

OpreX™ Analyzers

D071 / D072

OPTICAL DISSOLVED OXYGEN SENSORS

Yokogawa Optical Dissolved Oxygen Sensor D071 / D072

Wide and Trace measuring range

The D071 and D072 optical dissolved oxygen sensor uses the optical measurement method to continuously measure oxygen dissolved in water.

These extremely robust probes can be installed in various industries and applications.

See the light by using precise low maintenance SMART optical dissolved oxygen technology

The Optical Sensors have a fast response time & good long-term stability. These sensors are prone to less maintenance and overall cost of ownership is less.

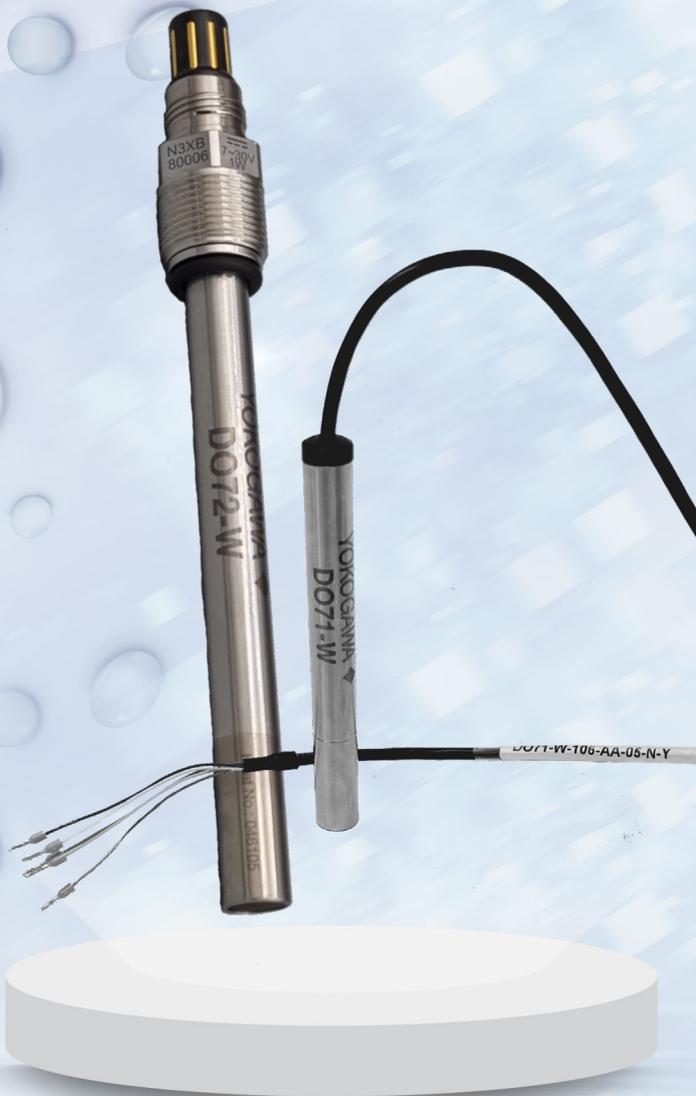
Sensors are available for different oxygen ranges, wide and ultra-trace range oxygen measurements, ideally suited for oxygen monitoring in industrial applications or for W&WW where they must stand harsh measurement conditions.

The optical sensor is integrated in a exchangeable stainless-steel cap that is screwed to the probe housing.

As a digital interface they use RS485 and can be connected directly to the FLXA402 4-Wire converter or any other host like, PLC, DCS, data acquisition units.

Features

- Integrated in a compact 12 mm stainless steel tube
- Standard PG13.5 fitting for simple integration
- Maximum measurement range of 0...22.5 mg/L O₂
- Detection limit of 20 ppb
- Trace oxygen sensor 0...2 mg/L O₂ with 1 ppb limit of detection
- DO71 Waterproof design
- Simple integration, No polarization time
- Integrated temperature sensor for temperature compensation
- Bi-directional digital communication via RS485 Modbus RTU
- Low power consumption
- 5 years oxygen end cap shelf life



Yokogawa Optical Dissolved Oxygen Sensor

DO71 / DO72

Wide and Trace measuring range

Object of Measurement

Concentration of oxygen dissolved in water, waste water treatment plants, environmental applications, measurements in aquaculture.

Principle of Measurement

Optical dissolved oxygen sensor in probe body and an OEC (oxygen exchange cap) type.

Performance DO71

Sensor type	Optical Dissolved oxygen sensor
Measuring range:	0 to 22,5 mg/L O ₂
Accuracy:	± 0.05 mg/L + 1% of reading
Repeatability	± 0.05 mg/L + 0.5% of reading
Temperature accuracy	≤ 1.0°C
Operating temperature	0 to 50 °C
Mechanical pressure	0 to 3 Barg (overpressure); 0 to 0.990 Barg (underpressure)
Response time t90	≤ 90 sec.
Insertion lengths	106 mm
Area classification	General purpose
Connection type	Permanent cable with 3, 5, 10 or 20m length

Performance DO72-W

Sensor type	Wide measuring range optical dissolved oxygen sensor
Measuring range	0 – 22.5 mg/L O ₂
Accuracy	± 0.05 mg/L + 1% of reading
Repeatability	± 0.05 mg/L + 0.5% of reading
Temperature accuracy	≤ 1.0°C
Insertion lengths	120 mm
Area classification	General purpose
Connection type	VarioPin connector
Operating temperature	0 °C to + 50 °C
Pressure	0-12 Barg (overpressure); 0-0.990 Barg (underpressure)
Response time t90	≤ 120 sec.

Performance DO72-T

Sensor type	Trace measuring range optical dissolved oxygen sensor
Measuring range	0 - 2 mg/L O ₂
Accuracy	± 3 ppb + 3% of reading
Repeatability	± 3 ppb + 3% of reading
Temperature accuracy	≤ 1.0°C
Insertion lengths	120 mm
Area classification	General purpose
Connection type	VarioPin connector
Operating temperature	0 °C to + 50 °C
Pressure	0-12 Barg (overpressure); 0-0.990 Barg (underpressure)
Response time t90	≤ 120 sec.

Model	Suffix code		Description
DO71			Optical Dissolved Oxygen sensor
Range	-W		Wide range (0 - 22,5 mg/L)
Insert length	-106		106 mm
Type	-AA		General purpose
Connection type		-3	Permanent cable, 3 meters
		-5	Permanent cable, 5 meters
		-10	Permanent cable, 10 meters
		-20	Permanent cable, 20 meters
Region	-N		Non-specific
Oxygen Exchange Cap	-Y		DO71 OEC
Option			

Model	Suffix code		Option code	Description
DO72				Optical Dissolved Oxygen sensor
Range	-T			Trace range (0 - 2 mg/L)
	-W			Wide range (0 - 22,5 mg/L)
Insert length	-120			120 mm
Type	-AA			General purpose
Connection type	-VP			VarioPin connector
Region	-N			Non-specific
Oxygen Exchange Cap	-Y			DO72 OEC ¹
Option				

Note 1: OEC is dependent on range type.



Water resources are finite, and therefore contributing to a sustainable water cycle is one of the Sustainable Development Goals (SDGs). Yokogawa has been providing advanced digital control solutions for the stable supply of clean and safe water, wastewater treatment for protecting the water environment, water loss management and optimization of plant operation for reducing CO2 emissions and running costs.

With our leading-edge technologies, dependable products and extensive expertise and experience of diverse water projects around the world, we work with you to provide sustainable water solutions that boost your business and add value throughout the plant lifecycle.

Yokogawa supports a wide range of water control applications in both the municipal and industrial water markets.



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Printed in The Netherlands, 01-2211
Bulletin 12A06G05-00EN-P