DULCOTEST® Fluoride Sensors

Reliable online measurement of fluoride – with DULCOTEST® sensors

LENNTECH
WATER TREATMENT SOLUTIONS

ProMinent®

Graduated measuring ranges 0.05 – 100 mg/l

In some countries fluoride is monitored when potable water is fluoridised, but also generally during the treatment of industrial waste water.

Our product line of DULCOTEST® fluoride sensors provides two types of sensor, optimised for these applications.

The sensor consists of a fluoride transducer, the connectable transducer of a reference electrode and a separate temperature measuring unit. The sensor is based on the potentiometric measuring principle with the help of an ion-selective electrode (ISE) and a reference electrode.

The measuring point is available fully mounted on our measuring and control system DULCOTROL® with the sensor fitting and controller DULCOMETER® diaLog DACa.

Your benefits

- Precise, real-time potentiometric measurement for efficient process control (short response time)
- Can be used up to a pH of 9.5
- Selective LaF3 crystal eliminates faults caused by cross sensitivities
- Rapid external temperature compensation eliminates faults caused by influence of temperature
- Potentiometric principle prevents faults caused by flow changes
- Potentiometric measuring principle enables quick commissioning

Field of application

- Monitoring of fluoride in potable water. In some countries it is standard practice to add fluoride to drinking water to prevent tooth decay.
- Monitoring discharger limit values in industrial waste water, e.g. in the semiconductor industry

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Technical Data

Fluoride Sensor FLEP 010-SE / FLEP 0100-SE

Highly selective, online fluoride sensor, optimised for the fluoridation of potable water and monitoring of waste water with a pH of up to 9.5

Your benefits

- Highly selective measurement of fluoride by LaF_3 single crystal silicon
- Unique pH range of up to pH 9.5 by optimisation of the electrolyte
- Two measuring ranges available: 0.05 -10 ppm for potable water; 0.5 -100 ppm for waste water

Measured variable	Fluoride ion concentration
Reference method	Photometrically (Photometer DT2C)
Measuring range	**With measuring transducer FPV1:** 0.05...10 mg/l **With measuring transducer FP100V1:** 0.5...100 mg/l
pH range	5.5 … 9.5
Temperature	1 … 35 °C
Max. pressure	7.0 bar, (no pressure surges)
Min. conductivity	100 µS/cm
Shaft diameter	12.0 mm
Fitting length	120 mm
Thread	PG 13.5
Electrical connection	SN6 plug-in head
Enclosure rating	IP 65
Installation	Bypass: open outlet or return of the sample water into the process line, inline: direct installation into the pipework; fixed or replaceable (replaceable fitting), tank, channel: Immersion in the immersion tube
Intake flow	10…200 l/h
Flow	20 l/h (recommended)
Response time T95 max.	30 s (for conc. > 0.5 ppm)
Shelf life	6 months
Sensor fitting	Bypass fitting DLG IV
Measuring and control equipment	D1C, DAC, DULCOMARIN®
Typical applications	Monitoring the fluoridation of potable water in waterworks, waste water.
Resistance to	Disinfectant, solids content (turbid types of water)
Measuring principle, technology	Direct potentiometric measurement, 2 electrodes, gel electrolyte, ceramic diaphragm, separate temperature measurement for temperature compensation needed

	Order no.
FLEP 010-SE / FLEP 0100-SE	1028279

Note: Measuring ranges from 5 … 1,000 mg/l and 50 … 10,000 mg/l available on request.

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