

Oxix[®]

Dissolved Oxygen Transmitter

3 Years
Sensor
Warranty



MJK Oxix[®] Dissolved Oxygen Transmitter is designed for measurement of dissolved oxygen in open tanks exposed to sunlight, in wells and in closed containers.

The Oxix[®] sensor function is based on the fluorescence principle and does not consume oxygen like standard membrane-type sensors. It is rugged and designed to handle tough applications.

The Oxix[®] sensor is factory calibrated and does not require any recalibration. The physical outline and structure of the sensor reduce frequent cleaning to a minimum. For extreme conditions a built-in air and water jet cleaning system can be activated.

The Oxix[®] Transmitter has one 4-20 mA analogue output, two digital outputs for process control and/or alarms, and one digital input for resetting alarms, etc.

The Oxix[®] Transmitter holds a large graphic display and a user interface showing the actual measurement values. The mobile phone-like menu system available in multiple languages, together with the soft keys for operation, makes it very easy to programme and control the instrument.

The large build-in data logger of the display unit offers 160.000 time-stamped entries. A trend curve of the loggings for the overview of the local operator is easily retrieved and shown in the display simply by activating a one-push button on the unit.

5.4

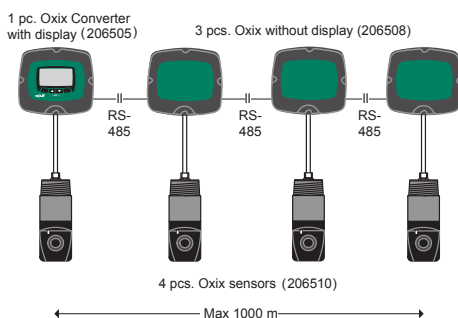
Features

- High performance optical sensor
- No calibration
- No spareparts needed in sensor's expected 10 year lifetime
- Air or water jet cleaning via built-in nozzle
- Measurements not affected by sunlight or dry environment
- Large, easy-to-read display with trend curve capability
- Multiple languages
- Built-in datalogger
- No moving parts, oxygen consumption or risk of poisoning
- Mounting accessories (optional)

Application sites

- Sewage and wastewater treatment plants
- Drinking water
- Biologic control
- Sludge treatment
- Filtering stations
- Fishponds and farms

Interconnectivity



MJK's modular design allows up to 300 meters (950ft.) between the sensor and the converter, and the Display Unit can be mounted up to 1000 m (3000 ft.) from the signal converter with ordinary twisted wires.

One Display Unit can control up to four Oxix[®] DO transmitters, MagFlux[®] flow meters and/or SuSix[®] TTS transmitters for greater economy, space savings and an improved overview of multiple measurement values.

Oxix[®] allows uploading of instrument software updates (firmware). The onboard data logger including 160.000 readings can be retrieved as a CSV file on a PC. This connectivity is achieved with a common USB port and the free MJK-Field Link software.

Specifications

Oxi ^{ix} ® Transmitter	
Accuracy	+/- 0,1% of reading
Measuring input	RS-485
Analog output	One active 4 - 20 mA, galvanically isolated (max. load 800 Ω)
Digital outputs	One voltage-free electromechanical relay (max. 50 V DC / 1 A) One optically isolated MOSFET relay (max. 50 VAC / V DC / 120 mA)
Digital inputs	One, max. 30 V DC, < 5 V DC = 0(low), > 10 V DC = 1(high), pulse length > 100 ms
Communication	MODBUS® RTU-mode, 9600 baud, 2-wire RS-485, slave-mode
Interface	RS-485 for connection to Display Unit or PLC
Power supply	10 - 30 V DC, or 24 V AC, 50 / 60 Hz ± 10 % or 115 V AC, 50 / 60 Hz ± 10 % or 230 V AC, 50 / 60 Hz ± 10 %
Power consumption	Max. 10 W
Cabinet material	Polycarbonate, glass reinforced
Enclosure rating	IP 67, NEMA 6
Temperature range	-20 ... 60 °C
Weight	1,1 kg
CE approvals	EN 61000-6-4:2001, EN 61000-6-2:2001

Display Unit	
Enclosure rating	Dust and waterproof IP 67, NEMA 6 (mounted on converter)
Housing material	Polycarbonate, glass reinforced
Protection lid	Transparent polycarbonate
Display	White backlit LCD-display (64 x 128 pixels) with softkeys
Indication	Indication measurement, configuration and graph
Clock	Real-time clock with built-in battery backup
Communication	Modbus® RTU-mode, 9600 baud, 2-wire RS-485, master
Interface	RS-485
Memory	2 Mb Flash memory, 160.000 entries with date, time, value
Interface	USB 1,1 type mini B, Female
Temperature range	-20 ... 60 °C

Oxi ^{ix} ® Sensor	
Dissolved saturated oxygen	0 - 25 mg/l or ppm 0 - 120 % SAT
Measurement principle	Optical, near infra-red fluorescence ($\lambda_{in} = 475 \text{ nm}$, $\lambda_{out} = 609 \text{ nm}$)
Sensor Check	Automatic self-diagnostics
Pressure	Max. 6 bar (100 psi)
Materials	PVC, polyurethane, silicone, epoxy and stainless steel 316
Cleaning system	Built-in air or water jet Max. water supply pressure: 35 - 50 psi (2,3 - 3,4 Bar) Max. air supply pressure: 40 - 60 psi (2,7 - 4,0 Bar)
Cable	4 x 0,326 mm ² , shielded, dia Ø 5.0 mm (22 AWG), PUR insul.
Cable length	10 m (33 ft.); can be extended up to 300 m
Response time	t_{90} less than 1 second
Flow velocity	No flow required
Power supply	12 V DC (10 -16 V DC), approx. 10 mA (from converter)
Output	RS-485, 9600 baud, 2-wire
Accuracy	Better than 1% of actual reading (0,02 mg/l)
Resolution	Better than 0,02 mg/l and 0,02 ppm
Temperature range	0 - 60 °C
Temp. comp.	0 - 50 °C
Enclosure rating	IP 68 to IEC 529 (10 m), NEMA 6x
Dimensions	50 x 130 mm (diameter x length)
Mounting	1,5 inch NPT thread 0,25 inch NPT thread for jet spray cleaning tube
Weight	0,77 kg (1.7 lbs)
Approvals	EN 61000-6-4:2001, EN 61000-6-2:2001

Order Numbers

Oxi ^{ix} ® Sensor	
206510	Oxi ^{ix} ® Sensor

Accessories for Oxi ^{ix} ® Sensors	
155205	Oxi ^{ix} ® Immersion fitting, 1 meter, stainless steel 316
155216	1½" NPT to 1¼" RG Adapter (for immersion fitting 155205)
-	Float fitting
-	Retrofit kit

Oxi ^{ix} ® Converters	
206304	Oxi ^{ix} ® Converter with display, 10 - 30 V DC
206305	Oxi ^{ix} ® Converter with display, 230 / 115 V AC
206306	Oxi ^{ix} ® Converter with display, 24 V AC
206307	Oxi ^{ix} ® Converter without display, 10 - 30 V DC
206308	Oxi ^{ix} ® Converter without display, 230 / 115 V AC
206309	Oxi ^{ix} ® Converter without display, 24 V AC

Mechanical Dimensions

