

VisiFerm DO 160

Specification Sheet (Part #242451-02)



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

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| a-length | 160 mm |
| Accuracy at 25 °C | 1 ± 0.05 %-vol; 21± 0.2 %-vol; 50 ± 0.5 %-vol |
| Analog Interface 1 | ECS / 4-20 mA |
| ATEX Approval | No |
| Autoclavable | Yes |
| Baud Rate | 4800, 9600, 19200, 38400, 57600, 115200 bd |
| Certificate | Yes, with parameter settings and materials used |
| CIP | Yes |
| Configurable Values | DO: mbar; %-sat; %-vol; µg/l; mg/l; ppb; ppm; Temperature: °C |
| Diameter | 12 mm |
| Digital RS485 Interface: | Modbus RTU, max 31 addresses |
| Drift at Room Temp. under Constant Conditions | < 1 % per week |
| Electrical Connector | VP 8 |
| Electrolyte | None |
| Max. CO2 partial pressure | 12 bar |

Product Specifications (continued)

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

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