

Complete monitoring system for the automatic, continuous measurement of the specific resistivity / specific conductivity in high purity water.

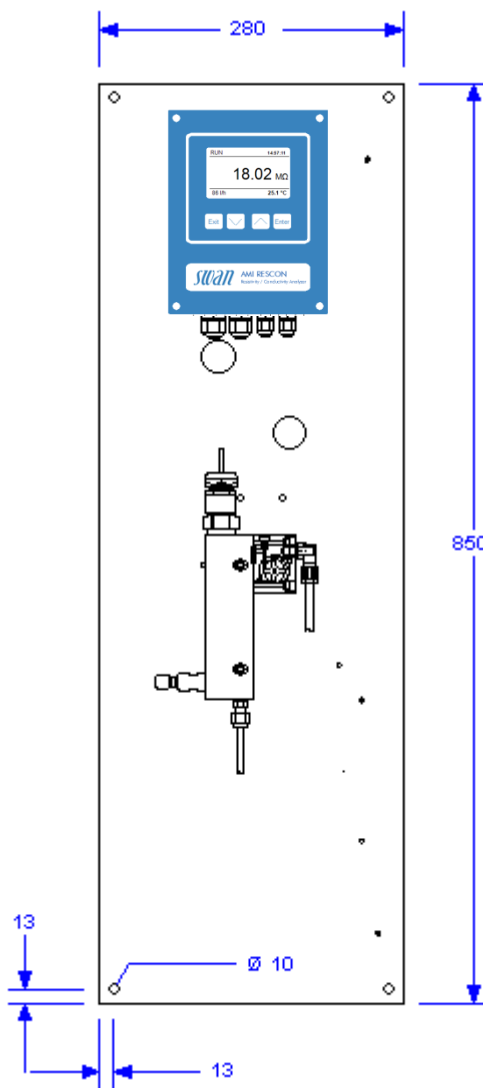
Monitor AMI Rescon

Complete system mounted on stainless steel mounting panel:

- **Transmitter AMI Rescon** in a rugged aluminum enclosure (IP 66).
- **Swansensor RC-U** high precision two-wire electrode made of stainless steel with integrated NTC temperature probe for automatic temperature compensation.
- **Flow cell QV-Hflow** made of stainless steel with manual flow adjustment valve and digital, high temperature sample flow meter.
- Factory tested, ready for installation and operation.

Specifications:

- Measurement range:
 - Resistivity: 0.01 to 18.18 MΩ-cm
 - Conductivity: 0.055 to 1000 μS/cm
- Big backlit LC display for the reading of measuring value, sample temperature, sample flow, temperature compensation type and operating status.
- Easy user menus in English, German, French and Spanish. Simple programming of all parameters by keypad.
- Wide range of selectable temperature compensations for different sample conditions.
- Alarm function according to the limits in USP<645>.
- Electronic record of major process events and calibration data.
- Data logger for 1'500 data records stored at a selectable interval. (Data download to PC requires optional HyperTerminal interface).
- Two current outputs (0/4 - 20 mA) for measured signals.



Accessory:

- Precision test resistor plug for verification of transmitter according to USP<645>.

Order Nr.	Monitor AMI Rescon	A-23.431.100
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

Conductivity Measurement

Swansensor RC-U ($k = 0.01 \text{ cm}^{-1}$) with integrated NT5K temperature sensor.

Measuring range	Resolution
0.01 to 18.18 M Ω -cm	0.01 M Ω -cm
0.055 to 2.999 $\mu\text{S/cm}$	0.001 $\mu\text{S/cm}$
3.00 to 29.99 $\mu\text{S/cm}$	0.01 $\mu\text{S/cm}$
30.0 to 99.9 $\mu\text{S/cm}$	0.1 $\mu\text{S/cm}$
100 to 1000 $\mu\text{S/cm}$	1 $\mu\text{S/cm}$

Automatic range switching.

System accuracy	
0.01 to 18.18 M Ω -cm	$\pm 0.5 \%$
0.05 to 20 $\mu\text{S/cm}$	$\pm 0.5 \%$
20 to 1000 $\mu\text{S/cm}$	$\pm 1 \%$

Periodic accuracy test with ultra high precision resistors.

Temperature compensation

- High purity water (non-linear)
- Neutral salts (NaCl)
- Strong acids (HCl)
- Strong bases (NaOH)
- Ammonia, Ethanolamine
- Morpholine
- Linear coefficient in $\%/\text{°C}$
- None (compensation switched off)

Test modus for transmitter according to USP<645> with test resistance.

Alarm function for limit values according to USP<645> Stage 1.

Temperature measurement Nt5k

Measuring range:	-30 to +130 °C
Resolution:	0.1 °C

Sample flow measurement with digital SWAN sample flow meter for extended temperature range.

Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP 66 / NEMA 4X
Display: backlit LCD, 75 x 45 mm
Electrical connectors: screw clamps
Dimensions: 180 x 140 x 70 mm
Weight: 1.5 kg
Ambient temperature: -10 to +50 °C
Humidity: 10 - 90% rel., non condensing

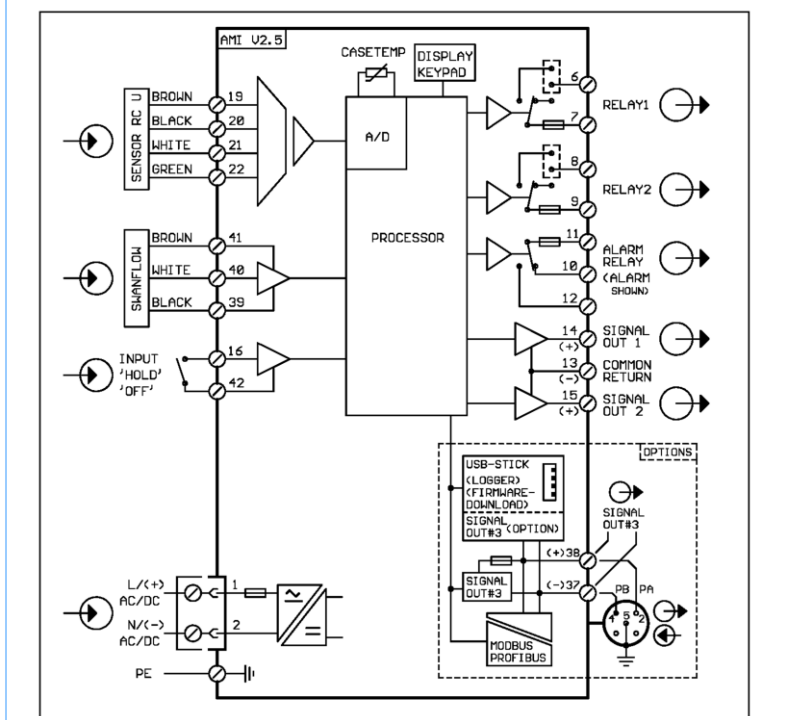
Power supply

Voltage: 100 - 240 VAC ($\pm 10 \%$),
50/60 Hz ($\pm 5 \%$)
or 24 VDC ($\pm 10 \%$)
Power consumption: max. 30 VA

Operation

Easy operation based on separate menus for "Messages", "Diagnostics", "Maintenance", "Operation" and "Installation". User menus in English, German, French and Spanish. Separate menu specific password protection. Display of process value, sample flow, alarm status and time during operation. Storage of event log, alarm log and calibration history.

Electrical Connection Scheme



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. Overvoltage protection of in- and outputs. Galvanic separation of measuring inputs and signal outputs.

Transmitter temperature monitoring with programmable high/low alarm limits.

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. Rated 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), as current source. 3rd signal output selectable as current source or current sink. 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)

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

Monitor Data

Sample conditions

Flow rate:	70 to 100 l/h
Temperature:	up to 95 °C
Inlet pressure (25 °C):	up to 2 bar
Outlet pressure:	pressure free
No sand, no oil	

Flow cell and connections

Flow cell made of stainless steel with built-in flow adjustment valve and digital sample flow meter.

Sample inlet: Swagelok 1/4" tube adapter
Sample outlet: G 1/2" adapter for flexible tube $\text{Ø} 20 \times 15 \text{ mm}$

Panel

Dimensions:	280 x 850 x 180 mm
Material:	stainless steel
Total weight:	7.0 kg