

# VisiFerm DO 120

## Specification Sheet (Part #242450-02)



Hamilton is the first company to offer a self-contained oxygen measurement in the popular 12 mm format similar to standard process and pH electrodes and classical sterilizable oxygen sensors. VisiFerm DO optical sensors demonstrate a number of substantial advantages because of a symbiosis of sensor and measurement amplifier—an intelligent sensor.

### Product Specifications

<b>a-length</b>	120 mm
<b>Accuracy at 25 °C</b>	1 ± 0.05 %-vol; 21± 0.2 %-vol; 50 ± 0.5 %-vol
<b>Analog Interface 1</b>	ECS / 4-20 mA
<b>ATEX Approval</b>	No
<b>Autoclavable</b>	Yes
<b>Baud Rate</b>	4800, 9600, 19200, 38400, 57600, 115200 bd
<b>Certificate</b>	Yes, with parameter settings and materials used
<b>CIP</b>	Yes
<b>Configurable Values</b>	DO: mbar; %-sat; %-vol; µg/l; mg/l; ppb; ppm; Temperature: °C
<b>Diameter</b>	12 mm
<b>Digital RS485 Interface:</b>	Modbus RTU, max 31 addresses
<b>Drift at Room Temp. under Constant Conditions</b>	< 1 % per week
<b>Electrical Connector</b>	VP 8
<b>Electrolyte</b>	None
<b>Max. CO2 partial pressure</b>	12 bar

## Product Specifications (continued)

<b>Measurement Principle</b>	Oxygen dependent luminescence quenching
<b>Measuring Range</b>	4 ppb to 25 ppm (DO) or 0.1 to 600 mbar (pO <sub>2</sub> )
<b>Medium Affected Materials</b>	Stainless steel 1.4435, Silicone (FDA approved), EPDM
<b>Monitoring of sensor quality</b>	Yes
<b>Operating Temperature Range</b>	-10 to 140 °C; the Sensor provides no DO reading above 85 °C
<b>Operating Voltage</b>	7 to 30 VDC max. 1 W
<b>O-ring Material</b>	EPDM (FDA approved)
<b>Oxygen Consumption</b>	None
<b>Pressure Range</b>	-1 to 12 bar
<b>Process Connection</b>	PG 13.5
<b>Required Flow</b>	None
<b>Response Time t<sub>98%</sub></b>	< 30 s at 25 °C, from air to nitrogen
<b>Serial Number</b>	Yes
<b>Steam Sterilizable</b>	Yes, max. temperature 140 °C
<b>Surface Quality of Steel</b>	Ra < 0.4 µm (N5)
<b>Temperature Sensor</b>	Yes

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