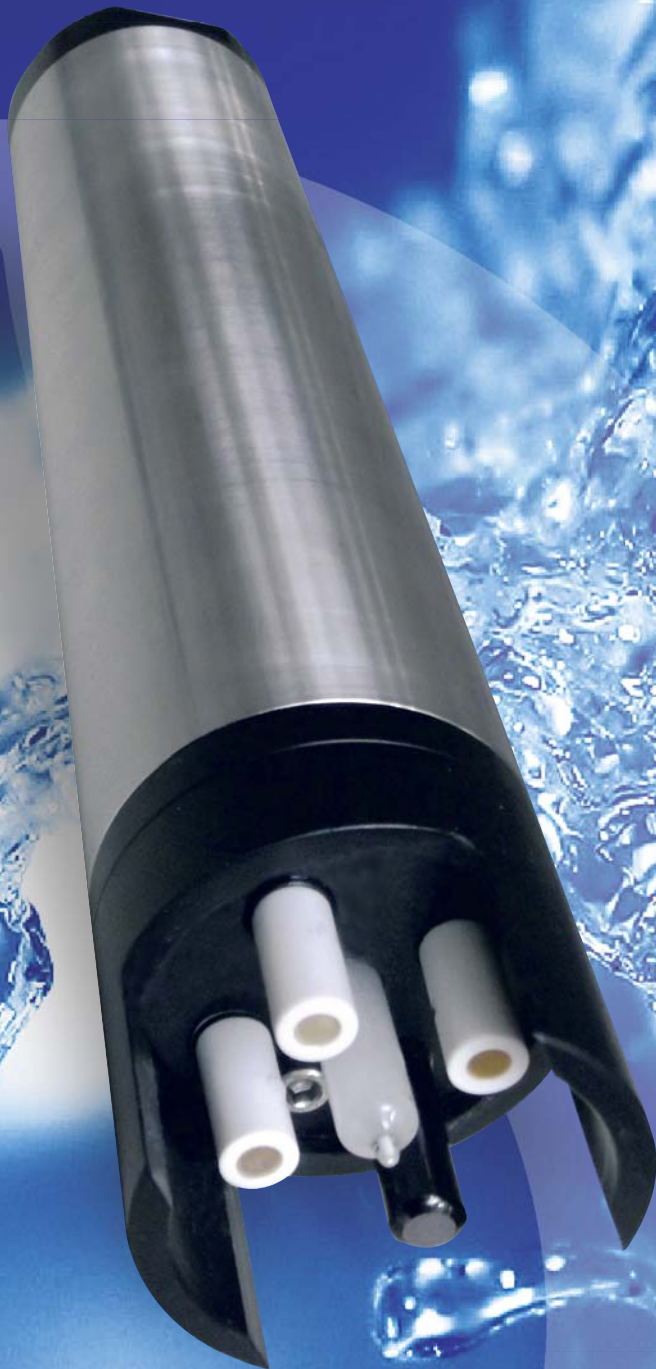


S470

Process ISE Sensor



AMMONIA (NH_4^+)

NITRATES (NO_3^-)

POTASSIUM (K^+)

CHLORIDE (Cl^-)

*Real time measure of the parameters **ON THE SPOT***

Immediate installation and easy maintenance

Quick coupling for electrodes cleaning and/or replacement

S470

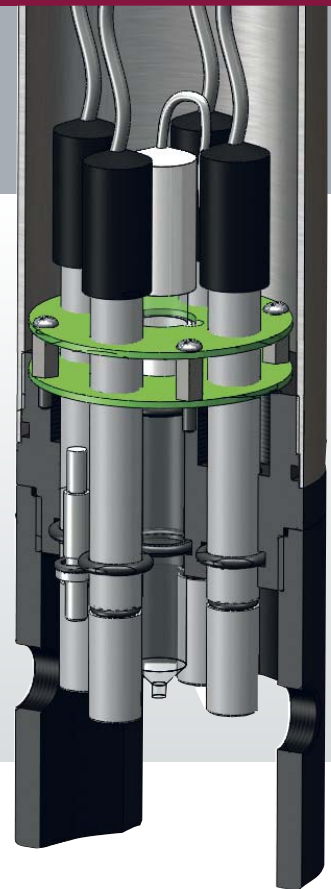
Process ISE sensor

The **Chemitec S470 ISE sensor** is based on using a set of ion-selective sensors (ISE: Ion-selective electrodes) to control the performance of the ammonium ion (as NH_4^+ or $\text{NH}_4\text{-N}$) and nitrate ion (as NO_3^- or $\text{NO}_3\text{-N}$) in a liquid matrix.

Particular attention was paid to identify a set of sensors stable and at the same time sensitive. For this purpose, it was also introduced a reference electrode with particularly high performance and with a high capacity of compensation of the pollutants.

The used sensors allow a correct reading of the above parameters in the following applications:

- surface water;
- wastewater;
- industrial and zootechnical process water.



The S470 family is composed by 3 elements:

- ▶ **S470/ NH_4^+ Sensor** for ammonium ion (0÷100ppm) with compensation of the potassium ion (0÷1000ppm)
- ▶ **S470/ NO_3^- Sensor** or nitrate ion (0÷100ppm) with compensation of the chloride ion (0÷5000ppm)
- ▶ **S470 Combined Sensor** for ammonium (0÷100ppm) and nitrate (0÷100ppm) ions with compensation of the potassium (0÷1000ppm) and chloride (0÷5000ppm) ions

All specific electrodes are individually replaceable.

The main ISE (ammonium and nitrate) are placed alongside the secondary sensors (potassium and chloride ISE) that have the task of monitoring the most important interfering and allow the instrument to have a correct compensation of the data.

Installation and commissioning can be performed easily, as well as routine maintenance and replacement of the finished sensors.

In the protection ring of the probe holder are integrated nozzles for cleaning, which can be connected to a line of water or compressed air. The cleaning system is controlled directly by the control unit.

The operations of configuration and calibration of the sensors on the **50Series** control unit have been simplified to the maximum in order to ensure an extreme ease of use to all the operators.

MEASURING OF AMMONIA, POTASSIUM, NITRATES, CHLORIDES, TEMPERATURE

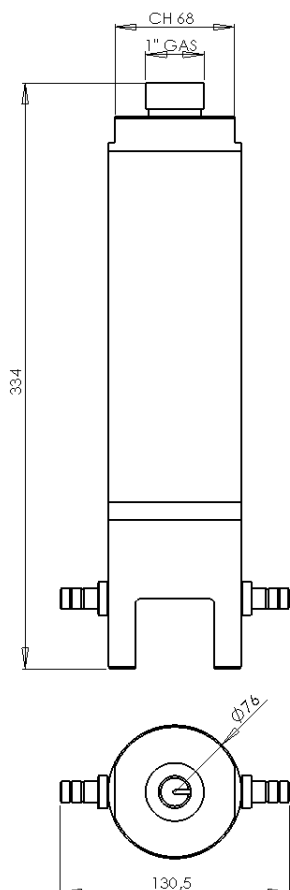
The sensor is composed by 3 or 5 (depending on the configuration) ion-selective electrodes housed in an AISI 316/PVC sensor body, realized in order to offer the maximum chemical compatibility with the project environments.

These sensors are individually replaceable and are constructed in such a way as to ensure the maximum efficiency and speed of response.

Nozzles for automatic cleaning (managed by the control unit) are integrated in the probe.

Communication with the controller is made via digital RS485 Modbus protocol.

In this way field interferences are virtually avoid and the sensor can be installed even at considerable distances from the control unit.



TECHNICAL DATA

Materials	AISI 316 Body
	Black PVC Protection, electrodes' housing and superior cap
	NBR O-Rings
Threaded connection	1" BSP
Measuring ranges	NH ₄ ⁺ : 0 ÷ 100 ppm
	K ⁺ : 0 ÷ 1000ppm
	NO ₃ ⁻ : 0 ÷ 100ppm
	Cl ⁻ : 0 ÷ 5000ppm
	Temperature : 0 ÷ 50°C
Measuring method	Ion-selective sensors
Accuracy	+/-1mg/L or +/-1 %
Repeatability	90% of the value in less than 60 seconds
Max refreshing time	< 1 second
Working Temperature	0 ÷ 50°C
Max working pressure	1 bar
Working pH Range	4 ÷ 10 pH
Mechanical protection	IP68 Sensor+cable
Cable	10m submersible
Power supply	12 ÷ 24Vdc
Signal interface	Modbus RTU Standard Protocol
Temperature sensor	PT100 included
Calibration	<p>The sensor is factory pre-calibrated using standard solutions.</p> <p>The curve stored in this way can be modified entering the analysis values of the customer (the correction of the field allows to take into consideration any peculiarities of the matrix).</p> <p>It's possible to enter a table of custom values (6 points) and let the probe work on a custom curve.</p> <p>The factory calibration curve, however, remains always available and could be set again as default.</p>



Specifications subject to change
without notice. Drawings and
pictures are merely indicative.

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The logo for Lana Sarrate s.a., featuring a stylized 'LS' monogram to the left of the company name.

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