

Transmitter AMU-II pH / Redox

Data sheet no. DenA11441X00

Electronic transmitter and controller for the measurement of pH or redox potential (ORP) in water.

Application examples

- General purpose instrument for use with all Swansensors pH or ORP for various applications: potable water, swimming pools, wastewater, and power cycles.

Measuring range

- 0 to 14 pH or -500 to +1500 mV.
- Automatic temperature compensations according to Nernst with or without correction functions.
- Measured value is compensated to 25 °C.

Sensors

- Connections for a pH or ORP sensor with integrated or separate reference electrode, and a Pt1000 temperature sensor.
- Use with high accuracy sensors: Swansensors pH or Swansensors Redox available in variants for different sample conditions.
- 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.

Order numbers:	AMU-II pH / Redox	A-11.441._00
Power supply	100 – 240 VAC, 50/60 Hz 10 – 36 VDC	1 2
Accessories	For all options and details, please visit our website at www.swan.ch . RS485 interface with Modbus RTU or Profibus protocol USB interface HART interface Swansensor pH Swansensor Redox Flow cell QV-Flow 2PG-T	A-81.460.010 A-81.460.020 A-81.460.030 A-87.1X0.200 A-87.4XX.200 A-83.412.11X



pH or Redox Measurement

Signal inputs galvanically separated.
Input resistance: $>10^{13} \Omega$

pH measurement

Measuring range: 0.00 to 14.00 pH
Resolution: 0.01 pH
Reference temperature: 25 °C

ORP measurement

Measuring range: -500 to +1500 mV
Resolution: 1 mV

Temperature compensations

Selectable modes according to

- Nernst (for potable water and wastewater),
- Nernst with non-linear solution compensation (for high-purity water),
- Nernst with linear compensation with selectable coefficient (for high-purity water).

Calibration solutions table

Programmable table for pH buffers and ORP calibration solution.

Sensor monitoring

Indication of glass breakage and line disconnection.

Auxiliary sensors

- Temperature measurement with Pt1000 type sensor (DIN class A).
Measuring range: -30 to +250 °C
Accuracy (0-50 °C) ± 0.25 °C
Resolution: 0.1 °C
- Sample flow measurement with digital SWAN sample flow sensor. Included as standard when ordering a QV-Flow 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

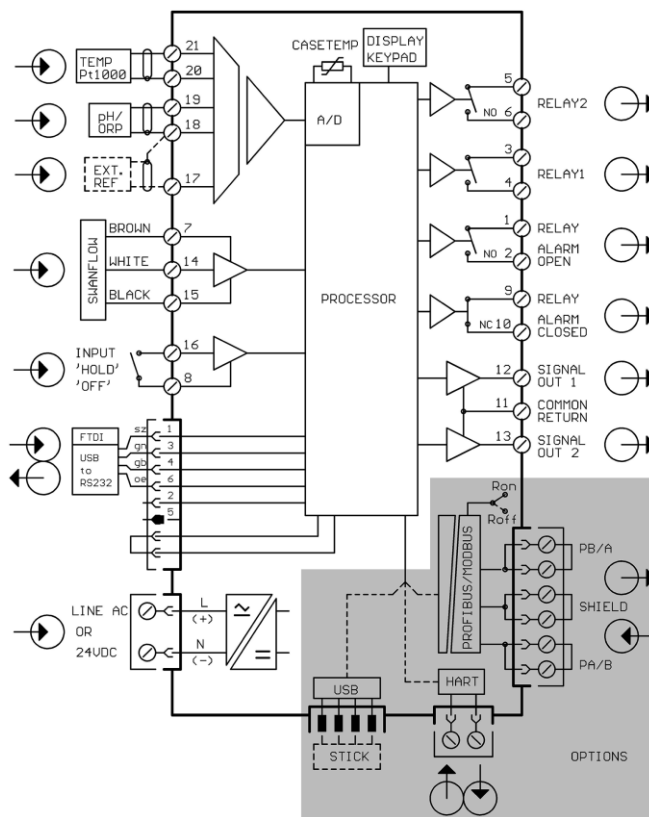
Power supply

AC version: 100 – 240 VAC ($\pm 10\%$),
50/60 Hz ($\pm 5\%$)
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

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

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

