



Seven Benchtop Instruments

SevenEasy™

SevenMulti™

pH, ISFET

Conductivity

ORP/Redox

Ion Concentration



Simple and Accurate Measurements
For Results at your Fingertips

METTLER TOLEDO

Comfortable Laboratory Work with Seven Simple and Accurate Measurements

- Intuitive pH, conductivity and ion measurements with maximum accuracy
- Comprehensive range of automation solutions and accessories
- Qualification and maintenance services are the perfect complement

A high-performance package for everyday lab work

Seven is a product line that combines precise electrochemical measuring technologies with innovative design and ease of use. It fulfills the highest demands for pH, conductivity and ion measurements and meets the latest requirements for quality control, data management and legal regulations (GxP, USP/EP). The self-explanatory user interface allows intuitive operation at all stages.



SevenEasy™ – for quick and reliable measurements

- Single-channel instrument for routine measurements
- pH/mV or conductivity
- Excellent price/performance ratio

Peripheral options

These range from printers, sample changers and barcode readers to software for automated data collection with the capability to integrate data into laboratory information management systems (LIMS).



SevenMulti™ – for a wide range of accurate measuring solutions

- Professional dual-channel instrument
- pH, conductivity, ISFET and ions – with modular expansion capability
- Full GLP support

7 good reasons for Seven Instruments

- Ease of use
- High measurement accuracy
- Fast result evaluation
- Easy-to-read display screen
- Automation expansion capability
- Comprehensive range of accessories
- Complementary qualification and maintenance services



SevenEasy™ and SevenMulti™

Composed of Great Individuals

All Seven models are easy to use and have an easy-to-read display screen and integrated data communication interfaces. As a result it is extremely simple to take measurements and process the results. Thanks to its modular design, the SevenMulti™ offers options for additional expansion. This also makes the Seven series an indispensable and ideal solution for the special requirements of experienced laboratory personnel.

SevenEasy™



Routine tasks for SevenEasy™

The SevenEasy™ S20 and S30 pH and conductivity instruments have all the basic functions essential for performing routine measurements and are a budget-friendly alternative to the SevenMulti™ product line.

Special applications for SevenMulti™

SevenMulti™ is the perfect choice for applications where maximum measurement accuracy is required. The dual-channel instrument supports the measurement of two electrochemical parameters simultaneously and can be expanded by additional modules. It meets the latest requirements for quality control, data management and legal GLP regulations.



SevenMulti™

Comparison of functions within the Seven family

| | | SevenEasy™ | | SevenMulti™ | | | | |
|---|------------------------------------|--------------------|--------------------------|--|--|-------------------------|----------------------------|-----|
| | | S20 | S30 | S40 | S50 | S80 | S47 | S70 |
| pH | Measuring range | 0.000 ... 14.000 | - | -2.000 ... 20.000 | | | | - |
| | Accuracy | +/-0.004 | - | +/-0.002 | | | | - |
| Conduc-tivity | Measuring range | - | 0.01 µS/cm ... 500 mS/cm | - | - | - | 0.001 µS/cm ... 1000 mS/cm | - |
| | Accuracy | - | +/-0.5% | - | - | - | +/-0.5% | - |
| Ions | Measuring range | - | - | - | 1.00E ⁻⁹ to 9.99E ⁺⁹ | - | - | - |
| | Accuracy | - | - | - | +/-0.5% | - | - | - |
| Dual-channel measurement | | - | - | - | - | • | • | - |
| Expandable to function as dual-channel instrument | | - | - | • | • | Dual-channel instrument | | • |
| Calibration | Calibration points | 3 | 1 | 5 | 9 | 9 | 5 | 5 |
| | User-defined buffer group/standard | • | - | • | • | • | • | • |
| | pH electrode test | - | - | • | • | • | • | - |
| | Manual cell constant entry | - | • | - | - | - | • | • |
| Choice of end point format | | Automatic / Manual | | Automatic / Manual / Scheduled | | | | |
| Choice of stability criteria (fast, normal, strict) | | - | - | • | • | • | • | - |
| Incremental methods for ion measurements | | - | - | - | • | • | - | - |
| ATC or MTC | | • | • | • | • | • | • | • |
| System and security | Time and date | -* | -* | • | • | • | • | • |
| | RS232 interface | • | • | • | • | • | • | • |
| | Choice of print formats | - | - | Short / Standard / GLP | | | | |
| | Data storage | - | - | 1000 measurements / 400 calibrations / 40 methods | | | | |
| | PIN protection | - | - | Instrument login / System settings / Data deletion | | | | |
| | Multilingual** | - | - | English / German / French / Spanish / Italian | | | | |
| | User ID, sample ID, sensor ID | - | - | Yes | | | | |

For a table with more information, see page 10. For complete instrument specifications, see pages 11 to 13.

* RS-P26 and RS-P28 printers have a built-in time and date function that enables the time and date to be included on the printout.

** SevenMulti™ is also available as SevenMulti™ Asia, which supports Chinese, Japanese, Russian and English.

Common peripherals

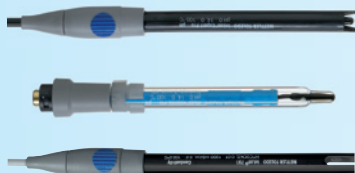


Peripherals connection

The instruments of the SevenEasy™ and SevenMulti™ product lines feature an RS232 interface as standard. A communication module with USB connection is optionally available for the SevenMulti™. You can therefore connect a printer or computer to the SevenEasy™ and SevenMulti™ at any time.

Multiple modes of versatility

The METTLER TOLEDO electrode holder comes as standard with the SevenEasy™ and SevenMulti™ and can be used either freestanding or attached to the left or right of the instrument. This makes it ideal for both left- and right-handed personnel and allows it to be adapted to the space available in the laboratory.



The right electrode for each application

The kit versions of SevenEasy™ and SevenMulti™ contain the InLab® Expert Pro or InLab® Routine Pro pH electrodes and the InLab®731 conductivity cell. You will find more information about these and other electrodes from METTLER TOLEDO on page 15.



SevenEasy™

Quick and Reliable Measurements

- Self-explanatory pH or conductivity measurements
- Harmonized sensor technology for reproducibility of measured values
- High-contrast display with large characters for easy readability
- Integrated RS232 interface for data communication



SevenEasy™ – simple and yet precise

The SevenEasy™ product line combines precise electrochemical measuring technology with an innovative, appealing design. The budget-friendly S20 model meets every demand for pH measurements and the S30 has all the basic functions of a professional conductivity instrument for routine use. Both instruments feature a self-explanatory user interface which allows intuitive operation at all stages.

Extensive range of uses

A wide range of applications is supported, from the independent, battery-powered one-off measurement to comprehensive analyses of measured values and data collection via your local network.

SevenEasy™ S20

Easy switching between pH and mV by pressing a single button

pH 0.01/0.001

Easy switching between two and three decimal places in pH mode

SevenEasy™ – two models for pH or conductivity measurements



SevenEasy™ S30

pH

pH measurements made simple with SevenEasy™ S20



ATC

Automatic temperature compensation (ATC) corrects the effect of temperature on the electrode signal.



Predefined buffer groups

The instrument features automatic buffer recognition for the 4 predefined buffer groups. With this function, there is no strict pH buffer sequence to be followed for routine calibration. Unnecessary error messages are avoided and processes shortened. Select either 1-, 2- or 3-point calibration.



4 measuring modes

The SevenEasy™ S30 offers a variety of measuring modes and units. The Mode button enables you to check conductivity, TDS, specific resistance and salinity, thereby eliminating the need for manual calculations of any kind.



Adaptable calibration

Calibration can be performed using conductivity standards 84 $\mu\text{S}/\text{cm}$, 1413 $\mu\text{S}/\text{cm}$ or 12.88 mS/cm . If you know the exact cell constant, you can enter it manually and edit it at any time. Maximum flexibility and accuracy are thus assured.



Temperature compensation

Select one of three temperature compensation modes: linear, non-linear (DIN 38404) and zero compensation for ultrapure water (USP/EP).

The SevenEasy™ S30 is equipped for all samples.



Automatic measured value acquisition

For a distinct improvement in the reproducibility and thus the quality of your measurement results.

Electrode condition

See at a glance whether your electrode is in good condition. Does it need to be cleaned or replaced? The icon displayed informs you instantly.

Self-test

Like the SevenEasy™ S20, the S30 also has a self-test function. Hardware and software can be checked through the interaction between instrument and user: the personal guarantee that all aspects of your device are in perfect working order.

Mobile

Each of the SevenEasy™ instruments can be operated on mains or battery power. With SevenEasy™, you no longer need to depend on mains power: simply insert four AA batteries.

Printers

Both SevenEasy™ instruments support a variety of printers, e.g. RS-P25, RS-P26 and RS-P28. The printers RS-P26 and RS-P28 have a built-in time and date function that enables the time and date to be included on the printout – for total GLP compatibility.

SevenMulti™

Maximum Precision and Flexibility

- Modular system for pH, conductivity, ion concentration and ISFET
- Efficiency enhanced by a variety of automation options
- Cutting edge data management with 1,000 GLP measurement data records, 400 GLP calibration data records and 40 methods
- Built-in time and date function



SevenMulti™ – For modular expansion at any time

The ingenious concept of this instrument is based on ultra-precise measurement technology, and includes a multitude of additional options and an intuitive, easy-to-use control interface. Measuring capabilities can be extended at any time by the use of additional small and manageable expansion units. Thanks to the large, backlit display screen, you can see all the important information at a glance, even in dual-channel mode. The RS232 and USB interfaces enable SevenMulti™ to be integrated easily into LIMS. The pH meter is the result of a cleverly devised system specially designed to meet the laboratory challenges of today and tomorrow.

SevenMulti™ – a host of functions to merit the name

Read

Reproducible measurements

A choice of automatic, manual or scheduled end point recognition and three selectable stability criteria enable fast and yet accurate recording of measured values with reproducible results.

Cal

Professional calibration

- Up to 9 calibration points with a choice of linear or segmented algorithm
- Multipoint conductivity calibration
- Automatic buffer recognition within the 8 predefined pH buffer groups
- Automatic recognition of 5 predefined conductivity standards
- User-definable buffers and standards including temperature dependencies

i

Help is always at hand

Context-sensitive help texts support you while operating the instrument. In routine mode, operation is made even easier by the exclusive display of settings specific to the current sample.

Data

Secure data management

SevenMulti™ guarantees the very fast access to current results and calibration data. Saving, logging in, retrieval and PIN-protected deletion of measurement and calibration data have never been easier.

ID

GLP excellence

SevenMulti™ makes it easy to record and print sample, user and sensor IDs of up to 12 characters, even with the barcode reader. The date and time are recorded automatically.

Printers

The SevenMulti™ is able to operate with a selection of METTLER TOLEDO printers, e.g. LC-P45, RS-P42 and RS-P25, RS-P26 and RS-P28. These printers are also compatible with other instruments from METTLER TOLEDO.

Automatic detection

SevenMulti™ detects your chosen expansion units automatically. Switching between individual parameters in dual-channel mode is fast and simple.

Clear text menus and ease of operation

The high-resolution, backlit display screen presents all your important information, whether in single- or dual-channel mode. The instrument is intuitive and easy to use.



Monitored sensors

Electrode test

A built-in pH electrode test verifies the slope, offset, drift and response time of your electrode without altering your current calibration.

Calibration reminder

This useful function reminds you that a calibration is due after a user-defined time interval. In addition, it is possible to block the instrument from taking measurements once this period has expired until the next calibration has successfully been performed.



Security has priority

PIN-protected

Instrument operation and general system settings such as the date and time can be protected by PIN.

Monitoring limit values

You can define your own limit values. If the actual values fall below or exceed the limit values, a warning appears on the display and on the GLP printout.

Standardized methods

Up to 40 defined user methods store all measurement-related settings so that all users can be confident they are using the same settings.

Compliance with USP/EP regulations

SevenMulti™ has a special mode for use with conductivity measurements to ensure USP and EP compliance (United States/European Pharmacopoeia).

Seven – Unrivalled Flexibility

Multifunctionality Overview

| Overview of functions and equipment | | SevenEasy™ models | | SevenMulti™ models | | | | |
|-------------------------------------|--|-------------------|-----|--------------------|-----|--------------|-----|-----|
| | | S20 | S30 | S40 | S50 | S80 | S47 | S70 |
| Parameters | pH measurement | • | | • | • | • | • | |
| | mV measurement | • | | • | • | • | • | |
| | Relative mV | | | • | • | • | • | |
| | Ion concentration (mol/L, mmol/L, %, ppm, mg/L) | | | | • | • | | |
| | Conductivity | | • | | | | • | • |
| | TDS (total dissolved solids) | | • | | | | • | • |
| | Specific resistance | | • | | | | • | • |
| | Salinity | | • | | | | • | • |
| Measurement | Choice of measured value acquisition | | | • | • | • | • | • |
| | Choice of stability criteria (fast, normal, strict) | | | • | • | • | • | |
| | Choice of pH decimal places (X.XXX, X.XX, X.X) | | | • | • | • | • | |
| | ATC or MTC | | | • | • | • | • | • |
| | Serial measurements in user-defined time interval | | | • | • | • | • | • |
| | Incremental methods for ion measurements | | | | • | • | | |
| Calibration | Calibration points | 3 | 1 | 5 | 9 | 9 | 5 | 5 |
| | Predefined pH buffer groups/conductivity standards | 4 | 3 | 8 | 8 | 8 | 8/6 | 6 |
| | User-defined buffer group/standard | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| | Automatic pH buffer/standard recognition | • | • | • | • | • | • | • |
| | Reminder function for calibration | | | • | • | • | • | • |
| | pH electrode test | | | • | • | • | • | |
| Conductivity | Special USP/EP mode | | | | | | • | • |
| | Choice of reference temperature (20 °C or 25 °C) | | • | | | | • | • |
| | Linear or non-linear temperature compensation | | | | | | • | • |
| | Procedure for automatic α -coefficient determination | | | | | | • | • |
| | Input and display of cell constant | | • | | | | • | • |
| Communication | LabX® direct PC software (included as standard equipment with SevenMulti™) | • | • | • | • | • | • | • |
| | RS232 interface | • | • | • | • | • | • | • |
| | Optional TTL or USB communication modules | | | • | • | • | • | • |
| | Special analogue output | | | | | | • | • |
| | Choice of print formats (short, standard, GLP) | | | • | • | • | • | • |
| | Automation with Rondolino sample changer | | | • | • | • | • | • |
| | Automation with barcode reader | | | • | • | • | • | • |
| | LIMS compatibility | | | • | • | • | • | • |
| Safety | Full GLP support | | | • | • | • | • | • |
| | Time and date | | | • | • | • | • | • |
| | Input of sample ID, sensor ID and SN, username | | | • | • | • | • | • |
| | ID input with barcode reader or alphanumeric keypad | | | • | • | • | • | • |
| | User-defined alarm limits | | | • | • | • | • | • |
| | PIN protection (instrument login/system settings/data deletion) | | | • | • | • | • | • |
| | Routine/expert mode | | | • | • | • | • | • |
| | Context-sensitive help function | | | • | • | • | • | • |
| Security | Data storage (1,000 measurements, 400 calibrations, 40 methods) | | | • | • | • | • | • |
| | Extensive filter functions | | | • | • | • | • | • |
| | Multilingual menu-guided operation | | | • | • | • | • | • |
| | Backlit display | | | • | • | • | • | • |
| | Instrument self-test | • | • | • | • | • | • | • |
| | Expandable to function as dual-channel instrument | | | • | • | Dual-channel | | • |

SevenEasy™ in 2 Models

Overview of Functions and Specifications

SevenEasy™ S20

pH meter

- 3-point calibration
- 4 predefined buffer groups
- User-defined buffer group
- RS232 interface



| SevenEasy™ S20 | Measuring range | Resolution | Accuracy |
|-----------------------|---|--------------|----------|
| pH | 0.000 ... 14.000 | 0.001 / 0.01 | ±0.004 |
| mV | -1.999 ... 1.999 | 0.1 / 1 | ±0.4 |
| Temperature | -5.0 ... 105.0 °C | 0.1 °C | ±0.5 °C |
| Sensor inputs | BNC, cinch/RCA (NTC 30 kΩ) | | |
| Interfaces | RS232 (connection to printer or PC) | | |
| Power supply | Mains connection (9 V, DC) or 4 AA batteries (not included) | | |
| Size / weight | 180 x 180 x 65 mm / 610 g | | |
| Package size / weight | 370 x 320 x 165 mm / 3.1 kg | | |

| Order info | Description and sensors | Order no. |
|------------------|--|-----------|
| S20 (instrument) | Includes instrument, electrode holder, protective cover, operating instructions, declaration of conformity and test certificate | 51302803 |
| S20-K (kit) | As S20, but also with InLab® Expert Pro, pH determination instructions and 2 buffer sachets for pH 4.01, 7.00 and 9.21 (or 10.00) respectively | 51302804 |
| S20-KS (kit) | As S20-K kit, but with InLab® Routine Pro instead of InLab® Expert Pro | 51302863 |

SevenEasy™ S30

Conductivity meter

- 3 predefined standards
- Manual cell constant input function
- Linear, non-linear or zero temperature compensation
- RS232 interface



| SevenEasy™ S30 | Measuring range | Resolution | Accuracy |
|-----------------------|---|------------|----------|
| Conductivity | 0.01 µS/cm ... 500 mS/cm | 0.01 ... 1 | ±0.5% |
| Temperature | -5.0 ... 105.0 °C | 0.1 °C | ±0.2 °C |
| TDS | 0.01 mg/L to 500 g/L | 0.01 ... 1 | ±0.5% |
| Specific resistance | 0.00 ... 20.00 MΩ cm | | |
| Salinity | 0.00 ... 80.00 ppt (parts per thousand) Practical salinity scale UNESCO 1978 | | |
| Sensor inputs | Mini DIN | | |
| Interfaces | RS232 (connection to printer or PC) | | |
| Power supply | Mains connection (9 V, DC) or 4 AA batteries (not included) | | |
| Size / weight | 180 x 180 x 65 mm / 610 g | | |
| Package size / weight | 370 x 320 x 165 mm / 3.1 kg | | |

| Order info | Description and sensors | Order no. |
|------------------|---|-----------|
| S30 (instrument) | Includes instrument, electrode holder, protective cover, operating instructions, declaration of conformity and test certificate | 51302805 |
| S30-K (kit) | As S30, but also with InLab®731, conductivity determination instructions and 2 1413 µS/cm and 12.88 mS/cm buffer sachets respectively | 51302806 |

SevenMulti™ in 5 Models

Numerous Functions and Specifications

SevenMulti™ S47

Dual-channel pH and conductivity measurement

- Combines all the functions of S40 and S70
- Easy-to-read dual-channel measurement thanks to large display screen
- Supportive, context-sensitive help menu



| SevenMulti™ S47 | Measuring range | Resolution | Accuracy |
|-----------------------|---|------------------|----------|
| pH | -2.000 ... 19.999 | 0.001, 0.01, 0.1 | ±0.002 |
| mV (rel. mV) | -1999 ... 1999 | 0.1 | ±0.1 |
| Temperature | -30.0 ... 130.0 °C | 0.1 °C | ±0.1 °C |
| Conductivity | 0.001 µS/cm ... 1000 mS/cm | 0.001 ... 1 | ±0.5% |
| Temperature | -30.0 ... 130.0 °C | 0.1 °C | ±0.1 °C |
| TDS | 0.01 mg/L ... 1000 g/L | 0.01 ... 1 | ±0.5% |
| Specific resistance | 0.00 ... 20.00 MQcm | | |
| Salinity | 0.00 ... 80.00 ppt | | |
| Sensor inputs | BNC, 2 mm ref., cinch/RCA (NTC), 4 mm banana (PT1000), mini DIN | | |
| Interfaces | RS232 (connection to printer or PC), titrator output | | |
| Power supply | Mains connection (9 V, DC) | | |
| Size / weight | 190 x 240 x 65 mm / 1100 g | | |
| Package size / weight | 370 x 320 x 165 mm / 4.2 kg | | |

| Order info | Description and sensors | Order no. |
|------------------|---|-----------|
| S47 (instrument) | Includes instrument, electrode holder, protective cover, operating instructions, declaration of conformity and test certificate, LabX® direct pH software for PC | 51302813 |
| S47-K (kit) | As S47, but also with InLab® Expert Pro and InLab®731, pH and conductivity determination instructions and two calibration sachets pH 4.01, 7.00 and 9.21 (or 10.00) and 1413 µS/cm and 12.88 mS/cm respectively | 51302814 |
| S47-KS (kit) | As S47-K, but with InLab® Routine Pro instead of InLab® Expert Pro | 51302865 |
| S47-USP/EP (kit) | As S47, but also with: InLab® Pure Pro "3-In-1" pH electrode, MultiPin cable, conductivity probe InLab®741, pH and conductivity determination instructions, buffer sachets (2 each ; 4.01, 7.00 and 9.21 (or 10.00)), conductivity standard sachets (2 each ; 1413 µS/cm and 12.88 mS/cm) | 51302869 |

SevenMulti™ S80

Premium dual-channel ion meter

- Supports simultaneous dual-channel measurement pH/ions or ions/ions
- Comprehensive range of electrodes and accessories
- Expandable: Rondolino sample changer, printer and barcode reader



| SevenMulti™ S80 | Measuring range | Resolution | Accuracy |
|-----------------------|--|----------------------|----------|
| Concentration | 1.00E ⁻⁹ ... 9.99E ⁻⁹ | ± last signifi.digit | ± 0.5 % |
| pH | -2.000 ... 19.999 | 0.001, 0.01, 0.1 | ± 0.002 |
| mV (rel. mV) | -1999 ... 1999 | 0.1 | ± 0.1 |
| Temperature | -30.0 ... 130.0 °C | 0.1 °C | ± 0.1 °C |
| Sensor inputs | 2 each of: BNC, 2 mm ref., cinch/RCA (NTC), 4 mm banana (PT1000) | | |
| Interfaces | RS232 (connection to printer or PC) | | |
| Power supply | Mains connection (9 V, DC) | | |
| Size / weight | 190 x 240 x 65 mm / 1125 g | | |
| Package size / weight | 370 x 320 x 165 mm / 4.2 kg | | |

| Order info | Description and sensors | Order no. |
|------------------|--|-----------|
| S80 (instrument) | Includes instrument, electrode holder, protective cover, operating instructions, declaration of conformity and test certificate, LabX® direct pH software for PC | 51302811 |
| S80-K (kit) | As S80, but also with InLab® Expert Pro, ion-specific measurement instructions and 2 buffer sachets for pH 4.01, 7.00 and 9.21 (or 10.00) respectively | 51302812 |
| S80-KS (kit) | As S80-K, but with InLab® Routine Pro instead of InLab® Expert Pro | 51302866 |

SevenMulti™ S40

Professional pH meter

- Compatible with Rondolino sample changer, printer and barcode reader
- Outstanding data management capabilities with 1,000 GLP data records
- Choice of stability criteria



| SevenMulti™ S40 | Measuring range | Resolution | Accuracy |
|-----------------------|---|------------------|----------|
| pH | -2.000 ... 19.999 | 0.001, 0.01, 0.1 | ±0.002 |
| mV (rel. mV) | -1999 ... 1999 | 0.1 | ±0.1 |
| Temperature | -30.0 ... 130.0 °C | 0.1 °C | ±0.1 °C |
| Sensor inputs | BNC, 2 mm ref., cinch/RCA (NTC), 4 mm banana (PT1000) | | |
| Interfaces | RS232 (connection to printer or PC) | | |
| Power supply | Mains connection (9 V, DC) | | |
| Size / weight | 190 x 240 x 65 mm / 1065 g | | |
| Package size / weight | 370 x 320 x 165 mm / 4.1 kg | | |

| Order info | Description and sensors | Order no. |
|------------------|--|-----------|
| S40 (instrument) | Includes instrument, empty expansion unit, electrode holder, protective cover, operating instructions, declaration of conformity and test certificate, LabX® direct pH software for PC | 51302807 |
| S40-K (kit) | As S40, but also with InLab® Expert Pro, pH determination instructions and 2 buffer sachets for pH 4.01, 7.00 and 9.21 (or 10.00) respectively | 51302808 |
| S40-KS (kit) | As S40-K, but with InLab® Routine Pro instead of InLab® Expert Pro | 51302864 |

SevenMulti™ S50

Single-channel ion meter

- Choice of 26 preprogrammed electrode types
- Incremental methods for ion measurements
- Up to 9 calibration points
- Choice of stability criteria



| SevenMulti™ S50 | Measuring range | Resolution | Accuracy |
|-----------------------|---|-----------------------|----------|
| Concentration | 1.00E ⁻⁹ ... 9.99E ⁺⁹ | ± last signifi. digit | ± 0.5% |
| pH | -2.000 ... 19.999 | 0.001, 0.01, 0.1 | ± 0.002 |
| mV (rel. mV) | -1999 ... 1999 | 0.1 | ± 0.1 |
| Temperature | -30.0 ... 130.0 °C | 0.1 °C | ± 0.1 °C |
| Sensor inputs | BNC, 2 mm ref., cinch/RCA (NTC), 4 mm banana (PT1000) | | |
| Interfaces | RS232 (connection to printer or PC) | | |
| Power supply | Mains connection (9 V, DC) | | |
| Size / weight | 190 x 240 x 65 mm / 1065 g | | |
| Package size / weight | 370 x 320 x 165 mm / 4.1 kg | | |

| Order info | Description and sensors | Order no. |
|------------------|--|-----------|
| S50 (instrument) | Includes instrument, empty expansion unit, electrode holder, protective cover, operating instructions, declaration of conformity and test certificate, LabX® direct pH software for PC | 51302867 |
| S50-K (kit) | As S50, but also with InLab® Expert Pro, ion-specific measurement instructions and 2 buffer sachets for pH 4.01, 7.00 and 9.21 (or 10.00) respectively | 51302868 |

SevenMulti™ S70

Luxury conductivity meter

- Programmable, customer-defined calibration standards including temperature table
- USP/EP mode: compliance with the latest guidelines for the highest grades of ultrapure water
- Free choice of 6 commercially available or user-defined calibration standards



| SevenMulti™ S70 | Measuring range | Resolution | Accuracy |
|-----------------------|--|-------------|----------|
| Conductivity | 0.001 µS/cm ... 1000 mS/cm | 0.001 ... 1 | ±0.5% |
| Temperature | -30.0 ... 130.0 °C | 0.1 °C | ±0.1 °C |
| TDS | 0.01 mg/L to 1000 g/L | 0.01 ... 1 | ±0.5% |
| Specific resistance | 0.00 ... 20.00 MΩcm | | |
| Salinity | 0.00 ... 80.00 ppt | | |
| Sensor inputs | Mini DIN | | |
| Interfaces | RS232 (connection to printer or PC), titrator output | | |
| Power supply | Mains connection (9 V, DC) | | |
| Size / weight | 190 x 240 x 65 mm / 1040 g | | |
| Package size / weight | 370 x 320 x 165 mm / 4.1 kg | | |

| Order info | Description and sensors | Order no. |
|------------------|--|-----------|
| S70 (instrument) | Includes instrument, empty expansion unit, electrode holder, protective cover, operating instructions, declaration of conformity and test certificate, LabX® direct pH software for PC | 51302809 |
| S70-K (kit) | As S70, but also with InLab®731, conductivity determination instructions and 2 1413 µS/cm and 12.88 mS/cm calibration sachets respectively | 51302810 |

Accessories and Service

The Finishing Touches

SevenEasy™ or SevenMulti™ – two expandable solutions

Boost the strength of your instruments. By selecting accessories from the list below you can create a tailor-made solution for your most frequent applications.

Buffers & standards

| Solutions | Order no. |
|--|-----------|
| pH 4.01 buffer solution in side-sealed sachet, 30 x 20 mL | 51302069 |
| pH 7.00 buffer solution in side-sealed sachet, 30 x 20 mL | 51302047 |
| pH 9.21 buffer solution in side-sealed sachet, 30 x 20 mL | 51302070 |
| pH 10.01 buffer solution in side-sealed sachet, 30 x 20 mL | 51302079 |
| Rainbow I (3 x 10 sachets of 20 mL, 4.01/7.00/9.21) | 51302068 |
| Rainbow II (3 x 10 sachets of 20 mL, 4.01/7.00/10.01) | 51302080 |
| pH 2.00 buffer solution, colorless, 6 x 250 mL | 51319010 |
| pH 4.01 buffer solution, red, 6 x 250 mL | 51340058 |
| pH 7.00 buffer solution, green, 6 x 250 mL | 51340060 |
| pH 9.21 buffer solution, blue, 6 x 250 mL | 51300194 |
| pH 10.01 buffer solution, colorless, 6 x 250 mL | 51340231 |
| pH 11.00 buffer solution, colorless, 6 x 250 mL | 51319018 |
| 1,413 µS/cm standard conduct. solution, 30 x 20 mL | 51302049 |
| 12.88 mS/cm standard conduct. solution, 30 x 20 mL | 51302050 |
| 10 µS/cm standard conductivity solution, 250 mL | 51300169 |
| 84 µS/cm standard conductivity solution, 250 mL | 51302153 |
| 500 µS/cm standard conductivity solution, 250 mL | 51300170 |
| 1,413 µS/cm standard conduct. solution, 250 mL | 51300138 |
| 12.88 mS/cm standard conduct. solution, 250 mL | 51300139 |
| General accessories | Order no. |
| Plastic sample bottle (50 mL) | 51300240 |
| Guide to pH measurement | 51300058 |
| Guide to conductivity and dissolved oxygen | 51724715 |
| Guide to ion-selective measurements | 51300201 |
| RS-P25 printer | 11124300 |
| RS-P26 printer | 11124303 |
| RS-P28 printer | 11124304 |
| RS232 cable (SevenEasy™, SevenMulti™) | 51302125 |

SevenEasy™ & SevenMulti™

| Accessories for SevenMulti™ | Order no. |
|------------------------------|-----------|
| Modules | |
| pH/mV expansion unit | 51302821 |
| Conductivity expansion unit | 51302822 |
| Ion/pH expansion unit | 51302823 |
| ISFET expansion unit | 51302824 |
| TTL communication module | 51302825 |
| USB communication module | 51302826 |
| Empty expansion unit | 51302874 |
| Other accessories | |
| SevenMulti™ protective cover | 51302819 |
| Electrode holder assembly | 51302820 |

| Accessories for SevenEasy™ and SevenMulti™ | Order no. |
|--|-----------|
| LabX® direct pH PC software | 51302876 |
| Mains adapter | 51302950 |

Electrodes & cables

| Electrodes and accessories | Order no. |
|--|-----------|
| pH electrodes | |
| InLab® Routine | 51343050 |
| InLab® Routine Pro | 51343054 |
| InLab® Power Pro | 51343111 |
| InLab® Expert Pro | 51343101 |
| InLab® Expert NTC30 | 51343104 |
| InLab® Easy | 51343010 |
| InLab® Basics BNC | 51343020 |
| InLab® Science | 51343070 |
| InLab® Micro | 51343160 |
| InLab® Semi-Micro | 51343165 |
| InLab® Solids | 51343153 |
| InLab® Solids Pro | 51343154 |
| S7-BNC cable, 1.2 m | 52300004 |
| MultiPin™ BNC/RCA (cinch), 1.2 m | 52300009 |
| Redox electrodes | |
| InLab® Redox | 51343200 |
| InLab® Redox Pro | 51343202 |
| Conductivity sensor | |
| InLab®731 | 51344020 |
| InLab®741 | 51344024 |
| SevenMulti™ DL series cable (conductivity) | 51302258 |



Seven service – so your instruments always measure accurately

Regular checks increase the accuracy of your instruments and extend the lifetime by many years. METTLER TOLEDO can provide all required services – tailored to your needs – for all Seven instruments. This ensures that your instrument continues to function reliably and without errors. All instruments are delivered with a signed factory certificate.

Choose from our wide range of services.

For more information on service, see www.mt.com/ServiceXXL



PC Software – LabX® direct pH

The user-friendly PC software archives your results quickly and reliably. It enables user-defined transfer of data from SevenEasy™ and SevenMulti™ to an open application such as MS Excel®. If required, the values can automatically be displayed graphically in the delivered MS Excel® templates.

LabX® direct pH is a standard feature of SevenMulti™ and makes data transfer so much easier.



You will find our full range of pH electrodes in a separate electrodes brochure (order no. 51724332).

pH electrodes for Seven benchtop instrument kits

pH electrodes

- The robust InLab® Expert Pro is the standard kit electrode, e.g. included in kits S20-K or S40-K. Thanks to the XEROLYT® polymer electrolyte, it features open reference connections making it universally usable, even for complex samples such as emulsions. InLab® Expert Pro requires very little maintenance.
- InLab® Routine Pro is a conventional glass electrode with replenishable electrolyte, ARGENTHAL™ reference system and silver-ion trap. The large pH membrane and the liquid KCl electrolyte enable fast and precise measurements, particularly practical for routine measurements of unproblematic samples. InLab® Routine Pro is included in the KS kits and is the ideal choice for experienced laboratory personnel.

Conductivity sensors

- InLab®731 is based on a 4-pole graphite cell and is suitable for a variety of applications in aqueous samples with a conductivity greater than 10 µS/cm. It is the standard kit sensor, included, for example, in kits S30-K or S47-K. Sample carry-over is minimized thanks to its open design.
- For precise measurements in the low conductivity range, e.g. pure water, the InLab®741 2-pole steel sensor (available separately) is recommended.

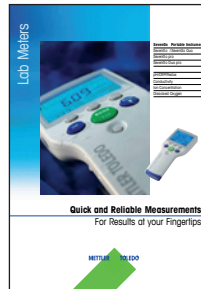
All kit sensors – pH and conductivity – feature an integrated temperature sensor for automatic temperature compensation (ATC).

METTLER TOLEDO and Seven

— Extra Value for Everyday Lab-Work...

...and for Use in the Field

The METTLER TOLEDO Seven range provides models for use in the lab as well as portable models for use in the field and in factories. The portable SevenGo™ and SevenGo Duo™ instruments are documented in a separate brochure with order number 51725122.



...with Corresponding Sensors

METTLER TOLEDO combines 60 years of experience of INGOLD in the production of electrochemical sensors with the innovative electronics of the Seven series. METTLER TOLEDO supplies complete systems for pH, conductivity, dissolved oxygen and ion measurements:

- Professional Seven instrument series
- Extensive collection of electrodes
- Useful accessories
- All required services





Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.