

## SensoDirect 200 (IP 67 waterproof)



■ Dissolved Oxygen (O<sub>2</sub>)  
O<sub>2</sub> Concentration in mg/l  
O<sub>2</sub> Saturation in %  
°C/°F

■ Conductivity/TDS/  
Salinity  
°C/°F

■ pH/ORP/Redox  
°C/°F

### Applications

- Drinking Water
- Cooling/Boiler Water
- Waste Water
- Pool Water
- Surface Water
- Water Treatment Companies
- Industrial and Governmental Laboratories

The microprocessor-controlled SensoDirect range of handheld meters from Lovibond® meets the day-to-day demands for sturdy and reliable systems for the measurement of pH value or ORP/Redox, conductivity/TDS and dissolved oxygen.

The water-tight housing complies with **IP67** and is equipped as standard with protective armouring and built-in electrode holder ensuring reliable operation even in extreme ambient conditions.

The support can be flipped up to hang the meter on pipes or branches.

A direct, easily understood user interface, outlining the required configuration options for all three systems, facilitates meter operation both outdoors and in the laboratory.

The automatic Hold function "freezes" stable



measuring data in the display and indicates the presence of stable and reproducible results.

The internal memory allows storage of 20 data sets to facilitate subsequent evaluation.

The integral automatic switch-off feature, varying from 1 to 120 minutes, increases the operating life of the units.

The power consumption of all three units has been reduced to a minimum. As a result, the 4 x 1.5 V integrated batteries have an operating life of up to 15000 hours, depending on the unit version.

## pH200

- pH / redox measurement and temperature measurement (Pt1000 or NTC 30kOhm)
- Automatic temperature compensation (ATC)
- Auto Hold function
- Internal memory for 20 data sets
- Automatic buffer recognition with Tintometer standard or DIN or individual buffer
- 1, 2 and 3 point calibration
- Low battery and battery change indicator
- Sensor evaluation in the display based on the calibration result (from 10 to 100%)
- Battery operation period up to 15000 hours
- Shock-absorbing rubber protective armouring
- Waterproof

## Con200

- Conductivity, Total Dissolved Solids (TDS), Salinity and Temperature measurement
- Dirt-insensitive up-to-date 4-pole conductivity cell offering highest precision
- Automatic temperature compensation (ATC)
- Min/Max value storage
- Internal memory for 20 data sets
- Linear and non-linear temperature compensation (EN27888)
- Calibration against standard solutions
- Low battery and battery change indicator
- Shock-absorbing rubber protective armouring
- Battery operation period up to 3000 hours
- Waterproof

## Oxi200

- Oxygen partial pressure, Oxygen concentration, Oxygen saturation, Temperature measurement
- Automatic absolute air pressure measurement
- Auto Hold function
- Easy calibration against oxygen in air
- Salinity correction
- Self-polarising galvanic oxygen probe, allows instant measurement after the system is switched on
- Low battery and battery change indicator
- Sensor evaluation in the display
- Accessories for depth measurement
- Battery operation period up to 12000 hours
- Shock-absorbing rubber protective armouring
- Waterproof

## Electrodes / measuring probes

The wide variety of high-quality electrodes and measuring probes for the SensoDirect 200 meters makes them suitable for almost any application in water analysis, industry and research.

pH combination electrodes made of glass and plastic, with gel or liquid electrolyte, as well as various temperature sensors (NTC 30kOhm, Pt1000) are considered standard for modern pH meters.

Redox electrodes made of plastic with gel electrolyte and platinum tip are hardwearing and easy to use.

The galvanic, membrane-covered oxygen sensor with built-in temperature sensor allows instant measurement without the need for time-consuming polarisation.

The sturdy, dirt-insensitive 4-pole conductivity measuring cell with graphite electrodes is ideal for use in industrial process and waste water analysis. The temperature range from 0...80 °C, for a short period up to 100°C, make this sensor to a practice-oriented, user friendly item.

## pH 200

### Technical Data

<b>pH</b>	0.00 ... 14.00
<b>Accuracy</b>	± 0.01 pH (at nominal temperature, unit ± 1 digit)
<b>Temperature</b>	-10.0 ... +110.0 °C 14.0 ... 230.0 °F
<b>Accuracy</b>	± 0.2 °C (-0..50 °C), otherwise ± 0.4 °C
<b>Redox (ORP)</b>	-1999 ... +2000 mV
<b>Relative Redox</b>	-1792 ... +2206 Rel mV (based on DIN 38 404)
<b>Accuracy</b>	± 0.1 % FS (mV or Rel mV)
<b>Sensor connections</b>	DIN 19262 and two 4 mm banana sockets "Temp" and "Ref"
<b>Input resistance</b>	>1012 Ohm (typ.)
<b>Input current</b>	<1 pA
<b>Nominal temperature</b>	25 °C
<b>Operating temperature</b>	0 to +50 °C
<b>Storage temperature</b>	-20 to +70 °C
<b>Power supply</b>	4 x 1.5V battery, type AA Operating time up to >15,000h
<b>Power consumption</b>	0.2 mA
<b>Auto-Off function</b>	0 - 120 minutes
<b>Calibration</b>	1-, 2- or 3-point calibration with auto buffer recognition Tintometer buffer, DIN buffer or user-selectable buffer
<b>CE</b>	EN 55 022 : 6 / 1993 class B, EN 50 082-1 (EN 61000-4-6, EN 61000-4-4, EN 61000-4-3, EN 61000-4-2 conforms to the EMC Directive 89/336/EEC and 73/23/EEC



SensoDirect pH200 in carrying case

### Delivery Content

#### SensoDirect pH200

Code	Article
721200	SensoDirect pH200, without electrode, with batteries, instruction manual, lanyard, in case
721220	SensoDirect pH200 (SET 1) instrument, batteries, pH/temp. plastic-electrode type 230, pH-buffer-set (pH 4.00/7.00/10.00), in case, manual, guarantee sheet
721221	SensoDirect pH200 (SET 2) as SET1, but with pH/temp. plastic-electrode type 225, and temperature sensor Pt 1000, manual, guarantee sheet

#### Accessories pH200

721225	pH-electrode plastic/gel-type 225
721230	pH/temp.-electrode type 230 plastic/gel/temperature NTC30kOhm
721235	pH-electrode glass/gel-type 235
721240	Redox-electrode plastic-type 240
721245	Temperature sensor
418609	KCl-solution, 3 molar saturated with AgCl, 100 ml
721250	pH buffer-set 4.00/7.00/10.00 (25°C)
721252	pH buffer 4.00 (25°C) 1 litre
721254	pH buffer 7.00 (25°C) 1 litre
721256	pH buffer 10.00 (25°C) 1 litre
721260	Adapter cable DIN19262 - BNC
721265	Adapter cable DIN19262, S7 plug-head
725010	Lanyard
725020	Case with foam inlet

## Con 200

### Technical Data

<b>Conductivity</b>	0.0 ... 200.0 µS/cm 0 ... 2000 µS/cm 0.00 ... 20.00 mS/cm 0.0 ... 200.0 mS/cm
<b>Resistance</b>	0.005 ... 100.0 kOhm*cm
<b>TDS</b>	0 ... 1999 mg/l
<b>Salinity</b>	0.0 ... 70.0 g/kg
<b>Accuracy</b>	± 0.5 % v. MW ± 0.5 % FS (± 3 digits)
<b>Temperature</b>	-5.0 ... 100.0 °C 23.0 ... 212 °F
<b>Accuracy</b>	± 0.3K
<b>Cell constant</b>	0.50 ± 0.10 cm-1
<b>Temperature compensation</b>	selectable: - linear, 0.3 to 3.0 %/K - non-linear in acc. with EN 27 888 - no compensation
<b>Reference temperature</b>	20 °C and 25 °C
<b>Calibration</b>	1-point calibration in the range from 1000 to 2000 µS/cm
<b>Nominal temperature</b>	25 °C
<b>Operating temperature</b>	Unit: 0 to + 50 °C Measuring cell: -5 to 80 °C (up to 100 °C for short periods)
<b>Power supply</b>	4 x 1.5 V battery, Type AA Operating time up to 1500 h
<b>Power consumption</b>	ca. 2 mA, max. 4.2 mA
<b>Auto-Off function</b>	0 - 120 minutes
<b>Measuring cell</b>	4-pole conductivity measuring cell with integrated temperature- sensor (NTC10kOhm). Electrode material: special graphite Shaft material: epoxy Temperature sensor: stainless steel Dimensions: diameter 12 mm, 120 mm long
<b>CE</b>	EN 55 022 : 6 / 1993 class B, EN 50 082-1 (EN 61000-4-6, EN 61000-4-4, EN 61000-4-3, EN 61000-4-2 conforms to the EMC Directive 89/336/EEC and 73/23/EEC



SensoDirect Con200 in carrying case

### Delivery Content

#### SensoDirect Con200

Code	Article
722220	SensoDirect Con200 with, batteries, 4-Pole conductivity cell, in case, manual, guarantee sheet

#### Accessories Con200

Code	Article
722225	SensoDirect Conductivity Cell, 4-Pole Technology
722250	Calibration solution 1413µS/cm
725010	Lanyard
725020	Case with foam inlet

## Oxi 200

### Technical Data

<b>O<sub>2</sub> partial pressure</b>	0.0...570.0 hPa, 0...1200 hPa 0.0...427.5 mm Hg, 0...900 mm Hg
<b>O<sub>2</sub> concentration</b>	0.00...25.00 mg/L, 0.0...70.0 mg/L
<b>O<sub>2</sub> saturation</b>	0.0...250.0 %, 0...600 %
<b>Accuracy</b>	± 1.5% ± 0.2 mg/L (0...25 mg/L) ± 2.5% ± 0.3 mg/L (25...70 mg/L) ± 1 Digit
<b>Temperature</b>	-5.0 ... + 50.0 °C 23.0 ... 122.0 ° F
<b>Accuracy</b>	± 0.1 °C
<b>Abs. air pressure</b>	500..1100 hPa
<b>Accuracy</b>	± 0.5% full scale
<b>Nominal temperature</b>	25 °C
<b>Operating temperature</b>	0 to +50 °C
<b>Storage temperature</b>	-20 to +70 °C
<b>Power supply</b>	4 x 1.5 V battery, Type AA Operating time up to 12.000 h
<b>Power consumption</b>	max. 0.25 mA
<b>Auto-Off function</b>	0 - 120 minutes
<b>Dimensions</b>	175 x 140 x 45 mm (L x W x H)
<b>Weight</b>	approx. 580 g
<b>Electrode</b>	Self-polarising oxygen electrode with integrated NTC sensor Connection: 7-pin DIN socket Installation diameter: 12.0 ± 0.2 mm Overall length: approx. 220 mm (incl. kink protection) Operating temperature: 0...40 °C
<b>CE</b>	EN 55 022 : 6 / 1993 class B, EN 50 082-1 (EN 61000-4-6, EN 61000-4-4, EN 61000-4-3, EN 61000-4-2 conforms to the EMC Directive 89/336/EEC and 73/23/EEC

### Delivery Content

#### SensoDirect Oxi200

Code	Article
723220	SensoDirect Oxi200 with batteries, oxygen sensor (1.5 m cable), electrolyte (KOH), 3 interchangeable membrane heads, in case, manual, guarantee sheet
723221	SensoDirect Oxi200 as above, but with oxygen sensor 10 m cable
723222	SensoDirect Oxi200 as above, but with oxygen sensor 30 m cable

#### Accessories Oxi200

Code	Article
723201	Oxygen sensor, 1.5 m cable
723210	Oxygen sensor, 10 m cable
723230	Oxygen sensor, 30 m cable
723250	Service Set Oxygen sensor 3 interchangeable membrane heads, 100 ml plastic bottle KOH-solution 3 mol/l
723260	Protection cap for depth measurement
725010	Lanyard
725020	Case with foam inlet



SensoDirect Oxi200 in carrying case