



# HandyLab MKII

THE NEW HANDYLAB GENERATION - AVAILABLE WITH IDS

SI Analytics  
a xylem brand



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# The new HandyLabs MKII

Our 2nd generation of HandyLab devices offers analog or digital options for the measurement of pH, ORP, dissolved oxygen and conductivity in the lab and in the field.

While our HandyLab 100 pH and HandyLab 200 Cond offer a single traditional analog channel, our IDS series HandyLab 600 and 680 devices take full advantage of our new digital technologies. The digital HandyLab 600 concentrates on the pH measurement as a one-channel device, whereas the HandyLab 680 allows you to measure any two parameters simultaneously; pH, ORP, conductivity or oxygen.

IDS stands for "intelligent, digital sensors" and means that the analog measuring signal is converted into a digital measuring value in the sensor. This protects the signal from external interferences, such as moisture, electro-magnetic fields or pulses. The higher measuring accuracy raises confidence in your readings to a whole new level. IDS sensors send their type designation and serial number, i.e. they identify themselves to the meter automatically. This information is always part of the documentation. Calibration values are stored in the IDS sensor and transferred to the measuring device avoiding unnecessary recalibration as would be needed for traditional analog devices. Especially with field devices, the increased comfort is considerable as the IDS sensors can be calibrated in the laboratory under optimal conditions and simply need to be connected in the field.

- ▶ The advanced speed and precision of our benchtops in a portable and durable design.
- ▶ Specifically designed for mobile use
  - ▶ Handy, battery-operated
  - ▶ Keypad made from a continuous silicone mat and therefore waterproof with noticeable key click, even when used with gloves.
- ▶ P67 classified
- ▶ Reproducible results due to active automatic AutoRead function with independent detection of stable measuring values.
- ▶ CMC (Continuous Measurement Control) makes sure that the pH measuring values and the calibration area remain in sight and that the measurement is conducted in the optimal range.
- ▶ Generous data storage in all devices
- ▶ Backlit graphics display in all versions
- ▶ A case for the safe storage and transport is always included with these devices.

## Advantages HandyLab MKII





## Selection chart

HandyLab	100	200	600	680
Analog	■	■		
IDS (Intelligent Digital Sensor)			■	■
One channel	■	■	■	
Two channel				■
pH/ORP	■		■	■
Temperature	■	■	■	■
Conductivity		■		■
DO				■
CMC-Function	■		■	■
1- to 5-point calibration with 22 stored buffer sets	■		■	■
QSC intelligent sensor evaluation			■	■
User administration				■
Autoread	■	■	■	■
Data memory	■	■	■	■
Interface Mini USB-B			■	■
Interface USB-A				■
Info display	■	■	■	■
Backlit B/W graphical display	■	■	■	
Backlit colored graphical display				■
Battery (Typ AA)	■	■	■	
Rechargeable AA from included power supply.				■
Watertight housing and keypad (built of one piece of silicone mat)	■	■	■	■
IP67 certified	■	■	■	■

# HandyLab 100

## The portable all-rounder for pH/mV measurements

The HandyLab 100 increases the measuring speed and accuracy thanks to the AutoRead and the CMC function. AutoRead displays when the measuring value is stable and eliminates the risk of a premature reading of the faulty measuring value. CMC (Continuous Measurement Control) visualizes whether the measuring value is still within the calibration limits. Having storage capacity for up to 200 data sets, stored data can be viewed.

The HandyLab 100 pH is precise, robust and easy to use.



HandyLab

## Technical specifications

Measuring range/ resolution/ accuracy (all values +/- 1 digit)	pH	-2.0 ... 20.0 +/-0.1 pH
		-2.00 ... 20.00 +/-0.01 pH
		-2.000 ... 19.999 +/-0,005 pH
	mV	+/- 1200.0 mV +/- 0.3 mV
+/- 2500 +/-1 mV		
	Temperature	-5.0 ... 105.0 °C +/- 0.1 °C
Calibration	Calibration points	1-, 2-, 3-, 4-, 5-Points
	Stored buffers	22 preloaded buffer sets
	Calibration memory	Latest calibration
Handling	AutoRead	Automatic/manual
	Celsius/Fahrenheit	Yes
	CMC	Yes
	Display	LCD B/W Graphic backlit
	Data memory	Manual 200 data sets
	Logger	Manual
	Power supply	4 x 1.5 V AA or 4 x 1.2 V NiMH rechargeable battery
	Continuous operating time	Up to 1000 h without/ 150 h with lighting
	Sensor connector	Waterproof DIN/ 4mm banana
	Waterproof	IP67 (including battery compartment, USB ports and channels)



- ▶ Waterproof IP67
- ▶ Reproducible results due to active automatic AutoRead function
- ▶ CMC function to visualize the optimal measuring range
- ▶ 1 to 5 point calibration with 22 stored buffer sets
- ▶ Data storage with output on display
- ▶ Backlit graphic display with clear text menu

Advantages  
HandyLab 100

# HandyLab 200

## The portable all-rounder for conductivity measurements

Due to the wide selection of 2 and 4 pole measuring cells made by SI Analytics, the system consisting of a sensor and HandyLab 200 can be used for a variety of purposes such as conductivity, salinity, TDS and specific gravity. Autoread provides a stable, precise measuring value. The backlit display and waterproof design make it especially ideal for field use.

For easy reference, the HandyLab 200 has a storage capacity for up to 200 data sets, which can be put out on the display.



HandyLab



## Technical specifications

Measuring range/ resolution/ accuracy (all values +/- 1 digit)	Conductivity	0.0 ... 1000 mS/cm +/- 0.5 % from average
		0.000 ... 1.999 $\mu$ S/cm, K= 0.01 cm <sup>-1</sup> +/- 0,5 % of the mean value
		0.00 ... 19.99 $\mu$ S/cm, K= 0.010 cm <sup>-1</sup> ; K=0.100 cm <sup>-1</sup> +/- 0,5 % of the mean value
	Specific resistance	1.000 Ohm cm ... 199.9 MOhm cm +/- 0,5 % of the mean value
	Salinity	0.0 ... 70.0 (IOT)
	TDS	0 ... 1999 mg/l, 0 bis 199.9 g/l
Temperature	-5.0 ... 105.0 °C +/- 0.1 °C	
Cell constant	Fixed	0.475 cm <sup>-1</sup> , 0.100 cm <sup>-1</sup> , 0.010 cm <sup>-1</sup>
	Calibratable (1 point)	0.450 to 0.500 cm <sup>-1</sup> , 0.585 ... 0.715 cm <sup>-1</sup> , 0.800 ... 0.880 cm <sup>-1</sup> , Standard: 0.01 mol/L KCl
	Adjustable:	0.250 ... 25.000 cm <sup>-1</sup> ; 0.090 ... 0.110 cm <sup>-1</sup>
Temperature compensation	Adjustment	Automatic/manual
	Temperature coefficient	nLF: none linear function according to EN 27 888 and ultrapure water function
		Linear compensation 0.000 ... 3.000 %/K
Handling	No Compensation	
	AutoRead	Automatic/manual
	Celsius/Fahrenheit	Yes
	Display	LCD B/W Graphic backlit
	Data memory	Manual 200 data sets
	Logger	Manual
	Power supply	4 x 1.5 V AA or 4 x 1.2 V NiMH rechargeable battery
	Continuous operating time	Up to 800 h without/ 100 h with backlight
	Sensor connector	8 Pole
Waterproof	IP67 (including battery compartment, USB ports and channels)	



- ▶ Waterproof IP67
- ▶ Reproducible results due to active automatic AutoRead function
- ▶ Data storage with output on display
- ▶ Backlit graphic display with clear text menu

Advantages  
HandyLab 200

# HandyLab 600

The portable pH IDS measuring device for the safest measuring and high operator comfort

*The HandyLab 600 increases the measuring accuracy via:*

**IDS technology (Intelligent Digital Sensor)** - The digitalization of the measuring signal eliminates interferences.

**AutoRead function** - Autoread provides a stabile, 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 600 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.

**Transmission of all data in \*.csv format** - Via USB interface to the PC. Or as an alternative, formatted transfer into Excel via MultiLabImporter (included in the delivery).



## Technical specifications

Measuring range/ resolution/ accuracy (all values +/-1 digit) depending on the kind of IDS sensor	pH	0.000 ... 14.000 +/-0.004 pH
	mV	+/- 1200.0 mV +/- 0.2 mV
	Temperature	-5.0 ... 105.0 °C +/- 0.2 °C
Calibration	Calibration points	1-, 2-, 3-, 4-, 5-Points
	Stored buffers	22 preloaded buffer sets
	Calibration memory	10 last calibrations
	Timer	1 - 999 Days
Handling	Digital: IDS Sensor	Yes for pH and ORP
	AutoRead	Automatic/manual
	Celsius/Fahrenheit	Yes
	CMC	Yes
	QSC	Yes
	Traceability of results	Yes
	Display	LCD B/W graphic backlit
	Data storage	Manually 500/automatic 5.000 data sets
	Logger	Manually/time triggered
	Interface	Mini USB-B
	Data transfer	In *.csv format via USB interface to the PC. Alternatively also transfer into Excel via MultiLab Importer (scope of delivery).
	Power supply	4 x 1.5 V AA or 4 x 1.2 V NiMH rechargeable battery
	Continuous operating time	up to 1,000 h without/ 150 h with backlight
	Sensor connector	1 x IDS
	Waterproof	IP67 (including battery compartment, USB ports and channels)



- ▶ IDS pH measuring device
- ▶ Measuring accuracy and highest operator comfort without compromise
- ▶ Waterproof design. Sealed keypad (IP67).
- ▶ 1 to 5 point calibration with 22 stored buffer sets
- ▶ Data storage with output on display and the USB interface
- ▶ Backlit graphic display with clear text menu
- ▶ Versatile application-oriented sets offered

**Advantages**  
HandyLab 600

# HandyLab 680

The portable IDS hand-held device measures two parameters simultaneously. ORP, pH, conductivity and oxygen.

*The HandyLab 680 increases the measuring accuracy via:*

**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).

- ▶ Two-channel IDS measuring device for pH/mV, conductivity and DO
- ▶ Measuring accuracy and highest operator comfort without compromise
- ▶ Waterproof design. Sealed keypad. (IP67)
- ▶ 1 to 5 point calibration with 22 stored buffer sets
- ▶ Huge data storage with output on display and to the USB interface as well to the USB memory stick
- ▶ Color backlit graphic display with clear text menu control
- ▶ Versatile application-oriented sets offered

Advanteges  
HandyLab 680



## Technical specifications

Measuring range/ resolution/ accuracy (all values +/-1 digit) depending on the kind of IDS sensor	pH	0.000 ... 14.000 +/-0.004 pH
	mV	+/- 1200.0 mV +/- 0.2 mV
	Temperature	-5.0 ... 105.0 °C +/- 0.2 °C
	Conductivity	0.00 ... 2000 mS/cm +/- 0.5 % of mean value
	Specific resistance	0.00 Ohm cm ... 100 MOhm cm +/- 0.5 % of mean value
	Salinity	0.0 ... 70.0 (IOT) +/- 0.5 % of mean value
	TDS	0 ... 1999 mg/l, 0 bis 199.9 g/l +/- 0.5 % of mean value
	DO concentration	0.00 ... 20.00 mg/l +/- 0.5 % of value
	DO saturation	0.0 ...200.0 % +/- 0.5 % of value
	DO partial pressure	0 ... 400 hPa +/- 0.5 % of value
	Calibration pH	Calibration points
Stored buffers		22 preprogrammed buffer sets
Calibration memory		10 last calibrations
Timer		1 - 999 Days
Calibration cell constant conductivity	Fixed	0.475 cm <sup>-1</sup> , 0.100 cm <sup>-1</sup> , 0.010 cm <sup>-1</sup>
	Calibratable (1 point)	0.450 to 0.500 cm <sup>-1</sup> , 0.800 ... 0.880 cm <sup>-1</sup> , Standard: 0.01 mol/L KCl
	Adjustable	0.250 ... 25.000 cm <sup>-1</sup> ; 0,090 ... 0.110 cm <sup>-1</sup>
Temperature compensation conductivity	Adjustable	Automatic/manual
	Temperature coefficient	nLF: none linear function according to EN 27 888 and ultrapure water function
		Linear compensation 0.000 ... 10.000 %/K
		No compensation
Calibration DO Handling	Calibration point	1 point in FDO check vessel
	Digital: IDS Sensor	Yes for pH, ORP, DO and conductivity
	AutoRead	Automatic/manual
	Celsius/Fahrenheit	Yes
	CMC	Yes
	QSC	Yes
	User administration	Yes
	Traceability of results	Yes
	Display	Colored graphic backlit
	Data storage	Manually 500/automatic 10,000 data sets
	Logger	Manually/time triggered
	Interface	USB-A and Mini USB-B
	Data transfer	In *.csv format via USB interface to the PC or USB-Memorystick. Alternatively also transfer into Excel via MultiLab Importer (scope of delivery).
	Power supply	4 x 1.2 V NiMH-rechargeable battery
	Continuous operating time	150h (dependent on connected sensor)
	Sensor connector	2 x IDS (any combination)
	Waterproof	IP67
	QS	Good Laboratory Practice (GLP)
	Waterproof	IP67 (including battery compartment, USB ports and channels)

## HandyLab MKII - Order information

Type Number	Order No.	Short Description	Detailed description
HL100Field	285204510	PH-METER Set HandyLab 100 Field	pH-Meter Set HandyLab 100 with pH-combination electrode BlueLine 24 pH and protective armoring Z389 for field applications *
HL100Routine	285204500	PH-METER Set HandyLab 100 Routine	pH-Meter Set HandyLab 100 with pH-combination electrode BlueLine 14 pH for routine applications *
HL100Versatile	285204520	PH-METER Set HandyLab 100 Versatile	pH-Meter Set HandyLab 100 with pH-combination electrode A7780-NTC30-DIN-N for versatile applications *
HL200PureWater	285204550	COND-METER HandyLab 200 Pure Water	Cond-meter set HandyLab 200 with conductivity cell LF313T for measurements in purified water *
HL200Routine	285204530	COND-METER HandyLab 200 Routine	Cond-meter set HandyLab 200 with conductivity cell LF613T for routine applications *
HL200Versatile	285204540	COND-METER HandyLab 200 Versatile	Cond-meter set HandyLab 200 with conductivity cell LF413T for versatile applications *
HL600Field	285204570	PH-METER Set HandyLab 600 Field	pH-Meter Set HandyLab 600 with pH-combination electrode BlueLine 24 pH IDS for field applications *
HL600Food	285204630	PH-METER Set HandyLab 600 Food	pH-Meter Set HandyLab 600 with pH-combination electrode with armoring BlueLine 21 pH IDS for cut-in measurements in food applications *
HL600LifeScience	285204600	PH-METER Set HandyLab 600 Life Science	pH-Meter Set HandyLab 600 with pH-combination electrode A157 IDS for life science applications *
HL600Routine	285204560	PH-Meter Set HandyLab 600 Routine	pH-Meter Set HandyLab 600 with pH-combination electrode BlueLine 14 pH IDS for routine applications *
HL600Science	285204590	PH-METER Set HandyLab 600 Science	pH-Meter Set HandyLab 600 with pH-combination electrode A162 IDS for demanding applications *
HL600Surface	285204610	PH-METER Set HandyLab 600 Surface	pH-Meter Set HandyLab 600 with pH-combination electrode BlueLine 27 pH IDS for measurement on surfaces *
HL600Tip	285204620	PH-METER Set HandyLab 600 Tip	pH-Meter Set HandyLab 600 with pH-combination electrode A6880 IDS for cut-in measurements *
HL600Tris	285204640	PH-METER Set HandyLab 600 Tris	pH-Meter Set HandyLab 600 with pH-combination electrode IL-pHT-A170MF-IDS for measurement in tris puffer *
HL600TrisMicro	285204650	PH-METER Set HandyLab 600 Tris Micro	pH-Meter Set HandyLab 600 with pH-combination electrode IL-Micro-pHT-IDS for measurement in tris puffer with smaller sample volume *
HL600Versatile	285204580	PH-METER Set HandyLab 600 Versatile	pH-Meter Set HandyLab 600 with pH-combination electrode A7780 IDS for versatile applications *
HL680 CondVersatile	285204760	Cond-METER Set HandyLab 680 Versatile	Cond-meter set HandyLab 680 with conductivity cell LF413T IDS and Z389 armoring for versatile applications *
HL680OxVersatile	285204770	OX-METER Set HandyLab 680 Versatile	OX-meter set HandyLab 680 with oxygen measuring cell FDO1100 IDS and Z389 armoring for versatile applications *

Type Number	Order No.	Short Description	Detailed description
HL680pH/Cond/OxVer	285204810	pH/Cond/OX-METER Set HandyLab 680 Versatile	pH/Cond/OX-meter set HandyLab 680 with oxygen measuring cell FDO1100 IDS, conductivity measuring cell LF413T IDS, pH-T-combination electrode A7780 IDS, Z530 and Z389 for versatile applications *
HL680pH/CondPW	285204780	pH/Cond-METER Set HandyLab 680 Pure Water	pH/Cond-meter set HandyLab 680 with conductivity cell LF313T IDS, pH-T-combination electrode A161 IDS, Z530 and Z389 for measurements in purified water **
HL680pH/CondVersat	285204790	pH/Cond-METER Set HandyLab 680 Versatile	pH/Cond-meter set HandyLab 680 with conductivity cell LF413T IDS, pH-T-combination electrode A7780 IDS, Z530 and Z389 for versatile applications **
HL680pH/OxVersat	285204800	pH/OX-METER Set HandyLab 680 Versatile	pH/OX-meter set HandyLab 680 with oxygen measuring cell FDO1100 IDS, pH-T-combination electrode A7780 IDS, Z530 and Z389 for versatile applications *
HL680pHField	285204670	PH-METER Set HandyLab 680 Field	pH-Meter Set HandyLab 680 with pH-T-combination electrode BlueLine 24 pH IDS and Z389 armoring for field applications *
HL680pHFood	285204730	PH-METER Set HandyLab 680 Food	pH-Meter Set HandyLab 680 with pH-combination electrode with armoring BlueLine 21 pH IDS and Z389 for cut-in measurements in food applications *
HL680pH LifeScience	285204700	PH-METER Set HandyLab 680 Life Science	pH-Meter Set HandyLab 680 with pH-T-combination electrode A157 IDS and Z389 armoring for life science applications *
HL680pHRoutine	285204660	PH-Meter Set HandyLab 680 Routine	pH-Meter Set HandyLab 680 with pH-T-combination electrode BlueLine 14 pH IDS and Z389 armoring for routine applications *
HL680pHScience	285204690	PH-METER Set HandyLab 680 Science	pH-Meter Set HandyLab 680 with pH-T-combination electrode A162 IDS and Z389 armoring for demanding applications *
HL680pHSurface	285204710	PH-METER Set HandyLab 680 Surface	pH-Meter Set HandyLab 680 with pH-T-combination electrode BlueLine 27 pH IDS and Z389 for measurement on surfaces *
HL680pHTip	285204720	PH-METER Set HandyLab 680 Tip	pH-Meter Set HandyLab 680 with pH-T-combination electrode A6880 IDS and Z389 armoring for cut-in measurements *
HL680pHTris	285204740	PH-METER Set HandyLab 680 Tris	pH-Meter Set HandyLab 680 with pH-T-combination electrode IL-pHT-A170MF-IDS and Z389 for measurement in tris puffer *
HL680pHTrisMicro	285204750	PH-METER Set HandyLab 680 Tris Micro	pH-Meter Set HandyLab 680 with pH-T-combination electrode IL-Micro-pHT-IDS and Z389 armoring for measurement in tris puffer with smaller sample volume *
HL680pHVersatile	285204680	PH-METER Set HandyLab 680 Versatile	pH-Meter Set HandyLab 680 with pH-T-combination electrode A7780 IDS and Z389 for versatile applications *
Z389	285202470	Protective armoring Z389	Protective armoring Z389 for HandyLab 100/200/600/680
Z530	285202480	Case for multi electrode storing for HL680	Case Z530 incl. Z389, buffer and conductivity testing solutions for storing several electrodes and the multi parameter instrument HandyLab 680

**Note:**

All sets include a practical case. There are two different cases available, depending on the set.

\* Standard case

\*\* Extra large case with the possibility to transport even more electrodes (Z530)

# IDS Sensors

## The intelligent Sensors

When determining the pH value, there are very high requirements of the sensor and the transmission of the measuring value from the sensor to the measuring device. The sensitive measuring signals and very high interior resistors of the sensors require a very complex shielded signal transfer to the measuring device in analog systems. If there is moisture present on the contacts, this can change the measuring value all the way to a complete failure of the measurement. This risk is eliminated by the IDS technology. The measuring value is processed in the sensor, then digitalized and transmitted to the device without interference.

When the IDS sensors are connected to the measuring device, they automatically identify themselves with their serial numbers and type designation and transmit their calibration data to the device. With conventional systems, the sensor must be calibrated with every sensor change, as the calibration data is merely saved in the devices and is only available with the combination device-sensor. The IDS concept helps here as well due to its calibration, which is saved in the sensor. Every sensor brings along its own calibration. There is no mandatory calibration when the sensor is changed in order to obtain a safe measurement.

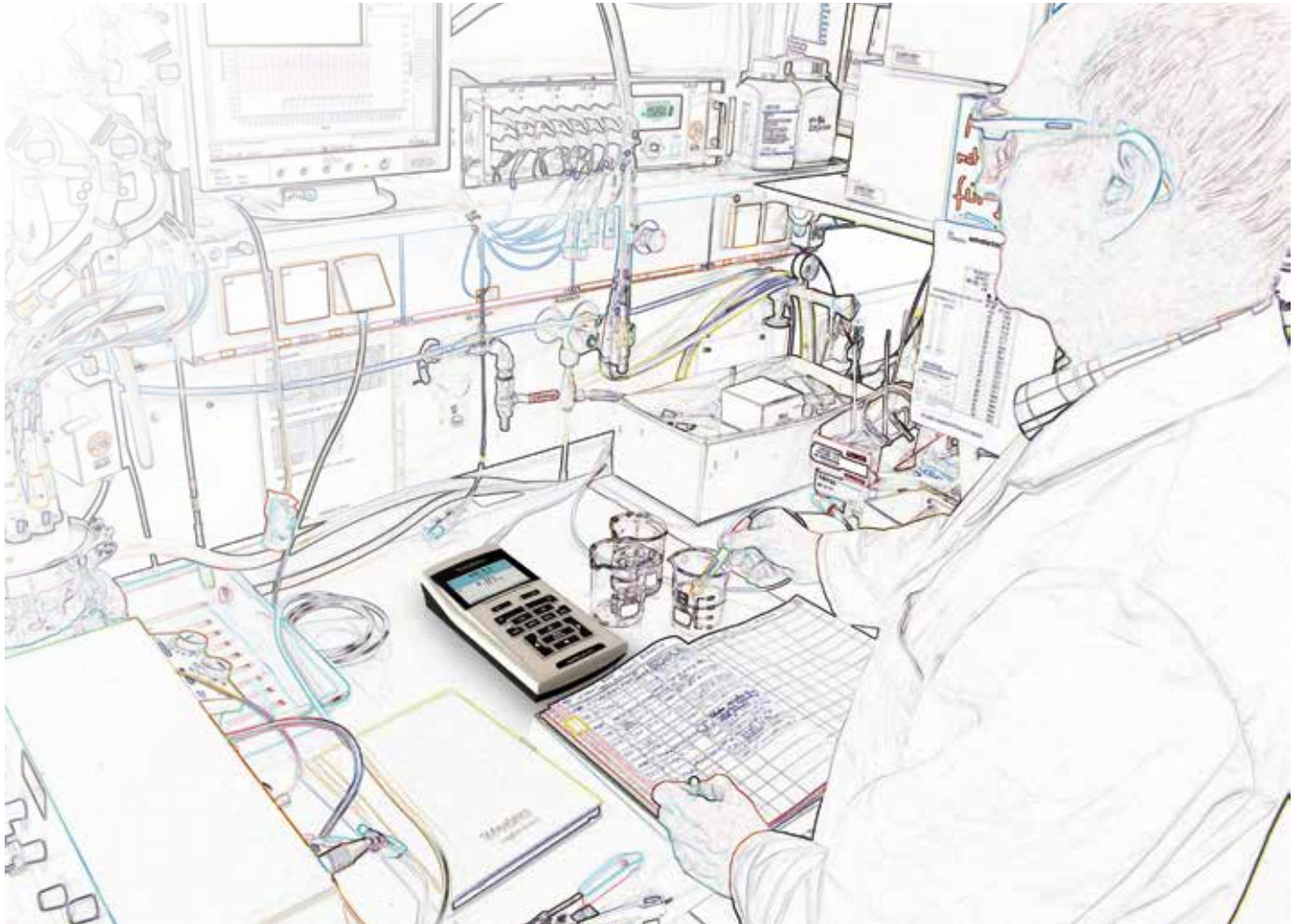
The already proven analog SI Analytics sensors are used as sensors. The possibility to distinguish between sensors of the same type by their serial numbers allows the easy allocation and documentation of electronically recorded and saved measurement results.

Storing the calibration data in the sensor head provides many advantages for the user outside the laboratory, especially in connection with portable devices. For instance, many samplers carry a number of sensors with them to cover their measurement tasks. Contrary to conventional systems, there is no longer the need to calibrate the sensor onsite every time it needs to be changed.



# IDS Sensors





- ▶ The measuring signals are transmitted without interference
- ▶ Perfect galvanized separation
- ▶ Resistant against environmental influences
- ▶ Allows prognostic maintenance of the sensors by the intelligent sensor evaluation QSC
- ▶ Effortless allocation and documentation of the sensor to electronically captured and saved calibration results
- ▶ Highest possible operator comfort and measuring accuracy.

Advanteges  
IDS Electrodes

## IDS Electrodes - Order Information

Type No	Order No	Short description	Detailed description
A 157 IDS	285100080	pH combination electrode A 157 IDS for Life Science applications	microelectrode, glass shaft, Pt junction, electrolyte KCl 3 mol/l, Silamid® reference, temp. sensor NTC 30 kOhm, cylindrical membrane, A glass, 1.5 m fixed cable with digital plug, length 200 (70/130) mm, 12/5 mm Ø, -5...+100 °C, 0...14 pH
A 161 IDS	285100090	pH combination electrode A 161 IDS for demanding applications	glass shaft, Pt junction, electrolyte KCl 3 mol/l, Silamid® reference, temp. sensor NTC 30 kOhm, sphere membrane, A glass, 1.5 m fixed cable with digital plug, length 170 mm, 12 mm Ø, -5...+100 °C, 0...14 pH
A 162 IDS	285100120	pH combination electrode A 162 IDS for demanding applications	glass shaft, Pt junction, electrolyte KCl 3 mol/l, Silamid® reference, temp. sensor NTC 30 kOhm, sphere membrane, A glass, 1.5 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+100 °C, 0...14 pH
A 6880 IDS	285100100	pH combination electrode A 6880 IDS with integrated temperature sensor for cut-in measurements in food applications	Glass shaft, spear electrode, temp. sensor NTC 30 kOhm, 1.5 m fixed cable with digital plug, 3 x ceramic junction, electrolyte KCl 3 mol/l, Silamid®-reference system, spear membrane, A-glass, length 120 (70/50) mm, 12/8 mm Ø, -5...+80 °C, 0...14 pH
A 7780 IDS	285101080	pH combination electrode A 7780 IDS for versatile applications	Glass shaft, 3 x ceramic junction, gel electrolyte, Silamid®-reference system, temperature sensor NTC 30 kOhm, sphere membrane, A-glass, 1.5 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+80 °C, 0...14 pH
BlueLine 14 pH IDS	285129140	pH combination electrode BlueLine 14 pH IDS for routine applications	Glass shaft, platinum junction, electr. KCl 3 mol/l, Ag/AgCl-reference system, temp.-sensor NTC 30 kOhm, cone membrane, A-glass, 1.5 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+100° C, 0...14 pH
BlueLine 21 pH IDS	285129210	pH combination electrode BlueLine 21 pH IDS for cut-in measurements in food applications	Plastic shaft, hole-junction, Referid® electrolyte, Ag/AgCl-reference system, spear membrane, A-glass, 1.5 m fixed cable with digital plug, length 90 (65/25) mm, 12/5 mm Ø, -5...+80 °C, 2...13 pH
BlueLine 24 pH IDS	285129240	pH combination electrode BlueLine 24 pH IDS for field applications	Plastic shaft, fibre-junction, gel electrolyte, Ag/AgCl-reference system, temp.-sensor NTC 30 kOhm, cylinder membrane, A glass, 1.5 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+80 °C, 0...14 pH
BlueLine 24-3 pH IDS	285129243	pH combination electrode BlueLine 24-3 pH IDS for field applications	Plastic shaft, fibre-junction, gel electrolyte, Ag/AgCl-reference system, temp.-sensor NTC 30 kOhm, cylinder membrane, A glass, 3 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+80 °C, 0...14 pH
BlueLine 27 pH IDS	285129270	pH combination electrode BlueLine 27 pH IDS for surface measurements	Glass shaft, KPG-annular-gap-junction, Referid® electrolyte, Ag/AgCl-reference system, temp.-sensor NTC 30 kOhm, flat membrane, L glass, 1.5 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+50 °C, 2...13 pH
BlueLine 31 RX IDS	285129310	ORP combination electrode BlueLine 31 RX IDS for routine applications	Glass shaft, ceramic junction, electrolyte KCl 3 mol/l, Ag/AgCl-reference system, temp.-sensor NTC 30 kOhm, sensor platinum disk 4 mm Ø, 1.5 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+100 °C

Type No	Order No	Short description	Detailed description
BlueLine 32 RX IDS	285129321	ORP combination electrode BlueLine 32 RX IDS for field applications	Plastic shaft, fibre-junction, gel electrolyte, Ag/AgCl-reference system, temp.-sensor NTC 30 kOhm, sensor platinum pin 1 mm Ø, 1.5 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+80 °C
BlueLine 32-3 RX IDS	285129323	ORP combination electrode BlueLine 32-3 RX IDS for on-site applications	Plastic shaft, fibre-junction, gel electrolyte, Ag/AgCl-reference system, temp.-sensor NTC 30 kOhm, sensor platinum pin 1 mm Ø, 3 m fixed cable with digital plug, length 120 mm, 12 mm Ø, -5...+80 °C
FDO11003MIDS	285202450	Optical oxygen measuring electrode FDO 1100 3M IDS for versatile applications	IDS® optical oxygen sensor (photoluminescence), plastic shaft, temperature sensor NTC30kOhm, 3 m fixed cable with digital plug, length 150 mm, 15.3 mm Ø, 0...+50 °C
FDO1100IDS	285202440	Optical oxygen measuring electrode FDO 1100 IDS for versatile applications	IDS® optical oxygen sensor (photoluminescence), plastic shaft, temperature sensor NTC30kOhm, 1.5 m fixed cable with digital plug, length 150 mm, 15.3 mm Ø, 0...+50 °C
IL-Micro-pHT-IDS	285100150	pH combination electrode IL-Micro-pHT-IDS for measurements in tris buffer or protein-containing samples with low volume	Glass shaft, micro electrode, temp. sensor NTC 30 kOhm, 1.5 m fixed cable with digital plug, Pt junction, electrolyte KCl 3 mol/l, Iodine/Iodide-reference system, cylindrical membrane, A glass, length 200 (70/130) mm, 12/5 mm Ø, -5...+100 °C, 0...14 pH
IL-pHT-A120MF-IDS	285100130	pH combination electrode IL-pHT-A120MF-IDS for measurements in tris buffer or protein-containing samples	Glass shaft, temp. sensor NTC 30 kOhm, 1.5 m fixed cable with digital plug, Pt junction, electrolyte KCl 3 mol/l, Iodine/Iodide-reference system, sphere membrane, A-glass, length 120 mm, 12 mm Ø, -5...+100 °C, 0...14 pH
IL-pHT-A170MF-IDS	285100140	pH combination electrode IL-pHT-A170MF-IDS for measurements in tris buffer or protein-containing samples	Glass shaft, temp. sensor NTC 30 kOhm, 1.5 m fixed cable with digital plug, Pt junction, electrolyte KCl 3 mol/l, Iodine/Iodide-reference system, sphere membrane, A-glass, length 170 mm, 12 mm Ø, -5...+100 °C, 0...14 pH
IL-Sp-pHT-IDS	285100160	pH combination electrode IL-Sp-pHT-IDS with integrated temperature sensor for cut-in measurements in protein-containing food applications	Glass shaft, spear electrode, temp.sensor NTC 30 kOhm, 1.5 m fixed cable with digital plug, 3 x ceramic junction, electrolyte KCl 3 mol/l, Iodine/Iodide-reference system, A-glass, length 120 (70/50) mm, 12/8 mm Ø, -5...+100 °C, 0...14 pH
LF313TIDS	285202430	Conductivity cell LF313T IDS for measurements in pure water	IDS® Ultrapure water cond. cell including flow through device, stainless steel shaft, 1.5 m cable with digital plug, sensor stainless steel, cell constant 0.1 cm <sup>-1</sup> , temp.-sensor NTC 30 kOhm, length 120 mm, 12 mm Ø, -5...+80 °C
LF413T3MIDS	285202420	Conductivity cell LF413T 3M IDS for versatile applications	IDS® 4 pole cell, plastic shaft, 3 m cable with digital plug, sensor material graphite, cell constant 0.475 cm <sup>-1</sup> , temp.-sensor NTC 30 kOhm, length 120 mm, 15.3 mm Ø, -5...+80 °C
LF413TIDS	285202410	Conductivity measuring cell LF413T IDS for versatile applications	IDS® 4 pole cell, plastic shaft, 1.5 m cable with digital plug, sensor material graphite, cell constant 0.475 cm <sup>-1</sup> , temp.-sensor NTC 30 kOhm, length 120 mm, 15.3 mm Ø, -5...+80 °C
OX930	285202460	Exchange head OX 930	Exchange head OX 930 for oxygen sensor FDO 1100 IDS

# IDS Sensors - Application overview



Application area

Sample type

Type	Measuring Function	Application Range	Construction
A 157 IDS	pH micro cylinder + Temp.	-5..100°C; pH 0-14	Pt Junct., Electr. KCl 3 mol/l, Silamid® Ref., Temp. Sensor NTC 30 kOhm, A Glass, 1.5 m fixed cable, length 200 (70/130) mm, 12/5 mm Ø
A 161/ 162 IDS	pH sphere + Temp.	+10..100°C; pH 0-14	Pt Junct., Electr. KCl 3 mol/l, Silamid® Ref., Temp. Sensor NTC 30 kOhm, A Glass, 1.5 m fixed cable, length 120 (A162) mm/ 170 mm (A161), 12 mm Ø
A 6880 IDS	pH spear + Temp.	-5..100°C; pH 0-14	3 x Ceramic Junct., Electr. KCl 3 mol/l, Silamid® Ref., Temp. Sensor NTC 30 kOhm, 1.5 m fixed cable, A Glass, length 120 (70/50) mm, 12/8 mm Ø
A 7780 IDS	pH sphere + Temp.	-5..80°C; pH 0-14	3 x Ceramic Junct., Gel Electr., Silamid®-Ref., Temp. Sensor NTC 30 kOhm, A Glass, 1.5 m fixed cable, length 120 mm, 12 mm Ø
BL 14 pH IDS	pH cone + Temp.	-5..100°C; pH 0-14	Pt Junct., Electr. KCl 3 mol/l, Ag/AgCl-Ref., Temp. Sensor NTC 30 kOhm, A Glass, 1.5 m fixed cable, length 120 mm, 12 mm Ø
BL 21 pH IDS	pH spear	-5..80°C; pH 2-13	Plastic shaft, hole Junct., Referid® Electr., Ag/AgCl-Ref., A Glass, 1.5 m fixed cable, length 90 (65/25) mm, 12/5 mm Ø
BL 24/ 24-3 pH IDS	pH cylinder	-5..80°C; pH 0-14	Plastic shaft, fibre Junct., Gel Electr., Ag/AgCl-Ref., Temp. Sensor NTC 30 kOhm, A Glass, 1.5 m/3 m fixed cable, length 120 mm, 12 mm Ø
BL 27 pH IDS	pH flat	-5..50°C; pH 2-13	KPG-annular gap Junct., Referid® Electr., Ag/AgCl-Ref., Temp. Sensor NTC 30 kOhm, L Glass, 1.5 m fixed cable, length 120 mm, 12 mm Ø
BL 31 RX IDS	ORP platinum disk, 4mm Ø + Temp.	-5..100°C	Ceramic Junct., Electr. KCl 3 mol/l, Ag/AgCl-Ref., Temp. Sensor NTC 30 kOhm, 1.5 m fixed cable, length 120 mm, 12 mm Ø
BL 32/ 32-3 RX IDS	ORP platinum pin, 1 mm Ø + Temp.	-5..80°C	Plastic shaft, fibre Junct., Gel Electr., Ag/AgCl-Ref., Temp. Sensor NTC 30 kOhm, 1.5 m/3 m fixed cable, length 120 mm, 12 mm Ø
FDO 1100/ 1100 3M IDS	oxygen optical (photoluminescence) + Temp.	0..50°C	Plastic shaft, Temperatursensor NTC30kOhm, 1.5 m/3 m fixed cable, length 150 mm, 15.3 mm Ø
IL-Micro-pHT-IDS	pH micro cylinder + Temp.	-5..100°C; pH 0..14	Pt Junct., Electr. KCl 3 mol/l, Iodine/Iodide-Ref., A Glass, Temp. Sensor NTC 30 kOhm, 1.5 m fixed cable, length 200 (70/130) mm, 12/5 mm Ø
IL-pHT-A120/ 170 MF-IDS	pH sphere + Temp.	-5..100°C; pH 0..14	Pt Junct., Electr. KCl 3 mol/l, Iodine/Iodide-Ref., A-Glass, Temp. Sensor NTC 30 kOhm, 1.5 m fixed cable, length 120 mm/170 mm, 12 mm Ø
IL-Sp-pHT-IDS	pH spear + Temp.	-5..100°C; pH 0..14	3 x Ceramic Junct., Electr. KCl 3 mol/l, Iodine/Iodide-Ref., A-Glass, Temp. Sensor NTC 30 kOhm, 1.5 m fixed cable, length 120 (70/50) mm, 12/8 mm Ø
LF313T IDS	conductivity stainless steel + Temp.	-5..80°C; 0..0.2 mS/cm	Cond. cell including flow through device, 1.5 m fixed cable, cell const. 0.1 cm <sup>-1</sup> , Temp. Sensor NTC 30 kOhm, length 120 mm, 12 mm Ø
LF 413T/ 413T 3M IDS	conductivity graphite + Temp.	-5..80°C; 1..2000 mS/cm	4 pole cond cell, Plastic shaft, 1.5 m/3 m fixed cable, cell const. 0.475 cm <sup>-1</sup> , Temp. Sensor NTC 30 kOhm, length 120 mm, 15,3 mm Ø

Agriculture	Beverage	Chemistry	Cosmetics	Dairy	Education	Field measurements	Food production	General Laboratory	Pharmacy, biology, biotechnology, medicine, microbiology	Surface	Water
Ground (extract/slug)											
Fertilizer solution											
Vegetables											
Beer											
Lemonades/soda											
Mineral water											
Juice											
Spirits											
Wine											
Etching and decreasing baths											
Dispersion paint											
Emulsions, partly water-based											
Paint/varnish, water-soluble											
Fixing bath											
Varnish, partly water-based											
Lye, extreme											
Organic percentile high											
Paper extract											
Sulphide containing liquid											
Suspension, water-based											
Viscose samples											
General purpose											
Emulsions - cosmetics, oil											
Butter											
Yoghurt											
Cheese											
Milk											
Cream											
Economic											
General purpose											
Research Grade											
Stream											
Ground water											
Lake water											
Seawater											
Rain water											
Bread/dough/pastry											
Vinegar											
Fish											
Meat											
Honey											
Margarine											
Jam/marmelade											
Mayonnaise											
Sausage											
General purpose											
High ionic strength - extrem pH											
Titration											
Harsh environment: rugged use											
Low maintenance											
Non-aqueous - solvents, alcohols											
Agar-agar gel											
Enzyme solution											
Small vessels/sample quantity											
Bacteria cultures											
Precision measurement											
Protein containing liquid											
Serum											
Tris Buffer											
Skin											
Leather											
Paper											
Textiles											
Waste water: general											
Deminalization/ion exchanger											
Condensate											
Purity water											
Salt solution											
Drinking water											
Drops											

# SI Analytics

a **xylem** brand

Our company name - SI Analytics - already expresses our core competency - the manufacturing of analysis equipment. Furthermore, SI stands for the main products of our company: Sensors and Instruments.

We have risen from the history of SCHOTT® AG and SI Analytics can offer 75 years of experience in glass technology and the development of analysis equipment. We will continue to develop and manufacture our products with the highest requirements of innovation and quality.

## **Only the name will change - the quality will remain!**

We have been an independent enterprise for over 40 years, and as a former subsidiary of SCHOTT® AG, we continue to value tradition and manufacture in the footsteps of traditional Mainz glass manufacturers.

Our electrodes, meters, titrators and capillary viscosimeters will continue to have their home in areas, where the know-how in analytic measurement technology is in demand.

SI Analytics has been part of the listed company Xylem Inc. since 2011, which is headquartered in Rye Brook / N.Y., USA. Xylem is a leading worldwide provider of problem solutions regarding water.

1973



SCHOTT  
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SCHOTT  
Instruments

SI Analytics

2013

# We are Xylem Analytics

Xylem consists of three business sectors - Water Solutions, Applied Water Systems and Analytics. The following companies make up Xylem Analytics and act like SI Analytics in the chemical, pharmaceutical, biotechnological, food and plastics industries.

## Bellingham & Stanley

For almost a century, Bellingham + Stanley has been the leader in the field of:

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- Polarimeters
- Certified Reference Materials

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## ebro

ebro has been servicing the scientific world with innovative temperature measurement solutions for over forty years and today, customer feedback still plays an important role within the business model. To ebro, customer care not only means supporting existing product and software; it also means being able to provide custom solutions within their field of excellence too!

- Precision thermometers
- Food Safety test kits
- Frying oil monitors
- Humidity, vacuum & temperature dataloggers
- Portable digital refractometers

[www.ebro.com](http://www.ebro.com)



## OI Analytical

Since 1963 OI Analytical has been providing innovative products used for chemical analysis and is a key supplier of sample preparation and turn-key analytical solutions for testing food products and water for chemical contaminants.

Beverage & water analyses include the determination of:

- Total Organic Carbon (TOC) & cyanide
- Organophosphorus & organochlorine pesticides
- Volatile Organic Compounds (VOCs)

Sample preparation for food and fruit analyses include:

- Antibiotics & mycotoxins
- Organophosphorus pesticides
- Organochlorine pesticides

[www.oico.com](http://www.oico.com)



Furthermore, Xylem Analytics comprises:



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# What can Xylem do for you?

We're 12,700 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

**For more information on how Xylem can help you, go to [www.xylem.com](http://www.xylem.com)**

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