Monitor AMI-II Dual pH/Redox

Data sheet no. DenA21522X00

Complete monitoring system for the automatic, continuous measurement of pH and redox potential (ORP) in water.

Application examples

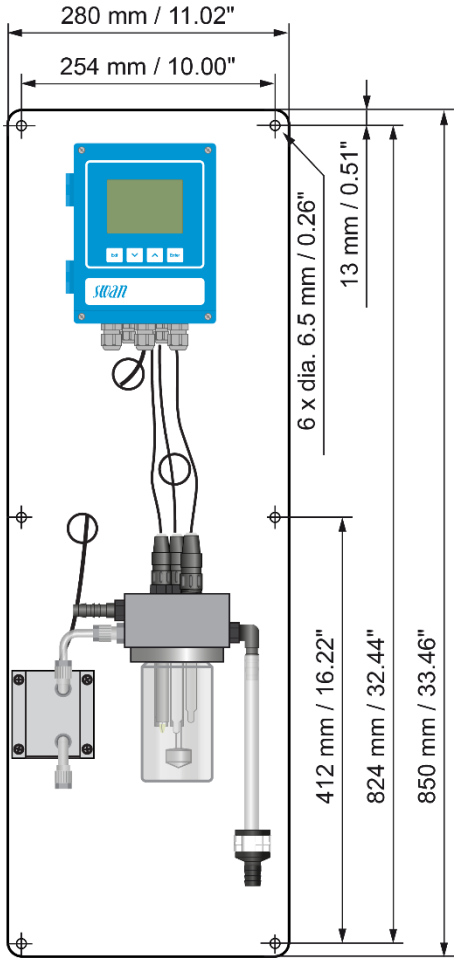
- Monitoring water quality in potable water, effluents and cooling water.

Measuring range

- 1.00 to 13.00 pH and −1500 to +1500 mV.
- Automatic temperature compensation according to Nernst.
- Measured value is compensated to 25 °C.

Instrument features

- **Transmitter AMI-II Dual pH/Redox**
  in a rugged aluminum enclosure (IP66).
- **Flow cell M-Flow 10-3PG**
  with removable sample vessel for easy sensor cleaning and calibration, Pt1000 (Class A, DIN EN 60751) temperature sensor and optional spray nozzle for sensor cleaning.
- For use with Swansensor pH/Redox Standard and Swansensor pH/Redox AY (combined electrodes with gel/polymer electrolyte).
- Factory tested, ready for installation and operation.



Monitor AMI-II Dual pH/Redox with optional Swansensor U-Flow and optional spray nozzle.

Order numbers:	Monitor AMI-II Dual pH/Redox	A–21.522._00
Power supply	100 – 240 VAC, 50/60 Hz	1
	10 – 36 VDC	2
Option 1	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
Option 2	Swansensor pH Standard	A–87.120.200
	Swansensor pH AY	A–87.130.200
Option 3	Swansensor Redox Standard	A–87.420.200
	Swansensor Redox AY	A–87.430.200
Option 4	Swansensor U-Flow, 1m	A–87.934.001
Option 5	Spray nozzle for sensor cleaning	A–83.491.120
Option 6	AMI-II Relay Box	A–89.812.200

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pH and ORP Measurement

Galvanic separation between the two sensor inputs.
Input resistance: $>10^{13}$ Ω

pH measurement
Measuring range with Swansensor pH ST/AY: 1.00 to 13.00 pH
Resolution: 0.01 pH
Reference temperature: 25 °C

ORP measurement
Measuring range with Swansensor ORP ST/AY: −1500 to +1500 mV
Resolution: 1 mV

Temperature compensation according to Nernst.

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 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.

Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP66 / NEMA 4X
Display: backlit LCD, 74 x 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

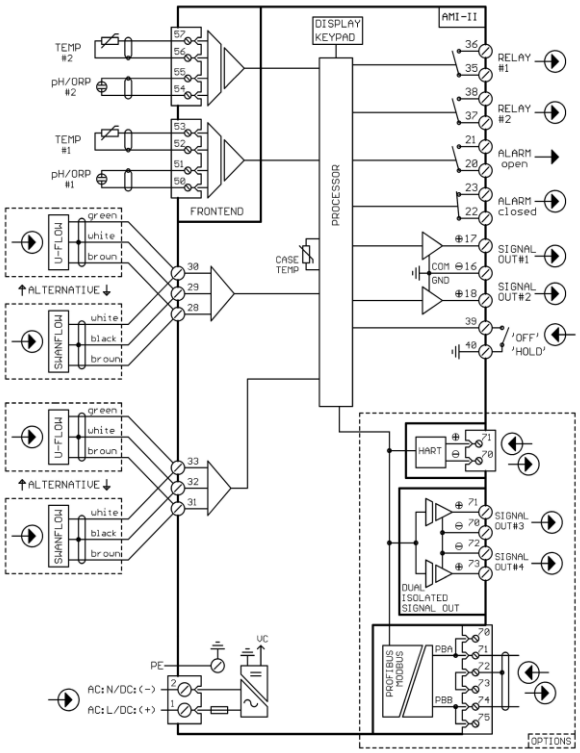
Operation
User menus in English, German, French, Spanish and Italian.
Separate, menu-specific password protection.

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

Electrical Connection Scheme



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

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: 3 to 15 L/h
Temperature: max. 50 °C
Operating pressure: max. 1 bar

Sample connections
Sample inlet (without Swansensor U-Flow): elbow hose nozzle for flexible tube, 10 mm inner Ø
Sample inlet (with Swansensor U-Flow): 6 mm Serto tube adapter (PA)
Sample outlet: for flexible tube, 15 mm inner Ø

Panel
Dimensions 280 × 850 × 180 mm
Material white PVC
Total weight 6 kg