Wallace & Tiernan® Analyzers/Controllers DEPOLOX® 5 bare electrode for Cl_2, O_3, ClO_2 or $KMnO_4$ measurement

General

The DEPOLOX® 5 measurement module can be used with either the SFC electronic package for single point analysis and control or the versatile MFC electronic package for multiple measurements and control. It consists of a plug-in sensor card and flow cell with an integral, bare-electrode measurement configuration. Utilizing amperometric residual measurement technology, it is suitable for disinfection applications, ranging from simple measuring/monitoring tasks to complex control processes for treating potable water, process water, and pool water. The DEPOLOX® 5 flow cell has a standard measuring range from 0.01 to 200 mg/l of free chlorine.

Typical applications

- Measurement and control tasks in potable water works and by potable water suppliers
- Process water monitoring in all water-based industrial processes
- Cooling water monitoring

Features

The DEPOLOX® 5 flow cell consists of a 3-electrode system utilizing a bare-electrode design which provides a quick response time (90 % change < 20 sec.) with high accuracy (±2 % F.S.) when compared to membrane sensor technology. Hydrodynamic grit cleaning of the electrode surfaces maintains sensitivity to extend the intervals between calibrations. Zero point calibration is not necessary. A sample with a constant pH is required, however, the addition of a pH sensor can provide for compensated free chlorine measurement with the suitable electronic package. An integral multi-sensor provides a PT 1000 temperature measurement and monitors sample flow to provide a loss-of-flow alarm contact. The flow cell is supplied with a 1 m (3.3 ft.) screened coaxial cable. Up to three additional sensors can be fitted into the flow cell for measuring other water parameters.

Benefits:

- Accurate measurement and high reproducibility
- Fast response time to meet fluctuating disinfection demands
- Rugged design and minimal maintenance due to hydrodynamic cell cleaning
- Economical, reagentless operation
- Proven operation in thousands of installations around the world
- Intuitive programming for user-friendly operation

Utilizing “plug and play” technology allows the SFC or MFC controller to automatically recognize the sensor card and provide the correct display information. An analog output (0/4 to 20 mA) is available along with user configurable alarm contacts.

DEPOLOX® 5 flow module with plug-in card

Product Sheet

Water Technologies

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Measuring cell	DEPOLOX® 5
Measuring system	Potentiostatic 3-electrode system
Measuring ranges	70, 100, 200, 1000 µA
Electrolyte	Potassium chloride solution, 3 mol
Resolution	up to 500 µg/l: 1 µg/l; up to 5 mg/l: 0,01 mg/l; up to 50 mg/l: 0,1 mg/l; up to 200 mg/l: 1 mg/l
Typical output signal	approx. 20 µA/mg/l free chlorine
Response time T_{90}	< 20 sec.
Conductivity	min 200 µS/cm
Enclosure Sensor connection	IP 66, designed to meet NEMA 4X
Temperature compensation	yes, with Pt 1000 (0 – 50 °C /32 – 122 °F)
pH compensation	yes, in combination with SFC pH (Cl^{++}) or pH sensor
pH range	5.0 – 8.5 according to HOCl curve
Cross-sensitivity	other oxidation agent: copperbased algaecide
Water quality	swimming pool, potable, industrial and process water

Flow module	DEPOLOX® 5
Sample water connection	PVC hose 6 x 3 mm or PE hose 6 x 1 mm, thread connection 1/2 "
Flow rate	33 l/h (0.15 US gpm), controlled
Sample water temperature	0 – 50 °C (32 – 122 °F)
Allowable sample water pressure	0.2 – 4.0 bar (3 – 60 psi)
Back pressure	max. 1.5 bar (pressurized version)
Weight	approx. 1.5 kg (3.3 lbs)
Dimensions	215 x 375 x 155 mm (8.4 x 14.8 x 6.1 ")

For detailled information about the SFC and MFC systems please see:

SFC Series	WT.050.590.000.PS
MFC System	WT.050.580.000.BR

Flow Module	View	Slots Non-pressurized	Slots Pressurized	Technical Data
DEPOLOX® 5 flow-through adapter with integrated, open sensor for oxidation and disinfection chemicals and compatible with additional measurements of the MFC/SFC series		 5 slots	 4 slots, 1.5 bar (22 psi) back pressure	Sample water flow: Controlled to 33 l/h (0.15 US gpm) with max. 4 bar (58 psi) inlet pressure* Integrated multi-sensor with flow monitor and compatible with temperature sensor max. sample water temperature: +50 °C (122 °F)

Membrane sensor pH/redox sensor Sensor for fluoride or conductivity

*: Sample water pressures of up to 40 bar (580 psi) can be adapted with special equipment.

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