

Electronic transmitter / controller for the continuous measurement of the pH value or Redox (ORP) in water.

Transmitter AMI pH-Redox

- Measuring and control transmitter in a rugged aluminum enclosure (IP 66).
- Measuring range:
0 to 14 pH respectively -500 to +1500 mV
- Sensor connections for a pH or ORP sensor, reference electrode, Pt1000 temperature and for a digital sample flow meter (QV-Flow or deltaT-Flow).
- Galvanically separated sensor connections.
- Automatic temperature compensations according to Nernst with or without correction functions.
- Values for pH buffer solutions and redox calibration solution programmable.
- Big backlit LC display for the reading of measuring value, sample temperature, sample flow, temperature compensation type and operating status.
- Easy user menus in English, German, French and Spanish. Simple programming of all parameters by keypad.
- Electronic record of major process events and calibration data.
- Real-time clock for time stamp in data logs and for automated functions.
- Data logger for 1'500 data records stored at a selectable interval. (Data download to PC requires optional HyperTerminal interface).
- Overvoltage protection for in- and outputs.
- Two current outputs (0/4 - 20 mA) for measured signals.
- Potential-free alarm contact as summary alarm indication for programmable alarm values and for instrument faults.
- Two potential-free contacts programmable as limit switch or PID-control.
- Input for potential-free contact to freeze the measuring value or to interrupt control in automated installations (hold function or remote-off).



Order Nr.	Transmitter AMI pH-Redox	A-11.411.100
Option:	<input type="checkbox"/> 3 rd current signal output (0/4 – 20mA) <input type="checkbox"/> Profibus DP interface <input type="checkbox"/> HyperTerminal interface (RS-232) <input type="checkbox"/> Modbus interface <input type="checkbox"/> USB interface	A-81.410.020 A-81.420.020 A-81.420.010 A-81.420.022 A-81.420.040

pH / ORP 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

automatic, 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.

Temperature measurement

with SWAN Pt1000 sensor.
Measuring range: -30 to +130 °C
Resolution: 0.1 °C

Sample flow measurement

with digital sample flow meter.

Transmitter Specifications and Functionality

Electronics case: Cast aluminum
Protection degree: IP 66 / NEMA 4X
Display: backlit LCD, 75 x 45 mm
Electrical connectors: screw clamps
Dimensions: 180 x 140 x 70 mm
Weight: 1.5 kg
Ambient temperature: -10 to +50 °C
Humidity: 10 - 90 % rel., non cond.

Power supply

Voltage: 100 - 240 VAC ($\pm 10\%$),
50/60 Hz ($\pm 5\%$)
or 24 VDC, ($\pm 10\%$)
Power consumption: max. 30 VA

Operation

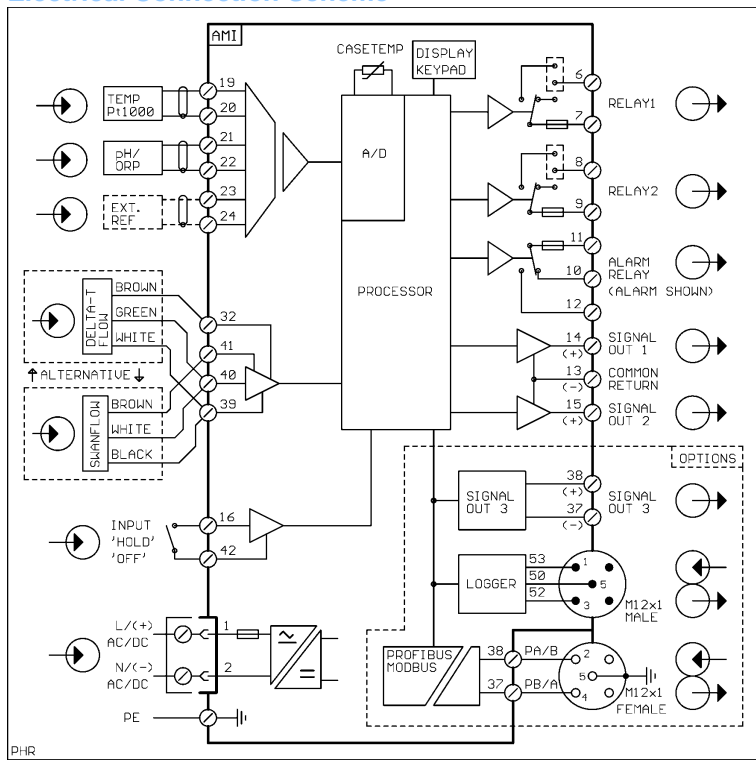
Easy operation based on separate menus for "Messages", "Diagnostics", "Maintenance", "Operation" and "Installation".

User menus in English, German, French and Spanish.

Separate menu specific password protection.

Display of process value, sample flow, alarm status and time during operation.

Electrical Connection Scheme



Storage of event log, alarm log and calibration history.

Storage of the last 1'500 data records in logger with selectable time interval.

Real-time clock with calendar

For action time stamp and preprogrammed actions.

Safety features

No data loss after power failure, all data is saved in non-volatile memory.
Overvoltage protection of in- and outputs. Galvanic separation of measuring inputs and signal outputs.

Transmitter temperature monitoring
with programmable high/low alarm limits.

1 Alarm relay

One potential free contact for summary alarm indication for programmable alarm values and instrument faults.
Maximum load: 1A / 250 VAC

1 Input

One input for potential-free contact. Programmable hold or remote off function.

2 Relay outputs

Two potential-free contacts programmable as limit switches for measuring values, controllers or timer for system cleaning with automatic hold function.
Max. load: 1A / 250 VAC

2 Signal outputs (3rd optional)

Two programmable signal outputs for measured values (freely scaleable, linear or bilinear) or as continuous control output (control parameters programmable).

Current loop: 0/4 - 20 mA
Maximum burden: 510 Ω

Control functions

Relays or current outputs programmable for 1 or 2 pulse dosing pumps, solenoid valves or for one motor valve. Programmable P, PI, PID or PD control parameters.

1 Communication interface (option)

- RS232 interface for logger download to PC with SWANTerminal
- RS485 interface (galvanically separated) with Fieldbus protocol Modbus or Profibus DP
- 3rd Signal output
- USB interface