

# 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\*

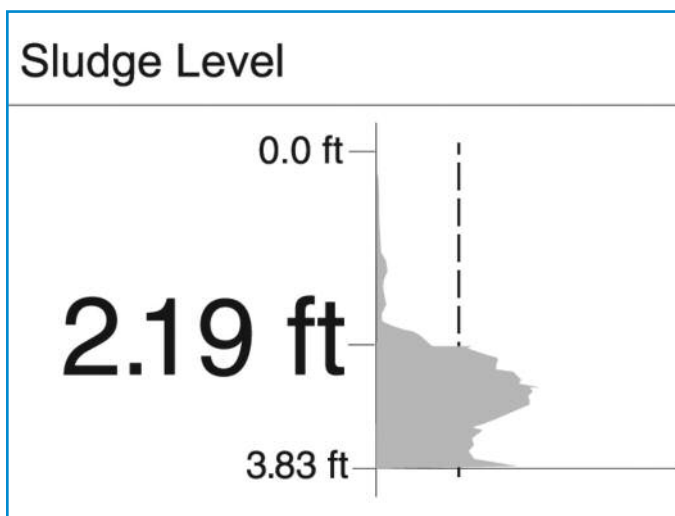
<b>Measuring Principle</b>	Ultrasonic measurement
<b>Range</b>	0.2 to 12 m (0.6 to 40 ft.)
<b>Resolution</b>	0.03 m (0.09 ft.)
<b>Accuracy</b>	±0.1 m (±0.33 ft.)
<b>Operating Temperature</b>	2 to 50°C (35 to 122°F)
<b>Pressure Range</b>	≤ 0.3 bar or ≤ 3 m (≤ 4.35 psi or ≤ 10 ft)
<b>Power Requirement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

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

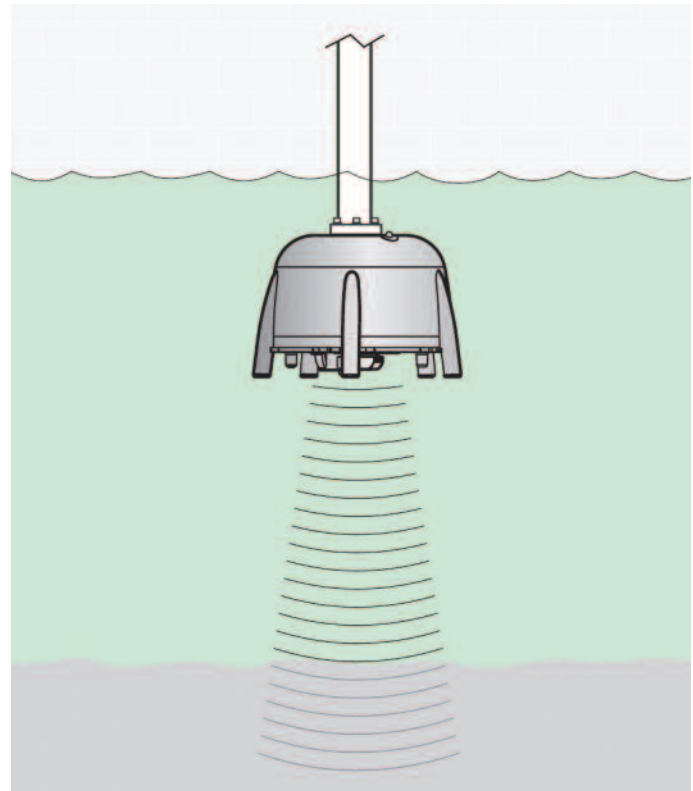
*\*Subject to change without notice.*

## 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).

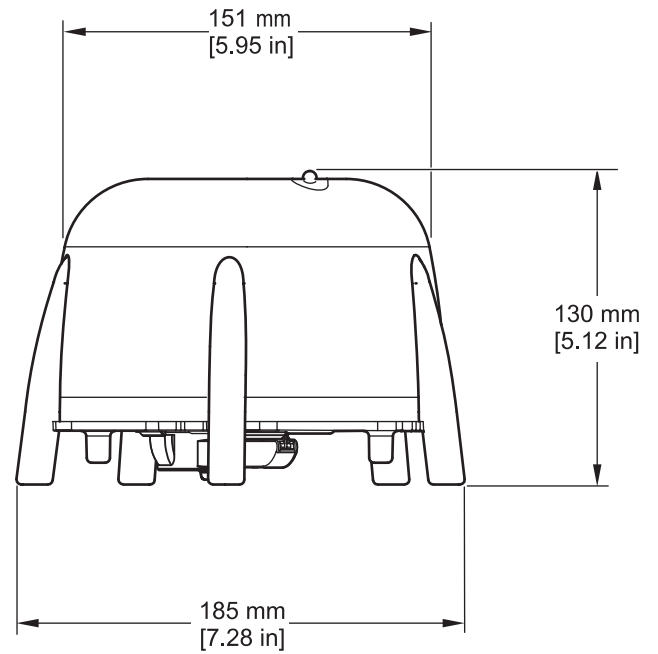


*NOTE: Graphical display of sludge profile is available only with the sc1000 controller.*



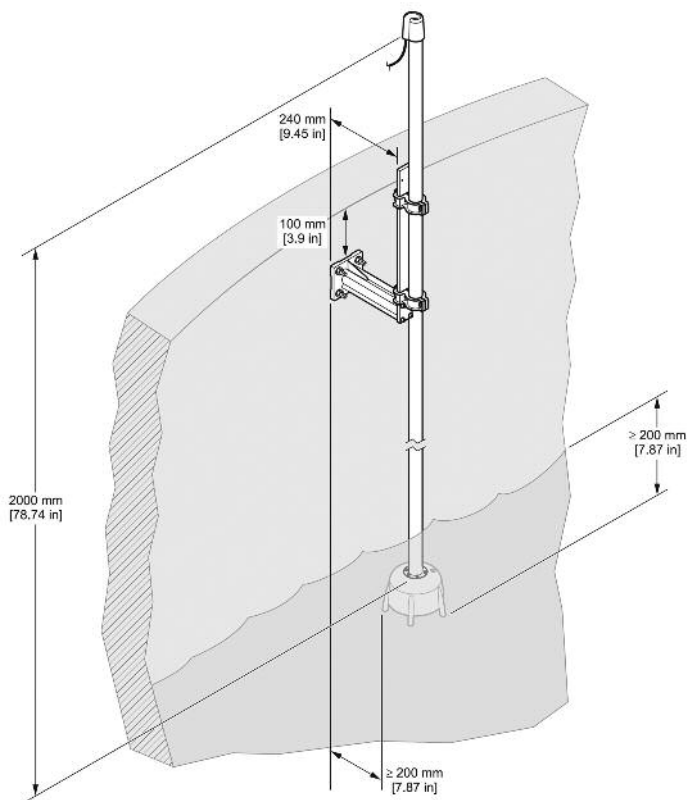
## Dimensions

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.

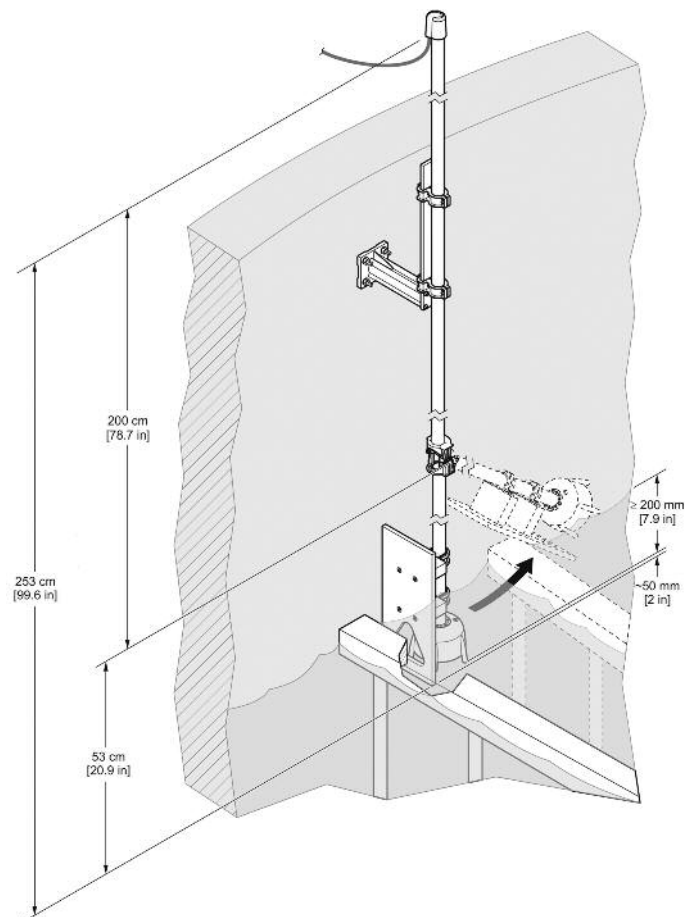


## Installation / Mounting

*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

## HACH COMPANY World Headquarters: Loveland, Colorado USA

United States: 800-227-4224 tel 970-669-2932 fax orders@hach.com

Outside United States: 970-669-3050 tel 970-461-3939 fax int@hach.com

**hach.com**

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