

Transmitter AMI-II Dual pH/Redox

Data sheet no. DenA11522X00

Dual-channel electronic transmitter and controller for the measurement of pH and/or redox potential (ORP) in water.

Application examples

- General purpose instrument for use with Swansensors pH or Redox with integrated reference for various applications: potable water, swimming pools, wastewater, power plants.

Measuring range

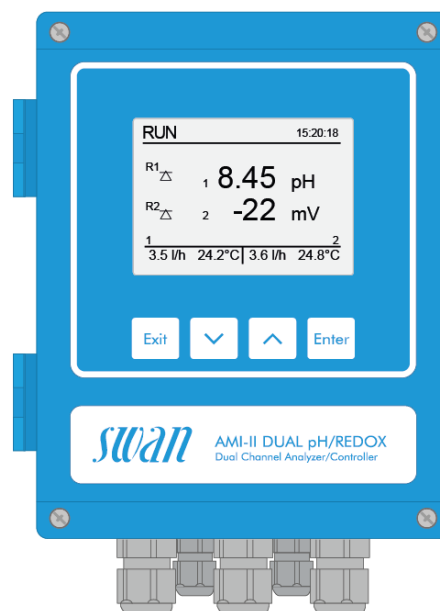
- 0.00 to 14.00 pH or –1500 to +1500 mV depending on installed sensors.
- Automatic temperature compensations according to Nernst with or without correction functions.
- Measured value is compensated to 25 °C.

Sensors

- Connections for two combined pH or ORP sensors and two Pt1000 temperature sensors.
- Galvanic separation between the two sensors inputs.
- Use with high accuracy sensors: Swansensors pH or Swansensors Redox available for different sample conditions.
- Optional: connecting two SWAN sample flow sensors.

Instrument features

- Measuring and control transmitter in a rugged aluminum enclosure (IP66).
- Large, backlit LC display and simple, menu-driven operation.
- Various connection options: two or optionally four analog signal outputs, two limit relays, one alarm relay and one relay input.
- Modbus, Profibus or HART as an option



Control functions

- Signal outputs and potential-free contacts flexibly configurable as control outputs.
- Optional AMI-II Relay Box for direct power supply and control of dosing devices, e.g. one or two solenoid valves or one motor valve.
- Relay input to freeze the measured value or to interrupt control in automated installations.

Order numbers:	Transmitter AMI-II Dual pH/Redox	A-11.522._00
Power supply	100 – 240 VAC, 50/60 Hz..... 10 – 36 VDC.....	1 2
Option	RS485 interface with Modbus RTU or Profibus protocol HART interface Two additional 0/4 – 20 mA signal outputs	A-81.470.0X0 A-81.470.030 A-81.470.040
Accessories	For all accessories and details, please visit our website at www.swan.ch . Swansensor pH..... Swansensor Redox Flow cell QV-Flow 2PG-T Flow cell M-Flow 10-3PG	A-87.1X0.200 A-87.4XX.200 A-83.411.11X A-83.416.330



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pH or ORP Measurement

Galvanic separation between the two sensor inputs.

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: -1500 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).

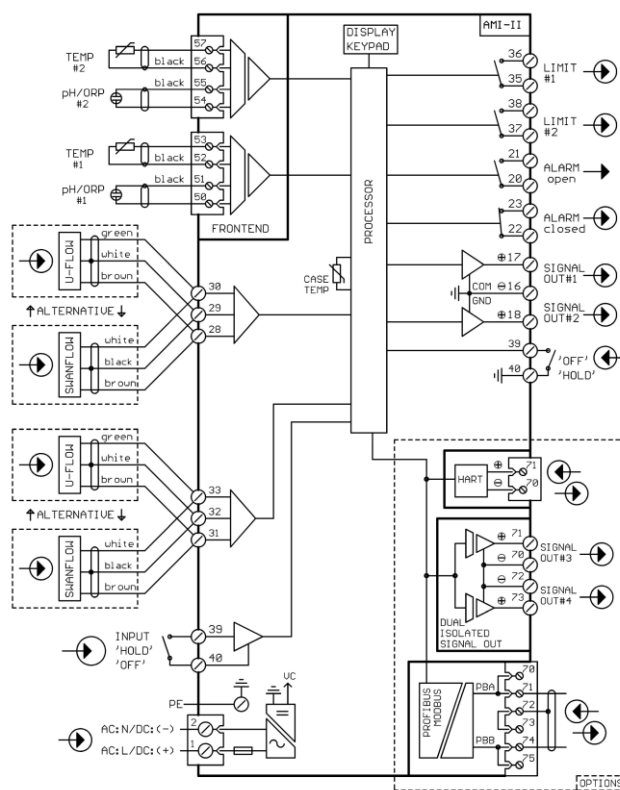
Calibration solutions table

Programmable table for pH buffers and ORP calibration solution. SWAN buffers (pH 7 and 9) pre-programmed.

Auxiliary sensors

- Temperature measurement with one or two Pt1000 type sensors (DIN class A).
Measuring range: -30 to +250 °C
Accuracy (0-50 °C) ± 0.25 °C
Resolution: 0.1 °C
- Sample flow measurement with one or two digital SWAN sample flow sensors.

Electrical Connection Scheme



Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP66 / NEMA 4X
Display: backlit LCD, 74 x 53 mm
Electrical connectors: screw clamps
Dimensions: 180 x 142 x 94 mm
Weight: 1.7 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. 35 VA

Operation

User menus in English, German, French, Spanish and Italian.
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.

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 timers with automatic hold function.

Rated load: 100 mA / 50 V

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

