

Complete monitoring system for the automatic, continuous measurement of chloride in potable water and process water.

- For the continuous, selective electrode (ISE method) online determination of chloride.
- Available in several measuring ranges:
  - 5 to 50 ppm or
  - 5 to 100 ppm or
  - 5 to 200 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 Chloride (select range from below)	SOL-57.341.000
Range Selection	5-50 ppm	Specify in Order
	5-100 ppm	Specify in Order
	5-200 ppm	Specify in Order
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" (for Analyzer + 1 <sup>st</sup> channel)	SOL-84.110.060
	1-Year Spare Part Package "Multi-Channel" (add once if multi-channel config. was selected)	SOL-84.110.150
	Reagent Shelf in SS316L	SOL-89.610.010



## Chloride Measurement

**Potentiometric method (ISE):**  
Measurement by selective ion electrode (ISE) combined with addition of standard.

Reaction time 10-11 min.

### Sensors/Measurement Equipment

ISE electrode  
Reference electrode (Double junction):  
Internal Part KCl 3M  
External Part KNO3 1M  
Temperature controlled measuring chamber

### Analyzer Measuring range

**Topaz Chlorides 5-50 / 5-100 / 5-200 ppm**

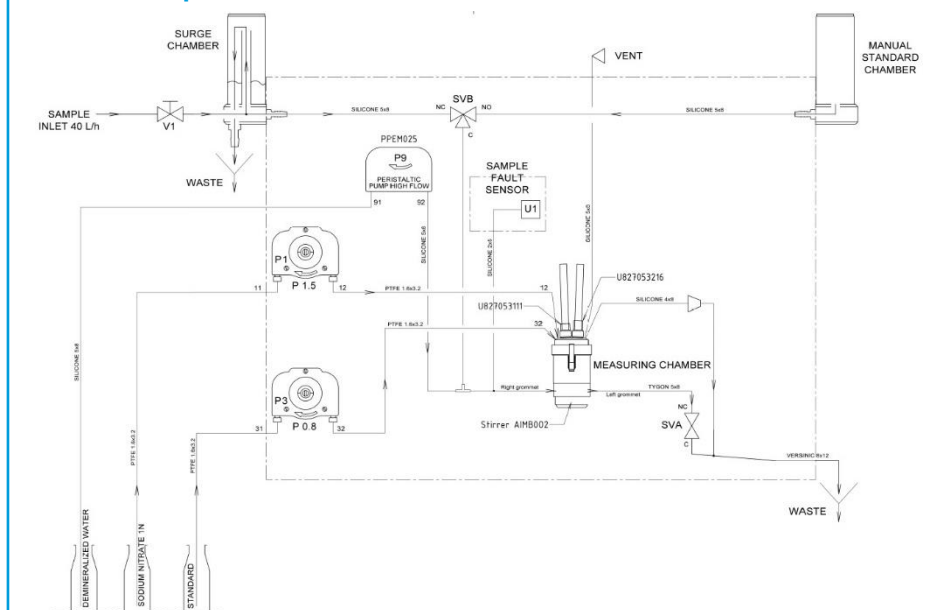
Repeatability 5% FS  
Accuracy 5% FS

Automatic baseline adjustment.

Sample flow surveillance.

Control of the slope of the electrode automatically.

## Seres OL Topaz Chloride Measurement Scheme



## 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 display, 7", touchscreen

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.

### 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<sub>Abs.</sub> (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\*

Type	Code
Demineralized Water	RXX273
Reagent Consumption	12l/month (1 slope control/week)
Sodium Nitrate 1M	RXX109
Reagent Consumption	2.1l/month
Chloride Standard	RXX256
(The concentration of the standard depends on the range)	
Reagent Consumption	3.7l/month

\* storage : dry, cool, well ventilated

