

SevenExcellence™ pH/mV

Flexible and Precise



SevenExcellence™ stands for convenient, easy-to-understand operation combined with high measurement accuracy and outstanding reliability, continuing the tradition of the Seven™ series from METTLER TOLEDO. The instrument can effectively cope with complex applications and stringent requirements in regulated markets, but it also feels at ease with routine measurement tasks in the laboratory.

SevenExcellence pH/mV meter redefines flexibility and offers various measurement parameters in the form of one meter. It not only measures pH and ORP with classical sensors, but also supports pH measurement with ISFET technology. Starting an analysis, changing the settings and accessing the results is easily achieved thanks to the cleverly-devised touch screen menu operation.

Seven good reasons for SevenExcellence™

- User-friendly touch-screen operation
- Large well-arranged color display
- Menu guidance in 10 languages
- Modular expansion at any time
- Many peripheral options
- Method concept, including One Click™
- GLP compliant, including user management

Productive Work from the Start

Secure and Powerful

SevenExcellence™ has been designed with the objective to optimize the workflow and increase the efficiency of your lab work. Just one click is required to start a sample or a series of samples. The interfaces on the instrument allow you to connect peripherals simultaneously supporting your workflow in the best possible way.

Security

The instruments' focus on workflow is also reflected in its security package. Mistakes are minimized to an absolute minimum by using

methods, by using ISM® sensors, by the professional user management and the sophisticated calibration support. Archiving results can be done automatically by

creating a hardcopy on a line or network printer and/or transfer to LabX® direct PC software.

Large color display and intuitive touch screen operation



The huge 7 high-resolution display and capacitive touch screen with clear buttons and intuitive menu structure makes the instruments' operation fast and easy. The menus exist in 10 languages and do not contain a single cryptic expression!

Modularity and peripherals – expand at any time



SevenExcellence fits three modules in any composition and order and it can be expanded at any time, adding new measurement parameters. The USB, Ethernet and RS232 interfaces allow the connection of a barcode scanner, fingerprint reader, Rondolino sample changer, USB stick and line or network printer.

Perfect ergonomics and high productivity with uPlace™



uPlace™: the electrode arm can be operated with one hand, moving perfectly straight up and down to bring the electrode to the perfect position. This allows for faster measurements and poses less risk of the sample vessel tipping over and damaging the sensor!

Specifications for SevenExcellence™ pH/mV

	Measuring range	Resolution	Accuracy
pH	-2.000 ... 20.000	0.001 / 0.01 / 0.1	± 0.002
mV	-2000.0 ... 2000.0	0.1 / 1	± 0.1
Rel. mV	-2000.0 ... 2000.0	0.1 / 1	± 0.1
ISFET pH	0.000 ... 14.000	0.001 / 0.01 / 0.1	± 0.05
Temperature MTC / ATC	-30.0 ... 130.0 °C	0.1 °C	± 0.1 °C
Calibration	Calibration points Buffer groups Buffer recognition Isopotential point Temperature capture Calibration reminder Electrode status icon Automatic pH calibration	Max. 5 8 pre-defined and 20 user-defined Automatic and manual pH 7.00 Automatic and manual Yes: usable life for each sensor configurable Yes: shows quality of last calibration Yes: with rondolino sample changer	
Measurement	Choice of endpoint formats Choice of stability criteria Choice of pH decimal places Temperature capture Measurement type Interval measurements Methods Series	Automatic, manual, timed Fast, standard, strict, user-defined X.XXX, X.XX, X.X Automatic and manual Direct measurements and methods Yes: time interval user-configurable 17 pre-defined and 50 user-defined Max. 9 samples	
System and GLP	Menu guidance Time and date Radioclock PIN protection User management Measurement limits ID input ID input automation	10 languages 2 time formats, 4 date formats WWVB, DCF77, JJY protocol Yes: login (password or fingerprint reader) 4 groups: operator, technician, expert, administrator Yes: user-defined Yes: user ID, sample ID, Sensor name, sensor SN Barcode reader (USB)	
Data processing	Data storage Print formats Printing Data Export	At least 20 000 data points, 250 analyses Summary and user-defined US-P25, RS232 and network printer, memory stick (pdf) USB-stick, LabX® direct PC software	
Connectors	pH Sensor input Temperature sensor input ISFET sensor input Digital sensor input Communication interfaces Stirrer connector	BNC (impedance > 3 x 10 ¹² Ω) Cinch/RCA (NTC30 kΩ) Mini-DIN Mini-LTW RS232, USB-A, USA-B, LAN Mini-DIN	
General	Power requirements Size/weight instrument Module weight Display	DC 12V-10W 235 x 188 x 75 mm, 1120 g 111-130 g TFT	
Ambient conditions	Temperature Relative humidity Installation category Pollution degree Altitude	5 ... 40 °C 5 ... 80% (non-condensing) II 2 Up to 2000 m above sea level	
Materials	Housing instrument Housing expansion units Touch panel	ABS/PC reinforced ABS/PC reinforced Tempered glass	

Order Information

Description and order information for SevenExcellence™ pH/mV

Order info	Description and sensors	Order no.
S400-Basic (instrument)	Includes instrument, pH/mV expansion unit, 2 blank expansion units, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, LabX® direct pH PC software, declaration of conformity and test certificate.	30046240
S400-Kit (kit)	As S400-Basic, but also with InLab® Expert Pro-ISM, guide to pH measurements and 2 buffer sachets for pH 4.01, 7.00, 9.21 and 10.00.	30046241
S400-Bio (kit)	As S400-Kit but with InLab® Routine Pro-ISM cable kit instead of InLab® Expert Pro-ISM.	30046242
S400-ISFET (kit)	As S400-Kit but with InLab® 490 instead of InLab® Expert Pro-ISM.	30046243

Accessories for SevenExcellence™

Modules	Order no.
pH/mV expansion unit	30034472
Conductivity expansion unit	30034473
pH/Ion expansion unit	30034471
Blank expansion unit	30034475

General accessories

uPlace™: electrode holder (included in standard delivery)	30019823
Semi-transparent cover (included in standard delivery)	30041154
Protective film for display (2 pcs)	30041155
Mains adapter 12V (included in standard delivery)	11120270
uMix™ magnetic stirrer	30040000
US-P25 printer (with USB cable)	11124301
LogStraigh™ fingerprint reader	51192107
Barcode reader body	21901297
USB cable for barcode reader (not included with barcode reader body)	21901309
Rondolino sample changer, complete for SevenExcellence	51302888
LabX® direct PC software (included in standard delivery)	51302876
USB A-B cable for LabX® direct PC software (not included with LabX® direct PC software)	51191926

Sensors and cables for SevenExcellence™ pH/mV

Sensors with fixed cable	Order no.
InLab® Expert Pro-ISM, rugged 3-in-1 pH sensor, PEEK shaft, ATC	30014096
InLab® 490, laboratory ISFET electrode	51302305

ISM® sensors with MultiPin™ head

InLab® Routine Pro-ISM, 3-in-1 pH sensor, glass shaft, ATC, refillable	51344055
InLab® Micro Pro-ISM, 3-in-1 pH sensor, glass shaft, 5 mm shaft diameter, ATC, refillable	51344163
InLab® Power Pro-ISM, 3-in-1 pH sensor, glass shaft, ATC, pressurized SteadyForce™ reference system	51344112
InLab® Pure Pro-ISM, 3-in-1 pH sensor, glass shaft, immovable glass sleeve, ATC, refillable	51344172
InLab® Science Pro-ISM, 3-in-1 pH sensor, glass shaft, movable glass sleeve, ATC, refillable	51344072
InLab® Solids Pro-ISM, 3-in-1 pH sensor, glass shaft, open junction, sharp membrane, ATC	51344155
ISM® cable 2 m, BNC/RCA-MultiPin™	51344291

Digital ISM® sensors with diagnostic functions

InLab® Smart Pro-ISM, 3-in-1 pH sensor, glass shaft, ATC, pressurized SteadyForce™ reference system	30027775
Cable InLab® Digital, 1.2 m	30027776

pH Buffers

Description	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



Mettler-Toledo AG, Analytical

CH-8603 Schwerzenbach, Switzerland
Tel. +41 22 567 53 22
Fax +41 22 567 53 23

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For more information