

SevenExcellence™ Conductivity 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 Conductivity meter redefines flexibility and offers various measurement parameters in the form of one meter. For special applications such as USP/EP and conductivity ash it guides you through the measurement steps and notifies you when a measurement is out of range. 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 EasyDirect™ pH PC software.

Large color display and intuitive touch screen operation



The huge 7 inch 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™ Conductivity

	Measuring range	Resolution	Accuracy
Conductivity	0.001 ... 999999 µS/cm	0.001 ... 1	± 0.5%
	0.001 ... 2000 mS/cm	0.001 ... 1	± 0.5%
	0.001 ... 200 S/m	0.0001 ... 1	± 0.5%
	0.001 ... 200000 mS/m	0.0001 ... 1	± 0.5%
	0.1 ... 999999 µS/m	0.001 ... 1	± 0.5%
TDS	0.001 ... 1000 g/L, ppt	0.001 ... 1	± 0.5%
	0.001 ... 999 999 mg/L, ppm	0.001 ... 1	± 0.5%
Salinity	0.01 ... 80.0 psu, ppt	0.01 ... 0.1	± 0.5%
Resistivity	0.01 ... 100.0 MΩ•cm	0.0001 ... 1	± 0.5%
	0.01 ... 999999 Ω•cm	0.01 ... 1	± 0.5%
Temperature MTC / ATC	-30.0 ... 130.0 °C	0.1 °C	± 0.1 °C
Calibration	Calibration points Calibration standards Temperature capture Manual input of cell constant Display of cell constant Calibration reminder	1 13 pre-defined and 20 user-defined Automatic (internal* and external**) and manual Yes Yes: always visible on online screen Yes: usable life for each sensor configurable	
Measurement	Choice of endpoint formats Choice of stability criteria Temperature capture Choice of reference temperature Choice of temperature compensation Measurement type Interval measurements Methods Series	Automatic, manual, timed Fast, standard, strict, user-defined Automatic (internal* and external) and manual 20 °C or 25 °C Linear, non-linear, off, pure-water Direct measurements and methods Yes: time interval user-configurable 34 pre-defined and 50 user-defined Max. 9 samples	
Regulations	Pure & ultra-pure water Bioethanol	Yes, USP/EP compliant Yes, ABNT NBR 10547:2006	
System and GLP	Menu guidance Time and date PIN protection User management Measurement limits ID input ID input automation	10 languages 2 time formats, 4 date formats Yes: login (password or fingerprint reader) 4 groups: operator, technician, expert, administrator Yes: user-defined Yes: user ID, sample ID, sensor ID, 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, EasyDirect™ pH PC software	
Connectors	Conductivity input Internal temperature sensor input External temperature sensor input Digital sensor input Communication Interfaces Stirrer connector	Mini-DIN Mini-DIN (integrated in conductivity input) Cinch/RCA (NTC30 kΩ or Pt1000) Mini-LTW RS232, USB-A, USA-B, LAN Mini-DIN	
General	Power requirements Size/weight instrument Module weight Display	DC 12V-10W 235 × 188 × 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	

* All conductivity sensors provided by METTLER TOLEDO have an integrated temperature sensor.

** The conductivity expansion unit has an RCA/Cinch connection to which a separate temperature sensor can be attached.

Order Information

Description and order information for SevenExcellence™ Conductivity

Order info	Description and sensors	Order no.
S700-Basic (instrument)	Includes instrument, conductivity expansion unit, 2 blank expansion units, uPlace™ electrode holder, semi-transparent cover, user manual, installation and quick guide, EasyDirect™ PC software, declaration of conformity and test certificate.	30046244
S700-Kit (kit)	As S700-Basic, but also with InLab® 731-ISM, guide to conductivity measurements and 2 calibration sachets for 1413 µS/cm and 12.88 mS/cm.	30046245
S700-Trace (kit)	As S700-Kit but with InLab® Trace instead of InLab® 731-ISM, with Flow-Cell and with calibration sachets for 84 µS/cm (instead of 12.88 mS/cm and 1413 µS/cm).	30046246

Dual channel instrument with pH/mV and conductivity expansion units

S470-Basic (instrument)	As S700-Basic, but with a pH/mV expansion unit instead of a blank expansion unit.	30046252
S470-Kit (kit)	As S700-Kit, but with but with a pH/mV expansion unit instead of a blank expansion unit. Additionally with InLab® Expert Pro-ISM, guide to pH measurements and 2 buffer sachets for pH 4.01, 7.00, 9.21 and 10.00.	30046253
S470-USP/EP (kit)	As S470-Kit but with InLab® 741-ISM instead of InLab® 731-ISM and InLab® Pure Pro-ISM instead of InLab® Expert Pro-ISM, BNC/RCA-MultiPin™ ISM-cable (1.2 m), and with calibration sachets for 84 µS/cm (instead of 12.88 mS/cm and 1413 µS/cm).	30046254

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
LogStraigh™ fingerprint reader	51192107
Barcode reader	30417466
Rondolino sample changer, complete for SevenExcellence™	51302888

Sensors for SevenExcellence™ Conductivity

Sensors with fixed cable	Order no.
InLab® 731-ISM, 4-electrode graphite conductivity sensor, ATC	30014092
InLab® 742-ISM, 2-electrode steel conductivity sensor, ATC	30014094
InLab® Trace, high-accuracy sensor for low conductivities, ATC	30014097
Flow-cell for InLab® Trace	30014098
InLab® Trace Kit (Sensor and Flow-Cell)	30014099

Conductivity standard solutions

Description	Order no.
1413 µS/cm standard conductivity solution in side-sealed sachet, 30 x 20 mL	51302049
12.88 mS/cm standard conductivity solution in side-sealed sachet, 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
1413 µS/cm standard conductivity solution, 250 mL	51300192
12.88 mS/cm standard conductivity solution, 250 mL	51302194



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For more information

Subject to technical changes
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