

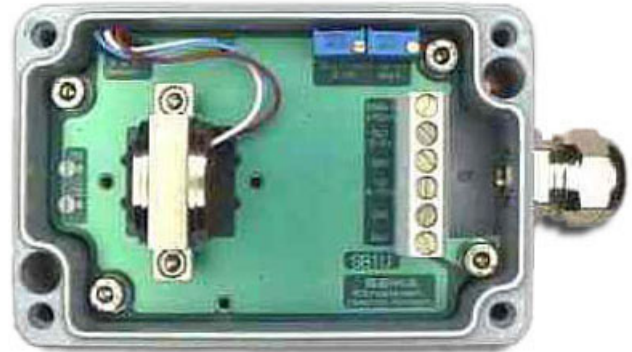


SB1U (0-5V)

Single Axis Inclinator Sensor Package

RIEKER
INCORPORATED

The SB1U is a rugged, environmentally sealed sensor package with an integrated inclinometer & signal amplifier for Analog Voltage 0...5 V output.



Features

- Specially designed aluminium housing for extra stable sensor platform
- IP65 in sea water resistant coated finish
- Integrated 0...5V amplifier
- Temperature compensation beyond the sensors own compensation data
- No extra power required
- The output signal of the SB1U can be scaled to customer's requirements
- Sensor and amplifier are galvanically separated from the housing
- Extensive EMC protection
- Highly stable sensor supply voltage
- Dynamic parameters are programmable
- 8-30 VDC power supply
- High overload resistance
- Reverse polarity protected
- Low-pass signal filter with optional setting of maximum frequency for suppression of interference frequencies

Description

The SB1U sensor box is packaged in a solid and compact pressure-cast aluminum housing with an integrated sensor for single axis inclination or acceleration measurements.

Within the box are 2 sections: An amplifier with a 0...5VDC output signal; and a separate highly stable power supply for the sensor, which can also be used as an external reference Voltage! The amplifier contains a low-pass filter for upper frequency limitation, with noise suppression filtering and a diode bridge that guarantees the electromagnetic compatibility. Both sensor and amplifier are galvanically isolated from the housing - further reducing susceptibility to outside noise. Specific response time constants and maximum current output limitations are additional options.

For a very high degree of accuracy, an NG-type sensor can be integrated into the SB1U box, which considerably reduces temperature drift over the entire temperature range. Add a strong metal PG cable fixing combined with the 2-wire current-loop output the SB1U provides a high-quality system for use under many types of harsh working conditions.

Applications

The SB1U is used where inclination or acceleration measurements need to be combined with a high level DC output. It has been used in building construction, mining, radar systems, bridges, ships, agricultural equipment, and all types of process machinery.

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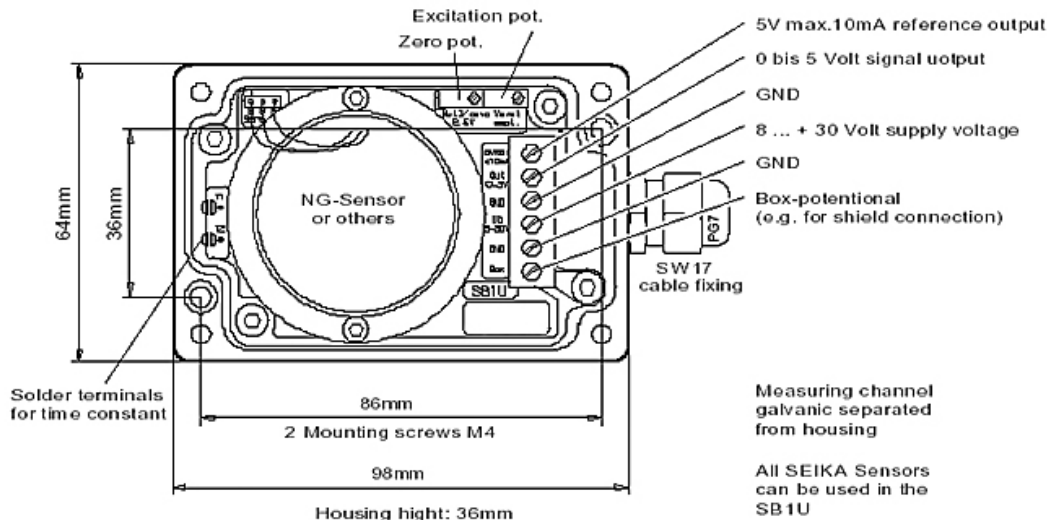
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Technical Data	
Termination/Cable diameter	max.: Max.: 6 x 1 mm ² / Ø 5 ... Ø7 mm
Cable fixing	PG7 (Metal with integrated stress relief)
Measuring ranges	In accordance with the actual sensor
Protection degree	IP65
Mounting	Any direction
Sensor measuring plane (N Series)	3 directions of mounting
Sensor measuring plane (NG Series)	Parallel to the base of housing
Accelerometer measuring directions (B or BD Series)	Place in X, Y, Z coordinates to the housing
Supply voltage to the box	+8 ... +30 Volt
Operating current	5mA
Maximum range of the output signal	+0.05 to +4.95 Volt
Reference initial voltage	(5+/-0.005) Volt (max.10mA) 20ppm/°C
Output impedance	100Ω
Adjustable parameters via potentiometers	Signal-zero (2.5V), Span
Low-pass filter	Active, 5 th order, minimal ripple
Operating temperature	-40 ... +85 °C
Options	
Special measuring ranges, test report, silicone filled housing, custom wiring	
The SB1u Sensor Box is extremely versatile, allowing various configurations with other Rieker sensors. If you have an application that requires alternative specifications, one of our engineers will be happy to discuss how to customize the box for your inclination or acceleration needs.	

SB1U Dimensions (in mm) - Shown with NG-type Inclinometer



Caution ! The supply voltage (8 to 30V) must NOT be incorrectly connected to any output signal.

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