

MULTIFUNCTION LABORATORY METER CX-601

- **CX-601** measures: pH, redox (mV), Ion concentration, conductivity, resistivity, salinity, TDS, oxygen in the air and oxygen concentration in water, atmospheric pressure and temperature.
- The results are displayed on a 7" graphical colour touch screen.
- The meter enables simultaneous measurement and displaying of the chosen functions.
- The meter is equipped with connectors which enable simultaneous measurement of: pH (or redox potential or ions), conductivity and salinity, oxygen in the air or dissolved in water and temperature.
- "HOLD" function to freeze the result on the display.
- Signalisation of the result stabilisation "READY" with symbol and sound.
- Possibility of sending to a PC a report of calibration - up to 10 last calibrations.
- All measuring functions are characterised by accuracy and stability.
- Programming of the parameters is very easy.
- Unification of operating procedures for all functions makes working easier.
- Except work with power adapter the meter may be powered with external rechargeable battery, what enables long-lasting measurements in the field conditions with use of special carrying case with batteries (optional) or during work in field measuring stations without power sources.

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Characteristic features of the particular functions.

In the pH measuring mode:

- pH electrode calibration in 1 to 5 points;
- Automatic detection of pH buffers and standards, their value may be set by the user;
- In case of using standard solutions (NIST norm) automatic introduction of temperature correction of the value of those standards, what makes calibration much easier;
- Storing of 3 pH electrodes' characteristics enables to replace them quickly.
- Automatic control of the electrode's condition.
- Depending on the used pH electrode kind possible measurements in pure water, sewage, pastes, etc.
- Enables readout of the pH electrode parameters – buffer and slope
- The measuring circuits of pH and conductivity are isolated what enables accurate and error free simultaneous measurements in this same vessel.

In the conductivity measuring mode:

- Full measuring range enables making measurements in ultra pure water as well as in very salty solutions.
- 6 ranges switched automatically.
- NEW** • High accuracy conductivity cell ECF-1 available as additional equipment. Measuring range 0÷500 mS/cm sufficient for measurements in ultra pure water and high salt concentration samples. Metal electrodes are easy to clean and PVC body protects it against mechanical damage.
- Calibration by entering the constant K in range 0.01÷19.999 cm⁻¹ or in buffer solution.
- Possibility of storing constants K of 3 cells.
- Wide range of α coefficient, chosen depending on the measured solution.
- NEW** • In case of measurements of natural water with conductivity from 60 μ S/cm to 1 mS/cm the meter enables using non-linear temperature compensation. The parameters of this type of water is determined in norm EN27888:1999 and concerns surface waters, deep water and well water. This solution lowers the measurement error.
- NEW** • The measurement accuracy of the ultra pure water with temperature compensation was increased by automatic adjustment of the α coefficient depending on the temperature and kind of trace contaminations.
- Calibration by entering the constant K of the cell or in standard solutions in 1 to 5 points.
- Possibility of changing the reference temperature.
- Automatic calculation of conductivity into salinity in NaCl or KCl on the basis of the actual characteristics, what greatly increases the accuracy of conversion.
- Possibility of defining the TDS with use of conductivity measurement by entering the TDS coefficient in range 0.2-1.0.
- NEW** • The liquid resistivity measurement option added.

In the ion measurement mode:

- The measuring range of the meter enables co-operation with all ion selective electrodes (ISE) chosen depending on the measured ion, equipped with BNC connector.
- Electrode calibration in 1 to 5 points;
- Molar weight of measured ion is automatically introduced.
- Automatic conversion of the units – e.g. M/l to mg/l or pX without the necessity of manual conversion.
- Possibility of entering freely chosen standard solution value.

In the redox potential measurement mode:

- Precise redox potential measurement (accuracy 0.1 mV).
- Possibility of the mV measurement relatively to the entered or measured reference (Vref) value.

In the oxygen measurement mode:

- Measurement of oxygen dissolved in water or oxygen content in the air.
- Air pressure measurement with automatic calculation of its influence on the oxygen measurement.
- Automatic transfer of the salinity value measured in conductivity mode to the oxygen measurement mode and automatic calculation of its influence on the result in mg/l oxygen content.
- Easy in use and maintenance galvanic dissolved oxygen sensor.
- Calibration of the oxygen sensor in 1 or 2 points.
- Wide measuring range

In the air pressure measurement mode:

- The air pressure sensor is placed inside the meter.
- Air pressure measurement may be displayed as separate measuring function on the screen.
- Possibility of unit choice: hPa, Bar, mmHg.

In the temperature measurement mode:

- Choice of the unit: °C, °F, K.
- Introducing the number of the group of the selected temperature sensor what increases the accuracy.

Other features:

- Automatic or manual temperature compensation.
- Possibility of observing the air pressure measurement on the screen.
- Internal clock with date.
- Datalogger for 2000 data sets of all actually chosen functions.
- Storing of measurement's results with time and date, taken as single or in series with set time interval.
- The results and calibration data are stored in non-volatile memory.
- Possibility of screen brightness control depending on the external conditions.
- Economy mode of screen back-light to preserve batteries when working in the field.
- Storing of the set date of next calibration.
- USB output to connect with a PC
- Possibility to choose English or German language
- Powered with power adapter.
- The meter meets the GLP requirements.
- 24 months of warranty.



Technical data

Function	pH	mV	Conductivity, Salinity	O ₂ (mg/l)	O ₂ (%)	Temperature
Range	-2.000 ÷ 16.000 pH	±1999.9 mV	0 ÷ 1999.9 mS/cm 0 ÷ 200 g KCl 0 ÷ 250 g NaCl	0 ÷ 60 mg/l	0 ÷ 600%	-50.0 ÷ 199.9°C
Accuracy (± 1 digit)	±0.002 pH	±0.1 mV	±0.1% > 20 mS/cm: ±0,25%	±0.1 mg/l	±1%	±0.1 °C*
Temp. compensation	-5 ÷ 110 °C	-	-5 ÷ 70 °C	0 ÷ 40 °C	0 ÷ 40 °C	-
Input impedance	10 ¹² Ω	10 ¹² Ω	-	-	-	-
Air pressure range	800 ÷ 1100 hPa					
Power	9V/500mA power adapter or external rechargeable battery (optional)					
Dimensions (mm)	L= 180,5 , W= 1233,5, H= 55,8 in the highest place					

* Accuracy of the meter. Total accuracy is a sum of the meter and probe accuracy.

Ion selective measurements

Function	Ion (M/l)	Ion (g/l)	Ion (ppm)	Ion (pX)
Range	0 ÷ 100	0 ÷ 1000	0 ÷ 1 000 000	-2.00 ÷ 16.00
Resolution	0.01 / 0.1%	0.01 / 0.1%	0.01 / 0.1%	0.001 / 0.01 pX
Accuracy (± 1 digit)	± 0.25%	± 0.25%	± 0.25%	± 0.002 pX

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