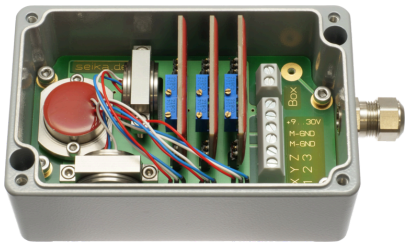


Sensorbox containing three SEIKA sensors and three signal conditioners with 0.5 ... 4.5 Volt or ±3.5 Volt output.

Features

- **robust pressure die cast aluminim housing (IP67) with saltwater proof coating**
- **twist free 4-point fastening of rigid, 3.2mm thick base PCB**
- **three integrated signal conditioners with 0.5V ... 4.5V or (optional) -3.5V ... +3.5V signal output**
- **extensive temperature drift compensation of the sensitivity**
- **all SEIKA sensors of the B, BDK, N and NB series can be mounted in multiple directions of operation in the housing**
- **the output signals for each sensor are calibrated to customer's specifications in the required directions of operation**
- **9V ... 30V supply voltage**
- **sensors and signal conditioners are electrically isolated from housing**
- **EMC protection**
- **internal, highly stable sensor supply voltages**
- **high mechanical overload resistance**
- **integrated reverse polarity protection**
- **low pass filter with optional choice of cut-off frequency for suppression of interference frequencies**

Description

The sensorbox SBG3U is a pressure die cast aluminium housing (IP67) with three integrated sensors for measuring accelerations and/or inclinations along three axes.

In addition to the sensors, the sensorbox contains three independent voltage signal conditioners, providing a 0.5V ... 4.5V or (optionally) ±3.5 Volt output. Furthermore, each conditioner includes an active low pass filter, whose upper cut-off frequency / setting time can be adjusted to suit the measurement task. Sensors and amplifiers are electrically isolated from each other and from the housing. Electronic temperature compensation largely compensates for the temperature drift of the implemented sensors' sensitivity. Optionally, the temperature drift of both offset and sensitivity can be reduced significantly through individual compensation.

The robust metal cable gland and compact housing size allow the use of this high quality measurement systems in harsh operating conditions.

Application

The SBG3U is suitable for applications requiring precise acceleration or inclination measurements along three axes under harsh environment conditions. Typical areas of application include construction, mining and agricultural machinery, transportation and conveyor systems, ships, automation technology as well as general mechanical engineering.

Specifications

Terminals	6 x 1.5mm^2 (plus 2 x 1.5mm^2 housing potential)
Cable gland	Standard: • M12 x 1.5, metal cable gland with integrated strain relief, clamping range 6mm ... 7.5mm Optional: • M20 x 1.5, metal cable gland with integrated strain relief, clamping range 7mm ... 12mm
Measuring range, Resolution, etc.	depending on implemented SEIKA sensors
Degree of protection	IP67
Mounting orientation	any (standard: wall mounting, cable on the right)
Supply voltage	9V ... 30V
Operating current	approx. 15mA
Normalized output voltage range	0.5V ... 4.5V (optional: ±3.5 Volt)
Output zero point	2.5 Volt (optional: 0 Volt)
Output impedance	100 Ohm
Low pass filter	active, 3rd order, minimal ripple
Operating temperature	-40°C ... +85°C
Weight	approx. 660g

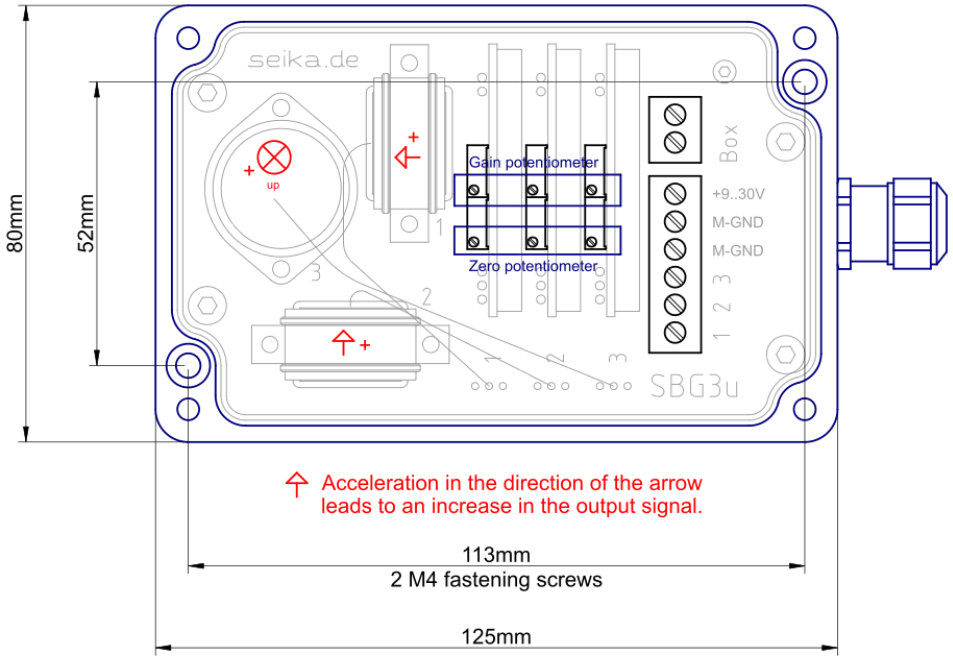
• The box is delivered with an individual calibration record that includes the precise offset and sensitivity values, the static characteristic curves and the linearity deviation curves.

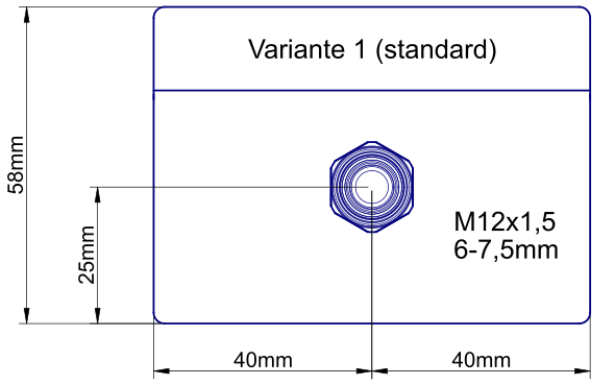
Options:

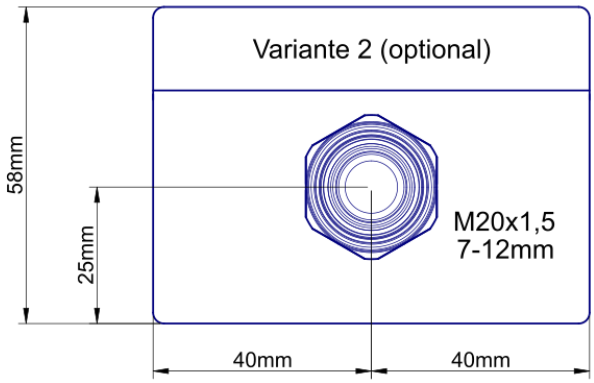
• special measuring ranges • silicon encapsulation • custom wiring

• individual temperature drift compensation of the offset and the sensitivity

Dimensions (in mm)







Connections