

Portable QC-Monitor for the automatic, continuous measurement of the specific resistivity or specific conductivity.

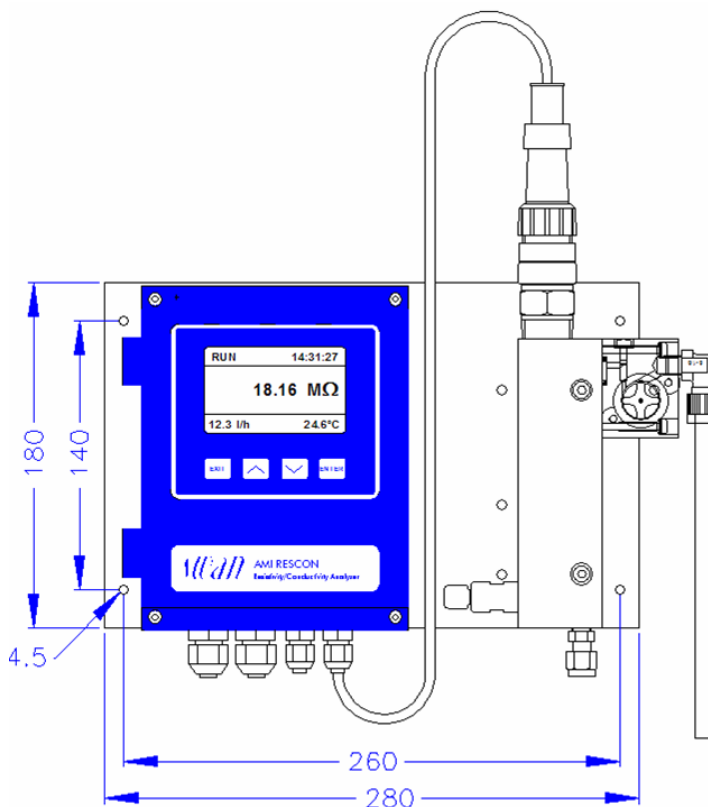
Q-Monitor AMI Rescon

Complete system mounted on a small, portable aluminum 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** made of stainless steel 316L with manual flow adjustment valve and digital sample flow meter (2 flow ranges).
- Factory tested, ready for installation and operation.

Specifications:

- Measurement range:
 - Resistivity: 0.01 to 200 MΩ-cm
 - Conductivity: 0.005 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 USP23.
- 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 (3rd as option).



Options:

- Precision test resistor plug for verification of transmitter according to USP23.
- Portable kit, supporting stand and holder for small monitor panel.
- Quick-lock 1/4" coupling for sample inlet.
- Quality certification of complete system.

Order scheme	Q-Monitor AMI Rescon	A	-	2	3	.	7	2	4	
Power supply	85 - 265 VAC / 47 - 63 Hz	1								
	24 VDC, direct current	2								
Electrical output option	None								0	
	Third current signal output 0/4 - 20 mA								1	
	Profibus DP interface								2	
	HyperTerminal interface (for logger download)								3	
	Modbus interface (for Webserver connection)								4	
Flow meter range	Low sample flow: up to 20 L/h (conductivity measurements in power plants)									5
	High sample flow: up to 100 L/h (resistivity meas. in semiconductor applications)									6

Conductivity Measurement

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

Measuring range	Resolution
0.01 to 200.00 M Ω -cm	0.01 M Ω -cm
0.005 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 20 M Ω -cm	$\pm 0.5 \%$
0.05 to 20 $\mu\text{S/cm}$	$\pm 0.5 \%$
20 to 1000 $\mu\text{S/cm}$	$\pm 1 \%$

Temperature compensation

- High purity water (non-linear)
- Neutral salts (NaCl)
- Strong acids (HCl)
- Strong bases (NaOH)
- Ammonia, Ethanolamine
- Morpholine
- Linear coefficient: 0.00 to 3.00 %/°C
- None (compensation switched off)

Test mode for transmitter according to USP<23> with test resistance.

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

Temperature input

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

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: 85 - 265 VAC, 47 - 63 Hz
or 24 VDC, $\pm 15 \%$
Power consumption: max. 20 VA

Operation

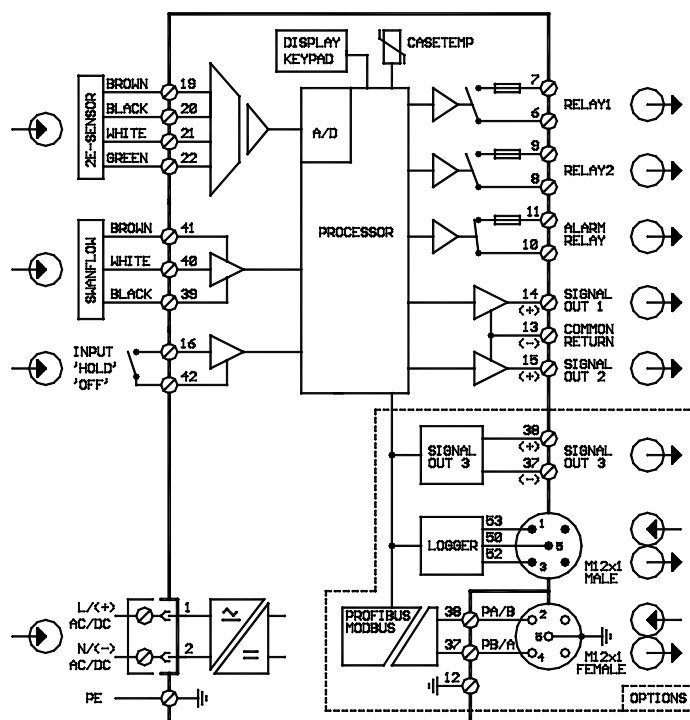
Easy operation based on separate menus for "Messages", "Diagnostics", "Maintenance", "Operation" and "Installation". User menus in English, German, French and Spanish.

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.
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 output (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 Microsoft HyperTerminal or RS485 interface (galvanically separated) with Fieldbus protocol Modbus or Profibus DP.

Monitor Data

Sample conditions

Flow rate:
- for power plant applications: 5 - 20 L/h
- for high purity water: 70 - 100 L/h
Temperature: up to 50 °C
Inlet pressure (25 °C): up to 10 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 selectable digital sample flow meter.

Sample inlet: Swagelok 1/4" tube adapter
Sample outlet: flexible tube 8 x 6 mm

Panel

Dimensions: 280 x 180 x 75 mm
Material: anodized aluminum
Total weight: 3.5 kg



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