SWAN Analytical Instruments AG
CH-8616 Riedikon/Uster
PHONE ++41 1 943 63 00 FAX ++41 1 943 63 01

COPRA Silica Analyzer

Data sheet no. DenA2511YXXX

Precision photometer for the measurement of silica in high purity water

COPRA Silica Analyzer

Analyzer for the continuous measurement of silica in high purity water applications, steam generation and in demineralisation plants.

Measuring range 0.5 ppb to 1000 ppb.

2 channel instrument.

Full-text display (2 x 20 characters).

Menu driven programming.

Programmable automatic calibration (zero point, gain).

Automatic check of sample flow and reagent addition.

Constant-temperature reaction chamber and photometer.

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

4 function contacts for remote control (choose channels or switch off channels).

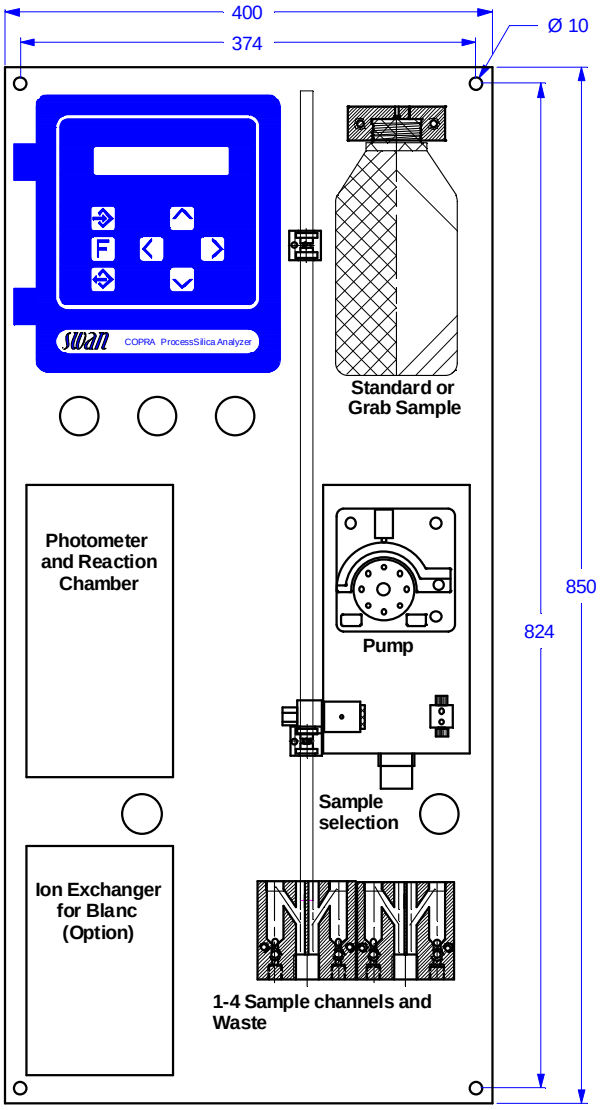
4 contacts programmable as limit switches for SiO_2 or check of sample flow.

Data logger for roughly 8000 data lines.

Grab-sample testing.

Safety channel.

Options:
- 4 - channel instrument
- Ion exchanger for blank
- Communication board for BUS (PROFIBUS DP, MODBUS) and connection of modem.



(all dimensions in mm)

Order scheme	COPRA Silica Analyzer	A-25.11				
Option 1:	Standard (up to 2 channels)	0				
	Multiplexor (up to 4 channels)	1				
Option 2:	Standard		0			
	Blank function		1			
Option 3:	Standard (RS232)			0		
	Multifunctional communication board			1		
Reagents:	No reagent included				0	
	Start-up kit for 1 month (transport restrictions might apply)				1	

Option:
A-89.600.010 Steel cabinet series 18500, for COPRA Silica and reagents, with glass door and lock

SWAN Analytical Instruments AG
CH-8616 Riedikon/Uster
PHONE ++41 1 943 63 00 FAX ++41 1 943 63 01

COPRA Silica Analyzer

Data sheet no. DenA2511YXXX

Technical data:
Dimensions (height x width x front-to-back size): 850 x 400 x 140 mm
Weight: 18 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, green, for measuring values SiO_2 of all channels with time of last measurement / operating status and date / time of clock.

Cabinet version:
Dimensions (height x width x front-to-back size): 1600 x 600 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:
Current loop: 0/4 - 20 mA
Max. burden: 600 Ω

4 function contacts:
For potential-free contacts.
Functions:
- standby (interruption of measurement)
- choosing channels
- switching off channels

4 contacts:
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 emptied before.

Measurement of silica:
Precision photometer, constant-temperature
Measuring range: 0.5 ppb to 1000 ppb
Accuracy for 0.5 to 500 ppb: ±0.5 ppb or 5% of measuring value
Reproducibility for 0.5 to 500 ppb: ±0.5 ppb or 2% of measuring value
Response time: 6 min
Grab sample function

Calibration:
Programmable automatic calibration, zero point, gain,
blank value with optional ion exchanger

Sample flow:
Constant head with tube connection
Pressure: 0.3 to 3.0 bar
Flow: min. 10 ml/min
Temperature: 5 to 45 °C
Connection inlet: 4x6 mm
Connection outlet: 14x20 mm (1/2")
Outlet: Pressure-free outlet
Suspended soils: less than 10 ppm
no oil and no grease

Multiplexor (max. 4 samples)
4 constant heads with multiplexor
The four contacts are used as limit switches for silica.

Connection scheme: