

Precision photometric analyzer for the measurement of trace silica in ultra pure water

COPRA Silitrace

Analyzer for the continuous measurement of trace amounts silica in ultrapure water applications using a reversed osmosis system to concentrate the sample (Carrcentrator) *)

Measuring range 0.005 ppb to 20 ppb.

Full-text display (2 x 20 characters).

Menu driven programming.

Programmable automatic calibration.

Automatic check of sample flow and reagent addition.

Automatic compensation for silica content of reagents.

Constant-temperature reaction chamber and photometer.

4 signal outputs 0/4 ... 20 mA, freely scaleable.

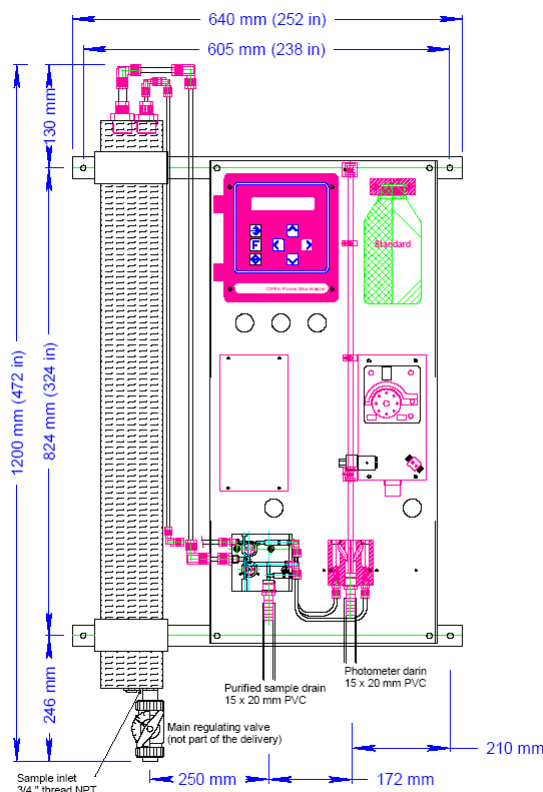
Remote off contact.

4 contacts programmable as limit switches for SiO₂ and check of sample flow.

Data logger for roughly 8000 data records.

Optional:

Communication board for field bus application (PROFIBUS DP, MODBUS) or connection of a modem.



Order scheme	COPRA Silitrace Analyzer	A-25.120.0		
Optional:	Standard (RS232)		0	
	Multifunctional communication board _____		1	
Reagents:	No reagent included			0
	Start-up kit for 1 month (transport restrictions might apply) _____			1

Optional Steel Cabinet

A-89.600.012 Steel cabinet series 18500, for COPRA Silitrace and reagents, with glass, door and lock.
A-89.600.013 Steel cabinet series 18500, for COPRA Silitrace and reagents, with glass, door and lock, including fan.

*) Patent no. US-6420185

Technical data:

Dimensions (height x width x front-to-back size): 1200 x 640 x 140 mm
Weight: 30 kg
Mounting panel: stainless steel
Electronic housing: injection-moulded aluminium
Protection: IP65
Ambient temperature: 5 - 45 °C
Relative humidity: 30 - 95% non-condensing
Storage and transport: 0 - 50 °C
Display: full-text display, 2 x 20 characters for measuring values SiO₂ / operating status and date / time.

Cabinet version:

Dimensions (height x width x front-to-back size): 1600 x 800 x 400 mm
Weight: roughly 100 kg

Power supply:

85 265 VAC, 50 ... 60 Hz
Power consumption: 85 VA
Parameter storage without battery.

Software:

Menu driven input of calibration parameters, limits, printer, logger, and communication parameters.
Programming of interval for automatic calibration.
Password protection for all programs.

4 Signal outputs:

Freely programmable.
Current loop: 0/4 - 20 mA
Max. burden: 600 Ω

Standby function:

Potential-free contact.

Limit Switches:

Max. load: 24 VDC / 0.1 A (with common reference potential)
Programmable as limit switches for silica, or no flow, or status contacts

Error contact:

Max. load: 1 A / 250 VAC
Potential-free switching contact
Summary alarm indication for system and handling errors.

Interfaces:

Interface RS232 for printer and firmware download
Option:
Multifunctional interface board RS485 including:
- PROFIBUS DP protocol
- MODBUS ASCII protocol
- MODBUS RTU protocol
- RS232 for modem connection

Safety:

Automatic check of sample flow and reagent addition.
Safety channel.
No spillage of aggressive reagents during the change of pump tubes, because tubes and photometer can be drained before.

Measurement of silica:

Temperature controlled high precision photometer.
Measuring range: 0.005 ppb to 20 ppb
Accuracy: ±0.005 ppb or 5% of measuring value
Reproducibility: ±0.002 ppb or 2% of measuring value
Response time: 10 min

Calibration:

Programmable automatic calibration.

Sample flow:

Membrane Module:
Min Pressure: 2.0 bar
Max Pressure: 10.0 bar
Flow: min. 100 l/h
Temperature: 5 to 45 °C
Feedwater pH: 3.0 – 10.0 pH
Inlet connection: ¾" NPT

2 outlets of 14x20 mm (1/2") counter pressure-free

Connection scheme:

