

OD 8325/8525

Fluorescence Dissolved Oxygen Sensors

These sensors are designed for measuring dissolved oxygen using the fluorescence phenomenon. OD 8325 sensor is for submersible installation. OD 8525 sensor is for overflow and in-line installation. Thanks to the analog and digital outputs, the sensors can be connected to the most common PLC's or data acquisition boards. B&C Electronics offers MC 6587 and MC 7687 multi-channel controllers that allow complete management of up to three sensors, displaying the measurements and the messages that guide calibration and configuration.

Measuring method:

A light pulse of a specific wavelength and a special substance is deposited on a transparent layer in contact with the liquid (or air). The light energy is absorbed and partially re-emitted in the form of a light pulse at a longer wavelength. This phenomenon is called fluorescence. The oxygen molecules in contact with the sensitive layer attenuate the fluorescence (quenching) in relations to their concentration. The digital processing of the fluorescence allows the measurement of oxygen concentration. The measuring method does not require electrolytes.



Technical Specifications

Ranges	0/200.0 % air saturation – 0/20.00 ppm
Scalability factor 4/20 mA	10/150 %
Resolution	0.1 % sat. – 0.01 ppm
Power supply	9/36 VDC
Accuracy	± 1.0 % sat. < 10.0 % sat. ± 2.0 % sat. > 10.0 % sat.
Repeatability	± 0.5 % of the scale
Drift	< 1 % year
Response time	95 % < 60 seconds
Load	600 Ohm max. a 24 Vdc
Digital output	RS 485 isolated
Protocols	0/50 °C
Dual filter software	2/220 seconds
Current loop	4/20 mA isolated
Protocols	B&C ASCII e Modbus RTU (03, 06, 16 functions)
Baud rate	2400 / 4800 / 9600 / 19200 baud
Probes ID	01/99 (B&C protocol) 01/243 (Modbus protocol)
Probes network	32 max.
Operating temperature	60 °C max.
Operating pressure	6 bar at 25 °C (OD 8525) 1 bar at 25 °C (OD 8325)
Dimensions OD 8525	L=143 mm, D=40 mm
Dimensions OD 8325	L=165 mm, D=60 mm
Weight OD 8525	Body 160 g, cable 640 g
Weight OD 8325	Body 420 g, cable 640 g
Body	PVC-C
Cable	10 m (100 m max.), PVC sheath
Protection	IP 68