



Oxix[®]

Dissolved Oxygen Transmitter



MJK Oxix[®] Dissolved Oxygen Transmitter measures dissolved oxygen in open tanks, in wells and in closed containers.

The measuring principle is based on fluorescence, and the sensor does not consume oxygen like standard membrane-type sensors. It is rugged and designed to handle tough applications.

The sensor is factory calibrated and does not require recalibration. The sensor design reduces frequent cleaning to a minimum. For extreme conditions a built-in air or water jet cleaning system can be used to keep maintenance to the absolute minimum.

The transmitter has one 4-20 mA analog output, 2 digital outputs for process control/alarms, and one digital input for resetting alarms or activating cleaning cycles.

The Oxix[®] has user-friendly interface and a large graphic display for measurement values. The mobile phone-like menu system is available in many languages. Combined with soft key operation it is very easy to start-up the instrument.

A large build-in data logger offers 160,000 date and time stamped entries. Logging trend curves for improved overview can easily be retrieved and shown in the display with a press of a single button.

Features

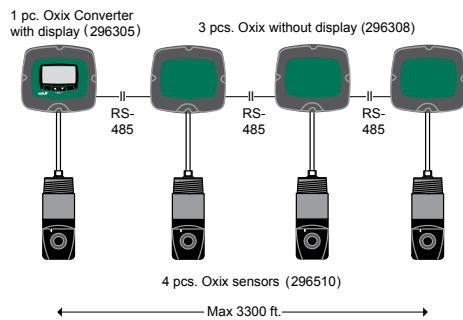
- High performance optical sensor
- No calibration
- No spare parts needed in sensor's expected 10 year lifetime
- Air or water jet cleaning via built-in nozzle
- Measurements not affected by sunlight or dry environment
- Large, easy-to-read display with trend curve capability
- Multiple languages and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

- Mounting accessories (optional)

Application sites

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

Interconnectivity



MJK's modular design allows up to 1000 ft. between the sensor and the converter, and the Display Unit can be mounted up to 3300 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 cost savings, space savings and improved overview of multiple measurement values.

Oxix[®] allows uploading of instrument software updates (firmware), and the onboard data logger with 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.

A number of communication modules for BlueTooth, Modbus, etc. are available.

Specifications Pending

| Oxix [®] Transmitter | |
|-------------------------------|--|
| Accuracy | +/- 0.1% of reading |
| Measuring input | RS-485 |
| Analog output | 1 active 4 - 20 mA, galvanically isolated (max. 800 Ω) |
| Digital outputs | 1 voltage-free elec-mech. relay (max. 50 V DC / 1 A) 1 optically isolated relay (max. 50 VAC/VDC /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, 9600 baud, 2-wire RS-485, slave |
| 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 / 230 V AC, 50 / 60 Hz ± 10 % |
| Consumption | Max. 10 W |
| Cabinet material | Polycarbonate, glass reinforced |
| Enclosure rating | IP 67, NEMA 4x |
| Temp. range | -4 ... 140 °F (- 20 ... 60 °C) |
| Weight | 2.4 lbs (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 (on converter) |
| Housing material | Polycarbonate, glass reinforced |
| Protection lid | Transparent polycarbonate or optional white opaque polycarbonate |
| Display | White, backlit LCD (64 x 128 pixels) with softkeys |
| Indication | Indication measurement, configuration and graph |
| Clock | Real-time clock with built-in battery backup |
| Communication | Modbus [®] RTU, 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 |
| Temp. range | -4 ... 140 °F (- 20 ... 60 °C) |

| Oxix [®] Sensor | |
|------------------------------|--|
| Dissolved oxygen/% saturated | 0 - 25 mg/l or ppm 0 - 120 % SAT |
| Measurement principle | Optical, near infra-red fluorescence ($I_{in} = 475 \text{ nm}$, $I_{out} = 609 \text{ nm}$) |
| Sensor Check | Automatic self-diagnostics |
| Pressure | Max. 100 psi (6 bar) |
| Materials | PVC, polyurethane, silicone, epoxy, stainless steel 316 |
| Cleaning system | Built-in air or water jet connection and nozzle, air/water supplied separately 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 Ø5.0 mm (22 AWG), PUR |
| Cable length | 33 ft. (10 m); can be extended up to 1000 ft. |
| 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 0.1% of actual reading (0.02 mg/l) |
| Resolution | Better than 0.02 mg/l and 0.02 ppm |
| Temp. range | 32 - 140 °F (0 - 60 °C) |
| Temp. comp. | 32 - 122 °F (0 - 50 °C) |
| Enclosure rating | IP 68 to IEC 529 (10 m), NEMA 6x |
| Dimensions | 2 x 5.1 in. (50 x 130 mm) (diameter x length) |
| Mounting | 1.5 inch NPT thread 0.25 inch OD jet spray tube compression fitting |
| Weight | 1.7 lbs (0.77 kg) |
| Approvals | EN 61000-6-4:2001, EN 61000-6-2:2001 |

Accessories for Oxix[®] Transmitter

| | |
|--------|---|
| 205546 | Modbus [®] and RS-485 communication module |
| 205547 | PROFIBUS [®] PA communication module |
| 205550 | Bluetooth [®] communication module |

Order Numbers

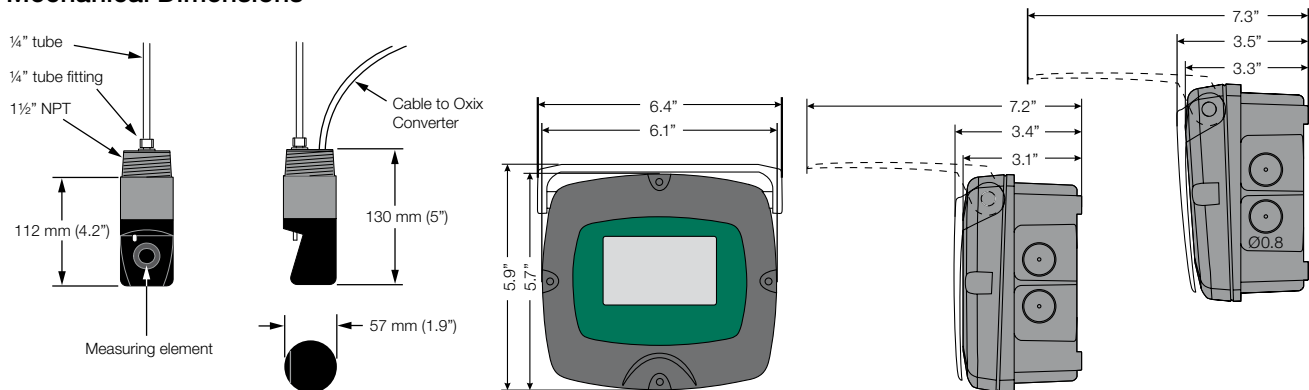
| Oxix [®] Sensor | |
|--------------------------|--------------------------|
| 296510 | Oxix [®] Sensor |

Accessories for Oxix[®] Sensors

| | |
|--------|--|
| 155244 | Oxix [®] Sensor Adapter for Immersion (see data sheet US 5.6 Immersion Adapters) |
| 155251 | Ball Float for Oxix [®] sensor-NPT thread (see data sheet US 5.5 Oxix Ball Float) |

| Oxix [®] Converters | |
|------------------------------|--|
| 206304 | Oxix [®] Converter with display, 10 - 30 VDC |
| 296305 | Oxix [®] Converter with display, 115 VAC |
| 206306 | Oxix [®] Converter with display, 24 VAC |
| 206307 | Oxix [®] Converter without display, 10 - 30 VDC |
| 296308 | Oxix [®] Converter without display, 115 VAC |
| 206309 | Oxix [®] Converter without display, 24 VAC |

Mechanical Dimensions



Distributed by:

 Denmark
www.mjk.dk
mjk@mjk.dk
 +45 45 56 06 56

 Norway
www.mjk.no
mjk@mjk.no
 +47 69 20 60 70

MJK offices:

 Sweden
www.mjk.se
kontoret@mjk.se
 +46 53 31 77 50

 The Netherlands
www.mjk.com
mjknl@mjk.com
 +31 251 672171

 Ireland
www.mjk.com
mke@mjk.com
 +353 87 953 5625

 North America
www.mjk.com
mjkusa@mjk.com
 +1 847 482 8655

 Australia
www.mjk.com
mjk@mjk.com
 +61 3 9755 1529

 Singapore
www.mjk.sg
mjk@mjk.sg