

### 3. Analytical measurement and testing

#### Multiparameter measurement/Devices

#### 1 Multiparameter meters AL15

The AL15 combines the features of several electrochemistry meters. It is designed for multi purpose operation and measures pH/Redox, dissolved oxygen and conductivity/TDS.

AQUALYTIC

- Real time data logger
- Large, easy to read LCD display with contrast adjustment
- protective casing

**Scope of supply:** AL15 instrument, batteries, instruction manual. Electrodes and further accessories match to the chosen Set.

pH:	0 - 14pH
ORP:	-1999 to +1999mV
Conductivity:	0 to 200.0 $\mu$ S
	0.2 to 2.000 mS
TDS:	0 to 132.000 ppm
Temperature:	0 to +60 °C or +32 to +140 °F
Oxygen:	0 to 20.0 mg/l
	0 to 100.0 % in Air
Interface:	USB, RS 232
Power supply:	DC 1.5V battery (UM3, AA) x 4 PCs or DC 9V Adapter

Type	PK	Cat. No.
AL15 pH/Con/Oxi	1	6.241 474
AL15 pH/Con	1	6.241 983
AL15 pH/Oxi	1	6.256 805
AL15 pH/Redox	1	9.699 295



#### 2 Multiparameter meter HandyLab 780

**Portable pH measuring devices by SI Analytics with Memosens® technology**

SI Analytics

- With Memosens® sensor measurement of pH, conductivity and dissolved oxygen by simple sensor exchange
- Automatic detection of the measuring parameter with Memosens® sensors
- Automatic compensation of the ambient pressure for oxygen measurement
- Storage of up to 10.000 data points
- Micro-USB connection to communicate with the HandyLab Pilot software for evaluation of data from digital Memosens® sensors. HandyLab Pilot software (included with delivery), allows for easy management and evaluation of stored data and can be used for device configuration.
- Contrast-rich and scratch-resistant clear glass display
- Display of the sensor status at one glance with Sensoface
- Calibration of up to 3 points with automatic buffer detection
- Manual calibration by indicating random buffer values
- Real-time clock and display of battery charging status
- Extended operating time of more than 1.000 hours with standard batteries (4 x AA) or Li-Ion accumulators.

**Supplied with:** Set pH-Meter HandyLab 780 incl. AquaLine 90pH, SKK K1A and DIN buffer solutions in ampoules



<b>pH measurement Memosens (also ISFET):</b>	-2 to 16 pH
<b>mV measurement Memosens Redox:</b>	-2000 bis 2000 mV
<b>pH/mV measurement (analog):</b>	-2 to 16 pH
	-1300 to 1300 mV
<b>Temperature measurement</b>	
Measuring range with sensor NTC 30kOhm:	-20 to 120 °C
Measuring range with sensor Pt 1000:	-40 to 250 °C
<b>Conductivity measurement (only Memosens®)</b>	
Measuring range:	0.001 $\mu$ S/cm ( $c < 0.05 \text{ cm}^{-1}$ )
	0.01 $\mu$ S/cm ( $c = 0.05 \text{ to } 0.2 \text{ cm}^{-1}$ )
	0.1 $\mu$ S/cm ( $c > 0.2 \text{ cm}^{-1}$ )
Specific resistance:	0 to 99.99 M $\Omega$ cm
Salinity:	0 to 45 g/kg (0 to 30 °C)
TDS:	0 to 1999 mg/l (10 to 40 °C)
<b>Oxygen measurement (only Memosens®)</b>	
DO concentration:	0 $\mu$ g/l to 20 mg/l
DO saturation:	0 to 200 %
DO partial pressure:	0 to 1000 mbar

Type	PK	Cat. No.
HL780AL90pH	1	6.266 647

## 3. Analytical measurement and testing

GENERAL CATALOGUE EDITION 20

### Multiparameter measurement/Devices

#### 1 Multi parameter HandyLab 680

The HandyLab 680 increases the measuring accuracy via:

SI Analytics

- IDS technology. The digitalization of the measuring signal eliminates interferences.
- AutoRead function. Autoread provides a stable, precise measuring value.
- CMC (Continuous Measurement Control) visualizes whether the measuring value is within the calibration range.
- QSC (Quality Sensor Control) informs about the actual condition of the electrode and therefore increases operation safety.

The HandyLab 680 increases the operator comfort via:

- IDS Technology. The secure allocation of the calibration data to the sensor eliminates any uncertainty about the date and results of its last calibration. This saves time and money while assuring the highest confidence in your measurements.
- Traceability of the measuring values by the digital and automatic capture of all sensor data.
- User administration can be activated to allow tiered access and capabilities ensuring security and confidence of your data.
- Transmission of all data in \*.csv format via USB interface to the PC or the USB memory stick, or, as an alternative, formatted transfer to Excel by means of MultiLabImporter (included in the delivery).

#### Supplied with:

**HL680pH/CondVersat:** pH/Cond meter Set HandyLab 680 with conductivity electrode LF413T IDS, pHTElectrode A7780 IDS, Z530 and Z389 for general applications

**HL680pH/Cond/OxVer:** pH/Cond/OX meter Set HandyLab 680 with oxygen electrode FDO1100 IDS, conductivity electrode LF413T IDS, pHTElectrode A7780 IDS, Z530 and Z389 for general applications

#### Specifications

##### pH

Measuring range: 0.000 ... 14.000 pH

Resolution:  $\pm 0.001$  pH

Accuracy:  $\pm 0.004$  pH

##### mV

Measuring range:  $\pm 1200.0$  mV

Resolution:  $\pm 0.1$  mV

Accuracy:  $\pm 0.2$  mV

##### Temperature

Measuring range:  $-5.0 \dots +105.0$  °C

Resolution:  $\pm 0.1$  °C

Accuracy:  $\pm 0.2$  °C

##### Conductivity

Measuring range: 0.00 ... 2000 mS/cm

Resolution:  $\pm 0.1$  mS/cm,  $\pm 0.01$  S/cm,  $\pm 0.001$   $\mu$ S/cm

Accuracy:  $\pm 0.5\%$  of mean value

Specific resistance: 0.00  $\Omega$ cm ... 100 M $\Omega$ cm  $\pm 0.5\%$  of mean value

Salinity: 0.0 ... 70.0 (acc. to IOT)

TDS: 0 ... 1999 mg/l, 0 ... 199.9 g/l  $\pm 0.5\%$  of mean value

##### Oxygen measurement

DO concentration: 0.00 ... 20.00 mg/l  $\pm 0.5\%$  of mean value

DO saturation: 0.0 ... 200.0 %  $\pm 0.5\%$  of mean value

DO partial pressure: 0 ... 400 hPa  $\pm 0.5\%$  of mean value

Type	PK	Cat. No.
HL680pH/CondVersat	1	6.265 601
HL680pH/Cond/OxVer	1	6.265 299

1



### 3. Analytical measurement and testing

#### Multiparameter measurement/Devices

#### 1 Multiparameter meters ProfiLine Cond 3320

**NEW**  
WTW®

1

The pH/Cond 3320 has a robust, waterproof housing (IP67) and is equipped with a memory as well as a data logger with an adjustable interval between 1 s and 60 min. All entries contain GLP-supporting data, like the date, time and ID number. The modern, waterproof USB interface is used for easy and quick data transfers. Applications: Process chemistry, Life Science, food and beverage industry, pharmaceutical industry (measurement of pH and conductivity according to pharmacopeia).

- Two inputs for the simultaneous measurement of pH/mV/ISE and conductivity
- Backlit graphic display for the parallel display of the measured values
- Perfect for monitoring process applications
- Waterproof USB interface

**Scope of delivery pH/Cond 3320 Set 2:** Professional pH and conductivity meter for mobile measurements. Meter in transport case with SenTix® 41, TetraCon® 325, protective armouring SM Pro, buffer solution STP 4 and STP 7, conductivity standard 0.01 mol/l KCl, manual, stand, beaker, CD-ROM, driver software for USB, batteries, cable.

##### Specifications

Measuring range/Resolution	
pH:	-2.000 ... 19.999 ±0.005 pH
mV:	-2500 ... +2500 ±1 mV
ISE (mg/l, µmol/l, mg/kg, ppm, %):	0.000 ... 999999
Conductivity:	0.000 µS/cm ... 1000 mS/cm
Salinity:	0.0 ... 70.0
TDS:	0 mg ... 199.9 g/l
Temp.:	-5.0 ... 105.0 °C ±0.1 °C
Memory:	manually 200/5000 automatically
Power supply:	4 x 1.5 V AA or 4 x 1.2 V NiMH battery
Protection class:	IP 67

Type	Description	PK	Cat. No.
pH/Cond 3320	only device	1	6.264 057
pH/Cond 3320 Set 2	with SenTix® 41, TetraCon® 325 and accessories	1	6.262 509



#### 2 Multiparameter meter ProfiLine Multi 3320

**NEW**  
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2

The Multi 3320 for the measurement of pH, ORP, conductivity and dissolved oxygen (electro-chemical) is an ideal meter for environmental applications in the areas of ground and surface water measurement, in aquatic cultures as well as in wastewater treatment plants and much more. The Multi 3320 has a robust waterproof housing (IP 67) and memory with data logger with adjustable interval between 1 s and 60 min. The keypad can also be operated when wearing gloves and is easy to clean under a water jet.

- Two inputs for simultaneous measurement of pH and conductivity or pH and dissolved oxygen
- Backlit graphic display for parallel output of measured values
- All conventional WTW pH electrodes, combined ISE electrodes, conductivity measuring cells and galvanic oxygen sensors can be connected to the meter.
- Waterproof USB interface

**Scope of delivery Multi 3320 Set 1:** Professional pH and conductivity meter for mobile measurements. Meter in field case with SenTix® 41, CelloX® 325, TetraCon® 325, sensor accessories, manual, stand, beaker, CD-ROM, driver software for USB, batteries, cable.

##### Specifications

Measuring range/Resolution	
pH:	-2.000 ... 19.999 ±0.005 pH
mV:	-2500 ... +2500 ±1 mV
ISE (mg/l, µmol/l, mg/kg, ppm, %):	0.000 ... 999999
O <sub>2</sub> concentration:	0.00 ... 20.00 mg/l or 0.0 ... 90.0 mg/l*
O <sub>2</sub> saturation:	0.00 ... 200.0 % or 0.0 ... 600 %*
O <sub>2</sub> partial pressure:	0.0 ... 200.0 hPa, 0 ... 1250 hPa*
Conductivity:	0.000 µS/cm ... 1000 mS/cm
Salinity:	0.0 ... 70.0
TDS:	0 mg ... 199.9 g/l
Temp.:	-5.0 ... 105.0 °C ±0.1 °C
Memory:	manually 200/5000 automatically
Power supply:	4 x 1.5 V AA or 4 x 1.2 V NiMH battery
Protection class:	IP 67

Type	Description	PK	Cat. No.
Multi 3320 Set 1	with SenTix® 41, TetraCon® 325, CelloX® 325 and accessories	1	7.660 051

\*depending on oxygen sensor and measuring media



### 3. Analytical measurement and testing

GENERAL CATALOGUE EDITION 20

#### Multiparameter measurement/Devices

##### 1 2 MultiLine® IDS

Multiparameter measurement newly defined. The new MultiLine® handhelds with intelligent digital IDS sensors are perfectly suited for all multiparameter applications. The biggest advantage - signals are directly processed in the sensor. Each sensor logs onto the instrument and transfers its ID data including calibration records. There is no danger of confusion, the digital signal transfer allows the use of long cables for all parameters. The unique QSC functionality for IDS pH sensors gives a realistic rating of the current sensor condition. The pH CMC indicates the optimum pH measuring range. A wide range of IDS pH, conductivity and DO probes covers almost any application. Universal waterproof quick-locks secure the sensor against loss. The robust and waterproof (IP67) MultiLine® handhelds are equipped with a graphic display for optimum information. A special silicone keypad provides excellent handling comfort. For Multi 3630 and 3620 IDS two USB host interfaces are provided for data transfer to USB sticks or the user's PC. The latest software updates are provided via the internet. NiMH-rechargeable batteries provide an energy-efficient operation for Multi 3620 and 3630 IDS. Available as field case sets including sensors and accessories. All MultiLine® IDS meters are prepared for wireless measurement.

WTW®



##### 3

MultiLine®

##### 3 4 Multiparameter meters

Selected IDS-Sensors:

**SenTix® 940:** Low maintenance combined pH electrode with ATC, QSC suitable, memory for 10 calibrations, stored serial number, pH 0.000 to 14.000 ( $\pm 0.004\text{pH}$ ), temperature range 0.0 to 80.0°C,  $\pm 0.2^\circ\text{C}$ . Also available with plug head for cable or wireless modules.

**SensoLyt® 900:** Low maintenance polymer electrolyte pH electrode with built-in temperature sensor, pressure resistant up to 10 bar, QSC suitable, memory for 10 calibrations, saved serial number, pH 2.000 to 12.000 ( $\pm 0.004\text{pH}$ ), temperature range from 0.0 to 60.0 °C,  $\pm 0.2^\circ\text{C}$ . Only available with plug head for cable, MPP or wireless modules.

**SenTix® 950:** Combined pH-electrode with plastic shaft, 3 mol/l KCl, ATC, QSC-suitable, memory for 10 calibrations, stored serial number, pH 0.000 to 14.000 ( $\pm 0.004\text{pH}$ ), temperature range 0.0 to 80.0 °C,  $\pm 0.2^\circ\text{C}$ . Also available with plug head for cable or wireless modules.

**SenTix® 980:** Combined pH-electrode with plastic shaft, 3 mol/l KCl, ATC, platinum wire junction, QSC-suitable, memory for 10 calibrations, stored serial number, pH 0.000 to 14.000 ( $\pm 0.004\text{pH}$ ), temperature range 0.0 to 100.0 °C,  $\pm 0.2^\circ\text{C}$ . Also available with plug head for cable or wireless modules.

**TetraCon® 925:** Robust, general purpose 4-electrode conductivity cell with graphite electrodes incorporating integral temperature sensor. Memory for 10 calibrations, stored serial number, measuring range 10  $\mu\text{S}/\text{cm}$  to 2000  $\text{mS}/\text{cm}$   $\pm 0.5\%$  of value, 0.0 to 100.0°C,  $\pm 0.2^\circ\text{C}$ . Also available with plug head for cable or wireless modules.

**LR 925/01:** 2-electrode stainless steel conductivity cell for low conductivities, integrated temperature sensor, flow through vessel, memory for 10 calibrations, stored serial number, measuring range 0.01  $\mu\text{S}/\text{cm}$  to 200 $\mu\text{S}/\text{cm}$   $\pm 0.5\%$  of value, 0.0 to 100.0°C,  $\pm 0.2^\circ\text{C}$ . Also available with plug head for cable or wireless modules.

**FDO® 925:** Extremely fast (T99 < 60 s) and precise optical DO sensor for field and laboratory applications. Handy, suits in different BOD bottles. Waterproof for depth measurement to 100m. Bevelled, air bubble repelling membrane, Green light technology for extended operation time. Insensitive against  $\text{H}_2\text{S}$ .  $\text{O}_2$  concentration: 0.00 to 20.00mg/l,  $\text{O}_2$  saturation: 0.0 to 200.0%  $\text{O}_2$  partial pressure: 0.0 to 400hPa. Accuracy:  $\pm 0.5\%$  of value. Also available with plug head for cable or wireless modules.

The information for meter precision refers to the sensors' built-in, electronic, measuring technology.

##### 4



### 3. Analytical measurement and testing

#### Multiparameter measurement/Devices

#### Multiparameter meters MultiLine® IDS

**NEW**  
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Professional digital multiparameter meters for mobile measurement, with 3, 2 or 1 universal measurement channels, wireless preparation, colour graphic display (black/white display for Multi 3510), data logger manually or automatically (timed) and 2 (1 for Multi 3510) waterproof USB interfaces suitable for field use. Easy to clean with a soft brush under water jet.

**Multi 3630:** The Multi 3630 IDS with three universal measurement channels is suitable for all WTW IDS pH, ORP, dissolved oxygen sensors, conductivity cells and turbidity sensors, whether connected to cable or wireless. Documentation of meter and sensor data. User control over MultiLab® users. With USB-A and Mini USB-B interface and colour display.

**Multi 3620:** The Multi 3620 IDS with two universal measurement channels is suitable for all WTW IDS pH, ORP, dissolved oxygen sensors, conductivity cells and turbidity sensors, whether connected to a cable or wireless. Documentation of meter and sensor data. User control over MultiLab® users. With USB-A and Mini USB-B interface and colour display.

**Multi 3510:** Sequential multi-parameter measurement. All WTW IDS pH, ORP, dissolved oxygen sensors, conductivity cells and turbidity sensors can be connected to the universal channel, either with cable or wireless module. Data transfer to PC with MultiLab® Importer. With Mini USB-B interface and black/white display.

**Multi 3630 IDS:** Single meter in a carrying case, batteries, cables, power supply, arming SM Pro

**Multi 3630 IDS SET F:** Single meter in a field case with IDS sensors (digital pH sensor SenTix® 940, digital conductivity cell TetraCon® 925, optical sensor FDO® 925), QSC Kit, stand, beaker, batteries, cables, power supply, arming SM Pro

**Multi 3620 IDS:** single device in a carrying case with Quick Start Guide, CD-ROM and batteries, driver software for USB, cable, power supply

**Multi 3620 IDS SET C:** Single meter in a carrying case with IDS sensors (digital pH sensor SenTix® 940, digital conductivity cell TetraCon® 925), QSC Kit, stand, beaker, CD-ROM, batteries, cables, power supply, arming SM Pro

**Multi 3510 IDS:** Single meter in a carrying case with buffer 4, 7, KCl 3 mol/l, conductivity standard, batteries, USB cable

**Multi 3510 IDS SET 4:** Single meter in a carrying case with optical sensor FDO® 925, batteries, USB cable

**IDS WLM Kit:** For wireless measurement of pH/ORP, conductivity, dissolved oxygen, or turbidity. Consisting of a wireless module for sensor and meter, USB charger and universal USB power supply.

#### Specifications

Measuring range:

Memory Multi 3510 IDS:

Memory Multi 3630 IDS/Multi 3620 IDS:

Dimensions (W x D x H):

Weight:

Power supply Multi 3510 IDS:

Power supply Multi 3630 IDS/Multi 3620 IDS:

Protection class:

depending on IDS sensor

manual: 500 data records

automatic: 4500 data records

manual: 500 data records

automatic: 10.000 data records

approx. 180 x 80 x 55 mm

400 g

4 alkaline batteries, USB

PSU with charging function, 4 NiMH batteries (AA type), USB

IP67

Type	Description	PK	Cat. No.
Multi 3630 IDS	3 channels, meter only	1	6.283 309 <b>1</b>
Multi 3630 IDS SET F	3 channels, with SenTix® 940, TetraCon® 925, FDO® 925	1	6.282 980
Multi 3620 IDS	2 channels, meter only	1	6.282 919
Multi 3620 IDS SET C	2 channels, with SenTix® 940, TetraCon® 925	1	6.270 419
Multi 3510 IDS	1 channel, meter only	1	6.282 979
Multi 3510 IDS SET 4	1 channel, with FDO® 925	1	6.270 393
IDS WLM KIT	Accessory Kit for wireless equipment	1	6.283 612 <b>2</b>



6.283 309



6.283 612



### 3. Analytical measurement and testing

GENERAL CATALOGUE EDITION 20

#### Multiparameter measurement/Devices

##### The inoLab® series from WTW

The inoLab® benchtops are perfectly designed for modern laboratory surroundings. The key pads are clearly outlined and easy-to-operate, their smooth surfaces are easy-to-clean and the operation is self-explanatory. All meters include a universal power supply and a convenient stand with sensor support. If desired they can be ordered in application oriented sets including sensors and accessories.

##### Laboratory instruments inoLab® Multi 9620 IDS/ 9630 IDS



Securely traceable with the cutting edge inoLab® Multi 9630 IDS and inoLab® Multi 9620 IDS

- Secure measurement data
- Digital sensor recognition
- Complete documentation
- Wireless ready

High-tech made by WTW for challenging applications. Two digital inoLab® multi parameter instruments for IDS sensors for simultaneous measurement of equal or different parameters and sensors. Two (inoLab® Multi 9620 IDS) or three sensors (inoLab Multi 9630 IDS) could be connected either by cable or via wireless modules. A large color graphic display protected by a glass plate supports the representation of readings and information, The anti-bacterial keypad minimizes the danger of microbiological contaminations. The robust lower case made of zinc diecast provides proper stand and perfect shielding against interferences. A high quality stand for alternative left or right mounting allows easy adaptation to the requirements at the working place.

##### Secure measurements

- Digital data transfer eliminates interferences, provide secure calibration data and makes documentation of sensor data easy.
- The smart sensor rating (QSC) gives information about the true condition of an IDS pH electrode and increases safety of operation
- The CMC function for pH visualizes the optimum measuring range and supports correct measurements.
- Visual display for the channel in order to provide correct allocation of channel and sensor.

##### Documentation according GLP/AQA

- Automatic digital recording of all sensor data for distinct documentation
- Optional user administration for clear allocation of user and measurement results and assigning different access levels
- Transfer of data as \*.csv format via USB to PC, if desired transfer direct to Excel (MultiLab Importer, part of scope of delivery or as download from internet)
- Additional transfer to USB memory drive or selected printer

##### Compatible to conventional pH measurement

- pH module (accessory) capable of being integrated for pH, ISE and ORP electrodes with DIN or BNC plug and 4 mm banana plug. For temperature sensor.

**IDS WLM Kit.** For wireless measurement of pH/ORP, conductivity, dissolved oxygen, or turbidity. Consisting of a wireless module for sensor and meter, USB charger and universal USB power supply.

##### Specifications

Measuring channels	
inoLab® Multi 9620 IDS:	2
inoLab® Multi 9630 IDS:	3
Display:	Color graphic, glass plate protected
Memory:	manual: 500/automatic: 10000
Logger:	manual/time controlled
Interface:	USB-A, Mini USB-B
Power supply:	Universal power supply, 100 to 240 V, 50/60 Hz

Type	Description	PK	Cat. No.
Multi 9620 IDS	Single instrument	1	6.283 614 1
Multi 9630 IDS	Single instrument	1	6.285 517 2
Multi 9630 IDS	With SenTix® 980, TetraCon® 925	1	7.644 960
IDS WLM KIT	Accessory Kit for wireless equipment	1	6.283 612 3

Separate IDS electrodes available on request.



6.283 614



6.285 517



6.283 612

### 3. Analytical measurement and testing

#### Multiparameter measurement/Devices

#### 1 Laboratory instrument inoLab® Multi 9310 IDS

The Multi 9310 IDS features a new technology: No longer is the meter determining the parameter but only the sensor. Intelligent, digital IDS sensors promotes the inoLab® Multi 9310 IDS to a perfect all-rounder. The universal digital input is ready for all available laboratory IDS sensors. No matter whether pH, conductivity or dissolved oxygen, when plugged into a suitable sensor the inoLab® Multi 9310 becomes either a pH, conductivity or dissolved oxygen meter. Of course it has a modern backlit graphic display with menu-controlled user interface for easy and intuitive operation. The mini USB-B interface provides fast data transfer to a PC. The internal memory can record up to 5000 GLP complying data including ID, date and time. The housing and the keypad are easy-to-clean. An integrated thermal printer (58mm width) is ready for printout of the measured data (option). Includes meter, power supply, stand and USB cable. The inoLab® Multi 9310 IDS is wireless ready.

WTW®



#### Specifications

Display:	backlit graphic LCD
Memory:	manual: 500/automatic: 5000
Logger:	manual/time controlled
Interface:	Mini USB-B
Power supply:	Universal power supply, 100 to 240 V, 50/60 Hz, 4 x 1.5 V AA or 4 x 1.2 V NiMH

Type	Description	PK	Cat. No.
Multi 9310	Single instrument	1	9.920 120
Multi 9310 Set 1	Incl. SenTix® 940	1	9.920 121
Multi 9310 Set 2	Incl. SenTix® 980	1	9.920 122
Multi 9310 Set 3	Incl. TetraCon® 925	1	9.920 123
Multi 9310 Set 4	Incl. FDO® 925	1	9.920 124
Multi 9310 Set C	Incl. SenTix® 940, TetraCon® 925	1	9.920 125
Multi 9310P*	Single instrument	1	9.920 127

\*Meter with integrated printer

#### pH/Conductivity meters SevenCompact™ S213

NEW

This universal well-designed meter is the perfect choice for a wide range of applications without overstretching your budget.

Mettler-Toledo Online

As a dual channel instrument it can measure pH/mV and conductivity simultaneously if desired. Measuring other parameters such as salinity, resistivity, total dissolved solids (TDS) and conductivity ash are easily executed with this instrument.

#### Scope of supply:

**S213-Meter:** Meter incl. electrode holder, protective cover, user manual, declaration of conformity and test certificate.

**S213-Standard kit:** As S213-Meter, additionally with InLab® Expert Pro-ISM pH sensor and InLab® 731-ISM conductivity sensor, guides to pH and conductivity measurements, 2 buffer sachets for pH 4.01, 7.00, 9.21, 10.00, 2 standard sachets for 1433 µS/cm and 12.88 mS/cm.

**S213-Water kit:** As 213-Standard kit but with InLab® Pure Pro-ISM instead of Expert Pro-ISM for pH and InLab® 741-ISM instead of 731-ISM for conductivity.

#### Specifications

Temperature range:	-5 (-30.0) to +130 °C // 0.1 // ±0.1
Temperature compensation:	Linear, non linear, off, pure water
pH range:	-2000 to 20000 // 0.001/0.01/0.1 // ±0.002
pH calibration:	Max. 5 points
mV range:	±2000.0 // 0.1/1 // ±0.1 mV in -1000 to 1000; ±0.2 mV outside
Conductivity range:	0.001 µS/cm to 1000 mS/cm // 0.001 to 1 // ±0.5 %
Resistivity range:	0.00 to 100.0 MOxcm // 0.00 to 1.0 // ±0.5 %
Salinity range:	0.00 to 80.00 psu/ppt // 0.00 to 1.0 // ±0.5 %
TDS range:	0.00 mg/l to 1000 g/l // 0.01 to 1 // ±0.5 %
Data logging:	2000 measurements
Display:	Colour TFT
Outputs:	RS232, USB
Dimensions (W x D x H):	204 x 174 x 74 mm
Weight:	890 g
Protection class:	IP 54

#### Measuring range // Resolution // Accuracy



6.284 460



6.284 461



6.284 462

Type	PK	Cat. No.
S213-Meter	1	6.284 460 2
S213-Standard kit	1	6.284 461 3
S213-Water kit	1	6.284 462 4

### 3. Analytical measurement and testing

GENERAL CATALOGUE EDITION 20

#### Multiparameter measurement/Devices

#### 2 pH/Ion meter SevenExcellence™ S500

Modular professional system for measurements of pH, redox potential, conductivity, salinity/TDS and ion concentration. Fits up to three modules in any composition and order, can be expanded with additional measurement parameters at any time.

Mettler-Toledo Online

- Large, high resolution 7" colour touch display (capacitive), very clear and easy to operate
- Modularity and flexibility; up to 3 measuring modules can work in parallel, expansion to 2 or 3 channels possible
- Universal communication via 2 x USB, Ethernet (LAN) and RS232
- Plain text user interface in 10 languages with menu guidance in full sentences
- OneClick™ operation concept to quickly start frequently used functions and preferred methods
- Storage for user methods
- Highest security and GxP support (ID protection, sophisticated user management, limits/alarms, integrated radio clock, etc.)
- Intelligent sensor management (ISM®)
- Connection of stirrer, sample changer, PC, barcode reader, keyboard, local or network printer possible
- Storage up to 20000 data sets (measurements, calibrations, methods)
- 17 predefined and 60 user-defined methods
- 12 most commonly used ion types pre-programmed for convenience
- 5 point calibration (pH), 8 pre-defined and 20 user-defined buffer groups, incl. temperature chart
- uPlace™ electrode arm with perfect vertical movement
- Compatible with all METTLER TOLEDO electrodes (Recommended: ISM® electrodes)
- Capable of ion concentration measurements using a suitable Ion Selective Electrode
- Methods included for the most common incremental ion measurement techniques

**S500-Basic:** Includes instrument, 1 x pH/Ion expansion unit, 2 x 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.

**S500-Kit:** As S500-Basic, but also with InLab® Expert Pro-ISM, guide to pH measurements and 2 buffer sachets for pH 4.01, 7.00, 9.21 and 10.00.

**S500-Bio:** As S500-Kit but with InLab® Routine Pro-ISM cable kit instead of InLab® Expert Pro-ISM.

**S500-F:** As S500-Kit but with PerfectION™ Fluoride instead of InLab® Expert Pro-ISM.

#### Specifications

Temperature MTC/ATC:

pH:

mV:

Rel. mV:

Ion concentration:

#### Measuring range // Resolution // Accuracy

-30.0 to 130.0 °C // 0.1 °C // ±0.1 °C  
 -2.000 to 20.000 // 0.001/0.01/0.1 // ±0.002  
 -2000.0 to 2000.0 // 0.1/1 // ±0.1  
 -2000.0 to 2000.0 // 0.1/1 // ±0.1  
 0 to 999 999 mg/L, ppm // 0.001 to 1 // ±0.5%  
 0 to 100 mol/L, % // 0.0001 to 1 // ±0.5%  
 0 to 100 000 mmol/L // 0.001 to 1 // ±0.5%  
 -2 to 20 pX // 0.001 to 1 // ±0.5%

Type	PK	Cat. No.
S500-Basic	1	9.704 357
S500-Kit	1	9.704 358
S500-Bio	1	9.704 359 1
S500-F	1	9.704 360



9.704 359





### 3. Analytical measurement and testing

#### Multiparameter measurement/Devices

#### 1 2 pH/mV, pH/Ion, Conductivity meter, SevenExcellence™ S475

Modular professional system for measurements of pH, redox potential, conductivity, salinity/TDS and ion concentration. Fits up to three modules in any composition and order, can be expanded with additional measurement parameters at any time.

Mettler-Toledo Online

- Large, high resolution 7" colour touch display (capacitive), very clear and easy to operate
- Modularity and flexibility; up to 3 measuring modules can work in parallel
- Universal communication via 2 x USB, Ethernet (LAN) and RS232
- Plain text user interface in 10 languages with menu guidance in full sentences
- OneClick™ operation concept to quickly start frequently used functions and preferred methods
- Storage for user methods
- Highest security and GxP support (ID protection, sophisticated user management, limits/alarms, integrated radio clock, etc.)
- Intelligent sensor management (ISM®)
- Connection of stirrer, sample changer, PC, barcode reader, keyboard, local or network printer possible
- Storage up to 20000 data sets (measurements, calibrations, methods)
- 17 predefined, 60 user-defined methods
- 5 point calibration (pH), 13 pre-defined and 20 user-defined buffer groups, incl. temperature chart
- uPlace™ electrode arm with perfect vertical movement
- Compatible with all METTLER TOLEDO electrodes (Recommended: ISM® electrodes)
- Measurement of the ion concentration with the corresponding electrode

**S475-Basic:** Includes 1 x pH/Ion expansion unit, 1 x pH/mV expansion unit, 1 x conductivity expansion unit, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, LabX® direct pH PC software, declaration of conformity and test certificate.

#### Specifications

Temperature range MTC/ATC:

pH:

mV:

Rel. mV:

ISFET pH:

Ion concentration:

#### Measuring range // Resolution // Accuracy

-30.0 to 130.0 °C // 0.1 °C // ±0.1 °C

-2.000 to 20.000 // 0.001/0.01/0.1 // ±0.002

-2000.0 to 2000.0 // 0.1/1 // ±0.1

-2000.0 to 2000.0 // 0.1/1 // ±0.1

0.000 to 14.000 // 0.001/0.01/0.1 // ±0.05

0 to 999 999 mg/L, ppm // 0.001 to 1 // ±0.5%

0 to 100 mol/L, % // 0.0001 to 1 // ±0.5%

0 to 100 000 mmol/L // 0.001 to 1 // ±0.5%

-2 to 20 pX // 0.001 to 1 // ±0.5%

Conductivity:

0.001 to 999999 µS/cm // 0.001 to 1 // ±0.5%

0.001 to 2000 mS/cm // 0.001 to 1 // ±0.5%

0.001 to 200 S/m // 0.0001 to 1 // ±0.5%

0.001 to 200000 mS/m // 0.0001 to 1 // ±0.5%

0.1 to 999999 µS/m // 0.001 to 1 // ±0.5%

TDS:

0.001 to 1000 g/L, ppt // 0.001 to 1 // ±0.5%

0.001 to 999999 mg/L, ppm // 0.001 to 1 // ±0.5%

Salinity:

0.01 to 80.0 psu, ppt // 0.01 to 0.1 // ±0.5%

Resistivity:

0.01 to 100.0 MΩxcm // 0.0001 to 1 // ±0.5%

0.01 to 999999 Ωxcm // 0.01 to 1 // ±0.5%

Conductivity Ash:

0.000 to 2022% // 0.001 to 1 // ±0.5%

Type	PK	Cat. No.
S475	1	9.704 364



#### 3 pH/mV, Conductivity, Oxygen meter, SevenExcellence™ S479

NEW

Triple channel instrument with pH/mV, conductivity and DO/BOD expansion units.

Mettler-Toledo Online

**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. Included kit sensors: InLab® Expert Pro-ISM, InLab® 731-ISM and InLab® OptiOx™.

Type	PK	Cat. No.
S479-Kit	1	6.284 512

