

## LABORATORY pH / CONDUCTIVITY / SALINITY METER CPC-502

Laboratory meter in benchtop housing, which measures: pH, redox potential (mV), conductivity, salinity in NaCl or KCl, TDS and temperature. The meter has built in thermal printer (60 mm).

High accuracy and repeatability in all measuring functions.

The operating procedures have been unified, what makes working trouble-free.

### Characteristic features:

#### In pH measuring function:

- Depending on the kind of applied pH electrode it may be used for clean water, sewage, soil measurements etc.
- Calibration: 1 ÷ 5 points.
- Storage of 3 electrodes characteristics enables to replace them quickly.
- Automatic buffer detection, its value can be set by the user.
- Automatic correction of the temperature influence on standard solution value (NIST), what eliminates the necessity of the temperature adjustment.
- Automatic evaluation of the pH electrode condition.

#### In mV and redox 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 it may be used in ultra pure water as well as in very high conductivity samples or chemical compounds.
- Salinity measurement can be converted to NaCl, KCl.
- Converting conductivity to salinity according to real characteristics, not a constant coefficient.
- Possibility of determining the TDS with use of conductivity measurement by entering the TDS coefficient in range 0.2 ÷ 1.0.
- 6 ranges switched automatically.
- Wide range of  $\alpha$  coefficient chosen depending on the measured solution.
- Calibration by entering the constant K in range 0.010 ÷ 19.999 cm<sup>-1</sup> or in standard solutions.
- Possibility of changing the reference temperature value.
- High accuracy conductivity cell **ECF-1** delivered in set. 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.

#### Other features

- Automatic or manual temperature compensation.
- Internal clock with date.
- Internal datalogger for up to 950 sets of results collected in series or singly with temperature time 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.

In comparison with **CPC-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  $\alpha$  coefficient for natural and ultra pure water.

The standard set includes: **ECF-1** conductivity cell, **CT2B-121** temperature probe 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. 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, the electrode's lifetime is longer than the standard electrodes.



## TECHNICAL DATA

Function	pH	mV	Conductivity / Salinity	Temperature
Range	-2.000 ÷ 16.000 pH	±1999.9 mV	0 ÷ 1999.9 mS/cm (autorange) / NaCl 0 ÷ 250 g/l KCl 0 ÷ 260 g/l	-50.0 ÷ 199.9 °C
Accuracy ( 1 digit)	0.002 pH*	0.1 mV*	<19.99 mS/cm: ±0.1%* > 20 mS/cm: ±0.25%* / salinity: ±2%*	±0.1 °C**
Temp. compensation	-5.0 ÷ 110.0 °C	-	-5.0 ÷ 70.0 °C	-
Input impedance	>10 <sup>12</sup> Ω	>10 <sup>12</sup> Ω	-	-
$\alpha$ coefficient	-	-	0 ÷ 10.00 %/ °C	-
K constant	-	-	0.010 ÷ 19.999 cm <sup>-1</sup>	-
Temperature sensor	Pt-1000 - standard or accurate			
Power supply	6 V / 2 A power adapter			
Printer	Thermal, width: 60 mm			
Weight	630 g			
Dimensions (mm)	L = 200; W = 180; H = 20 / 50			

\*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.

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