



Recorder



Flow



Pressure



Temp



Analyzer



Level

Datasheet

Sludge Concentration Electrode

SUP-ADT3300

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Datasheet

Sludge Concentration Electrode SUP-ADT3300

Self-cleaning sludge consistency sensor is based on the principle of combined infrared scattering method, and according to ISO7027 infrared scattering light technology, the sludge concentration is determined without the influence of chroma. Sensor without reagent, no pollution; More economical and environmentally friendly. The product is equipped with a self-cleaning brush to eliminate air bubbles and reduce the impact of contamination on measurements for longer maintenance cycles.

Applications

- process control
- Sludge treatment and disposal
- Production process monitoring
- Resource recovery and utilisation
- Surface water monitoring
- Groundwater monitoring

Features

- Digital sensor, RS485 output, MODBUS protocol.
- Infrared scattered light detection technology with reliable repeatability and stability.
- Sapphire custom optical windows and filters are resistant to ambient light and chromaticity.
- With self-cleaning brush to prevent the attachment of microorganisms and extend the maintenance cycle.
- Built-in calibration parameters for easy on-site use and secondary calibration.



Sludge Concentration Electrode

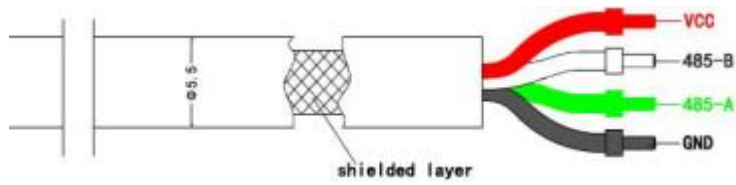
Principle

The sludge concentration electrode operates mainly on two principles. Optical scattering: a light beam hits the sludge suspension, and the scattered light intensity, detected by the electrode's light source and detector, correlates with the sludge concentration. After calibration, the concentration can be calculated from the corresponding electrical signal. Electrochemical sensing: charged sludge particles react on the electrode surface, creating a potential difference related to the concentration. Measuring and calibrating this difference allows for its determination.

Parameters	
Measurement Principle	Scattering method
Range	0-50000mg/ L
Accuracy	±5% (depends on the homogeneity of the activated sludge)
Resolution	0.1mg/ L
Sensor Size	Φ55mm * 214mm
Power	0.2W(non wiping) 0.8W(wiping) Suggested Power Supply: DC 9-24V, >500mA
Temperature Range	0-50℃
IP Range	IP68
Maximum Pressure	3bar
Self-cleaning System	One-piece self-cleaning brush
Sensor Interface	RS-485, MODBUS Protocol
Assemble	Input Installation
Cable Length	10m (default), customized
Calibration	One-point or Two-points Calibration
Body Material	316L

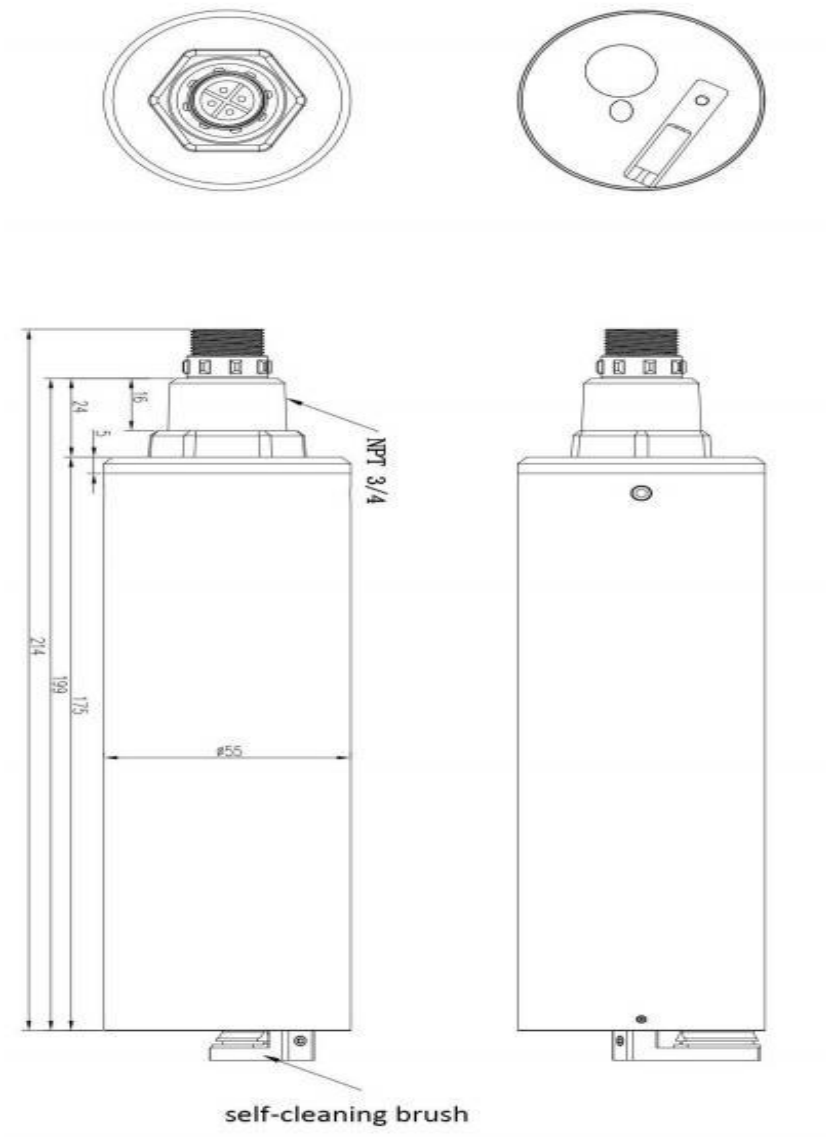
Wiring

4 wire AWG-24 or AWG-26 shielding wire. OD=5.5mm



- 1, Red—Power (VCC)
- 2, White—485 Date_B (485_B)
- 3, Green—485 Date_A (485_A)
- 4, Black—Ground (GND)

Dimension



Installation

■ Installation

Sensor Installation

(1) Wiring and power supply

- ① Do not use the sensor cable to pull the sensor! It is required to install sensor in a secure and stable mounting bracket.
- ② The female and male connector of sensor cable should be screwed tightly to avoid moisture incursio.



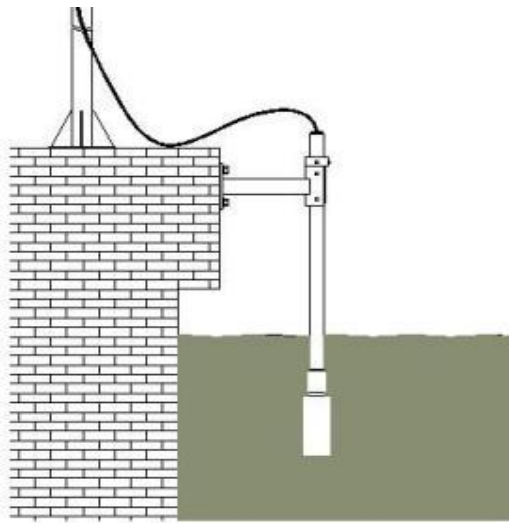
- ③ Make sure power supply voltage is correct before power on.

(2) Sensor installation

- ① It is recommended to install the sensor vertically with electrodes facing down.
- ② In consideration of the fluctuation of water level, install the sensor below water level of 30cm, and try to install it in the position where there are no bubbles in the water;
- ③ Considering the basic principles of optics, Please keep the sensor. The end of the light window is not less than 10cm from the bottom of the container/related device!

Fixed Installation on Site

Fixed mounting with NPT3/4 thread at the end.



Warning

1. Please install the protective mesh cover correctly.
2. Do not use the sensor cable to lift the sensor.
3. Do not cover the measuring surface with lifting accessories.

Ordering code

SUP-ADT3300-WE-1-A5-A-B-10-M3							Description
SUP-ADT3300	-	-	-	-	-	-	-
Measurement Range	WE						0-15g/L
Electrode Scraper		1					Yes
Thread Type			A5				NPT3/4 Thread
Output				A			RS485
Power Supply					B		12VDC
Cable Length						10	10m
						20	20m
						30	30m
						XX	Others
Housing Material							M3 316LSS