

SONAR-410 FTS-Flex ST

Ultrasonic Level Sensor

SONAR-410 FTS-Flex is a probe designed specifically for vertical storage tanks (VSTs), along with a console.



Function Description

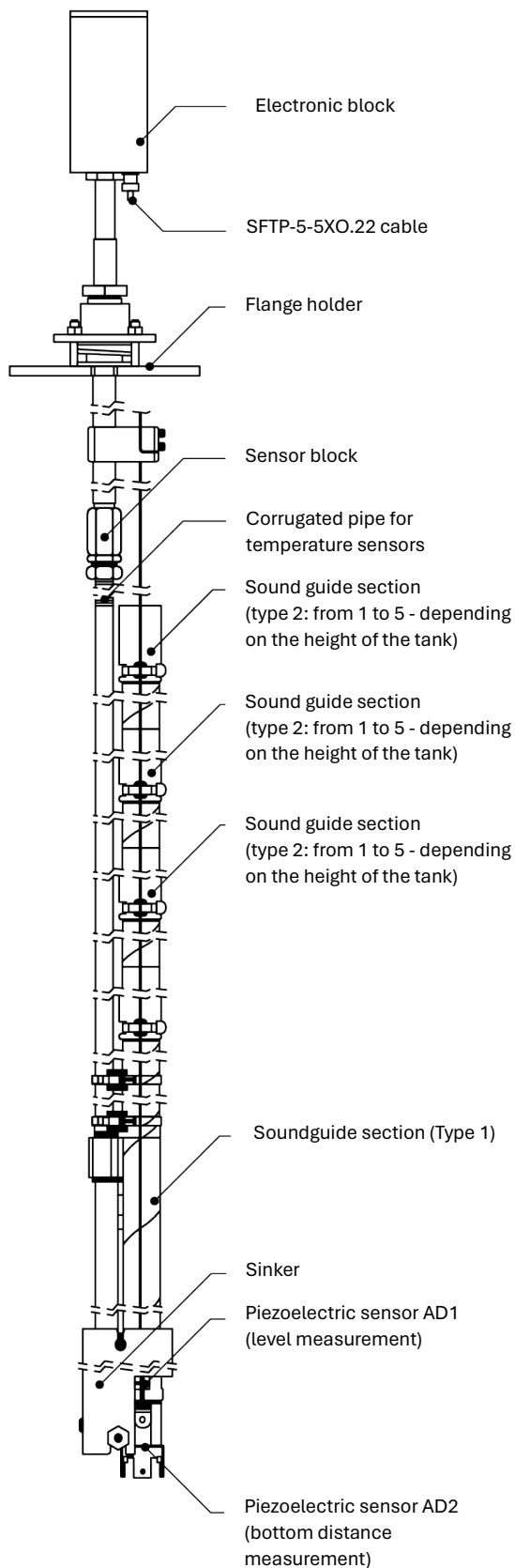
When measuring the liquid level, the principle relies on pulse ultrasonic echolocation. The ultrasonic probe is based on a sensor block, made of stainless steel corrugated pipe with two piezoelectric sensors (for level and distance to the bottom measurements) and a set of sound waveguide modules (2 meters to 5 meters),

enabling liquid level measurement in tanks up to 14 meters. Its special design allows to bend the probe in any direction, facilitating compact packaging to reduce transportation costs. The probe has a very simple installation design. It comes with a density calculator (software option) included in the package.

Technological Advantages of Freiberg Technologie

- Implementation of the method does not require high demands on the wear resistance and durability of equipment construction.
- Measurement and calculation results are displayed on the level gauge operator's monitor and transmitted to the facility's automated control system.
- The simplicity of the transducer's construction and its installation method onto/in tanks result in easy servicing and a simplified service support regime, eliminating the need for expensive spare parts.





The main technical characteristics of the level gauge modification **FTS-Flex ST**

- The measurement range for liquid levels is from 100 mm to 14000 mm, inclusive.
- The maximum permissible inaccuracy in measuring the liquid level is ± 1.0 mm.
- The range of measurements for the product water level is from 5 mm to 100 mm, inclusive.
- The maximum permissible inaccuracy in measuring the product water level is ± 1.0 mm.
- The temperature range of the liquid inside the reservoir is from -10°C to $+30^{\circ}\text{C}$, inclusive.
- The maximum permissible inaccuracy in temperature measurement is $\pm 0.5^{\circ}\text{C}$.
- The operating temperature range for the components of the probe is as follows:
 - Sensor block: from -40°C to $+50^{\circ}\text{C}$;
 - Electronic block: from -40°C to $+50^{\circ}\text{C}$.
- The degree of protection of the components of the level gauges against water, dust, and foreign solid particles is as follows:
 - IP68 for the sensor block of the probe;
 - IP65 for the electronic block of the probe.
- The components of the probe have explosion-proof design and are marked accordingly:
 - Sensor block is marked as "0Ex ia IIB T4 Ga"
 - Electronic block is marked as "1Ex ib [ia Ga] IIB T4 Gb"
 They can be installed and used as follows:
 - Sensor block can be used in hazardous area zone 0
 - Electronic block can be used in hazardous area zone 1
- The probe can be used to measure the level of sound-transparent liquids that are non-aggressive to the materials from which the probe components are made. These materials include stainless steel 12X18H9T, glass-reinforced plastic tube covered with anti-static enamel, and steel grade St10.

