BRAN+LUEBBE
ANALYTICS

SPX Process Equipment

Monitor 90 S Kolorimeter

- On-line analyzer
- Measures Total Phosphate and ortho Phosphate automatically
- Ensures compliance with legal limits for purified water
- Suitable for water treatment plants, rivers and lakes

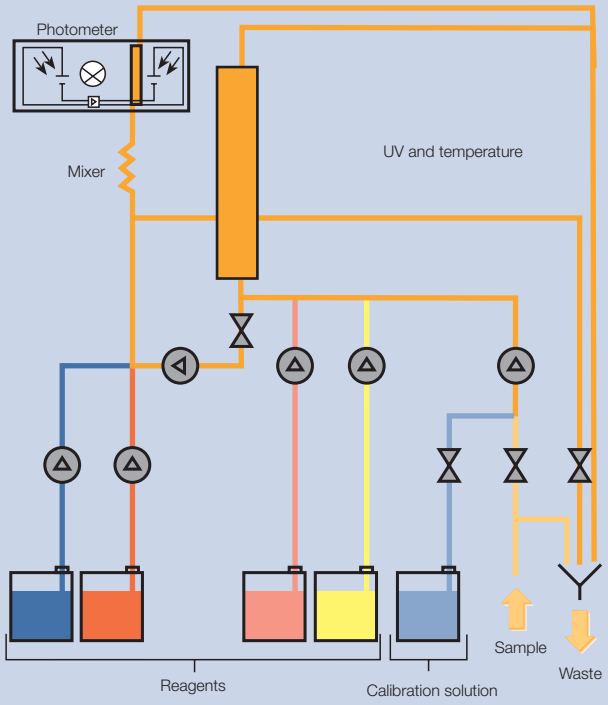
Applications

- **Total Phosphate and ortho Phosphate**

Phosphorus occurs in several different forms, both in natural waters and in waste water, typically as ortho-phosphate, inorganic polyphosphates and organic phosphorus ompounds. These last two classes of compounds have to be broken down, or digested, before the phosphorus can be measured.

In the Monitor 90S, this digestion takes place automatically inside the analyzer, using a combination of high temperature and UV techniques. The resulting ortho-phosphate is then measured using the molybdenum blue method, which is well proven for its low detection limit, high precision and low reagent consumption.

Them Monitor 90 S Total P combines proven analysis technology with automated sample treatment.



Advantages

- Fully automatic
- High sensitivity
- High accuracy and stability
- Automatic recalibration for long-term accuracy
- Measures up to 6 different sample streams
- Optional manual sampling point
- Full computer control
- Maintenance-free photometer with automatic blank compensation
- Retains user settings and restarts automatically after a power cut
- Optional PC and printer interfaces

Measuring principe

The sample steam to be analyzed is selected with a solenoid-operated valve and the sample and reagents and drawn into the system by specially designed pumps. The sample with sulfuric acid and an oxidant, then digested in the heat in a new type of UV digestor to break down complex phosphorus compounds into orthophosphate. Color reagents are added and after complete reaction the solution passes into a flowcell. The built-in computer then calculates the phosphorus concentration.

Technical Data

Measuring principle
Molybdenum blue reaction following automatic digestion

Measuring frequency
Every 35 minutes

Measuring range, in mg per litre
0 - 0.05 to 0 - 6.0 mg/L

Other components and ranges on request.

Detection limit in the lowest detection range 0,001 mg/L

Precision
typ. <3% of full scale

Drift
typ. <1% of full scale per day

No. of sample streams
Up to 6 plus manual sample

Reagent supply
at least 2-3 months

Outputs
0/4 - 20 mA, max. load 400 ohms, galvanically separated, linear response

Options:
RS 232C or
RS 485 bus interface

Limit value alarms
1 potential-free contact per sample stream, max. load 25 VAC, 60 VDC, 3 A

General alarm
1 potential-free contact, max. load 25 VAC, 60 VDC, 3 A

Sample
Pressure
max 0.1 bar
Temperature
2 - 35°C
Volume
2 - 10 l/h
free of solids and oil
Connection
Swagelok: pipe 6 x 1 mm

Waste connection
pressure-free,
tubing 10 x 2 mm

Power supply
Voltage
115/230 V AC
Tolerance
±10%
Frequency
50 or 60 Hz

Power consumption
approx. 150 VA

Environmental temperature
15 - 35°C

Colour
grey/white (RAL 9002)

Mounting
wall mounting

Protection class
IP 54 / NEMA 13
IP 65 / NEMA 4 (Electronics)

Weight
at least 60 kg
Dimensions (HxWxD)
900x600x310 mm
Optional junction box
1200x600x310 mm
*** multi-channel models**

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