DO Sensors

Laboratory and Field DO Sensors have a similar size and shape as Laboratory pH electrodes. Industrial DO Sensors are usual larger, to store more inner electrolyte solution

All DO Sensors have a thin plastic membrane through which the Oxygen gas can penetrate. The plastic membrane has to be replaced from time to time (it lasts usually 2 to 6 month).

For good working there must be a sufficient water movement below the membrane, because the membrane takes out oxygen from the water. There must be always fresh water below the membrane.

Industrial DO Sensors are watertight and can be immersed completely under water. In many cases DO is measured close to the surface and 1 to 3 m below the surface.

From the electrical measuring principle there are 2 types of DO sensors: Galvanic and Polarographic DO Sensors. Both are used. Some people believe that Galvanic DO Sensors are better, some people believe in the contrary.

The Measuring Range of DO Sensors is usual from 0 to 20 mg/litre (0 to 20 ppm) DO or 0 to 100% of the saturation value. Some DO Sensors can measure up to 400% of the saturation value.

The Detection Limit of good DO sensors is as low as 0.1 mg/litre.

Many DO Sensors have a built-in Temperature Sensor to compensate the temperature dependence of the measurement. Various types of temperature sensors are used.