

Transmitter AMU-II Rescon

Data sheet no. DenA13670X00

Electronic transmitter and controller 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.

Sensors

- Connections for a 2-electrode sensor with integrated NT5k temperature sensor.
- Use with high accuracy sensor Swansensor RC U for installation in dedicated SWAN flow cells or pipes.
- Optional: connecting a SWAN sample flow sensor.



Instrument features

- Transmitter for panel mounting with IP54 protection (front).
- Large, backlit LC display and simple, menu-driven operation.
- Various connection options: two analog signal outputs, two limit relays, one alarm relay and one relay input.
- Modbus, Profibus, HART, RS232 or USB as an option.
- Daily, automatic electronic zero calibration.

Order numbers:	AMU-II Rescon	A-13.670_00
Power supply	100 – 240 VAC, 50/60 Hz 10 – 36 VDC	1 2
Option	RS485 interface with Modbus RTU or Profibus protocol USB interface HART interface	A-81.460.010 A-81.460.020 A-81.460.030
Accessories	For all options and details, please visit our website at www.swan.ch . Swansensor RC U Flow cell QV-HFlow L130	A-87.322.2X0 A-83.436.16X



Resistivity or Conductivity Measurement

Sensor type

2-electrode 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)

Ranges and accuracy with Swansensor RC U (cell constant ~0.01 cm⁻¹).

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
Resolution: 0.1 °C
- Sample flow measurement with digital SWAN sample flow sensor. Included as standard when ordering a QV-HFlow L130 flow cell.

Transmitter Specifications and Functionality

Electronics case: Noryl® resin
Protection degree: IP54 (front)
Display: backlit LCD, 64 x 32 mm
Electrical connectors: clamping yoke
Dimensions: 96 x 96 x 85 mm
Weight: 0.30 kg
Ambient temperature: -10 to +50 °C
Humidity: 10 - 90% rel., non-condensing

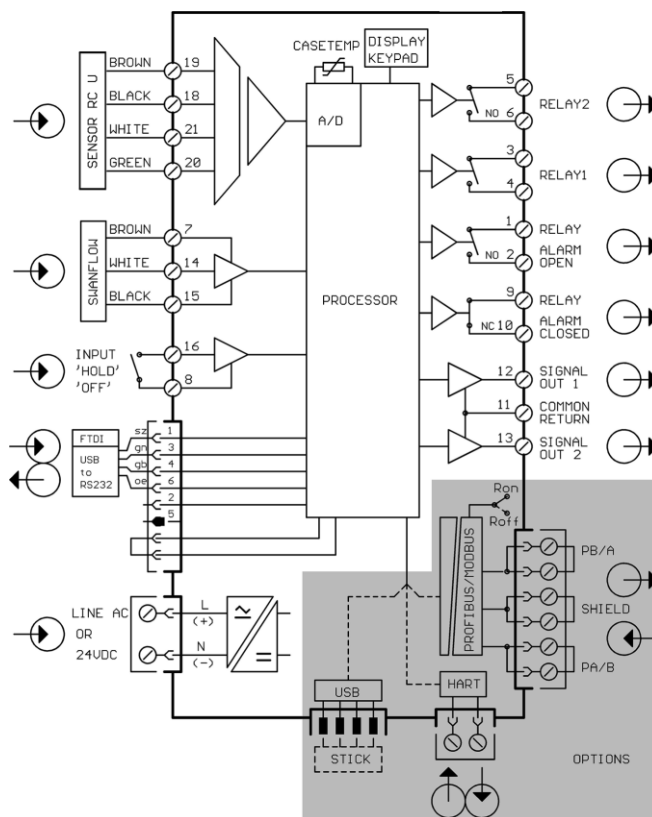
Power supply

AC version: 100 – 240 VAC (±10%),
50/60 Hz (±5%)
DC version: 10 – 36 VDC
Power consumption: max. 3 VA

Operation

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

Electrical Connection Scheme



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.

Transmitter temperature monitoring

With programmable high/low alarm limits.

Real-time clock with calendar

For action time stamp and preprogrammed actions

Alarm relay

Two potential-free contacts for summary alarm indication for programmable alarm values and instrument faults (one normally open and one normally closed contact).
Maximum load: 100 mA / 50 V resistive

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 timer with automatic hold function.
Rated load: 100 mA / 50 V resistive

Signal outputs

Two 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

RS232 interface

For data logger download to PC and for transmitter firmware updates. Requires the optional USB to RS232 interface converter.

Communication interface options

- RS485 interface with Modbus RTU or Profibus DP protocol, galvanically separated
- USB interface for logger download
- HART interface

