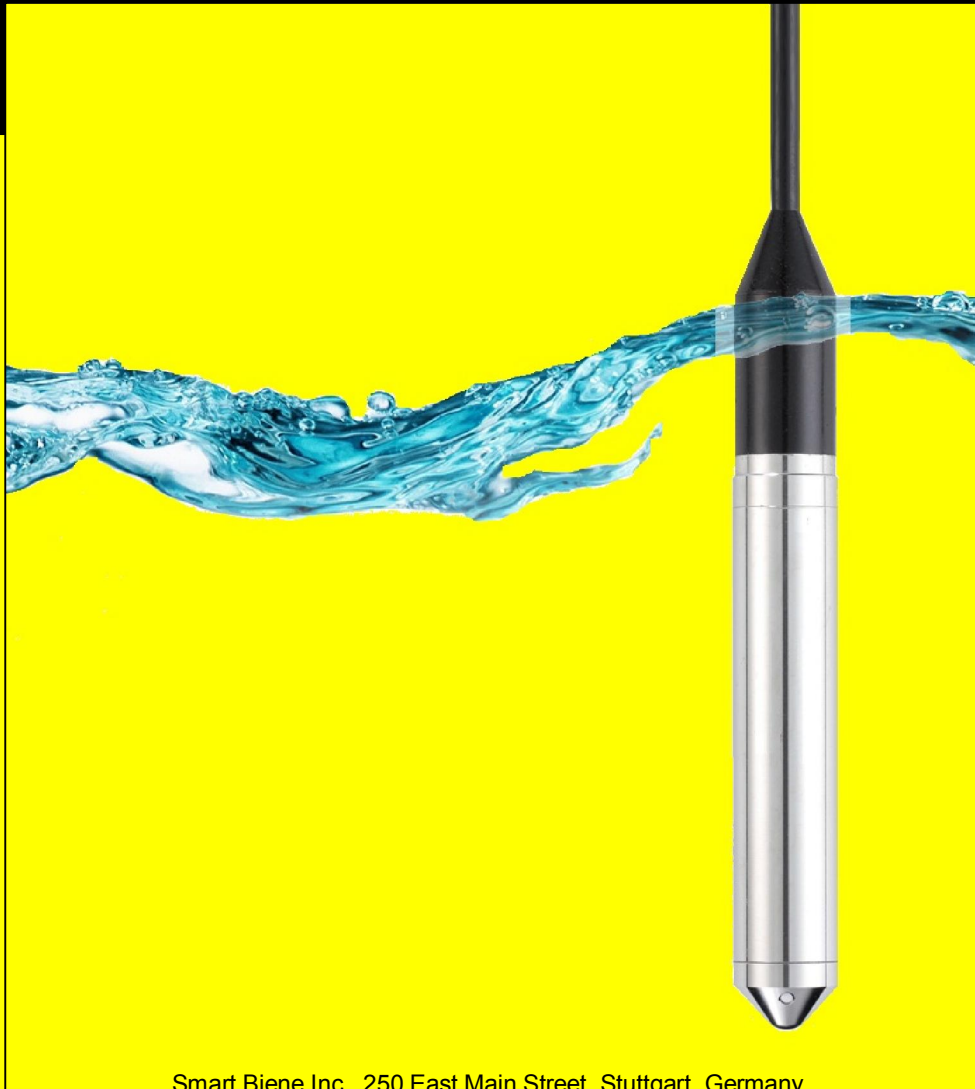


Hydrostatic Level Transmitter MODEL: SB-HL

SMART BIENE.



Smart Biene Inc., 250 East Main Street, Stuttgart, Germany.
Email: info@smartbiene.com



Measuring principle

SB-HL Level transmitter based on hydrostatic pressure measurement generally, measures the height. In an open vessel in accordance with the following principle:

- A liquid fluid generates a pressure which increases with the filling height. This pressure, increasing proportionally with the filling height, is called the liquid column.

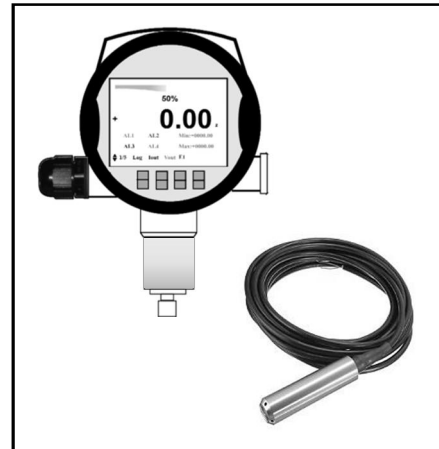


Figure 1. SB-HL

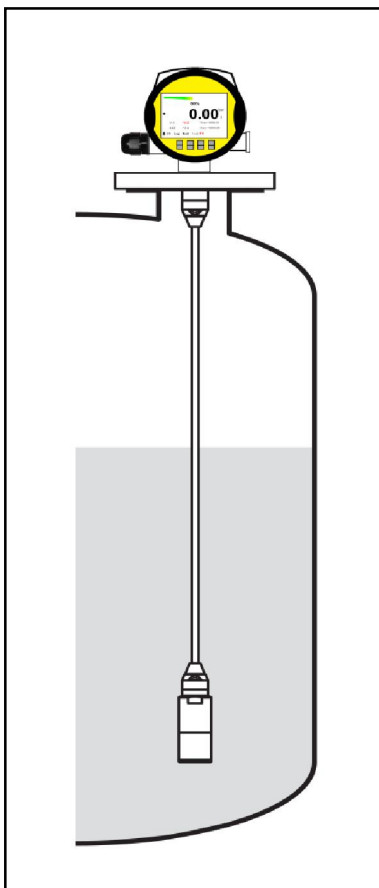


Figure 2. SB-HL as a tank level measurement

APPLICATIONS

The Hydrostatic Level Transmitter **SB-HL** was especially developed to measure levels in a wide range of liquids with different properties. Measurement of the product temperature is also possible. **SB-HL** is a submersible pressure transmitter for level measurement in **wells, basins and open vessels**.

Area of application:

The hydrostatic Level transmitter **SB-HL** was specifically designed to measure level in a wide range of liquids with widely different properties. Optionally it can measure the temperature of the medium.

Advantages:

Level measurement by means of pressure measurement is totally unaffected by foam or internal vessel installations. The hydrostatic pressure transmitters can be precisely adapted to the process by selecting an appropriate measuring cell and suitable housing materials.



MEASURING SPECIFICATIONS

Reference Condition: 25 °C (77 °F):

- Accuracy: +/-0.1% FS (URL) to +/-0.5% FS (URL).
- Stability: ±0.25% FS/year.
- Response Time: 30msec.
- Output Resolution: 0.05% FS (URL)
- LCD Accuracy: ±0.05% FS (URL) + last digit

*URL: Accuracy includes the effects of linearity, Hysteresis, and repeatability.

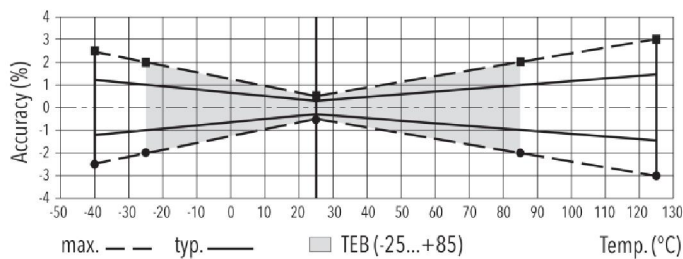


Figure 3. Accuracy VS Temperature

ELECTRICAL SPECIFICATIONS

- Display: 2.8 inch full-color TFT LCD with LED Backlight.
- Power Supply: 24VDC.
- Voltage Output: 0-10 , 0-5 V, MIN Load: 10KΩ
- Current Output: 0-10 , 0-20 , 4-20 mA , MAX Load: 500Ω
- Relay Output: 2 or 4 Relays, 0.5A-220VAC or 4A-30VDC.
- 2 Wire Modbus-RTU communication protocol.
- Insulation Resistance: 50Vdc (>100MΩ).
- All In/Out Ports: 30VDC Circuit Protected.
- CE Compliance: EMC Directive 2004/108/EC IEC/EN 61326-1: 2006 (EMI Class A/ EMS Table 2).

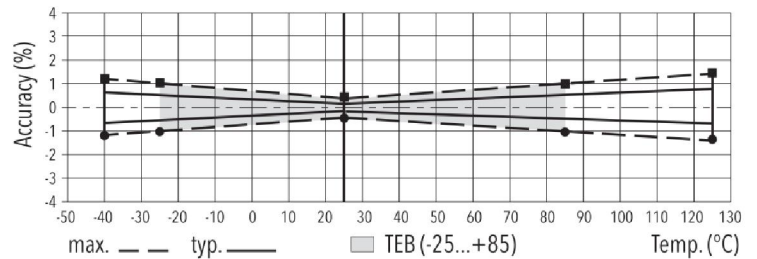


Figure 4. Accuracy VS Temperature

MECHANICAL SPECIFICATIONS

- Submersible pressure transmitter for level measurement in **wells, basins** and **open vessels**.
- Robust NEMA 4X (IP66) aluminum die cast housing for panel.
- Media: Liquid Fluids compatible with SS-316, SS416L and pH17-4.
- Standard Ranges : 0...1 to 0...250m H₂O
- Sensor Material: ceramic, Al₂O₃, (96%)
- Mounting torque: 15...20 N.m.
- Mounting Accessories: U-Bolt
- Weight: ~ 1900 g.

ENVIRONMENTAL CONDITIONS

- Operating temperature: -25 ...+85°C
- Media temperature: -20 ...125°C
- Humidity: max. 90%
- Relative vibration: 2g (10...2000 Hz)
- Shock: 5g/ 8 ms.



MODEL SELECTION

S B - H L - 3 - S - 1 0 4 0 - G - - - 0 0 2 5 - U L - -

Device Type:

HL: Hydrostatic Level Transmitter.

Measuring Accuracy:

1: ±0.15% FS.

2: ±0.25% FS.

3: ±0.3% FS.

4: ±0.5% FS.

Wetted Parts (Submersible sensor):

S: SS-316

L: SS-316L

Output:

1: Current Output (0-20/4-20 mA)

0: NO Current Output

1: Voltage Output (0-5/0-10 V)

0: NO Voltage Output

2: Two-Relay Output

4: Four-Relay Output

1: Modbus-RTU Output

0: NO Modbus-RTU Output

Panel Connection Type:

G: G 1" -male

Measuring Range: (mH₂O)

1040: 04

0010: 10

0016: 16

0025: 25

0040: 40

0060: 60

0100: 100

0160: 160

0250: 250

Options:

UL: USB Connection & Data Logger.

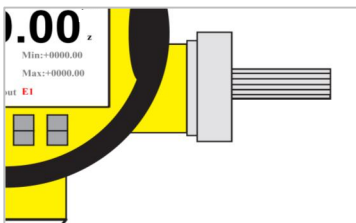
T: External Trimming Potentiometer.

PT: **Temperature Measurement (PT100).**

EXTERNAL TRIMPOT

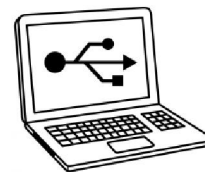
External trimming Potentiometer can be used for External Configuration of ALARM Value:

- No need to Enter in Menu
- You can see alarm value in main page 1.
- User friendly for machine operators.



Adjustment via PC-USB

- You can also adjust device via USB connecting to pc and using device Software, refer to page 17 .



WWW.SMARTBIENE.COM

Smart Measurement.

All specifications are subject to change without notice.
All sales subject to standard terms and conditions.
© Smart Biene Inc. 2012/09/15

Smart Biene Inc., 250 East Main Street, Stuttgart,
Germany.
Email: info@smartbiene.com