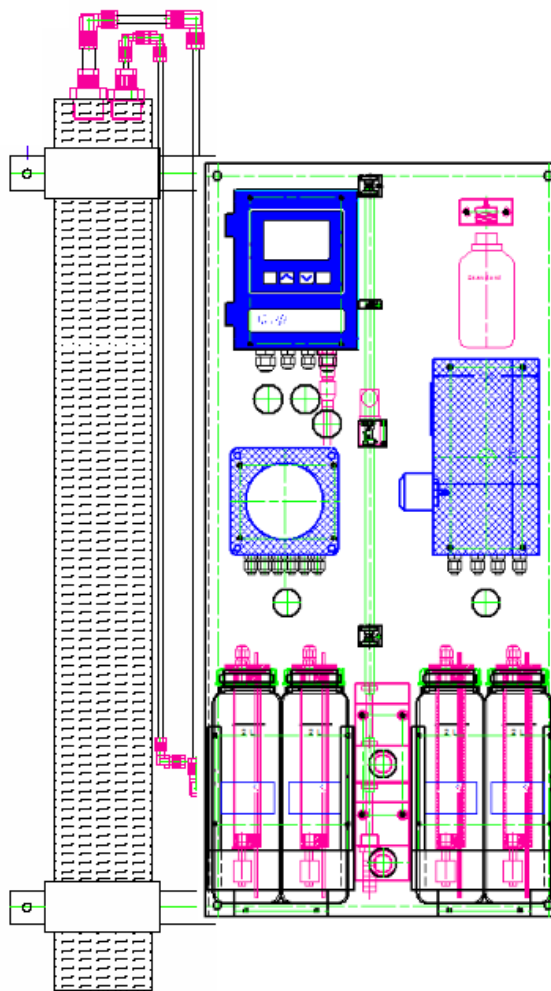


Complete monitoring system for the automatic, continuous measurement of trace amounts of silica in ultra pure water.

### Monitor AMI Silitrace Ultra

- Measuring range: 5 ppt (0,005 ppb) to 25 ppb
- Based on colorimetric measurement principle.
- Programmable automatic calibration.
- Programmable automatic verification.
- Programmable automatic blank determination (Permeat).
- Manual Zero measurement.
- Complete system including measurement and control electronics, photometer with integrated constant-temperature reaction chamber, flow indicator, reagent dosing system and reagent containers using reversed osmosis system to concentrate the sample (Carrcentrator).
- Continuous, automatic monitoring of main instrument functions (sample flow, reagent supply, reaction temperature and pump tube integrity).
- 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.



Monitor AMI Silitrace Ultra

### Instrument Options

- Communication interface (Profibus, Modbus, 3<sup>rd</sup> Signal Output, USB, HART).

Order Nr.	Monitor AMI Silitrace; Ultra	A-25.431.150
Option 1:	<input type="checkbox"/> 3 <sup>rd</sup> current signal output (0/4 – 20mA)	A-81.420.050
	<input type="checkbox"/> Profibus DP & Modbus RTU interface (RS-485)	A-81.420.020
	<input type="checkbox"/> USB interface	A-81.420.042
	<input type="checkbox"/> HART interface	A-81.420.060

**Analytical System**

Colorimetric, Molybdosilicat method.  
Temperature controlled high precision photometer with RO module.

**Silica measurement**

Measuring range: 0.005 ppb to 25 ppb  
Reproducibility: ± 0.005 ppb or ± 5%, whichever is greater

Cycle time: 3'

**Flow cell**

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

**Transmitter Specifications and Functionality**

Electronics case: 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 (± 10 %)  
50/60 Hz (± 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.

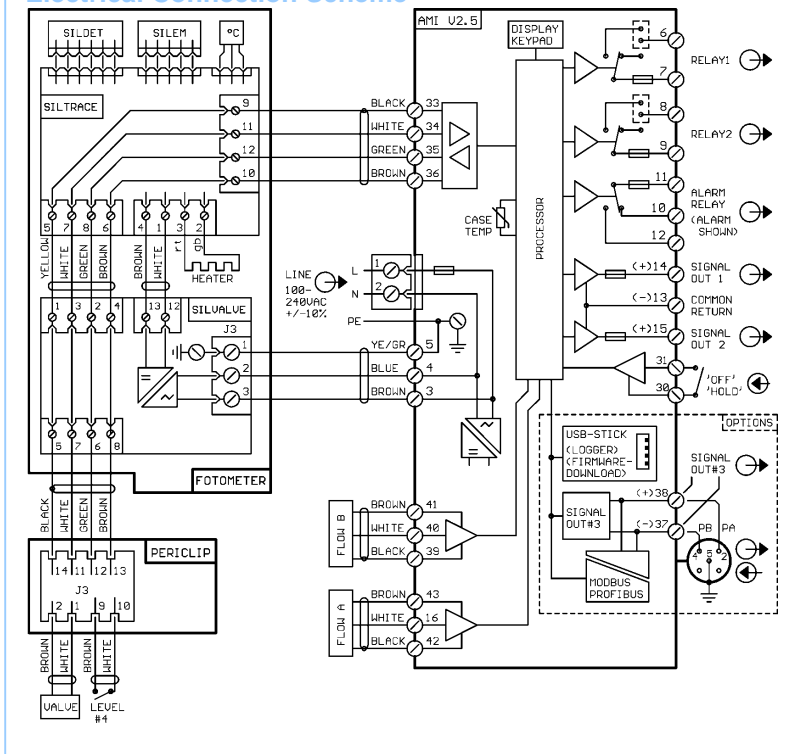
**Monitoring of reagent consumption**

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

**1 Alarm relay**

One potential free contact for summary alarm indication for programmable alarm values and instrument faults. Maximum load: 1A / 250 VAC

**Electrical Connection Scheme**



**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 auto-matic hold function.  
Max. load: 1A / 250 VAC

**2 Signal outputs (3<sup>rd</sup> 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. 3<sup>rd</sup> 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
- 3<sup>rd</sup> Signal output
- USB interface
- HART interface

**Sample and Monitor Data**

Ambient temperature: 5 to 50 °C

**Sample conditions Membrane:**

Flow rate: min. 100 l/h  
Temperature: 5 to 50 °C  
Inlet pressure: 2 to 20 bar  
Outlet pressure: pressure free, atmospheric drain  
Feedwater pH: 3 to 10 pH

**Sample connections Membrane**

Inlet: 3/4" NPT  
Outlet 2: Ø 16 mm, tubing 15x20 mm

**Panel incl Membrane**

Dimensions: 640 x 1200 x 150 mm  
Material: stainless steel  
Weight: 30.0 kg