

Nitrate analyser Model 8810

data sheet



Applications

- On-line monitoring of industrial wastewater
- On-line measurement of water treatment plants effluents
- Control of nitrification and denitrification processes
- Natural water quality monitoring

Methodology

- **Measurement principle:** Direct with NITRATE ION SELECTIVE ELECTRODE
- **Measuring range:** 1-100 mg/l N-NO₃
- **Detection limit:** 1 mg/l N- NO₃
- **Analysis frequency:** Programmable - 1 analysis every 5 min. max.

Advantages

- No sample filtration (if any suspended particles < 1% and < 1 mm)
- Easy to setup user-friendly programming
- Automatic temperature compensation
- Measuring cell automatic cleaning
- Automatic calibration (standard additions)
- Monthly maintenance only

International Headquarters

Zellweger Analytics SA - Polymetron division
33, rue du Ballon
93165 Noisy-le-Grand cedex - France
Tel : (33) 1 48 15 80 80 - Fax : (33) 1 48 15 80 00

Members of the Zellweger Analytics Division

Germany
Zellweger Analytics GmbH
Sollnerstrasse 65b
D-81479 München
Tel : (49) 89-79-19-20
Fax : (49) 89-79-19-243

Italy
Zellweger Analytics S.r.l.
Via Primaticcio, 168
I-20147 Milano
Tel : (39) 2-48-339-1
Fax : (39) 2-48-30-23-14

India
Forbes Zellweger Analytics
A 34/35, MIDC Estate
"H" Block
Pimpri, Pune 411 018
Tel : (91) 212-770-171
Fax : (91) 212-777-049

Benelux
Zellweger Analytics
Chaussée de Louvain A
B-1932 Zaventem
Belgium
Tel : (32) 27-14-03-11
Fax : (32) 27-14-03-44

Singapore
Zellweger Analytics Ltd.
84 Tuas Avenue 11
Singapore 639 098
Tel : (65) 862-77-01
Fax : (65) 862-38-58

Spain
Zellweger Analytics SA.
Avenida Remolar, 31
El Prat de Llobregat
8820 Barcelona
Tel : (34) 93-379-96-11
Fax : (34) 93-379-85-51

United Kingdom
Zellweger Analytics Ltd.
Parsonage Road, Takeley
Bishops Stortford,
Herts CM22 6PU
Tel : (44) 1-279-870-182
Fax : (44) 1-279-870-377

USA
Zellweger Analytics Inc.
100 Park Avenue
League City
Texas 77573
Tel : (1) 281-316-7700
Fax : (1) 281-316-7800

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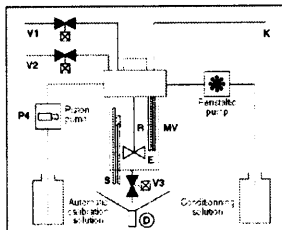
Operating principle

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

After the rinse valve closes, the sample valve opens while drain valve stays opened 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 adjusted with the built-in siphon.

The conditioning pump is activated and operates during a programmed length of time. When the programmed stabilizing time is over, the ion selective potential is displayed and allows the determination of the concentration C in nitrate (Nernst Law $E=E_0 + S \log C$).



V1 : Rinsing valve
V2 : Sample valve
V3 : Drain valve
P1 : Conditioning pump
P4 : Automatic calibration pump
E : Electrode/Pt100
M : Stirrer
S : Siphon/overflow tube
MV : Reactor
K : Electrode cable

Specifications

SAMPLE

Number of sample streams:
1, up to 6 with optional 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- or wall-mount unit, or free-standing cabinet
Sample tubing: 12/14 mm
Flush water: tubing 6/8 mm
Air instrument: tubing 4/6 mm
Inches connectors on request with sample : 1/2" OD; rinsing : 3/8" OD; air : 1/4" OD

ANALYSIS

Analysis cycle: 5 min.

Cycle time: programmable 999 min. max.
Units : ppm, ppb, mg/l—programmable
Accuracy: ± 2% (within one decade)
Reproducibility: < 3%
Calibration: manual (2 standard solutions), process or automatic with standard additions

OUTPUTS

Analog outputs:
Two 0–4/20 mA signal galvanically isolated
Alarms:
3 relays: system alarm, low 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

8810 NITRATE ANALYSER BASIC INSTRUMENT

P/N 368810,35xxx:

8810 NITRATE ANALYSER, 19" panel-mount unit, includes:

- Titration vessel/spinnaker
- Measuring combination NITRATE electrode/Pt100
- One reagent pump for sample conditioning

OPTIONS

- P/N 368810,60000: Automatic calibration (one point)
- P/N 368810,72000: Automatic calibration (standard additions)
- P/N 368810,56000: Chemical cleaning
- P/N 368810,76000: Automatic heating device/controller
- P/N 368810,65000: Manual sample entry system
- P/N 368810,40000: Fiberglass enclosure, wall-mount
- P/N 368810,45000: Steel cabinet, floor-mount
- The product can be configured with different frequency/voltage:
- 220V/50HZ - 240V/50HZ - 110V/50HZ - 110V/60HZ

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