MEMBRANE SENSORS WITH MFC-VARIASENS

MEMBRANE SENSORS FC2, TC3, CD7, OZ7 FOR APPLICATION WITH SFC & MFC UNITS

WALLACE & TIERNAN® ANALYZERS/CONTROLLERS

The Wallace & Tiernan® membrane sensor measuring modules for free chlorine (FC2), total chlorine (TC3), chlorine dioxide (CD7) and ozone (OZ7) consist of a plug-in sensor card and a particular membrane sensor. They are applicable in different flow cell modules for single measurements with SFC units or combinable with the measurement of several parameters in the MFC electronics.

Typical applications

- Measurement and control in industrial and municipal water treatment
- Process measurement, final inspections, neutralization plants
- Monitoring of potable water, well water, pool water, boiler feed water

The membrane sensors are supplied with a 0.9 m (3.0 ft.) screened coaxial cable. Extension cables up to 50 m (164 ft.) in length are available as optional accessories. Utilizing “plug & 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.

Benefits of membrane sensors

- Safe, long-term stable measurement system
- Integral temperature compensation
- No reagents required

Benefits of FC2 for free chlorine

- Continuous, on-line measurement of free chlorine even at high pH (up to pH 10) and at low conductivity (from 10 µS/cm on)
- Ideal for samples with varying pH (internal buffering)

TECHNICAL DATA

Sensor	FC2/TC3	CD7/OZ7
Measuring system	membrane-covered 3-electrode potentiostatic system	membrane-covered 2-electrode potentiostatic system
Measured parameter	free chlorine/total chlorine	chlorine dioxide/ozone
Electrolyte	diluted potassium halide solution	
Reference electrode	silver/silver halide/potassium halide solution	
Application	clear water in potable water quality , pool water, brine	all kind of water like treated wastewater, process water, salt water/brine, applicable for water with tensides
Dimension	ø 25 mm, length 175 mm	
Models	non-pressurized or pressurized TC3 up to max. 0.5 bar FC2 up to max. 3 bar	non-pressurized or pressurized up to max. 1 bar
Measuring range	0.05 to 20 ppm, TC3: chloramines as well	CD7: 0.05 up to 20 ppm/OZ7: 0.02 up to 10 ppm
Response time (T_{90})	FC2: 60 s to 300 s/TC3: up to 5 min	CD7: approx. 20 s/ OZ7: > 50 s
Temperature range measuring water	+5 up to 45 °C, temperature compensation	
Conductivity	10 µS/cm up to 50 mS/cm	> 1 µS/cm up to max. 40 mS/cm

Flow module	View	Slots, non-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		1 x membrane sensor	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)
VariaSens** flow-through adapter in combination with membrane sensors and additional measurements of the MFC/SFC series		2 x membrane sensors	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)

Electronic	Sensor card for MFC and SFC
Measurement input	For membrane sensor pre-calibrated
Input data	-7 to 1000 µA
Accuracy	0.5 % FS
Temperature drift	< 0.2 %/10 K
Measuring cable	Customized cable-plug combo

*: SAMPLE WATER PRESSURES OF UP TO 40 BAR (580 PSI) CAN BE ADAPTED WITH SPECIAL EQUIPMENT.

**: CD7/OZ7: IN VARIASENS MODULE PRESSURIZED APPLICABLE WITH UP TO 1 BAR BACK PRESSURE

● MEMBRANE SENSOR; ● PH/ORP SENSOR; ● SENSOR FOR FLUORIDE OR CONDUCTIVITY

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