

SI Analytics

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1.2 HandyLab 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.
- ▶ Specially 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.
- ▶ IP67
- ▶ 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.

**Benefits
HandyLab MKII**



HandyLab 680

HandyLab 680

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	■	■	■	■

1.2.1 HandyLab 100

The portable allrounder 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 is ready for 1- to 5-point calibrations and offers 22 pre-stored buffer sets



Technical data

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



- ▶ Designed for mobile use
- ▶ 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

Benefits
HandyLab 100

1.2.2 HandyLab 200

The portable Allrounder for conductivity measurements

Due to the wide selection of 2 and 4 pole measuring cells made by SIAnalytics, 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.



Technical data

Measuring range/ resolution/ accuracy (all values +/- 1 digit)	Conductivity	0.0 ... 1000 mS/cm +/- 0.5 % from average 0.000 ... 1.999 µS/cm, K= 0.01 cm ⁻¹ +/- 0,5 % of the mean value
	Specific resistance	0.00 ... 19.99 µS/cm, K= 0.010 cm ⁻¹ ; K=0.100 cm ⁻¹ +/- 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



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

Benefits
HandyLab 200

1.2.3 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 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 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 data

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	LCDB/W graphic backlight
	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
- ▶ 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

Benefits
HandyLab 600

1.2.4 HandyLab 680

The portable pH IDS meter with two connectors for simultaneously measurement of pH, LF and DO

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).

Color graphic display - with clear text menu control. The display color corresponds with the color of the sensor plug which prevents the user from unplugging the wrong sensor from the device.



- ▶ Two-channel IDS measuring device for pH/mV, conductivity and DO
- ▶ 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 as to the USB memory stick
- ▶ Color backlit graphic display with clear text menu control
- ▶ Versatile application-oriented sets offered

Benefits
HandyLab 680

Technical data

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	1-, 2-, 3-, 4-, 5-Point
	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	Calibration point	1 point in FDO check vessel
Handling	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	

1.2.5 Ordering information - HandyLabMKII

Type Number	Order No.	Short Description	Detailed description
HL100Field	285204510	PH-METERSet HandyLab 100 Field	pH-Meter Set HandyLab 100 with pH-T-combination electrode BlueLine 24 pH and protective armoring Z389 for field applications *
HL100Routine	285204500	PH-METERSet HandyLab 100 Routine	pH-Meter Set HandyLab 100 with pH-T-combination electrode BlueLine 14 pH for routine applications *
HL100Versatile	285204520	PH-METERSet HandyLab 100 Versatile	pH-Meter Set HandyLab 100 with pH-T-combination electrode A7780-NTC30-DIN-N for versatile applications *
HL200PureWater	285204550	COND-METERHandyLab 200 Pure Water	Cond-meter set HandyLab 200 with conductivity cell LF313Tfor measurements in purified water*
HL200Routine	285204530	COND-METERHandyLab 200 Routine	Cond-meter set HandyLab 200 with conductivity cell LF613T for routine applications *
HL200Versatile	285204540	COND-METERHandyLab 200 Versatile	Cond-meter set HandyLab 200 with conductivity cell LF413T for versatile applications *
HL600Field	285204570	PH-METERSet HandyLab 600 Field	pH-Meter Set HandyLab 600 with pH-T-combination electrode BlueLine 24 pH IDSfor field applications*
HL600Food	285204630	PH-METERSet 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-METERSet HandyLab 600 Life Science	pH-Meter Set HandyLab 600 with pH-T-combination electrode A157 IDS for life science applications *
HL600Routine	285204560	PH-Meter Set HandyLab 600 Routine	pH-Meter Set HandyLab 600 with pH-T-combination electrode BlueLine 14 pH IDSfor routine applications *
HL600Science	285204590	PH-METERSet HandyLab 600 Science	pH-Meter Set HandyLab 600 with pH-T-combination electrode A162 IDS for demanding applications *
HL600Surface	285204610	PH-METERSet HandyLab 600 Surface	pH-Meter Set HandyLab 600 with pH-T-combination electrode BlueLine 27 pH IDSfor measurement on surfaces *
HL600Tip	285204620	PH-METERSet HandyLab 600 Tip	pH-Meter Set HandyLab 600 with pH-T-combination electrode A6880 IDS for cut-in measurements *
HL600Tris	285204640	PH-METERSet HandyLab 600 Tris	pH-Meter Set HandyLab 600 with pH-T-combination electrode IL-pHT-A170MF-IDS for measurement in tris puffer *
HL600TrisMicro	285204650	PH-METERSet HandyLab 600 Tris Micro	pH-Meter Set HandyLab 600 with pH-T-combination electrode IL-Micro-pHT-IDS for measurement in trispuffer with smaller sample volume *
HL600Versatile	285204580	PH-METERSet HandyLab 600 Versatile	pH-Meter Set HandyLab 600 with pH-T-combination electrode A7780 IDSfor versatile applications *
HL680 CondVersatile	285204760	Cond-METERSet HandyLab 680 Versatile	Cond-meter set HandyLab 680 with conductivity cell LF413T IDS and Z389 armoring for versatile applications *
HL680OxVersatile	285204770	OX-METERSet HandyLab 680 Versatile	OX-meter set HandyLab 680 with oxygen measuring cell FDO1100 IDS and Z389 armoring for versatile applications *

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)

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 LF313TIDS, 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 LF413TIDS, 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-METERSet 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-METERSet 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-METERSet 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-METERSet HandyLab 680 Science	pH-Meter Set HandyLab 680 with pH-T-combination electrode A162 IDS and Z389 armoring for demanding applications *
HL680pHSurface	285204710	PH-METERSet 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-METERSet 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-METERSet 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-METERSet 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-METERSet 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

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