

Complete monitoring system for the automatic, continuous measurement of specific resistivity or conductivity in ultrapure water.

Application examples

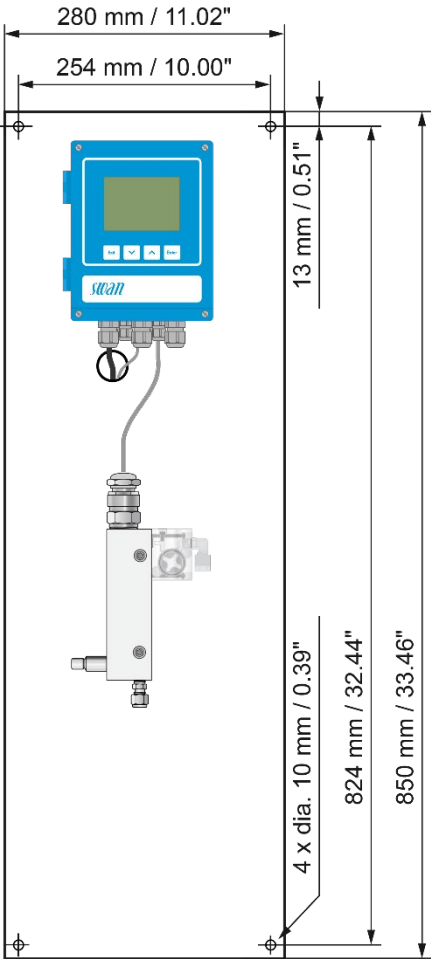
- For use in the semiconductor industry and all other applications with the highest demands on the purity of the process water and the accuracy and resolution of the resistivity measurement.

Measuring range

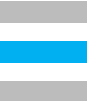
- Resistivity from 0.01 to 18.24 MΩ×cm or conductivity from 0.055 to 1000 µS/cm.
- Temperature compensations: non-linear for high purity water, linear with coefficient, various chemicals.
- Measured value is compensated to 25 °C.

Instrument features

- **Transmitter AMI-II Rescon**
in a rugged aluminum enclosure (IP66).
- **Flow cell QV-HFlow L130**
with integrated flowmeter for measurement validation and needle valve.
- **Swansensor RC U**
Two-electrode conductivity sensor with NPT 3/4" thread, integrated NT5k temperature probe and a cell constant of 0.01 cm⁻¹.
- Factory tested, ready for installation and operation.



Order numbers: AMI-II Rescon		A-23.531._00
Power supply	100 – 240 VAC, 50/60 Hz.....	1
	10 – 36 VDC.....	2
Option	RS485 interface with Modbus RTU or Profibus protocol	A-81.470.0X0
	HART interface	A-81.470.030
	Two additional 0/4 – 20 mA signal outputs	A-81.470.040



Resistivity or Conductivity Measurement

Sensor type

2-electrode conductivity sensor.

Measuring range

0.01 to 18.24 MΩ×cm
0.055 to 2.999 μS/cm
3.00 to 29.99 μS/cm
30.0 to 99.9 μS/cm
100 to 1000 μS/cm

Resolution

0.01 MΩ×cm
0.001 μS/cm
0.01 μS/cm
0.1 μS/cm
1 μS/cm

Automatic range switching.

Accuracy (at 25 °C)

0.01 to 18.24 MΩ×cm ±0.5 %
0.055 to 20.00 μS/cm ±0.5 %
20.00 to 1000 μS/cm ±1 %
of measured value
or ±1 digit (whichever is greater)

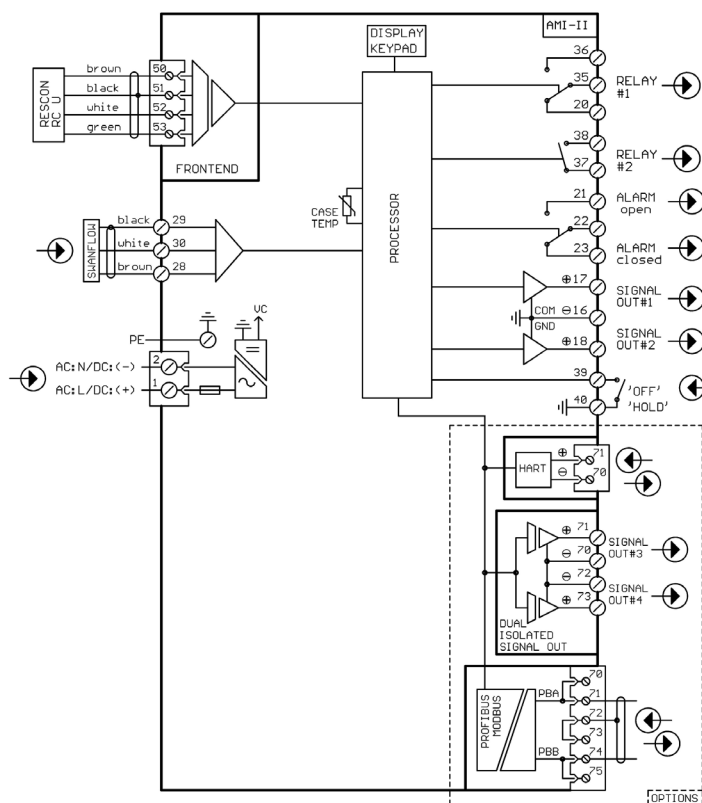
Temperature compensations

- Absolute (none)
- Non-linear function (NLF) for high purity water
- Linear coefficient 0.00 – 10.00 %/°C
- Various chemicals

Auxiliary sensors

- Temperature measurement with NT5k type sensor.
Measuring range: -30 to +130 °C
Accuracy (0-50 °C) ±0.2 °C
Resolution: 0.1 °C
- Sample flow measurement with digital SWAN sample flow sensor.

Electrical Connection Scheme



Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP66 / NEMA 4X
Display: backlit LCD, 74 × 53 mm
Electrical connectors: screw clamps
Ambient temperature: -10 to +50 °C
Humidity: 10 - 90% rel., non-condensing

Power supply

AC version: 100 – 240 VAC (±10 %),
50/60 Hz (±5 %)
DC version: 10 – 36 VDC
Power consumption: max. 35 VA

Operation

User menus in English, German, French and Spanish.
Separate, menu-specific password protection.

Safety features

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

Alarm relay

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

Input

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

Relay outputs

Two potential-free contacts programmable as limit switches for measured values, controllers or timers with automatic hold function.
Rated load: 1 A / 250 VAC

Signal outputs

Two or four (with optional communication interface) programmable signal outputs for measured values (freely scalable, linear or bilinear) or as controller outputs.
Current loop: 0/4 – 20 mA
Maximum burden: 510 Ω
Type: current source

SD card interface

Possibility to record measured values and diagnostic data to an SD card.
SD card included.

Communication interface options

- Two additional signal outputs, galvanically separated
- RS485 interface with Modbus RTU or Profibus DP protocol, galvanically separated
- HART interface

Monitor Data

Sample conditions

Flow rate: 20 to 100 L/h
Temperature: 0 to 50 °C
Inlet pressure: max. 2 bar
Outlet pressure: pressure free
No sand, no oil

Sample connections

Sample inlet: Swagelok fitting with R 1/8" (ISO 7-1) thread for 1/4" tube OD
Sample outlet: 8 mm Serto tube adapter (PA)

Panel

Dimensions: 280 × 850 × 200 mm
Material: stainless steel
Total weight: 7 kg

