

LABORATORY pH / ION METER CPI-502

Measures pH, redox potential (mV), ion concentration and temperature. Simultaneous observation of the chosen function and temperature after choosing the right button.

Characteristic features:

- The meter is equipped with built-in thermal printer (60 mm).
- High accuracy and repeatability in all measuring functions.
- Programming of all the parameters is very easy.
- The operating procedures in all measuring functions have been unified, what makes working trouble-free.

pH measurement:

- Calibration of the pH electrode: 1 ÷ 5 points.
- Automatic and manual temperature compensation.
- Automatic pH buffer detection, their values may be set by the user.
- Automatic correction of the stored pH standard value influenced by the temperature change (compliant with NIST), what eliminates the necessity of the temperature adjustment.
- Possibility of storing characteristics of 3 pH electrodes enables their quick replacement.
- Automatic control of the electrode's condition.
- Depending on type of the chosen electrode making measurement in pure water, sewage, pastes, etc. is possible.

Ion selective measurement:

- Enables ion concentration measurements of monovalent, bivalent, negative and positive ions.
- The meter's measuring range enables work with all available ion selective electrodes (ISE), chosen adequately to the kind of measured ion, equipped with BNC 50 connector.
- Automatic entering of the molar weight and valence of a particular ion.
- Possibility to choose the unit among pX, g/l, M/l, ppm.
- Automatic unit conversion (e.g. mol/l to mg/l).
- Possibility of entering freely chosen values of ion standard solutions.
- The meter is equipped with 1 BNC connector for measurements of pH, Ion or mV (ORP) and "banana" connector for the reference electrode.

mV and redox potential measurement:

- Precise redox potential measurement (accuracy 0.1 mV).
- Possibility to measure redox potential relatively to the entered or measured reference potential – V_{ref} .

Other features:

- Internal datalogger for up to 950 sets of results collected singly or in series with temperature, time and date.
- RS-232 output for PC (optionally: USB by special adapter).
- Clock with date.

In comparison with **CP-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 standard set includes: **CT2B-121** temperature sensor with **Pt-1000B** resistor and **EPS-1** pH electrode for measurements in clear water, which should not be used in other types of liquid. Measurements in liquid with sediment should be made with use of **IJ44A** pH electrode, which enables measurements in various samples of both pure and contaminated liquids and semi-solids. Its unusual construction (“intermediate junction”) protects the real junction (diaphragma) of the electrode against clogging, ensures stable measurements in these types of liquids or semi-liquid mass, in which other electrodes stop working quickly. When properly handled and maintained the electrode may be efficient for several years.



TECHNICAL DATA

Function	pH	Redox / mV	Temperature
Range	-2.000 ÷ 16.000 pH	±1999.9 mV	-50.0 ÷ 200.0 °C
Resolution	0.001 pH or 0.01 pH	0.1 mV	0.1 °C
Accuracy (1 digit)	±0.002 pH*	±0.1 mV*	±0.1 °C**
Temperature compensation	-5 ÷ 110 °C	-	-
Input impedance	10 ¹² W	10 ¹² W	-
Power supply	6 V / 2 A power adapter		
Weight	550 g		
Dimensions (mm)	L= 200 W= 180 H = 20 / 50		
Printer	Thermal, width: 60 mm		

*The accuracy of the meter only.

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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.

Ion selective measurements

Function	Ion (M/l)	Ion (g/l)	Ion (ppm)	Ion (pX)
Range	0 ÷ 100	0 ÷ 1 000	0 ÷ 1 000 000	-2.000 ÷ 16.000 pX
Resolution	0.01 / 0.1	0.01 / 0.1	0.01 / 0.1	0.001 / 0.01
Accuracy (± 1 digit)	± 0.25 %*	± 0.25 %*	± 0.25 %*	± 0.002 pX*
Temperature compensation	-5 ÷ 110 °C	-5 ÷ 110 °C	-5 ÷ 110 °C	-5 ÷ 110 °C

*The accuracy of the meter only.

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