



# SHLT02 Diffusive Silicon Level Transmitter

## Product Overview

SHLT02 Diffusive Silicon Series level transmitters are the extension and development of pressure transmitter technology. According to the principle that the liquid with different specific gravity are in linear relation to the pressure generating at different height to realize the accurate measurement and transmission of volume, level height and weight of water, oil and paste-state matters. They are widely used in the industries such as power, petroleum, chemical engineering, metallurgy, water utilization, running water and food, etc.

## Features

- Simple installation, convenient use, strong interchange ability; hi-quality, high sensitivity, fast response rate, can accurately react the subtle change of moving or static level, and high measuring accuracy.
- Possess the ability of intrinsically safe explosion separation and explosion-proof; can be applied to all kinds of hazardous fields.
- Can be equipped with LCD digital display
- 4~20mA DC two-wire output, strong interference-resistant ability, long transmitting distance.
- Fine and unique zero, temperature shift and non-linearity compensation ensure the instrument in the range of using conditions to have a stable accuracy for a long time.

## Technical Specification

Table 1

|                          |                                              |
|--------------------------|----------------------------------------------|
| Measuring range          | (0-0.5~200)m ( $\rho=1\text{g/cm}^3$ )       |
| Over load                | 150%FS~200%FS                                |
| Accuracy                 | 0.5 ,0.2                                     |
| Medium                   | Compatible to stainless steel or PTFE        |
| Working temperature      | (-20~80) °C, medium should not be solid      |
| Power supply             | (12~45)VDC, normal 24VDC                     |
| Output                   | 2 wire 4-20mA,4-20mA+HART, MODBUS            |
| Ingress protection:      | Sensor IP68, Transmitter IP65 (Std.) or IP67 |
| Stability                | 0.2%FS/year                                  |
| Working temperature      | (-20~85) °C, medium should not be solid      |
| Stability                | $\leq \pm 0.2\%$ /URL (12 months)            |
| Temperature compensation | 0-50 °C                                      |
| Response time            | 0.25s                                        |
| Effect of power supply:  | $\leq \pm 0.005\%$ /URL/V                    |

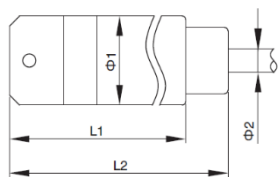
## Model Selection

Table 2

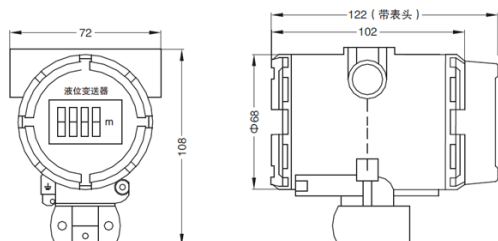
| Item                  | Code   | Description                                 |
|-----------------------|--------|---------------------------------------------|
| Type                  | A      | 4-20mA Output (0.5% accuracy)               |
|                       | S      | 4-20mA & Hart Protocol (0.25% accuracy)     |
|                       | R      | Modbus RS485                                |
| Product               | SHLT02 | Diffusive Silicon Level Transmitter         |
| Digital indicator     | 1      | No indicator                                |
|                       | 3      | LCD indicator                               |
| Measuring range       | 1      | 0~1m (H <sub>2</sub> O)                     |
|                       | 2      | 0~5m (H <sub>2</sub> O)                     |
|                       | 3      | 0~3.5m (H <sub>2</sub> O)                   |
|                       | 4      | 0~7m (H <sub>2</sub> O)                     |
|                       | 5      | 0~10m (H <sub>2</sub> O)                    |
|                       | 6      | 0~20m (H <sub>2</sub> O)                    |
|                       | 7      | 0~35m (H <sub>2</sub> O)                    |
|                       | 8      | 0~70m (H <sub>2</sub> O)                    |
|                       | 9      | 0~100m (H <sub>2</sub> O)                   |
|                       | X      | X-Custom level range                        |
| Explosion Proof       | N      | Non explosion proof (Std.)                  |
|                       | 1      | Intrinsically safe, Exia II CT6             |
|                       | E      | Explosion proof, Exd II CT6                 |
| Installation          | 1      | Thread M20*1.5                              |
|                       | 2      | Thread 1" NPT                               |
|                       | 4      | Thread 2" NPT                               |
|                       | 3      | Flange connection (Specify flange standard) |
|                       | x      | Custom                                      |
| Probe material        | A2     | Stainless steel 304 (Std.)                  |
|                       | A3     | Stainless steel 316L                        |
|                       | A4     | PTFE material                               |
|                       | A5     | Others                                      |
| Cable sheath material | B1     | Polyethylene                                |
|                       | B3     | PTFE                                        |
|                       | B2     | Others                                      |
| Power supply          | V1     | 24V DC                                      |
|                       | V2     | Others                                      |
| Cable length          | L **   | L range 1-200m, for example 5m is L005      |

**Note:** Please provide density of liquid when ordering. Otherwise we will calibrate the instruments with water (4°C, density 1g/cm<sup>3</sup>).

## Dimension



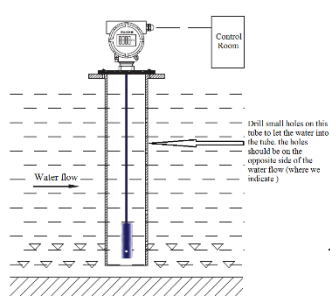
Sensor Dimensions



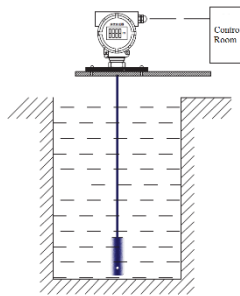
Transmitter Dimensions

| Type                | L1  | L2  | Φ1 | Φ2  |
|---------------------|-----|-----|----|-----|
| Standard            | 92  | 105 | 27 | 7.2 |
| Anti-thunder Type   | 112 | 125 | 27 | 7.2 |
| Anti-corrosive Type | 72  | 90  | 30 | 7.5 |

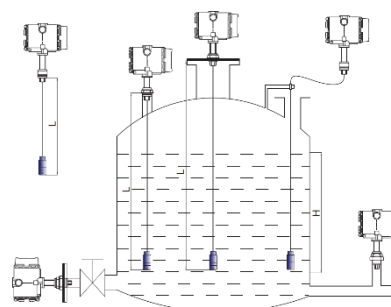
## TYPICAL INSTALLATION



Water with Vibration



Static Water



Vessel Installation