SWAN Analytical USA
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Monitor AMI Solicon4

Data sheet No. DenA23421020

Complete monitoring system for the automatic, continuous measurement of the specific conductivity, concentration of CIP solutions, salinity and TDS in surface water, potable water and cooling water.

Monitor AMI Solicon4

Complete system mounted on PVC mounting panel:
- **Transmitter AMI Solicon4** in a rugged aluminum enclosure (IP 66).
- **Flow cell M-Flow PG**.
- **Swansensor Shurecon P;** 4-electrode conductivity sensor with integrated Pt1000 temperature sensor.
- Factory tested, ready for installation and operation.

Optional:
- Swansensor deltaT for flow detection

Specifications:
- Simultaneous measurement and display of conductivity, sample temperature and sample flow.
- Measurement range   from 0.1 μS/cm to 100 mS/cm.
- For the measurement of specific conductivity, concentrations (for NaCl, NaOH and acids in %), salinity (as NaCl in %) and total dissolved solids (TDS in % or mg/l).
- Conductivity sensor unaffected by fouling. No measuring errors due to polarization effects.
- Straightforward sensor calibration without sensor removal directly in flow cell with quick release vessel and user guided dialogue.
- Large backlit LCD display for the reading of measuring value, sample temperature, sample flow and operating status.
- Easy user menus in English, German, French and Spanish. Simple programming of all parameters by keypad.
- Two current signal outputs (0/4 – 20mA) for measured signals.
- Data logger for 1'500 data records stored at a selectable interval. (Data download to PC requires optional Hyper-Terminal interface)
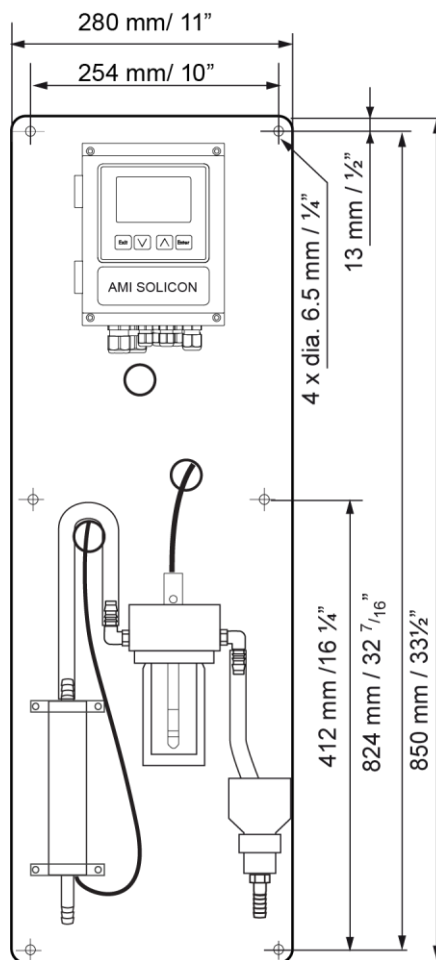
Monitor AMI Solicon4
with optional deltaT flow detection.

Order Nr.	Monitor AMI Solicon4	A–23.421.020
Option 1:	[ ] 3rd current signal output (0/4 – 20mA)	A-81.410.020
	[ ] Profibus DP interface	A-81.420.020
	[ ] HyperTerminal interface (RS-232)	A-81.420.010
	[ ] Modbus interface	A-81.420.022
	[ ] USB interface	A-81.420.040
Option 2:	[ ] Swansensor deltaT Flow	A-87.933.010

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Conductivity Measurement

Swansensor Shurecon P with integrated Pt1000 temperature sensor.

Measuring range	Resolution
0.10 to 9.99 µS/cm	0.01 µS/cm
10.0 to 99.9 µS/cm	0.1 µS/cm
100 to 999 µS/cm	1 µS/cm
1.00 to 9.99 mS/cm	0.01 mS/cm
10.0 to 29.9 mS/cm	0.1 mS/cm
30 to 100 mS/cm	1 mS/cm

Automatic range switching.

Accuracy ± 0.5% of measured value

Temperature compensations
Absolute (none), linear coefficient in %/°C, non linear function (NLF) for natural waters according to EN 27888 / DIN 38404

Concentration measurements (25°C)
- NaCl: 0 - 4.6%
- HCl: 0 - 0.8%
- NaOH: 0 - 1.6%
- H_2SO_4:   0 - 1.1%
- HNO_3:   0 - 1.5%
- Salinity: 0 - 4.6% (as NaCl)
- TDS: 0 - 4.6% (as NaCl)
- TDS: 0.0 mg/l – 20 g/l (with coefficient)

Temperature measurement
With Pt1000 type sensor.
Measuring range: -30 to +130°C
Resolution: 0.1°C

Sample flow measurement (option)
With digital SWAN sample flow meter.

Transmitter Specifications and Functionality

Electronics case:	Aluminum
Protection degree:	IP 66 / NEMA 4X
Display:	backlit LCD, 75 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 %) or 24 VDC (± 10 %)
Power consumption: max. 30 VA

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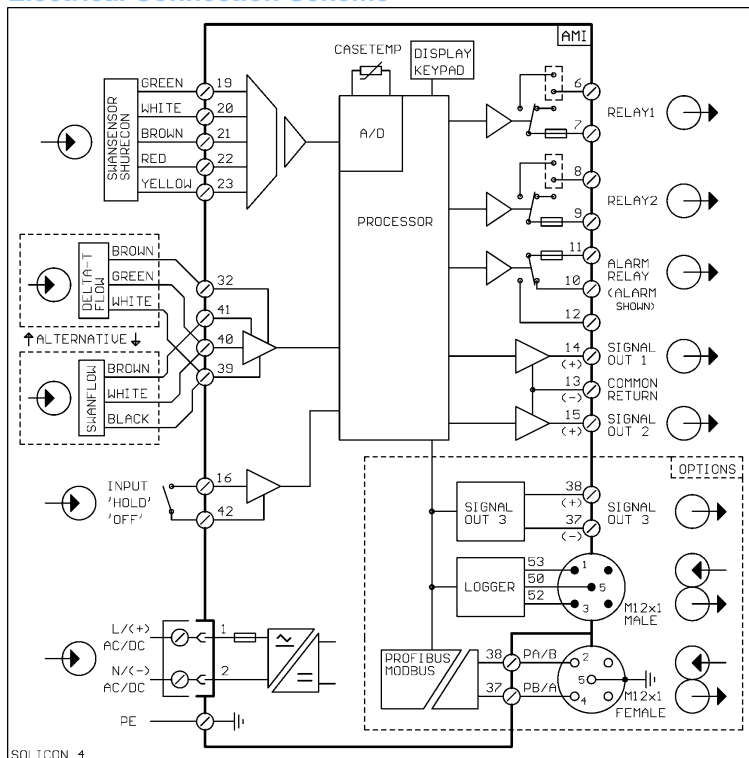Separate menu specific password protection possible.
Display of process value, sample flow, alarm status and time during operation.
Storage of event- and alarm log.
Storage of the last 1'500 data records in logger with selectable time interval.

Electrical Connection Scheme

SOLICON 4

Safety features
No data loss after power failure, all data is saved in non-volatile memory.
Overvoltage 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 preprogrammed actions.

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 for system cleaning with automatic hold function.
Max. load: 1A / 250 VAC

2 Signal outputs (3rd as option)
Two programmable signal outputs for measured values (freely scaleable, linear or bilinear) or as continuous control outputs (control parameters programmable).
Current loop: 0/4 - 20 mA
Maximum burden: 510 Ω

Control functions
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)
- RS232 interface for logger download to PC with SWANTerminal
- RS485 interface (galvanically separated) with Fieldbus protocol Modbus or Profibus DP
- 3rd Signal output
- USB interface

Monitor Data

Sample conditions
Flow rate: 4 to 15 l/h
Temperature: up to 50 °C
Inlet pressure (25 °C):   up to 1 bar
Outlet pressure: pressure free

Sample connections
Sample inlet: Hose nozzle ¼" -10 elbow for 10mm tube
Sample outlet: G ½" adapter for flexible tube Ø 20 x 15 mm

Panel dimensions: 280 x 850 x 180 mm
Panel material: white PVC
Weight: 9.0 kg