

8810 ANALYSER

Chlorine high concentration



Applications

- On-line monitoring of Chlorine / hypochlorine in the odour control process of waste water treatment plants

Methodology

- Measurement principle: potentiometric titration with sodium thiosulfate after automatic sample conditioning with acetic acid / acetate buffer.
- Electrodes: platinum and reference.
- Measurement range: 0-3 g/l Cl_2
- Detection limit: 0.1 g/l Cl_2
- Titration reagent: sodium thiosulfate.
- Conditioning solution: acetic acid/acetate buffer.
- Calibration solution: chlorine standard solution (freshly prepared).
- Analysis frequency: programmable - 1 analysis every 5 minutes max.

Advantages

- No sample filtration required (if any suspended solids < 1% and 1 mm)
- Standard laboratory method
- Automatic reactor cleaning
- Accurate on-line measurement of chlorine is used for an optimum treatment quality
- Low maintenance: easy to prepare reagents and pump tube changing monthly only

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Distributor

TE 8810=A=914 - Rev. D - FR. 50622048726

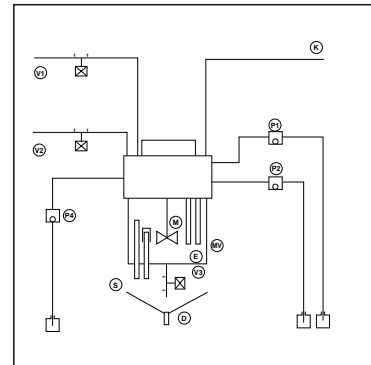


Operating principle

The drain valve and the rinse valve open allowing rinse water to clean the reactor for a programmed time (see figure).

After the rinse valve, the sample valve opens while the drain valve stays open a few seconds in order to flush any remaining rinse water droplets with fresh sample solution.

The drain valve closes and the sample volume is accurately adjusted with the siphon. The conditioning pump is now activated and operates for a programmed time. The power working of the titration is directly proportional to the chlorine concentration at the equivalent time.



V1 : Rinse valve
V2 : Sample valve
V3 : Drain valve
MV : Reactor

P4 : Volumetric pump for automatic calibration
D : Drain
M : Stirrer

S : Siphon/overflow
P1 : Titration pump
P2 : Sample conditioning pump
K : Electrode cable
E : Electrodes

Specifications

SAMPLE

Number of sample streams:
1, up to 6 with sequencer model 8811
Sampling mode: cyclic, programmable
Sample temperature: 0–50 °C (32–122 °F)
Sample pressure: 0.5–6 bar (7.2–87 psi)
Sample flowrate: 50–300 l/h (10–80 GPH)
Flush-water pressure: 1–6 bar (14.5–87 psi)
Air instrument: 5–7 bar (72.5–101.5 psi)

INSTALLATION

Mounting: 19" panel, wall mounting unit or free-standing cabinet
Sample tubing: 12/14 mm or 1/2" OD on request
Flush water: tubing 6/8 mm or 3/8" OD on request
Air instrument: tubing 4/6 mm or 1/4" OD on request

ANALYSIS

Analysis cycle: '5 min.

Cycle time: programmable 999 min. max.

Units : ppm, ppb, mg/l... programmable

Accuracy: ± 2%

Reproducibility: < 3%

Calibration: manual, process or automatic programmable

OUTPUTS

Analog outputs:

2 x 0 or 4/20 mA signal galvanically isolated

Alarms:

3 relays: 1 system alarm, 1 our limit, high limit

Control:

1 sample level detector
1 reagent level detector
1 calibration solution level detector
RS232 output
Remote start/stop

E.M.C.: This instrument conforms to European Directive 89/336/CEE concerning electromagnetic compatibility.

System configuration

CHLORINE ANALYSER BASIC INSTRUMENT

- P/N 368810,xxxxx:
8810 chlorine analyser 19" panel mounted includes:
Titration vessel/sprinkler
Measuring pH electrode
One reagent pump for titration
- P/N 368810,7xxxx : additional reagent pump for sample conditioning

OPTIONS

- P/N 368810,60000: Automatic calibration
- P/N 368810,56000: Chemical cleaning
- P/N 368810,65000: Manual sample entry system
- P/N 368810,40000: Fiberglass enclosure, wall mounting
- P/N 368810,45000: Steel cabinet, floor mounting
- * Reagent pump are either peristaltic or micropiston (24V/50HZ or 24V/60HZ)
- * The product can be configured with different frequency/voltage :
- 220V/50HZ - 240V/50HZ - 110V/50HZ - 110V/60HZ