



HandyLab MKII

THE NEW HANDYLAB GENERATION - AVAILABLE WITH IDS



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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





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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 μ S/cm, K= 0.01 cm ⁻¹ +/- 0,5 % of the mean value 0.00 ... 19.99 μ S/cm, K= 0.010 cm ⁻¹ ; K=0.100 cm ⁻¹ +/- 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 |
| Calibratable (1 point) | | 0.450 to 0.500 cm ⁻¹ , 0.585 ... 0.715 cm ⁻¹ , 0.800 ... 0.880 cm ⁻¹ , Standard: 0.01 mol/L KCl |
| Adjustable: | | 0.250 ... 25.000 cm ⁻¹ ; 0.090 ... 0.110 cm ⁻¹ |
| 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 No Compensation |
| Handling | 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

Advantages
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 ⁻¹ , 0.100 cm ⁻¹ , 0.010 cm ⁻¹ |
| | Calibratable (1 point) | 0.450 to 0.500 cm ⁻¹ , 0.800 ... 0.880 cm ⁻¹ , Standard: 0.01 mol/L KCl |
| | Adjustable | 0.250 ... 25.000 cm ⁻¹ ; 0,090 ... 0.110 cm ⁻¹ |
| 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, pHT-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, pHT-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, pHT-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, pHT-combination electrode A7780 IDS, Z530 and Z389 for versatile applications * |
| HL680pHField | 285204670 | PH-METER Set HandyLab 680 Field | pH-Meter Set HandyLab 680 with pHT-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 pHT-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 pHT-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 pHT-combination electrode A162 IDS and Z389 armoring for demanding applications * |
| HL680pHSurface | 285204710 | PH-METER Set HandyLab 680 Surface | pH-Meter Set HandyLab 680 with pHT-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 pHT-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 pHT-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 pHT-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 pHT-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.

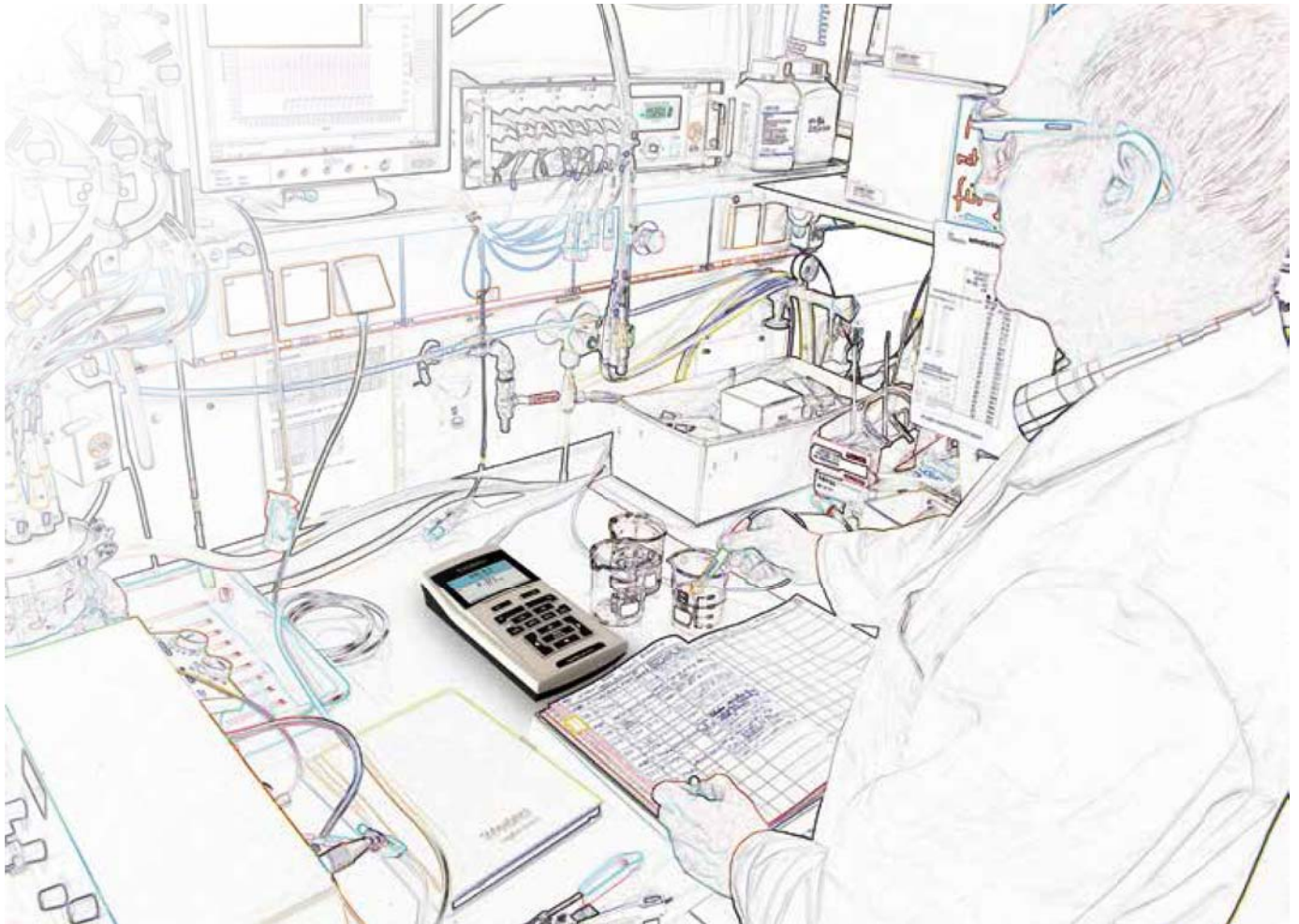
Storing the calibration data in the sensor head provides many advantages for the user outside the laboratory, especially in connection with portable devices. For instance, many samplers carry a number of sensors with them to cover their measurement tasks. Contrary to conventional systems, there is no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

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.



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 ⁻¹ , 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 ⁻¹ , 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 ⁻¹ , 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 ⁻¹ , 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 ⁻¹ , 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 degreasing 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 | | | | | | | | | | | |

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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.

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- Organophosphorus & organochlorine pesticides
- Volatile Organic Compounds (VOCs)

Sample preparation for food and fruit analyses include:

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- Organophosphorus pesticides
- Organochlorine pesticides

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