





Sludge Interface Sludge Level Sludge Profile





- No readjustment required
- Sensor-integrated fully automatic cleaning equipment for extreme requirements

algae growth on the sensor face. Wiping cycles can be set freely.

The integrated wiper is to avoid incrustation and

The NivuScope 2 is particularly suitable for use in:

- Wastewater treatment plants
 Primary and secondary clarification tanks, thickeners
- Fresh water treatment facilities Sludge sedimentation tanks, filters
- Flue gas desulphurisation plants Sedimentation tanks
- Aluminium industry Cleaning tanks and thickeners
- Paper industry
 Flotation facilities
- Mining Washing
- Construction materials
 Cleaning facilities
- Industry/Chemical Heavy metal separation Sedimentation monitoring Brine monitoring Crystal growing

NivuScope 2 makes your tanks and basins transparent.

The Measurement Method

The sensor emits directed high frequency impulses into the liquid.

For that purpose, the sensor must be immersed into the liquid to be measured for a few centimetres. However it necessarily shall be positioned always above the topmost interface to be measured. Solid particles or sludge contained in the liquid will reflect the sound waves back to the sensor, which subsequently converts the acoustic signals into electric signals. The intensity of the received signal depending on the ultrasonic transit time is evaluated and will be indicated as a graph on the display.





Evaluation

NivuScope 2 is equipped with a back-lit graphic display for information and adjustment purposes. Screens indicated can be easily interpreted without the need for expert knowledge and the best suitable evaluation algorithm for the respective application can be selected from four presets. The settings are largely completed as soon as the tank depth or the measurement range has been entered additionally. Anything else is done by the NivuScope 2. The display indicates multiple parameters such as sludge level, relay condi-

tions and echo profiles.



Initial Start-Up

The NivuScope 2 can be programmed very easy either by using the front-side keypad or via the RS232 interface utilising the PC software.





Echo image representation on PC

Features

The NivuScope 2 has two separate measuring channels to connect type VT or type P air-ultrasound sludge level sensors. Hence it is possible to monitor two hydraulically separated sedimentation tanks by using two sludge level sensors. Combining a sludge level sensor and an air-ultrasound sensor furthermore allows to control sludge water discharge. In contrast to electro-mechanical / optical

measurement systems, NivuScope 2 de-

tects interfaces or density changes independent from the absolute density. This allows to e.g. safely avoid the topmost interface in the secondary clarification stage. The same applies for the sludge storage in the secondary clarification tank, where the sludge level must not fall below the minimum.

Recommended Installation

Wall mounting bracket for easy sensor removal

- with solid stainless steel tube for rigid installation
- with flexible arm sensor assembly for pendulous installation with skimming equipment on the water surface





Specifications



Enclosure also suitable for DIN rail mounting

Dimensions in mm

Transmitter

Supply power	• 100 to 240 V AC, 50/60 Hz or • 22 to 28 V DC
Power consumption	20 Watt (14 Watt typical)
Enclosure	wall mount enclosure, also suitable for DIN rail mounting
	• material: Polycarbonate
	• weight: approx. 1200 g
	• protection: IP65
Operating temperature	-20 °C to +50 °C
Display	full graphic back-lit LCD,
	192 x 128 Pixel
Interface	RS232 / RS485 (Modbus, Profibus optional)
Outputs	 2 x 4 - 20 mA, galvanically isolated,
	1000 Ohm max. load
	12 bit resolution, deviation 0.1 %
	• 6 relays,
	function: alarms/limit values/timer
	(all contacts as SPDT, max. 5A at max. 240 V AC)
Software (optional)	for echo evaluation and parameter settings
	as well as data backups
Accessories	
Wall mounting bracket AE	
for easy sensor removal, incl. fastening material	
Flexible arm sensor assembly SE	





Sensor dimensions

Sensors

Please find more accessories in our price list.

for safe transmitter installation on-site

for installation in tanks with skimming equipment,

Upright column, base mount, weatherproof cover

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incl. fastening material

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You can find more specifications in the respective manuals or on www.nivus.com