

OXYGEN METER CO-505, pH / OXYGEN METER CPO-505 CONDUCTIVITY / SALINITY / OXYGEN METER CCO-505

All the models measure: concentration of oxygen dissolved in water and sewage in % or mg/l, temperature and atmospheric pressure.

CCO-505 model additionally measures conductivity, TDS and salinity.

CPO-505 model additionally measures pH and redox potential.

Characteristic features:

- Large easy-to-read backlit LCD facilitates working.
- Standardised procedures in all measuring functions make working easier.
- "HOLD" function enables freezing the result on the display.
- Signalisation of the result stabilisation with the "READY" symbol and a sound.
- Possibility of sending a calibration report to a PC - up to 10 last calibrations.

Oxygen measurement function:

- Possibility to measure oxygen dissolved in water in % or mg/l and oxygen saturation in air in %.
- Galvanic dissolved oxygen sensor, accurate and easy to operate.
- When properly maintained, the sensor may be efficient for several years.
- Each model equipped with a function of automatic atmospheric pressure measurement with calculation of its influence on the oxygen measurement readout in mg/l.
- Calibration of the oxygen sensor in 1 or 2 points.
- Automatic or manual temperature compensation.
- In **CO-505** and **CPO-505** models possibility of introducing the salinity value with automatic calculation of its influence on the result of oxygen measurement.
- **CCO-505** model automatically counts the influence of salinity measured in the conductivity mode on the oxygen measurement result.



All the models have the same housing, they differ in number of buttons and colours.

Conductivity measurement function in CCO-505:

- Full conductivity measuring range enables measurements in ultra pure water as well as saline.
- 6 sub-ranges switched automatically.
- In case of measurements of natural water with conductivity from 60 $\mu\text{S}/\text{cm}$ to 1 mS/cm the meter enables using non-linear temperature compensation. The parameters of this type of water are determined by the norm EN27888:1999 and concern surface water, deep water and well water. This solution lowers the measurement error.
- The measurement accuracy of the ultra pure water with temperature compensation has been improved by automatic adjustment of the α coefficient depending on the kind of trace contaminations and temperature.
- Calibration by entering the K constant in range $0.01 \div 19.999 \text{ cm}^{-1}$ or in standard solutions in 1 – 5 points.
- Possibility to store K constants of three cells, which cover the whole conductivity range.
- Wide range of α coefficient ($0 \div 10\% / ^\circ\text{C}$) chosen depending on a kind of measured liquid.
- Possibility of changing the reference temperature.
- Converting the conductivity into salinity in NaCl and KCl proceeds according to the real characteristics, what greatly increases accuracy.
- Possibility of determining the TDS by entering the TDS coefficient (0.2 to 1.0).
- Resistivity measurement.
- In set with high accuracy conductivity cell **ECF-1**. Measuring range $0 \div 500 \text{ mS}/\text{cm}$ is sufficient for measurements in ultra pure water and high salt concentration samples. Metal electrodes are easy to clean.

pH measurement function in CPO-505:

- The pH and conductivity measurement circuits are isolated.
- pH calibration in 1 \div 5 points.
- Automatic detection of the buffer solutions' values entered by the user.
- Automatic correction of the standard solution's pH value changes along with the temperature changes for NIST standards, what eliminates the necessity of the standards' temperature adjustment.
- Storing of 3 pH electrodes characteristics enables to replace them quickly.
- Automatic evaluation of the electrode's condition.
- Readout of the electrode's characteristic (slope, offset).
- Depending on the kind of applied pH electrode it may be used for clear water, sewage, soil measurements etc.

mV, redox potential measurement function in CPO-505:

- Precise redox potential measurement (accuracy 0.1mV).
- Relative measurement function.

Other features

- Automatic or manual temperature compensation.
- Stores the next calibration date.
- Internal clock with date.
- Internal datalogger enables storing up to 4000 measurements taken as single or in series with time, temperature and date.
- The results and calibration data are stored in non-volatile memory.
- USB output for connecting with a PC.
- The meters meet the GLP requirements.

The standard set includes **CT2B-121** temperature sensor with **Pt-1000B** resistor and **COG-1** oxygen sensor. Other accessories depend on the chosen model of the meter.

TECHNICAL DATA

Function	O2 (%)	O2 (mg/l)	Temp.	pH (CPO-505)	mV (CPO-505)	Conductivity / Salinity (CCO-505)
Range	0 ÷ 600%	0 ÷ 60 mg/l	-50.0 ÷ 199.9°C	2.000 ÷ 16.000 pH	1999.9mV	0 ÷ 1999.9 mS/cm / 0 ÷ 239 g/l KCl, 0 ÷ 296 g/l NaCl
Accuracy (1 digit)	±0.1%**	±0.01 mg/l*	±0.1 °C***	±0.002 pH*	±0.1 mV*	<19.99 mS/cm: ±0.1%* >20 mS/cm: ±0.25%* salinity: 2%*
Temp. compens.	-	0 ÷ 40 °C	-	-5 ÷ 110 °C	-	-5 70 °C
Input imped.	-	-	-	10 ¹² Ω	10 ¹² Ω	-
α coeff.	-	-	-	-	-	0.00 ÷ 10.00% / °C
Atm.press.	800 ÷ 1100 hPa, accuracy: ±2 hPa					
Resistivity	Range: 0.500 Ωcm ÷ 200 MΩcm, accuracy: ±2% of the measured value					
Power supply	12 V / 100 mA power adapter					
Weight	560 g					
Dimensions (mm)	L = 200, W = 180, H = 20/50					

*The accuracy of the meter only.

**The accuracy of the meter only. With COG-1 or COG-2 oxygen sensor the accuracy at calibration temperature: ±1%.
By the difference ±5 °C accuracy: ± 3%, by the difference ±10°C accuracy: ±5%.

***The accuracy of the meter only. The total error includes the meters and probe's accuracy.

In the range 0 ÷100 °C the acceptable error of the probe with Pt-1000B resistor: ±0,8 °C, with Pt-1000A resistor: ±0,35 °C.

ELMETRON® Sp. j.
41-814 Zabrze . Witosa 10 POLAND
tel. +48 32 / 2738106 fax +48 32 / 2738114
www.elmetron.pl e-mail: info@elmetron.com.pl