Laboratory pH Meters, METTLER TOLEDO

① **SevenEasy pH, basic pH meter**
The entry model for routine pH measurements with high functionality:
- 3-point calibration with automatic buffer recognition
- 3 preprogrammed buffer sets and 1 freely definable buffer set
- Automatic or manual temperature compensation
- Automatic or manual measured data collection
- Simultaneous indication of pH/mV and temperature as well as electrode condition (zero point, gradient) and the calibrating buffers used
- RS232 interface
- With electrode arm, free standing or for fitting o the left or right
- Mains or battery operation
- 21 CFR Part 11 conform

② **SevenEasy conductivity, basic conductometer**
The entry model for conductivity measurements with high functionality:
- 1-point calibration with automatic recognition of the calibrating standard (84 µS/cm, 14.13 µS/cm, 12.88 mS/cm)
- Specification of the calculated cell constants
- Entry of known cell constants
- 2-pole or 4-pole cells can be used
- Selectable reference temperature (20 or 25°C)
- Linear or non-linear temperature compensation
- Temperature compensation can be deactivated for measurements according to USP <645>
- Automatic or manual measured value collection
- Simultaneous indication of conductivity and ttemperature as well as cell constants and calibrating standard used
- Selectable measured value: conductivity, salinity, TDS
- RS232 interface
- With electrode arm, free standing or for fitting on the the left or right
- Mains or battery operation
- 21 CFR Part 11 conform

SevenMulti high-performance instruments
SevenMulti is a modular system for measuring pH value/Redox potential, conductivity/salinity/TDS and ion concentration. The basic instrument can be combined as required with up to 2 measuring modules. The high flexibility and functionality of the components satisfy all requirements imposed on a high-performance laboratory instrument. Upgrading into a 2-channel instrument is possible at any time

SevenMulti basic instrument
This instrument provides extensive functions for user-friendly working with all measurement variables.
- Backlit graphics-capable dot matrix display
- Easy-to-understand plain text user prompting with Help menu in various languages (German/English/French/Italian/Spanish)
- Bidirectional RS232 interface, optional USB interface
- Optional TTL interface for control of stirrers and sample changers
- Password protected GLP menu
- Alphanumeric entry of instrument, user and sample ID
- IDs can also be read in with an optional barcode reader
- Programmable upper/lower limit values
- Data memory per measurement channel for 10 calibrations, 10 methods and 1000 measured values
- Data logger (data storage manual or interval-controlled)
- Manual, automatic or time-controlled measured value collection
- Calibrating timer (time-controlled or according to number of collected measured values)
- Graphic presentation of the last 25 measured values with limit values
- Graphic presentation of the sensor characteristic curve

SevenMulti pH module
Expansion module for measuring pH value and Redox potential
- Automatic 1- to 9-point calibration
- 5 preprogrammed buffer sets
- 1 freely programmable buffer set
- Selectable resolution 0.1/0.01/0.001 pH
- Relative mV measuring mode for Redox measurement
- Automatic temperature compensation with Pt1000 or NTC 30 kΩ

SevenMulti conductivity module
Expansion module for measuring conductivity, salinity, TDS and specific resistance
- 1-point calibration with automatic recognition of the cailbrating standard (84 µS/cm, 14.13 µS/cm, 12.88 mS/cm, NaCl saturated, user-defined)
- Specification of the calculated cell constants
- Entry of known cell constants
- 2-pole or 4-pole cells can be used
- Selectable reference temperature (20 or 25°C)
- Linear or non-linear temperature compensation
- Temperature compensation can be deactvated for measurement according to USP <645>
- USP <645> table stored, programmable USP factor

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SevenMulti pH/ion concentration module
Expansion module for measuring concentration with ion-selective and gas-sensitive electrodes as well as pH value and Redox potential. Same feature as the pH module, plus:
- 2- to 9-point calibration for concentration determination
- Storage of calibrating data with sensor ID and serial number for up to 10 sensors
- Measuring methods: direct potentiometry, standard addition/subtraction, sample addition/subtraction

SevenMulti pH/ISFET module
Expansion module for measuring the pH value with ISFET sensors (InLab® 490)
(ISFET = ion-selective field effect transistor)

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Article	Order No.
SevenEasy pH S20	**61 50 02803**

Instrument incl. electrode arm, mains adapter, operating manual

Article	Order No.
① **SevenEasy pH S20-KS**	**61 50 02863**

Instrument incl. electrode arm, InLab® 410 pH electrode, AS-MP/1.2m/BNC/Cinch electrode cable, pH 4.01/7.00/9.21 buffer solution (each 2 × 30 ml in a sealed-edge bag), mains adapter, pH guide, operating manual

Article	Order No.
SevenEasy LF S30	**61 50 02805**

Instrument incl. electrode arm, mains adapter, operating manual

③

Article	Order No.
② **SevenMulti S30-K**	**61 50 02806**

Instrument incl. electrode arm, InLab® 730 4-pole conductivity sensor, with fixed cable, 14.13 µS/cm and 12.88 mS/cm calibrating standards (each 2 × 30 ml in a sealed-edge bag), mains adapter, conductivity guide, operating manual

Article	Order No.
SevenMulti pH S40	**61 50 02807**

Basic instrument with pH module incl. electrode arm, mains adapter, operating manual

Article	Order No.
③ **SevenMulti pH S40-KS**	**61 50 02864**

Basic instrument with pH module incl. electrode arm, InLab® 410 pH electrode, AS-MP/1.2m/BNC/Cinch electrode cable, pH 4.01/7.00/9.21 buffer solution (each 2 × 30 ml in a sealed-edge bag), mains adapter, pH guide, operating manual

④

Article	Order No.
SevenMulti LF S70	**61 50 02809**

Basic unit with conductivity module incl. electrode arm, mains adapter, operating manual

Article	Order No.
④ **SevenMulti S70-K**	**61 50 02810**

Basic instrument with conductivity module incl. electrode arm, InLab® 730 4-pole conductivity sensor, 14.13 µS/cm nd 12,88 mS/cm calibrating standards (each 2×30 ml in a sealed-edge bag), mains adapter, conductivity guide, operating manual

Article	Order No.
SevenMulti pH/LF S47	**61 50 02813**

Basic instrument with pH module and conductivity module incl. electrode arm, mains adapter, operating manual

Article	Order No.
⑤ **SevenMulti pH/LF S47-KS**	**61 50 02865**

Basic instrument with pH module and conductivity module incl. electrode arm, InLab® 410 pH electrode, AS-MP/1.2m/BNC/Cinch electrode cable, InLab® 730 4-pole conductivity sensor, pH 4.01/7.00/9.21 buffer solution, 14.13 µS/cm and 12.88 mS/cm calibrating standards (each 2 × 30 ml in a sealed-edge bag), mains adapter, pH guide, conductivity guide, operating manual

⑤

Article	Order No.
SevenMulti Ion S80	**61 50 02811**

Basic instrument with 2 concentration modules incl. electrode arm, mains adapter, operating manual

Article	Order No.
⑥ **SevenMulti Ion S80-KS**	**61 50 02866**

Basic instrument with 2 concentration modules incl. electrode arm, InLab® 410 pH electrode, AS-MP/1.2m/BNC/Cinch electrode cable, pH 4.01/7.00/9.21 buffer solution (each 2 × 30 ml in a sealed-edge bag), mains adapter, ISE guide, operating manual

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	S20 Basic pH Meter	S40 High-Performance pH-Meter	S80 2-Channel pH/Ionenmeter
pH measurement			
Measuring range	0,00 to 14,00	-2,000 to 19,999	-2,000 to 19,999
Resolution	0,01	0,001/0,01/0,1	0,001/0,01/0,1
Relative accuracy	±0,01	±0,001	±0,001 ±0,001ICMS)[2225]>
mV measurement			
Measuring range	-1999 to 1999	-1999 to 1999	-1999 to 1999
Resolution	1	0,1	0,1
Releative accuracy	±1	±0,2	±0,2
Relative mV measurement	no	yes	yes
Temperature measurement			
Measuring range	-5,0 to 105,0	-30,0 to 130,0	-30,0 to 130,0
Resolution	0,1	0,1	0,1
Relative accuracy	±0,5	±0,1	±0,1
Concentration measurement			
Measuring range			$1{,}00E^{-9}$ to $9{,}99E^{+9}$
Resolution			±1 Digit
Relative accuracy			±0,5%
Hardware			
Inputs	BNC, Cinch, power	BNC, 2 mm, Cinch, 2×4 mm, power	Power, 2×: BNC, 2 mm, Cinch, 2×4 mm each
analog outputs	-	±1999 mV (pH)	2× ±1999 mV
Digital outputs	RS232 unidirectional	RS232 bidirectional, optional USB	RS232 bidirectional, optional USB
Power supply	9V DC / battery	9V DC	9V DC
Temperature compensation			
Manual (default 25°C)	-5,0 to 105,0°C	-5,0 to 130,0°C	-5,0 to 130,0°C
Automatic	-5,0 to 105,0°C	-5,0 to 130,0°C	-5,0 to 130,0°C

	S30 Basic Conductometer	S70 Standard Conductometer	S47 2-Channel pH/conductometer
pH measurement			
Measuring range			-2,000 to 19,999
Resolution			0,001/0,01/0,1
Relative accuracy			±0,001
mV measurement			see S40
Temperature measuerment			
Measuring range	-5,0 to 105,0	-5,0 to 130,0	-5,0 to130,0
Resolution	0,1	0,1	0,1
Relative accuracy	±0,1	±0,1	±0,1
Conductivity measurement			
Measuring range, dynamic	0,1 µS/cm to 500 mS/cm	0,01 µS/cm to 1000 mS/cm	0,01 µS/cm to 1000 mS/cm
Resolution	2 decimal places	2 decimal places	2 decimal places
Relative accuracy	±0,5%	±0,5%	±0,5%
Measuring range TDS (Total Dissolved Solids) dynamic	0,1 mg/L to 2000 g/L	0,1 mg/L to 2000 g/L	0,1 mg/L to 2000 g/L
Resolution TDS	2 decimal places	2 decimal places	2 decimal places
Relative accuracy TDS	±0,5%	±0,5%	±0,5%
Programmable TDS factor	yes	yes	yes
Specific resistance measuring range, dynamic	0,00 to 2000 MΩ cm	0,00 to 2000 MΩ cm	0,00 to 2000 MΩ cm
Measuring range salinity	0.00 to 80.00 ppt	0.00 to 80.00 ppt	0.00 to 80.00 ppt
Hardware			
Inputs	Mini-DIN, power	Mini-DIN, 2 mm, Cinch, power	BNC, 2 mm, Mini-DIN, 2x Cinch, power
Analog outputs	no	see S40	see S40
Digital outputs	RS232, unidirectional	RS232 bidirectional, optional USB	RS232 bidirectional, optional USB
Power supply	9V DC / battey	9V DC	9V DC

Accessories

	Article	Order No.
⑦	pH module extension unit	**61 50 02821**
⑧	Conductivity module extension unit	**61 50 02822**
⑨	Concentration module extension unit	**61 50 02823**
⑩	pH/ISFET module extension unit	**61 50 02824**
⑪	Communication module TTL	**61 50 02825**
	Communication module USB	**61 50 02826**
	Rondolino sample changer	**61 50 08500**
	DL5X bar stirrer incl.. 2 propeller stirrers	**61 50 09150**
	Control unit for Rondolino/bar stirrer	**61 50 02827**
	Sample beaker 100 ml for Rondolino (1400 St.)	**61 50 01974**
	Barcode reader RS232	**61 50 00879**
	Printer RS-P42	**61 50 29265**
	Case for SevenMulti	**61 50 02819**
⑫	Electrode arm and -holder	**61 50 02820**
	Temperature sensor Pt1000	**61 50 20350**
	Temperature probe NTC 30 kΩ	**61 50 00164**
	InLab®710 4-pole conductivity sensor, glass/platinum	**61 50 02256**
	InLab®720 2-pole conductivity sensor, glass/platinum	**61 50 02255**
	InLab®730 4-pole conductivity sensor, plastic/graphite	**61 50 02119**
	InLab®740 4-pole conductivity sensor for ultrapure water, stainless steel	**61 50 40260**
	InLab®490 pH/ISFET sensor	**61 50 02305**