

# SevenGo Duo™



## SevenGo Duo™ Portables

SevenGo Duo™

SevenGo Duo pro™

pH/ORP

Conductivity

Ion Concentration

Dissolved Oxygen

**Quick and Reliable Measurements**  
for Results at your Fingertips

**METTLER TOLEDO**

# The SevenGo Duo™ Product Range

## Composed of High-Calibre Individuals

All of the products in the SevenGo™ family from METTLER TOLEDO are characterized by user-friendliness and excellent ergonomics. The instruments are suited for mobile measurements both in the field and in the production environment.

### Routine tasks for SevenGo Duo™

The SG23 SevenGo Duo™ pH/mV/conductivity meter is best suited for routine measurements of pH or conductivity while allowing for parallel measurements in dual-channel mode. In addition, it also offers Intelligent Sensor Management (ISM®).



### Special applications for SevenGo Duo pro™

The SevenGo Duo pro™ instruments allow simultaneous determination and display of two electrochemical parameters with highest possible accuracy. They are operated using soft keys with interactive function fields on the display, thus enabling flexible and convenient menu navigation. These instruments offer extensive security functions, such as Intelligent Sensor Management (ISM®), PIN-protection, date/time and sensor/sample ID.

Overview of functions and equipment		SevenGo Duo™ model		SevenGo Duo pro™ models	
		SG23	SG68	SG78	SG98
pH/ion	Calibration points	3	5	5	5
	Predefined pH buffer groups	4	7	7	7
	User-defined pH buffer group	•	•	•	•
	Automatic pH buffer recognition	•	•	•	•
	Linear calibration mode	•	•	•	•
	Segmented calibration mode		•	•	•
	Choice of number of digits		•	•	•
	Choice of ion unit (mg/L, mmol/L, mol/L, %, ppm)		•	•	•
	Choice of stability criteria (strict, normal, fast)		•	•	•
Conductivity	Calibration points	1		1	
	Predefined conductivity standard	3		5	
	User-defined conductivity standard			•	
	Manual cell constant entry			•	
	Linear temperature compensation	•		•	
	Non-linear temperature compensation			•	
	Choice of reference temperature (20 °C, 25 °C)	•		•	
Oxygen	Calibration points		2		2
	Predefined oxygen standards		1		1
	Choice of pressure unit (mbar, hPa, Torr, Atm)		•		•
	Automatic/manual pressure compensation		•		•
Measurement	Automatic and manual end point recording	•	•	•	•
	Time-dependent end point recording		•	•	•
	Serial measurements in user-defined time interval		•	•	•
	Automatic storage of measurements		•	•	•
	Manual storage of measurements	•	•	•	•
	ATC/MTC	•	•	•	•
	Intelligent Sensor Management (ISM®)	•	•	•	•
	Time and date		•	•	•
Safety	Routine/expert mode		•	•	•
	Data storage	99	500 (GLP)	500 (GLP)	500 (GLP)
	Calibration data storage	•	•	•	•
	Calibration reminder		•	•	•
	Sensor ID		•	•	•
	Sensor SN		•	•	•
	Sample ID		•	•	•
	User ID		•	•	•
	User-defined alarm limits		•	•	•
	PIN protection		•	•	•
Security	Dual-channel measurement	•	•	•	•
	Dual-channel display		•	•	•
	Backlit display		•	•	•
	Infrared interface		•	•	•
	Softkey menu navigation		•	•	•
	Multilingual interface (10 languages)		•	•	•
	Alphanumeric entry		•	•	•
	Acoustic signal	•	•	•	•
	Extensive filter functions		•	•	•
	LabX® direct pH software (compatibility)		•	•	•
	Instrument self-test	•	•	•	•
	Watertight and dustproof (IP67)	•	•	•	•

## Standard equipment for the SevenGo Duo™ kit versions

	B Measuring instrument only	ELK Electrode kit	FK2 1.8 m field kit	FK5 5 m field kit
Measuring instrument	•	•	•	•
IP67 sensor with 1.8 m fixed cable and electrode clip		•	•	
IP67 sensor with 5 m fixed cable and electrode clip				•
IP67 sensor with 10 m fixed cable and electrode clip				
new uGo™ carrying case, 3 calibration bottles and calibration sachets (pH: 6 pcs; conductivity: 4 pcs)			•	•

Always included in the standard equipment: Wrist strap, 4 AA batteries, operating instructions, test certificate, and declaration of conformity.

# SevenGo Duo™

## Ergonomic Analysis

- **Rapid and easy routine measurements in dual-channel mode**
- **Determination of pH/mV and conductivity/salinity/TDS/specific resistance**
- **Excellent ease of operation thanks to high contrast display with large characters**
- **Reproducible results owing to automatic end point recognition**

### SevenGo Duo™ –

#### Working in the field becomes a pleasure

The SevenGo Duo™ combines ease-of-use, quality and reliable measurement functions. The instrument is designed in such a way, that a single keystroke triggers a calibration run, a measurement or allows access of stored results or system settings.

#### At a glance

The large SevenGo Duo™ display shows all relevant settings and highlights the most important items. You can read the measurement value and check the state of the electrode at a glance. The results of parallel measurements appear in alternating fashion on the display.

#### SevenGo Duo™ electrode clip

The rotatable electrode clip can be attached on the left, right or on both sides of all instruments. It allows measurements to be taken with just one hand and is a convenient, space-saving way of storing electrodes.

#### An ergonomic masterpiece

SevenGo Duo™ fits neatly into your hand, regardless of whether you are right- or left-handed. The size of the buttons reflects their importance. SevenGo Duo™ is so easy to use you can really save time.





### **Durable carrying case**

The uGo carrying case has a hermetically sealed, IP67 interior that is easy to clean and sterilize. The inner lining of the case provides instrument, sensors and accessories a secure fitting. Nothing moves, nothing gets damaged.



### **Rubber holster**

This practical cover provides optimum impact protection for the device. You can naturally still attach the electrode clip and change the batteries without needing to remove the protective rubber-elastic cover.

### **Intelligent Sensor Management (ISM®)**

ISM® provides the SevenGo Duo™ with a sophisticated new concept. It means that the user automatically works with the most up-to-date data for the sensor.

### **Reproducibility**

The most important METTLER TOLEDO functions, such as automatic end point recognition and automatic buffer recognition, are naturally also integrated into our routine devices to make operating our instruments as convenient as possible.



### **IP67 Watertight and dustproof**

The SevenGo Duo™ meets the requirements of IP67. This applies to the entire measurement system as well as to the meter itself. This means that the instrument is equipped for the most adverse usage conditions.

### **What is IP67?**

The IP (Ingress Protection) norm code consists of two digits: the 6 indicates that SevenGo Duo™ is completely dustproof. The number 7 means that SevenGo Duo™ is watertight for 30 minutes at a depth of 1 meter.

# SevenGo Duo pro™

## Comprehensive Professionalism

- Professional dual-channel instruments with GLP excellence
- Determination of pH/mV/ion or conductivity/salinity/TDS/specific resistance or dissolved oxygen
- Large, backlit display with all relevant information

### Freedom of communication thanks to infrared technology

The IR interface of the SevenGo Duo pro™ enables the wireless transmission of data to your laptop, printer and PC via an IR adapter. The IR window is hermetically welded to the housing and thus provides maximum protection against water and dust.



### GLP excellence

All measurement-relevant information (such as the time and date, alphanumeric sample, user, and sensor IDs, sensor serial numbers, and any warning messages) are stored for each measurement and can be printed on each printout.

### PC Software – LabX® direct pH

The user-friendly PC software archives your results quickly and reliably. It enables the easy transfer of data from SevenGo Duo pro™ to an open application such as MS Excel®. If required, the values can automatically be displayed graphically in the delivered MS Excel® templates.





### Expert mode

The expert decides! Make use of the entire range of functions to configure your instrument in the laboratory.



### Routine mode

You can work with the SevenGo Duo pro™ extremely quickly in this mode, since the calibration and initial settings are blocked, and settings for the measurement are fixed ready to select.

### Illumination

You can switch on the bright back-light on the SevenGo Duo pro™ when required in order to facilitate your work in poor lighting conditions. You can program the switch-off interval individually to preserve battery power. Maximize your comfort!



### Barometric pressure

The SG68 and SG98 SevenGo Duo pro™ models for dissolved oxygen measure the air pressure using an integrated barometer. The instruments automatically compensate for any deviations in the air pressure, thus increasing the reproducibility of dissolved oxygen measurements accordingly.



### Security has priority

Your security is in good hands with SevenGo Duo pro™. These instruments have fantastic security features that are rarely found on other instruments:

### Calibration reminder

This useful function reminds you that a calibration is due after a user-defined time interval. In addition, it is possible to block the SevenGo Duo pro™ from taking measurements once this period has expired until the due calibration has taken place.

### Electrode condition

A self-explanatory symbol on the display tells you the current state of the electrode.

### GLP support

On the SevenGo Duo pro™, the date/time and sensor and sample IDs are recorded for each measurement. You can also enter a user ID and sensor serial number.

# SevenGo Duo pro™

## the Best Among its Class

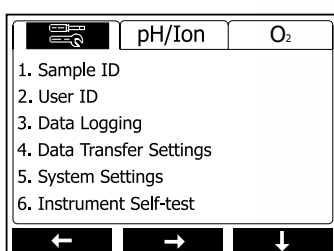
- Intuitive, user-friendly operation thanks to 10-language menu
- Extra reliability due to comprehensive support for intelligent sensors (ISM®)
- Supports latest sensor technology including optical dissolved oxygen

### SevenGo Duo pro™ – An extensive functional package

The SG68, SG78 and SG98 SevenGo Duo pro™ instruments are easy to use, offer the highest possible accuracy and provide great functions and security features not found in other portable instruments. In addition to the many security features the SevenGo Duo pro™ instruments also have ISM®. This ensures that the correct and most up-to-date calibration of the connected sensor is always used for the measurement.

### No more confusion

The user interface displays menu and system settings as well as all error messages and warnings in complete words and sentences. You even have a choice of 10 languages.



### Menu navigation with softkeys

You use softkeys and interactive function fields on the display to operate the SevenGo Duo pro™. The configuration and data management functions are therefore as flexible and convenient as possible.





## Convenience and security with SevenGo Duo pro™ (SG78, SG68, SG98)

SevenGo Duo pro™ offers a range of great security features:

### ISM® Intelligent Sensor Management

A sophisticated safety concept that leaves nothing to chance. The instrument automatically detects the connected sensor and uses the most up-to-date calibration data stored on the sensor chip. For more information on this revolutionary security function, see below.

### PIN protection

The instrument offers separate PIN protection functions for operating the device, for accessing general system settings such as the date and time and for the deletion of data records.

### Monitoring limit values

You can define your own limit values. If the actual values fall below or exceed the limit values, a warning appears on the display and on the GLP printout.

### Acoustic signal

You can also activate an acoustic signal to announce the appearance of warnings on the display, the pressing of a button and that a stable end-point has been reached.

**The OptiOx™ optical measuring system for determining dissolved oxygen is based on the reliable RDO® technology. Thanks to RDO (Rugged Dissolved Oxygen), measuring dissolved oxygen is easier than ever before:**

- **Stable results and rapid response time** – Optical oxygen measurement is superior to conventional technologies. OptiOx is fast, precise and produces highly reproducible results. Because of the optical measuring principle used, the oxygen is not chemically consumed during the measurement, which makes stirring the sample superfluous.
- **Immediately ready for use** – The InLab® OptiOx requires no polarisation time, meaning you can start your measurement immediately. In addition the whole measuring system has a high level of stability making calibration rarely necessary.
- **Extremely easy handling, zero maintenance: save time!** – 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.
- **Suitable for an immensely wide 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.



- **Biochemical oxygen demand (BOD)** – The BOD content of any effluent can be checked very easily, making measurements both quick and economic. With the special BOD adapter, the sensor is suitable for measuring in all current types of BOD bottles. According to the EPA (Environmental Protection Agency, USA), stirring is not necessary thanks to RDO technology.

### SevenGo Duo™ – SG23 pH/conductivity meter (IP67) for routine use

- Dual-channel instrument for determining pH, mV, conductivity, TDS (Total Dissolved Solids), salinity, and specific resistance
- 3-point pH calibration with pre-defined or user-defined buffers
- Intelligent Sensor Management (ISM®)
- Data storage for 99 GLP data records

SevenGo™ SG23	Measuring range	Resolution	Accuracy
pH	0.00 to 14.00	0.01	±0.01
mV	-1999 to 1999	1	±1
Temperature pH	-5.0 to 105 °C	0.1 °C	±0.5 °C
Conductivity	0.01 µS/cm to 500 mS/cm	0.01 to 1	±0.01%
Temperature cond.	-5.0 to 105 °C	0.1 °C	±0.2 °C
TDS	0.01 mg/L to 300 g/L	0.01 to 1	±0.5 °C
Spec. resistance	0.00 to 100.0 MΩcm	0.01 to 0.1	±0.5 °C
Salinity	0.00 to 80.0 ppt	0.01 to 0.1	±0.5 °C
pH sensor inputs	BNC; RCA/cinch (both IP67)		
Conductivity sensor input	LTW 7-pin (IP67)		
Outputs	–		
Power supply	4 1.5 V AA batteries or 1.3 V NiMH accumulators		
Operating conditions	0 to 40 °C, 5 to 85% rel. humidity (non-cond.)		
Size/weight	220 x 90 x 45 mm/357 g (without batteries)		

Order info	Description and sensors	Order No.
SG23-B	Instrument only	51302600
SG23-ELK	Electrode kit with InLab® Expert Pro-ISM and InLab®738-ISM (both IP67, 1.8 m cable)	51302601
SG23-FK2	Field kit with InLab® Expert Pro-ISM, InLab®738-ISM (both IP67, 2 m cable) and uGo™	51302602
SG23-FK5	Field kit with InLab® Expert Pro-ISM, InLab®738-ISM (both IP67, 5 m cable) and uGo™	51302603

### SevenGo Duo pro™ – SG78 pH/ion/conductivity meter (IP67) to meet the highest requirements

- Dual-channel instrument for the determination of pH, mV, rel. mV, ion concentration, conductivity TDS (Total Dissolved Solids), salinity, and specific resistance
- 5-point pH calibration with a choice of 7 predefined and one user-defined buffer group
- Data storage for 500 GLP data records with time/date, sensor ID and SN, and user and sample IDs
- Contact-free IR communication
- Intelligent Sensor Management (ISM®)

SevenGo Duo pro™ SG68	Measuring range	Resolution	Accuracy
pH	-2.000 to 19.999	0.001	±0.002
mV (rel. mV)	-1999 to 1999	0.1	±0.1
Ions			
Conductivity	0.01 µS/cm to 1000 mS/cm	0.01	±0.5%
TDS	0.01 mg/L to 600 g/L	0.01 to 1	±0.5%
Specific resistance	0.00 to 100.00 MΩcm		
Salinity	0.00 to 80.00 ppt		
Temperature	-5.0 to 130.0 °C (ATC) -30.0 to 130.0 °C (MTC)	0.1 °C	±0.2 °C
pH sensor inputs	BNC; RCA/cinch (both IP67)		
Conductivity sensor input	LTW 7-pin (IP67)		
Outputs	IR to printer or PC via RS232 or USB		
Power supply	4 1.5 V AA batteries or 1.3 V NiMH accumulators		
Operating conditions	0 to 40 °C, 5 to 85% rel. humidity (non-cond.)		
Size/weight	220 x 90 x 45 mm/325 g (without batteries)		

Order info	Description and sensors	Order No.
SG78-B	Instrument only	51302620
SG78-ELK	Electrode kit with InLab® Expert Pro-ISM and InLab®738-ISM (both IP67, 1.8 m cable)	51302621
SG78-FK2	Field kit with InLab® Expert Pro-ISM, InLab®738-ISM (both IP67, 1.8m cable) and uGo™	51302622
SG78-FK5	Field kit with InLab® Expert Pro-ISM, InLab®738-ISM (both IP67, 5 m cable) and uGo™	51302623
SG78-USP/EP	Like SG78-ELK but with different sensors: Inlab® Pure Pro-ISM, 2m ISM-electrode cable and Inlab® 742-ISM	51302625

## SevenGo Duo pro™ – SG68

### pH/ion/oxygen meter (IP67)

#### to meet the highest requirements

- Dual-channel instrument for the determination of pH, mV, rel. mV, ion concentration, and dissolved oxygen
- 5-point pH calibration with a choice of 7 predefined and one user-defined buffer set
- Data storage for 500 GLP data records with time/date, sensor ID and SN, and user and sample IDs
- Contact-free IR communication
- Intelligent Sensor Management (ISM®)

SevenGo Duo pro™ SG68	Measuring range	Resolution	Accuracy
pH	-2.000 to 19.999	0.001	±0.002
mV (rel. mV)	-1999 to 1999	0.1	±0.1
Ions (units) mg/L, mmol/L, mol/L	0.000 to 999.9% 0.000 to 9999 ppm 1.00E <sup>-9</sup> to 9.99E <sup>-9</sup>		±0.5%
Temperature	-5.0 to 130.0 °C (ATC) -30.0 to 130.0 °C (MTC)	0.1 °C	±0.2 °C
Saturation	0.0 to 600%	0.1 to 1	±0.5%
Temperature	0.0 to 60.0 °C	0.1 °C	±0.1 °C
Oxygen (mg/L, ppm)	0.00 to 99.00	0.01	±0.5% max. 0.03
Pressure	500 to 1100 mbar	1	±1
pH sensor inputs	BNC; RCA/cinch (both IP67)		
DO sensor inputs	BNC; RCA/cinch (both IP67)		
Outputs	IR to printer or PC via RS232 or USB		
Power supply	4 1.5 V AA batteries or 1.3 V NiMH accumulators		
Operating conditions	0 to 40 °C, 5 to 85% rel. humidity (non-cond.)		
Size/weight	220 x 90 x 45 mm/368 g (without batteries)		

Order info	Description and sensors	Order No.
SG68-B	Instrument only	51302610
SG68-ELK	Electrode kit with InLab® Expert Pro-ISM and InLab®605-ISM (both IP67, 1.8m cable)	51302611
SG68-FK2	Field kit with InLab® Expert Pro-ISM, InLab®605-ISM (both IP67, 1.8m cable) and uGo™	51302612
SG68-FK5	Field kit with InLab® Expert Pro-ISM, InLab®605-ISM (both IP67, 5 m cable) and uGo™	51302613

## SevenGo Duo pro™ – SG98

### pH/ion/RDO meter (IP67)

#### to meet the highest requirements

- Dual-channel instrument for the determination of pH, mV, rel. mV, ion concentration, dissolved oxygen based on RDO technology
- 5-point pH calibration with a choice of 7 predefined and one user-defined buffer group
- Data storage for 500 GLP data records with time/date, sensor ID and SN, and user and sample IDs
- Contact-free IR communication
- Intelligent Sensor Management (ISM®)

SevenGo Duo pro™ SG98 DO	Measuring range	Resolution	Accuracy
pH	-2.000...19.999	0.001	± 0.002
mV (rel. mV)	-1999...1999	0.1	± 0.1
Ions (mg/L, mmol/L, mol/L)	0.000...999.9% 0.000...9999 ppm 1.00E <sup>-9</sup> ...9.99E <sup>-9</sup>		± 0.5%
Temperature pH	-5.0...130.0 °C (ATC) -30.0...130.0 °C (MTC)	0.1	± 0.2 °C
pH sensor inputs	BNC; RCA/cinch (both IP67)		
	<b>Measuring range</b>	<b>Resolution</b>	<b>Accuracy</b>
Oxygen (mg/L, ppm)	0.00...50.00	0.01	± 0.1 mg/L from 0...8 ± 0.2 mg/L from 8...20 ± 10% from 20...50
Saturation	0...500 %	0.1 %	
Temperature DO	0...50.0 °C	0.1 °C	± 0.1 °C
Pressure (mbar)	500...1100	1	± 1
DO Sensor input	Mini-LTW (IP67)		
Outputs	IR to printer or PC via RS232 or USB		
Power supply	4 1.5 V AA batteries or 1.3 V NiMH accumulators		
Operating conditions	0 to 40 °C, 5 to 85% rel. humidity (non-cond.)		
Size/weight	220 x 90 x 45 mm/368 g (without batteries)		

Order info	Description and sensors	Order No.
SG98-B	Instrument only	51302661
SG98-ELK	Electrode kit with InLab® Expert Pro-ISM and InLab® OptiOx (both IP67, 1.8 m cable)	51302662
SG98-FK2	Field kit* with InLab® Expert Pro-ISM, InLab® OptiOx (both IP67, 1.8 m cable) and uGo™	51302663
SG98-FK5	Field kit* with InLab® Expert Pro-ISM-5m, InLab® OptiOx-5m (both IP67, 5 m cable) and uGo™	51302664

\* More detailed information about the field kit on previous pages

# SevenGo Duo™ Sensors

## the right Sensor for each Application

- Robust IP67 sensors for pH, conductivity and oxygen applications
- Peace of mind thanks to Intelligent Sensor Management (ISM®)
- Integrated temperature sensor for automatic temperature compensation (ATC)
- Easy to clean, low-maintenance, long lifetime

### Four tried and tested sensors

The SevenGo Duo™ instruments in their kit versions are fitted with high-performance electrodes. All sensors combine robustness with state-of-the-art measurement technology and they have been tried and tested in numerous applications.



InLab®		pH	Conductivity		Dissolved oxygen	
		Expert Pro-ISM-IP67	738-ISM	742-ISM	605-ISM	OptiOx
Order number	1.8 m cable	51344102	51344110	51344116	51344611	51344621
	5 m cable	51344103	51344112	51344118	51344612	51344622
	10 m cable	51344104	51344114		51344613	51344623
Measuring range		pH 0 to 14	0.01 to 1000 mS/cm	0.001 to 500 µS/cm	0 to 600%, 0 to 60 mg/L	0 to 500%, 0 to 50 mg/L
Temperature range		0 to 100 °C	0 to 100 °C	0 to 100 °C	0 to 60 °C	0 to 50 °C
Temperature probe		NTC 30 kΩ	NTC 30 kΩ	NTC 30 kΩ	NTC 22 kΩ	NTC 30 kΩ
Type of membrane		U glass				Luminophore
Membrane resistance (25 °C)		<250 MΩ				
Membrane type/ cell type		Open connection	4-pin graphite	2-pin steel		
Reference system/ electrolyte		ARGENTHAL™/ XEROLYT® polymer				
Nominal cell constant			0.57 cm <sup>-1</sup>	0.105 cm <sup>-1</sup>		
Shaft material		PEEK	Epoxy	V4A steel	PPS	PC/ABS
Shaft length		120 mm	120 mm	120 mm	120 mm	65 mm
Shaft diameter		12 mm	12 mm	12 mm	12 mm	16 mm
Storage		FRISCOLYT-B®	Dry	Dry	Dry	Dry
IP67		Yes	Yes	Yes	Yes	Yes
Connections		Fixed cable: BNC/RCA (cinch)	Fixed cable: LTW	Fixed cable: LTW	Fixed cable: BNC/RCA (cinch)	Fixed cable: mini LTW

## High-quality Sensors with Excellent Properties

### InLab® 742 pure water conductivity sensor

- Robust 2-pin steel cell for low conductivity values
- Precise measurements down to 0.001  $\mu\text{S}/\text{cm}$
- Maximum linearity

### InLab® 738 normal conductivity sensor

- Conductivity cell for medium and high conductivity values
- Minimal sample carryover
- 4-pin graphite cell with maximal linearity

### InLab® OptiOx optical oxygen sensor

- Optical oxygen sensor based on RDO technology
- No membranes or electrolyte solutions required
- Stable results and rapid response

### InLab® 605 polarographic oxygen sensor

- Oxygen sensor based on precise process analytics
- Replaceable DO membrane
- Robust, chemical-resistant PPS shaft

### Other great sensors with and without ISM®

METTLER TOLEDO supplies pH electrodes for all possible applications. The most important electrodes are also available with ISM®. Naturally, all other InLab® sensors in our diverse range can also be connected to SevenGo Duo™ instruments. The complete METTLER TOLEDO portfolio is documented in a separate brochure with the order number 51724332.



InLab®	Science Pro	Routine Pro	Power Pro	Pure Pro	Solids Pro	Micro Pro
Order number with ISM	51344072	51344055	51344211	51344172	51344155	51344163
Order number without ISM	51343071	51343054	51343111	51343171	51343154	51343162
pH range	0 to 12	0 to 14	0 to 12	1 to 11	1 to 11	0 to 14
Temperature range	0 to 100 °C	0 to 100 °C	0 to 100 °C	0 to 80 °C	0 to 80 °C	0 to 100 °C
Temperature probe	NTC 30 k $\Omega$	NTC 30 k $\Omega$	NTC 30 k $\Omega$	NTC 30 k $\Omega$	NTC 30 k $\Omega$	NTC 30 k $\Omega$
Type of membrane glass	A41	HA	A41	LoT	LoT	U
Membrane resistance (25 °C)	<600 M $\Omega\text{cm}$	<600 M $\Omega\text{cm}$	<600 M $\Omega\text{cm}$	<50 M $\Omega\text{cm}$	<250 M $\Omega\text{cm}$	<300 M $\Omega\text{cm}$
Diaphragm type	Movable, ground glass	Ceramic	Ceramic	Fixed, ground glass	Open connection	Ceramic
Reference system	ARGENTHAL™ with Ag <sup>+</sup> trap	ARGENTHAL™ with Ag <sup>+</sup> trap	SteadyForce™	ARGENTHAL™ with Ag <sup>+</sup> trap	ARGENTHAL™	ARGENTHAL™ with Ag <sup>+</sup> trap
Reference electrolyte	3 mol/L KCl	3 mol/L KCl	DPA gel	3 mol/L KCl	XEROLYT®PLUS polymer	3 mol/L KCl
Shaft material	Glass	Glass	Glass	Glass	Glass	Glass
Shaft length	170 mm	120 mm	170 mm	170 mm	25 mm	130 mm
Shaft diameter	12 mm	12 mm	12 mm	12 mm	6 mm	12 mm
Storage	3 mol/L KCl	3 mol/L KCl	3 mol/L KCl	3 mol/L KCl	FRISCOLYT-B®	3 mol/L KCl
IP67	No	No	No	No	No	No
Electrode cables	With ISM®, 51344291 (2 m) or 51344292 (5 m) electrode cables must be used; without ISM®, 52300009 (1.2 m) or 51340290 (2.5 m) electrode cables must be used.					

# Accessories and Service

## the Finishing Touches

### SevenGo Duo™ and SevenGo Duo pro™

Boast the strength of your instruments. By selecting accessories from the list below you can have a tailor made solution for your most frequent applications.

### Buffers and standards

Solutions	Order No.
VPac™ pH Verifications Kit, 2x100 mL	30090849
pH 2.00 buffer solution in sachet, 30 x 20 mL	30111134
pH 4.01 buffer solution in sachet, 30 x 20 mL	51302069
pH 7.00 buffer solution in sachet, 30 x 20 mL	51302047
pH 9.21 buffer solution in sachet, 30 x 20 mL	51302070
pH 10.01 buffer solution in sachet, 30 x 20 mL	51302079
pH 11.00 buffer solution in sachet, 30 x 20 mL	30111135
Rainbow I (3 x 10 sachets of 20 mL, 4.01/7.00/9.21)	51302068
Rainbow II (3 x 10 sachets of 20 mL, 4.01/7.00/10.01)	51302080
pH 2.00 buffer solution, colorless, 6 x 250 mL	51319010
pH 4.01 buffer solution, red, 6 x 250 mL	51340058
pH 7.00 buffer solution, green, 6 x 250 mL	51340060
pH 9.21 buffer solution, blue, 6 x 250 mL	51300194
pH 10.01 buffer solution, colorless, 6 x 250 mL	51340231
pH 11.00 buffer solution, colorless, 6 x 250 mL	51319018
1413 µS/cm conductivity standard solution in sachet, 30 x 20 mL	51302049
12.88 mS/cm conductivity standard solution in sachet, 30 x 20 mL	51302050
10 µS/cm standard conductivity solution, 250 mL	51300169
84 µS/cm standard conductivity solution, 250 mL	51302153
500 µS/cm standard conductivity solution, 250 mL	51300170
1413 µS/cm standard conductivity solution, 250 mL	51300138
12.88 mS/cm standard conductivity solution, 250 mL	51300139

General accessories	Order no.
Plastic sample bottle (50 mL)	51300240
Guide to pH measurement	51300047
Guide to conductivity measurement	30099121
Guide to conductivity and dissolved oxygen	51324716
Guide to ion-selective measurements	51300075
RS-P26 printer	11124303
RS-P28 printer	11124304



### Accessories for SevenGo™

Accessories for SevenGo™	Order no.
<b>Communication (for models SG68, SG78, SG98)</b>	
Infrared USB adapter	51302332
Infrared RS232 adapter	51302333
LabX® direct pH PC software	51302876
<b>OptiOx™ accessories</b>	
OptiOx™ replacement cap	51344630
OptiOx™ calibration tub	51344631
OptiOx™ protective guard	51344632
OptiOx™ BOD adapter	51344633
<b>Other accessories</b>	
SevenGo™ clip	51302325
SevenGo™ 2-electrode clip	51302319
SevenGo™ rubber holster	51302322
Wrist strap	51302331
Neck strap	51302321
SevenGo™ cap (blue)	51302324
Rubber pads (2)	51302335
Clip cover	51302327
Battery lid	51302328
SevenGo™ sealing kit	51302336
Field electrode arm	51302334
New uGo Case	30122300

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