

Complete monitoring system for the automatic, continuous measurement of silica in water steam cycles.

Monitor AMI Silitrace

- Measuring range: 0,5 to 1'000 ppb
- Based on colorimetric measurement principle.
- Programmable, automatic calibration.
- Programmable, automatic verification.
- Automatic Zero measurement (daily).
- Easy to use grab sample capability.
- Reagent saving mode.
- Continuous, automatic monitoring of main instrument functions (sample flow, reagent supply, reaction temperature and pump tube integrity).
- Complete system including measurement and control electronics, photometer with integrated constant-temperature reaction chamber, flow indicator, reagent dosing system and reagent containers.
- Measurement values are available as analog output signals.
- Alarm display and activation of alarm relay when user defined, critical limits are reached.
- Large back-lit LCD display showing all measured values and status information simultaneously.
- Easy user menus in English, German, French and Spanish. Simple programming of all parameters by keypad.
- Data logger for 1'500 data records stored at a selectable interval.
- Factory tested, ready for installation and operation.

Instrument variants

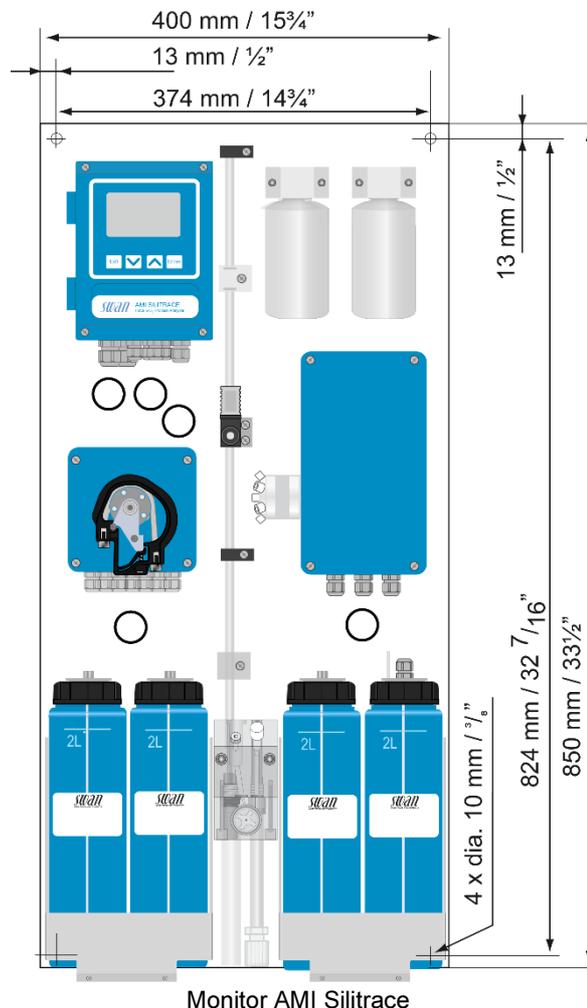
- Single stream or Dual stream instrument

Accessory

- AMI Sample Sequencer, switching up to 6 sample streams with single stream instrument.

Instrument options

- Communication interface (Profibus, Modbus, 3rd Signal Output, USB, HART)



Monitor AMI Silitrace

Order Nr.	Monitor AMI Silitrace AC	A-25.431.100
	Monitor AMI Silitrace AC; Dual-Stream	A-25.431.110
Option:	[] 3 rd current signal output (0/4 – 20mA)	A-81.420.050
	[] Profibus DP & Modbus RTU interface (RS-485)	A-81.420.020
	[] USB interface	A-81.420.042
	[] HART interface	A-81.420.060
Option:	[] Sample degasser AMI Silitrace	A-82.321.100

Analytical System

Colorimetric, molybdosilicat method with temperature controlled high precision photometer.

Silica measurement

Measuring range: 0.5 to 1'000 ppb
Reproducibility: ± 0.5 ppb or $\pm 5\%$, whichever is greater

Cycle time: 3'
Reagent saving mode: up to 100 days lifetime with one reagent kit.

Flow cell

Made of acrylic glass with water inlet and flow adjustment valve.

Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP 66 / NEMA 4X
Display: backlit LCD, 75 mm x 45 mm
Electrical connectors: screw clamps
Ambient temperature: -10 to +50 °C
Limit range of operation: -25 to +65 °C
Storage and transport: -30 to +85 °C
Humidity: 10 to 90 % relative, non condensing

Power supply

Voltage: 100 - 240 VAC ($\pm 10\%$)
50/60 Hz ($\pm 5\%$)
Power consumption: max. 50 VA

Operation

Easy operation based on separate menus for "Messages", "Diagnostics", "Maintenance", "Operation" and "Installation".
Separate menu specific password protection possible.
Display of process value, sample flow, alarm status and time during operation.
Storage of event log, alarm log and calibration history.
Storage of the last 1'500 data records in logger with selectable time interval.

Safety features

No data loss after power failure, all data is saved in non-volatile memory. Over voltage protection of in- and outputs. Galvanic separation of measuring inputs and signal outputs.

Transmitter temperature monitoring

With programmable high/low alarm limits.

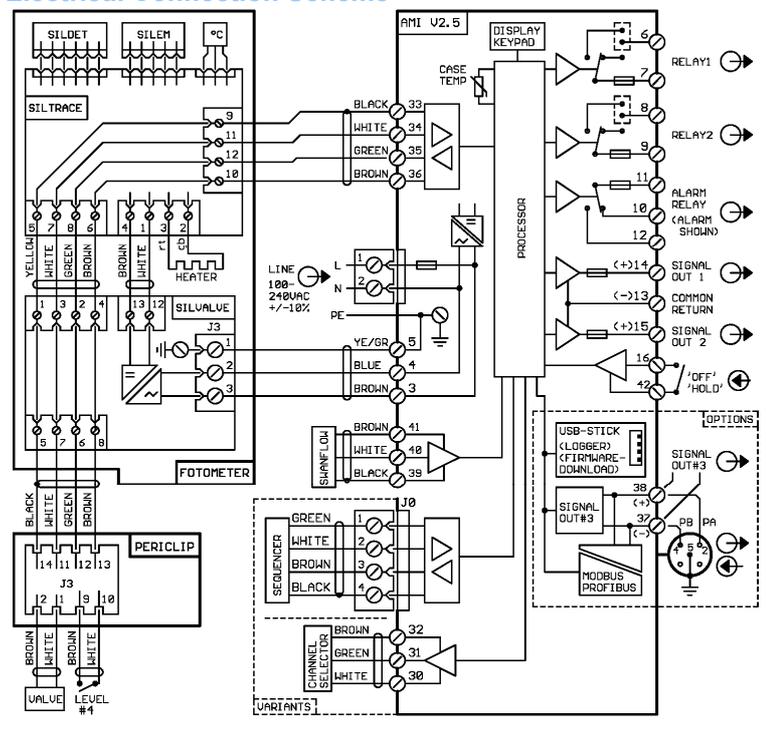
Real-time clock with calendar

For action time stamp and pre-programmed actions.

Monitoring of reagent consumption

Warning if low level is reached and alarm for lack of reagents.

Electrical Connection Scheme



1 Alarm relay

One potential free contact for summary alarm indication for programmable alarm

values and instrument faults. Maximum load: 1A / 250 VAC

1 Input

One input for potential-free contact. Programmable hold or remote off function

2 Relay outputs

Two potential-free contacts programmable as limit switches for measuring values, controllers or timer with automatic hold function.

Max. load: 1A / 250 VAC

2 Signal outputs (3rd as option)

Two programmable signal outputs for measured values (freely scalable, linear or bilinear) or as continuous control output (control parameters programmable) as current source. 3rd signal output selectable as current source or current sink.

Current loop: 0/4 - 20 mA
Maximum burden: 510 Ω

Control function

Relays or current outputs programmable for 1 or 2 pulse dosing pumps, solenoid valves or for one motor valve. Programmable P, PI, PID or PD control parameters.

1 Communication interface (option)

- RS485 interface (galvanically separated) with Fieldbus protocol Modbus RTU or Profibus DP
- 3rd Signal output
- USB interface
- HART interface

Sample and Monitor Data

Ambient temperature: 5 to 50 °C

Sample conditions

Flow rate: min. 3 l/h
Temperature: 5 to 50 °C
Inlet pressure: 0.15 to 2 bar
Outlet pressure: pressure free, atmospheric drain
No oil, no grease

Sample connections

Inlet: Serto PVDF 6 mm (1/8"), for tubing 4x6 mm
Drain: \varnothing 16 mm, tubing 15x20 mm

Panel

Dimensions: 400 x 850 x 150 mm
Material: stainless steel
Weight: 16.0 kg