +85°C</b> <b>+/-1.5% F.S. over full range !</b>

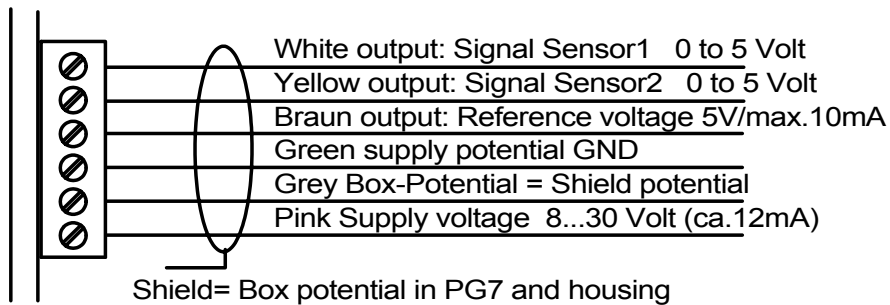
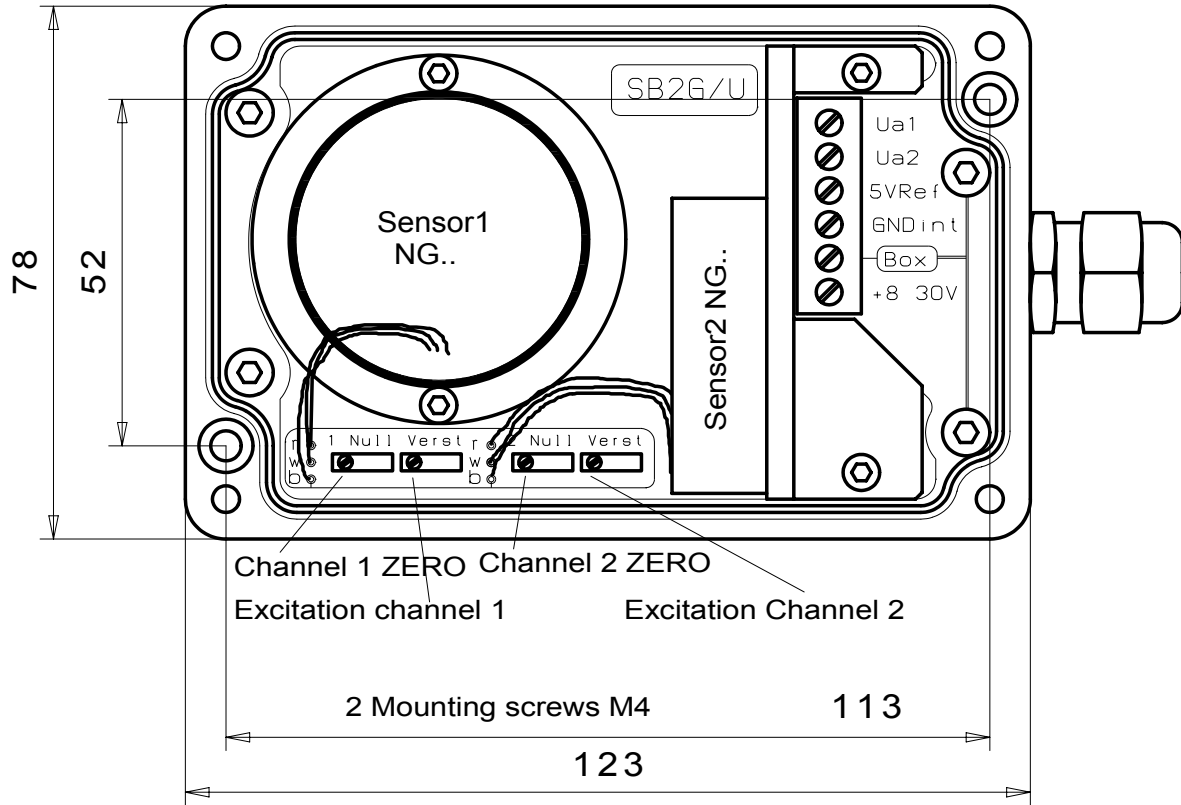
**Options:** Special measuring ranges, test report, Silicone filled housing, custom wiring

Type sensor used in SB2G	NG2	NG3	NG4
Measuring range	±10 degrees	±30 degrees	±80 degrees
Typical Noise-signal relationship	<± 0,003degrees	<± 0,008 degrees	<±0,016 degrees
Dimensions	See drawing		
Max. Non-linearity	0,1% from measuring value!		
Transverse Sensitivity	1% at 45° tilt		

**Please also look at NG brochure specification!**



Dimensions and pin assignments



**CAUTION! Do not short-circuit the operating voltage (8 to 30V) with one of the outputs!**