CROSS SMART SENSOR

SA9LNx: Dual-Wavelength Detecting Sensor

Digital technology for optimized measures

FEATURES & BENEFITS

- ❑ Xenon lamp light source, 50 year theoretical lifetime
- ❑ Dual-wavelength deep UV detection of NO_3
- ❑ Turbidity/DOC compensation
- ❑ In-situ, real-time measurement
- ❑ Digital sensor with RS485 Modbus protocol communication
- ❑ Compact construction, fully submersible
- ❑ 316L SS housing standard, optional Titanium housing
- ❑ Air/water purging or clip-on wiper, very low maintenance

TYPICAL APPLICATIONS

Wastewater Treatment Plant

- ❑ Nitrate measurement in biochemical tanks

GENERAL

Utilizing state-of-the-art flashing Xenon lamp technology, combining spike filters and hi-sensitive photoreceptors, SA9LNx is a Dual-Wavelength Absorption Spectral Detecting Sensor designed for long-term, low-drift monitoring of water quality. The target parameter Nitrate is measured by the Beer-Lambert law at 220nm. A second absorbance spectrum at another UV wavelength represents the reference absorption from Turbidity/SS (suspend solid) and Dissolved Organic Carbon (DOC). Built-in correction or compensation minimizes interferences. The following diagram shows the relation between the targeted nitrate parameter and interference compensation spectra.

The SA9LNx Sensor is available in various optical paths with typical path lengths: 1mm and 2mm. Different paths meet the requirement of different ranges. In-situ installation is recommended for SA9LNx. The fully submersible probe can be simply put into tanks, open channels etc. However, a sampling flow cell can be used if in-situ mounting is difficult. Sensor includes hard-wearing sapphire windows, with spray nozzles aiming at the windows for air or water purging to keep the windows free from fouling. An optional clamp-on wiper could be used to remove buildup or coating on the windows if no pressurized air or water is available. Therefore, the sensor is particularly low maintenance even under harsh conditions. SA9LNx sensor connects to Delta-Phase General Display & Controllers, (GDCs), by RS485 Modbus communication. Equipped with Delta-Phase View™ software, GDC-04/6/8 can offer flexible calibration or configuration to the SA9LNx sensor with features such as fast setup, data logger, analogue outputs. multiple protocols, etc. As the protocol is open, SA9LNx is compatible with other terminals from third parties as well.

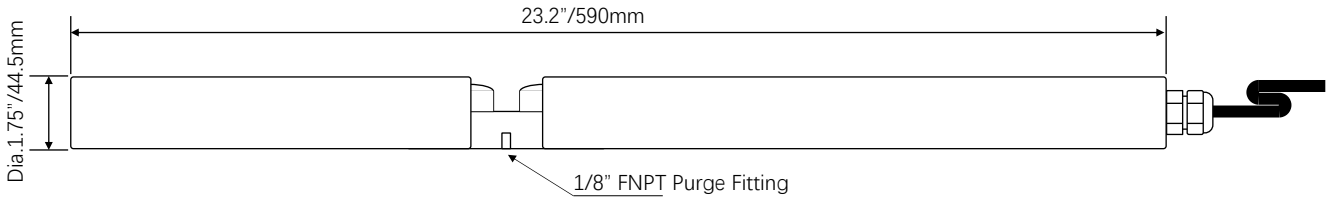
Delta Phase
WATER GAS MONITORING

CROSS SMART SENSOR

SPECIFICATIONS

Parameter/Range	Nitrate (NO_3), typical range 0-50 mg/l.
Light source	Flashing Xenon lamp light source, 50-year theoretical lifetime
Optical Length	Typical 1 or 2 mm, consult factory for other optional path lengths.
Resolution	±1% F.S.
Accuracy	±3%
Interval of Measuring	Min. 10s, 9999s Adjustable
Operating Temp.	14 to 122 °F (-10 to 50 °C)
Operating Pressure	< 5 bar
Housing Material	316L Stainless steel, optional Titanium; Optical Window: Sapphire
Protection type	>IP68 Immersible
Auto cleaning	Air purging uses compressed air of 3-6 Bar. Easily controlled by GDC. Optional clamp-on wiper controlled by GDC.
Interface	RS-485 Modbus RTU
Power	12 to 24 VDC, Usually Powered by GDC, Consumption normally 5W.
Dimension & Weight	1.75" O.D, 22.05" length (Diameter 44.5 x L560 mm) & 6.6 lbs. (3 kg) for SS housing probe

DIMENSION



ORDER CODE

SA9LN Dual Wavelength Spectral Nitrate Detecting Sensor with Xenon light source

Housing Material

-	Standard Material Stainless Steel 316L
-T	Titanium

Optical Path

-001	1mm
-002	2mm

Cable Length

-C10	10'	**-C20**	20'	
-C30	30'	**-C50**	50'	Other please contact Factory

SA9LN	-	-020	-C30

Specifications subject to change without notice.

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