

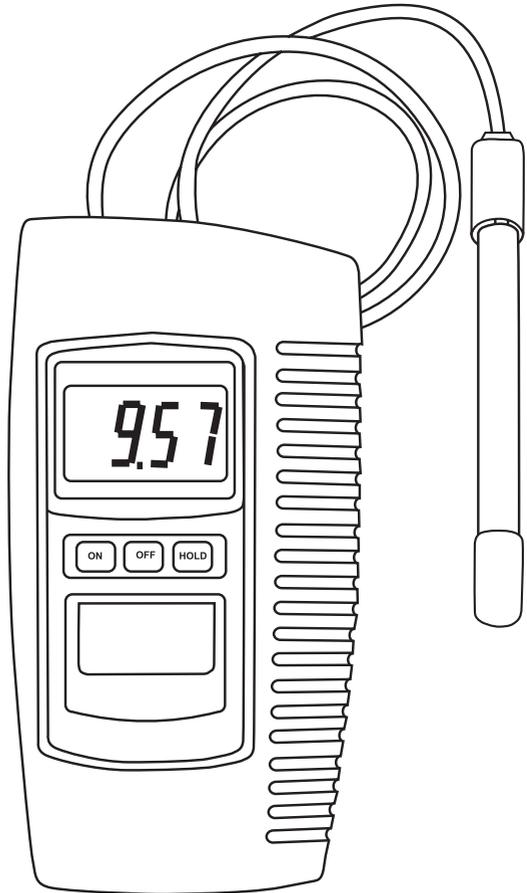
# Lovibond® Water Testing

Tintometer® Group



## SensoDirect Con110

Conductivity Meter - Instruction Manual



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### **1. GENERAL DESCRIPTION**

- \* General purpose conductivity meter with broad application including AQUARIA & FISH HATCHERIES, FOOD & BEVERAGE PROCESSING, PHOTOGRAPHY, LABORATORY, PAPER INDUSTRY, PLATING INDUSTRY, QUALITY CONTROL, EDUCATION, SWIMMING POOLS & WATER CONDITIONING
- \* High quality, compact unit with a separate electrode that is designed for easy operation
- \* Water resistant front panel with easy to read LCD display and rubberised function keys

### **Unpacking**

Please check that the shipment includes the following items:

- Lovibond® SensoDirect Con110
- Lovibond® SensoDirect Conductivity Sensor
- 9V Battery
- Protective Cover
- 7 Screws
- Screwdriver
- Plastic Cover Calibration Screws
- Instruction Manual

### **Battery installation**

Prior to first use take the instrument out of the protective cover open the battery compartment and insert the 9V battery. Ensure polarity is correct.

### **Protective Cover**

The instrument is equipped as standard with the protective cover.

Prior to the first measurement please fix the cover by using the enclosed screws. The protective cover ensures reliable operation even in harsh environments.

When the instrument is used without the protective cover please use the enclosed plastic cover to protect the calibration screws against dust and humidity.

## 2. SPECIFICATION

Display	LCD, 21.5 mm (0.7") digit height Maximum display count no. 1999
Measurement Range	2 ranges: 0 - 1.999 mS/cm, 0 - 19.99 mS/cm
Resolution	0.001 mS/cm for 0 - 1.999 mS/cm range 0.01 mS/cm for 0 - 19.99 mS/cm range
Accuracy (23 ± 5°C)	3% full scale + 1 digit
Sample Time	Approx. 0.4 seconds
Over Range Indicator	Display shows „1“
Data Hold	Freezes the conductivity value on the display
Temperature Compensation	Automatic, 0 - 50°C (32 - 122°F)
Operating Temperature	0 - 100°C (32 - 212°F)
Operating Humidity	Maximum 80% relative humidity
Power Supply	006P DC 9V battery (heavy-duty type), MN1604 (PP3) or equivalent
Power Current	Approx. DC 5 mA
Weight	380 g
Dimensions	Meter: 208 x 110 x 34 mm (L x W x H) Electrode: 22 mm diameter x 120 mm length

## 3. FUNCTIONAL DESCRIPTION

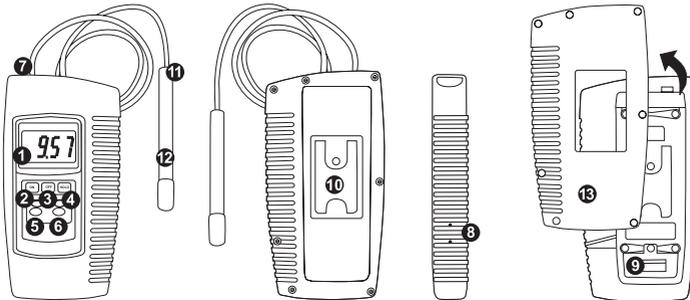


Figure 1

- |   |                        |    |                             |
|---|------------------------|----|-----------------------------|
| 1 | Display                | 8  | Calibration Adjust (HR, LR) |
| 2 | Power ON Button        | 9  | Battery compartment/cover   |
| 3 | Power OFF Button       | 10 | Stand                       |
| 4 | Data Hold Button       | 11 | Electrode Handle            |
| 5 | 2 mS/cm Range Button   | 12 | Conductivity Electrode      |
| 6 | 20 mS/cm Range Button  | 13 | Protective Cover            |
| 7 | Electrode Input Socket |    |                             |

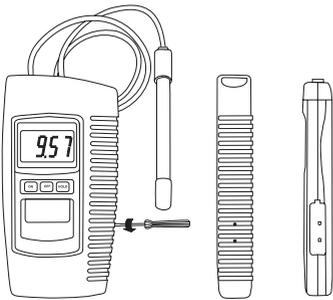
## 4. TAKING MEASUREMENTS

- 1) Connect the Conductivity Electrode (Figure 1, 12) to the Electrode Input Socket (Figure 1, 7).
- 2) Power on the instrument by pressing the Power ON Button.
- 3) Select the 2 mS/cm or 20 mS/cm range by pressing the appropriate range button (Figure 1, 5 or 6).
- 4) Holding the electrode handle (Figure 1, 11), immerse the conductivity electrode completely in the sample.

Shake the electrode several times to remove air bubbles from the electrode and therefore ensure stable readings. The instrument will display the conductivity value in mS/cm.

Note: „1” in the display indicates an out-of-range measurement. When operating in the 20 mS/cm range, if the value obtained has one or more zeros after the decimal point, change to the 2 mS/cm range for improved accuracy.

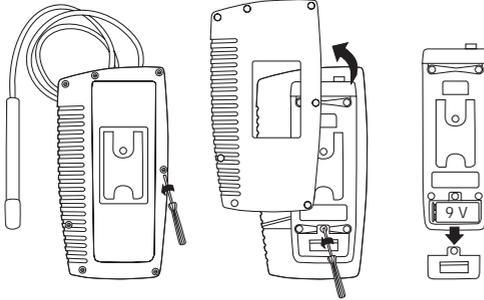
## 5. CALIBRATION



To calibrate the meter:

- i) Prepare a 1.413 mS/cm calibration solution (Order Code 722250) or similar.
- ii) Select the 2 mS/cm range (Figure 1, 5).
- iii) Holding the conductivity electrode by its handle (Figure 1, 11), immerse it completely in the calibration solution. Shake the electrode to disperse air bubbles on it and allow measurements to stabilise. Adjust „Calibration Adjust LR” (see above) until the display reads exactly 1.413 mS/cm.

## 6. CHANGING THE BATTERY



- i) „ “ in the left corner of the display indicates that it is necessary to replace the battery. However, accurate measurements may still be made for several hours after the “Low Battery” indicator first appears.
- ii) Remove the protective cover before replacing the battery. To replace the battery, remove the Battery Compartment Cover (Figure 1, 9) on the rear of the meter.
- iii) Remove the battery, install a replacement one (006P DC 9V battery (heavy duty type), MN1604 (PP3) or equivalent) and replace the battery compartment cover.

## 7. ACCESSORIES

722250 Calibration solution 1413  $\mu\text{S}/\text{cm}$ , 500 mL, traceable to N.I.S.T.

## Notes



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