

# Lab Meters



## SevenGo™ Portable Instruments

SevenGo™ / SevenGo Duo™

SevenGo pro™

SevenGo Duo pro™

pH/ORP/Redox

Conductivity

Ion Concentration

Dissolved Oxygen



## Quick and Reliable Measurements

For Results at your Fingertips

**METTLER TOLEDO**

# Pure flexibility

## Simple and accurate measurements

- Portable instruments for pH, conductivity, ion and dissolved oxygen determination
- Robust, watertight single- and dual-channel instruments for use in demanding conditions
- Efficiency thanks to unique ergonomics and extremely simple operation
- Comprehensive range of equipment qualification services including IQ/OQ/PQ

### SevenGo™ – For quick and reliable measurements

- Single-channel instrument for routine use
- pH/mV or conductivity measurements
- Data storage for 30 GLP records
- Excellent price/performance ratio



### SevenGo Duo™ – Reliable measurements with ISM®

- Dual-channel instrument for routine use
- Parallel pH/mV and conductivity measurements
- Data storage for 99 GLP data records
- Includes Intelligent Sensor Management (ISM®)



### SevenGo pro™ – For precise measurements

- Professional, single-channel instrument for high measurement accuracy
- Determination of pH/mV/ions, conductivity or dissolved oxygen
- Data storage for 200 GLP data records
- Contact-free infrared communication



### SevenGo Duo pro™ – Unlimited measurement possibilities with ISM®

- Dual-channel instrument to meet the highest requirements
- Parallel determination of pH/mV/ion combined with conductivity or dissolved oxygen
- Modern data management with 500 GLP data records and contact-free infrared communication
- Revolutionary Intelligent Sensor Management (ISM®)



## 7 good reasons for the SevenGo™ series

- Easy and intuitive operation
- High measurement accuracy
- Large, easy-to-read display screen
- Ergonomically designed, watertight and robust
- Comprehensive range of practical accessories
- Modern GLP data management
- Revolutionary Intelligent Sensor Management (ISM®)



# The SevenGo™ 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™ and SevenGo Duo™

The two single-channel instruments, SG2 SevenGo™ pH and SG3 SevenGo™ conductivity have all the basic functions required for performing routine measurements and they constitute an economical alternative to the SevenGo pro™ instruments. The SG23 SevenGo Duo™ pH/mV/conductivity meter is best suited for parallel routine measurements in dual-channel mode. In addition, it also offers Intelligent Sensor Management (ISM®).



### Special applications for SevenGo pro™

The SevenGo pro™ pH/mV/ion (SG8), conductivity (SG7) and dissolved oxygen (SG6) instruments are ideal for taking measurements that need to be highly accurate. They are operated using softkeys with interactive function fields on the display, thus enabling flexible and convenient menu navigation. Important GLP characteristics, such as date/time and sensor/sample IDs, are stored for each measurement and – if required – appear on all printouts.

## Comparison of functions within the SevenGo™ family

		SevenGo™			SevenGo pro™				
		SG2	SG3	SG23	SG6	SG7	SG8	SG68	SG78
<b>pH</b>	Measuring range	0.00 to 14.00		0.00 to 14.00	-	-	-2.000 to 20.000		
	Accuracy	+/-0.01		+/-0.01	-	-	+/-0.002		
<b>Conductivity</b>	Measuring range	-	0.1 µS/cm to 500 mS/cm	0.1 µS/cm to 500 mS/cm	-	0.01 µS/cm to 1000 mS/cm	-	-	0.01 µS/cm to 1000 mS/cm
	Accuracy	-	+/-0.5%	+/-0.5%	-	+/-0.5%	-	-	+/-0.5%
<b>Ion</b>	Measuring range	-		-	-	-	-1.00E <sup>-9</sup> to 9.99E <sup>-9</sup>		
	Accuracy	-		-	-	-	+/-0.5%		
<b>Oxygen</b>	Measuring range	-	-	-	0.0 to 600%	-	-	0.0 to 600%	-
	Accuracy	-	-	-	+/-0.5%	-	-	+/-0.5%	-
<b>Dual-channel measurement</b>		-	-	•	-	-	-	•	•

For a table with more information and the complete range of functions, see page 12; for the complete specifications, see pages 13 – 16.



### Reliability and flexibility with SevenGo Duo pro™

The SG78 and SG68 SevenGo Duo pro™ instruments allow simultaneous determination and display of two electrochemical parameters with highest possible accuracy. They have the same comprehensive GLP functions as their SevenGo pro™ counterparts. In addition, the SevenGo Duo pro™ instruments have extra security functions, such as Intelligent Sensor Management (ISM®), PIN-protected device logon and PIN-protected system settings.

## Standard equipment for the SevenGo™ kit versions

	<b>B</b> Measuring instrument only	<b>ELK</b> Electrode kit	<b>FK2</b> 1.8 m field kit	<b>FK5</b> 5 m field kit	<b>FK10</b> 10 m field kit	<b>ASK</b> Assistant kit
Measuring instrument	•	•	•	•	•	•
IP67 sensor with 1.8 m fixed cable and clip		•	•			•
IP67 sensor with 5 m fixed cable and clip				•		
IP67 sensor with 10 m fixed cable and clip					•	
Field Compact Case, 4 calibration bottles and calibration sachets (pH: 6 pcs; conductivity: 4 pcs)			•	•	•	
Compact Case, 4 calibration bottles and calibration sachets (pH: 6 pcs; conductivity: 4 pcs)						•
ErGo™ (field assistant)						•

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

# SevenGo™ and SevenGo Duo™

## Ergonomic analysis

- **Rapid and easy routine measurements in single- or dual-channel mode**
- **Determination of pH/mV and or 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™ and SevenGo Duo™ –

#### Working in the field becomes a pleasure

SevenGo™ and SevenGo Duo™ combine ease-of-use, quality, and reliable measurement functions. The instruments are designed in such 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™ 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. On the SevenGo Duo™, the results of parallel measurements appear in alternating fashion on the display.

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





Field Compact Case

### Transport protection and workplace

The SevenGo™ cases for the field kit (FK) and assistant kit (ASK) provide lots of space for all important accessories such as cables and electrodes. Choose the case that suits your requirements.



Compact Case

**Field Compact Case (FK):** This case provides space for two electrodes with up to 10 m cable length.

**Compact Case (ASK):** This case provides safe storage for all required tools including the Ergo™.



### 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™ family meets the requirements of IP67. This applies to the entire measurement system as well as to the meters themselves. This means that the instruments are 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™ is completely dustproof. The number 7 means that SevenGo™ is watertight for 30 minutes at a depth of 1 meter.

# SevenGo pro™

## The small difference

- Professional single-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
- Intuitive, user-friendly operation thanks to flexible softkeys

### SevenGo pro™ – Comprehensive professionalism

SevenGo pro™ instruments are most suitable for users who rely on highest possible accuracy and reliability when taking single-channel measurements. All of the excellent functions in the single-channel meters are naturally also offered by the professional two-channel SevenGo Duo pro™ instruments (see page 10).

### Freedom of communication thanks to infrared technology

The IR interface of the SevenGo pro™ and 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.



### Menu navigation with softkeys

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





### 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 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 pro™ and 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!



### Security has priority

Your security is in good hands with the SevenGo pro™ (SG6, SG7, SG8) and SevenGo Duo pro™ (SG78, SG68). These instruments have fantastic security features that are rarely found on other instruments:



### Barometric pressure

The SG6 SevenGo pro™ and SG68 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.

### Routine and expert mode

There are two operating modes: A routine mode and a PIN-protected expert mode. Functions that are not needed for routine measurements are blocked in the routine mode. This turns the instrument into a simple piece of working equipment and prevents instrument settings from being accidentally changed.

### 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 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 when using the SevenGo Duo pro™.

# SevenGo Duo pro™

## The best among its class

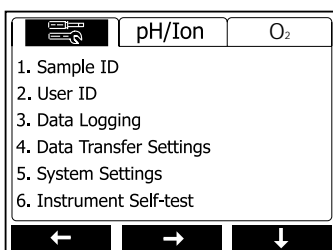
- Professional measurements in both single- and dual-channel operation
- Determination of pH/mV/ion combined with conductivity/TDS/salinity/specific resistance and dissolved oxygen
- Intuitive, user-friendly operation thanks to 10-language menu
- Extra reliability due to comprehensive support for intelligent sensors (ISM®)

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

The SG68 and SG78 SevenGo Duo pro™ instruments are easy to use, offer the highest possible accuracy and provide great functions and security features not found with other portable instruments. In addition to the security features for the SevenGo pro™ family, 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.



### 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.



### Even more convenience and security with SevenGo Duo pro™ (SG78, SG68)

SevenGo Duo pro™ offers a range of great extra security features in addition to those provided by SevenGo Pro™:

#### ISM®

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.

#### Intelligent Sensor Management (ISM®)

**Current calibration:** Following the connection of the ISM® sensor, the calibration data of the sensor is transferred to the SevenGo Duo™ or SevenGo Duo pro™ and is used automatically for the subsequent measurement (SG23, SG68, SG78).

**Storage of Calibration Data:** After calibrating an ISM® sensor, the calibration data is automatically transferred from the SevenGo Duo™ or SevenGo Duo pro™ to the sensor and is stored on the data chip of the sensor (SG23, SG68, SG78).

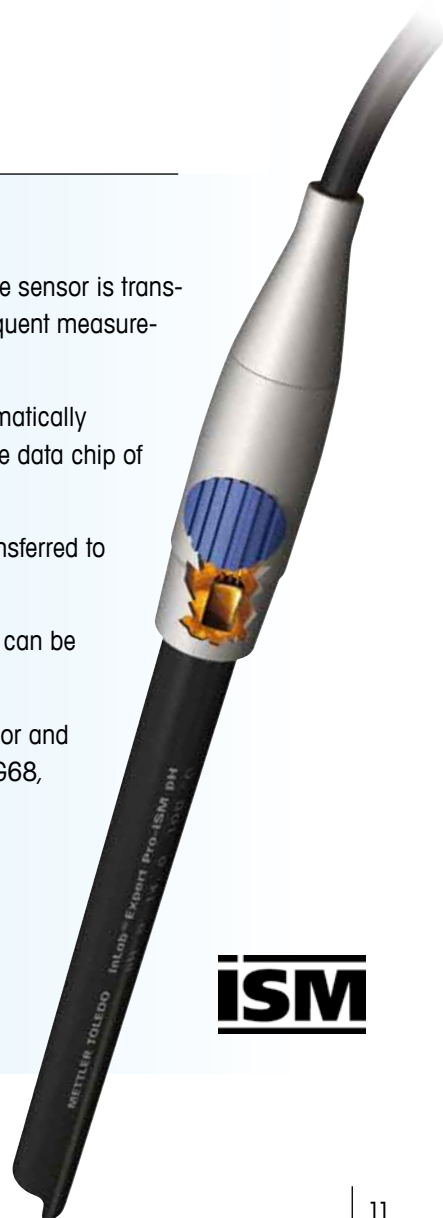
**Sensor ID:** Following the connection of the ISM® sensor, the sensor ID is automatically transferred to the SevenGo Duo pro™ and appears on the display (SG68, SG78).

**Factory calibration:** The electrode certificate with the factory calibration of an ISM® sensor can be viewed in the SevenGo Duo pro™ and transferred to a printer or PC (SG68, SG78).

**5 calibration data records:** The last 5 calibration data records are stored in the ISM® sensor and can be viewed at any time in the SevenGo Duo pro™, printed out or transferred to a PC (SG68, SG78).

**Temperature:** The maximum temperature to which an ISM® sensor is exposed during a measurement is automatically monitored and can be viewed in the SevenGo Duo pro™ at any time (SG68, SG78).

**DO membrane:** When you replace a DO membrane you can use the SevenGo Duo pro™ to store the date of replacement in the ISM® DO sensor and call up this date later on (SG68).



# SevenGo™ in 8 models

## Numerous functions and specifications

Overview of functions and equipment		SevenGo™ models			SevenGo pro™ models				
		SG2	SG3	SG23	SG6	SG7	SG8	SG68	SG78
pH/ion	Calibration points	3		3			5	5	5
	Predefined pH buffer groups	4		4			6	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		1			1
	Predefined conductivity standard		3	3		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	•	•	•	•	•	•	•	•
Safety	Intelligent Sensor Management (ISM®)			•				•	•
	Time and date				•	•	•	•	
	Routine/expert mode				•	•	•	•	•
	GLP data storage	30	30	99	200	200	200	500	500
	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)		•	•	•	•	•	•	•	•

## SevenGo™ pH – SG2

### pH Meter (IP67) routine use

- Single-channel instrument for pH or mV measurements
- Automatic end point and buffer recognition and temperature compensation
- 3-point calibration with predefined or user-defined buffers
- Data storage for 30 GLP data records

SevenGo™ SG2	Measuring range	Resolution	Accuracy
pH	0.00 to 14.00	0.01	±0.01
mV	-1999 to 1999	1	±1
Temperature	-5.0 to 105 °C	0.1 °C	±0.5 °C
Sensor inputs	BNC (10 <sup>12</sup> Ω); NTC 30 KΩ (both 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/325 g (without batteries)		

Order info	Description and sensors	Order No.
SG2-B	Instrument only	51302521
SG2-ELK	Electrode kit with InLab®413 SG (IP67, 1.8 m cable)	51302522
SG2-FK	Field kit with InLab®413 SG (IP67, 1.8 m cable)	51302523
SG2-ASK	Assistant kit with InLab®413 SG (IP67, 1.8 m cable)	51302525

## SevenGo™ – SG3

### Conductivity meter (IP67) for every-day use

- Single-channel instrument for measuring conductivity, TDS (Total Dissolved Solids), salinity, and specific resistance
- Predefined conductivity standards: 84 µS/cm, 1413 µS/cm or 12.88 mS/cm
- Linear temperature compensation
- Data storage for 30 GLP data records

SevenGo™ SG3	Measuring range	Resolution	Accuracy
Conductivity	0.01 µS/cm to 500 mS/cm	0.01 to 1	±0.5%
Temperature	-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%
Spec. resistance	0.00 to 100.0 MΩcm	0.01 to 0.1	±0.5%
Salinity	0.00 to 80.0 ppt	0.01 to 0.1	±0.5%
Sensor inputs	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/325 g (without batteries)		

Order info	Description and sensors	Order No.
SG3-ELK	Electrode kit with InLab®738 (IP67, 1.8 m cable)	51302531
SG3-FK2	Field kit with InLab®738 (IP67, 1.8 m cable)	51302532
SG3-FK10	Field kit with InLab®738 (IP67, 10 m cable)	51302533
SG3-ASK	Assistant kit with InLab®738 (IP67, 1.8 m cable)	51302534

## 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 predefined or user-defined buffers
- Intelligent Sensor Management (ISM®)
- Data storage for 99 GLP data records

For specifications, see SG2 and SG3 (exception: Weight: 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 and InLab®738-ISM (both IP67, 2 m cable)	51302602
SG23-FK5	Field kit with InLab® Expert Pro-ISM and InLab®738-ISM (both IP67, 5 m cable)	51302603

**SevenGo pro™ – SG6****Professional dissolved oxygen instrument (IP67)**

- Portable single-channel instrument for measuring dissolved oxygen
- Manual or automatic air pressure compensation using an integrated barometer
- High-performance DO sensor
- Data storage for 200 GLP data records with time/date, sensor ID, and sample ID
- Contact-free IR communication

SevenGo pro™ SG6	Measuring range	Resolution	Accuracy
Saturation	0.0 to 600%	0.1 to 1	±0.5%
Temperature	0.0 to 60.0 °C	0.1 °C	±0.1 °C
mg/L, ppm	0.00 to 99.00	0.01	±0.5% max. 0.03
Pressure	500 to 1100 mbar	1	±1
Sensor inputs	BNC (>10 <sup>12</sup> Ω); NTC 22 KΩ (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/325 g (without batteries)		

Order info	Description and sensors	Order No.
SG6-ELK	Electrode kit with InLab®605 (IP67, 1.8m cable)	51302561
SG6-FK2	Field kit with InLab®605 (IP67, 1.8m cable)	51302562
SG6-FK10	Field kit with InLab®605 (IP67, 10m cable)	51302563
SG6-ASK	Assistant kit with InLab®605 (IP67, 1.8m cable)	51302564

**SevenGo pro™ – SG7****Professional conductivity meter (IP67)**

- Single-channel instrument for measuring conductivity, TDS (Total Dissolved Solids), salinity, and specific resistance
- Linear and non-linear temperature compensation
- Measurement of ultra-pure water as per USP/EP
- Data storage for 200 GLP data records with time/date, sensor ID, and sample ID
- Contact-free IR communication

SevenGo pro™ SG7	Measuring range	Resolution	Accuracy
Conductivity	0.01 µS/cm to 1000 mS/cm	0.01	±0.5%
Temperature	-5.0 to 105.0 °C	0.1 °C	±0.1 °C
TDS	0.01 mg/L to 600 g/L	0.01 to 1	±0.5%
Specific resistance	0.00 to 100.00 MΩcm	0.01 to 0.1	±0.5%
Salinity	0.00 to 80.00 ppt	0.01 to 0.1	±0.5%
Sensor inputs	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.
SG7-ELK	Electrode kit with InLab®738 (IP67, 1.8m cable)	51302571
SG7-FK2	Field kit with InLab®738 (IP67, 1.8m cable)	51302572
SG7-FK10	Field kit with InLab®738 (IP67, 10m cable)	51302573
SG7-ASK	Assistant kit with InLab®738 (IP67, 1.8m cable)	51302574
SG7-USP/EP	Like SG7-ELK, but with InLab®742 instead of InLab®738	51302575

**SevenGo pro™ – SG8****pH/ion meter (IP67) to meet the highest requirements**

- Single-channel instrument for the determination of pH, mV, rel. mV, and ion concentration
- 5-point calibration with a choice of 6 predefined and one user-defined buffer group
- Choice of segmented or linear calibration
- Data storage for 200 GLP data records with time/date, sensor ID, and sample ID
- Contact-free IR communication

SevenGo pro™ SG8	Measuring range	Resolution	Accuracy
pH	-2.000 to 19.999	0.001	±0.002
mV (rel. mV)	-1999 to 1999	0.1	±0.1
Temperature	-5.0 to 130.0 °C (ATC) -30.0 to 130.0 °C (MTC)	0.1 °C	±0.2 °C
Sensor inputs	BNC (>10 <sup>12</sup> Ohm); NTC 30 KΩ (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/325 g (without batteries)		

Order info	Description and sensors	Order no.
SG8-B	Instrument only	51302581
SG8-ELK	Electrode kit with InLab®413 SG (IP67, 1.8m cable)	51302582
SG8-FK	Field kit with InLab®413 SG (IP67, 1.8m cable)	51302583
SG8-ASK	Assistant kit with InLab®413 SG (IP67, 1.8m cable)	51302584

## SevenGo Duo pro™ – SG68

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

#### to meet the highest requirements

- Portable 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 (>10 <sup>12</sup> Ohm); NTC 30 KΩ (both IP67)		
DO sensor inputs	BNC (>10 <sup>12</sup> Ω); NTC 22 KΩ (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 and InLab®605-ISM (both IP67, 1.8m cable)	51302612
SG68-FK5	Field kit with InLab® Expert Pro-ISM and InLab®605-ISM (both IP67, 5 m cable)	51302613

## SevenGo Duo pro™ – SG78

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

#### to meet the highest requirements

- Portable 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 (>10 <sup>12</sup> Ohm); NTC 30 KΩ (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 (both IP67, 1.8 m cable)	51302621
SG78-FK2	Field kit with InLab® Expert Pro-ISM and InLab®738 (both IP67, 1.8m cable)	51302622
SG78-FK5	Field kit with InLab® Expert Pro-ISM and InLab®738 (both IP67, 5 m cable)	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™ sensors

## The right sensor for each application

- Robust IP67 sensors for pH, conductivity and oxygen applications
- Sensors with integrated chip for 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™ instruments in their kit versions are fitted with high-performance electrodes. All four 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	413 SG	738-ISM	738	742-ISM	742	605-ISM	605
Order number	1.8 m cable	51344102	51340288	51344110	51344120	51344116	51344126	51343611	51340291
	5 m cable	51344103	51340297	51344112	51344122	51344118	51344128	51343612	51343298
	10 m cable	51344104	51340289	51344114	51344124			51343613	51340292
<b>Measuring range</b>		0 to 14 pH		0.01 to 1000 mS/cm		0.001 to 500 µS/cm		0 to 200%, 0 to 20 mg/L	
<b>Temperature range</b>		0 to 100 °C		0 to 100 °C		0 to 100 °C		0 to 60 °C	
<b>Temperature probe</b>		NTC 30 kΩ		NTC 30 kΩ		NTC 30 kΩ		NTC 22 kΩ	
<b>Type of membrane glass</b>		U							
<b>Membrane resistance (25 °C)</b>		<250 MΩ							
<b>Membrane type/cell type</b>		Open connection		4-pin graphite		4-pin steel			
<b>Reference system/electrolyte</b>		ARGENTHAL™/XEROLYT® polymer							
<b>Nominal cell constant</b>				0.57 cm <sup>-1</sup>		0.105 cm <sup>-1</sup>			
<b>Shaft material</b>		PEEK		Epoxy		V4A steel		PPS	
<b>Shaft length</b>		120 mm		120 mm		120 mm		120 mm	
<b>Shaft diameter</b>		12 mm		12 mm		12 mm		12 mm	
<b>Storage</b>		FRISCOLYT-B®		Dry		Dry		Dry	
<b>IP67</b>		Yes		Yes		Yes		Yes	
<b>Connections</b>		Fixed cable: BNC/RCA (cinch)		Fixed cable: LTW		Fixed cable: LTW		Fixed cable: BNC/RCA (cinch)	



## High-quality sensors with excellent properties

### InLab® 413 SG & InLab® Expert Pro-ISM pH sensors

- Low-maintenance XEROLYT® polymer electrolyte with two open reference connections
- Robust, chemical-resistant PEEK shaft
- Long-lasting ARGENTHAL™ reference system

### InLab® 742 conductivity sensor

- Robust 2-pin steel cell for low conductivity values
- Precise measurements up to 0.001 µS/cm
- Maximum linearity

### InLab® 738 conductivity sensor

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

### InLab® 605 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™ instruments. The complete METTLER TOLEDO portfolio is documented in a separate brochure with the order number 51724331.



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 kΩ	NTC 30 kΩ	NTC 30 kΩ	NTC 30 kΩ	NTC 30 kΩ	NTC 30 kΩ
Type of membrane glass	A41	HA	A41	LoT	LoT	U
Membrane resistance (25 °C)	<600 MΩcm	<600 MΩcm	<600 MΩcm	<50 MΩcm	<250 MΩcm	<300 MΩcm
Diaphragm type	Moving, 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®, 513444291 (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™, SevenGo Duo™, SevenGo pro™, 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.
pH 4.01 buffer solution in side-sealed sachet, 30 x 20 mL	51302069
pH 7.00 buffer solution in side-sealed sachet, 30 x 20 mL	51302047
pH 9.21 buffer solution in side-sealed sachet, 30 x 20 mL	51302070
pH 10.01 buffer solution in side-sealed sachet, 30 x 20mL	51302079
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 standard conductivity solution, 30 x 20 mL	51302049
12.88 mS/cm standard conductivity solution, 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
<b>General accessories</b>	
Plastic sample bottle (50 mL)	51300240
Guide to pH measurement	51300058
Guide to conductivity and dissolved oxygen	51724715
Guide to ion-selective measurements	51300201
RS-P25 printer	11124300
RS-P26 printer	11124303
RS-P28 printer	11124304

### Accessories for SevenGo™

Accessories for SevenGo™	Order no.
<b>Communication (for models SG6, SG7, SG8, SG68, SG78)</b>	
Infrared USB adapter	51302332
Infrared RS232 adapter	51302333
LabX® direct pH PC software	51302876
<b>ErGo™ accessories</b>	
ErGo™ field assistant	51302320
ErGo™ electrode tube	51302323
ErGo™ adapter	51302337
<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
SevenGo™ compact case (empty)	51302380
SevenGo™ field compact case (empty)	51302359



## Seven service – so your instruments always measure accurately

Regular checks increase the accuracy of your instruments and extend the lifetime by many years. METTLER TOLEDO can provide all required services – tailored to your needs – for all Seven instruments. This ensures that your instrument continues to function reliably and without errors. All instruments are delivered with a signed factory certificate.

Choose from our wide range of services - we have a flexible solution for every need!

For more information on service, see [www.mt.com/ServiceXXL](http://www.mt.com/ServiceXXL)



## 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 pro™ and 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.

2)



## ErGo™

The ErGo™ field assistant provides working and carrying convenience when working in the factory, the laboratory or in the field. ErGo™ can be adjusted freely and provides a range of usage possibilities and additional functions.

- 1) ErGo™ fits neatly into your hand making it safe and convenient.
- 2) pH electrodes can be stored wet in ErGo™, and are ready for use immediately with no need for wetting caps.
- 3) ErGo™ converts SevenGo™ into a mobile bench-top instrument.

1)



3)



## Compatibility with digital sensors

The Ingold digital process sensors, such as InPro 3253i/SG, can be calibrated on the SevenGo Duo pro™ SG78 and SG68 outside the process equipment. Thanks to ISM® these sensors can then be placed into operation in the process equipment without further calibration.

# METTLER TOLEDO and Seven

– Extra value for use in the field...

...and for everyday lab-work

The METTLER TOLEDO Seven range provides models for use in the lab as well as portable models for use in the field and in factories. The SevenMulti™ and SevenEasy™ benchtop instruments are documented in a separate brochure with order number 51725133.



...with the corresponding sensors

METTLER TOLEDO combines 60 years of experience of INGOLD in the production of electrochemical sensors with the innovative electronics of the Seven series. METTLER TOLEDO supplies complete systems for pH, conductivity, measurements and ion measurements:

- Professional Seven instrument series
- Extensive collection of electrodes
- Useful accessories
- All required services





Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)330 088 0560**

**Fax: +44 (0)1245 808399**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.