Fast oxygen sensor

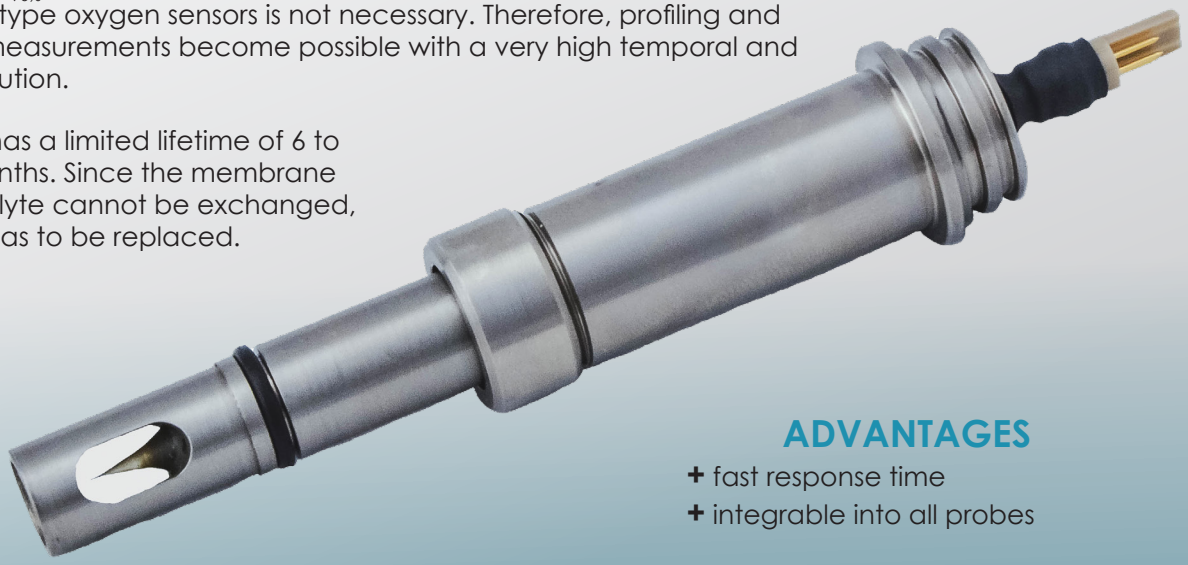
max. depth 100 m.

Sea & Sun Technology

The AMT DO shallow water sensor is a galvanic micro-sensor that has been developed for fast in-situ profiling of dissolved oxygen with CTD probes to depths of up to 100 m. Due to the partial pressure of the gaseous O_2, the analyte permeates through the membrane. Inside of the sensor the oxygen reacts electrochemically at the working electrode. This causes a current corresponding to the partial pressure of the dissolved oxygen.

The sensor has a very short response time of down to some hundred milli-seconds for $t_{90\%}$. Streaming of the membrane as it is well known from all the other Clark-type oxygen sensors is not necessary. Therefore, profiling and stationary measurements become possible with a very high temporal and spatial resolution.

The sensor has a limited lifetime of 6 to max. 24 months. Since the membrane and electrolyte cannot be exchanged, the sensor has to be replaced.



ADVANTAGES

+ fast response time
+ integrable into all probes

Oxygen sensor / AMT	
Pressure resistance	100 dbar
Measuring range	0...200% saturation
Accuracy	± 2% measuring value
Resolution	0,1%
Response time	down to 200 ms
Principle	galvanic, membrane covered micro-sensor
Material	Titanium / glass
Dimensions	24 mm Ø, 87 mm lenght
Used for	CTD48, CTD48M, CTD48c,CTD48Mc, CTD75M, CTD90, CTD90M, CTD115M

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