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.

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
- 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

**Oxix® 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)
- **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 66 to IEC 529 (10 m), NEMA 6x
- **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

**Oxix® Sensor**

- **Dissolved saturated oxygen**: 0 - 25 mg/l or ppm
- **Measurement principle**: Optical, near infra-red fluorescence ($i_o = 475$ nm, $i_{out} = 609$ 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 mm², 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 ºC
- **Temp. comp.**: 0 - 50 ºC
- **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
- **Weight**: 0.77 kg (1.7 lbs)
- **Approvals**: EN 61000-6-4:2001, EN 61000-6-2:2001

**Order Numbers**

**Oxix® Sensor**

- **206510**: Oxix® Sensor

**Accessories for Oxix® Sensors**

- **155205**: Oxix® Immersion fitting, 1 meter, stainless steel 316
- **155216**: 1¼” NPT to 1½” RG Adapter (for immersion fitting 155205)
- **- Float fitting**
- **- Retrofit kit**

**Oxix® Converters**

- **206204**: Oxix® Converter with display, 10 - 30 V DC
- **206205**: Oxix® Converter with display, 230 / 115 V AC
- **206206**: Oxix® Converter with display, 24 V AC
- **206207**: Oxix® Converter without display, 10 - 30 V DC
- **206208**: Oxix® Converter without display, 230 / 115 V AC
- **206209**: Oxix® Converter without display, 24 V AC

**Mechanical Dimensions**

- **1/4” tube fitting**
- **1/2” tube fitting**
- **1½” NPT**

- **Cable to Oxix Converter**

- **Measuring element**

- **57 mm (1.9”)**

- **130 mm (5”)**

- **162 mm (6.4”)**

- **106 mm (4.2”)**

- **50 mm (2”)**

- **183 mm (7.2”)**

- **95 mm (3.7”)**

- **85 mm (3.3”)**

- **83 mm (3.3”)**

www.mjk.com

DK: +45 45 56 06 56
NO: +47 69 20 60 70
SE: +46 53 31 77 50
NL: +31 251 672171
USA: +1 847 482 8655
AUS: +61 3 9758 8533

GB 5.4 Oxix DO Transmitter 081106