

## POCKETSIZE WATERPROOF MULTIFUNCTION METER CX-105

**CX-105** is a multipurpose meter which enables making different kinds of measurements depending on the type of the chosen head. Complete set of heads enables following measurements: pH, mV, redox potential, conductivity, salinity, TDS, oxygen dissolved in water in mg/l or %, humidity with possibility of determining the dew point, temperature of the surface and temperature of liquids or air. The user may choose appropriate heads. Good accuracy and minimised size.

### Characteristic features:

#### The meter cooperates with the following heads:

- GP-105** - for pH and temperature measurement in water with low deposit content;
- GPX-105s** - for pH and temperature measurements in waste water or other viscous samples;
- GR-105k** - for redox potential and temperature measurement, electrode with cable;
- GC-105** - for conductivity, salinity and temperature measurement;
- GO-105** - for oxygen dissolved in water, in % or mg/l and temperature measurements, probe without cable;
- GO-105K** - for oxygen dissolved in water, in % or mg/l and temperature measurements, probe with cable;
- GT-105** - for accurate temperature measurement, without cable;
- GT-105k** - for accurate temperature measurement, probe with cable;
- GH-105** - for humidity and dew point measurements, sensor without cable;
- GH-105k** - for humidity and dew point measurements, sensor with cable;
- GH-105p** - for humidity and dew point measurements, sensor without cable but with chinch connector for surface temperature probe, what enables to decide if painting on the surface in existing conditions is advisable.

### pH measurement

- pH calibration in 1 to 3 points.
- Automatic detection of the buffer solutions 4.00, 7.00, 9.00 pH (optionally: 4.00, 7.00, 10.00 pH).
- Automatic temperature compensation.

### Redox (mV) measurement

- Accuracy 1mV.

### Conductivity and salinity measurement

- 5 sub-ranges switched automatically.
- Wide measuring range in conductivity mode (up to 100 mS/cm) enables using the meter for measurements in clear water, waste water or in sea water.
- Salinity measurement in range up to 60 g/l converted to NaCl.
- In the conductivity measuring mode possibility of calibration by introducing the K constant or in standard solution.
- The reference temperature for measurement in honey may be chosen between 25 °C and 20 °C.
- Constant  $\alpha$  coefficient: 2%/°C.

## Oxygen concentration measurement

- 1 point calibration (in 100% O<sub>2</sub> saturation).
- Oxygen measurement in % or in mg/l.
- Possibility of introducing a correction connected with the salinity of the sample.
- Galvanic oxygen sensor of good quality.
- When properly handled, the sensor may be efficient for several years.

## Temperature measurement

- The measurement is made simultaneously with other chosen measurement function.
- Separate head for temperature measurements enables measurements up to 150 °C with 3 cm probe without cable, 200 °C with 12 cm probe without cable, 400 °C with every probe equipped with cable.
- Accuracy of the temperature measurement depends on the kind of the chosen probe.

## Other features

- Fully waterproof housing.
- Powered by 3 x LR44 batteries
- Long-lasting work on one battery set.
- Automatic switch-off function to protect the batteries against discharging.
- Warranty: 24 months.

**GPX-105s** head is equipped with durable pH electrode made by Australian company „Ionode”, 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 masses, in which other electrodes stop working quickly. When properly handled and maintained, the electrode's lifetime is longer than the standard electrodes.

## TECHNICAL DATA

Function	pH	mV	Conductivity / salinity	Oxygen in water	Humidity*	Temperature**
Ranges	0.00 ÷ 14.00 pH	±1200 mV	0 ÷ 100 mS/cm / 0 ÷ 60 g/l NaCl	199.9 % 19.99 mg/l	0 ÷ 100 RH	-70.0 ÷ 400 °C****
Accuracy (±1 digit)	±0.02 pH*	±1 mV*	up to 10 mS/cm: ±1 %*, up to 50 mS/cm: ±2 %* above 50 mS/cm: ±5 %* / salinity up to 5 g/l: ±1.5% up to 25 g/l: ±2.5% above: ±5%	±0.2 %** ± 0.02 mg/l**	10 ÷ 90% RH ±3% beyond the range: ±4% RH	±1 °C*** at 25 °C: ±0.4 °C
Temperature range	-5 ÷ 60 °C	—	0 ÷ 50 °C	0 ÷ 40 °C	-40 ÷ 70 °C	—
Temp. compensation	-5 ÷ 60 °C**	—	0 ÷ 50 °C	0 ÷ 40 °C	—	—
Dew point temperature range	—	—	—	—	-199.9 ÷ 70 °C	—
Input impedance	>10 <sup>12</sup> Ω	>10 <sup>12</sup> Ω	—	—	-	—
α coefficient	—	—	2 % / °C (constant)	—	-	—
Power supply	3 x LR44 batteries					
Weight	about 70 g depending on the head type					
Dimensions (mm)	L = 160mm, φ = 26mm, with GP-105s head: L = 235 mm φ = 26mm					

\* The accuracy of the meter only.

\*\* The accuracy of the meter only. With the oxygen sensor the accuracy at calibration temperature: ±2%. By the difference ±5 °C accuracy: ±4%, by the difference ±10 °C accuracy: ±6%.

\*\*\* The accuracy of the meter with **Pt-1000B** standard resistor: ±0.8 °C. In the range 0 ÷ 100 °C for **GT-105** temperature head the acceptable error of the probe with **Pt-1000A** resistor: ±0.27 °C.

\*\*\*\* Maximal range for head with sensor on cable. For sensor with 12 cm pipe without cable: -70 ÷ 200 °C.

## CX-105 WITH HEADS

