

# OxyFerm FDA



The OxyFerm FDA is an electrochemical oxygen sensor suited for applications with high demands for hygiene, e.g. in pharmaceutical industry, in biotechnology and in food & beverage production. It is available with 12 mm or 25 mm (XL) shaft diameter.

The sensor is equipped with an FDA-approved membrane for use in hygienic processes. It withstands steam sterilization, autoclavation and CIP cleanings.

### Benefits

- ▶ Sanitary Feature: The silicone membrane seals without a gap to steel membrane body (no additional o-ring)
- ▶ Little drift, fast response, short polarization time
- ▶ Replacing the cathode is possible and very simple to perform.

### Typical applications

- ▶ Explosive atmospheres environment
- ▶ Fermentation

### Specifications

Measuring range	10 ppb to 40 ppm (DO)
Response time t <sub>98%</sub>	< 60 s at 25 °C, from air to nitrogen
Process temperature	0 to 130 °C (Arc: analog 0 to 110 °C, digital 0 to 130 °C)
Pressure range (relative to ambient)	0 to 4 bar
Hygienic aspects	Autoclavable, CIP, SIP
Electrolyte	Oxylyte
Surface Quality	R <sub>a</sub> < 0.4 μm (N5)
Current in air at 25°C	40 to 80 nA
Material	Stainless steel 1.4435
Polarization voltage	-670 mV
O-ring	EPDM

For more specifications see [www.hamiltoncompany.com](http://www.hamiltoncompany.com)

### Ordering Information



	a-length	T82	VP 6	Arc	MS
<b>OxyFerm FDA</b>	120	237450	237540	243100	237713
	160	237455	237541	243101	10069701
	225	237452	237542	243102	237715
	325	237453	237543	243103	10069700
	425	237454	237544	243104	-
<b>OxyFerm XL</b>	56	237175-OP	-	243140-OP	-
	125	237170	-	-	-
	262	237174	-	-	-
<b>OxyFerm CIP</b>	120	243289	-	-	-

With the XL option, the o-ring position can be optimally matched to the weld-in socket from 22 to 55mm. Please state the OP you need when ordering.

### Accessories



- **Membrane Kit FDA** Ref 237140
- **Membrane Kit CIP** Ref 237126
- **Membrane Kit** Ref 237123
- **Oxylyte 30 mL** Ref 237118

- **Replacement Cathode OxyFerm** Ref 237306
- **Autoclavation Cap Oxyferm** Ref 242000
- **Polarization Module G** Ref 237350
- **Polarization Module T** Ref 237370

- **Cables** see page 112
- **Arc Accessories** see page 116
- **Housings** see page 127



# OxyGold G



### Specifications

Measuring range	1 ppb to 40 ppm (DO)
Response time t <sub>98%</sub>	< 60 s at 25 °C, from air to nitrogen
Process temperature	0 to 130 °C (Arc: analog 0 to 110 °C, digital 0 to 130 °C)
Pressure range (relative to ambient)	0 to 12 bar
Hygienic aspects	Autoclavable, CIP, SIP
Electrolyte	Oxylyte G
Surface Quality	R <sub>a</sub> < 0.4 µm (N5)
Current in air at 25°C	180 to 500 nA
Material	Stainless steel 1.4435
Polarization voltage	-670 mV
O-ring	EPDM

For more specifications see [www.hamiltoncompany.com](http://www.hamiltoncompany.com)

The OxyGold G is an electrochemical oxygen sensor designed for processes in which very small amounts of oxygen have to be traced, like in the pharmaceutical or microelectronics industry. It is also suitable for processes where high pressures are applied.

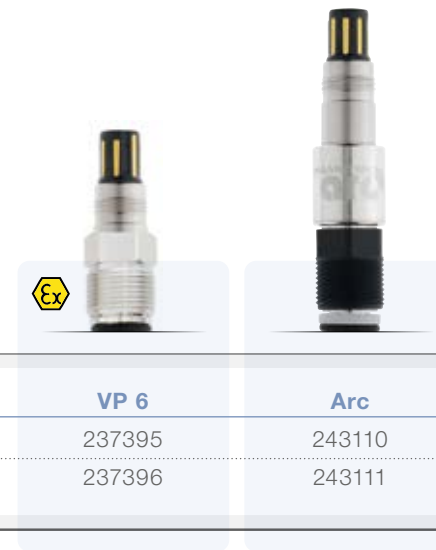
### Benefits

- ▶ Trace level measurement
- ▶ Suitable for use at high temperatures and high pressures during sterilization and CIP
- ▶ Little flow sensitivity
- ▶ Replacing the cathode is possible and very simple to perform.

### Typical applications

- ▶ Boiler Feed Water
- ▶ Microelectronics

### Ordering Information



	a-length	VP 6	Arc
OxyGold G	120	237395	243110
	225	237396	243111

### Accessories



- OxyGold Membrane Kit Ref 237135
- Oxylyte G 30 mL Ref 237139
- Polarization Module G Ref 237350
- Replacement Cathode OxyGold G Ref 237427

Cables see page 112

Arc Accessories see page 116

Housings see page 127



# Oxygen Accessories



## OxyFerm Membrane Kit

The OxyFerm Membrane Kit contains 3 membrane bodies, Oxylyte electrolyte, pipette, spare o-ring and a polishing strip.

Ref 237123

## Membrane Kit FDA

The Membrane Kit FDA is the kit for the OxyFerm FDA sensors and contains 3 FDA membrane bodies, Oxylyte electrolyte, pipette, spare o-ring and a polishing strip. The membrane body of the FDA membrane has a special rounded design to prevent accumulation of gas bubbles.

Ref 237140

## Membrane Kit CIP

The Membrane Kit CIP contains 3 membrane bodies that are especially designed to withstand CIP cleanings. Oxylyte electrolyte, pipette, spare o-ring and a polishing strip.

Ref 237126

## OxyGold Membrane Kit

The OxyGold Membrane Kit contains 3 membrane bodies with the rounded design, pipette and a spare o-ring. Electrolyte must be ordered separately to match the sensor (see page 111).

Ref 237135

## Polarization Module

The Polarization Module is to prepare replacement sensors so that they can be used immediately for measurements without connection to a transmitter. It polarizes the oxygen sensors and saves polarization time at the transmitter.

<b>Polarization Module T</b> OxyFerm / OxyFerm FDA / OxyFerm XL	Ref 237370
<b>Polarization Module G</b> OxyFerm VP / OxyGold G	Ref 237350
<b>Polarization Module B</b> OxyGold B	Ref 237360

<b>Replacement Cathode OxyFerm</b>	Ref 237306
<b>Replacement Cathode OxyGold G</b>	Ref 237427
<b>Replacement Cathode OxyGold B</b>	Ref 237437

## Autoclavation Cap

The Autoclavation Cap is used to protect the OxyFerm T82 connector from moisture during autoclavation. It is important to keep connections dry and clean to ensure reliable measurements.

Autoclavation Cap OxyFerm Ref 242000

# Electrolytes and Solutions



## Electrolyte

Electrolytes for pH Sensors		Ref
3 M KCl	100 mL	238036
3 M KCl	500 mL	238936
Skylyte-CL	100 mL	242080
Protelyte	100 mL	238038
3 M KCl-LR	500 mL	238939
Skylyte	500 mL	238937

Electrolytes for Oxygen Sensors		Ref
OxyGold Oxylyte G	30 mL	237139
OxyGold Oxylyte B	30 mL	237138
OxyFerm Oxylyte	30 mL	237118

## Storage Solution

In order to achieve long sensor life and faster electrode response times, it is recommended to store electrodes in our storage solution. It is an acid-buffered solution that ensures the regeneration of the electrode in addition to provide an optimized storage.

Storage Solution 500 mL Ref 238931



## Cleaning Solution Set

Depending on the type of application, the pH glass or diaphragm can get contaminated through various ingredients of the measuring solution. This is indicated by a slow response of the electrode, or even incorrect readings. To overcome these problems, Hamilton has developed a cleaning solution set. The intention is to have an overall cleaning of the pH glass as well as the diaphragm. The set is comprised of Cleaning Solution A, Cleaning solution B and a storage solution. To clean the electrode put it into each solution for 15 – 30 minutes, and your electrode will be ready for new measurements again.

Cleaning Solution Set Ref 238290