

Monitor AMI-II pH/Redox M-Flow

Data sheet no. DenA21512X00

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

Application examples

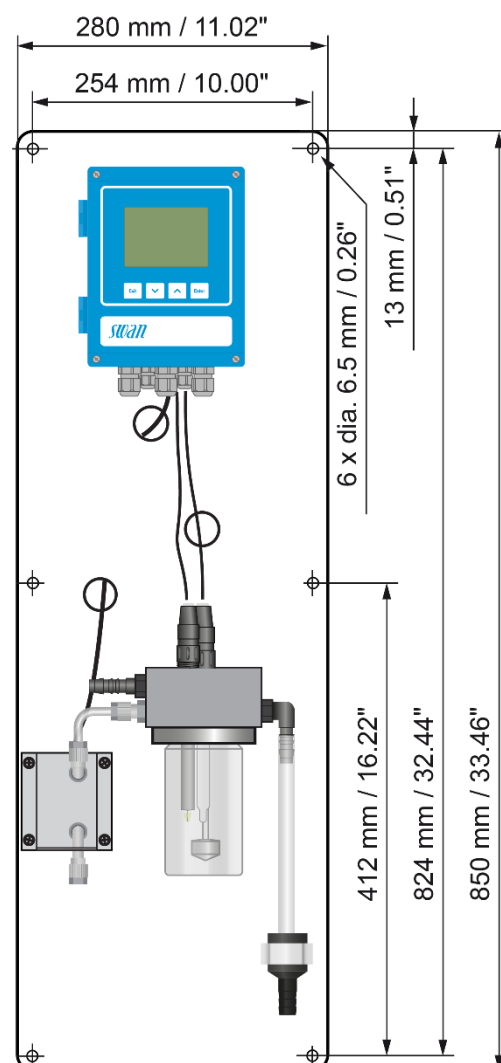
- Monitoring water quality in potable water, effluents and cooling water.

Measuring range

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

Instrument features

- **Transmitter AMI-II 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 pH/Redox M-Flow with optional Swansensor U-Flow and optional spray nozzle.

Order numbers: Monitor AMI-II pH/Redox M-Flow		A-21.512._00
Power supply	100 – 240 VAC, 50/60 Hz..... 10 – 36 VDC.....	1 2
Option 1	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
Option 2	Swansensor pH Standard Swansensor pH AY Swansensor Redox Standard Swansensor Redox AY	A-87.120.200 A-87.130.200 A-87.420.200 A-87.430.200
Option 3	Swansensor U-Flow, 1m	A-87.934.001
Option 4	Spray nozzle for sensor cleaning	A-83.491.120
Option 5	AMI-II Relay Box	A-89.812.200



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pH or ORP Measurement

Input resistance: $>10^{13} \Omega$

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 Redox 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 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.

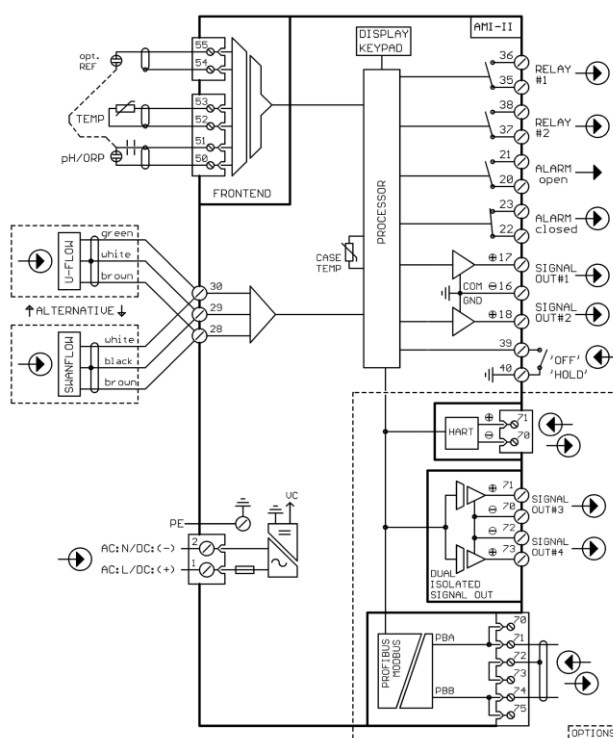
Transmitter temperature monitoring

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 $\varnothing$
Sample inlet (with Swansensor U-Flow):
6 mm Serto tube adapter (PA)
Sample outlet: for flexible tube,
15 mm inner $\varnothing$

Panel

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

