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On-line measurement of chlorite – with ProMinent

On-line monitoring of chlorite limit values in potable water and function control for chlorine dioxide production

ProMinent®



Gone are the days of expensive laboratory analysis. The on-line process sample point for chlorite (patent pending) from ProMinent directly monitors the production of chlorite (chemical: ClO_2^-) whilst potable water is being treated with chlorine dioxide. Oxidation and disinfection using chlorine dioxide can lead to the harmful substance chlorite being created as an unwanted by-product. The chlorite sample point from ProMinent provides the measured variables relevant for safety at any time – prescribed limit values (e.g. EU: 0.2 mg/l) remain under control 24 hours a day.

- On-line measuring of chlorite in real time for transparent information and swift reaction in the event of fault
- Clear savings on cost and time compared with conventional laboratory analysis
- High reliability thanks to selective amperometric measurement: no cross-sensitivity to chlorine dioxide, chlorine or chlorate, no interference due to clouding or colouring
- Not sensitive to fluctuations in temperature due to integrated temperature compensation
- Long sensor service life due to diaphragm-protected electrodes
- Lower maintenance costs as a result of economical exchange of diaphragm caps
- Plug & Play – Easy to install measuring unit with matched controller and probe housing
- Complete set for on-site calibration with Photometer DT4 and reagent available as accessories



On-line process sample point for chlorite

DULCOTEST® CLT 1 sensor

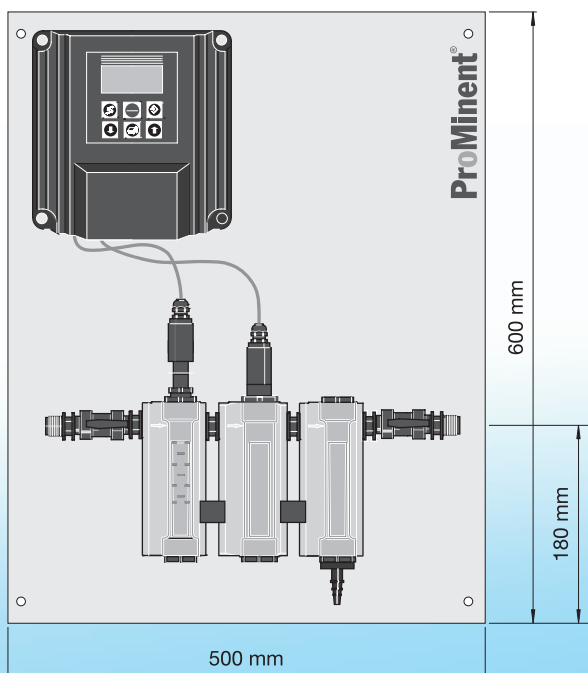
Measured variable	Chlorite (ClO_2^-)
Area of application	Potable water, water similar to potable water
Measurement range	CLT 1-mA-0.5 ppm: 0.02 – 0.5 mg/l, CLT 1-mA-2 ppm: 0.1 - 2 mg/l
Resolution	CLT 1-mA-0.5 ppm: 0.01 ppm, CLT 1-mA-2 ppm: 0.02 ppm
Response time T_{90}	Approx. 60 s (with increasing and decreasing concentration)
pH range	6.5 – 9.5
Conductivity range	0.05 - 5 mS/cm
Temperature range	1-40 °C
Cross-sensitivity	Negligible to chlorine dioxide, chlorine and chlorate
Materials	Diaphragm cap PPE, Electrode shaft: PVC
Power supply	16 - 24 V DC; min 35 mA at 16 V DC
Output signal	4 - 20 mA (uncalibrated, temperature-compensated, no dynamic isolation)
Ambient temperature	5 to 50 °C
Storage temperature	5 to 50 °C
Protection system	IP 65

DULCOMETER® D1C controller

Power supply	230 V (50/60 HZ)
Disturbance signal activation	for flow
Control input	Pause (for disconnection of the controller in the event of fault)
Signal output	2 freely programmable output signals
Relay control	for alarm and 2 limit values
Pump control	for 2 pumps
Control characteristic	P, PID
Languages for operating software	German, Italian, French, Spanish (other configurations possible)

Housing

Hydraulic connection	DN 10, PVC threaded connector
Flow rate	20-100 l/h
Max. temperature	60 °C
Max. pressure	2 bar at 30 °C
Materials	PVC, PP



The controller and housing are mounted on a PE back plate. The package is prewired and plumbed. Sensors are ordered according to the measuring range required.

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