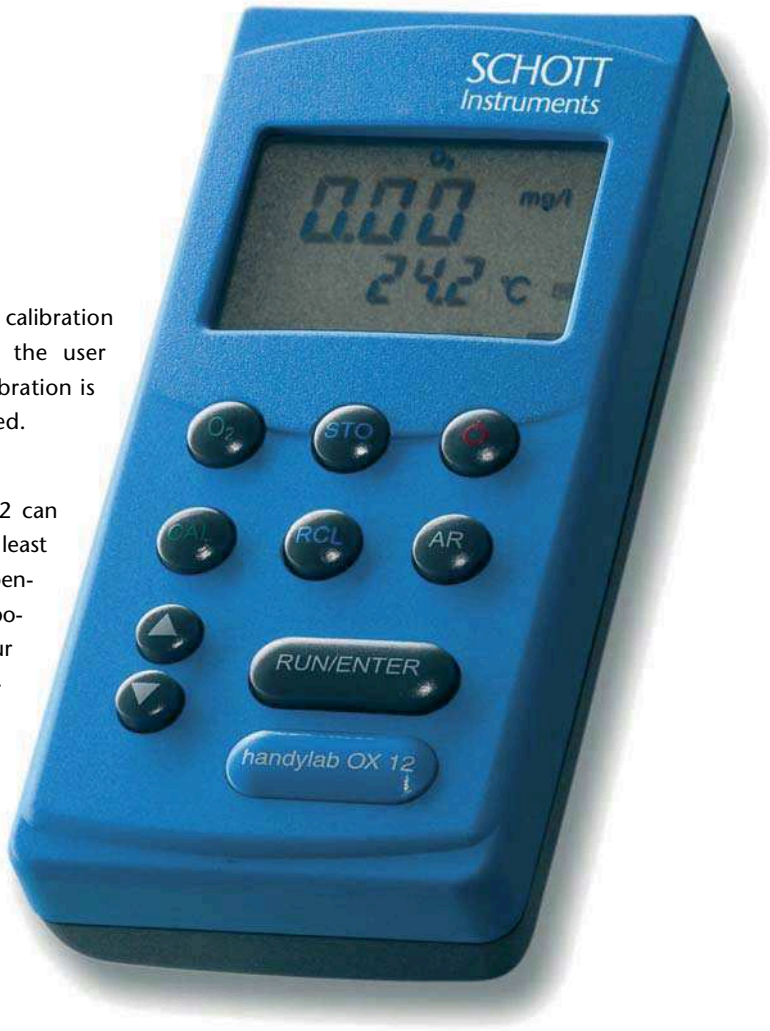
Portable oxygen meter with GLP functions handylab OX 12



The handylab OX12 portable oxygen meter in a shock-proof, water-tight casing is also ideally suited for on-site oxygen measurements in rivers, lakes or effluent, as well as for BOD measurements.

Measurement parameters

The oxygen concentration, saturation index and temperature measurement parameters mean that the SCHOTT Instruments handylab OX 12 has a variety of uses.

Measurement memory and interface

The meter has a data memory, whereby measurements can be saved manually or automatically using a timer control, and then evaluated later on. In addition, the oxygen meter has a configurable interface with a recognition function (RS-232) so that it can be connected to a computer (bi-directional) or a recorder.

Measurement reliability

The special AutoRead function, which can be additionally activated, serves to monitor the drift of the combination electrode. The measured value is only released when the stability criteria are fulfilled. This ensures the reproducibility of measurement results.

Measurements

During the measurement process, influence variables such as temperature and air pressure are automatically taken into account and compensated. Even the influence of a higher salinity level on oxygen determination can be corrected by entering the salinity that has been determined using a conductivity meter.

Calibration

Calibration of the handylab OX12 can beperformed easily on-site using the air calibration vessel. The vessel ensures a defined humidity and therefore ideal calibration conditions. After automatic calibration, a sensor symbol indicates the status of the oxygen combination electrode. The adjustable calibration timer can remind the user when the next calibration is due to be performed.

Power supply

The handylab OX12 can be operated for at least 2,000 hours independently of a mains power supply using four conventional batteries. A reminder for the user to replace the batteries appears on the display in good time. The calibration data are retained when the batteries are changed.

Sensor

The modern, zero current free, galvanic sensor 9009/61, which is included with the meter and can be used immediately for measuring purposes, ensures precise, reliable and rapid measurement of oxygen concentrations.

As a set

The handylab OX 12 portable oxygen meter is available as a complete set in a carrying case together with the 9009/61 sensor, the OX 925 maintenance set and the OxiCal®-SL calibration vessel.

Technical data	**9009/61 O_2 sensor**
Measuring principle	membrane covered galvanic sensor
temperature compensation	IMT
measurement range	0…50 mg/l O_2
temperature range	0…50 °C
max. over-pressure	6 bar
immersion depth	min. 6 cm
	max. 20 m water depth
Material	membrane head and shaft: POM
	membrane FEP
	thermistor housing VA steel (1.4571)
Dimensions	shaft length: 145 mm
	diameter: 15.25 mm
	membrane thickness: 13 µm
Cable connection	fixed cable length: 1.5 m (standard); max. length: 20 m
Approach velocity	> 3 cm/s at 10 % measuring accuracy
	10 cm/s at 5 % measuring accuracy
	18 cm/s at 1 % measuring accuracy
Specifications of sensor when new	
zero signal	< 0.1 % of saturation value
reaction time at 20 °C	t_{90} (90 % of final value) after < 10 sec.
	t_{95} (95 % of final value) after < 16 sec.
	t_{99} (99 % of final value) after < 60 sec.
internal consumption	0.008 µg/h
drift	approx. 3 % per month under operating conditions
service life	min. 6 months per electrolyte filling
polarization time	not required; sensor can be used immediately

Technical data handylab OX 12

Oxygen meter		**handylab OX 12**
Measuring ranges		
O_2 concentration	ranges	0.00…19.99 mg/l / 0…90.0 mg/l
	resolution max.	0.01
	accuracy	± 0.5 % of measured value
O_2 saturation index	ranges	0.0…199.9 % / 0…600 %
	resolution max.	0.1 %
	accuracy	± 0.5 % of measured value
O_2 partial pressure	ranges	0.0…199.9 mbar / 0…1250 mbar
temperature	range	0…+50.0 °C
	resolution	0.1 K
	accuracy	± 0.1 K
drift control	can be switched off	yes
Correction functions		
air pressure	automatic (built-in pressure sensor)	500…1100 hPa
temperature	automatic (IMT)	0…+40 °C
salinity	using setting keys	0.0…70.0
Calibration		
procedure		air calibration procedure
slope range		0.60…1.25
calibration interval control		1…999 days
calibration data storage		yes
sensor evaluation	via symbol on display	yes
real time clock	integrated with time/date	yes
Data storage		
storage by depression of key		800 data records
time controlled storage	in 7 intervals (5 sec…60 min)	800 data records
Connections		
oxygen sensor		8 pole socket
Interface		
for analogue recorder cable Z 394		4 pole socket
for RS-232 cable Z 395, bi-directional		4 pole socket
Ambient temperature		
operating temperature		-10…+55 °C
relative humidity (annual average)		< 90 %
Power supply		
battery operated		4 x 1.5 V mignon cells (type AA)
battery life time (data remain when changing batteries)		approx. 2,000 h
power supply (no akku)		optionally
automatic switch-off at operation		60 min
Housing		ABS, water-tight key pad
dimensions (H x W x D)		172 mm x 80 mm x 37 mm
weight		approx. 0.3 kg
Display		
LCD multi-function display		60 mm x 45 mm
Instrument safety	protection class	3, EN 61010-1 A2
	protection type	IP 66, EN 60529
approvals/marks of conformity		cETLus, CE
instrument warranty		3 years