

SevenExcellence™ DO/BOD

Professional and Precise



The SevenExcellence S900 benchtop instrument provides customers a premium benchtop solution to measure dissolved oxygen (DO) in aqueous media. Whether you measure DO using the traditional polarographic or the new digital optical dissolved oxygen technology (OptiOx), the S900 guarantees precise and highly reproducible results.

The SevenExcellence DO meter can be combined with one of the following two high-performance sensors:

InLab® OptiOx **ISM**

- Optical oxygen sensor based on RDO technology
- Easy-to-replace OptiOx sensor caps
- Short time-to-measure period

InLab® 605 **ISM**

- Traditional polarographic measuring technology
- Ideal for turbid, challenging samples
- Robust design

Optical Precision with SevenExcellence

Fast and Reliable Oxygen Measurement

Optical oxygen measurement is superior to conventional technologies, including polarographic and galvanic measuring systems. Thanks to our optical dissolved oxygen sensors (OptiOx), measuring dissolved oxygen is easier and more reliable than ever.



Save time: Easy handling, zero maintenance

The principle of optical measurement requires no membranes or electrolyte solutions. A used cap can be replaced by simply removing it and fitting a new one. A new cap lasts a whole year and the device informs you in good time when the next cap change is due.



Be versatile: Suitable for an immense range of applications

Thanks to the robust design and the customized accessories, the InLab® OptiOx is a true allrounder. Thus, it's ideally equipped for use in the laboratory, e.g. in quality monitoring, or, when fitted with the OptiOx protective guard, in harsh environments.



Determine BOD: Suitable for all BOD applications

The biochemical oxygen demand (BOD) of any effluent can be readily checked with the InLab® OptiOx sensors. With the special BOD adapter, the sensors can be fitted to all current types of BOD bottles. According to the EPA (Environmental Protection Agency, USA), stirring is not necessary when using our OptiOx sensors.



Find out more about our optical DO technology OptiOx and how you can use it with your brand new SevenExcellence instrument at:

► www.mt.com/OptiOx

Specifications for SevenExcellence™ DO/BOD

Parameter		InLab® OptiOx – optical	InLab® 605-ISM – polarographic
Dissolved oxygen	Measuring range	0.000 ... 50 mg/L (ppm)	0.00 ... 99 mg/L (ppm)
	Display resolution	0.001/0.01/0.1	0.001/0.01/0.1
	Accuracy	± 0.1 mg/L from 0 ... 8 ± 0.2 mg/L from 8 ... 20 ± 10 % from 20 ... 50	± 0.5%
	Units	mg/L, ppm, %	mg/L, ppm, %
DO saturation	Measuring range / Resolution	0.0 ... 500% / 0.1	0.0 ... 600% / 0.1
Pressure	Measuring range	500 ... 1100 mbar	500 ... 1100 mbar
	Resolution / Accuracy	1 / ±1	1 / ±1
	Barometric pressure units	mbar, hPa, mmHg, Atm	mbar, hPa, mmHg, Atm
General	Calibration points	2	2
	Sensor input	Mini-LTW (IP67)	BNC
	Pressure compensation	automatic / manual	automatic / manual
Calibration	Calibration points	2	
	Calibration standards	2 pre-defined and 1 user-defined	
	Temperature capture	Automatic (internal* and external**) and manual	
	Barometric pressure capture	Automatic and manual	
	Calibration reminder	Yes: usable life for each sensor configurable	
Measurement	Choice of endpoint formats	Automatic, manual, timed	
	Choice of stability criteria	Fast, standard, strict, user-defined	
	Temperature capture	Automatic (internal and external) and manual	
	Choice of reference temperature	20 °C or 25 °C	
	Choice of temperature compensation	Linear, non-linear, off	
	Measurement type	Direct measurements and methods	
	Interval measurements	Yes: time interval, user-configurable	
	Methods	17 pre-defined and 50 user-defined	
	Series	Max. 9 samples	
System and GLP	Menu guidance	10 languages	
	Time and date	2 time formats, 4 date formats	
	Radio clock	WWVB, DCF77, JJY protocol	
	PIN protection	Yes: login (password or fingerprint reader)	
	User management	4 groups: operator, technician, expert, administrator	
	Measurement limits	Yes: user-defined	
	ID input	Yes: user ID, sample ID, sensor ID, sensor SN	
	ID input automation	Barcode reader (USB)	
Data processing	Data storage	At least 20 000 data points, 250 analyses	
	Print formats	Summary and user-defined	
	Printing	US-P25, RS232 and network printer, memory stick (pdf)	
	Data Export	USB-stick, LabX® direct PC software	
General connectors	DO Inputs – digital	Mini-LTW	
	DO Inputs – polarographic	BNC	
	Internal temperature sensor input	Integrated in digital and polarographic inputs	
	External temperature sensor input	Cinch/RCA (NTC 30 kΩ or Pt1000)	
	Communication interfaces	RS232, USB-A, USB-B, LAN	
	Stirrer connector	Mini-DIN	
General specifications	Power requirements	DC 12V–10W	
	Size/weight instrument	235 x 188 x 75 mm, 1120 g	
	Module weight	111–130 g	
	Display	TFT	
Ambient conditions	Temperature	5 ... 40 °C	
	Relative humidity	5 ... 80% (non-condensing)	
	Installation category	II	
	Pollution degree	2	
	Altitude	Up to 2000 m above sea level	
Materials	Housing instrument	ABS/PC reinforced	
	Housing expansion units	ABS/PC reinforced	
	Touch panel	Tempered glass	

* All DO sensors provided by METTLER TOLEDO have an integrated temperature probe

** The DO/BOD expansion unit has an RCA/Cinch connection to which a separate temperature sensor can be connected



Order Information

Description and order information for SevenExcellence™ DO/BOD

Order info	Description and sensors	Order no.
S900-Basic	Includes instrument, DO/BOD expansion unit, 2 blank expansion units, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, LabX® direct pH PC software, declaration of conformity and test certificate.	30092984
S900-Kit	As S900-Basic, but with InLab® OptiOx, guide to DO measurement and zero oxygen tablets.	30092986
S900-BOD	As S900-Kit, also including BOD adapter.	30092987
S600-Kit	As S900-Kit, but with InLab® 605-ISM instead of InLab® OptiOx.	30092985
Triple channel instrument with pH/mV, conductivity and DO/BOD expansion units		
S479-Kit	Includes instrument, pH/mV, conductivity and DO/BOD expansion units, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, LabX® direct pH PC software, declaration of conformity and test certificate. Kit includes the following sensors: InLab® Expert Pro-ISM, InLab® 731-ISM and InLab® OptiOx.	30092988
Triple channel instrument with pH/Ion, conductivity and DO/BOD expansion units		
S975-uMix (Kit)	Includes instrument, pH/Ion, conductivity and DO/BOD expansion units, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, LabX® direct pH PC software, declaration of conformity and test certificate. Also includes the uMix® magnetic stirrer. Kit includes the following sensors: InLab® Expert Pro-ISM, InLab® 731-ISM, and InLab® OptiOx.	30092989

Accessories for SevenExcellence™

Modules	Order no.
pH/mV expansion unit	30034472
Conductivity expansion unit	30034473
DO/BOD expansion unit	30034774
pH/Ion expansion unit	30034471
Blank expansion unit	30034475
General accessories	
uPlace™: electrode holder (included in standard delivery)	30019823
Semi-transparent cover (included in standard delivery)	30041154
Protective film for display (2 pcs)	30041155
Main adapter 12V (included in standard delivery)	11120270
uMix™ magnetic stirrer	30040000
US-P25 printer (with USB cable)	11124301
LogStraigh™ fingerprint reader	51192107
Barcode reader body	21901297
USB cable for barcode reader (not included with barcode reader body)	21901309
Rondolino sample changer, complete for SevenExcellence™	51302888
LabX® direct PC software (included in standard delivery)	51302876
USB A-B cable for LabX® direct PC software (not included with LabX® direct PC software)	51191926

Dissolved Oxygen

Digital dissolved oxygen sensors (RDO technology, includes ISM® technology)	Order no.
InLab® OptiOx, 1.8 m fixed cable, ATC	51344621
InLab® OptiOx, 5 m fixed cable, ATC	51344622
InLab® OptiOx, 10 m fixed cable, ATC	51344623
Polarographic dissolved oxygen sensors	
InLab® 605-ISM, 1.8 m fixed cable, ATC	51344611
InLab® 605-ISM, 5 m fixed cable, ATC	51344612
InLab® 605-ISM, 10 m fixed cable, ATC	51344613
Dissolved oxygen accessories	
Zero Oxygen Tablets (20 pcs); used for calibration	51300140

