

DISSOLVED OXYGEN HEADS FOR METERS OF 105 SERIES GO-105, GO-105k

GO-105 and **GO-105k** dissolved oxygen heads cooperate with meters of 105 series and are used for periodical measurements of oxygen dissolved in water or sewage. They are equipped with galvanic oxygen sensors and built-in temperature sensors.

- **GO-105** is a head with the oxygen sensor without cable, mounted directly to the meter.
- **GO-105k** is equipped with the oxygen sensor on 1 m cable.
- Both models enable accurate measurement, have affordable price and low exploitation costs.
- Easy to operate.
- The oxygen sensors may work for several years provided that simple conservation and maintenance activities are performed.
- The sensors have a stable signal drift in time, what facilitates usage and lowers the cost of conservation and maintenance.
- Wide measuring range enables measurements in water with low oxygen content (e.g. boiler water) as well as in water with high oxygen content.
- The sensor has internal temperature compensation system which is dependent from the membrane's permeability.



GO-105 oxygen meter with GO-105 head – without cable

- During measurements in mg/l it is necessary to consider temperature, salinity of the measured liquid and atmospheric pressure. In the **CO-105** it is necessary to manually enter the data received from other instruments (pressure and salinity). Some of the more developed meters of other series enable automatic correction.
- High precision and repeatability of measurements may be obtained by providing flow of the sample (1cm/s). Lack of the flow will result with lower indications.
- The anode of the sensors is made of zinc, which is less harmful to environment than use of lead and complies to the RoHS directive.
- Negatively charged silver cathode is more resistant to sulphides, which may appear in strongly contaminated water, e.g. municipal or industrial sewage.
- The sensor is equipped with a membrane made of a Teflon foil which has high chemical resistance, selectivity and oxygen permeability.

The principle of operation:

The **GO-105** sensor works on the galvanic cell principle. It consists of a silver cathode and zinc anode placed in the electrolyte solution, separated from the measured solution by the membrane, which is permeable for oxygen. The dissolved oxygen diffuses through the membrane and is reduced on the cathode, what generates voltage proportional to the partial pressure of the oxygen at current temperature.

TECHNICAL DATA

Measuring range	0 ÷ 199,9% 0 ÷ 19.99 mg/l
Accuracy	at calibration temperature: ±2 %*
Temperature. measurement accuracy	in range 0 ÷ 40 °C ±0.5 °C
Acceptable temperature of measured solution	0 ÷ 40 °C
Temperature compensation range	0 ÷ 40 °C (for mg/l measurement)
Signal of the probe for solutions (in 20 °C)	In 100 % O ₂ saturation 20 ÷ 25 mV in 0 % O ₂ saturation max 0.3 mV
Signal drift	0.7 % / 24h
Time of response T ₉₉	below 1 minute
Internal compensation	yes (thermistor)
Built in temperature probe	yes, Pt-1000B
Cathode material	silver
Anode material	zinc
Membrane material	Teflon foil
Body and membrane cap material	PVC
Electrolyte	KCl 0.5 M
Body diameter GO-105	12.0 / 17.0 mm
Body length	50 mm
Cable length (GO-105k)	about 1 m
Connector	special plug for connecting with the meter

* By the difference ±5 °C accuracy: ± 4 %, by the difference ±10 °C accuracy: ± 6 %.

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