

# TriOxmatic® and FDO® in comparison

Analog (electrochemical)	
	TriOxmatic® 700 / 690 / 701
Measuring principle	Electrochemical
Membrane exchange	Yes – exchange of membrane and electrolyte
Calibration	Yes – rarely
Drift behavior	Yes
Sulfide and ionogenic substances	Influence
Measuring range	Up to 60 mg/l
Self-diagnosis system	Yes
Trace sensor	Yes
Investment costs	Reduced
Calibration data storage	No
Signal output	Analog
Integrated lightning protection	Yes

## TriOxmatic® 700/700 IN

The standard Model TriOxmatic® 700 is a rugged dissolved oxygen sensor with a very durable 50 micron thick hydrophobic membrane, a minimal flow rate of 0.5 cm/sec and a medium response time of less than 180 sec. With these features, this membrane sensor is ideally suited for any D.O. measurement in biological purification stages of municipal waste water treatment plants; e.g. control of the oxygenation. The response of the sensor prevents signal disturbances due to rising air bubbles thus eliminating false readings and improved stability. This is specially important for measurements in aeration tanks.

## TriOxmatic® 690

This cost-effective D.O. sensor offers the same specifications and features as the Model TriOxmatic® 700, except it does not have the sensor monitoring function. This unit is primarily designed for conventional D.O. measurements, where a continuous membrane check is not needed; e.g. general applications in water quality analysis.

## TriOxmatic® 701

Equipped with a special 25 micron thick membrane, the Model TriOxmatic® 701 features an enhanced resolution and a faster response time. This sensor is ideally suited for low level concentration applications; e.g. measurements of residual oxygen in the denitrification of biological sewerage treatment.

Digital (electrochemical/optical)	
TriOxmatic® 700 IQ/701 IQ/702 IQ	FDO® 700 IQ
Electrochemical	Optical
Yes – exchange of membrane and electrolyte	Yes – exchange cap – self-recognition of cap via IQMC technology
Yes – rarely	No
Yes	No
Influence	No influence
Up to 60 mg/l	Up to 20 mg/l
Yes	No
Yes	No
Reduced	Higher
Yes	Yes (IQMC technology)
Digital	Digital
Yes	Yes

## FDO® 700 IQ

Optical working D.O. sensor for the measuring and control of oxygen concentration in the biological cleaning process of wastewater plants, no flow required and H<sub>2</sub>S insensitive. Digital sensor for connecting to the IQ SENSOR NET.

## TriOxmatic® 700 IQ

Universal oxygen sensor for measuring and controlling oxygen input in biological sewage treatment processes in wastewater treatment plants. Membrane, flow rate and response times equivalent to TriOxmatic® 700, however as digital sensor with calibration value memory for connection to IQ SENSOR NET.

## TriOxmatic® 701 IQ

O<sub>2</sub> sensor with increased resolution and improved response times. Technical specifications equivalent to TriOxmatic® 701, however as digital sensor with calibration value memory for connection to IQ SENSOR NET.

## TriOxmatic® 702 IQ

Providing similar performance data as the TriOxmatic® 701, the 702 IQ model is specifically designed for trace level measurements in the ppb range. This sensor is ideally suited for use in ultra-pure water applications; e.g. monitoring of boiler feed water or drinking water purification. The applied digital technology permits integrated storage of calibration values and simple connection to IQ SENSOR NET.