

AQUACON PO4-10/PO4-20

Process analyzers for Orthophosphate measurement

The AQUACON PO4-10 and PO4-20 process photometers can be used for the monitoring and control of the concentration of orthophosphate (PO_4^{3-}) in water. Measurement principle is the photometric detection of the color change of a water sample after the formation of a molybdoblue-phosphoric acid complex (PO4-10) or a molybdovanadate-phosphoric acid complex (PO4-20).

Main applications for the photometers are the monitoring of surface water, treated water, waste water or process water and the control of phosphate dosing plants.

The analyzers consist of a control unit with touchscreen and an analysis unit with measuring chamber, valve, dosing pumps and all required tube connections. The control unit includes a microprocessor which controls the automatic measurement incl. sampling, rinsing, reagent dosing and surveillance of the photodetection system.

Your advantages:

- ⇒ Automatic measurement incl. self test and drift compensation
- ⇒ Easy operation via touchscreen
- ⇒ Adjustable limit value and alarm value
- ⇒ Programmable analog output (0/4-20 mA), optionally with USB port for easy data storage
- ⇒ Adjustable break time between two analysis
- ⇒ External start/stop of an analysis possible
- ⇒ No external calibration required
- ⇒ External plug connections (IP65) for alarm relay, limit relay, analysis relay, external start/stop, analog output 0/4-20 mA
- ⇒ Multi range power supply (110–230 Volt, 50–60 Hz)
- ⇒ Including polycarbonate wall cabinet



Example for AQUACON analyzer

Order informations:

AQUACON PO4-10	(0,05 - 10 ppm PO_4^{3-})	Order No. 693 2784 01
AQUACON PO4-20	(0,5 - 50 ppm PO_4^{3-})	Order No. 693 2785 01
Reagent POB-R1003	(500 ml)	Order No. 103 2784 01
Reagent POB-R1004	(500 ml)	Order No. 104 2784 01
Reagent PO20-R1011	(500 ml)	Order No. 101 2785 03

Technical Data

Current output	0/4 - 20 mA, max. load 500 ohm
Display	240 x 128 dots, touchscreen
Relays	1 x Alarm, potential-free 230 V/50 Hz, 3A 1 x Limit, potential-free 230 V/50 Hz, 3A 1 x Analysis state, potential-free 230 V/50 Hz, 3A
External Switching	potential-free contact, 18 V DC, ca. 4 mA
Power Supply	110 - 230 V -- 50/ 60 Hz
Power Consumption	approx. 16 VA
Dimensions	640 x 315 x 190 mm (H x W x D)
Protection	IP 65 (transmitter housing)
Connections	Plugs with circular connection 1,5 mm ²
Temperature	5° to 45°C, at consumption of reagents within 6 months

Since it is company policy to continuously improve its product range, we reserve the right to make changes in the product design without notification to its users.

Specifications

Parameter	Orthophosphate (PO ₄ ³⁻)	
Description	Automatic microprocessor controlled analyzer for the photometric determination of dissolved orthophosphate	
Typical Applications	Monitoring of surface, treated and clarified water Control of phosphate dosing plants	
Analysis Method:	Molybdblue method	Molybdovanadate method
Analyzer type	AQUACON PO4-10	AQUACON PO4-20
Measuring Range	0,05 – 10 ppm	0,5 – 50 ppm
Resolution	0,01 ppm	0,1 ppm
Accuracy	2 % of end value	
Reproducibility	1 % of end value	
Zero-point Stability	automatic adjustment	
Number of Samples	1	
Sample	Operating Pressure 0,1 - 10 bar Temperature 5 - 30 °C Sample Volume 25 ml per analysis (excluding rinsing) Sample Condition clear, filtrated Chemical Demands pH 4-8 Drain pressure free into open drain	
Reagents	Number 2 Storage Temp. 0 - 30°C Usage/analysis appr. 1,35 ml each reagent Reagent volume 500 ml Suitable for appr. 370 analysis	1 0 - 30°C appr. 2,7 ml 500 ml appr. 185 analysis
Analysis	Cycle (approx.) 3 - 12 min (incl. rinsing) Sample interval 1 – 99 min or external start/stop	