Wallace & Tiernan® Analyzers/Controllers ORP measurement

General

The Wallace & Tiernan® ORP (Redox) 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 a combination electrode that can be mounted in a variety of flow cells or probe holders. It is suitable for Redox voltage applications ranging from simple measuring/monitoring tasks to complex control processes for treating potable water, process water, pool water and waste water. The sensor card is designed for connection to ORP electrodes compatible with DIN 38404.

Typical applications

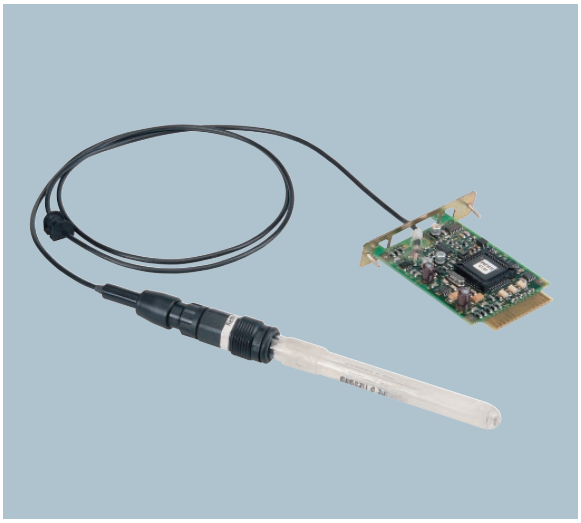
- Industrial and municipal water and waste water treatment plants
- ORP measurement in a wide variety of processes, in electroplating shops, for final inspection and testing, and in neutralization plants
- Potable and well water, pool water, boiler feed water, process water
- Mildly contaminated waste water

Features

The Wallace & Tiernan® ORP electrode is a single junction, combination electrode with a ceramic diaphragm and a silver-silver chloride wire with 3.0 mol KCl gel. This does away with the need to refill the sensor with electrolyte. The ORP electrode is mounted in a standard flow-through adapter or can be mounted in the DEPOLOX® 5 or VariaSens™ flow modules along with other measurement sensors. The ORP sensor card is supplied with a 0.9 m (3.0 ft.) screened coaxial cable. Extension cables up to 50 m (164 ft.) are available as optional accessories. 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.

Benefits:

- Accurate, reproducible on-line continuous measurement resistant to interference
- Reliable, long service life thanks to large salt reference solution reservoir
- Intuitive programming for user-friendly operation
- Simple to calibrate using standard buffer solutions



Redox sensor with cable and plug-in card

Product Sheet

Water Technologies

SIEMENS

Measuring Cell	ORP (Redox) Sensor
Measuring principle	single junction electrode with a silver-silver chloride wire
Measuring range	-1000 to +1000 mV
Electrolyte	3.0 mol KCl gel, 4 ring salt reservoir
Working temperature	-5 to +80 °C (23 – 192 °F)
Conductivity measuring water	200 µS/cm to 200 mS/cm
Max. operating pressure	6 bar (87 psi)
Installation length	120 mm (4.7 ")

Electronics	Sensor Card for MFC and SFC
Measurement input	for single junction electrode acc. to DIN 19263, pre-calibrated
Input data	-1000 to +1000 mV, impedance 10^{13} Ohm
Measuring accuracy/drift	Linearity < 0.1 % FS/max. 0.2 %/10 K
Measuring cable	Customized cable-plug combo

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		 2 slots, e.g. for ORP sensor	 2 slots, e.g. for ORP sensor, 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)
VariaSens™ Flow-through adapter in combination with membrane sensors and additional measurements of the MFC/SFC series		 2 slots, e.g. for ORP sensor	 2 slots, e.g. for ORP sensor, 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)
Angle seat adapter flow-through adapter for separate pH measurement			1 slot e.g. for Redox, back pressure 6 bar (87 psi)	Sample water feed line in bypass or directly in process water flow possible 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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Water Technologies

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