

WATERPROOF pH / CONDUCTIVITY / SALINITY METER CPC-411

Measures: pH, mV (redox potential), conductivity, salinity and temperature.
Easy in use simple meter of good accuracy.

Characteristic features:

- Used for work in the field and in the laboratory.
- Small size and low weight make working in the field easier.
- Waterproof housing (IP-66) facilitates work in difficult conditions.
- The LCD enables simultaneous readout of the measured function and temperature value.
- pH and conductivity circuits are isolated. This eliminates the influence of one measurement to the other.
- Very easy in use.

In the pH measurement mode:

- Calibration in 1÷ 3 points in buffer solutions.
- Automatic detection of the pH buffer solution's value 4.00, 7.00, 9.00 pH (optionally: 4.00; 7.00; 10.00 pH).
- Automatic temperature compensation.
- Depending on the chosen electrode, makes measurement in clean water, sewage, pastes, etc.
- The electrode's buffer and slope readout.



In the redox (mV) measuring function:

- Accuracy 1 mV redox potential measurement.
- Possibility of automatic calculation of the redox reading made with the reference chloride/silver electrode to the hydrogen electrode.

In the conductivity measurement mode:

- Enables measurements of clean water and samples with conductivity up to 199.9 mS/cm.
- 4 sub-ranges switched automatically (autorange).
- Measures salinity with conversion to NaCl up to 177.9 g/l.
- Converts conductivity into salinity according to the actual dependency instead of a constant coefficient.
- Determines estimated value of the total dissolved solids (TDS), variable coefficient introduced by user in range 0.20 ÷ 1.00.
- Automatic temperature compensation.

- Constant α temperature compensation coefficient – 2% / °C. For precise measurements with temperature compensation we recommend the meters of series 401 or 461.
- Reference temperature 25 °C or 20 °C for measurements made in honey.
- In set with accurate **ECF-1** conductivity cell. 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.
- Possibility to measure electric admittance of tree seedlings – checking the vitality of seedlings with a special sensor.

Other features:

- Automatic switch off function preserves the battery life.
- Memory of 50 results.
- Warranty - 24 months for the meter.
- The user's manual in English on CD added to the set.

The 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 (diaphragm) 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	0.00 ÷ 14.00 pH	± 1999 mV	0 ÷ 199.9 mS/cm (autorange) / NaCl 0 ÷ 177.9 g/l	-50.0 ÷ 199.9 °C
Accuracy (± 1 digit)	±0.01 pH*	±1 mV*	±0.25 %* up to 19.99 mS/cm ±0.5%*above 20 mS/cm / salinity ±2%*	±0.1 °C**
Temp. compensation	-5.0 ÷ 110.0 °C	-	-5.0 ÷ 70.0 °C	-
Input impedance	>10 ¹² Ω	>10 ¹² Ω	-	-
α coefficient	-	-	2 %/ °C constant	-
K constant	-	-	0.010 ÷ 1.999 cm ⁻¹	-
Temperature sensor	Pt-1000 standard or accurate			
Power supply	9 V battery, 12 V / 100 mA power adapter - optionally			
Weight	220 g			
Dimensions (mm)	L=149, W=82, H=22			

*The accuracy of the meter only.

**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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