

SONATAX sc SLUDGE BLANKET LEVEL PROBE

Applications

- Wastewater
- Industrial Water



Continuous ultrasonic measurement of sludge blanket level.

The Hach SONATAX sc is designed for use in primary and secondary clarifiers, thickeners in wastewater treatment, raw water clarifiers, sludge settling basins in water treatment, and special industrial applications.

Superior Accuracy

The digitalized SONATAX sc probe features an ultrasonic measurement system, which automatically scans a range of frequencies to find the ideal settings for the application. Built-in software can disregard signals reflected from tank structures such as pipes, rods, etc. Besides this temperature compensation, and position sensor ensure accuracy and reliability.

Reduced Maintenance with Innovative Wiper Design

The Hach SONATAX sc Sludge Blanket Level Probe features a wiper with a magnetic connector that effectively cleans the probe. No o-rings to replace and no tools needed to replace the wiper blades.

Visual Performance Indicator Enhances Troubleshooting

A visual performance LED indicator light on the SONATAX sc probe provides assurance of proper performance at a glance.

Multi-probe, Multi-parameter Capability

Expand systems as needed without additional controller investment. Hach sc digital controllers can accept from two to eight probes, accommodating any combination of parameters with Hach's line of digital probes.

Increased Efficiency Saves Energy and Money

The Hach SONATAX sc Sludge Blanket Level Probe can decrease your power costs by automatically actuating pumps to control pump rates for WAS/RAS. Other benefits of continuous blanket level measurement include early warning information of solids wash-out potential at the outlet and optimized sludge extraction to minimize dewatering and final disposal cost.

Specifications*

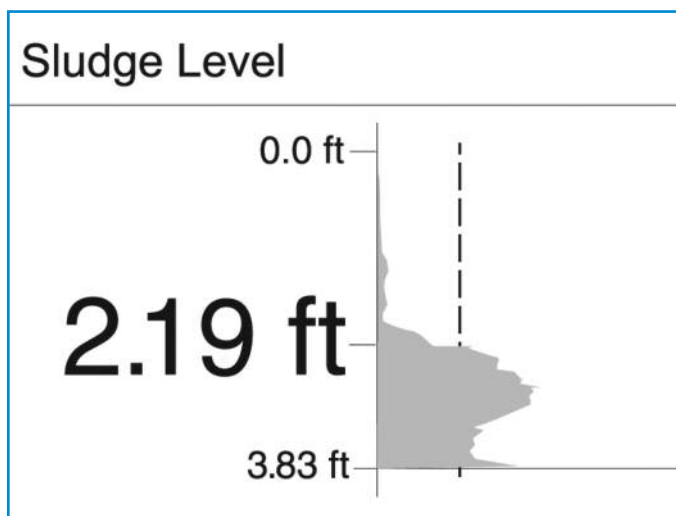
Measuring Principle	Ultrasonic measurement
Range	0.2 to 12 m (0.6 to 40 ft.)
Resolution	0.03 m (0.09 ft.)
Accuracy	±0.1 m (±0.33 ft.)
Operating Temperature	2 to 50°C (35 to 122°F)
Pressure Range	≤ 0.3 bar or ≤ 3 m (≤ 4.35 psi or ≤ 10 ft)
Power Requirement	12 V, 2.4 W, provided by sc controller
Measurement Interval	10 to 1800 seconds (adjustable)
Probe Mounting	Fixed pole mount, pivot mount or chain mount

Calibration	Factory calibrated
Probe Construction	Wiper: Silicon Body: Stainless steel Face: Polyoxymethylene
Certifications	CE
Dimensions	130 x 185 mm (5 x 7.3 in.)
Weight	3.5 kg (7.7 lbs.)
Cable Length	10 m (33 ft.)
Warranty	2 years
Display Unit	sc200 controller or sc1000 controller

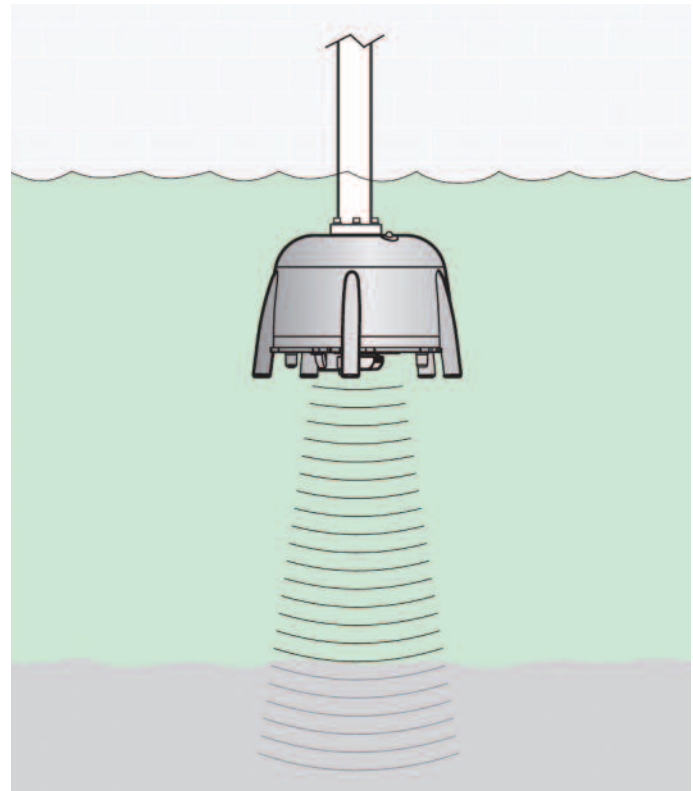
*Subject to change without notice.

Principle of Operation

The Hach SONATAX sc Sludge Level Probe uses an ultrasonic pulse to accurately measure the sludge level. An ultrasonic signal sent from the probe is directed towards the sludge blanket in the tank (figure at right). Height and depth measurements are based on the time it takes for the ultrasonic echo to return to the probe and are displayed on the controller (figure below).

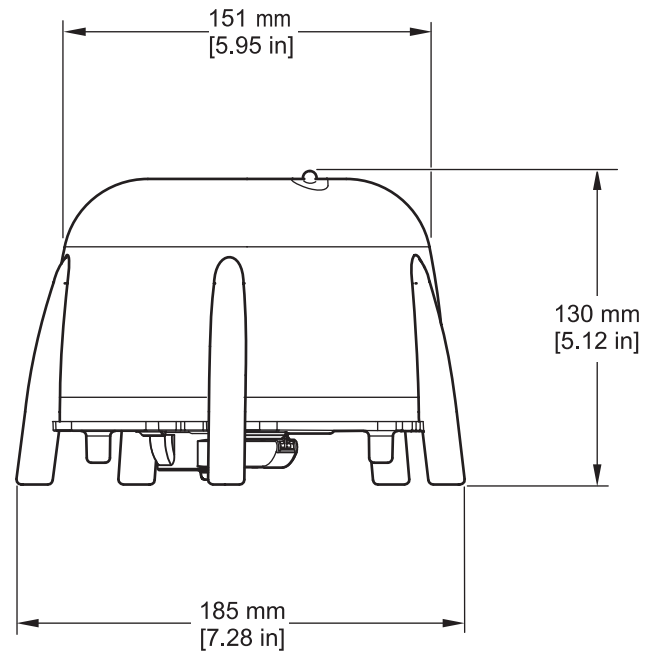


NOTE: Graphical display of sludge profile is available only with the sc1000 controller.



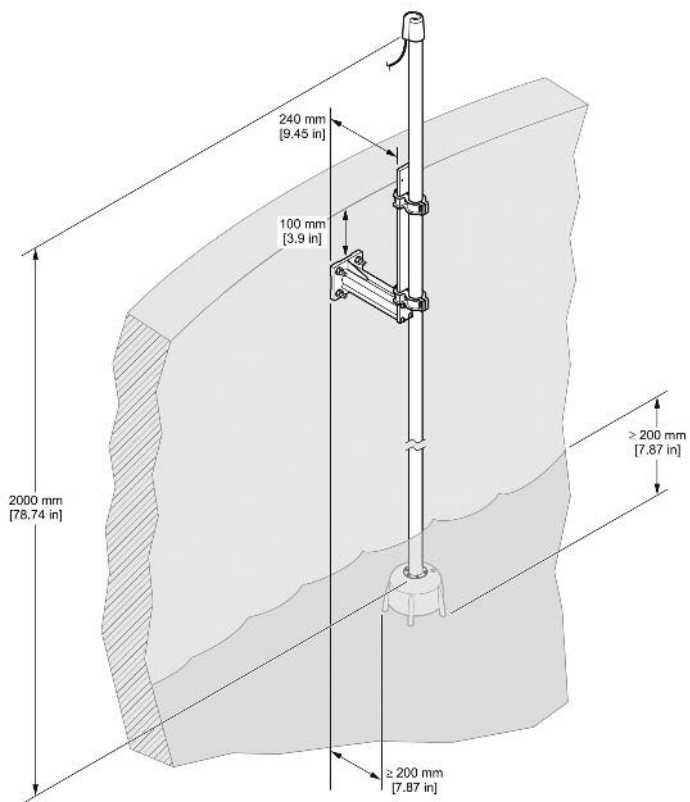
Dimensions

The Hach SONATAX sc Sludge Level Probe must be installed with the ultrasonic head submerged at least 20 cm (8 in.). Protect it against larger objects in the sewage flow such as branches or ice. Slight rocking of the mounting link of the ultrasound head will not affect measurements.

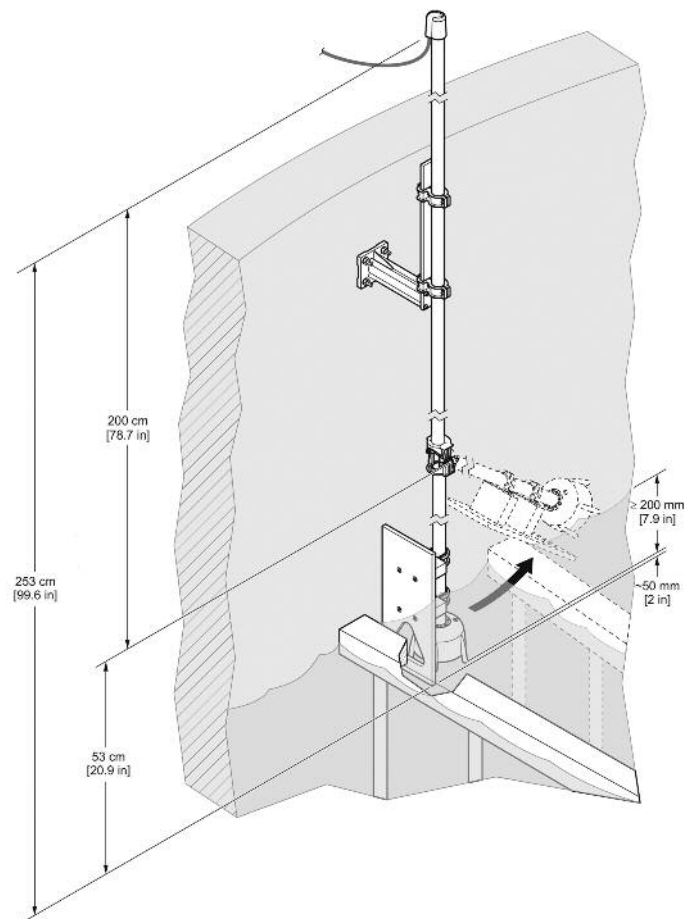


Installation / Mounting

Installation of SONATAX sc with stainless steel fixed point mount (Prod. No. LZY714.99.42120).



Installation of SONATAX sc with stainless steel pivot mount for operation with skimmer (Prod. No. LZY714.99.62160).



Ordering Information

Single Probe Systems

2976300 SONATAX sc System; includes one SONATAX sc probe, pivot mount hardware, and sc200 standard controller

Single Probe Systems with Digital Communication

2976200 SONATAX sc System; includes one SONATAX sc probe, pivot mount hardware, and sc200 controller with RS-232/485 MODBUS® output

2976100 SONATAX sc System; includes one SONATAX sc probe, pivot mount hardware, and sc200 controller with Profibus DP

Note: Power cords must be ordered separately.

SONATAX sc Probes

Each probe is equipped with 10 m (33 ft.) cable

LXV431.99.00002 One SONATAX sc Sludge Level Probe

5773000 One SONATAX sc Sludge Level Probe with one pivot mount hardware

5773100 Two SONATAX sc Sludge Level Probes with two pivot mount hardware

Note: For information about Hach sc controllers, please see LIT2403 and LIT2665.

Cable Accessories

5796000 7.6 m (25 ft.) Extension Cable

5796100 15.2 m (50 ft.) Extension Cable

5796200 30.5 m (100 ft.) Extension Cable

Maximum total length of cables: 50 m (164 ft.)

Accessories

LZY714.99.42120 Fixed Point Mount for probe
For mounting probe at a fixed location.

LZY714.99.00030 Extension pipe 1m (3.3 ft.)
For fixed point mount LZY714.99.42120

LZY714.99.00040 Extension pipe 2m (6.6 ft.)
For fixed point mount LZY714.99.42120

LZY714.99.62160 Pivot Mount for probe (0.35m (1.15 ft.) extension pipe)
For mounting probe on a pivot assembly for clarifiers with skimmers.

LZY714.99.72160 Pivot Mount for probe (1 m (3.3 ft.) extension pipe)
For mounting probe on a pivot assembly for clarifiers with skimmers.

LZX414.00.73000 SONATAX sc Rail Mounting Assembly
Rail Mount must be ordered with either LZY714.99.42120 or LZY714.99.72160 or LZY714.99.72160.

LZX914.99.11300 Chain Mount Assembly for SONATAX sc
9202900 120V Power Cord for sc200 with Strain Relief

9220600 Sun Shield for sc200 controller

LZX328 Wiper Blades for Probe, replacement only, pkg. of 5

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