



Bench instruments

FiveEasy™ pH

FiveEasy™ conductivity

pH

mV / ORP

Conductivity

TDS

Salinity

FiveEasy™

The easy introduction to the world of pH

METTLER TOLEDO

FiveEasy™ pH and FiveEasy™ conductivity

Suitable for a wide variety of applications

Agriculture

The pH value of arable land must be monitored regularly to protect people and the environment from potential hazards and to create ideal conditions for growing agricultural products.



Industry

The pH and conductivity of cooling and cleaning water as well as the manufactured products themselves must be tested during the manufacturing process – to guarantee a high level of quality in the finished products, to keep manufacturing costs down and to protect manufacturing equipment from corrosion and other damage.



Foodstuffs

Yogurt, cheese, fish, meat, sauces ... the number of samples is virtually endless, but they all have one thing in common: The pH value must be kept at the optimum level so that quality and freshness of the products is guaranteed.



Beverages

pH value must be monitored during various processing stages involved in the production of beverages to ensure that the final product has the desired flavor.



Water

No matter whether it's a lake or a sewage plant – compliance to certain pH and conductivity values in water is vital for the sustainability of all life, be it human, plant or animal.

5 x 5 reasons for FiveEasy™

5 x useful information on a large, well organized display

- Simultaneous display of measurement, temperature and endpoint recording
- Electrode icon: provides information on the condition of the electrode
- Calibration icon: the instrument is calibrating
- Measurement icon: the instrument is carrying out measurements
- Setup icon: settings can be modified

5 x useful accessories

- Electrode arm can be attached to the left or right-hand side of the instrument
- "Quick guide" for the lab bench – laminated in case of spills
- A variety of electrodes for various applications
- Extensive range of solutions for calibration and cleaning
- Separate temperature sensor and ORP electrodes are also available



5 x self-explanatory buttons for the simplest, intuitive operation

- Simple start and finish of measurements and calibrations
- Fast changeover between pH and mV parameters, or between conductivity, TDS and salinity
- Intuitive adjustment of settings e.g. for manual temperature compensation
- Current calibration data can be accessed at the push of a button
- Separate on/off switch



5 x outstanding price/ performance ratio

- METTLER TOLEDO quality for reliable measurements
- Separate reference input for pH measurement with half-cells
- Compact design requiring little space
- Handy electrode arm automatically included in kit versions
- Over 60 years of sensor know-how also included in entry-level instruments

5 x superb functionalities

- Automatic or manual termination of a measurement or calibration
- Automatic calibration with predefined pH buffer groups or predefined conductivity standards
- Automatic or manual temperature compensation
- Automatic buffer recognition during pH calibration
- Linear temperature compensation from 0.00 %/°C to 10.00 %/°C and selectable reference temperature for conductivity measurement

Ordering codes and scope of supply

Instrument	Description	Order No.
FE20-Basic	pH instrument incl. operating manual, "Quick guide", power adapter	51302910
FE20-Kit	Instrument and accessories as with FE20 Basic, also with LE409 pH electrode, electrode arm, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets	51302911
FE20-ATC Kit	Instrument and accessories as with FE20 Basic, also with LE438 pH electrode, electrode arm, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets	51302916
FE30-Basic	Conductivity instrument incl. operating manual, "Quick guide", power adapter	51302912
FE30-Kit	Instrument and accessories as with FE30 Basic, also with LE703 conductivity probe, electrode arm, 2 x 1413 µS/cm and 2 x 12.88 mS/cm standard sachets	51302913

Electrodes and applications



Electrode	Description	Order No.
LE407	Robust plastic pH electrode with gel electrolyte, suitable for simple applications and easy samples such as water; low-maintenance	51340330
LE409	Glass pH electrode with liquid electrolyte for simple and rapid measurements in the laboratory, aqueous samples such as acids, bases etc.; refillable electrolyte	51340331
LE420	Glass electrode with ground-joint diaphragm for demanding, "dirty" samples such as waste water, emulsions (e.g. milk), oily samples; refillable electrolyte	51340332
LE427	Robust puncture pH electrode with protective plastic cover, suitable for measurements of food and other solids; low-maintenance gel electrolyte	51340333
LE438	3-in-1 plastic electrode with integrated temperature sensor for field use, samples with fluctuating temperatures; low-maintenance	51340242
LE501	Glass ORP electrode for lab use	51340338
LE510	Robust plastic ORP electrodes for field use, e.g. swimming pools	51340339
LE703	Robust conductivity probe for medium to high conductivities (10 μ S/cm ... 500 mS/cm)	51340335
NTC 30kOhm	Separate temperature sensor	51300164

Our InLab sensors can, of course, also be connected to our "Five" series instruments. More detailed information about our InLab portfolio is available at www.mt.com/electrodes.



Accessories

FiveEasy™ accessories	Order No.
FiveEasy™ power adapter	51302950
FiveEasy™ electrode arm (complete)	51302951
FiveEasy™ rubber cap (2 pieces for electrode arm opening on instrument)	51302952
"Quick guide" for FiveEasy™ pH (laminated)	51710492
"Quick guide" for FiveEasy™ conductivity (laminated)	51710493

Calibration and cleaning solutions



Calibration solutions	Order No.	
	30 x 20 mL sachets	6 x 250 mL bottles
pH 4.01	51302069	51340058
pH 7.00	51302047	51340060
pH 9.21	51302070	51300194
pH 10.01	51302079	51340231
1413 μ S/cm	51302049	51300259
12.88 mS/cm	51302050	51300260

Cleaning solutions	Order No.
Pepsin/HCL solutions for cleaning diaphragms with proteinaceous contamination. Reaction time: approx. 1 hour. (250 mL)	51340068
Thiourea solution for cleaning diaphragms contaminated by silver sulfide. Leave to act until decolorization. (250 mL)	51340070
Reactivation solution for regenerating glass pH electrodes. Reaction time: 1 min. (25 mL)	51340073

Technical specifications

	FE20 FiveEasy™ pH	FE30 FiveEasy™ conductivity
Measuring range	0.00...14.00 pH -1999...1999 mV 0 °C...100 °C (32 °F ...212 °F)	0.1 µS/cm...199.9 mS/cm 0.1 mg/l...199.9 g/l (TDS) 0.00...19.99 psu (salinity) 0 °C...100 °C (32 °F...212 °F)
Resolution	0.01 pH 1 mV 0.1 °C	Automatic range 0.00...19.99 psu 0.1 °C
Error limits	± 0.01 pH ± 1 mV ± 0.5 °C	± 0.5 % of the measured value ± 0.3 °C
Calibration	2 points 4 predefined buffer groups	1 point 3 predefined standards
Power supply	100-240 V / 50-60 Hz, 9V DC	100-240 V / 50-60 Hz, 9V DC
Size/weight	200 x 175 x 52 mm / 0.6 kg	200 x 175 x 52 mm / 0.6 kg
Display	Liquid crystal	Liquid crystal
Input	BNC, impedance > 10e+12 Ω Cinch, NTC 30 kΩ reference: 2 mm	Mini-Din
Temperature-compensation	ATC & MTC	Linear: 0.00 %/°C...10.00 %/°C reference temperature: 20 & 25 °C
Housing	ABS/PC reinforced	ABS/PC reinforced



METTLER TOLEDO - The right solution right from the start ...

... also for outdoor applications: FiveGo™, the splash-protected portable instrument for a mobile introduction to the world of electrochemistry.

METTLER TOLEDO gone global...

the contact addresses of METTLER TOLEDO representatives globally can be found under the Internet address www.mt.com/contacts

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www.mt.com/pH



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