Seres OL Analyzer Topaz Phenol

Datasheet No. DenSOL55341000

Complete monitoring system for the automatic, continuous measurement of phenol C_6H_5OH in process water, wastewater and effluents.

- For the continuous, colorimetric online determination of phenol per **AFNOR T90-109**.
- Available in separate measuring ranges :
  - **Topaz Phenol LR**: 0 to 5 ppm
  - **Topaz Phenol HR**: 0 to 20 ppm
- Complete system including measurement and control electronics, measuring unit, flow indicator, reaction chamber and reagent dosing system.
- With sample dilution for Topaz Phenol HR.
- Robust, high quality analyzer cabinet painted stainless steel, 316L.
- Automatic, electrical zero measurement prior to each measurement cycle.
- Automatic cell cleaning.
- 4 (LR) or 5 (HR) easily accessible peristaltic pump modules for accurate, automatic dosing of chemical reagents.
- 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.

Seres OL Topaz Series Showcase

Analyzer	**Seres OL Topaz Phenol LR**	(0-5 ppm)	**SOL–55.341.000**
Analyzer	**Seres OL Topaz Phenol HR**	(0-20 ppm)	**SOL–55.341.100**
Configurations	2-Channel Setup	(LR only, similar range)	SOL-83.590.020
	4-Channel Setup	(LR only, similar range)	SOL-83.590.040
	6-Channel Setup	(LR only, 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 + 1st channel)		SOL-84.110.110
	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

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Phenol Measurement

Colorimetric method; determination of phenol after chemical reaction in an alkaline environment.
Reaction time 9-10 min.

Sensors/Measurement Equipment
Detection wavelength 555 nm
Temperature controlled measuring chamber.
Sample dilution for Topaz Phenol HR.

Analyzer	Measuring range
Topaz Phenol LR	**0-5 ppm**
Limit of Detection	29 ppb
Repeatability	± 2 % FS or ± 0.03 ppm whichever is greater
Precision	± 3 % FS or ± 0.03 ppm whichever is greater
Topaz Phenol HR	**0-20 ppm**
Limit of Detection	0.2 ppm
Repeatability	± 2 % FS or ± 0.1 ppm whichever is greater
Precision	± 3% FS or ± 0.1 ppm whichever is greater

Automatic baseline adjustment.

Sample flow surveillance.

Specifications and Functionality

Pump type: peristaltic
Pump quantity Topaz Phenol LR: 4
Pump quantity Topaz Phenol HR: 5

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

Operation
Display: Color LCD, 7”, touch-screen

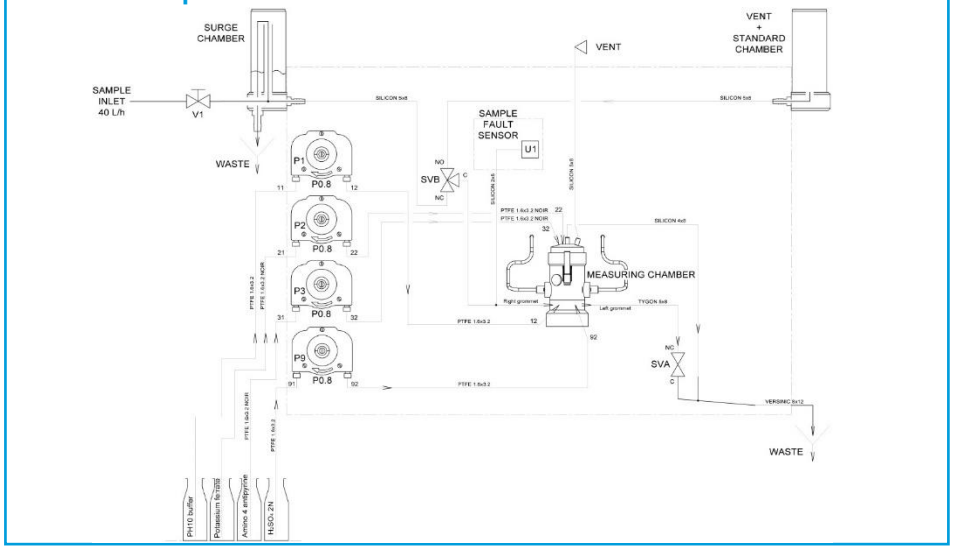
Display of process value, alarm status and time during operation.

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 Phenol 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, opt.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-channel (LR only): 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
pH Buffer Solution (pH10)	RXX143
Reagent Consumption	2.5 l/month
Potassium Hexacyanoferrate	RXX161
Reagent Consumption	3.0 l/month
Amino 4 Antipyrine	RXX160
Reagent Consumption	1.5 l/month
Sulfuric Acid 2N	RXX159
Reagent Consumption	2.0 l/month
Deionized Water (Dilution - for Phenol HR only)	
Reagent Consumption	~4000l/month

** storage : dry, cool, well ventilated*