

MULTIFUNCTION LABORATORY METER CX-502

CX-502 measures pH, redox potential (mV), conductivity, salinity, TDS, dissolved oxygen in % of saturation or mg/l, atmospheric pressure and temperature. The meter has built in thermal printer (60mm).

Characteristic features:

- High accuracy and repeatability in all measuring functions.
- The operating procedures in all measuring functions have been unified, what makes working trouble-free.



In the pH measuring function:

- Depending on the kind of applied electrode it may be used for clear water, sewage, soil measurements etc.
- Calibration: 1 ÷ 5 points.
- Storing characteristics of 3 pH electrodes makes changing them easy.
- Automatic buffers' detection, their value can be set by the user.
- Automatic correction of the temperature influence on sample solution (NIST) value, what eliminates the necessity of the temperature adjustment.
- Automatic evaluation of the electrode's condition.

In the mV and redox potential measuring function:

- Precise redox potential measurement (accuracy 0.1 mV).
- Possibility of mV measurement in relation to the set or measured reference potential – Vref.

In the conductivity measuring function:

- Thanks to a wide conductivity measuring range the meter can be used for measurements in ultra pure water as well as in very high conductivity samples and chemical compounds.

- Salinity measurement can be converted to NaCl or KCl.
- Converting conductivity into salinity according to the actual characteristics, not a constant coefficient.
- Possibility of defining the TDS with use of conductivity measurement with entering the TDS coefficient in range 0.2 ÷ 1.0.
- 6 subranges switched automatically.
- Wide range of α coefficient, its choice is dependent on the measured solution.
- Kalibration by entering the constant K in range 0.010 ÷ 19.999 cm⁻¹ or in standard solutions.
- Possibility of changing the reference temperature value.
- High accuracy conductivity cell **ECF-1** available as additional equipment. Measuring range: 0 , 400 mS/cm is sufficient for conductivity measurements in majority of liquids of maximal concentration, e.g. aqueous soil extracts and water with grease or oil. Metal electrodes are easy to clean. Plastic housing protects from mechanical damage.

In the dissolved oxygen measuring mode:

- Air pressure measurement with automatic calculation of its influence on the oxygen measurement increases accuracy and makes working easier.
- Automatic transfer of the salinity measured in the conductivity mode to the oxygen measurement mode with calculation of its influence on the oxygen content.
- 1 or 2 point oxygen sensor calibration.
- Wide measuring range.
- In case of oxygen measurements it is recommended to buy an accurate, easy in use and maintenance galvanic **COG-1** oxygen sensor.

Other features:

- Automatic or manual temperature compensation.
- Internal clock with date.
- Internal datalogger enables storing up to 950 measurements taken as single or in series with time, temperature and date.
- The results and calibration data are stored in non-volatile memory.
- Powered by power adapter.
- RS-232 output and optional USB adapter for connecting with a PC and Centronics for standard printer.

The accessories are chosen individually. In standard set the **CT2B-121** temperature sensor with **Pt-1000B** resistor is included.

In comparison with **CX-505** the meter has smaller display without backlight. There is no possibility to "hold" the reading on the display and no information about the reading stabilisation. Does not create calibration reports. No possibility of viewing the electrode's buffer and slope. The meter has no function of automatic calculations of the α coefficient for natural and ultra pure water.

TECHNICAL DATA

Function	pH	mV	Conductivity / Salinity	O2 (mg/l)	O2 (%)	Temperature
Range	- 2.000 , 16.000 pH	± 1999.9 mV	0 , 1999.9 mS/cm (autorange) 0 , 239 g/l KCl 0 , 296 g/l NaCl	0 , 60.00 mg/l	0 , 600 %, in air: 0 ÷ 100 %	-50.0 , 199.9 °C
Accuracy (± 1 digit)	± 0.002 pH*	± 0.1 mV*	< 19.00 mS/cm: ± 0.1%* > 20 mS/cm: ± 0.25%* / salinity: ± 2 %*	± 0.01 mg/l*	± 0.1%**	±0.1 °C***
Temperature compensation	-5 , 110 °C	-	-5 70 °C	0 , 40 °C	0 , 40 °C	-
Input impedance	>10 ¹² W	>10 ¹² W	-	-	-	-
α coefficient	-	-	0.00 10.00 % / °C	-	-	-
K constant	-	-	0.010 ÷ 19.999 cm ⁻¹	-	-	-
Pressure range	800 , 1100 hPa, accuracy: ± 2 hPa					
Power supply	6 V / 2 A power adapter					
Weight	640 g					
Dimens. (mm)	L=200 W=180 H=20/50					
Printer	Thermal, 60 mm width					

* 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.

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