

Complete monitoring system for the automatic, continuous measurement of Fluoride in potable water, industrial water.

For the continuous, selective electrode (combined ISE electrode with standard addition) online determination of Fluoride within the range of 0.2 to 20 ppm.

- Complete system including measurement and control electronics, measuring unit, flow indicator, reaction chamber and reagent dosing system.
- Robust, high quality analyzer cabinet painted stainless steel, 316L.
- Automatic, electrical zero measurement prior to each measurement cycle.
- Automatic cell cleaning.
- 2 easily accessible peristaltic pump modules for accurate, automatic dosing of chemical reagents.
- 1 peristaltic pump for demineralized water to control the slope of the electrode automatically.
- 2 analog and 6 digital outputs for alarms for process values and diagnostic alarms for each sample stream.
- RS485 Modbus/JBUS RTU interface.
- Large back-lit touchscreen color LCD display for the reading of all measured values and status information simultaneously.
- Easy menu-guided operation in English or French.



Analyzer	Seres OL Topaz Fluoride (0.2-20 ppm)	SOL-57.331.000
Configurations	2-Channel Setup (similar range)	SOL-83.590.020
	4-Channel Setup (similar range)	SOL-83.590.040
	6-Channel Setup (similar range)	SOL-83.590.060
	Ethernet Interface (TCP/IP) Please, inform SERES about automatic or fixed IP-address (give address)	SOL-81.410.020
Options	1-Year Spare Part Package "Basis" (Analyzer + 1 st channel)	SOL-84.110.170
	1-Year Spare Part Package "Multi-Channel" (add once if multi-channel configuration was selected)	SOL-84.110.150
	Reagent shelf in SS316L	SOL-89.610.010



Fluoride Measurement

Potentiometric method (ISE):

Measurement by selective ion electrode (ISE) combined with addition of standard and TISAB.

Reaction time 15 min.

Sensors/Measurement Equipment

ISE electrode Fluoride:

Electrode filling product: NaF(0.1M)/KCl(1M)

Reference electrode (Simple junction):

Electrode filling product: KCl 3M

Temperature controlled measuring chamber

Analyzer Measuring range

Topaz Fluoride 0.2-20 ppm

Limit of Detection < 0.2 ppm

Repeatability $\pm 5\%$ FS

Accuracy $\pm 5\%$ FS

Automatic baseline adjustment.

Sample flow surveillance.

Control of the slope of the ISE electrode automatically.

Specifications and Functionality

Dosing pump type peristaltic
Pump quantity 2
Pump for demineralized water 1

Power supply

Voltage: 110 - 240 VAC
Frequency: 50/60 Hz
Power consumption: max. 300 VA

Operation

Display: Color LCD, 7", touch-screen

Display of process value, alarm status and time during operation.

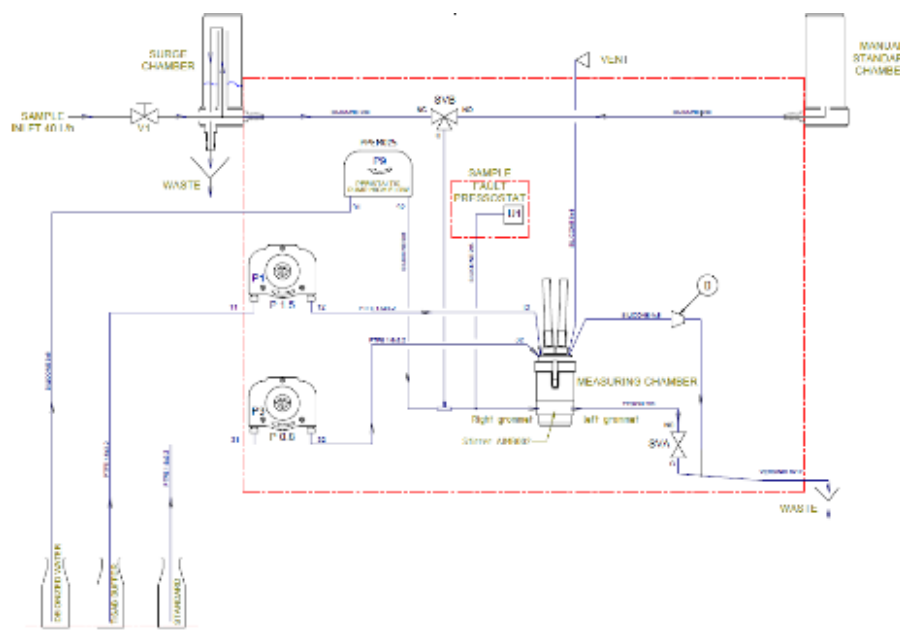
Smart and intuitive interface based on separate menu sections: "Measurement", "Diagnostic" and "Tools".

User menus in English and French.

Password protection and storage of data records.

Storage and graphical display of measurement history.

Seres OL Topaz Fluoride Measurement Scheme



Alarm Relays

1 summary alarm for "analyzer failure"

Maximum load: 1A / 24 V

Relay Outputs

2 potential-free contacts for each channel programmable as limit switches for measuring values (high/low thresholds)

1 sample flow alarm for each channel

1 output for indication of the active sample stream for each channel.

1 output for maintenance indication.

Rated load: 1A / 24 V

Signal inputs

One input for "stop command end of cycle".

Signal outputs

2 programmable signal outputs for measured values (freely scalable, linear).

Current loop: 4 - 20 mA

Communication interface

RS485 interface (galvanically separated) with Modbus/JBUS RTU protocol included in standard.

Ethernet interface (TCP/IP) optional.

Analyzer Data

Sample conditions

Flow rate: min 30 l/h
optimum 40 l/h
Temperature: 5 to 40 °C
Inlet pressure_{Abs.} (25 °C): 0.1 up to 2.0 bar
Outlet pressure: pressure-free
Particle size: < 20 µm

Ambient conditions

Temperature: 5 to 40 °C
Humidity: 10 to 80% rel.
Installation in a closed, protected, tempered room is recommended

Sample connections

Sample inlet: 1/4" BSP F
Sample outlet: soft tubing D INT 9
Sample outlet waste: soft tubing D INT 12
Sample outlet multi-ch.: soft tubing D INT 19

Wall cabinet

Dimensions: 780 x 570 x 370 mm
Material: Stainless Steel 316L
Total weight: 35 kg
Protection degree: IP 55

Reagent specifications*

Analyzer Fluoride

Type	Code
Demineralized Water	RXX273
Reagent Consumption	
12l/month (1 slope control/2 days)	
TISAB	RXX213
Reagent Consumption	6l/month
Sodium Fluoride standard	RXX257G1
Reagent Consumption	2.5l/month

* storage : dry, cool, well ventilated

