

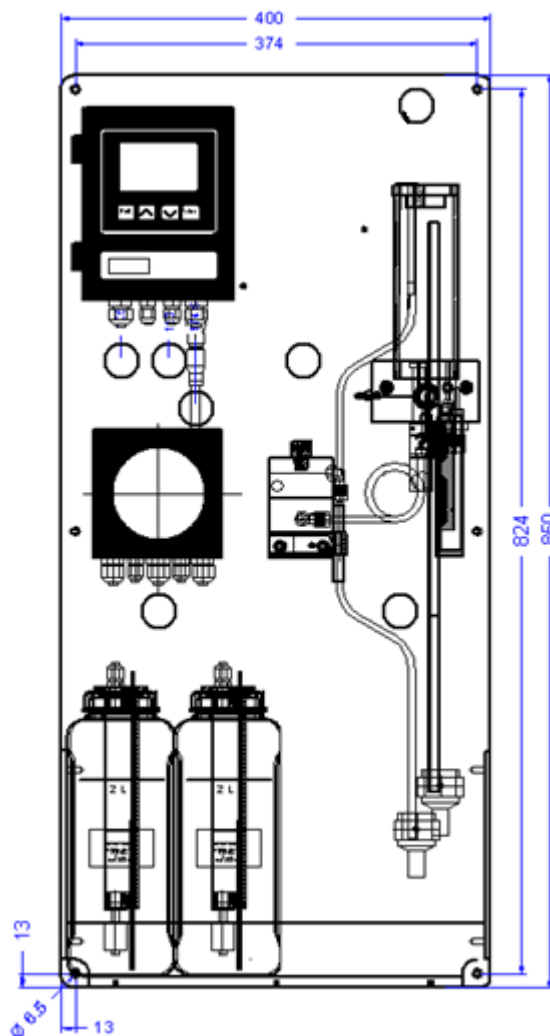
Complete monitoring system for the automatic, continuous measurement of phosphate in potable water, effluents and cooling water.

## Monitor AMI Phosphate-II

- Measuring range: 0.01 to 10 ppm (mg/L) PO<sub>4</sub>
- Based on colorimetric measurement principle according to EN ISO 6878 / APHA 4500 –P E.
- No interferences with silica.
- Complete system including measurement and control electronics, photometer, flow indicator, reaction chamber, reagent dosing system and reagent containers.
- Measurement values are available as analog output signals.
- Alarm display and activation of alarm relay when user defined, critical limits are reached.
- Continuous, automatic monitoring of main instrument functions (sample flow, reagent supply).
- Large back-lit LC display showing all measured values and status information simultaneously.
- Easy user menus in English, German, French and Spanish. Simple programming of all parameters by keypad.
- Data logger for 1'500 data records stored at a selectable interval. (Data download requires optional HyperTerminal interface).
- Factory tested, ready for installation and operation.

### Accessories

- *Cleaning Module* for automatic chemical cleaning of flow cell and photometer. For details see separate data sheet no. DenA82312000.
- *Webserver* for remote instrument access over the internet. For details see separate data sheet no. DenA815XX000.



Monitor AMI Phosphate-II

Order scheme	Monitor AMI Phosphate-II	A-25.421.100
Option 1:	<input type="checkbox"/> 3 <sup>rd</sup> 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

## Analytical System

### Phosphate (PO<sub>4</sub>) measurement

Measuring range:	Resolution
0.01 to 0.99 ppm	0.01 ppm
1.0 to 4.9 ppm	0.1 ppm
5 to 10 ppm	1.0 ppm
Reproducibility:	
up to 5 ppm	± 0.01 ppm or ± 2.5%, whichever is the greater
5 to 10 ppm	± 10%
Measurement time:	7 minutes
Cycle time:	10 minutes

### Flow cell

Made of acrylic glass with water inlet filter and flow adjustment valve.

## Transmitter Specifications and Functionality

Electronics case:	Aluminum
Protection degree:	IP 66 / NEMA 4X
Display:	backlit LCD, 75 x 45 mm
Electrical connectors:	screw clamps
Ambient temperature:	-10 to +50 °C
Limit range of operation:	-25 to +65 °C
Storage and transport:	-30 to +85 °C
Humidity:	10 to 90 % relative, non condensing

### Power supply

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

### Operation

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

Separate menu specific password protection possible.

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

Storage of event log, alarm log and calibration history.

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

### Real-time clock with calendar

For action time stamp and pre-programmed actions.

### Safety features

Data storage in non-volatile memory.  
Over voltage protection of in- and outputs.  
Galvanic separation of measuring inputs and signal outputs.

### Reagents monitoring

Warning if low level is reached and alarm for lack of reagents.

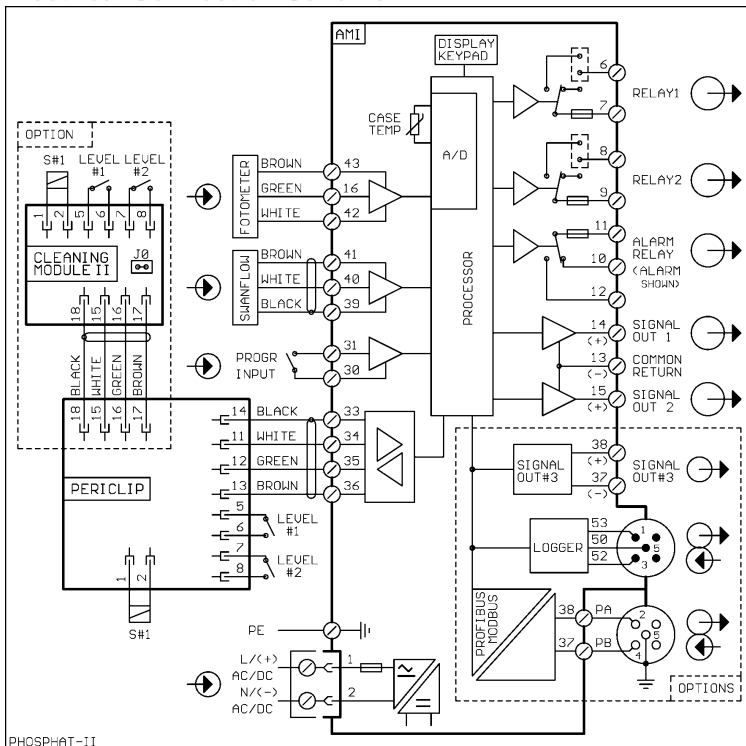
### Temperature monitoring

Alarm if the transmitter temperature is higher than +65 °C or lower than 0 °C.

### 1 Alarm relay

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

## Electrical Connection Scheme



### 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 with automatic hold function.  
Max. load: 1A / 250 VAC

### 2 Signal outputs

Two programmable signal outputs for measured values (freely scalable, linear or bilinear) or as continuous control output (control parameters programmable).  
Current loop: 0/4 - 20 mA  
Maximum burden: 510 Ω

### Control function

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
- 3<sup>rd</sup> Signal output
- USB interface

## Sample and Monitor Data

### Sample conditions

Flow rate:	min. approx. 10 l/h
Temperature:	up to 50 °C
Inlet pressure:	0.15 to 2 bar
Outlet pressure:	pressure free, atmospheric drain

### Sample connections

Inlet:	Serto PVDF 8 mm (1/4"), for tubing tubing 6x8 mm
Drain:	Ø 16 mm, tubing 15x20 mm

### Panel

Dimensions:	400 x 850 x 200 mm
Material:	white PVC
Weight:	9.0 kg