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pH-measurement/Paper, chopstick



9.129 800

LLG-Universal indicator paper, rolls

For the determination of pH values. Plastic dispensing reel with 1 roll of 5m.

Range	Description	PK	Cat. No.
pH			
1 - 11	Dispensing reel with 1 roll	1	9.129 800 1
1 - 14	Dispensing reel with 1 roll	1	9.129 802
1 - 11	Refill packs with 3 rolls	3	9.129 801
1 - 14	Refill packs with 3 rolls	3	9.129 803



LLG-Universal indicator paper, strips



For determination of pH value. Box of 100 pre-cut indicator paper strips of 70mm length.

Range	Package contents	PK	Cat. No.
pH			
1 - 14	box of 100 strips	100	9.129 805



Universal indicator papers

For determination of pH- value. Plastic dispensing reel with 1 roll of indicator paper and colour scale.

MACHERY-NAGEL

Range	Description	PK	Cat. No.
pH			
1 - 11	Dispensing reel with 1 roll	1	9.130 200
1 - 14	Dispensing reel with 1 roll	1	9.130 210
1 - 11	Refill packs with 3 rolls	3	9.130 203
1 - 14	Refill packs with 3 rolls	3	9.130 213

Further indicatorpapers available on request.



Special indicator papers

For determination of pH- value. Plastic dispensing reel with 1 roll of indicator paper and colour scale.

MACHERY-NAGEL

Range	Description	PK	Cat. No.
pH			
0.5 - 5.5	Dispensing reel with 1 roll	1	9.130 305
5.5 - 9.0	Dispensing reel with 1 roll	1	9.130 325
0.5 - 5.5	Refill packs with 3 rolls	3	9.130 306
5.5 - 9.0	Refill packs with 3 rolls	3	9.130 326

Further indicator papers available on request.



Indicator paper, Duotest

Roll length 5m, 10mm width. With two colour zones. Plastic box with 1 roll of indicator paper and colour scale.

MACHERY-NAGEL

Range	Description	PK	Cat. No.
pH			
1 - 12	Dispensing reel with 1 roll	1	9.130 344
1.0 - 4.3	Dispensing reel with 1 roll	1	9.130 356
3.5 - 6.8	Dispensing reel with 1 roll	1	9.130 359
5.0 - 8.0	Dispensing reel with 1 roll	1	9.130 347
7.0 - 10.0	Dispensing reel with 1 roll	1	9.130 362
9.5 - 14.0	Dispensing reel with 1 roll	1	9.130 363
1 - 12	Refill packs with 3 rolls	3	9.130 355
5.0 - 8.0	Refill packs with 3 rolls	3	9.130 358



Indicator paper, Tritest

For determination of pH-value. Roll length 5M, 10mm width. With three colour zones, without hydrophobic zone. Plastic container with 1 roll of indicator paper and colour scale.

MACHERY-NAGEL

Range	Description	PK	Cat. No.
pH			
1 - 11	Dispensing reel with 1 roll	1	9.130 367
1 - 11	Refill packs with 3 rolls	3	9.130 368

3. Analytical measurement and testing pH-measurement/Paper, chopstick

1 Universal indicator paper Tritest L

For determination of pH- value. MACHEREY-NAGEL
 Roll length 6M, 14mm width. With 3 colour zones and 2 hydrophobic zones. The zones are separated by a hydrophobic barrier, which effectively prevents mixing of the reaction colours and increases mechanical stability.
 Plastic container with 1 roll of indicator paper and colour scale.



Range pH	Description	PK	Cat. No.
1 - 11	Dispensing reel with 1 roll	1	9.130 360
1 - 11	Refill packs with 3 rolls	3	9.130 361

2 Litmus paper

Litmus paper, available in blue, red and neutral. Supplied in booklets of 100 strips, 10 x 70mm W x L. MACHEREY-NAGEL



Type	Measuring range	Colour change	PK	Cat. No.
Litmus paper, blue	8.0 to 5.0	blue - red	1	9.130 112
Litmus paper, red	5.0 to 8.0	red - blue	1	9.130 116
Litmus paper, neutral	5.0 to 8.0	red - violett - blue	1	9.130 118

Also available as reel. Refill packs available separately.

LLG-Indicator paper sticks

For pH determination.

Range pH	Package contents	PK	Cat. No.
0 - 14	50 sticks per pack	50	9.129 806
0 - 14	100 sticks per pack	100	9.129 807



9.129 807

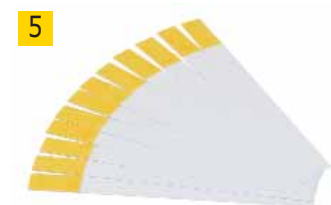
4 5 LLG-Universal Indicator strips, in vial with snap lid "Premium" NEW!

Flip-top vial easy to open and close with one hand. The new LLG pH strips offer the utmost in convenience and ease of use in laboratory grade testing. With a single colour match, and a 12mm reagent pad, these universal pH strips (0.0-14.0) belong in every lab.

- Single colour match - no more matching multiple pads
- 12mm matching area for quick matches,
- Flip-top vial stays closed when dropped, but is easy to open with one-hand.
- Vial keeps strips safe from the elements
- 1 pack (vial) of 100 strips



Range pH	Package contents	PK	Cat. No.
0 - 14	100 strips per vial with snap lid	100	9.129 808



6 Indicator paper, PEHANON®

For determination of pH-value in coloured solutions. MACHEREY-NAGEL
 Supplied in packs of 200, 11 x 100mm W x L strips.

Range pH	PK	Cat. No.
1 - 12	200	9.130 657
0 - 1.8	200	9.130 658
1.0 - 2.8	200	9.130 651
1.8 - 3.8	200	9.130 652
2.8 - 4.6	200	9.130 656
3.8 - 5.5	200	9.130 603
4.0 - 9.0	200	9.130 659
5.2 - 6.8	200	9.130 605
6.0 - 8.1	200	9.130 626
7.2 - 8.8	200	9.130 660
8.0 - 9.7	200	9.130 366
9.5 - 12.0	200	9.130 661
10.5 - 13.0	200	9.130 663
12.0 - 14.0	200	9.130 666



1

1 pH-Fix indicator strips, universal
NEW!

For determination of pH- value. Permanent colour. Non bleeding.

MACHEREY-NAGEL

Range	PK	Cat. No.
pH		
0.0 - 6.0	100	9.130 382
0 - 14	100	9.130 381
0 - 14 PT*	100	9.130 379
7.0 - 14.0	100	9.130 384

* PlopTop tube.

2

2 pH-Fix indicator strips, special

For determination of pH- value. Permanent colour. Non bleeding.

MACHEREY-NAGEL

Range	PK	Cat. No.
pH		
0.3 - 2.3	100	9.130 385
1.7 - 3.8	100	9.130 386
2.0 - 9.0	100	9.130 380
3.1 - 8.3 CE** ¹⁾	100	9.130 377
3.6 - 6.1 PT* CE** ^{1) 2)}	100	9.130 378
3.6 - 6.1 CE** ^{1) 2)}	100	9.130 387
4.5 - 10.0 CE** ¹⁾	100	9.130 383
5.1 - 7.2	100	9.130 388
6.0 - 7.7	100	9.130 389
6.0 - 10.0	100	9.130 392
7.5 - 9.5	100	9.130 390
7.9 - 9.8	100	9.130 391

* PlopTop tube.

 ** CE-marked according to the ¹⁾ IVD-directive 98/79/EG ²⁾ the directive for medical products 93/42/EWG.

3

3 pH indicator strips

Non-bleeding. Ranges as indicated. Supplied in packs of 100 strips.

Merck

Type	Range pH	Increments pH units	PK	Cat. No.
Universal	0 - 14	1	100	9.130 001
Acilit	0 - 6	0.5	100	9.130 016
Neutralit	5 - 10	0.5	100	9.130 017
Alkalit	7,5 - 14	0.5	100	9.130 018

4

4 Special indicator strips

Non-bleeding. Supplied in packs of 100 strips.

Merck

Range	PK	Cat. No.
pH		
0.0 - 2.5	100	9.130 002
2.0 - 9.0	100	9.130 003
2.5 - 4.5	100	9.130 004
4.0 - 7.0	100	9.130 007
5.2 - 7.2	100	9.130 009
6.5 - 10.0	100	9.130 010
11.0 - 13.0	100	9.130 013

3. Analytical measurement and testing pH-measurement/Portable devices

1 pH tester Checker 1

Pocket pH tester with exchangeable electrode. Ideal for pH testing small amounts of liquid and in narrow vessels.

Hanna

Specifications:

Measuring range: 0.00 to 14.00 pH
 Accuracy: ±0.2 pH
 Battery: 2 x 1.5V cells
 Dimensions without probe: 66 x 50 x 25 mm
 Weight: 63g

Type	PK	Cat. No.
Checker 1	1	9.773 930
Spare electrode HI1270	1	9.773 931
Calibration kit, 5 x 20 ml pH 4 and pH 7	1	9.773 932
Calibration kit, 10 x 20 ml pH 7	1	9.773 933



pH tester PHX 800

NEW!

ebro

- Housing made of ABS
- Automatic switch-off after 15 minutes
- Hold-function
- Auto-lock-function
- Automatic deactivation
- Battery level indicator
- Exchangeable battery
- Robust
- Waterproof
- Adjustable

Specifications

Measuring range: 0 to 14pH
 Accuracy: ±0.1pH
 Resolution: ±0.2pH
 Operating temperature: 0 to +50°C
 Storage temperature: -25 to +60°C
 Battery: 4 x 1.5V A76/LR44
 Battery lifetime: approx. 150 hours
 Dimensions (W x L x H): 170 x 32 x 15mm
 Weight: approx. 70 g

Type	Description	PK	Cat. No.
PHX 800	pH tester	1	6.266 914



6.266 914

3 pH/°C tester pHep®-4

NEW!

Hanna

Recently developed waterproof pH and temperature tester (IP67). This is the first pH tester with handheld measuring device features. Automatic two point calibration with 3 pre-programmed standard buffers (pH 7.01; pH 4.01; pH 10.01). Stability indicator for high-precision measurements. Simultaneous display of pH value and temperature. Optional automatic or manual temperature compensation. Includes exchangeable HI 73127 pH electrode.

Specifications:

Measuring range: 0.0 to 14.0 pH
 0.0 to 60.0°C
 Accuracy: ±0.1 pH
 ±0.5°C
 Batteries: 4 x 1.5V
 Environmental conditions: 0 to +50°C
 Dimensions: 163 x 40 x 26mm
 Weight: 100g

Type	PK	Cat. No.
pHep®-4	1	9.773 920
Spare electrode HI 73127	1	9.773 921
Calibration Kit pH 7.01 + 10.01, 5 x 20 ml	1	9.773 934
Calibration kit pH 4.00 + 7.01, 5 x 20 ml	1	9.773 932



1



6.262 991

pH meter PHT 810

NEW!

ebro

Portable pH meter with external electrode.

- BNC connection
- With automatic pH calibration
- Handy and robust
- Current value memory
- Simple calibration with keypad
- Electrodes for different applications
- Min/Max- and hold function

Plastic electrode AT 200: Housing material: Plastic, Diam.: 12mm, Length shaft: 120mm

Glass electrode AT 201: Housing material shaft: Glass, Diam. shaft: 12mm, Length shaft: 900mm

Penetration electrode AT 206 for measurements in semi-solid food stuff and other materials. Housing material: Glass, Diameter shaft/electrode: 25mm/5mm, Length shaft/electrode: 65mm/12mm, with 1m cable and BNC plug

pH meter set contains: pH meter PHT 810, penetration electrode AT 206, punching pin, buffer solutions pH4 and pH7, KCl solution, carrying case, 2-point calibration certificate

2



6.252 036

3



6.266 915

Specifications

Measuring range:	0 to 14pH
Accuracy:	±0.03pH
Resolution:	±0.01pH
Operating temperature:	0 to +50°C
Storage temperature:	-25 to +60°C
Battery:	Lithium 3V/1Ah
Battery lifetime:	approx.. 5 years
Dimensions (W x L x H):	54 x 110 x 22mm
Weight:	approx. 200g

Type	Description	PK	Cat. No.
PHT 810	pH meter (without electrode)	1	6.262 991 1
AT 200	Plastic electrode for PHT 810	1	6.267 164
AT 201	Glass electrode for PHT 810	1	6.267 165
AT 206	Penetration electrode for PHT 810	1	6.252 036 2
ST 1000	pH meter set	1	6.266 915 3

4



4 Pocket pH meters, PICCOLO

Hanna

Handy pocket pH meters with built-in amplifier electrode for greater measurement stability. Automatic temperature compensation via built-in temperature sensor.

Two point calibration.

Piccolo Plus model has additional temperature display.

Supplied complete with electrode, batteries and buffer solutions in ABS case.

Specifications:

Measuring range:	0.00 to 13.00pH
	0 to 70°C (Piccolo Plus only)
Accuracy:	±0.01pH
	±1°C (Piccolo Plus only)
Batteries:	3 x 1.5V cells giving up to 100 hours operation
Weight:	80g

Type	Dimensions (W x D x H) mm	PK	Cat. No.
PICCOLO I with electrode HI 1280	194 x 29 x 15	1	9.773 946
PICCOLO II with electrode HI 1280	265 x 29 x 15	1	9.773 945
PICCOLO Plus with electrode HI 1280	265 x 29 x 15	1	9.773 944
Spare electrode HI 1280 for PICCOLO I (length 90 mm)		1	9.773 947
Spare electrode HI 1290 for PICCOLO II (length 160 mm)		1	9.773 948
Spare electrode HI 1295 for PICCOLO Plus (length 160 mm)		1	9.773 950

1 pH/°C Meter HI 991001

Hanna

- Portable pH/°C -Meter for laboratory use
- Displays pH and temperature simultaneously
- Stability Indicator prevents unstable measurements
- Automatic 2 point calibration with pre-programmed standard buffers (pH 7.01; 4.01; 10.01)
- Automatic temperature compensation enables highest accuracy
- Supplied with amplified pH Electrode HI 1296D with integral temperature sensor

Specifications:

Measuring ranges: -2.00 to 16.00 pH
-5.0 to 105°C
Accuracy: ±0.02 pH
±0.5°C
Battery: 1x 9 Volt
Operating temp. range: 0 to 50.0°C
Weight: 500g

Type	PK	Cat. No.
HI 991001	1	9.733 998
Spare electrode HI 1296D	1	9.773 982

2 pH/ mV/ °C Meters HI 8314N/ HI 83141

Hanna

HI 8314N: supplied complete with plastic-bodied pH electrode HI1217D with integral temperature sensor, calibration screwdriver, 9 Volt Battery.

HI 83141: supplied complete with plastic-bodied pH electrode HI1230B, separate temperature probe, calibration screwdriver, 9 Volt battery.

Measuring range/Accuracy:

pH: 0.00 to 14.00/±0.01
mV: 0 to ±1999 (ORP)/±1
°C: 0.0 to 100.0/±0.4
pH calibration: manual, 2 point, through trimmers, (offset ±1 pH; slope 85 to 105%)
Temperature compensation: automatic, 0 to 70°C (32 to 158°F) or fix at 25°C without temperature probe
Dimensions: 185mm x 82mm x 45mm
Battery type/operating life: 1 x 9V/approx. 100 hours of continuous use

Type	PK	Cat. No.
HI 8314N	1	9.773 959
HI 83141	1	9.773 953
Spare electrode HI 1217D for HI 8314N	1	6.234 050
Spare electrode HI 1230B for HI 83141	1	6.050 012

3 Waterproof pH-/mV-/°C- Meters HI 9125 and HI 9126

Hanna

- rugged waterproof pH Meters
- pH or mV value and temperature are displayed simultaneously
- graphical symbols guide the user through calibration and measurement
- automatic one or two point calibration with pre-programmed standard buffers (pH 4.01, 6.86, 7.01, 9.18, 10.01)
- automatic or manual temperature compensation
- additionally, HI 9126 displays the electrode status, 2 customs buffers can be programmed
- HI 9125 & HI 9126 are supplied with plastic pH electrode, temperature probe buffer solutions pH 4.01 and 7.01 (20ml each), 3 x 1.5V batteries all contained within a carrying case

Specifications

Range:
pH -2.00 to 16.00
mV -1999 to +1999
°C -20.0 to +120.0
Accuracy:
pH ±0.01
mV ±1
°C ±0.4
Dimensions: 192 x 72 x 36mm
Weight: 525g

Type	PK	Cat. No.
HI 9125	1	9.773 978
HI 9126	1	9.773 979
Spare electrode HI 1230B	1	6.050 012



1



1

Foodcare pH Meter HI 99161 with penetration electrode

The FC202D electrode supplied is highly suitable for measurements in Food products like fruit juices, yoghurt, butter, cheese and meat, due to its conical profile. It has a built in temperature sensor. pH and temperature are displayed simultaneously. With Stability indicator. Automatic 1- or 2-point calibration with pre-programmed standard buffers (pH 4.01; 7.01; 10.01).

Hanna

Instrument is supplied with Foodcare Electrode FC202D, pH 7.01 & pH 4.01 buffer solutions (one sachet of 20ml each), cleaning solutions (2 x 20ml) 4 x 1.5 Volt batteries, all contained in a carrying case.

Measuring range/Accuracy:

pH: -2.00 to 16.00/±0.01
 °C: -5.0 to 105.0/±0.4
 Battery type: 4 x 1.5 Volt AAA
 Operating range: 0 to 50°C
 Weight: 205g

Type	PK	Cat. No.
HI 99161	1	6.233 767
Spare electrode FC 202D	1	6.235 596

Pocket pH meters ProfiLine Series

The WTW ProfiLine, hand-held, pH/mV meters are robust and waterproof, according to IP67. They have LCD or graphics displays. The proven DIN socket for connecting pH electrodes permits pH measurement even in wet environments. The instruments can be operated by standard alkaline or rechargeable batteries.

WTW

2 3 pH meter pH 3110 ProfiLine

Make testing simple. Easy operation virtually eliminates errors. All function keys of the 3110 can be operated even when wearing gloves; automatic calibration and AutoRead functions ensure stable and reproducible results. The multifunctional display for pH, and temperature is always easy to read.

WTW

Measuring ranges

pH: -2.0 ... +20.0
 -2.00 ... +20.0
 -2.000 ... +19.999
 Accuracy: ±0.01 pH (±1 digit)
 ±0.005 from +15°C to +35°C
 mV/Accuracy: ±1200.0/±0.3
 ±2000/±0.1
 Temperature: -5.0 to +105.0°C
 Accuracy: ±0.1°C
 Temperature compensation: Automatic via pH electrodes with integral temperature probe, TFK 325 or Pt100

Type	Description	PK	Cat. No.
pH 3110	meter only	1	9.774 367
pH 3110 Set 1	case set including SenTix 21 and accessories	1	9.774 376
pH 3110 Set 2	case set including SenTix 41 and accessories	1	9.774 354
pH 3110 Set 3	case set including SenTix 81 and accessories	1	9.774 317

2



3



1 2 pH meter pH 3210/pH 3310 ProfiLine

pH meter pH 3210

WTW

Convenient and versatile pH/mV meter with backlit graphics display and menu controlled operation. Waterproof and robust. With 5 point calibration for WTW technical or DIN/NIST buffers. Additional 20 pre-programmed buffer sets. The new CMC function (Continuous Measurement Control) helps maintain the optimum measuring range and warns when limits are exceeded.

pH meter pH 3310

The pH/mV handheld meter with integral, time controlled, data logger and memory for 5000 GLP compliant records is ideal for extended data collection. With 1 to 5-point pH calibration. Menu controlled, with backlit graphics display for comfortable and safe operation. Unique CMC-function for controlling the optimum measuring range. 100% waterproof, USB interface for fast data transfer. Includes driver software and cable.

Measuring ranges

pH:	-2.0 ... +20.0
	-2.00 ... +20.00
	-2.000 ... +19.999
Accuracy:	±0.005 pH from +15°C to +35°C
mV/Accuracy:	±1200.0/±0.3 mV
	±2500/±0.1 mV
Temperature:	-5.0 to +105°C
Accuracy:	±0.1°C
Interface (pH3310 only):	Mini USB-B
Memory	
pH3210:	200 records (measured value, temperature, date, time, ID)
pH3310:	5000 records (measured value, temperature, date, time, ID)



Type	Description	PK	Cat. No.
pH 3210	meter only	1	9.774 377
pH 3210 Set 2	case set including SenTix 41 and accessories	1	9.774 355
pH 3210 Set 3	case set including SenTix 81 and accessories	1	9.774 318
pH 3210 Set 4	case set including SenTix 51 and accessories	1	9.774 319
pH 3310	meter only	1	9.774 337
pH 3310 Set 2	case set including SenTix 41 and accessories	1	9.774 356
pH 3310 Set 3	case set including SenTix 81 and accessories	1	9.774 375
pH 3310 Set 4	case set including SenTix 51 and accessories	1	9.774 329

Protective armouring SM Pro, for ProfiLine handheld meters

Soft rubber, shock absorbing cover for ProfiLine handheld meters

WTW

Type	PK	Cat. No.
SM Pro	1	9.774 118

3 Storage and maintenance kit for pH meters

Kit with one pH storage sleeve, technical buffer solution pH 4 and pH 7, 30ml KCl, 50ml cleaning and 50ml storage solutions.

WTW

Type	PK	Cat. No.
Safe Kit	1	9.774 117





1 Portable pH meter Education Line EL2

Experience science with portable pH meters.

Mettler-Toledo Online

- Simple intuitive operation helps you save time during classes
- Ideally suited for classroom and field-based measurements alike
- Robust, low-maintenance, yet reliable electrodes available in kit version

EL2-Basic: pH instrument incl. electrode clip, wrist strap, operating manual, "Quick guide", 4 x batteries

EL2-Kit: Instrument and accessories as with EL2 Basic, also with LE407 pH electrode, IP54 connection caps, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets

EL2-Fieldkit: Instrument and accessories as for EL2 Kit, also with carry bag incl. 4 sample bottles

Please note: These articles are only available for schools and universities.

Specifications

pH-range/accuracy:	0.00 to 14.00/±0.01
mV-range/accuracy:	-1999 to +1999/±1
Temperature range/accuracy:	0.0 to +100.0°C/±0.5°C
Calibration:	Max. 2 points, 3 predefined buffer groups
Free disk space:	30 datasets
Display:	LCD
Batteries:	4 AAA, 1.5V
Dimensions (WxDxH):	169 x 82 x 36mm
Weight:	180g (without batteries)

Type	PK	Cat. No.
EL2-Basic	1	9.704 000
EL2-Kit	1	9.704 001
EL2-Fieldkit	1	9.704 002
Spare electrode LE407	1	9.041 619
Additional electrode LE409	1	9.041 620



2 pH meter FiveGo™ pH FG2

FiveGo™ pH is a handy, portable meter ideal for those who require rapid and reliable results on the go. This meter is suitable for a wide range of applications in various areas such as food and beverage, agriculture, industry, water and environment

Mettler-Toledo Online

- Outstanding functions including storage capacity for up to 30 measurements, mV/ORP measuring mode and IP54 protection against dust and water ingress are combined with useful features such as automatic endpoint recognition and calibration with automatic buffer recognition.
- Five self-explanatory operating and function buttons for easy measurement, menu access, saving and recalling results and calibration recall
- A big, well organised display that simultaneously shows readings, temperature and endpoint criteria along with helpful icons
- Useful accessories such as the electrode clip, wrist strap and laminated quick guide are enclosed with every FiveGo. The electrode kit version also includes the LE438 electrode (Food Kit with LE427 puncture electrode) and the Field Kit version comes in a handy carry bag with 4 sample bottles.

FG2-Basic: pH instrument incl. electrode clip, wrist strap, operating manual, "Quick guide", 4 x batteries

FG2-Kit: Instrument and accessories as with FG2-Basic, with LE438 pH electrode, IP54 connection caps, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets

FG2-Fieldkit: Instrument and accessories as for FG2-Kit, with carry bag incl. 4 sample bottles

FG2-Food Kit: Instrument and accessories as with FG2-Basic, with LE427 puncture pH electrode, IP54 connection caps, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets, with carry bag incl. 4 sample bottles

Specifications:

Measuring range (Accuracy)	
pH:	0.00 to 14.00pH (±0.01pH)
mV:	-1999 to +1999mV (±1mV)
Temperature:	0 to +100°C (±0.5°C)
Calibration:	2 points, 4 predefined buffer groups
Input:	BNC/Cinch (NTC)
Temperature compensation:	ATC and MTC
Memory:	30 measurements
Power supply:	4 x AAA
Protection class acc. to DIN EN 60529:	IP 54

Type	PK	Cat. No.
FG2-Basic	1	9.972 060
FG2-Kit	1	7.619 615
FG2-Fieldkit	1	9.972 061
FG2-Food Kit	1	9.972 062

pH-meter Seven2Go™ S2



1

Portable routine model for pH measurement

Mettler-Toledo Online

- New, intuitive menu structure with fast and easy T-Pad navigation in 12 languages
- Robust design with IP67 protection for use in harsh and demanding environments
- Intelligent Sensor Management (ISM®) functionality reduces the risk of errors
- Up to 5 point calibration with automatic buffer recognition and temperature compensation
- 4 predefined buffer groups and 1 user defined buffer group
- Automatic, manual and time dependant endpoint recording
- Data memory storage for 200 data points
- Power requirements: 4 x 1.5V AA or 1.3V NiMH accumulators

Items supplied:

S2-Meter: Instrument, electrode clip, operating instructions, quick guide, test certificate, declaration of conformity and batteries.

S2-Standard kit: As S2-Meter, but also with InLab Expert Pro-ISM-IP67, buffer sachets for pH 4.01, 7.00, 9.21 and 10.00.

S2-Field kit: As S2-Standard kit, but also with bottles for calibration and uGo™ carrying case.

S2-Food kit: As S2-Field kit, but with InLab Solids Pro-IP67 instead of InLab Expert Pro-ISM-IP67.

S2-Light kit: As S2-Standard kit, but with InLab Versatile Pro instead of InLab Expert Pro-ISM-IP67.



6.265 415

Specifications

pH

Measuring range: -2 to 20 pH
Resolution: 0.01/0.1
Accuracy: ±0.01

mV

Measuring range: -1999 ... +1999mV
Resolution: 1
Accuracy: ±1
Relative mV-measurement: yes

Temperature

Measuring range: -5.0 ... 105.0°C
Resolution: 0.1°C
Accuracy: ±0.5°C
Dimensions (WxDxH): 222 x 70 x 35mm

Type	PK	Cat. No.
S2-Meter	1	6.265 414
S2-Standard kit	1	6.265 415 1
S2-Field kit	1	6.265 416
S2-Food kit	1	6.265 417
S2-Light kit	1	6.265 418

We can supply this
manufacturer's
whole
product range !



1

pH/Ion-Meter Seven2Go™ pro S8

NEW!

Portable professional model for pH measurement

Mettler-Toledo Online



6.265 259

- New, intuitive menu structure with fast and easy T-Pad navigation
- Robust design with IP67 protection for use in harsh and demanding environments
- Intelligent Sensor Management (ISM®) functionality reduces the risk of errors
- New sunlight-proof screen guarantees screen readability even in direct sunlight
- New StatusLight gives a fast, visual confirmation showing if the meter is ready to measure or not
- Operating support for 12 languages with information shown in complete words and sentences
- Up to 5 point calibration with automatic buffer recognition and temperature compensation
- 8 predefined buffer groups and 1 user defined buffer group (1 user defined ion-standard)
- Automatic, manual and time dependant endpoint recording
- Data memory storage for 2000 GLP data points with weatherproof Micro-USB connection for data export
- Power requirements: 4 x 1.5V AA or 1.3V NiMH accumulators

Items supplied:

S8-Meter: Instrument, LabX direct pH, USB cable, electrode clip, base accessory, operating instructions, quick guide, test certificate, declaration of conformity and batteries.

S8-Standard kit: As S8-Meter, but also with InLab Expert Pro-ISM-IP67 and buffer sachets for pH 4.01, 7.00, 9.21 and 10.00.

S8-Field kit: As S8-Standard kit, but also with bottles for calibration and uGo™ carrying case.

S8-Biotech kit: As S8-Field kit, but with InLab Routine Pro ISM (incl. cable) instead of InLab Expert Pro-ISM-IP67.

S8-Fluoride kit: As S8-Standard kit, but with perfectION Fluoride instead of InLab Expert Pro-ISM-IP67, without buffer sachets.

Specifications

pH

Measuring range: -2 to 20 pH
 Resolution: 0.001/0.01/0.1
 Accuracy: ±0.002

mV (rel. mV)

Measuring range: -2000 ... +2000 mV
 Resolution: 0.1/1
 Accuracy: ±0.1

Ion

Measuring range: 1.00e-09 ... 9.99e+09
 Resolution: 3 or 4 digits (auto-range)
 Accuracy: ±0.5%

Temperature

Measuring range: -5.0 ... 130°C (ATC)
 -30.0 ... 130°C (MTC)
 Resolution: 0.1°C
 Accuracy: ±0.2°C if T = 0°C ... 105°C
 ±0.5°C if T < 0°C or T > 105°C

Dimensions (WxDxH): 222 x 70 x 35mm

Units: mg/L, mmol/L, mol/L, %, ppm, pX

Type	PK	Cat. No.
S8-Meter	1	6.265 258
S8-Standard kit	1	6.265 259 1
S8-Field kit	1	6.265 260
S8-Biotech kit	1	6.265 261
S8-Fluoride kit	1	6.265 262



1 pH-meter HandyLab 100



1

The portable allrounder for pH/mV measurements. The HandyLab 100 increases the measuring speed and accuracy thanks to the AutoRead and the CMC function. AutoRead displays when the measuring value is stable and eliminates the risk of a premature reading of the faulty measuring value. CMC (Continuous Measurement Control) visualizes whether the measuring value is still within the calibration limits. Having storage capacity for up to 200 data sets, stored data can be viewed. The HandyLab 100 can process 1- to 5-point calibration with a choice of 22 stored buffer sets easily and comfortably.

SI Analytics



Supplied with:

HL100Versatile: pH meter set HandyLab 100 with pHT combination electrode A7780-NTC30-DIN-N for general applications

HL100Field: pH meter set HandyLab 100 with pHT-electrode BlueLine 24 pH and reinforcement for on-site measurements

Specifications

pH

Measuring range: -2 ... 20 pH
Resolution: ±0.1/±0.01/±0.001 pH
Accuracy: ±0.005 pH

mV

Measuring range: -2500 ... +2500 mV
Resolution: ±1 mV
Accuracy: ±0.3 mV

Temperature

Measuring range: -5.0 ... +105.0°C
Resolution: ±0.1°C
Accuracy: ±0.1°C

Type	PK	Cat. No.
HL100Versatile	1	6.265 283
HL100Field	1	7.910 240

2 pH meter HandyLab 600



2

- IDS technology (Intelligent Digital Sensor). The digitalization of the measuring signal eliminates interferences.
- AutoRead function. Autoread provides a stable, precise measuring value.
- CMC (Continuous Measurement Control) visualizes whether the measuring value is within the calibration range.
- QSC (Quality Sensor Control) informs about the actual condition of the electrode and therefore increases operation safety.
- IDS Technology. The secure allocation of the calibration data to the sensor eliminates any uncertainty about the date and results of its last calibration. This saves time and money while assuring the highest confidence in your measurements.
- Traceability of the measuring values by the digital and automatic capture of all sensor data.
- Transmission of all data in *.csv format via USB interface to the PC. Or as an alternative, formatted transfer into Excel via MultiLabImporter (included in the delivery).

SI Analytics



Supplied with:

HL600Versatile: pH meter Set HandyLab 600 with pHT electrode A7780 IDS for general applications

HL600Food: pH meter Set HandyLab 600 with pH electrode BlueLine 21 pH IDS. (with reinforcement and integrated temperature sensor) for penetration measurements in the food section.

Specifications

pH

Measuring range: 0.000 ... 14.000pH
Resolution: ±0.001pH
Accuracy: ±0.004pH

mV

Measuring range: ±1200.0 mV
Resolution: ±0.1mV
Accuracy: ±0.2mV
Relative mV-measurement:

Temperature

Measuring range: -5.0 ... +105.0°C
Resolution: ±0.1°C
Accuracy: ±0.2°C

Type	PK	Cat. No.
HL600Food	1	6.265 288
HL600Versatile	1	6.265 296

1



1 pH-meter HandyLab 680

(NEW!)

The HandyLab 680 increases the measuring accuracy via:

- IDS technology. The digitalization of the measuring signal eliminates interferences.
- AutoRead function. Autoread provides a stable, precise measuring value.
- CMC (Continuous Measurement Control) visualizes whether the measuring value is within the calibration range.
- QSC (Quality Sensor Control) informs about the actual condition of the electrode and therefore increases operation safety.

The HandyLab 680 increases the operator comfort via:

- IDS Technology. The secure allocation of the calibration data to the sensor eliminates any uncertainty about the date and results of its last calibration. This saves time and money while assuring the highest confidence in your measurements.
- Traceability of the measuring values by the digital and automatic capture of all sensor data.
- User administration can be activated to allow tiered access and capabilities ensuring security and confidence of your data.
- Transmission of all data in *.csv format via USB interface to the PC or the USB memory stick, or, as an alternative, formatted transfer to Excel by means of MultiLabImporter (included in the delivery).

Supplied with:

HL680pHVersatile: pH meter Set HandyLab 680 with pHT electrode A7780 IDS and Z389 for general applications

HL680pHField: pH meter Set HandyLab 680 with pHT electrode BlueLine 24 pH IDS and Z389 for on-site measurements

HL680pHFood: pH meter Set HandyLab 680 with pH electrode BlueLine 21 pH IDS (with reinforcement and integrated temperature sensor) and Z389 for penetration measurements in the food section

Specifications

pH

Measuring range: 0.000 ... 14.000pH

Resolution: ±0.001pH

Accuracy: ±0.004pH

mV

Measuring range: ±1200.0mV

Accuracy: ±0.02mV

Relative mV-measurement:

Temperature

Measuring range: -5.0 ... +105.0°C

Resolution: ±0.1°C

Accuracy: ±0.2°C

Type	PK	Cat. No.
HL680pHVersatile	1	6.265 612
HL680pHField	1	6.265 603
HL680pHFood	1	6.265 604

Accessories for HandyLab

For HandyLab 100/200/600/680.

(NEW!)

SI Analytics

Description	PK	Cat. No.
Protective reinforcement Z389	1	6.265 613
Case Z530 incl. reinforcement Z389, buffer solutions, conductivity testing solution	1	6.265 614

1 pH meter HandyLab 700/750



1

SI Analytics

Portable pH measuring devices by SI Analytics with Memosens® technology offers increased safety and a user-friendly interface

- Durable design for daily measurements
- Connection: 2 x 4mm diam. for integrated or separate temperature sensor
- Contrast-rich and scratch-resistant clear glass LCD display
- Self-explanatory operation with one clear text line
- Display of the sensor status at one glance with Sensoface
- Calibration of up to 3 points with automatic buffer detection (from 10 buffers)
- Manual calibration by indicating random buffer values
- Real-time clock and display of battery charging status
- Extended operating time of more than 1.000 hours with standard batteries (4 x AA)

HandyLab 750 additional features:

- Store up to 5.000 data points.
- Micro-USB connection to communicate with the software HandyLab Pilot software for evaluation of data from digital Memosens® sensors.
- HandyLab Pilot software (included with delivery), allows easy management and evaluation of stored data and can be used for device configuration.

Supplied with: Set with pH meter, AquaLine 90pH, SKK K1A and DIN buffer solutions in ampoules

Specifications

pH measurement Memosens (also ISFET)

Measuring range: -2.000 ... +16.000pH

mV measurement Memosens Redox

Messbereich: -2000 ... +2000mV

pH/mV measurement (analog)

pH measurement measuring range: -2 ...16pH

mV measurement measuring range: -1300 ... +1300mV

Temperature measurement

Measuring range with sensor NTC 30kOhm: -20 ... +120°C

Measuring range with sensor Pt 1000: -40 ... +250°C

Type	PK	Cat. No.
HL700AL90pH	1	6.266 645
HL750AL90pH	1	6.266 646



2 3 pH/Redox-Meter SD300pH

AQUALYTIC

- Rugged, water resistant (IP67) designed for field use
- Automatic buffer detection for calibration
- Data logger and alarm function (min./max.), Good Laboratory Practice (GLP-features)
- Clear, concise result reading: easy-to-read backlit LCD display
- Automatic temperature compensation
- PC interface for data download (USB/serial or analog)
- High resolution (0.001 pH/0.1 mV)

Supplied with:

SD300PH: Meter without electrode, incl. batteries and manual

SD300PH Set-1: Meter complete in case, incl. manual and batteries, pH electrode with temperature sensor plastic/gel-BNC plug, buffer solution 4/7/10 pH (90 ml each)

SD300PH Set-2: Meter complete in case, incl. manual and batteries, pH electrode with temperature sensor plastic/gel-BNC plug, temperature sensor PT 100, buffer solution 4/7/10 pH (90 ml each)

Specifications

pH: -2.000 to 16.000
 Accuracy: ±0.005
 Temperature: -5.0 to +150°C
 Accuracy: ±0.2°C
 Redox (ORP): -2000.0 to 2000.0mV
 Accuracy: ±0.05% FS (mV or mVH)
 Dimensions (WxDxH): 86 x 160 x 37mm
 Power supply: 2 x AAA battery
 Power consumption: < 1.0mA
 Protection class acc. to: IP 67

Type	PK	Cat. No.
SD300PH	1	9.699 275
SD300PH Set-1	1	9.699 276
SD300PH Set-2	1	9.699 277



pH-measurement/Table devices

1



1 Laboratory pH Meter with built in Magnetic Stirrer, HI 208-02

Compact, easy to use pH Meter with built in Magnetic Stirrer, suitable for educational purposes. Hanna

- pH and temperature value are displayed together on the Dual Level LCD
- Automatic 1- /2- Point Calibration with pre-programmed buffers (pH 4.01, 7.01 and 10.01)
- Automatic temperature compensation from -5.0 to 105.0°C

HI 208-02 is supplied with pH Electrode HI 1291D (with internal temperature sensor), pH Electrode holder and plastic beaker, stirring bar, 9V battery, 12V adapter, pH buffer solutions (2 sachets of 20ml each)

Specifications

Measuring range/Accuracy: -2.00 to 16.00pH/±0.01pH
 Temperature range/Accuracy: -5.0 to +105.0°C/±0.5°C (up to 60°C)
 Power Supply: 12V Adapter or 9V battery (included)
 Weight: 500g

Type	PK	Cat. No.
pH meter HI 208-02	1	6.233 844
Spare electrode HI 1291D	1	6.235 794
Measuring beaker HI 740036P, 50ml	10	9.773 919

2



2 pH/mV/°C meter HI 2211-02/HI 2215-02

- Extra wide LCD, displays pH/mV value and temperature simultaneously Hanna

- The stability indicator makes the calibration procedure calibration error free
- Automatic calibration at two points with pre-programmed standard buffers (pH 7.01; 4.01; 10.01)
- Automatic temperature compensation from -10°C to +120°C
- Graphic symbols guide the user through calibration and measurement

Further specifications (HI 2215-02 only):

- Resolution: 0.01 or 0.001pH
- Automatic calibration at two points with 7 pre-programmed standard buffers (pH 1.68; 4.01; 6.86; 7.01; 9.18; 10.01; 12.45) and 2 selectable buffers.
- Recording of up to 100 values with date and time via keystroke
- Data transfer to PC via USB interface

Supplied with:

HI 2211-02 is supplied with pH glass electrode HI 1131B, temperature probe, pH 7.01 and pH 4.01 buffer solution (20ml each), electrolyte solution, electrode holder, 12V adapter

Measuring range/Accuracy:

pH: -2.00 to 16.00/±0.01
 mV: ±399.9 (ISE); ±2000 (ORP)/
 ±0.2 (±699.9); ±1 (2000)
 °C: -9.9 to 120/±0.5 (0.0 to 100.0)

Resolution:

pH: 0.01
 0.01 or 0.001 (HI 2215-02 only)
 mV: 0.1 (±399.9); ±1 (2000)
 °C: 0.1
 Power supply: 12V d.c. adapter (included)
 Operating temp. range: 0 to 50°C
 Weight: 2.5

Type	PK	Cat. No.
HI 2211-02	1	9.773 981
HI 2215-02	1	9.773 994
Spare electrode HI 1131B for HI 2211-2 / HI 2215-02	1	9.040 993



1 | 2 pH meter edge



Hanna

Features tablet meter edge:

- thin and lightweight (approx. 280g only)
- large 140mm LCD display with clear full text readout capacitive touch screen
- ergonomic design, versatile, can be used as a benchtop docking station with electrode holder, as a portable meter or wall mounted (included in delivery)
- Rechargeable battery (about 8 hours of continuous use), battery charge via mains connection or USB cable, table station and wall mounting can also be used to charge the battery
- Integrated measured data storage for up to 1000 data records, manual storage or time-controlled by defining a storage interval
- Data transfer from device to PC via USB ports (no software needed)
- All electrodes are supplied with integrated temperature sensor and a 3.5mm plug with 1m cable

pH meter HI 2020-02:

- Sensor type, ID and calibration information are automatically recognized when connecting the electrode to the instrument
- GLP: data of last calibration (buffers, date, time, electrodes offset, slope) are stored and be checked at any time
- Calibration time out warns the user when set calibration time has been exceeded
- Instrument can be used in Basic or Standard mode: Basic mode ideally for routine measurements for a simplified screen and features. In Basic mode, resolution is 0.01 pH, calibration can be performed automatically at 1, 2, 3 points with pre-programmed buffer series (pH 4.01; 6.86; 7.01; 9.18; 10.01). The standard mode offers additional features. In Standard mode the resolution can be selected between 0.01 pH and 0.001 pH, calibration can be performed automatically at 3, 4, 5 points with 7 standard buffers and 2 custom buffers for special applications.
- Calibration Check Function (pH electrode only): controlling of calibration process, displays electrode status after calibration

pH Kit supplied with: instrument incl. electrode HI 11310, buffer solution pH 4, pH 7 and pH 10 (2 sachets each), cleaning solution for electrodes, bench top docking station with electrode holder, wall mounting, USB cable, 5 V adapter

Specifications	Measuring range // Resolution // Accuracy
pH:	2.00 to 16.00 // 0.01 // ±0.01/±0.002 -2.000 to 16.000 // 0.001 // ±0.01/±0.002
Temperature:	-20.0 to +120.0°C // 0.1°C // ±0.2°C

Type	Description	PK	Cat. No.
HI 2020-02	pH meter edge, kit with pH electrode and accessories	1	6.261 874
HI 11310	Refillable pH electrode, glass body, ceramic diaphragm, double junction	1	6.261 876

1



2



1



1 pH Meters, Lab 850 and 860

NEW!

SI Analytics

CalClock function keeps your calibration under control: This unique combination of sensor evaluation and calibration timer monitors all calibration relevant parameters (buffer, electrode, curve slope, zero-point, time) and immediately indicates any errors.

Features:

- keypad
- clock
- large LCD display
- adjustable calibration interval
- alarm

Additional features Lab 850:

- bi-directional RS 232C interface
- memory: 800 data records
- GLP compliant
- 3 point calibration

Additional features Lab 860:

- USB (slave) connection
- 5 point calibration

Items supplied Lab 850/860 Set: pH meter Lab 850 or pH meter Lab 860, electrode BlueLine pH14 with temperature sensor, support, cover, power supply and DIN buffers 4.01 and 6.87.

Items supplied Lab 850/860 BNC Set: pH meter Lab 850 or pH meter Lab 860, electrode BlueLine pH15 with temperature sensor, support, cover, power supply and DIN buffers 4.01 and 6.87.

Specifications

Measuring range: -2.00 to +19.999pH
or -999.9 to +999.9mV
and -1999 to +1999mV

Temperature range: -5.0 to +120.0°C

Type	PK	Cat. No.
Lab 850 Set	1	9.773 850
Lab 860 Set	1	9.773 855
Lab 850 BNC Set	1	6.260 750
Lab 860 BNC Set	1	6.260 751

2



2 pH measuring instrument Lab 870

SI Analytics

ID electrodes and meters with automatic identification and data exchange and allocation.

- Reliable and precise measuring values due to perfect matching with the measuring system consisting of meter, electrode and buffer solutions.
- Fast pH measurement and calibration through advanced measuring algorithm.
- Maintains reliability with "CalClock", sensor recognition and calibration timer.
- Fast and easy documentation complying with GLP through perfect communication via USB (slave) and RS232.
- Highest safety for measuring and calibrating through wireless sensor recognition.
- ID electrodes and meters with automatic identification and data exchange and allocation.
- The special stand - mounting with one click and the stand is positioned firmly and safely.

Items supplied in set:

- measuring instrument
- ID-electrode with integrated temperature sensor
- buffer solutions
- stand
- universal power supply unit
- cover

Specifications

pH measuring range: -2.000pH to +19.999pH
-2.00pH to +19.99pH

Accuracy (±1digit): ±0.005
±0.01

mV measuring range: -999.9mV to +999.9mV;
-999mV to +999mV

Accuracy (±1digit) ±0.3mV
±1mV

Temperature measuring range: -5.0°C to + 120.0°C

Accuracy (±1digit): 0.1°C

Type	PK	Cat. No.
Lab 870 DIN Set	1	9.773 851
Lab 870 BNC Set	1	9.773 852

1 Laboratory instrument inoLab® pH 7110

WTW

The new inoLab® pH 7110 is a basic pH/mV benchtop meter for fast and accurate results without efforts. A big LCD segment display makes readings easy; a well-arranged keypad provides convenient operation. The automatic AutoRead function supports correct and repeatable results. An adjustable built-in calibration timer reminds the user of periodical calibration. Each meter comes including stand and accessories.

Specifications

Ranges All values ±1 digit
 pH: -2.0 ... 20.0 ±0.1 pH
 -2.00 ... 20.00 ±0.01 pH
 -2.000 ... 19.999 ±0.005 pH
 mV: ±(1200.0 ±0.3) mV
 ±(2000 ±1) mV
 Calibration: 1-, 2- or 3 point WTW technical buffer or DIN/NIST
 Temperature: -5.0 ... 105.0°C ±0.1°C
 Power supply: Universal power supply 100 to 240V, 50/60Hz, 4 x 1.5V AA or 4 x 1.2V NiMH rechargeable batteries



Type	Description	PK	Cat. No.
pH 7110	Single unit incl. accessories	1	9.920 090
pH 7110 SET 2	Meter incl. SenTix® 41 and accessories	1	9.920 091
pH 7110 SET 4	Meter incl. SenTix® 81 and accessories	1	9.920 092
pH 7110 BNC	Single instrument including accessories, BNC input	1	9.920 093
7110 BNC SET 7	Meter incl. SenTix® 42 and accessories	1	9.920 094
7110 BNC SET 9	Meter incl. SenTix® 82 and accessories	1	9.920 095

3 Laboratory instrument inoLab® pH 7310

WTW

Reliable Documentation for pH measurement, if desired also available with built-in printer:
 This is the new inoLab® pH 7310 or inoLab® pH 7310P. A modern backlit graphic display with menu controlled user interface allows easy and intuitive operation. The mini USB-B interface provides fast data transfer to a PC. The internal memory can record up to 5000 GLP complying data including ID, date and time. The housing and the keypad are easy-to-clean. Up to five calibration points cover almost the complete pH range. A calibration history of the 10 last calibrations allows conclusions on the state of the sensor. An integrated thermal printer (58mm width) is ready for printout of the measured data (option).

Supplied with: meter, power supply, stand and USB cable.

Specifications

Ranges All values ±1 digit
 pH: -2.0 ... 20.0 ±0.1 pH
 -2.00 ... 20.00 ±0.01 pH
 -2.000 ... 19.999 ±0.005 pH
 mV: ±(1200.0 ±0.3) mV
 ±(2500 ±1) mV
 Temperature: -5.0 ... 105.0°C ±0.1°C
 Calibration: 1-, 2-, 3-, 4-, 5 point WTW technical. DIN, NIST and 20 additional buffer sets
 Calibration memory: Up to 10 calibrations recallable
 Display: LCD Graphic, backlit
 Memory: manual 200/5000 automatic
 Logger: manual/time controlled
 Interface: Mini USB-B
 Power supply: Universal power supply, 100 to 240V, 50/60 Hz, 4 x 1.5V AA or 4 x 1.2V NiMH



Type	Description	PK	Cat. No.
pH 7310	Meter only incl. accessories	1	9.920 100
pH 7310 Set 2	Meter incl. SenTix® 41and accessories	1	9.920 101
pH 7310 Set 4	Meter incl. SenTix® 81 and accessories	1	9.920 102
pH 7310P	Meter incl. integrated printer	1	9.920 104
pH 7310P Set 2	Meter with integrated printer, incl. SenTix® 41and accessories	1	9.920 105
pH 7310P Set 4	Meter with integrated printer, incl. SenTix® 81 and accessories	1	9.920 106
pH 7310P BNC	Meter with integrated printer, incl. accessories, BNC input	1	9.920 107

1



1 Benchtop pH meter Education Line EL20

NEW!

Mettler-Toledo Online

Experience science with pH bench meters

- Simple intuitive operation: helps you save time during classes
- Compact, robust benchtop instrument
- Robust, low-maintenance, yet reliable electrodes available in kit version
- Ideal for schools and universities

EL20-Basic: pH instrument incl. operating manual, "Quick guide", power adapter

EL20-Kit: Instrument and accessories as with EL20 Basic, also with LE407 pH electrode, electrode arm, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets

Please note: These articles are only available for schools and universities.

Specifications

pH-range/accuracy:	0.00 to 14.00/±0.01
mV-range/accuracy:	-1999 to +1999/±1
Temperature range/accuracy:	0.0 to +100.0°C/±0.5°C
Calibration:	Max. 2 points, 3 predefined buffer groups
Display:	LCD
Power supply:	100-240V/50-60Hz, 9V DC
Dimensions (WxDxH):	200 x 175 x 52mm
Weight:	600g

Type	PK	Cat. No.
EL20-Basic	1	9.704 147
EL20-Kit	1	9.704 148
LE407	1	9.041 619
LE409	1	9.041 620

2



2 pH meter FiveEasy™ pH FE20/FiveEasy Plus™ pH FEP20

Mettler-Toledo Online

FiveEasy™ and FiveEasy Plus™ pH are compact, easy to use bench meters suitable for a wide range of applications in various areas such as food and beverage, agriculture, industry, water and environment.

- Outstanding functions include a separate reference electrode input, mV/ORP measuring mode and a self-test combined with useful features such as automatic endpoint recognition and calibration with automatic buffer recognition.
- Five self-explanatory operating and function buttons for easy measurement, menu access and calibration recall
- A big, well organised display that simultaneously shows readings, temperature and endpoint criteria along with helpful icons

FE20-Basic: pH instrument incl. operating manual, "Quick guide", power adapter

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

FE20 ATC Kit: Instrument and accessories as with FE20-Basic, also with LE438 "3-in-1" pH electrode, electrode arm, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets

FEP20-Basic: pH instrument incl. operating manual, "Quick guide", power adapter

FEP20 ATC Kit: Instrument and accessories as with FEP20-Basic, also with LE438 "3-in-1" pH electrode, electrode arm, 2 x pH 4.01 and 2 x pH 7.00 buffer sachets

Specifications

Measuring range (Accuracy)	
pH:	0.00 to 14.00 pH (±0.01pH)
mV:	-1999 to 1999 (±1mV)
Temperature:	0°C to 100°C (±0.1°C)
Input:	BNC/RCA, Cinch (NTC)
Temperature compensation:	ATC and MTC
Power supply:	100-240V/50-60Hz/9V DC
Calibration FE20:	2 points, 4 predefined buffer groups
Calibration FEP20:	3 points, 4 predefined buffer groups
FEP20 only:	
Memory:	99 measurements
Interface FEP20:	RS232

Type	PK	Cat. No.
FE20-Basic	1	6.234 716
FE20-Kit	1	6.232 715
FE20 ATC Kit	1	9.972 070
FEP20-Basic	1	9.773 702
FEP20 ATC Kit	1	9.773 703
FiveEasy AC adaptor (incl. connectors) input 230V, output DC 9V	1	7.900 515
FiveEasy electrode arm (complete)	1	6.235 935

1 2 pH meter SevenCompact™ S210



Mettler-Toledo Online

The SevenCompact™ pH meter S210 is the perfect choice for a wide range of applications. At the same time, working with the S210 is like child's play. Starting a measurement or calibration has never been easier, requiring only a single keypress.

- Fast and accurate measurements
- User-friendly operation
- Menu guidance in 12 languages
- Clear, well arranged color display
- Many peripheral options
- GLP compliant

Supplied with:

- S210-Basic:** Instrument, electrode holder, protective cover, operating instructions, quick guide, declaration of conformity and test certificate
- S210-Kit:** As per S210-Basic, 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.
- S210-Bio:** As per S210-Kit, but with InLab® Routine Pro-ISM cable kit instead of InLab® Expert Pro-ISM.
- S210-U:** As per S210-Kit, but with InLab® Versatile Pro instead of InLab® Expert Pro-ISM.

Specifications:

pH-range:	-2.000 to 20.000
pH-relative accuracy:	±0.002
pH-resolution User-definable:	0.001/0.01/0.1
mV-range:	-2000.0 to 2000.0
mV-relative accuracy:	±0.2
mV-resolution User-definable:	0.1/1
Temperature range	
MTC:	-30.0 to 130.0°C
ATC:	-5.0 to 130.0°C
Temperature accuracy:	±0.1°C
Display:	4.3 inch, TFT color
Ext. power supply:	9-12V/10W
Protection class:	IP54

Type	PK	Cat. No.
S210-Basic	1	9.704 156
S210-Kit	1	9.704 157
S210-Bio	1	9.704 158
S210-U	1	9.704 159



pH-measurement/Table devices

1



1 pH/Ion meter SevenCompact™ S220

Mettler-Toledo Online

The colour display with its well-designed icons and menu settings in 10 languages makes operation genuinely intuitive. Applications range from routine measurements through sample analysis, data handling and data archiving in compliance with GLP regulations. Simply innovative design that meets the requirements for a universal, easy-to-operate pH/Ion meter.

- User friendly instrument for demanding users
- Security and high reproducibility thanks to Intelligent Sensor Management (ISM®)
- Improved quality of measurements through professional calibration support
- Comprehensive service package including IQ/OQ
- Integrated USB and RS232 interfaces for data exchange

Supplied with:

S220-Basic: Instrument, electrode holder, protective cover, operating instructions, quick guide, declaration of conformity and test certificate

S220-Kit: As per S220-Basic, 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.

S220-Bio: As per S220-Kit, but with InLab® Routine Pro-ISM cable kit instead of InLab® Expert Pro-ISM.

S220-U: As per S220-Kit, but with InLab® Versatile Pro instead of InLab® Expert Pro-ISM.

Specifications:

pH-range:	-2.000 to 20.000
pH-relative accuracy:	±0.002
pH-resolution User-definable:	0.001/0.01/0.1
mV-range:	-2000.0 to 2000.0
mV-relative accuracy:	±0.2
mV-resolution User-definable:	0.1/1
Ion-Concentration range:	1.00E-9 to 9.99E+9
Ion-Concentration accuracy:	±0.5%
Temperature range	
MTC:	-30.0 to 130.0°C
ATC:	-5.0 to 130.0°C
Temperature accuracy:	±0.1°C
Display:	4.3 inch, TFT color
Ext. power supply:	9-12V/10W

Type	PK	Cat. No.
S220-Basic	1	9.704 160
S220-Kit	1	9.704 161
S220-Bio	1	9.704 162
S220-U	1	9.704 163

2



6.252 178

3



9.773 710

Printers for Mettler Toledo instruments



Mettler-Toledo Online

Suitable for the following Mettler Toledo instruments:

RS-P25, RS-P26, RS-P28: SevenExcellence™, SevenCompact™, FiveEasy Plus™, SevenMulti™

RS-P25/USB-P25: SevenExcellence™

RS-P26, RS-P28: SevenGo pro™, SevenGo pro Duo™, Densito, Refracto, SevenEasy™

Supplied with: Printer, power cable (country specific), interface cable, paper roll (1 pcs), ribbon cartridge (1 pcs)

Features

- Built-in real-time clock, Zero/Tare key:
- Statistic application, totalling application:
- RS232 Schnittstelle:
- Printer unit:
- Ribbon cartridge:
- Paper roll:
- Print quality:
- Interface:
- Dimensions (WxDxH):
- Net weight:

For model

- RS-P26, RS-P28
- RS-P28
- RS-P25, RS-P26, RS-P28
- Dot matrix printer
- Exchangeable, black ink
- Standard paper 57.5 mm (W), max. Ø 60 mm
- Thermally stable and lightfast paper (GxP)
- RS232C, 9pin male connector or USB* (*SevenExcellence ONLY)
- 120 x 203 x 73mm
- 740g (paper roll included)

Type	PK	Cat. No.
RS-P25/USB-P25	1	6.252 178 2
RS-P26	1	6.251 155
RS-P28	1	9.773 710 3

1 | 2 pH meter, SevenExcellence™ S400

Mettler-Toledo Online

Modular professional system for measurements of pH, redox potential, conductivity, salinity/TDS and ion concentration. Fits up to three modules in any composition and order, can be expanded with additional measurement parameters at any time.

- Large, high resolution 7" colour touch display (capacitive), very clear and easy to operate.
- Modularity and flexibility; up to 3 measuring modules can work in parallel, expansion to 2 or 3 channels possible.
- Universal communication via 2 x USB, Ethernet (LAN) and RS232.
- Plain text user interface in 10 languages with menu guidance in full sentences.
- OneClick™ operation concept to quickly start frequently used functions and preferred methods.
- Storage for user methods.
- Highest security and GxP support (ID protection, sophisticated user management, limits/alarms, integrated radio clock, etc.).
- Intelligent sensor management (ISM®).
- Connection of stirrer, sample changer, PC, barcode reader, keyboard, local or network printer possible.
- Storage up to 20000 data sets (measurements, calibrations, methods).
- 17 predefined, 60 user-defined methods
- 5 point calibration (pH), 8 pre-defined and 20 user-defined buffer groups, incl. temperature chart
- uPlace™ electrode arm with perfect vertical movement.
- Compatible with all METTLER TOLEDO electrodes (Recommended: ISM® electrodes).

S400-Basic: Includes instrument, 1 x pH/mV expansion unit, 2 x 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.

S400-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.

S400-Bio: As S400-Kit but with InLab® Routine Pro-ISM cable kit instead of InLab® Expert Pro-ISM.

S400-ISFET: As S400-Kit but with InLab® 490 instead of InLab® Expert Pro-ISM.

Specifications

	Measuring range // Resolution // Accuracy
Temperature range MTC/ATC:	-30.0 to 130.0°C // 0.1°C // ±0.1°C
pH:	-2.000 to 20.000 // 0.001/0.01/0.1 // ±0.002
mV:	-2000.0 to 2000.0 // 0.1/1 // ±0.1
Rel. mV:	-2000.0 to 2000.0 // 0.1/1 // ±0.1
ISFET pH:	0.000 to 14.000 // 0.001/0.01/0.1 // ±0.05

Type	PK	Cat. No.
S400-Basic	1	9.704 350
S400-Kit	1	9.704 351
S400-Bio	1	9.704 352
S400-ISFET	1	9.704 353



Accessories for Printers for Mettler Toledo instruments



Mettler-Toledo Online

Description	PK	Cat. No.
Normal paper	5	9.947 538
Printer ribbon, black	1	9.947 539
Paper roll adhesive	1	9.947 540



1 pH combination electrodes, gel electrolyte, SenTix®, refillable

Basic pH combination electrodes, with plastic body, gel reference system. SenTix® 20 with plug head (AS/DIN or AS/BNC cable combination please order separately).

WTW

Specifications

Temperature range:	0 to 80°C
pH range:	0 to 14pH
Length/diam.:	120mm/12mm
Electrolyte:	Gel
Diaphragm:	Fibre
Membrane shape:	Cylindrical
Membrane resistance at 25°C:	1 GΩ
Refill hole cover:	Slide

Type	Temperature sensor	Connector	Cable m	PK	Cat. No.
SenTix® 20	-	Plug-in head	-	1	9.040 851
SenTix® 21	-	DIN, waterproof	1	1	9.040 872
SenTix®21-3	-	DIN, waterproof	3	1	9.040 873
SenTix® 22	-	BNC	1	1	9.040 840
SenTix® 41	NTC 30 kΩ	DIN, waterproof	1	1	9.040 876
SenTix® 41-3	NTC 30 kΩ	DIN, waterproof	3	1	9.040 877
SenTix® 42	NTC 30 kΩ	BNC	1	1	9.040 841



2 pH combination electrodes, liquid electrolyte, SenTix® 51/SenTix® 52, refillable



Standard pH combination electrodes with plastic shaft, non-solid electrolytes. With fixed cable (1m).

WTW

Specifications

Temperature range:	0 to 80°C
pH range:	0 to 14pH
Length/diam.:	120/12mm
Electrolyte:	Liquid, KCl 3mol/l
Diaphragm:	Ceramic
Membrane shape:	Cylindrical
Membrane resistance at 25°C:	1 GΩ
Refill hole cover:	Slide

Type	Temperature sensor	Connector	PK	Cat. No.
SenTix® 51	NTC 30 kΩ	DIN + Banana	1	6.223 092
SenTix® 52	NTC 30 kΩ	BNC + Banana	1	6.232 743 2



3 pH combination electrodes, liquid electrolyte, SenTix®, refillable

Standard pH combination electrodes with glass shaft, non-solid electrolytes. With fixed cable (1m). SenTix® 60 with screw head (AS/DIN or AS/BNC cable combination please order separately).

WTW

Specifications

Temperature range:	0 to 100°C
pH range:	0 to 14pH
Length/diam.:	120/12mm
Electrolyte:	Liquid, KCl 3mol/l
Diaphragm:	Platinum
Membrane shape:	Conical
Membrane resistance at 25°C:	600 MΩ
Refill hole cover:	Slide

Type	Temperature sensor	Connector	PK	Cat. No.
SenTix® 60	-	Plug head	1	9.040 842
SenTix® 61	-	DIN, watertight	1	9.040 881
SenTix® 62	-	BNC	1	9.040 843
SenTix® 81	NTC 30 kΩ	DIN, watertight	1	9.040 886
SenTix® 82	NTC 30 kΩ	BNC	1	9.040 844

1 pH combination electrode, SenTix® H, refillable

Precision pH combination electrodes with glass shaft and liquid electrolyte. With plug head (AS/DIN or AS/BNC cable combination please order separately).

WTW

Specifications

Temperature range:	0 to 80°C
pH range:	0 to 14pH
Length/diam.:	170/12mm
Electrolyte:	Liquid, KCl 3mol/l
Diaphragm:	Ground joint
Membrane shape:	Cylindrical
Membrane resistance at 25°C:	2GΩ
Refill hole cover:	Slide

Type	Temperature sensor	Connector	PK	Cat. No.
SenTix® H	-	DIN + BNC	1	9.040 845



2 pH electrodes, SenTix®, not refillable

pH electrodes with glass shaft and polymer electrolyte. With plug head (AS/DIN or AS/BNC cable combination (please order separately). For surface measurements.

WTW

Specifications

Temperature range:	0 to 50°C
pH range:	2 to 13pH
Length/diam.:	120mm/12mm
Electrolyte:	Polymer
Diaphragm:	Split ring
Membrane shape:	Flat
Membrane resistance at 25°C:	<1GΩ

Type	Temperature sensor	Connector	PK	Cat. No.
SenTix® Sur	-	DIN + BNC	1	9.040 891



3 pH electrodes, SenTix® Mic, refillable

pH micro combination electrode glass shaft and liquid electrolyte. With plug head (AS/DIN or AS/BNC cable combination please order separately).

WTW

Specifications

Temperature range:	0 to 100°C
pH range:	0 to 14pH
Length // diam.:	40/80mm // 12/5mm
Electrolyte:	Liquid, KCl 3mol/l
Diaphragm:	Ceramic
Membrane shape:	Cylindrical
Membrane resistance at 25°C:	< 700MΩ

Type	Temperature sensor	Connector	PK	Cat. No.
SenTix® Mic	-	DIN + BNC	1	9.040 892



4 pH electrodes, SenTix® SP, not refillable

pH electrodes with plastic shaft and liquid electrolyte. SenTix® SP with plug head (AS/DIN or AS/BNC cable combination please order separately). SenTix® SP-DIN with 1m-fixed cable. For penetration measurements.

WTW

Specifications

Temperature range:	0 to 80°C
pH range:	2 to 13pH
Length // diam.:	65/25 mm // 15/5 mm
Electrolyte:	Polymer
Diaphragm:	Hole
Membrane shape:	Spear
Membrane resistance at 25°C:	400MΩ

Type	Temperature sensor	Connector	PK	Cat. No.
SenTix® SP	-	DIN + BNC	1	9.040 890
SenTix® SP-DIN	-	DIN	1	7.655 158



pH-measurement/Electrodes



1 pH electrodes, SenTix® 940 digital IDS (NEW!) WTW	
pH electrodes with plastic shaft and liquid gel electrolyte with built-in temperature sensor. Cable length 1.5m, SenTix® 940-3 with 3m cable.	
Specifications	
Temperature range:	0 to 80°C
pH range:	0.000 to 14.000pH
Length // diam.:	120mm/12mm
Electrolyte:	Gel
Diaphragm:	Fibre
Membrane shape:	Cylinder
Membrane resistance at 25°C:	< 1GΩ
Type	PK Cat. No.
SenTix® 940-3	1 6.239 769
SenTix® 940	1 6.240 824



2 pH electrodes, SenTix® 980 digital IDS (NEW!) WTW	
pH electrodes with glass shaft and KCl electrolyte with built-in temperature sensor. Cable length 1.5m	
Specifications	
Temperature range:	0 to 100°C
pH range:	0.000 to 14.000pH
Length // diam.:	120mm/12mm
Electrolyte:	3 mol/l KCL
Diaphragm:	Platinum wire
Membrane shape:	Cone
Membrane resistance at 25°C:	> 600MΩ
Type	PK Cat. No.
SenTix® 980	1 6.238 921



Accessories for combination electrodes WTW			
Connection cable for pH electrodes with plug head connection to plugs as indicated.			
Type	Connector	Cable m	PK Cat. No.
AS/DIN	DIN	1	1 9.040 895 3
AS/DIN-3	DIN	3	1 9.040 896
AS/BNC	BNC	1	1 9.040 897



4 Electrode stand WTW	
With flexible electrode holder for two electrodes and temperature sensor.	
Type	PK Cat. No.
Electrode stand	1 9.040 870

Application table for the BlueLine pH electrodes

Application	Sample type	BlueLine Type-Nr.	Integrated temperature probe
General Laboratory	General purpose	14/15 pH	YES
		12 pH	NO
	Small sample volume	16 pH	NO
	High ionic strength - extreme pH Non-aqueous -solvents, alcohols	13 pH	NO
	Titration	14/15 pH	YES
		12 pH	NO
	Harsh environment, rugged use	54 pH	YES
	Low maintenance	24-29 pH	YES
Food, Beverage and Dairy	Flat surface - cheese, meat, agar	27 pH	NO
	Semi solids - fruit, meat, cheese, jam	21 pH	NO
	Titration	14/15 pH	YES
		12 pH	NO
	Juices	14/15 pH	YES
		12 pH	NO
Cosmetics	General purpose	14/15 pH	YES
		12 pH	NO
	Emulsions - cosmetics, oil	13 pH	NO
Manufacturing	Flat surface - paper	27 pH	NO
	Harsh environment - rugged use, field or plant	54 pH	YES
	Emulsions - petroleum, paint	13 pH	NO
Education	Economic	24-29 pH	YES
		22/23 pH	NO
	Research Grade	13 pH	NO

pH electrodes BlueLine, refillable



pH combination electrode with glass body, Ag/AgCl reference system. With fixed cable, length 1m (BlueLine 14 pH IDS 1.5m). BlueLine 11 pH and BlueLine13 pH with screw head (LB 1A or LB 1BNC cable combination please order separately).

SI Analytics

Specifications

Temperature range:	-5 to 100°C
pH range:	0 to 14pH
Zero point:	pH=7.0 ±0.3
Length/diam.:	120/12mm
BlueLine 13 pH:	170/12mm
Electrolyte:	Liquid, KCl 3mol/l
Diaphragm:	Platinum
BlueLine 13 pH:	Ground joint
Membrane shape:	Conical
BlueLine 13 pH:	Cylindrical
Membrane resistance at 25°C:	250MΩ
BlueLine 13 pH:	300MΩ
Refill hole cover:	Slide

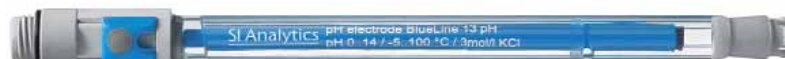
Type	Temperature sensor	Connector	PK	Cat. No.
BlueLine 11 pH	-	Plug head	1	9.041 140 1
BlueLine 12 pH	-	DIN	1	9.041 141
BlueLine 13 pH	-	Plug head	1	9.041 142 2
BlueLine 14 pH	NTC 30 kΩ	DIN + Banana	1	9.041 143
BlueLine 14 pH ID	NTC 30 kΩ	DIN + 4-mm-banana, ID function	1	6.233 381
BlueLine 14 pH IDS	NTC 30 kΩ	Digital plug	1	6.265 620
BlueLine 15 pH	NTC 30 kΩ	BNC + Banana	1	9.041 144
BlueLine 15 pH ID	NTC 30 kΩ	BNC + 4-mm-banana, ID function	1	9.041 155
BlueLine 15 pH Cinch	NTC 30 kΩ	BNC + Cinch	1	6.240 767
BlueLine 17 pH	-	BNC	1	7.608 144
BlueLine 18 pH	Pt 1000	DIN + Banana	1	7.054 864
BlueLine 19 pH	Pt 1000	BNC + Banana	1	7.658 006

1



9.041 140

2



9.041 142



1 pH-electrodes, BlueLine, not refillable (NEW)

Low maintenance pH combination electrode with plastic body, Ag/AgCl reference system. With fixed cable, length 1m (BlueLine 24 pH IDS 1.5m). BlueLine 22 pH with plug head (LB 1A or LB 1BNC cable combination please order separately). SI Analytics

Specifications
 Temperature range: -5 to 80°C
 pH range: 0 to 14pH
 Zero point: pH=7.0 ±0.3
 Length/diam.: 120mm/12mm
 Electrolyte: Gel
 Diaphragm: Fibre
 Membrane shape: Cylindrical
 Membrane resistance at 25°C: 400MΩ

Type	Temperature sensor	Connector	PK	Cat. No.
BlueLine 22 pH	-	Plug head	1	9.041 147
BlueLine 23 pH	-	DIN	1	9.041 148
BlueLine 24 pH	NTC 30 kΩ	DIN + Banana	1	9.041 149
BlueLine 24 pH IDS	NTC 30 kΩ	Digital plug	1	6.265 622
BlueLine 25 pH	-	BNC	1	9.041 150
BlueLine 26 pH	NTC 30 kΩ	BNC + Banana	1	9.041 151
BlueLine 26 pH-Cinch	NTC 30 kΩ	BNC + Cinch	1	6.251 893
BlueLine 28 pH	Pt 1000	DIN + Banana	1	7.075 024
BlueLine 28 pH-P	Pt 1000	DIN + 2-mm-pin	1	6.204 522
BlueLine 29 pH	Pt 1000	BNC + Banana	1	6.261 445
BlueLine 29 pH-P	Pt 1000	BNC + 2-mm-pin	1	6.226 741



2 Micro Electrode BlueLine 16 pH, refillable

micro-pH-combination electrode with glass body, Ag/AgCl reference system and plug-in head. LB 1A or LB 1BNC cable combination please order separately. Ideal for small sample volumes. SI Analytics

Specifications:
 Temperature range: -5 to 100°C
 pH range: 0 to 14pH
 Temperature sensor: No
 Length // Dia.: 40/80mm // 12/5mm
 Electrolyte: Fluid, KCl 3mol/l
 Diaphragm: Platinum
 Membrane resistance at 25°C: 300MΩ
 Refill hole cover: Slide

Type	PK	Cat. No.
BlueLine 16 pH	1	9.041 145



3 Spear-tip electrode, BlueLine 21 pH, not refillable (NEW)

pH combination electrode with plastic body, Ag/AgCl reference system and spear membrane tip. BlueLine 21 pH IDS mit 1.5 m fixed cable and digital plug. BlueLine 21 pH with plug head. LB 1 A or LB 1 BNC cable combination please order separately. Particularly suitable for penetration measurements in semi-solid media. SI Analytics

Specifications
 Temperature range: -5 to + 80°C
 pH range: 2 to 13 pH
 Temperature sensor: No
 Taper length // Dia. max./min.: 65/25mm // 12/5mm
 Electrolyte: Referid®
 Diaphragm: Hole
 Membrane resistance at 25°C: 400 MΩ

Type	PK	Cat. No.
BlueLine 21 pH	1	9.041 146
BlueLine 21 pH IDS	1	6.265 621

1 pH electrode A 7780



1

Glass shaft, Silamid®-reference system, with 1m or 1.5 m (A 7780 IDS) fixed cable.

SI Analytics

Specifications

Temperature range: -5 to + 80°C
 pH range: 0 to 14pH
 Zero point: pH=7.0 ±0.3
 Taper length/Dia.: 120mm/12mm
 Electrolyte: Gel
 Diaphragm: 3 x ceramic
 Membrane shape: Sphere
 Membrane resistance at 25°C: 250 MOhm

Type	Temperature sensor	Connector	PK	Cat. No.
A 7780 1M-DIN-ID	Pt 1000	DIN + 4-mm	1	6.235 995
A 7780 IDS	NTC 30 kΩ	Digital	1	6.265 619



2 pH electrode A 157



2

Microelectrode, glass shaft, Silamid® reference system, with 1m or 1.5m (A 157 IDS) fixed cable.

SI Analytics

Specifications

Temperature range: -5 to +100°C
 pH range: 0 to 14pH
 Zero point: pH=7.0 ±0.25
 Temperature sensor: NTC 30kOhm
 Taper length // Dia. max./min. 200(70/130)mm/12/5mm
 Electrolyte: KCl 3mol/l
 Diaphragm: Platinum
 Membrane shape: Cylindrical
 Membrane resistance at 25°C: 500MOhm

Type	Temperature sensor	Connector	PK	Cat. No.
A 157 1M-DIN-ID	Pt 1000	DIN+ 4 mm	1	9.041 156
A 157 IDS	NTC 30 kOhm	Digital	1	6.265 615



3 Electrode, BlueLine 27 pH, for surface measurements, not refillable

SI Analytics

pH-combination electrode with glass body, Ag/AgCl reference system and plug head. LB 1A or LB 1BNC cable combination please order separately. Specially suitable for surface measurements.

Specifications:

Temperature range: -5 to 50°C
 pH range: 2 to 13 pH
 Temperature sensor: no
 Length/Dia.: 120mm/12mm
 Electrolyte: Referid®
 Diaphragm: Annular space
 Membrane resistance at 25°C: 400 MΩ

Type	PK	Cat. No.
BlueLine 27 pH	1	9.041 152



4 Redox (ORP) electrodes, BlueLine 31 RX, refillable

SI Analytics

Redox combination electrode with glass body, Ag/AgCl reference system and plug head. LB 1A or LB 1BNC cable combination please order separately. Application: Universal applications in chemical and food industries.

Specifications:

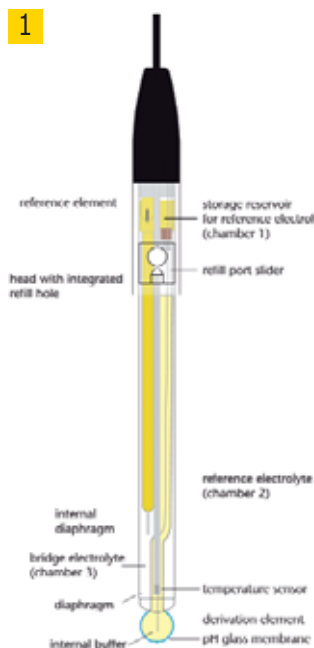
Temperaturbereich: -5 to 100°C
 Sensor: Pt disc
 Temperature sensor: No
 Length/Dia.: 120mm/12mm
 Electrolyte: liquid, KCl 3mol/l
 Junction: Ceramic
 Membrane: Platinum
 Refill hole cover: Slide

Type	PK	Cat. No.
BlueLine 31 RX	1	9.041 153



pH-measurement/Electrodes

1



1 2 pH electrodes, IoLine

pH electrodes for the most demanding measuring tasks.

SI Analytics

The IoLine electrode family with iodine/iodide reference system has been developed to meet the most demanding laboratory measurement tasks. These electrodes are metal ion free and hence ideally suited for measurements that may cause sample contamination by such ions (e.g. silver ions) and for pH measurements in Tris buffers too.

Advantages of IoLine Electrodes over classical Ag/AgCl reference systems are notably by:

- longer service life thanks to a patented three-chambers Iodine reservoir in the reference electrode.
- fast reaction, precise measurement and clearly improved stability of measurement values, especially with changing temperatures or at temperatures other than the calibration temperature. This is due to the lower temperature sensitivity of the iodine/iodide reference potential.
- free choice of the bridge electrolyte, hence optimum adaptation to the sample by double electrolyte system.

The electrodes are available in different membrane glass shapes and types and with different plugs to ensure that the user gets the instrument best suited to his needs. ID versions are available for use with Schott Instruments' ProLab line of high-end laboratory meters.

IoLine electrodes are the right choice for the most critical pH measurements in research and quality control in pharmacy, biotechnology or food industry.

Specifications:

Temp. range	-5 to +100°C
pH range	0 to 14
Zero point	pH = 7.00 ±0.25
Length/diam.	
IL-pHT-A 120:	120mm/12mm
IL-pHT-A 170:	170mm/12mm
Shaft material	Glass
Reference system:	Iodine/Iodide
Diaphragm:	Platinum
Membrane shape:	Sphere
Membrane resistance at 25°C:	200MΩ

2



Type	Temperature sensor	Connector	PK	Cat. No.
IoLine-pHT-A 120-MF	-	S7	1	9.041 163
IoLine-pHT-A 170-MF	-	S7	1	9.041 164
IoLine-pHT-A 120-MF-DIN	-	DIN	1	9.041 165
IoLine-pHT-A 120-MF-DIN N	Pt 1000	DIN + Banana	1	9.041 166
IoLine-pHT-A 170-MF-DIN N	Pt 1000	DIN + Banana	1	9.041 167

3



3 pH-electrode IL-Micro-pHT-IDS

NEW!

Micro electrode for measurements in tris buffers or protein-containing solutions with small sample volumes.

SI Analytics

Glass shaft, 1.5 m cable with digital plug, iodine/iodide-reference system.

Specifications

Temperature range:	-5 to +100°C
pH range:	0 to 14pH
Zero point:	pH=7.00 ±0.25
Taper length // Dia. max./min.	70/130mm/12/5mm
Electrolyte:	KCl 3mol/l
Diaphragm:	Platinum
Membrane shape:	Cylindrical
Membrane resistance at 25°C:	500 MOhm

Type	Temperature sensor	Connector	PK	Cat. No.
IL-Micro-pHT-IDS	NTC 30 kOhm	Digital	1	6.265 630

4



4 Cable combinations, LB 1 A and LB 1 BNC

For BlueLine pH electrodes, Scienceline and IoLine.

SI Analytics

Type	PK	Cat. No.
LB1-A	1	9.041 303
LB1-BNC	1	9.041 304

Combination pH Electrodes

SI Analytics

Type	PK	Cat. No.
Combination electrode N 6000 A	1	9.041 160 1
Combination pH electrode N 1042 A	1	9.041 217 2



3 Metal (ORP) electrodes, ScienceLine

SI Analytics

Type	PK	Cat. No.
Redox electrode Pt 6280	1	9.041 207
Electrode Ag 6280	1	9.041 211



4 pH-Electrodes ScienceLine

With plug head, glass shaft, ceramic diaphragm, 3mol/l KCl electrolyte, 12mm dia, spherical membrane, pH range: 0 to 14.

SI Analytics

Type	Temp. range max. °C	Length mm	Membrane	PK	Cat. No.
N 6280, with plug head	-5 ... +100	120	N-glass	1	9.041 117
N 6180	-5 ... +100	170	N-glass	1	9.041 180
N 42 A	-5 ... +100	120	A-glass	1	9.041 182



5 pH-combination electrodes

With plug head, glass shaft, platinum diaphragm, 3mol/l KCl electrolyte, Silamid® reference system and 12mm dia. spherical membrane.

SI Analytics

Type	Temp. range max. °C	Length mm	Membrane	PK	Cat. No.
N 61	-5 ... +100	170	A-glass	1	9.041 100
H 61	+10 ... +100	170	H-glass	1	9.041 105
N 62	-5 ... +100	120	A-glass	1	9.041 110
H 62	+10 ... +100	120	H-glass	1	9.041 112
N 64	-5 ... +100	170	A-glass	1	9.041 120



6 Electrode vessel Z 453

Free standing electrode vessel for storing electrodes with 12mm diam. shaft.

SI Analytics

Type	PK	Cat. No.
Z 453	1	7.624 578



Application table for Electrodes Mettler

Common Industries	Common Application(s)	InLab® Electrode Model	Electrode Cat. No.	Cable Cat. No.	Cables available for other manufacturers meters	Temp. Sensor
General, Cosmetic, Food, Beverage, Agriculture, Paint	Aqueous samples, TRIS, Gels/Soaps/Shampoo, Dairy, Soft Drinks, Beer & Wine, Fertilizer, Soil, Suspensions/Emulsions, Water Based Paint	Expert Pro	9.041 506	--	No	Yes
General, Cosmetic, Water, Food, Beverage, Chemical	Aqueous samples, TRIS, Gels/Soaps/Shampoo, Drinking Water, Soft Drinks, Beer & Wine, Jam/Preserves, Galvanic Baths, Corrosive/Hot Acids & bases,	Routine Pro	9.041 454	9.041 757	Yes	Yes
General, Cosmetic, Water, Food, Beverage, Chemical	Aqueous samples, TRIS, Gels/Soaps/Shampoo, Drinking Water, Soft Drinks, Beer & Wine, Jam/Preserves, Galvanic Baths, Corrosive/Hot Acids & bases,	Routine	9.041 450	9.041 759	Yes	No
Pharmaceutical/Biological, Cosmetic, Water, Food, Beverage, Paint, Chemical	Aqueous samples, TRIS, Serums/Gastric Juices, Medicinal formulas, Enzyme solutions, Gels/Soaps/Shampoo, Waste Water, Drinking Water, Dairy, Dough/Cocoa, Suspensions/Emulsions, Water Based Paint, Oily Samples, Varnish/Glue, Colorants/Dyes, Galvanic Baths, Corrosive/Hot Acids & bases, Hydrocarbons	Science Pro	9.041 471	9.041 757	Yes	Yes
Pharmaceutical/Biological, Cosmetic, Water, Food, Beverage, Paint, Chemical	Aqueous samples, TRIS, Serums/Gastric Juices, Medicinal formulas, Enzyme solutions, Gels/Soaps/Shampoo, Waste Water, Drinking Water, Dairy, Dough/Cocoa, Suspensions/Emulsions, Water Based Paint, Oily Samples, Varnish/Glue, Colorants/Dyes, Galvanic Baths, Corrosive/Hot Acids & bases, Hydrocarbons	Science	9.041 470	9.041 759	Yes	No
Pharmaceutical/Biological, Cosmetic	Aqueous samples, TRIS, Vials/NMR Samples, Serums/Gastric Juices, Samples in Test Tubes, Medicinal formulas, Enzyme solutions, Cosmetic Creams/Mascara	Micro Pro	9.041 562	9.041 757	Yes	Yes
Pharmaceutical/Biological, Cosmetic	Aqueous samples, TRIS, Vials/NMR Samples, Serums/Gastric Juices, Samples in Test Tubes, Medicinal formulas, Enzyme solutions, Cosmetic Creams/Mascara	Micro	9.041 560	9.041 759	Yes	No
Pharmaceutical/Biological, Cosmetic, Water, Food, Beverage, Paint	Aqueous samples, TRIS, Serums/Gastric Juices, Samples in Test Tubes, Medicinal formulas, Enzyme solutions, Gels/Soaps/Shampoo, Cosmetic Creams/Mascara, Natural/Synthetic Resins, Dairy, Water Based Paint, Oily Samples	Semi Micro	9.041 565	9.041 759	Yes	No
Pharmaceutical/Biological, Cosmetic, Food	Aqueous samples, TRIS, Medicinal formulas, Enzyme solutions, Cosmetic Creams/Mascara, Butter, Yoghurt, Cheese, Ice Cream, Meats, Fruit/Vegetables, Dough/Cocoa	Solids	9.041 553	9.041 759	Yes	No
Pharmaceutical/Biological, Cosmetic, Textile, Paper	Gelled Agars, Skin, Leather, Textiles/Prints, Paper, Laminates, Drop Size Samples	Surface	9.041 557	9.041 759	Yes	No

For more information please visit www.electrodes.net

pH electrodes InLab® Routine Series

Combined pH electrode, glass shaft, ARGENTHAL™ reference with silver-ion trap, detachable cable.

Mettler-Toledo Online

Specifications:

Temperature range: 0 to +100°C
 pH range: 0 - 14
 Electrode Dia.: 12 mm
 Electrolyte: Liquid, KCl 3 mol/l
 Diaphragm: ceramic
 Membrane resistance at 25°C: < 600 M Ω



9.041 450



9.041 456

Description	Shaft length min. mm	Temperature sensor	Electrode head	PK	Cat. No.
InLab®Routine	120	-	S7	1	9.041 450 1
Set InLab®Routine + DIN cable	120	-	S7	1	9.041 451
Set InLab®Routine + BNC cable	120	-	S7	1	9.041 452
InLab®Routine Pro	120	NTC 30 kΩ	MultiPin™	1	9.041 454
Set InLab®Routine Pro + BNC/Cinch cable	120	NTC 30 kΩ	MultiPin™	1	9.041 455
InLab®Routine Pt1000	120	Pt1000	MultiPin™	1	9.041 456 2
InLab®Routine Pro-L	170	Pt1000	MultiPin™	1	9.041 457
InLab®Routine Pro ISM	120	NTC 30 kΩ	MultiPin™	1	7.629 195
InLab®Routine Pro ISM Set	120	NTC 30 kΩ	MultiPin™	1	9.041 458

3 pH electrodes InLab® Expert Pro

pH-combination electrode with chemically resistant PEEK shaft, ARGENTHAL™ reference system. Fixed BNC/RCA (Cinch) cable.

Mettler-Toledo Online

InLab® Expert Pro ISM for SevenCompact and SevenExcellence.

Specifications

Temperature range: 0 to +100°C
 pH range: 0 - 14
 Temperature sensor: NTC 30kΩ
 Length/Diam.: 120mm/12mm
 Electrolyte: XEROLYT® polymer
 Diaphragm: open junction
 Membrane resistance at 25°C: < 250MΩ



3

Type	PK	Cat. No.
InLab® Expert Pro	1	9.041 506
InLab® Expert Pro ISM	1	9.041 508

4 pH electrode InLab® Science

pH-combination electrode with glass shaft, ARGENTHAL™ reference system with Ag⁺ trap and S7 electrode head. Cable - please order separately.

Mettler-Toledo Online

Specifications

Temperature range: 0 to +100°C
 pH range: 0 - 12
 Temperature sensor: no
 Length/Diam.: 120mm/12mm
 Electrolyte: Fluid, KCl 3mol/l
 Diaphragm: movable glass sleeve
 Membrane resistance at 25°C: < 600MΩ



4

Type	PK	Cat. No.
InLab® Science	1	9.041 470

5 pH electrode InLab® Science Pro

pH-combination electrode with glass shaft, ARGENTHAL™ reference system with Ag⁺ trap and MultiPin™ electrode head. Cable - please order separately.

Mettler-Toledo Online

InLab® Science Pro ISM for SevenCompact and SevenExcellence.

Specifications

Temperature range: 0 to +100°C
 pH range: 0 - 12
 Temperature sensor: NTC 30kΩ
 Length/Diam.: 170mm/12mm
 Electrolyte: Fluid, KCl 3mol/l
 Diaphragm: movable glass sleeve
 Membrane resistance at 25°C: < 600MΩ



5

Type	PK	Cat. No.
InLab® Science Pro	1	9.041 471
InLab® Science Pro ISM	1	9.041 472

pH-measurement/Electrodes



1 pH electrode InLab® Micro

pH-combination electrode with glass shaft, ARGENTAL™ reference system with Ag⁺ trap and S7 electrode head. Cable - please order separately.

Mettler-Toledo Online

Specifications

Temperature range:	0 to +80°C
pH range:	0 - 14
Temperature sensor:	no
Length/Diam.:	60mm/3mm
Electrolyte:	Fluid, KCl 3mol/l
Diaphragm:	Ceramic type Z (pore size 0.9µm)
Membrane resistance at 25°C:	< 1000MΩ

Type	PK	Cat. No.
InLab® Micro	1	9.041 560



2 pH electrode InLab® Semi-Micro

pH-combination electrode with glass shaft, ARGENTAL™ reference system and S7 electrode head. Cable - please order separately.

Mettler-Toledo Online

Specifications

Temperature range:	0 to +100°C
pH range:	0 - 12
Temperature sensor:	no
Length/Diam.:	100mm/6mm
Electrolyte:	XEROLYT®EXTRA Polymer
Diaphragm:	open junction
Membrane resistance at 25°C:	< 300MΩ

Type	PK	Cat. No.
InLab® Semi-Micro	1	9.041 565



3 pH electrode InLab® Micro Pro

pH-combination electrode with glass shaft, ARGENTAL™ reference system with Ag⁺ trap and MultiPin™ electrode head. Cable - please order separately. InLab® Micro Pro ISM for SevenCompact and SevenExcellence.

Mettler-Toledo Online

Specifications

Temperature range:	0 to +100°C
pH range:	0 - 14
Temperature sensor:	NTC 30kΩ
Length/Diam.:	130mm/5mm
Electrolyte:	Fluid, KCl 3mol/l
Diaphragm:	Ceramic
Membrane resistance at 25°C:	< 300MΩ

Type	PK	Cat. No.
InLab® Micro Pro	1	9.041 562
InLab® Micro Pro ISM	1	6.243 633



4 pH combination electrode InLab® Solids

With spear-tip membrane. With glass shaft, Argenthal™ reference system and S7 plug head. Cable - please order separately.

Mettler-Toledo Online

Specifications

Temperature range:	0 to +80°C
pH range:	0 - 11
Temperature sensor:	no
Length/Diam.:	25mm/6mm
Electrolyte:	XEROLYT® PLUS polymer electrolyte, non-refillable
Diaphragm:	open junction
Membrane resistance at 25°C:	< 250 MΩ

Type	PK	Cat. No.
InLab® Solids	1	9.041 553

1 pH electrode InLab® Surface

pH-combination electrode with polysulfone shaft, Ag/AgCl reference system and S7 electrode head. Cable - please order separately.

Mettler-Toledo Online

Specifications

Temperature range:	0 to +50°C
pH range:	1 - 11
Temperature sensor:	no
Length/Diam.:	100mm/6mm
Electrolyte:	Fluid, KCl 3mol/l, AgCl saturated
Diaphragm:	Safelock™ ABS ring
Membrane resistance at 25°C:	< 800MΩ

Type	PK	Cat. No.
InLab® Surface	1	9.041 557



Connection cables

For connecting pH electrodes with built-in temperature sensors and MultiPin plug head or with S7 plug head (without temperature sensor) as indicated.

Mettler-Toledo Online

Cables suitable for connection of Mettler Toledo electrodes to a variety of other manufacturers meters.

Cat. No. 9.041 757, 7.629 194 (ISM electrodes) and 9.041 759 should be used for connection to Mettler Toledo meters.

Length m	Connector	Electrode head	PK	Cat. No.
1.2	DIN + 4 mm	MultiPin™	1	9.041 754
1.2	BNC + 4 mm	MultiPin™	1	9.041 755
1.2	DIN + Cinch	MultiPin™	1	9.041 756
1.2	BNC + Cinch	MultiPin™	1	9.041 757 ²
2.5	BNC + Cinch	MultiPin™	1	9.041 765
1.2	Lemo 00 + 2 x 4 (Metrohm)	MultiPin™	1	9.041 760
1.8	BNC + Cinch - ISM	ISM-MultiPin™	1	7.629 194
1.2	DIN	S7	1	9.041 758 ³
1.2	BNC	S7	1	9.041 759 ⁴
1.2	RM	S7	1	9.041 761
5.0	-	S7	1	9.041 764
1.2	-	S7	1	6.700 357



pH-measurement/Buffer solutions

1



1 LLG-pH-Buffer solution (NEW)

Tested and certified at 20°C. Provided with label that gives the pH value at different temperatures. Tolerance ±0.02 pH. Supplied in PE-HD containers. Traceable to NIST (SRM). Temperature dependence data is printed on the label as well as batch numbers and expiry dates. Buffers have a 24 month shelf life from date of manufacture.

pH-value at 20 °C	Capacity ml	Buffer	PK	Cat. No.
pH 4.00	1000	citrate	1	9.041 367
pH 7.00	1000	phosphate	1	9.041 368
pH 9.00	1000	H ₂ BO ₃ -KCl-NaOH	1	9.041 374
pH 10.00	1000	borate	1	9.041 369

LLG-pH buffer solutions with colour coding (NEW)

The ready-to-use colour coded pH buffer solutions offer excellent quality, precision and are designed to suit all end user requirements.

Supplied in 1L bottles and conveniently colour coded to eliminate any risk of confusion between the 3 pH values.

Features

- Accuracy ±0.01 pH, tested and certified at 25°C
- Temperature dependence data table printed on the label
- Traceable to NIST
- Shelf-life: 24 months (pH 7 and 10) or 36 months (pH 4) from date of production
- Colour-coded

pH-value at 25 °C	Capacity ml	Colour	PK	Cat. No.
4.00	1000	red	1	9.040 865
7.00	1000	yellow	1	9.040 866
10.00	1000	blue	1	9.040 867

2



2 LLG-pH-Buffer solutions with colour coding in twin-neck dispensing bottles (NEW)

The ready-to-use buffer solutions offer excellent quality, precision and advantages in use. The calibration vessel, integrated into the twin-neck dispensing bottles, allows the particularly economical dispensing of solution and prevents contamination.

Features

- Accuracy ±0.01 pH, tested and certified at 25°C
- Temperature dependence data table printed on the label
- Traceable to NIST
- Shelf-life: 24 months (pH 7 and 10) or 36 months (pH 4) from date of production
- Colour-coded

pH-value at 25 °C	Capacity ml	Colour	PK	Cat. No.
4.00	250	red	1	9.040 868
7.00	250	yellow	1	9.040 869
10.00	250	blue	1	9.040 871

3



3 Technical pH buffer solutions

Colour coded. Tested and ISO 17025 Certified at 25°C. Uncertainty of measurement ±0.02pH. Reagecon
Temperature dependence data is printed on the label as are lot numbers and expiry dates.

These pH buffer solutions are suitable for use where very accurate measurements are required and are supplied with a detailed Certificate of Analysis which outlines traceability to N.I.S.T (the N.I.S.T SRM(s) Lot No. is stated on the certificate. This item has a 12 to 36 month shelf life from date of manufacture depending on pH value.

pH-value at 25 °C	Capacity ml	Colour	PK	Cat. No.
2.0	250	Red	1	9.040 949
4.01	250	Red	1	9.040 950
4.01	500	Red	1	6.206 907
4.01	1000	Red	1	9.040 955
7.02	250	Yellow	1	6.240 744
7.02	500	Yellow	1	6.229 762
7.02	1000	Yellow	1	6.238 677
9.21	250	Blue	1	9.040 951
10.00	250	Blue	1	6.240 745
10.00	1000	Blue	1	6.238 676

1 pH buffer solutions

Clear, Colourless pH Buffer Solutions. Tested and ISO17025 Certified at 20°C, supplied with a detailed Certificate of Analysis which outlines traceability to N.I.S.T. Temperature dependence data is printed on the label as are lot numbers and expiry dates. Available in 500ml or 1l HDPE containers. Reagecon

pH-value	Capacity	Accuracy	PK	Cat. No.
at 20 °C	ml	(±)		
pH 2.00	500	0.02	1	6.228 059
pH 3.50	1000	0.05	1	7.632 597
pH 4.00	500	0.01	1	9.040 911
pH 4.00	1000	0.01	1	9.040 912
pH 6.00	500	0.01	1	6.203 561
pH 6.00	1000	0.01	1	6.321 027
pH 6.80	500	0.01	1	6.206 693
pH 6.865*	500	0.01	1	7.900 066
pH 7.00	500	0.01	1	9.040 913
pH 7.00	1000	0.01	1	9.040 914
pH 9.00	500	0.01	1	6.225 161
pH 9.00	1000	0.01	1	6.206 691
pH 10.00	500	0.01	1	9.040 915
pH 10.00	1000	0.01	1	9.040 916
pH 12.00	500	0.05	1	6.234 641

*at 25°C



2 pH buffer solutions (Coloured)

Coloured pH Buffer Solutions solutions. Tested and ISO17025 Certified at 20°C. Uncertainty of measurement ±0.01pH. Supplied with a detailed Certificate of Analysis which outlines traceability to N.I.S.T. Temperature dependence data is printed on the label as are lot numbers and expiry dates. Supplied in 500ml, 1L or 5L Reagecon

pH-value	Capacity	Colour	PK	Cat. No.
at 20 °C	ml			
pH 4.00	500	Red	1	9.040 920
pH 4.00	1000	Red	1	9.040 921
pH 4.00	5000	Red	1	9.040 922
pH 7.00	500	Yellow	1	9.040 923
pH 7.00	1000	Yellow	1	9.040 924
pH 7.00	5000	Yellow	1	9.040 925
pH 10.00	500	Blue	1	9.040 926
pH 10.00	1000	Blue	1	9.040 927
pH 10.00	5000	Blue	1	9.040 928



3 pH buffer solutions with colour code, with/without certificate

Colored buffer solutions, standardized against NIST references, accuracy ±0.01 pH at 25°C, 500ml bottles with label that indicates correlation between pH-value and temperature. Hanna

pH-value	Description	PK	Cat. No.
at 25 °C			
pH 7.01	with certificate	1	6.225 206
pH 4.01	with certificate	1	6.225 208
pH 10.01	with certificate	1	6.225 207
pH 7.01	without certificate	1	6.053 384
pH 4.01	without certificate	1	6.053 383
pH 10.01	without certificate	1	6.090 412



4 pH buffer solutions

Colour coded. pH values at 25°C. Provided with label that gives the pH value at different temperatures. Supplied in 250ml containers. Tolerance ±0.02 pH. SI Analytics

pH-value	Capacity	Colour	PK	Cat. No.
at 25 °C	ml			
pH 4.01	250	yellow	1	9.041 050
pH 7.00	250	green	1	9.041 051
pH 10.01	250	orange	1	9.041 052



pH-measurement/Buffer solutions

1


1 Buffer solutions, sterile

According to DIN 19 266. Values stated at 25°C. To be delivered in DURAN® glass bottles. Hot steam sterilized. Accuracy $\pm 0.012\text{pH}$. Comes with individual batch number and manufacturer certificate.

SI Analytics

pH-value at 25 °C	Capacity	PK	Cat. No.
pH 4.01	250ml DURAN® bottle	1	9.041 004
pH 6.87	250ml DURAN® bottle	1	9.041 007
pH 9.18	250ml DURAN® bottle	1	9.041 009

Other buffer solutions available on request.

2


2 pH buffer solutions, technical

Without colour coding, hot steam sterilized. Stated pH values at 25°C. Available in 250ml containers. Shelf life approx. 2 years, accuracy $\pm 0.02\text{ pH}$.

SI Analytics

Calibration set for pH measurement.

Set contains 20 x 17ml ampoules filled with pH 4.00, 7.00 and 10.00 solutions (at 25°C).

pH-value at 25 °C	Capacity ml	Colour	PK	Cat. No.
pH 4,00	250	clear	1	9.041 043
pH 7,00	250	clear	1	9.041 045
pH 10.01	250	clear	1	9.041 048
Set	17	3 x 20 x 17 ml ampoules	1	9.041 081

3


3 Technical buffer solutions

Identified by colour-coded labels. Tolerance $\pm 0.02\text{ pH}$.

WTW

pH-value at 25 °C	Capacity ml	PK	Cat. No.
4.01	50	1	9.040 734
4.01	1000	1	9.040 722
7.00	50	1	9.040 735
7.00	1000	1	9.040 723
10.00	1000	1	9.040 724
10.01*	1000	1	9.040 725
4.01	250	1	9.040 727
7.00	250	1	9.040 728
10.00	250	1	9.040 729

* For handheld meters 315i, 330i, 340i, 350i, 3110, 3210, 3310 and Inolab® versions from 2004 onwards

4


4 Standard buffer solutions

To DIN/NIST. Supplied in 250ml bottles. Tolerance $\pm 0.02\text{ pH}$.

WTW

pH-value at 25 °C	Capacity ml	PK	Cat. No.
4.01	250	1	9.040 744
6.87	250	1	9.040 746
9.18	250	1	9.040 749

5


5 Redox buffer solution

For testing ORP electrodes. 427mV, pH7. Supplied in pack of 250ml.

WTW

Type	PK	Cat. No.
Redox	1	9.040 782

3. Analytical measurement and testing pH-measurement/Buffer solutions

1 Calibration Kits for pH meters (NEW)		
20ml sachets. Without certificate of analysis . Hanna		
Description	PK	Cat. No.
Calibration Kit pH 7.01 & 4.01 (5 x 20ml each)	1	9.773 932
Calibration Kit pH 7,01 & 10,01 (5 x 20ml each)	1	9.773 934



2 pH buffer solutions in sachets with certificate of analysis		
One 20ml sachet is sufficient for each calibration. Sachets are well sealed and protected against light. Single use only, so no risk of contamination. Accuracy: ±0.01 pH at 25°C. The outer box contains a certificate of analysis, showing the date of production and Lot Nr. (Expiry date). The solutions are produced against NIST standards. Hanna		
pH-value at 25 °C	PK	Cat. No.
pH 4.01	25	6.803 609
pH 7.01	25	6.803 610
pH 10.01	25	6.803 611



3 LLG-Electrolyte solutions, KCL (NEW)		
Potassium chloride electrolyte for pH electrodes - Filling solution for reference electrolyte.		
Type	PK	Cat. No.
3mol/l, 1000ml	1	9.041 370
3mol/l, 250ml	1	9.041 371
3mol/l, (AgCl saturated.), 250ml	1	9.041 372



4 KCL electrolyte solutions		
For refilling or replacing reference electrolyte. Supplied in 250ml DURAN® bottles. SI Analytics		
Type	PK	Cat. No.
2mol/L KNO ₃ + 0.001mol/l KCl for Ag-probes	1	9.041 072
3 mol/l KCl	1	9.041 092
3 mol/l KCl, Ag/AgCl saturated	1	9.041 036
4.2 mol/l KCl	1	9.041 033



5 Storage and cleaning solutions for electrodes		
Hanna		
Type	PK	Cat. No.
Storage Solution, 500ml	1	9.773 987
Cleaning solution, general purpose, 500ml	1	6.080 217
Cleaning solution for proteins, 500ml	1	6.223 522



6 Cleaning and storage solutions for pH-probes		
Reagecon		
Type	Capacity ml	PK Cat. No.
Pepsin / HCL, for cleaning media containing protein	500	1 9.040 940
Thiourea / HCL, for cleaning media containing sulphide	500	1 9.040 941
Organic cleaning solution	500	1 9.040 942
Regeneration solution	100	1 9.040 943
Storage solution	100	1 9.040 945
Storage solution	500	1 9.040 944



1



1 Regeneration solution and storage solution

For pH-probes.

SI Analytics

Type	Capacity ml	PK	Cat. No.
Regeneration solution / Storage solution	250	1	9.041 034

2



2 Pepsin cleaning solution PEP/pH

DIN. Supplied in bottles of 250ml.

WTW

Type	PK	Cat. No.
Pepsin cleaning solution	3	9.040 796

Cleaning solution RL/G

NEW!

1 bottle with 30ml acetic acid, solution UN 2790, 8, III, (E)

WTW

Capacity ml	PK	Cat. No.
30	1	9.822 552



1 Conductivity testers, DIST 3 and DIST 4

Pocket measuring device with digital display for testing the conductivity in drinking water and industry. *Hanna*

DIST 3: suitable for measuring drinking water, reverse osmosis monitoring and in the laboratory.

DIST 4: ideal for measurements required in industry, horticulture, sewage, cooling towers.

Specifications:

Measuring range: DIST 3: 0 to 1990µS
DIST 4: 0 to 19.90mS
Resolution: DIST 3: 1µS/cm
DIST 4: 0.01mS
Accuracy: ±2% measuring range
Batteries: 4 x 1.5V button cells (MP 675H)
Dimensions: 175 x 41 x 23mm

Type	PK	Cat. No.
DIST 3	1	9.704 010
DIST 4	1	9.704 014



2 Conductivity testers, Dist 5 and Dist 6

Watertight Conductivity-/ TDS- /°C-testers. Simultaneous display of conductivity and/or TDS and temperature values. Automatic temperature compensation for highest measuring accuracy. User selection of temperature coefficient enables use in alkaline and acidic media. Stability indicator prevents incorrect measurements *Hanna*

Specifications:

Measuring range: DIST 5 : 0 to 3990mS (0 to 2000ppm)
DIST 6 : 0 to 20.00mS (0 to 10.00ppm)
Temperature range: 0.0 to 60.0°C
Resolution EC/TDS: ±2% in each measuring range
Resolution: ±0.5°C
Batteries: 4 x 1.5V button cells
Operating temp. range: 0 to 50.0°C

Type	PK	Cat. No.
DIST 5	1	9.704 012
DIST 6	1	9.704 013



3 Conductivity meters HI 99300/HI 99301

- Waterproof conductivity meters with microprocessor *Hanna*
- Conductivity (or TDS value) and temperature are displayed simultaneously
- Automatic temperature compensation from 0 to 60.0°C
- Temperature compensation coefficient is adjustable from 0 to 2.4%/°C
- Automatic one point calibration with conductivity solution 1413µS (HI 99300) or 12.880µS (HI 99301)

Supplied with:
Conductivity probe with 1 meter cable, 4x 1.5V AAA alkaline batteries and transport case

Specifications:

Measuring range/Resolution EC:
HI 99300: 0 to 3999µS/1µS
HI 99301: 0.00 to 20.00mS/0.01mS
Measuring range/Resolution TDS:
HI 99300: 0 to 2000ppm (mg/l)/1ppm (mg/l)
HI 99301: 0.00 to 10.00ppt (g/l)/0.01ppt (g/l)
Accuracy: ±2% full scale
Measuring range/Resolution T: 0.0 to 60°C/±0.5°C
Battery: 4 x 1.5V
Dimensions (L x W x H): 143mm x 80mm x 38mm
Weight: 210g

Type	PK	Cat. No.
HI 99300	1	7.618 482
HI 99301	1	6.240 795
Spare electrode HI 76306 for HI 99300 / HI 99301	1	6.241 639





1 Conductivity meter HI 8733

Hanna

- Multi range conductivity meter for laboratory use
- Can be used for various applications from deionized water to brine
- Automatic temperature enables highest accuracy
- For various strong acids or bases the temperature coefficient can be adjusted between 0% and 2.5% per °C
- Instrument is supplied with 4-ring, potentiometric probe for all 4 ranges

Specifications:

Ranges/Resolution:	0.00 to 199µS/0.1 µS 0 to 1999µS/1 µS 0 to 19.99mS/0.01mS 0 to 199.9mS/ 0.1mS
Accuracy:	±1% Full Scale
Temperature compensation:	automatic from 0 to +50°C
Calibration:	manual single point trough trimmer
Battery:	1 x 9 Volt
Operating temp. range:	0 to +50°C
Dimensions:	164mm x 76mm x 45mm
Weight:	500g

Type	PK	Cat. No.
HI 8733	1	9.704 016
Spare probe HI 76302W	1	6.200 643



2 Conductivity meter HI 9033

Hanna

Waterproof housing, perfect for laboratory and field work.

- 4 different ranges from 0 to 199.9mS can be selected by simply pressing a button
- automatic temperature compensation grants highest accuracy
- manual calibration at 1 point trough trimmer

Supplied in a transport case, complete with 4 ring conductivity probe with 1 metre cable, calibration screwdriver and battery.

Specifications:

Measuring range/Resolution:	0.0 to 199.9µS/0.1µS 0 to 1999 µS/1 µS 0 to 19.99 mS/0.1 mS 0 to 199.9 mS/1 mS
Accuracy:	±1% full scale
Temperature compensation:	automatically from 0 to 50°C
Operating range:	0 to 50°C
Battery:	1 x 9V
Weight:	1kg (incl. transport case)

Type	PK	Cat. No.
HI 9033	1	6.095 234
Spare probe HI 76302W	1	6.200 643



Pocket conductivity meters ProfiLine

The new ProfiLine hand-held conductivity meters have a waterproof (IP 67) housing and a new, completely sealed silicone membrane keypad with tactile feedback. A separate battery compartment allows easy exchange of standard alkaline, or rechargeable, batteries. The carefully laid out, large displays indicate the reading and other important information. 3210 and 3310 series meters have a backlit, graphics display and menu-controlled operation. A selection of application specific conductivity cells cover virtually all measurement tasks.

1 2 Portable conductivity meter ProfiLine Cond 3110

Easy to operate rugged conductivity meter for measurement of conductivity and salinity. Simplified keypad for clear and secure operation. Simultaneous display of measurement value and temperature. Large LCD display for easy reading. Automatic nF compensation for all grades of natural water. Works with four-electrode cell TetraCon® 325 or two-electrode cell KLE 325.

WTW

Specifications

Measuring ranges/Resolution
 Conductivity: 0.0µS/cm to 1000mS/cm with 5 measuring ranges in the Auto Range mode
 Temperature: -5.0°C to +105.0°C ±0.1°C
 Salinity: 0.0 to 70.0
 T_{ref}: 20°C/25°C switchable

Type	Description	PK	Cat. No.
Cond 3110	meter only	1	9.774 372
Cond 3110 Set 1	cased set including conductivity probe TetraCon 325 and accessories	1	9.774 358
Cond 3110 Set 2	cased set including conductivity probe TetraCon 325 (3m) and accessories	1	9.774 403
Cond 3110 Set 3	cased set including conductivity probe KLE 325 and accessories	1	9.774 404

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2



3 Portable conductivity meter ProfiLine Cond 3210

Convenient and versatile, hand-held, conductivity meter with backlit graphics display and menu-controlled operation. Waterproof and robust. For the measurement of conductivity, specific resistivity, salinity and TDS. Includes a 200 x GLP-compliant record memory. Wide selection of different conductivity cells attachable. Automatic and manual temperature compensation with linear temperature function and non-linear function for ultra-pure water and natural water in accordance with EN 27888.

WTW

Specifications

Measuring ranges/Resolution:
 Conductivity: as Cond 3110, but additionally with 0.00µS/cm to 19.99µS/cm (when K=0.1cm⁻¹) and 0.000µS/cm at 1.999µS/cm (when K=0.01 cm⁻¹)
 TDS: 0 to 1999mg/l and 0.0 to 199.9g/l
 Spec. resistance: 0.0 to 999MΩ/cm
 Memory: 200 data records (measured value, temperature, date, time, ID)

Type	Description	PK	Cat. No.
Cond 3210	meter only	1	9.774 379
Cond 3210 Set 1	cased set including conductivity probe TetraCon 325 and accessories	1	9.774 398
Cond 3210 Set 2	cased set including 4-pole conductivity probe TetraCon 325 (3m) and accessories	1	9.774 405
Cond 3210 Set 4	cased set including 2-pole conductivity probe LR 325 / 01and accessories	1	9.774 399

3



➔ Conductivity cell probes please see page 324.

Conductivity measurement/Portable devices

1


1 | 2 Conductivity meter ProfiLine Cond 3310

Comfortable and versatile conductivity meter with integral, time controlled, data logger and 5000 GLP-compliant record memory for extended data collection. Menu controlled, with backlit, graphics display for comfortable, safe operation. Wide range of conductivity cells attachable. GLP-supporting functions, enhanced choice of cell constants, automatic and manual temperature compensation (which can be switched off) with linear and non-linear functions for pure water and natural waters acc. to EN 27888.

WTW

Specifications:

Measuring ranges/Resolution:

Conductivity:

as Cond 3110, but additionally with
 0.00 μ S/cm to 19.99 μ S/cm (when $K=0.1\text{cm}^{-1}$)
 0.000 μ S/cm at 1.999 μ S/cm (when $K=0.01\text{cm}^{-1}$)

TDS:

Spec. resistance:

Memory:

0 to 1999mg/l, 0.0 to 199.9g/l

 0.0 to 999M Ω /cm

5000 records (measured value, temperature, date, time, ID)

2


Type	Description	PK	Cat. No.
Cond 3310	meter only	1	9.774 409
Cond 3310 Set 1	case set including conductivity probe TetraCon 325 and accessories	1	9.774 400
Cond 3310 Set 2	case set including 4-pole conductivity probe TetraCon 325 (3m) and accessories	1	9.774 401
Cond 3310 Set 4	case set including 2-pole conductivity probe LR 325 / 01 and accessories	1	9.774 402

3


3 VARIO C_{ond} Set conductivity instrument

The VARIO C_{ond} has a lot to offer. This instrument was designed with ergonomic requirements in mind. It is ideal for service work and inspection measurements on process equipment.

WTW

The TetraCon® 325 measuring cell, recognised around the world, was shortened and modified especially for the VARIO C_{ond}. If that is not enough; an adapted ultra-pure water cell with plug-in head and flow-through vessel can also be used with the VARIO C_{ond}.

Specifications:

Measurement range/Resolution

Conductivity:

Temperature:

Salinity:

TDS:

Spec. resistance:

Accuracy (± 1 digit)

Conductivity:

Temperature:

 Reference temp. (T_{ref}):

Cell constant:

Temperature comp.:

Temperature coefficient:

 0.0 μ S/cm to 200mS/cm

-0.5 to +105.0°C

0.0 to 70.0°C

0 to 1999mg/l

0.000 to 1999 Mohm/cm

 $\pm 0.5\%$ of measurement

 $\pm 0.1\text{K}$

selectable 20°C or 25°C

 fixed 0.475 cm^{-1} , 0.1 cm^{-1}

automatic or switched off

- non-linear function of natural water (nLF) per EN 27888 and ultra-pure water function

- linear compensation of 0.01 to 2.99%/K

- no compensation

Type	Description	PK	Cat. No.
VARIO C _{ond} Set A	incl. transport case, TetraCon® 325 and KCL solution	1	9.774 390
VARIO C _{ond} Set B	incl. transport case and LR 01/V	1	9.774 391

3. Analytical measurement and testing Conductivity measurement/Portable devices

1 Portable conductivity meter Education Line EL3

Mettler-Toledo Online

Experience science with portable conductivity meters

- Simple intuitive operation helps you save time during classes
- Ideally suited for classroom and field-based measurements alike
- Robust, low-maintenance, yet reliable electrodes available in kit version

EL3-Basic: Conductivity instrument incl. electrode clip, wrist strap, operating manual, "Quick guide", 4 x batteries

EL3-Kit: Instrument and accessories as with EL3 Basic, also with LE703 conductivity sensor, IP54 connection caps, 2 x 1413 µS/cm and 2 x 12.88 mS/cm standard sachets

EL3-Fieldkit: Instrument and accessories as for EL3 Kit, also with carry bag incl. 4 sample bottles

Please note: These articles are only available for schools and universities.

Specifications

Measuring range/accuracy:

Conductivity: 0.1µS/cm to 199.9mS/cm/±0.5%

Temperature: 0.0°C to +100°C/±0.3°C

Calibration: 1-point, 3 predefined standards

Free disk space: 30 data sets

Display: LCD

Batteries: 4 x AAA

Dimensions (WxDxH): 169 x 82 x 36mm

Weight: 180g (without batteries)

Type	PK	Cat. No.
EL3-Basic	1	9.704 003
EL3-Kit	1	9.704 004
EL3-Fieldkit	1	9.704 006
Spare elektrode LE703	1	9.041 621



2 Conductivity meter FiveGo™ FG3

Mettler-Toledo Online

FiveGo Conductivity is a handy, portable meter ideal for those who require rapid and reliable results on the go. This meter is suitable for a wide range of applications in various areas such as food and beverage, agriculture, industry, water and environment

- Outstanding functions such as storage capacity for 30 measurements, TDS and salinity modes and IP54 ingress protection combined with features such as automatic endpoint, 1 point calibration, linear temperature compensation and selectable reference temperatures
- Five self-explanatory buttons for starting and ending a measurement, for saving and accessing measurement results and for reviewing the latest calibration data.
- A big, well organised display simultaneously showing readings, temperature, endpoint criteria and various helpful icons

FG3-Basic: Conductivity instrument incl. electrode clip, wrist strap, operating manual, "Quick guide", 4 x batteries

FG3-Kit: Instrument and accessories as with FG3-Basic, with LE703 conductivity sensor, IP54 connection caps, 2 x 1413 µS/cm and 2 x 12.88mS/cm standard sachets

FG3-Fieldkit: Instrument and accessories as for FG3-Kit, with carry bag incl. 4 sample bottles

Specifications:

Measuring range (Accuracy) 0.1µS/cm to 199.9mS/cm (±0.5% of measured value)

TDS: 0.1mg/L to 199.9g/L (±0.5% of measured value)

Salinity: 0.00 to 19.99psu (±0.5% of measured value)

Temperature: 0 to +100°C (±0.3°C)

Calibration: 1 point, 3 predefined standards

Input: Mini-DIN

Temperature compensation: Linear: 0.00%/°C to 10.00%/°C

Reference temperature: 20 and 25°C

Memory: 30 measurements

Power supply: 4 x AAA

Protection class acc. to DIN EN 60529: IP 54

Type	PK	Cat. No.
FG3-Basic	1	9.773 720
FG3-Kit	1	9.773 721
FG3-Fieldkit	1	7.652 924



Conductivity meter Seven2Go™ S3



Portable routine model for conductivity measurement.

Mettler-Toledo Online

- New, intuitive menu structure with fast and easy T-Pad navigation
- Robust design with IP67 protection for use in harsh and demanding environments
- Intelligent Sensor Management (ISM®) functionality reduces the risk of errors
- Easy 1 point calibration with option of manual cell constant entry
- 3 predefined standards and 1 user defined standard
- Automatic, manual and time dependant endpoint recording
- Data memory storage for 200 data points
- Power requirements: 4 x 1.5V AA or 1.3V NiMH accumulators

Supplied with:

S3-Meter: Includes instrument, electrode clip, operating instructions, quick guide, test certificate, declaration of conformity and batteries.

S3-Standard kit: As S3-Meter, but also with InLab 738-ISM and sachets of conductivity standards 1413 $\mu\text{S}/\text{cm}$ and 12.88 mS/cm .

S3-Field kit: As S3-Standard kit, but also with bottles for calibration and uGo™ carrying case.

S3-Bioethanol kit: As S3-Field kit, but also with InLab 725 instead of InLab 738-ISM.

Specifications

Conductivity

Measuring range: 0.010 $\mu\text{S}/\text{cm}$... 500 mS/cm
 Resolution: 0.001 ... 1 (auto-range)
 Accuracy: $\pm 0.5\%$

Temperature

Measuring range: -5.0 ... +105.0°C
 Resolution: 0.1°C
 Accuracy: $\pm 0.2^\circ\text{C}$

TDS (Total Dissolved Solids)

Measuring range: 0.01 mg/l ... 300 g/l
 Resolution: 0.01 ... 1 (auto-range)
 Accuracy: $\pm 0.5\%$

Specific resistance

Measuring range: 0.01 ... 100.0 $\text{M}\Omega\text{cm}$

Salinity

Measuring range: 0.01 ... 42 psu

Conductivity Ash

Measuring range: 0.01 ... 2022%
 Dimensions (WxDxH): 222 x 70 x 35 mm

Type	PK	Cat. No.
S3-Meter	1	6.265 247
S3-Standard kit	1	6.265 248 ¹
S3-Field kit	1	6.265 249
S3-Bioethanol kit	1	6.265 250



6.265 248

Conductivity meters Seven2Go™ pro S7



Portable professional model for conductivity measurement

Mettler-Toledo Online

- New, intuitive menu structure with fast and easy T-Pad navigation
- Robust design with IP67 protection for use in harsh and demanding environments
- Intelligent Sensor Management (ISM®) functionality reduces the risk of errors
- New sunlight-proof screen guarantees screen readability even in direct sunlight
- New StatusLight gives a fast, visual confirmation showing if the meter is ready to measure or not
- Operating support for 12 languages with information shown in complete words and sentences
- Easy 1 point calibration with option of manual cell constant entry
- 3 predefined standards and 1 user defined standard
- Automatic, manual and time dependant endpoint recording
- Data memory storage for 2000 GLP data points with weatherproof Micro-USB connection for data export
- Power requirements: 4 x 1.5V AA or 1.3V NiMH accumulators

Supplied with:

- S7-Meter:** Includes instrument, LabX direct pH, USB cable, electrode clip, base accessory, operating instructions, quick guide, test certificate, declaration of conformity and batteries.
- S7-Standard kit:** As S7-Meter, but also with InLab 738-ISM and sachets of conductivity standard 1413 µS/cm and 12.88 mS/cm.
- S7-Field kit:** As S7-Standard kit, but also with bottles for calibration and uGo™ carrying case.
- S7-USP/EP kit:** As S7-Field kit, but with InLab 742-ISM instead of InLab 738-ISM.

Specifications

Conductivity	
Measuring range:	0.010µS/cm ... 1000mS/cm
Resolution:	0.001 ... 1 (auto-range)
Accuracy:	±0.5%
Temperature	
Measuring range:	-5.0 ... +105°C
Resolution:	0.1°C
Accuracy:	±0.1°C
TDS	
Measuring range:	0.01 mg/l ... 600 g/l
Resolution:	0.01 ... 1 (auto-range)
Accuracy:	±0.5 %
Specific resistance	
Measuring range:	0.01 ... 100.0MΩcm
Salinity	
Measuring range:	0.01 ... 42psu
Conductivity Ash	
Measuring range:	0.01 ... 2022%
Dimensions (WxDxH):	222 x 70 x 35mm

Type	PK	Cat. No.
S7-Meter	1	6.265 254
S7-Standard kit	1	6.265 255
S7-Field kit	1	6.265 256
S7-USP/EP kit	1	6.265 257 1

1



6.265 257

1



1 Conductivity meters HandyLab 200

NEW!

SI Analytics

The portable allrounder for conductivity measurements

Due to the wide selection of 2 and 4 pole measuring cells made by SI Analytics, the system consisting of a sensor and HandyLab 200 can be used for a variety of purposes such as conductivity, salinity, TDS and specific gravity. Autoread provides a stabile, precise measuring value. The backlit display and waterproof design make it especially ideal for field use. For easy reference, the HandyLab 200 has a storage capacity for up to 200 data sets, which can be put out on the display.

Supplied with:

HL200Versatile: Conductivity meter Set HandyLab 200 with conductivity probe LF413T for general applications

Specifications

Conductivity

Measuring range: 0.0 ... 1000mS/cm
 Resolution: ± 0.1 mS/cm, ± 0.01 μ S/cm, ± 0.001 μ S/cm
 Accuracy: $\pm 0.5\%$ of mean value

Temperature

Measuring range: -5.0 ... +105.0°C
 Resolution: ± 0.1 °C
 Accuracy: ± 0.1 °C

TDS (Total Dissolved Solids)

Measuring range: 0 ... 1999mg/l
 Resolution: 1mg/l
 Accuracy: $\pm 0.5\%$ of mean value

Specific resistance

Measuring range: 1.000 ... 199.9M Ω cm $\pm 0.5\%$ of mean value

Salinity

Measuring range: 0.0 ... 70.0 (acc. to IOT)

Type	PK	Cat. No.
HL200Versatile	1	6.265 286

2



2 3 Conductivity meter SD320CON

Electrochemistry instrument for the determination of Conductivity, Resistance, Salinity and TDS.

AQUALYTIC

- Rugged, water resistant (IP65), water proof plug connections
- Use of different electrodes
- Data Logger and alarm function
- GLP features (Good Laboratory Practice)
- Interface for Data transfer
- Large backlit display
- Low power consumption, long battery shelf life

Supplied with:

SD320CON (SET 1): Hand-held meter complete in case with 4-pol graphite electrode (diameter 12 mm) measuring range up to 200 ms/cm, batteries, instruction manual.

SD320CON (SET 2): Hand-held meter complete in case with 4-pol graphite electrode (diameter 16 mm) measuring range up to 1000 ms/cm, batteries, instruction manual.

Specifications

Conductivity: 0.0 ... 500.0 μ S/cm (cell constant 1/cm)
 0.000 ... 5.000 μ S/cm (cell constant 0.01/cm)
 0.0 ... 500.0mS/cm (cell constant 1/cm)
 0 ... 5000 μ S/cm (cell constant 0.01/cm)
 0 ... 1000mS/cm (cell constant 1/cm)

Temperature: -5.0 ... +150.0°C
 TDS: 0.000 ... 10000mg/l*
 Resistance: 0.0010kOhm cm... 50.00MOhm cm*
 Salinity: 0.0 ... 70.0g/kg (PSU)
 Protection class: IP65
 Power supply: 2 x AAA batteries (incl.)

Type	PK	Cat. No.
SD320CON (SET 1)	1	9.699 292
SD320CON (SET 2)	1	9.699 293

*depends on cell constant

3



The new inoLab® series from WTW

The new inoLab® benchtops are perfectly designed for modern laboratory surroundings. The key pads are clearly outlined and easy-to-operate, their smooth surfaces are easy-to-clean and the operation is self-explanatory. All meters include a universal power supply and a convenient stand with sensor support. If desired they can be ordered in application oriented sets including sensors and accessories.

WTW

1 Laboratory instrument inoLab® Cond 7110

Modern conductivity measurement is east to do. the inoLab® Cond 7110 has all important functions for measuring conductivity like adjustable reference temperature and different methods of temperature compensation. A big LCD segment display makes readings easy and a well-arranged keypad provides convenient operation. The automatic AutoRead function supports correct and repeatable results. Each meter come with a stand and accessories.

WTW

Specifications

Ranges: All values ±1 digit
 Conductivity: 0.00 ... 1000 mS/cm ±0.5 % v. Mw.
 0.00 ... 19.99 µS/cm at K= 0.1 cm⁻¹
 Salinity: 0.0 ... 70.0 (acc. IOT)
 Temperature: -5.0 ... 105.0°C ±0.1°C
 AutoRead: automatic
 Power supply: Universal power supply, 100V to 240V, 50/60Hz, 4 x 1.5V AA or 4 x 1.2V NiMH

Type	Description	PK	Cat. No.
Cond 7110	Meter only including accessories	1	9.920 096
Cond 7110 Set 1	Meter including TetraCon® 325 and accessories	1	9.920 097
Cond 7110 Set 3	Meter including KLE 325 and accessories	1	9.920 098



Conductivity meter inoLab® Cond 7310

This is the new inoLab® Cond 7310 or inoLab® Cond 7310P. A modern backlit graphic display with menu controlled user interface allows easy and intuitive operation. The mini USB-B interface provides fast data transfer to a PC. The internal memory can record up to 5000 GLP complying data including ID, date and time. The housing and the keypad are easy-to-clean. The inoLab® Cond 7310 has the possibility to connect different standard and special conductivity electrodes and has automatic and manual temperature compensation (can even be switched off for pure water measurements according pharmacopeia) for linear and non-linear function according EN 27 888. An integrated thermal printer (58mm width) is ready for printout of the measured data (option). The scope of delivery includes meter, stand, power supply and USB cable.

WTW

Specifications

Ranges: All values ±1 digit
 Conductivity additional: 0.00 ... 1000 mS/cm ±0.5 % v. Mw.
 0.000 ... 1.999 µS/cm, K= 0.01 cm⁻¹
 0.00 ... 19.99 µS/cm, K= 0.1 cm⁻¹
 Specific resistance: 0.00 ... 20 MOhm cm
 Salinity: 0.0 ... 70.0 (acc. IOT)
 TDS: 1 ... 1999 mg/l, 0 to 199.9 g/l
 Temperature: -5.0 ... 105.0°C ±0.1°C
 Calibration: 1 point
 Calibration memory: Up to 10 calibrations recallable
 Display: LCD Graphic, backlit
 Memory: manual 200/5000 automatic
 Logger: manual/time controlled
 Interface: Mini USB-B
 Power supply: Universal power supply, 100V to 240V, 50/60Hz, 4 x 1.5V AA or 4 x 1.2V NiMH



9.920 114



9.920 117

Type	Description	PK	Cat. No.
Cond 7310	Meter incl. accessories	1	9.920 114 2
Cond 7310 Set 2	Meter incl. TetraCon® 325 and accessories	1	9.920 115
Cond 7310 Set 6	Meter incl. USP Kit 1	1	9.920 116
Cond 7310P	Meter with built-in printer and accessories	1	9.920 117 3
Cond 7310P Set 1	Meter with built-in printer, incl. TetraCon® 325 and accessories	1	9.920 118
Cond 7310P Set 6	Meter incl. USP Kit 1	1	9.920 119

Conductivity measurement/Table devices

1



1 Conductivity meter Education Line EL30

NEW!

Experience science with conductivity bench meters

Mettler-Toledo Online

- Simple intuitive operation: helps you save time during classes
- Compact, robust benchtop instrument
- Robust, low-maintenance, yet reliable electrodes available in kit version
- Ideal for schools and universities

EL30-BASIC: Conductivity instrument incl. operating manual, "Quick guide", power adapter

EL30-KIT: Instrument and accessories as with EL30 Basic, also with LE703 conductivity sensor, electrode arm, 2 x 1413µS/cm and 2 x 12.88mS/cm standard sachets

Please note: These articles are only available for schools and universities.

Specifications

Measuring range/accuracy

Conductivity:	0.1µS/cm to 199.9mS/cm/±0.5%
Temperature:	0.0°C to +100°C/±0.3°C
Calibration:	1-point, 3 predefined standards
Display:	LCD
Power supply:	100-240V/50-60Hz, 9V DC
Dimensions (WxDxH):	200 x 175 x 52mm
Weight:	600g

Type	PK	Cat. No.
EL30-Basic	1	9.704 149
EL30-Kit	1	9.704 150
LE703	1	9.041 621

2



2 Conductivity meters FiveEasy™/FiveEasy™ Plus

NEW!

FiveEasy and FiveEasy Plus Conductivity are compact, easy to use bench meters suitable for a wide range of applications in various areas such as food and beverage, agriculture, industry, water and environment.

Mettler-Toledo Online

- Outstanding functions such as TDS and salinity modes and meter self-test combined with features such as automatic endpoint, 1 point calibration, linear temperature compensation and selectable reference temperature
- Five self-explanatory buttons for starting and ending a measurement or calibration and for accessing the latest calibration data
- A big, well organised display simultaneously showing readings, temperature, endpoint criteria and various helpful icons

FE30-Basic: Conductivity instrument incl. operating manual, "Quick guide", power adapter

FE30-Kit: Instrument and accessories as with FE30-Basic, also with LE703 conductivity sensor, electrode arm, 2 x 1413µS/cm and 2 x 12.88mS/cm standard sachets

FEP30-Basic: Conductivity instrument incl. operating manual, "Quick guide", power adapter

FEP30-Kit: Instrument and accessories as with FEP30-Basic, also with LE703 conductivity sensor, electrode arm, 2 x 1413µS/cm and 2 x 12.88mS/cm standard sachets

Specifications:

Measuring range (Accuracy)

Conductivity:	0.1µS/cm to 199.9mS/cm (±0.5% of measured value)
TDS:	0.1mg/L to 199.9g/L (±0.5% of measured value)
Salinity:	0.00 to 19.99psu (±0.5% of measured value)
Temperature:	0°C to +100°C (±0.3°C)
Calibration:	1 point, 3 predefined standards
Input:	Mini-DIN
Temperature compensation:	Linear: 0.00%/°C to 10.00%/°C
Reference temperature:	20°C and 25°C
Power supply:	100-240 V/50-60 Hz/9V DC

FEP30 only:

Memory:	99 measurements
Output:	RS232 interface

Type	PK	Cat. No.
FE30-Basic	1	9.773 701
FE30-Kit	1	6.251 347
FEP30-Basic	1	9.773 711
FEP30-Kit	1	9.773 712
FiveEasy AC adaptor (incl. connectors) input 230V, output DC 9V	1	7.900 515
FiveEasy electrode arm (complete)	1	6.235 935

1 Conductivity meter SevenCompact™

The colour display with its well-designed icons and menu settings in 10 languages makes operation genuinely intuitive. Applications range from routine measurements through sample analysis, data handling and data archiving in compliance with GLP regulations. Simply innovative design that meets the requirements for a universal, easy-to-operate conductivity meter. Mettler-Toledo Online

- User friendly instrument for demanding users
- Security and high reproducibility thanks to Intelligent Sensor Management (ISM®)
- Improved quality of measurements through professional calibration support
- Comprehensive service package including IQ/OQ
- Integrated USB and RS232 interfaces for data exchange

Supplied with:

S230-Basic: Instrument, electrode holder, protective cover, operating instructions, quick guide, declaration of conformity and test certificate
S230-Kit: As per S230-Basic, additionally with InLab® 731-ISM, guide to conductivity measurements and 2 calibration sachets for 1413µS/cm and 12.88mS/cm.
S230-USP/EP: As per S230-Kit, but with InLab® 741-ISM instead of InLab® 731-ISM and without calibration sachets for 12.88mS/cm.

Specifications:

Calibration:	13 pre-defined and 1 user-defined standard
Conductivity range:	0.001µS/cm to 1000mS/cm, autoscaling
Conductivity accuracy:	±0.5%
Salinity range:	0.00 to 80.00psu
TDS range:	0.00mg/L to 1000g/L, autoscaling
Resistivity range:	0.00 to 100MOhm*cm, autoscaling
Conductivity ash range:	0.000 to 2022%, autoscaling
Temperature range	
MTC:	-30.0 to 130.0°C
ATC:	-5.0 to 130.0°C
Temperature accuracy:	±0.1°C
Display:	4.3 inch, TFT color
Ext. power supply:	9-12V/10W

Type	PK	Cat. No.
S230-Basic	1	9.704 164
S230-Kit	1	9.704 165
S230-USP/EP	1	9.704 166

1





1 2 Conductivity meter SevenExcellence™ S700

Mettler-Toledo Online

- Modular professional system for measurements of pH, redox potential, conductivity, salinity/TDS and ion concentration. Fits up to three modules in any composition and order, can be expanded with additional measurement parameters at any time.
- Large, high resolution 7" colour touch display (capacitive), very clear and easy to operate
 - Modularity and flexibility; up to 3 measuring modules can work in parallel, expansion to 2 or 3 channels possible
 - Universal communication via 2 x USB, Ethernet (LAN) and RS232
 - Plain text user interface in 10 languages with menu guidance in full sentences
 - OneClick™ operation concept to quickly start frequently used functions and preferred methods
 - Storage for user methods
 - Highest security and GxP support (ID protection, sophisticated user management, limits/alarms, integrated radio clock, etc.)
 - Intelligent sensor management (ISM®)
 - Connection of stirrer, sample changer, PC, barcode reader, keyboard, local or network printer possible
 - Storage up to 20000 data sets (measurements, calibrations, methods)
 - 17 predefined, 60 user-defined methods
 - Calibration: 13 pre-defined and 20 user-defined standards
 - uPlace™ electrode arm with perfect vertical movement
 - Compatible with all METTLER TOLEDO electrodes (Recommended: ISM® electrodes)

S700-Basic: Includes instrument, 1 x conductivity expansion unit, 2 x 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.

S700-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.

S700-Trace: As S700-Kit but with InLab® Trace instead of InLab® 731-ISM, with Flow-Cell and without calibration sachets.

Specifications

	Measuring range // Resolution // Accuracy
Temperature MTC/ATC:	-30.0 to 130.0°C // 0.1°C // ±0.1°C
Conductivity:	0.001 to 999999 µS/cm // 0.001 to 1 // ±0.5%
	0.001 to 2000 mS/cm // 0.001 to 1 // ±0.5%
	0.001 to 200 S/m // 0.0001 to 1 // ±0.5%
	0.001 to 200000 mS/m // 0.0001 to 1 // ±0.5%
	0.1 to 999999 µS/m // 0.001 to 1 // ±0.5%
TDS:	0.001 to 1000 g/L , ppt // 0.001 to 1 // ±0.5%
	0.001 to 999999 mg/L , ppm // 0.001 to 1 // ±0.5%
Salinity:	0.01 to 80.0 psu , ppt // 0.01 to 0.1 // ±0.5%
Resistivity:	0.01 to 100.0 MΩxcm // 0.0001 to 1 // ±0.5%
Conductivity Ash:	0.01 to 999999 Ωxcm // 0.01 to 1 // ±0.5%
Conductivity Ash:	0.000 to 2022% // 0.001 to 1 // ±0.5%

Type	PK	Cat. No.
S700-Basic	1	9.704 354
S700-Kit	1	9.704 355
S700-Trace	1	9.704 356



9.704 081

3 Conductivity cell probes

TetraCon® 325 standard conductivity cell probe:

4-pole cell with integral temperature sensor. Cable length 1.5 metres. Measuring range: 1µS/cm to 2S/cm.

LR 325/01 ultra-pure water conductivity cell probe:

With integral temperature sensor and flowthrough vessel D 01/T for measuring very low conductivity ranges (<1 µS/cm) e.g. boiler feed water or deionised water. Cable length 1.5 metres. Min./max. insertion depth 35/110mm and flowthrough, measuring range: 0.001µS/cm to 200µS/cm.

TetraCon® DU/T conductivity flowthrough cell:

4-pole conductivity cell with integral temperature sensor for standard applications. Connection via 10mm diameter tubing nozzles (the adapter cable KKDU with 1 metre cable is required for connection). Filling volume 7ml. Measuring range: 1µS/cm to 1000mS/cm.



9.704 078

Type	Electrode	Shaft	Length	Cell constant	PK	Cat. No.
			mm			
TetraCon® 325	Graphite	Epoxy resin	120	K = 0,475	1	9.704 081 3
LR 325/01	V4A steel	V4A steel	121	K = 0.1	1	9.704 083
TetraCon® DU/T	Graphite	Epoxy resin	155	K approx. 0.8	1	9.704 078 4
KKDU 325	Connection cable	-	100	-	1	9.704 079

1 Conductivity measuring cell LF413TIDS



For versatile applications. IDS® 4-pole cell, plastic shaft, 1.5m cable with digital plug, sensor material graphite, temperature sensor NTC 30 kOhm.

SI Analytics

1

Specifications

Temperature range: -5 to +80°C
 Conductivity range: 1µS/cm to 2000mS/cm
 Taper length/Dia.: 120mm/15.3mm

Type	Electrode	Shaft	Length mm	Cell constant	PK	Cat. No.
LF413TIDS	Graphite	Plastic	120	K=0.475	1	6.265 636



Conductivity sensors for Mettler Toledo conductivity meters



InLab® 731

4 graphite pole cell with integral temperature sensor. Cable length 1.2 metres. Measuring range: 0.01 to 1000mS/cm.

Mettler-Toledo Online

2

InLab® 741

2 steel pole cell with integral temperature sensor. Cable length 1.2 metres. Measuring range: 0.001 to 500µS/cm

InLab® 710

4 platinum pole cell with integral temperature sensor. Cable length 1 metres. Measuring range: 0.01 to 500mS/cm

InLab® 720

2 platinum pole cell with integral temperature sensor. Cable length 1 metres. Measuring range: 0.1 to 500µS/cm

InLab® 751-4mm

2 platinum pole micro cell with integral temperature sensor. Cable length 1 meter. Measuring Range: 0.01 to 100mS/cm

InLab® 752-6mm

2 platinum pole semi-micro cell with integral temperature sensor. Cable length 1 meter. Measuring Range: 0.01 to 112mS/cm



9.041 443

Type	Material shaft	Shaft diameter mm	Length mm	Cell constant	PK	Cat. No.
InLab® 731	Graphite	12	120	K=0.57	1	9.041 447
InLab® 731-ISM	Graphite	12	120	K=0.57	1	9.041 448
InLab® 741	V4A steel	12	120	K=0.105	1	6.242 844
InLab® 741-ISM	V4A steel	12	120	K=0.105	1	9.041 442
InLab® 710	Glass	12	120	K=0.80	1	9.041 443 2
InLab® 720	Glass	12	120	K=0.06	1	9.041 446
InLab® 751-4mm	Glass	4	120	K=1.0	1	9.041 475
InLab® 752-6mm	Glass	6	120	K=1.0	1	9.041 476

3 LLG-Conductivity Solutions



- Directly traceable to NIST
- ISO17025 Certificate including actual value, expiration date and uncertainty of measurement
- Actual expiry and temperature dependence data on label.
- All standards are aqueous based and non-hazardous.
- Supplied in unbreakable PE-HD bottle.
- Values stated at 25°C: Accuracy ±1%

Type	Capacity ml	PK	Cat. No.
84 µS/cm	500	1	9.040 861
147 µS/cm	500	1	9.040 862
1.413 µS/cm	500	1	9.040 863
12.880 µS/cm	500	1	9.040 864

3



4 Conductivity solutions for Conductivity meters

Bottle with 500ml.

Hanna

Type	PK	Cat. No.
12880 µS	1	9.704 017
1413 µS	1	9.704 018
84 µS	1	9.773 992
80.000 µS	1	9.773 993

4





1 Conductivity Solutions



Conductivity standards, aqueous based and non-hazardous for handling and transport. Tested and ISO17025 certified at 25°C with an uncertainty of measurement of ±1%. Directly traceable to N.I.S.T. Temperature dependence data is printed on the label as are lot numbers and expiry dates. Supplied in 500ml and HDPE bottle (1.3µS/cm single use in 250ml bottle)

Reagecon

Type	Capacity ml	PK	Cat. No.
1.3µS/cm*	250	1	6.225 059
5µS/cm	500	1	6.901 629
10µS/cm	500	1	6.901 622
20µS/cm	500	1	6.802 901
50µS/cm	500	1	6.074 754
84µS/cm	500	1	9.040 904
100µS/cm	500	1	6.234 859
147µS/cm	500	1	9.040 905
200µS/cm	500	1	6.802 902
500µS/cm	500	1	6.205 415
1000µS/cm	500	1	6.901 670
1413µS/cm	500	1	9.040 906
5000µS/cm	500	1	6.205 412
10000µS/cm	500	1	6.901 671
12880µS/cm	500	1	9.040 907
50000µS/cm	500	1	6.210 129
100000µS/cm	500	1	6.205 413
350000µS/cm	500	1	9.040 987

*Accuracy ±1%

Conductivity solutions with Certificate of Analysis

Bottles with 500ml.

Hanna

Type	PK	Cat. No.
84 µS	1	6.230 626
1413 µS	1	7.970 290



2 Conductivity testing solutions

Values stated at 25°C. Supplied in containers as indicated. Accuracy ±2%.

SI Analytics

Type	Capacity ml	PK	Cat. No.
147µS/cm*	17	18	9.041 053
12.9mS/cm*	17	18	9.041 055
1413µS/cm	250	1	9.041 056

* Supplied in vials!



3 Waterproof Oxygen Meter HI9146

DO measurements can be displayed in ppm (mg/l) or in % saturation, together with temperature value. Automatic calibration in the air, at 100%. Automatic temperature compensation from 0 to 50°C. Instrument allows manual compensation of altitude and salinity. Hold-Function allows the user to "freeze" the reading on the LCD. Auto-off after 4 hours of inactivity, input for 12V d.c. adapter.

Hanna

Waterproof Oxygen Meter supplied complete with Oxygen Probe, electrolyte solution for DO probe (30 ml), 2 membranes, 4 batteries and a hard carrying case.

Measuring range/Accuracy:

O ₂ concentration:	0.00 to 45.00mg/l ±1.5% of Measuring range
O ₂ saturation:	0.0 to 300.0% ±1.5% of Measuring range
Temperature:	0.0 to 50.0°C/±0.5°C

Resolution:

O ₂ concentration:	0.01mg/l
O ₂ saturation:	0.1%
Temperature:	0.1°C
Temperature compensation:	automatic from 0 to 50°C
Height compensation:	0 to 4km/resolution 0.1km
Salinity compensation:	0 to 80g/l/resolution 1g
Environment:	0 to 50°C
Dimensions:	196 x 80 x 60mm
Weight:	500g

Type	Description	PK	Cat. No.
HI 9146-04	incl. Oxygen Probe with 4m cable	1	9.773 997
HI 9146-10	incl. Oxygen Probe with 10m cable	1	9.773 999

1 Portable dissolved oxygen meter Oxi 3205

Robust and easy to use dissolved oxygen meter for standard alkaline, or rechargeable, batteries. Menu-controlled with backlit graphics display for ease of use under all lighting conditions. Suitable for use in harsh environments. WTW

Measuring ranges:

O2 concentration: 0.00 to 20.0mg/l (19.9mg/l*)
 0.0 to 90.0mg/l (90mg/l*)
 O2 saturation: 0.0 to 200.0% (200%*)
 0 to 600%
 Temperature: 0.0 to +50.0°C, ±0.1°C
 * when using DurOx oxygen sensor probes

Accuracy:

O2 concentration: ±0.5% of reading
 O2 saturation: ±0.5% of reading

Type	Description	PK	Cat. No.
Oxi 3205	meter only	1	9.774 378
Oxi 3205 Set 1	case set including DO sensor CellOx 325 and accessories	1	9.774 340
Oxi 3205 Set 2	case set including DO sensor CellOx 325 (3m) and accessories	1	9.774 406
Oxi 3205 Set 3	case set including DO sensor DurOx 325 (3m) and accessories	1	9.774 343

2 Portable dissolved oxygen meter Oxi 3210

Convenient and versatile dissolved oxygen meter. Menu controlled, with backlit, graphics display. Memory, including GLP supporting functions, temperature compensation, barometric pressure and salinity. Powered by standard alkaline, or rechargeable, batteries. WTW

Measuring ranges:

O2 concentration: 0.00 to 20.00mg/l (19.9mg/l*)
 0.0 to 90.0mg/l (90mg/l*)
 O2 saturation: 0.0 to 200.0% (199%*)
 0 to 600%
 Partial pressure: 0.0 to 200.0mbar (199 mbar*)
 0 to 1250mbar
 Temperature: 0.0 to +50.0°C, ±0.1°C
 * when using DurOx oxygen sensor probes

Accuracy:

O2 concentration: ±0.5% of reading
 O2 saturation: ±0.5% of reading
 Partial pressure: ±0.5% of reading
 Datalogger: 200 records (Reading, Temperature, Date, Time, ID)

Type	Description	PK	Cat. No.
Oxi 3210	meter only	1	9.774 350
Oxi 3210 Set 1	cased set including DO sensor CellOx 325 and accessories	1	9.774 351
Oxi 3210 Set 2	cased set including DO sensor CellOx 325 (3m) and accessories	1	9.774 407
Oxi 3210 Set 3	cased set including DO sensor DurOx 325 (3m) and accessories	1	9.774 357



➔ StirrOx®, CelloX® and DurOx® electrodes please see page 331.

The new inoLab® series from WTW

The new inoLab® benchtops are perfectly designed for modern laboratory surroundings. The key pads are clearly outlined and easy-to-operate, their smooth surfaces are easy-to-clean and the operation is self-explanatory. All meters include a universal power supply and a convenient stand with sensor support. If desired they can be ordered in application oriented sets including sensors and accessories.

WTW

1



1 Oxygen meter inoLab® Oxi 7310

Reliable Documentation for dissolved oxygen measurement, if desired also available with built-in printer. This is the inoLab® Oxi 7310 or inoLab® Oxi 7310P. A modern backlit graphic display with menu controlled user interface allows easy and intuitive operation. The mini USB-B interface provides fast data transfer to a PC. The internal memory can record up to 5000 GLP complying data including ID, date and time. The housing and the keypad are easy-to-clean. The inoLab® Oxi 7310 supports the long proven WTW galvanic sensors, CelloX® 325 and StirrOx® G. A calibration history of the 10 last calibrations allows conclusions on the state of the sensor. Calibrations versus external standards e.g. Winkler titration, are possible, too. The meter includes automatic barometric pressure and temperature compensation. An integrated thermal printer (58 mm width) is ready for printout of the measured data (option). The scope of delivery includes meter, stand, power supply and USB cable.

WTW

Specifications

Ranges:	All values ±1 digit
Dissolved oxygen concentration:	0.00 ... 20.00 mg/l ±0.5 % Mw. 0 ... 90 mg/L ±0.5 %
Saturation:	0.0 ... 200.0 % ±0.5 % v. Mw. 0 ... 600 % ±0.5 v Mw.
Partial pressure:	0 ... 200.0 hPa, 0 ... 1250 hPa
Temperature:	-5.0 ... 105.0°C ±0.1°C
Calibration:	1-point air calibration (water vapour saturated air) or versus external standard
Calibration memory:	Up to 10 calibrations recallable
Display:	Backlit graphic LCD
Memory:	manual 5/5000 automatic
Logger:	manual/time controlled
Interface:	Mini USB-B
Power supply:	Universal power supply, 100 to 240 V, 50/60 Hz, 4 x 1.5 V AA

Type	Description	PK	Cat. No.
Oxi 7310	Meter only including accessories	1	9.920 108
Oxi 7310 Set 1	Meter including CelloX® 325 and accessories	1	9.920 109
Oxi 7310 Set 4	Meter including StirrOx® G and accessories	1	9.920 110
Oxi 7310P	Meter including integrated printer	1	9.920 111
Oxi 7310P Set 1	Meter including integrated printer, incl. CelloX® 325 and accessories	1	9.920 112
Oxi 7310P Set 4	Meter including integrated printer, incl. StirrOx® G and accessories	1	9.920 113



1 Portable dissolved oxygen meter FiveGo™ DO

FiveGo™ DO is a handy, portable meter ideal for those who require rapid and reliable results on the go. This meter is suitable for a wide range of applications in various areas such as food and beverage, agriculture, industry, water and environment

Mettler-Toledo Online

- Outstanding functions such as storage capacity for 30 measurements, %, mg/L and ppm measuring modes plus IP54 ingress protection combined with features such as automatic endpoint recognition, calibration in air and automatic temperature compensation when a temperature sensor is connected
- Five self-explanatory buttons for starting and ending a measurement, for saving and accessing measurement results and for reviewing the latest calibration data.
- A big, well organised display simultaneously showing readings, temperature, endpoint criteria and various helpful icons

FG4-Basic: Dissolved oxygen meter incl. electrode clip, wrist strap, operating manual, "Quick guide", 4 x batteries
FG4-Kit: Instrument and accessories as for FG4-Basic, but with LE621 sensor, NTC 30 kΩ temperature sensor, IP54 connection caps
FG4-Fieldkit: Instrument and accessories as for FG4-Kit, with carry bag incl. 4 sample bottles

Measuring range (Accuracy) DO:	0.0 to 199.9% and 200 to 400% (±1%) 0.0 to 45.0mg/L (±1%) 0.0 to 45.0ppm (±1%)
Temperature:	0 to +50°C (±0.3%)
Salinity (Resolution):	0.0 to 50.0ppt (0.1ppt)
Barometric pressure (Resolution):	500 to 1100mbar (1mbar) 500 to 1100hPa (1hPa)
Calibration:	2 points, 100% and 0%
Input:	BNC, Cinch, NTC 30 kΩ
Temperature compensation:	ATC and MTC
Memory:	30 measurements
Power supply:	4 x AAA
Protection class acc. to DIN EN 60529:	IP 54

Type	PK	Cat. No.
FG4-Basic	1	9.773 722
FG4-Kit	1	9.773 723
FG4-Fieldkit	1	9.773 724



Dissolved oxygen meter Seven2Go™ S4



Portable routine model for dissolved oxygen measurement

Mettler-Toledo Online

- New, intuitive menu structure with fast and easy T-Pad navigation
- Robust design with IP67 protection for use in harsh and demanding environments
- Intelligent Sensor Management (ISM®) functionality reduces the risk of errors
- Up to 2 calibration points and a choice of 2 predefined oxygen standards
- Automatic, manual and time dependant endpoint recording
- Data memory storage for 200 data points
- Power requirements: 4 x 1.5V AA or 1.3V NiMH accumulators

Supplied with:

S4-Meter: Includes instrument, electrode clip, operating instructions, quick guide, test certificate, declaration of conformity and batteries.

S4-Standard kit: As S4-Meter, but also with InLab 605-ISM and zero oxygen tablets.

S4-Field kit: As S4-Standard kit, but also with bottles for calibration, uGo™ carrying case.

Specifications

Measuring range (O ₂ Saturation):	0.1 ... 600.0%
Resolution:	0.1
Accuracy:	±10%
Measuring range (Temperature):	0.0 ... 60.0°C
Resolution:	0.1°C
Accuracy:	±0.2°C
Measuring range (O ₂ concentration):	0.01 ... 99.99mg/L (ppm)
Accuracy (display):	±0.2mg/L in range 0 ... 15mg/L ±10% in range 15 ... 60mg/L
Measuring range (Pressure):	500 ... 1100mbar
Resolution:	1
Accuracy:	±2%
Dimensions (WxDxH):	222 x 70 x 35mm

Type	PK	Cat. No.
S4-Meter	1	6.265 251
S4-Standard kit	1	6.265 252 2
S4-Field kit	1	6.265 253



6.265 252



6.265 264

Dissolved oxygen meter Seven2Go™ pro S9



Portable professional model for dissolved oxygen measurement

Mettler-Toledo Online

- New, intuitive menu structure with fast and easy T-Pad navigation
- Robust design with IP67 protection for use in harsh and demanding environments
- Intelligent Sensor Management (ISM®) functionality reduces the risk of errors
- New sunlight-proof screen guarantees screen readability even in direct sunlight
- New StatusLight gives a fast, visual confirmation showing if the meter is ready to measure or not
- Operating support for 12 languages with information shown in complete words and sentence
- Up to 2 calibration points and a choice of 2 predefined oxygen standards
- Automatic, manual and time dependant endpoint recording
- Data memory storage for 2000 GLP data points with weatherproof Micro-USB connection for data export
- Power requirements: 4 x 1.5V AA or 1.3V NiMH accumulators

Supplied with:

S9-Meter: Includes instrument, LabX direct pH, USB cable, electrode clip, base accessory, operating instructions, quick guide, test certificate, declaration of conformity and batteries.

S9-Standard kit: As S9-Meter, but also with InLab OptiOx and zero oxygen tablets.

S9-Field kit: As S9-Standard kit, but also with bottles for calibration, uGo™ carrying case and InLab OptiOx with protective guard.

S9-BOD kit: As S9-Field kit, but including InLab OptiOx (without protective guard), BOD adapter and BOD application note.

Specifications

DO Saturation

Measuring range: 0.1 ... 500.0%
Resolution: 0.1
Accuracy: ±10%

Temperature

Measuring range: 0.0 ... 50.0°C
Resolution: 0.1°C
Accuracy: ±0.1°C

Dissolved Oxygen

Measuring range: 0.01 ... 50.00mg/L (ppm)
Resolution: 0.01
Accuracy: ±0.1mg/L in range 0 ... 8mg/L
±0.2mg/L in range 8 ... 20mg/L
±10% in range 20 ... 50mg/L

Pressure

Measuring range: 500 ... 1100mbar
Resolution: 1
Accuracy: ±2%
Dimensions (WxDxH): 222 x 70 x 35mm

Type	PK	Cat. No.
S9-Meter	1	6.265 263
S9-Standard kit	1	6.265 264 1
S9-Field kit	1	6.265 265
S9-BOD kit	1	6.265 266



1 Accessories for Oxygen meters

StirrOx® G:

For inoLab® Oxi 730, ProfiLine 197i/1970i, inoLab® 740 Oxi, inolab Oxi 7310
Self-stirring oxygen sensor.

- single-handed use
 - high reproducibility
 - ready for immediate use, no polarisation period necessary
 - extremely low internal consumption of oxygen by the electrode
 - no zero point calibration necessary
 - OxiCal®-SL calibration and storage vessel included
 - 6 months operation with one electrolyte filling
 - IMT function compensation
 - membrane leakage monitoring, damaged membranes are indicated.
- Supplied with case, spare parts and maintenance solutions.

WTW



CellOx® 325:

For Oxi 3xx, Oxi 3xxi, ProfiLine Oxi 197, ProfiLine Oxi 197i, ProfiLine Multi 197i, Multi 340i, Oxi 3205, Oxi 3210, Oxi 3310, ProfiLine Oxi 1970i, ProfiLine Multi 1970i, inoLab®
Membrane-covered, galvanic oxygen sensor.

- ready for immediate use, no polarisation period necessary
- IMT function compensation
- 6 months operation with one electrolyte filling
- stable zero point
- 1.5 metre cable and waterproof plug (to IP 67) (other cable lengths available on request)
- OxiCal®-SL calibration and storage vessel included

Type	PK	Cat. No.
StirrOx® G	1	9.822 560
CellOx® 325	1	9.822 551

2 Oxygen sensor DurOx® 325

For use with Oxi 3xxi, ProfiLine Oxi 1970i, ProfiLine 3205, 3210, 3310.
Membrane-covered oxygen sensor with low flow requirement and removable cage guard, for field applications (fish farm revival pools) and for educational purposes.

WTW

- ready to measure - no polarisation time
- IMT compensation via two integral temperature sensors
- service life with one electrolyte filling approx. 6 months
- minimal flow requirement
- no zero current
- sensor is watertight (IP 68 - 2)
- standard with 3m cable and watertight plug
- standard with calibration/storage vessel OxiCal® -D
- standard with cage guard SK-D

Type	PK	Cat. No.
DurOx® 325	1	9.920 045



3 Dissolved oxygen electrode FDO1100IDS

For versatile applications. IDS® optical oxygen sensor (photoluminescence), plastic shaft, temperature sensor NTC30kOhm, 1.5 m fixed cable with digital plug.

NEW!
SI Analytics

Specifications

- Temperature range: 0 to +50°C
- DO range: 0 to 20.00mg/l (0 to 20.00ppm)
- Resolution: 0.01mg/l (0.01ppm)
- DO saturation: 0 to 200.0%
- Resolution: 0.1%
- Taper length/Dia.: 150mm/15.3mm

Type	Temperature sensor	Connector	PK	Cat. No.
FDO1100IDS	NTC 30 kOhm	Digital	1	6.265 629



Electrolyte solution ELY/G for dissolved oxygen electrodes

NEW!
WTW

Capacity ml	PK	Cat. No.
50	1	9.822 553

➔ BOD (Karlsruher) bottles - please see page 1144.



1 Combined pH/conductivity/temperature testers



Hanna

Simultaneous display of pH- and/or conductivity measurement value and temperature. Automatic temperature compensation of pH- and/or conductivity measurement gives enhanced accuracy. User selection of temperature coefficient enables use in alkaline and acidic media. Easy calibration with pre-programmed pH and conductivity solution values. Exchangeable pH electrode HI 73127. Model HI 98130 features a very wide measuring range of 0 to 19.99 mS

Measuring ranges:

pH: 0.0 to 14.0
 EC: 0 to 3999µS (HI 98129)
 0 to 19.99mS (only HI 98130)
 TDS: 0 to 2000mg/l (HI 98129)
 °C: 0 to 10.00g/l (HI 98130)

Accuracy:

pH: ±0.05
 EC/TDS: ±2% of the upper range value
 °C: ±0.5
 Batteries: 4 x 1.5 Volt
 Ambient conditions: 0 to 50.0°C
 Weight: 100g

Type	PK	Cat. No.
HI 98129	1	9.773 995
Spare electrode HI 73127	1	9.773 921
HI 98130	1	9.773 996



2 Waterproof Multimeters HI991300/HI991301 N

Hanna

pH or conductivity (TDS) values are displayed together with temperature. Supplied with multi-parameter probe, all measurements can be taken without changing the probe. Automatic temperature compensation ensures high accuracy of the measurements. Automatic calibration with pre-programmed pH buffer (pH 7.01, pH 4.01, pH 10.01) and conductivity solutions 1413µS (for HI 991300) or 12880µS (for HI 991301 N). Graphic symbols guide the user through calibration and measurements.

HI991300 and HI991301 are supplied complete with multi-parameter probe with 1metre cable, 4 x 1.5 Volt batteries, altogether in a carrying case.

Measurement range/Accuracy:

pH: 0.00 to 14.00/±0.01
 EC: 0 to 3999µS/cm (HI991300)
 0 to 20.00mS (HI991301 N)/
 ±2 % of the measurement range
 TDS: 0 to 2000 mg/l (HI991300)
 0 to 10.00 g/l (HI991301 N)/
 ±2 % of the measurement range
 °C: 0.0 to 60.0

Resolution:

pH: 0.01
 EC: 1µS/cm (HI991300)
 0.01mS/cm (HI991301 N)
 TDS: 1mg/l (HI991300)
 0.01g/l (HI991301 N)
 °C: 0.1°C
 Batteries: 4 x 1.5 Volt AAA
 Dimension: 145 x 80 x 36mm
 Weight: 210g

Type	PK	Cat. No.
HI 991300	1	6.231 448
HI 991301 N	1	6.241 705
Spare probe HI 1288	1	6.901 328

1 | 2 Multiparameter meter edge



Hanna

1



Features tablet meter edge:

- Single-channel instrument for measuring pH, conductivity and TDS
- thin and lightweight (approx. 280g only)
- large 140mm LCD display with clear full text readout capacitive touch screen
- ergonomic design, versatile, can be used as a benchtop docking station with electrode holder, as a portable meter or wall mounted (included in delivery)
- Rechargeable battery (about 8 hours of continuous use), battery charge via mains connection or USB cable, table station and wall mounting can also be used to charge the battery
- Integrated measured data storage for up to 1000 data records, manual storage or time-controlled by defining a storage interval
- Data transfer from device to PC via USB ports (no software needed)
- All electrodes are supplied with integrated temperature sensor and a 3.5mm plug with 1m cable

pH meter HI 2020-02:

- Sensor type, ID and calibration information are automatically recognized when connecting the electrode to the instrument
- GLP: data of last calibration (buffers, date, time, electrodes offset, slope) are stored and can be checked at any time
- Calibration time out warns the user when set calibration time has been exceeded
- Instrument can be used in Basic or Standard mode: Basic mode ideally for routine measurements for a simplified screen and features. In Basic mode, resolution is 0.01 pH, calibration can be performed automatically at 1, 2, 3 points with pre-programmed buffer series (pH 4.01; 6.86; 7.01; 9.18; 10.01). The standard mode offers additional features. In Standard mode the resolution can be selected between 0.01 pH and 0.001 pH, calibration can be performed automatically at 3, 4, 5 points with 7 standard buffers and 2 custom buffers for special applications.
- Calibration Check Funktion (pH electrode only): controlling of calibration process, displays electrode status after calibration

2



Conductivity meter HI 2030-02:

- Conductivity or TDS and temperature are displayed simultaneously
- Auto ranging or manual range selection
- Automatic Temperature compensation, or no temperature compensation for measurement of absolute EC
- Selectable reference temperature (20 or 25°C), adjustable temperature correction coefficient
- 1 point offset calibration, 1 point slope in EC standards (84µS; 1413µS; 12.88mS)

pH Kit supplied with: instrument incl. electrode HI 11310, buffer solution pH 4, pH 7 and pH 10 (2 sachets each), cleaning solution for electrodes, bench top docking station with electrode holder, wall mounting, USB cable, 5 V adapter

Conductivity Kit supplied with: instrument incl. digital 4-Ring conductivity probe HI 763100, conductivity solution 1413 µS/cm and 12880µS/cm (3 sachets each), bench top docking station with electrode holder, wall mounting, USB cable, 5 V adapter

Specifications

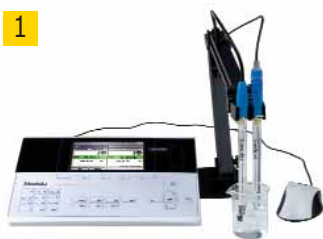
Measuring range // Resolution // Accuracy

- pH: 2.00 to 16.00 // 0.01 // ±0.01/±0.002
 -2.000 to 16.000 // 0.001 // ±0.01/±0.002
- Conductivity: 0.00µS to 200.0mS/cm // 0.01µS to 0.1mS (depending on measuring range) // ±1% of measured value ±1 digit
 0.00µS to 500.0mS/cm (absolute conductivity) // 0.01µS to 0.1mS (depending on measuring range) // ±1% of measured value ±1 digit
- TDS: 0.00 to 100.00g/l // 0.01mg/l to 0.1g/l (depending on measuring range) // ±1% of measured value ±1 digit
 0.00 to 400.0g/l (absolute TDS) // 0.01mg/l to 0.1g/l (depending on measuring range) // ±1% of measured value ±1 digit
- Temperature: -20.0 to +120.0°C // 0.1°C // ±0.2°C

Type	Description	PK	Cat. No.
HI 2020-02	pH meter edge, kit with pH electrode and accessories	1	6.261 874
HI 2030-02	Conductivity meter edge, kit with conductivity probe and accessories	1	6.261 875
HI 11310	Refillable pH electrode, glass body, ceramic diaphragm, double junction	1	6.261 876
HI 11311	Refillable pH electrode, matching pin, glass body, ceramic diaphragm, double junction	1	6.261 877
HI 12301	pH electrode, matching pin, gel-filled, plastic body, double junction	1	6.261 878
HI 10530	Refillable pH electrode, conical tip, glass body, triple diaphragm, single junction	1	6.261 879
HI 12300	pH electrode, gel-filled, plastic body, double junction	1	6.261 880
HI 10430	Refillable pH electrode, glass body, ceramic diaphragm, double junction	1	6.261 881
HI 763100	Digital 4-ring-conductivity probe	1	6.261 882

Multiparameter measurement/Devices

1



9.773 857

Multiparametermeters ProLab 3000/ProLab 4000

SI AnalytICS

- "Windows" interface and operation
- In ISE measuring mode controll of Titronic® burettes for dosing of TISAB, standards or sample.
- Flexible display of measuring values on a high resolution, bright, backlit, colour-graphics display (320x240 pixels)
- 2-channel pH/mV (galvanically isolated) inputs and dU differential measurement
- ID electrodes with automatic identification and data exchange or allocation with the meter
- Automatic user identification with electronic identity card including password entry
- Recorder functions: display of measurement against time, scalable coordinate axis
- Numerical display of measurement value via mouse click (time, data, measurement value, temperature)
- Interfaces: RS232C interface (bi-directional), USB connection (slave, bi-directional), USB master connection with direct connection (without configuration) to: USB-hub, USB-printer, USB-memory, keyboard, mouse, USB-stick

Specifications

pH measuring range:	-2.000 pH to +20.000pH -2.00 pH to +20.00pH -2.0 pH to +20.0pH
Accuracy (±1digit):	±0.002 ±0.01
mV measuring range:	-2200.0mV to +2200.0mV; -2200mV to +2200mV
Accuracy (±1digit)	±0.1mV ±1mV
ISE measuring range:	1.0E ⁻¹⁰ to 9.9E ³⁹ mg/l
Temperature measuring range:	-35.0°C to + 150.0°C
Accuracy (±1digit):	0.1°C
ProLab 4000 only:	
Conductivity measuring range:	0.000µS/cm to 2000mS/cm
Accuracy (±1digit):	0.5% from measurement value at an ambient temperature of 5°C to 30°C

Type	PK	Cat. No.
ProLab 3000 DIN Set	1	9.773 857 1
ProLab 3000 BNC Set	1	9.773 859
ProLab 4000 DIN Set	1	9.773 861
ProLab 4000 BNC Set	1	9.773 863

2



2 Multiparameter meters AL15

AQUALYTIC

Dissolved Oxygen/O2-concentraion in mg/l/Conductivity/TDS/pH/Redox/Temperature
The AL15 combines the features of several electrochemistry meters. It is designed for multi purpose operation and measures pH/Redox, dissolved oxygen and conductivity/TDS. The AL15 incorporates an intuitive user interface, large, easy to read display and is supplied with a sturdy handy case with electrodes, buffer solution and accessories.

Specifications Measuring range

pH:	0 - 14pH
ORP:	-1999 to +1999mV
Conductivity:	0 to 200.0µS 0.2 to 2.000mS 2 to 200.0mS
TDS:	0 to 132.000 ppm
Temperature:	0 to +60°C or +32 to +140°F
Oxygen:	0 to 20.0mg/l 0 to 100.0% in Air
Display:	Large LCD with contrast adjustment
Interface:	USB, RS232
Power supply:	DC 1.5V battery (UM3, AA) x 4 PCs or DC 9V Adapter

Type	PK	Cat. No.
AL15 pH/Con/Oxi	1	6.241 474
AL15 pH/Con	1	6.241 983
AL15 pH/Oxi	1	6.256 805
AL15 pH/Redox	1	9.699 295



Good quality! Great value!



www.llg-labware.com

www.wenk-labtec.com

1



1 Multi parameter HandyLab 680

NEW!

SI Analytics

The HandyLab 680 increases the measuring accuracy via:

- IDS technology. The digitalization of the measuring signal eliminates interferences.
- AutoRead function. Autoread provides a stable, precise measuring value.
- CMC (Continuous Measurement Control) visualizes whether the measuring value is within the calibration range.
- QSC (Quality Sensor Control) informs about the actual condition of the electrode and therefore increases operation safety.

The HandyLab 680 increases the operator comfort via:

- IDS Technology. The secure allocation of the calibration data to the sensor eliminates any uncertainty about the date and results of its last calibration. This saves time and money while assuring the highest confidence in your measurements.
- Traceability of the measuring values by the digital and automatic capture of all sensor data.
- User administration can be activated to allow tiered access and capabilities ensuring security and confidence of your data.
- Transmission of all data in *.csv format via USB interface to the PC or the USB memory stick, or, as an alternative, formatted transfer to Excel by means of MultiLabImporter (included in the delivery).

Supplied with:

HL680pH/CondVersat: pH/Cond meter Set HandyLab 680 with conductivity electrode LF413T IDS, pHTElectrode A7780 IDS, Z530 and Z389 for general applications

HL680pH/Cond/OxVer: pH/Cond/OX meter Set HandyLab 680 with oxygen electrode FDO1100 IDS, conductivity electrode LF413T IDS, pHTElectrode A7780 IDS, Z530 and Z389 for general applications

Specifications

pH

Measuring range: 0.000 ... 14.000pH
 Resolution: ±0.001pH
 Accuracy: ±0.004pH

mV

Measuring range: ±1200.0 mV
 Resolution: ±0.1mV
 Accuracy: ±0.2mV

Temperature

Measuring range: -5.0 ... +105.0°C
 Resolution: ±0.1°C
 Accuracy: ±0.2°C

Conductivity

Measuring range: 0.00 ... 2000mS/cm
 Resolution: ±0.1mS/cm, ±0.01S/cm, ±0.001µS/cm
 Accuracy: ±0.5% of mean value
 Specific resistance: 0.00 Ωcm ... 100 MΩcm ±0.5% of mean value
 Salinity: 0.0 ... 70.0 (acc. to IOT)
 TDS: 0 ... 1999 mg/l, 0 ... 199.9g/l ±0.5% of mean value

Oxygen measurement

DO concentration: 0.00 ... 20.00mg/l ±0.5% of mean value
 DO saturation: 0.0 ... 200.0 % ±0.5% of mean value
 DO partial pressure: 0 ... 400 hPa ±0.5% of mean value

Type	PK	Cat. No.
HL680pH/CondVersat	1	6.265 601
HL680pH/Cond/OxVer	1	6.265 299

1 Multiparameter meter HandyLab 780



Portable pH measuring devices by SI Analytics with Memosens® technology offers increased safety and a userfriendly interface

SI Analytics

- With Memosens® sensor measurement of pH, conductivity and dissolved oxygen by simple sensor exchange
- Automatic detection of the measuring parameter with Memosens® sensors
- Automatic compensation of the ambient pressure for oxygen measurement
- Storage of up to 10.000 data points
- Micro-USB connection to communicate with the HandyLab Pilot software for evaluation of data from digital Memosens® sensors. HandyLab Pilot software (included with delivery), allows for easy management and evaluation of stored data and can be used for device configuration.
- Contrast-rich and scratch-resistant clear glass display
- Self-explanatory operation with extensive information and help text
- Display of the sensor status at one glance with Sensoface
- Calibration of up to 3 points with automatic buffer detection
- Manual calibration by indicating random buffer values
- Real-time clock and display of battery charging status
- Extended operating time of more than 1.000 hours with standard batteries (4 x AA) or Li-Ion accumulators, even with very high or low operating temperatures. The batteries are charged via the USB interface.

Supplied with: Set pH-Meter HandyLab 780 incl. AquaLine 90pH, SKK K1A and DIN buffer solutions in ampoules

Specifications

pH measurement Memosens (also ISFET)

Measuring range: -2.000 ... +16.000pH

mV measurement Memosens Redox

Messbereich: -2000 ... +2000mV

pH/mV measurement (analog)

pH measurement measuring range: -2 ...16pH

mV measurement measuring range: -1300 ... +1300mV

Temperature measurement

Measuring range with sensor NTC 30kOhm: -20 ... +120°C

Measuring range with sensor Pt 1000: -40 ... +250°C

Conductivity measurement (only Memosens®)

Measuring range: 0.001 µS/cm (c < 0.05 cm⁻¹)
0.01µS/cm (c = 0.05 ... 0.2cm⁻¹)
0.1µS/cm (c > 0.2cm⁻¹)

Specific resistance: 00.00 ... 99.99MΩcm

Salinity: 0.0 ... 45.0g/kg (0 ... 30°C)

TDS: 0 ... 1999mg/l (10 ... 40°C)

Oxygen measurement (only Memosens®)

DO concentration: 000 µg/l ... 20.00 mg/l

DO saturation: 0.000 ...200.0 %

DO partial pressure: 0.0 ... 1000mbar

Type	PK	Cat. No.
HL780AL90pH	1	6.266 647

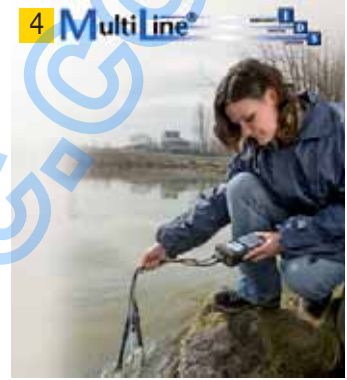


Multiparameter measurement/Devices

1 2 3 4 MultiLine® IDS

Multiparameter measurement new defined. The new MultiLine® handhelds with intelligent digital IDS sensors are perfectly suited for all multiparameter applications. The biggest advantage - signals are directly processed in the sensor. Each sensor logs onto the instrument and transfers its ID data including calibration records. There is no danger of confusion, the digital signal transfer allows the use of long cables for all parameters. The unique QSC functionality for IDS pH sensors gives a realistic rating of the current sensor condition. The pH CMC indicates the optimum pH measuring range. A wide range of IDS pH, conductivity and DO probes covers almost any application. Universal waterproof quick-locks secure the sensor against loss. The robust and waterproof (IP67) MultiLine® handhelds are equipped with a colour graphic display for optimum information. A special silicone keypad provides excellent handling comfort. Two USB host interfaces are provided for data transfer to USB sticks or the user's PC. The latest software updates are provided via the internet. NiMH-rechargeable batteries provide an energy-efficient operation. Available as field case sets including sensors and accessories.

WTW



5 6 Multiparameter meters, ProfiLine Multi 3410/3420/3430

There are 3 different models available:

Multi 3410: A single channel meter for pH, ORP, conductivity and DO measurement. It is particularly aimed at those users measuring one parameter but occasionally having requirements for measuring a second or third.

Multi 3420: A dual channel instrument for simultaneous measurement of two equal or different parameters

Multi 3430: A triple channel instrument for simultaneous measurement of up to three equal or different parameters

Selected IDS-Sensors:

SenTix® 940: Low maintenance combined pH electrode with ATC, QSC suitable, memory for 10 calibrations, stored serial number, pH 0.000 to 14.000 ($\pm 0.004\text{pH}$), temperature range 0.0 to 80.0°C, $\pm 0.2^\circ\text{C}$

SensoLyt® 900: Low maintenance polymer electrolyte pH electrode with built-in temperature sensor, pressure resistant up to 10 bar, QSC suitable, memory for 10 calibrations, saved serial number, pH 2.000 to 12.000 ($\pm 0.004\text{pH}$), temperature range from 0.0 to 60.0°C, $\pm 0.2^\circ\text{C}$

SenTix® 950: Combined pH-electrode with plastic shaft, 3 mol/l KCl, ATC, QSC-suitable, memory for 10 calibrations, stored serial number, pH 0.000 to 14.000 ($\pm 0.004\text{pH}$), temperature range 0.0 to 80.0°C, $\pm 0.2^\circ\text{C}$

SenTix® 980: Combined pH-electrode with plastic shaft, 3 mol/l KCl, ATC, platinum wire junction, QSC-suitable, memory for 10 calibrations, stored serial number, pH 0.000 to 14.000 ($\pm 0.004\text{pH}$), temperature range 0.0 to 100.0°C, $\pm 0.2^\circ\text{C}$

TetraCon® 925: Robust, general purpose 4-electrode conductivity cell with graphite electrodes incorporating integral temperature sensor. Memory for 10 calibrations, stored serial number, measuring range 10 $\mu\text{S}/\text{cm}$ to 2000 mS/cm $\pm 0.5\%$ of value, 0.0 to 100.0°C, $\pm 0.2^\circ\text{C}$

LR 925/01: 2-electrode stainless steel conductivity cell for low conductivities, integrated temperature sensor, flow through vessel, memory for 10 calibrations, stored serial number, measuring range 0.01 $\mu\text{S}/\text{cm}$ to 200 $\mu\text{S}/\text{cm}$ $\pm 0.5\%$ of value, 0.0 to 100.0°C, $\pm 0.2^\circ\text{C}$

FDO® 925: Extremely fast (T99 < 60 s) and precise optical DO sensor for field and laboratory applications. Handy, suits in different BOD bottles. Waterproof for depth measurement to 100m. Bevelled, air bubble repelling membrane, Green light technology for extended operation time. Insensitive against H₂S. O₂ concentration: 0.00 to 20.00mg/l, O₂ saturation: 0.0 to 200.0% O₂ partial pressure: 0.0 to 400hPa. Accuracy: $\pm 0.5\%$ of value. The information for meter precision refers to the sensors' built-in, electronic, measuring technology.



Multiparameter meters, ProfiLine Multi 3410/3420/3430

WTW

Measurement ranges

pH: -2.000 to 20.000
 mV: -2.00 to +20.00
 ±2500, ±1250

Oxygen measurement

O2 concentration: 0.00 to 20.00 mg/l
 O2 saturation: 0.0 to 200.0%
 O2 partial pressure: 0.0 to 400%
 Conductivity measurement: 0.0mS/cm to 2000mS/cm in 5 mode
 0.00µS/cm to 19.99µS/cm (at K=0.1cm-1)
 0.000µS/cm to 2.000µS/cm (at K=0.01cm-1)

Temp.: -5.0°C to +105°C
 Memory: manual or time controlled logger, 10000 records
 Power supply: 4 x 1.2V NiMH, A-Type, battery charger

Type	Description	PK	Cat. No.
Multi 3410	meter only	1	9.920 051
Multi 3410 Set 1	incl. SenTix®940	1	9.920 052
Multi 3410 Set 2	incl. SenTix®940-3	1	9.920 053
Multi 3410 Set 3	incl. SensoLyt®900-P incl. 6m cable	1	9.920 054
Multi 3410 Set 4	incl. FDO® 925	1	9.920 055
Multi 3410 Set 5	incl. FDO® 925-3 m	1	9.920 046
Multi 3410 Set 6	incl. FDO® 925-P incl. 6m cable	1	9.920 056
Multi 3410 Set 7	incl. TetraCon® 925	1	9.920 057
Multi 3410 Set 8	incl. TetraCon® 925-3	1	9.920 058
Multi 3410 Set 9	incl. TetraCon® 925-6	1	9.920 059
Multi 3410 Set A	incl. LR 925/01	1	9.920 060
Multi 3410 Set B	incl. SenTix® 940-3, FDO® 925-3	1	9.920 061
Multi 3410 Set C	incl. SenTix® 940, TetraCon® 925	1	9.920 062
Multi 3410 Set D	incl. SenTix® 940-3, TetraCon® 925-3	1	9.920 063
Multi 3410 Set E	incl. SenTix® 980, LR 925/01	1	9.920 047 ¹
Multi 3420	meter only	1	9.920 064
Multi 3420 Set B	incl. SenTix® 940-3, FDO 925-3	1	9.920 065
Multi 3420 Set C	incl. SenTix® 940, TetraCon® 925	1	9.920 066
Multi 3420 Set D	incl. SenTix® 940-3, TetraCon® 925-3	1	9.920 067
Multi 3420 Set E	incl. SenTix®980, LR 925/01	1	9.920 068
Multi 3420 Set H	incl. SenTix® 950, TetraCon® 925	1	9.920 048 ²
Multi 3420 Set G	incl. SenTix® 940-3, FDO® 925-3, TetraCon® 925-3	1	9.920 049
Multi 3430	meter only	1	9.920 069
Multi 3430 Set C	incl. SenTix®940, TetraCon® 925	1	9.920 070
Multi 3430 Set D	incl. SenTix®940-3, TetraCon® 925-3	1	9.920 071
Multi 3430 Set E	incl. SenTix®980, LR 925/01	1	9.920 072
Multi 3430 Set F	incl. SenTix®940, FDO 925, TetraCon® 925	1	9.920 073
Multi 3430 Set G	incl. SenTix® 940-3, FDO® 925-3, TetraCon® 925-3	1	9.920 050 ³
Multi 3430 Set K	incl. SenTix® 980, FDO® 925, TetraCon® 925	1	6.241 477



9.920 047



9.920 048



9.920 050

The new inoLab® series from WTW

The new inoLab® benchtops are perfectly designed for modern laboratory surroundings. The key pads are clearly outlined and easy-to-operate, their smooth surfaces are easy-to-clean and the operation is self-explanatory. All meters include a universal power supply and a convenient stand with sensor support.

WTW

If desired they can be ordered in application oriented sets including sensors and accessories.

1 | 2 Laboratory instrument inoLab® Multi 9310 IDS pH

The Multi 9310 IDS features a new technology: No longer is the meter determining the parameter but only the sensor. Intelligent, digital IDS sensors promotes the inoLab® Multi 9310 IDS to a perfect all-rounder. The universal digital input is ready for all available laboratory IDS sensors. No matter whether pH, conductivity or dissolved oxygen, when plugged into a suitable sensor the inoLab® Multi 9310 becomes either a pH, conductivity or dissolved oxygen meter. Of course it has a modern backlit graphic display with menu-controlled user interface for easy and intuitive operation. The mini USB-B interface provides fast data transfer to a PC. The internal memory can record up to 5000 GLP complying data including ID, date and time. The housing and the keypad are easy-to-clean. An integrated thermal printer (58mm width) is ready for printout of the measured data (option). Includes meter, power supply, stand and USB cable.

WTW

Specifications

Display:	backlit graphic LCD
Memory:	manual: 500/automatic: 5000
Logger:	manual/time controlled
Interface:	Mini USB-B
Power supply:	Universal power supply, 100 to 240 V, 50/60 Hz, 4 x 1.5 V AA or 4 x 1.2 V NiMH

Type	Description	PK	Cat. No.
Multi 9310	Single instrument	1	9.920 120
Multi 9310 Set 1	Incl. SenTix® 940	1	9.920 121
Multi 9310 Set 2	Incl. SenTix® 980	1	9.920 122
Multi 9310 Set 3	Incl. TetraCon® 925	1	9.920 123
Multi 9310 Set 4	Incl. FDO® 925	1	9.920 124
Multi 9310 Set C	Incl. SenTix® 940, TetraCon® 925	1	9.920 125
Multi 9310 Set K	Incl. SenTix® 980, FDO® 925 and TetraCon® 925	1	9.920 126
Multi 9310P*	Single instrument	1	9.920 127
Multi 9310P Set 1*	Incl. SenTix® 940	1	9.920 128
Multi 9310P Set 2*	Incl. SenTix® 980	1	9.920 129
Multi 9310P Set 3*	Incl. TetraCon® 925	1	9.920 130
Multi 9310P Set 4*	Incl. FDO® 925	1	9.920 131
Multi 9310P Set C*	Incl. SenTix® 940, TetraCon® 925	1	9.920 132
Multi 9310P Set K*	Incl. SenTix® 980, FDO® 925 and TetraCon® 925	1	9.920 133

*Meter with integrated printer



Laboratory instruments inoLab® Multi 9420 IDS/9430 IDS

Securely traceable with the cutting edge inoLab® Multi 9430 IDS and inoLab® Multi 9420 IDS

WTW

- Secure measurement data
- Digital sensor recognition
- Complete documentation

High-tech made by WTW for challenging applications. Two digital inoLab® multi parameter instruments for IDS sensors for simultaneous measurement of equal or different parameters and sensors. Two (inoLab® Multi 9420 IDS) or three sensors (inoLab Multi 9430 IDS) could be connected. A large color graphic display protected by a glass plate supports the representation of readings and information, The anti-bacterial keypad minimizes the danger of microbiological contaminations. The robust lower case made of zinc diecast provides proper stand and perfect shielding against interferences. A high quality stand for alternative left or right mounting allows easy adaptation to the requirements at the working place. By end of 2013 firmware packages for ISE applications will be available.

Secure measurements

- Digital data transfer eliminates interferences, provide secure calibration data and makes documentation of sensor data easy.
- The smart sensor rating (QSC) gives information about the true condition of an IDS pH electrode and increases safety of operation
- The CMC function for pH visualizes the optimum measuring range and supports correct measurements.
- Visual display for the channel in order to provide correct allocation of channel and sensor.

Documentation according GLP/AQA

- Automatic digital recording of all sensor data for distinct documentation
- Optional user administration for clear allocation of user and measurement results
- Transfer of data as *.csv format via USB to PC, if desired transfer direct to Excel (MultiLab Importer, part of scope of delivery or as download from internet)
- Additional transfer to USB memory drive or selected printer

Compatible to conventional pH measurement

- pH module (accessory) capable of being integrated for pH, ISE and ORP electrodes with DIN or BNC plug and 4 mm banana plug. For temperature sensor.

Specifications

Measuring channels

inoLab® Multi 9420 IDS: 2

inoLab® Multi 9430 IDS: 3

Display: Color graphic, glass plate protected

Memory: manual: 500/automatic: 10000

Logger: manual/time controlled

Interface: USB-A, Mini USB-B

Power supply: Universal power supply, 100 to 240 V, 50/60 Hz

Type	Description	PK	Cat. No.
Multi 9420	Single instrument	1	6.257 359 ¹
Multi 9420 Set C	Incl. SenTix® 980 and TetraCon® 925	1	7.656 860
Multi 9430	Single instrument	1	9.920 134 ²
Multi 9430 Set C	Incl. SenTix® 980 and TetraCon® 925	1	6.254 755

Separate IDS electrodes available on request.



6.257 359



9.920 134

Multiparameter measurement/Devices

1 2 pH/Ion meter SevenExcellence™ S500

Mettler-Toledo Online

Modular professional system for measurements of pH, redox potential, conductivity, salinity/TDS and ion concentration. Fits up to three modules in any composition and order, can be expanded with additional measurement parameters at any time.

- Large, high resolution 7" colour touch display (capacitive), very clear and easy to operate
- Modularity and flexibility; up to 3 measuring modules can work in parallel, expansion to 2 or 3 channels possible
- Universal communication via 2 x USB, Ethernet (LAN) and RS232
- Plain text user interface in 10 languages with menu guidance in full sentences
- OneClick™ operation concept to quickly start frequently used functions and preferred methods
- Storage for user methods
- Highest security and GxP support (ID protection, sophisticated user management, limits/alarms, integrated radio clock, etc.)
- Intelligent sensor management (ISM®)
- Connection of stirrer, sample changer, PC, barcode reader, keyboard, local or network printer possible
- Storage up to 20000 data sets (measurements, calibrations, methods)
- 17 predefined and 60 user-defined methods
- 12 most commonly used ion types pre-programmed for convenience
- 5 point calibration (pH), 8 pre-defined and 20 user-defined buffer groups, incl. temperature chart
- uPlace™ electrode arm with perfect vertical movement
- Compatible with all METTLER TOLEDO electrodes (Recommended: ISM® electrodes)
- Capable of ion concentration measurements using a suitable Ion Selective Electrode
- Methods included for the most common incremental ion measurement techniques

S500-Basic: Includes instrument, 1 x pH/Ion expansion unit, 2 x 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.

S500-Kit: As S500-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.

S500-Bio: As S500-Kit but with InLab® Routine Pro-ISM cable kit instead of InLab® Expert Pro-ISM.

S500-F: As S500-Kit but with PerfectION™ Fluoride instead of InLab® Expert Pro-ISM.

Specifications

	Measuring range // Resolution // Accuracy
Temperature MTC/ATC:	-30.0 to 130.0°C // 0.1°C // ±0.1°C
pH:	-2.000 to 20.000 // 0.001/0.01/0.1 // ±0.002
mV:	-2000.0 to 2000.0 // 0.1/1 // ±0.1
Rel. mV:	-2000.0 to 2000.0 // 0.1/1 // ±0.1
Ion concentration:	0 to 999 999 mg/L, ppm // 0.001 to 1 // ±0.5%
	0 to 100 mol/L, % // 0.0001 to 1 // ±0.5%
	0 to 100 000 mmol/L // 0.001 to 1 // ±0.5%
	-2 to 20 pX // 0.001 to 1 // ±0.5%

Type	PK	Cat. No.
S500-Basic	1	9.704 357
S500-Kit	1	9.704 358
S500-Bio	1	9.704 359
S500-F	1	9.704 360

1



2



3. Analytical measurement and testing Multiparameter measurement/Devices-Balances/Pocket balances

1 | 2 pH/mV, pH/Ion, Conductivity meter, SevenExcellence™ S475

Modular professional system for measurements of pH, redox potential, conductivity, salinity/TDS and ion concentration. Fits up to three modules in any composition and order, can be expanded with additional measurement parameters at any time.

Mettler-Toledo Online

- Large, high resolution 7" colour touch display (capacitive), very clear and easy to operate
- Modularity and flexibility; up to 3 measuring modules can work in parallel
- Universal communication via 2 x USB, Ethernet (LAN) and RS232
- Plain text user interface in 10 languages with menu guidance in full sentences
- OneClick™ operation concept to quickly start frequently used functions and preferred methods
- Storage for user methods
- Highest security and GxP support (ID protection, sophisticated user management, limits/alarms, integrated radio clock, etc.)
- Intelligent sensor management (ISM®)
- Connection of stirrer, sample changer, PC, barcode reader, keyboard, local or network printer possible
- Storage up to 20000 data sets (measurements, calibrations, methods)
- 17 predefined, 60 user-defined methods
- 5 point calibration (pH), 13 pre-defined and 20 user-defined buffer groups, incl. temperature chart
- uPlace™ electrode arm with perfect vertical movement
- Compatible with all METTLER TOLEDO electrodes (Recommended: ISM® electrodes)
- Measurement of the ion concentration with the corresponding electrode

S475-Basic: Includes 1 x pH/Ion expansion unit, 1 x pH/mV expansion unit, 1 x conductivity expansion unit, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, LabX® direct pH PC software, declaration of conformity and test certificate.

Specifications

Temperature range MTC/ATC:

pH: -2.000 to 20.000 // 0.001/0.01/0.1 // ±0.002

mV: -2000.0 to 2000.0 // 0.1/1 // ±0.1

Rel. mV: -2000.0 to 2000.0 // 0.1/1 // ±0.1

ISFET pH: 0.000 to 14.000 // 0.001/0.01/0.1 // ±0.05

Ion concentration: 0 to 999 999 mg/L, ppm // 0.001 to 1 // ±0.5%

0 to 100 mol/L, % // 0.0001 to 1 // ±0.5%

0 to 100 000 mmol/L // 0.001 to 1 // ±0.5%

-2 to 20 pX // 0.001 to 1 // ±0.5%

Conductivity: 0.001 to 999999 µS/cm // 0.001 to 1 // ±0.5%

0.001 to 2000 mS/cm // 0.001 to 1 // ±0.5%

0.001 to 200 S/m // 0.0001 to 1 // ±0.5%

0.001 to 200000 mS/m // 0.0001 to 1 // ±0.5%

0.1 to 999999 µS/m // 0.001 to 1 // ±0.5%

TDS: 0.001 to 1000 g/L, ppt // 0.001 to 1 // ±0.5%

0.001 to 999999 mg/L, ppm // 0.001 to 1 // ±0.5%

Salinity: 0.01 to 80.0 psu, ppt // 0.01 to 0.1 // ±0.5%

Resistivity: 0.01 to 100.0 MΩxcm // 0.0001 to 1 // ±0.5%

0.01 to 999999 Ωxcm // 0.01 to 1 // ±0.5%

Conductivity Ash: 0.000 to 2022% // 0.001 to 1 // ±0.5%

Measuring range // Resolution // Accuracy

-30.0 to 130.0°C // 0.1°C // ±0.1°C

-2.000 to 20.000 // 0.001/0.01/0.1 // ±0.002

-2000.0 to 2000.0 // 0.1/1 // ±0.1

-2000.0 to 2000.0 // 0.1/1 // ±0.1

0.000 to 14.000 // 0.001/0.01/0.1 // ±0.05

0 to 999 999 mg/L, ppm // 0.001 to 1 // ±0.5%

0 to 100 mol/L, % // 0.0001 to 1 // ±0.5%

0 to 100 000 mmol/L // 0.001 to 1 // ±0.5%

-2 to 20 pX // 0.001 to 1 // ±0.5%

0.001 to 999999 µS/cm // 0.001 to 1 // ±0.5%

0.001 to 2000 mS/cm // 0.001 to 1 // ±0.5%

0.001 to 200 S/m // 0.0001 to 1 // ±0.5%

0.001 to 200000 mS/m // 0.0001 to 1 // ±0.5%

0.1 to 999999 µS/m // 0.001 to 1 // ±0.5%

0.001 to 1000 g/L, ppt // 0.001 to 1 // ±0.5%

0.001 to 999999 mg/L, ppm // 0.001 to 1 // ±0.5%

0.01 to 80.0 psu, ppt // 0.01 to 0.1 // ±0.5%

0.01 to 100.0 MΩxcm // 0.0001 to 1 // ±0.5%

0.01 to 999999 Ωxcm // 0.01 to 1 // ±0.5%

0.000 to 2022% // 0.001 to 1 // ±0.5%

Type	PK	Cat. No.
S475	1	9.704 364



Balances/Pocket balances

1



7.633 920

Hanging Scales HDB-N



Kern & Sohn

Convenient for hanging loads.

- Ideal for quick checking in goods receiving and shipping, also suitable for cases.
- Data hold function: For easy reading of the weight, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Hook (stainless steel), can be hinged
- Batteries included, 2 x 1.5 V AAA, operating time approx. 180 h, AUTOOFF function to preserve the battery (can be switched off)

Type	Capacity	Readability	Weight	Dimensions (W x D x H)	PK	Cat. No.
	kg	g	g	mm		
HDB 5K5N	5	5	150	70 x 25 x 105	1	6.231 173
HDB 10K10N	10	10	150	70 x 25 x 105	1	7.633 920 1

2



2 Hanging Scale HCB



Kern & Sohn

The handy scales for higher loads.

- Ideal for quick checking in goods receiving and shipping
- Data hold function: For easy reading of the weight, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Peak load display (peak hold), measuring frequency 5 Hz
- LCD display, digit height 12 mm
- Ready for use: 3 x 1.5 V AA standard, operating time approx. 300 h

Dimensions (WxDxH): 80 x 45 x 150mm
Weight: 400g

Type	Capacity	Readability	PK	Cat. No.
	kg	g		
HCB 20K10	20	10	1	6.206 835
HCB 50K20	50	20	1	6.225 876
HCB 50K100	50	100	1	7.616 709
HCB 100K200	100	200	1	7.650 037
HCB 200K100	200	100	1	6.230 356
HCB 200K500	200	500	1	6.201 752

3



3 Pocket Balances Type JE

OHAUS

Simple, compact and handy. Ideal for precise weighing in the field.

- Automatic calibration, using external weight
- Large, high-contrast, liquid crystal display with back light
- Robust plastic housing
- Auto-off function prolongs battery life
- Includes protective cover and batteries
- Dimensions (WxDxH): 136 x 83 x 20mm

Type	Capacity	Readability	Plate dimensions	PK	Cat. No.
	g	g	mm		
JE120	120	0.1	83 x 76	1	9.902 413
JE250	250	0.1	83 x 76	1	9.902 414
JE500	500	0.1	83 x 76	1	9.902 415

4



4 Portable electronic balances, CS series

OHAUS

Compact and practical with choice of weighing ranges from 200g to 5000g

- Sleek, low-profile housing
- Stainless steel weighing pan
- Large, 11mm high digital display
- Energy-saving, automatic switch-off
- Robust plastic construction
- Battery or mains operation

Supplied with 3 x 1.5V AAA batteries and mains adapter.

Dimensions WxDxH: 135 x 193 x 39mm
Accessories: 1050ml plastic container

Type	Capacity	Readability	Plate dimensions	PK	Cat. No.
	g	g	mm		
CS200	200	0.1	146 x 133	1	9.950 222
CS2000	2000	1.0	146 x 133	1	9.950 223
CS5000	5000	1.0	146 x 133	1	9.950 224

Accessories for Portable electronic balances, CS series

OHAUS

Description	PK	Cat. No.
Plastic container, 1050ml	1	9.947 300
Stainless steel weighing pan cover	1	9.947 302

1 Compact balances Type EMB

Economically priced, battery-operated models. Large LCD readout with 15mm high digits. "Weigh-in" function simplifies mixing. Supplied with 4 x 1.5V AA batteries. With d.c. power connection socket (accessory mains adapter Cat. No. 6.082 721 available at extra cost). Auto-off function activates after 3 minutes without use for saving battery power.

Kern & Sohn

Dimensions WxDxH: 170 x 240 x 38mm
Net weight: approx. 600g

Type	Capacity g	Readability g	Reproducibility ± g	Linearity ± g	Plate diam. mm	PK	Cat. No.
EMB 100-3	100	0.001	0.001	0.003	82	1	6.238 426
EMB 200-2	200	0.01	0.01	0.02	105	1	9.901 320
EMB 600-2	600	0.01	0.01	0.03	105	1	9.901 321
EMB 1000-2	1000	0.01	0.01	0.03	150	1	6.235 728
EMB 500-1	500	0.1	0.1	0.2	150	1	9.901 322
EMB 1200-1	1200	0.1	0.1	0.3	150	1	9.901 323
EMB 5.2K1	5200	1.0	1.0	3.0	150	1	9.901 324
EMB 2200-0	2200	1.0	1.0	2.0	150	1	9.901 371
EMB 5.2 K 5	5200	5.0	5.0	10.0	150	1	9.901 372

2 3 Portable Balances, Scout® Pro series

The Scout® Pro offers simple operation and higher resolution to accommodate more applications than ever before:

OHAUS

- High contrast, LCD display.
- Parts counting, percentage weighing, check weighing, totalisation, weigh-below facility, display-hold-function
- Simple, two-button operation
- Density determination kit for automatic specific gravity calculations (optional accessory)
- Optional USB or RS232 interface accessories (cable included)
- Battery or AC operation (AC adapter included)
- 1 mg readability model supplied with draught shield
- Energy saving, auto switch-off
- Below-balance weighing (weighing hook included)

Type	Capacity g	Readability g	Plate dimensions mm	PK	Cat. No.
SPU123	120	0.001	90 dia.	1	9.902 420
SPU202	200	0.01	120 dia.	1	9.902 421
SPU402	400	0.01	120 dia.	1	9.902 422
SPU401	400	0.1	120 dia.	1	9.902 423
SPU602	600	0.01	120 dia.	1	9.902 428
SPU601	600	0.1	165 x 142	1	9.902 424
SPU2001	2000	0.1	165 x 142	1	9.902 425
SPU4001	4000	0.1	165 x 142	1	9.902 426
SPU6000	6000	1	165 x 142	1	9.902 427
SPU6001	6000	0.1	165 x 142	1	9.902 429

1



2



3



Precision balances Entris®



Get the reliability and quality of a Sartorius balance and pay only for the features you really need. The new Entris® was specially designed for effective and reliable every day weighing. The simple and clearly structured user surface, with its logical key assignment and last but not least the very good readability, are ideal conditions for safe working.

Sartorius Lab Instruments

- Easy-to-use: Excellent readability by the backlit and high-contrast display, navigation with the function keys and the easy-to-read water level on the front allows for easy and fast operation.
- Basic applications: Entris® supports you in your daily weighing with integrated basic applications like animal weighing, density determination, counting, percent weighing or convert.
- High accuracy: The monolithic weighing system guarantees a permanently high measurement accuracy and represents the reliability and quality of a Sartorius balance.
- i-Type balances have internal calibration, balances without i in Type designation have external calibration
- Dimensions (WxDxH): 230 x 303 x 91mm (height of balances with windshield 136mm), Height weighing space: 46mm

Supplied with: Universal power adapter, installations and operation manual, windshield as indicated

Type	Capacity	Readability	Reproducibility	Linearity	Plate dimensions mm	PK	Cat. No.
	g	g	± g	± g			
ENTRIS153i-1S*	150	0.001	0.001	0.002	Ø 115	1	6.262 582
ENTRIS153-1S*	150	0.001	0.001	0.002	Ø 115	1	6.262 583
ENTRIS323i-1S*	320	0.001	0.001	0.002	Ø 115	1	6.262 580
ENTRIS323-1S*	320	0.001	0.001	0.002	Ø 115	1	6.262 581
ENTRIS423i-1S*	420	0.001	0.001	0.002	Ø 115	1	6.262 578
ENTRIS423-1S*	420	0.001	0.001	0.002	Ø 115	1	6.262 579
ENTRIS623i-1S*	620	0.001	0.001	0.002	Ø 115	1	6.262 576 ¹
ENTRIS623-1S*	620	0.001	0.001	0.002	Ø 115	1	6.262 577
ENTRIS822i-1S	820	0.01	0.01	0.03	Ø 150	1	6.262 591 ³
ENTRIS822-1S	820	0.01	0.01	0.03	Ø 150	1	6.262 592
ENTRIS2202i-1S	2200	0.01	0.01	0.03	180 x 180	1	6.262 589
ENTRIS2202-1S	2200	0.01	0.01	0.03	180 x 180	1	6.262 590
ENTRIS2201i-1S	2200	0.1	0.1	0.3	180 x 180	1	6.262 597
ENTRIS2201-1S	2200	0.1	0.1	0.3	180 x 180	1	6.262 598
ENTRIS3202i-1S	3200	0.01	0.01	0.03	180 x 180	1	6.262 587
ENTRIS3202-1S	3200	0.01	0.01	0.03	180 x 180	1	6.262 588
ENTRIS4202i-1S	4200	0.01	0.01	0.03	180 x 180	1	6.262 585
ENTRIS4202-1S	4200	0.01	0.01	0.03	180 x 180	1	6.262 586
ENTRIS5201i-1S	5200	0.1	0.1	0.3	180 x 180	1	6.262 595
ENTRIS5201-1S	5200	0.1	0.1	0.3	180 x 180	1	6.262 596
ENTRIS6202i-1S	6200	0.01	0.01	0.03	180 x 180	1	7.940 261 ²
ENTRIS6202-1S	6200	0.01	0.01	0.03	180 x 180	1	6.262 584
ENTRIS8201i-1S	8200	0.1	0.1	0.3	180 x 180	1	6.262 593
ENTRIS8201-1S	8200	0.1	0.1	0.3	180 x 180	1	6.262 594

*with windshield



6.262 576



7.940 261



6.262 591



6.262 321

Precision balances Practum®



Unmatched reliability with the world-class weighing instrument. Made in Germany.

Sartorius Lab Instruments

- Overload protection for years of reliability
- Supervisor lock for protection against unintentional changes
- Coloured Touchscreen-Display
- Simple data transfer to printer or PC ("Plug & Work" Technology). Direct data transfer to Microsoft® Windows programs without further software
- Integrated underfloor weighing
- External calibration, weights are included in delivery
- Practum® 213/313/513: For cleaning of the windshield, the side windows, the sliding cover and all stainless steel parts are easily removable.
- Extra large adjustable feet for easy levelling



6.262 323

Specifications

Overall dimensions (WxDxH):
 PRACTUM213/313/513: 360 x 216 x 95mm
 360 x 216 x 320mm
 Height weighing space PRACTUM213/313/513: 209mm
 Permissible ambient temperature: +10 to+30°C
 Mains adapter: 100 - 240V, 50/60Hz

Type	Capacity	Readability	Plate diam.	Reproducibility	Linearity	PK	Cat. No.
	g	g	mm	± g	± g		
PRACTUM213-1S*	210	0.001	120	0.001	0.002	1	6.262 322
PRACTUM313-1S*	310	0.001	120	0.001	0.002	1	6.262 321 1
PRACTUM412-1S	410	0.01	180	0.01	0.03	1	6.262 836
PRACTUM513-1S*	510	0.001	120	0.001	0.002	1	6.262 835
PRACTUM612-1S	610	0.01	180	0.01	0.03	1	6.262 325
PRACTUM1102-1S	1100	0.01	180	0.01	0.03	1	6.262 324
PRACTUM2101-1S	2100	0.1	180	0.1	0.3	1	6.262 838
PRACTUM2102-1S	2100	0.01	180	0.01	0.03	1	6.262 323 2
PRACTUM3102-1S	3100	0.01	180	0.01	0.03	1	6.262 837
PRACTUM5101-1S	5100	0.1	180	0.1	0.3	1	7.671 426
PRACTUM5100-1S	5100	1.0	180	0.5	1.0	1	6.262 326
PRACTUM6101-1S	6100	0.1	180	0.1	0.3	1	6.262 839
PRACTUM6100-1S	6100	1.0	180	0.5	1.0	1	6.262 840

*with windshield



6.262 430

Precision balances Quintix®



Intuitive application guidance, start of applications with only one keystroke. Maximum accuracy at all times. Made in Germany.

Sartorius Lab Instruments

- The balance automatically adjusts itself when the pre-set temperature and time is exceeded
- Coloured Touchscreen-Display
- Easy cleaning
- "Plug & Work" connectivity to printer or computer via USB port for simple GLP-compliant logging, direct data transfer to Microsoft® Windows programs without further software
- Password protection and supervisor lock for protection against unintentional changes
- Integrated underfloor weighing
- Quintix® 213/313/513/613: For cleaning of the windshield, the side windows, the sliding cover and all stainless steel parts are easily removable.
- Extra large adjustable feet for easy levelling



6.262 429

Specifications

Overall dimensions (WxDxH):
 QUINTIX213/313/513/613: 216 x 360 x 95mm
 216 x 360 x 320mm
 Height weighing space QUINTIX213/313/513/613: 209mm
 Permissible ambient temperature: +10 to+30°C
 Mains adapter: 100 - 240V, 50/60Hz

Type	Capacity	Readability	Plate diam.	Reproducibility	Linearity	PK	Cat. No.
	g	g	mm	± g	± g		
QUINTIX213-1S*	210	0.001	120	0.001	0.002	1	6.262 423
QUINTIX313-1S*	310	0.001	120	0.001	0.002	1	6.262 426
QUINTIX412-1S	410	0.01	180	0.01	0.03	1	6.262 842
QUINTIX513-1S*	510	0.001	120	0.001	0.002	1	6.262 430 3
QUINTIX612-1S	610	0.01	180	0.01	0.03	1	6.262 431
QUINTIX613-1S*	610	0.001	120	0.001	0.002	1	6.262 841
QUINTIX1102-1S	1100	0.01	180	0.01	0.03	1	6.262 420
QUINTIX2102-1S	2100	0.01	180	0.01	0.03	1	6.262 422
QUINTIX2101-1S	2100	0.1	180	0.1	0.3	1	6.262 844
QUINTIX3102-1S	3100	0.01	180	0.01	0.02	1	6.262 425
QUINTIX5102-1S	5100	0.01	180	0.01	0.02	1	6.262 429 4
QUINTIX5101-1S	5100	0.1	180	0.1	0.3	1	6.262 428
QUINTIX5100-1S	5100	1.0	180	0.5	1.0	1	6.262 427
QUINTIX6102-1S	6100	0.01	180	0.01	0.02	1	6.262 843
QUINTIX6101-1S	6100	0.1	180	0.1	0.3	1	6.262 845
QUINTIX6100-1S	6100	1.0	180	0.5	1.0	1	6.262 846

*with windshield

Balances/Precision balances

1 Balances, electronic, precision, 572 series

Weighing speed adjustable in two stages. Unit transfer to bullion and non-metric units of weight.

Kern & Sohn

With calibration adjustment programme. With net/total weighing. Piece counting: 1, 5, 10 or 20 reference pieces.

Percentage weighing. Bi-directional RS232C data output supplied. Ultra low-profile, metal casing (WxDxH): 150 x 310 x 60mm. Supplied with mains adapter for 230V 50/60Hz.

Balances can be alternatively operated by accessory batteries.

Also available with DKD certified calibration weight, thermal printer, statistic printer, rechargeable battery pack or label printer at additional cost.

Type	Capacity g	Readability g	Reproducibility ± g	Linearity ± g	Plate dimensions mm	PK	Cat. No.
572-31*	300	0.001	0.001	0.005	106 diam.	1	9.900 990
572-32*	420	0.001	0.001	0.005	106 diam.	1	6.229 315
572-33	1600	0.01	0.01	0.03	150 diam.	1	9.901 333
572-35	2400	0.01	0.01	0.03	150 diam.	1	9.901 335
572-37	3000	0.01	0,01	0.05	150 diam.	1	6.227 789
572-45	12000	0.05	0.05	0.15	160 x 200	1	9.900 991
572-49	16000	0.1	0.1	0.3	160 x 200	1	9.901 336
572-57	24000	0.1	0.1	0.3	160 x 200	1	9.901 354

*with removable draught shield

1



WE FOCUS ON PRECISION – SINCE 1844

KERN

PROFESSIONAL MEASURING



Laboratory balances



Analytical balances



Moisture analysers



Microscopes



Refractometers

www.kern-sohn.com

1 Precision Balances Pioneer™

Designed to meet simple weighing needs at best price

OHAUS

- Weighing (18 units + 1 custom unit), parts counting, percentage weighing
- LCD readout
- Mains power
- RS232 for sending balance ID and weight
- Solid, diecast, metal housing, stainless steel pan
- Fixed, integral, weigh-below hook, all-glass draught shield with 3 sliding doors for 1mg models, front levelling bubble, menu and calibration locks
- EC Type approved versions also available (models ending in M)



Type	Capacity	Readability	Plate diam.	Description	PK	Cat. No.
	g		mm			
PA213	210	1mg	120	external calibration	1	9.902 130
PA213C	210	1mg	120	internal calibration	1	9.902 131
PA213CM	210	1mg	120	internal calibration	1	9.902 132
PA413	410	1mg	120	external calibration	1	9.902 133
PA413C	410	1mg	120	internal calibration	1	9.902 134
PA413CM	410	1mg	120	internal calibration	1	9.902 135
PA512	510	0.01g	180	external calibration	1	9.902 136
PA512C	510	0.01g	180	internal calibration	1	9.902 137
PA512CM	510	0.01g	180	internal calibration	1	9.902 138
PA2102	2100	0.01g	180	external calibration	1	9.902 139
PA2102C	2100	0.01g	180	internal calibration	1	6.234 850
PA2102CM	2100	0.01g	180	internal calibration	1	9.902 141
PA4102	4100	0.01g	180	external calibration	1	9.902 142
PA4102C	4100	0.01g	180	internal calibration	1	9.902 143
PA4102CM	4100	0.01g	180	internal calibration	1	9.902 144
PA4101	4100	0.1g	180	external calibration	1	9.902 145
PA4101C	4100	0.1g	180	internal calibration	1	9.902 146
PA4101CM	4100	0.1g	180	internal calibration	1	9.902 147

2 Precision Balances Adventurer®

NEW!

OHAUS

- Fast stabilization and reliable operation to ensure solid weighing performance and accurate, repeatable results.
- Two USB ports with GLP/GMP tracking capabilities assist the monitoring and reporting of the data.
- The wide viewing angle 4.3" colour touchscreen provides access to all applications.
- Reduced footprint due to two piece, top-mounted draft shield doors
- The 0.01g models feature large weighing pans
- AutoCal™ automatic internal calibration system or traditional external calibration (external calibration models -/E)
- EC Type Approved models available



Applications: Weighing (17 units + custom unit), parts counting, percentage weighing, check weighing, dynamic weighing, totalization/statistics, formulation, density determination, display hold.

Display: 4.3" (109 mm) Full-colour VGA graphic touchscreen with user-controlled brightness,

Operation: Mains operation.

Communication: RS232, USB Host, USB Device (included). GLP/GMP compliant data output with real-time clock

Construction: Die-cast metal base, ABS top housing, stainless steel pan, glass draft shield with two piece top mounted side doors and sliding top door (0.1 and 1mg models only), illuminated up-front level indicator, integral weigh below hook, security bracket, calibration lock, full housing in-use cover

Design features: Two-piece, top mounted, space-saving draft shield with removable panels on 0.1mg and 0.001g models. AutoCal™ automatic internal calibration or external calibration. Level assist feature with illuminated level indicator. Selectable environmental and auto-print settings. Integral weigh below hook. Protective full housing in-use cover. Software lock switch.

Type	Readability	Weighing range	Plate dimensions	PK	Cat. No.
	g	g	mm		
AX223	0.001	220	Ø 130	1	6.268 208
AX223/E	0.001	220	Ø 130	1	6.266 893
AX423	0.001	420	Ø 130	1	6.268 210
AX423/E	0.001	420	Ø 130	1	6.268 212
AX523	0.001	520	Ø 130	1	6.268 213
AX523/E	0.001	520	Ø 130	1	6.268 215
AX622	0.01	620	175 x 195	1	6.268 216
AX622/E	0.01	620	175 x 195	1	6.268 217
AX1502	0.01	620	175 x 195	1	6.268 218
AX1502/E	0.01	1520	175 x 195	1	6.268 220
AX2202	0.01	1520	175 x 195	1	6.267 263
AX2202/E	0.01	2200	175 x 195	1	6.268 222
AX4202	0.01	2200	175 x 195	1	6.268 223
AX4202/E	0.01	4200	175 x 195	1	6.268 225
AX5202	0.01	5200	175 x 195	1	6.268 226

Balances/Precision balances

1



9.901 403

Precision balance KB

Convenience model at an economical price

Kern & Sohn

- for applications that require verification, please order verification at the same time, verification at a later date is not possible.
 - user guidance step by step in the display
 - freely programmable weighing units, e.g. display directly in special units such as the length of thread g/m, paper weight g/m², or similar
 - precise counting. The automatic reference optimization gradually improves the average value of the piece weighing
 - numerical tare deduction for container weighing. Useful when checking loads
 - ring-shaped draft shield standard, 90 x 40mm dia. x ht. for models with readability d = 0.001g
- also available with DKD certified calibration weight, thermal printer, statistics printer at additional cost.

Type	Capacity	Readability	Reproducibility	Linearity	Plate dimensions	PK Cat. No.
	g	g	± g	± g	mm	
KB 120-3N	120	0.001	0.001	0.003	81 diam.	1 6.234 511
KB 240-3N	240	0.001	0.001	0.003	81 diam.	1 6.235 214
KB 360-3N	360	0.001	0.002	0.005	81 diam.	1 9.901 402
KB 1200-2N	1200	0.01	0.01	0.03	130 x 130	1 6.233 613
KB 2000-2N	2000	0.01	0.01	0.03	130 x 130	1 6.231 607
KB 2400-2N	2400	0.01	0.01	0.03	130 x 130	1 9.901 403 1
KB 3600-2N	3600	0.01	0.02	0.05	130 x 130	1 9.901 404
KB 10K0.05N	10000	0.05	0.05	0.15	150 x 170	1 9.901 405
KB 10000-1N	10000	0.1	0.1	0.3	150 x 170	1 9.901 406
KB 650-2NM	650	0.01	0.01	0.03	130 x 130	1 9.901 407
KB 6500-1NM	6500	0.1	0.1	0.2	150 x 170	1 9.901 409

Precision balance PLE-N

Low-cost precision balance with wide range of functions

Kern & Sohn

- Compact size, practical for small spaces
- Percentage determination: makes it possible to store a given weight value (100%) and to determine deviations from this target value
- Weighing with tolerance range (checkweighing): Input of an upper/lower limit value. A visual signal assists with portion division, dispensing or grading
- Weighing sum memory adds individual weighing results
- Ring-shaped draft shield standard, only for models with weighing plate sizes dia. 80mm. Removable metal cover with pipette opening. Weighing space (Ø x H): 125 x 70mm

Specifications

Overall dimensions, without draft shield (WxDxH): 185 x 250 x 80mm
 Dimensions weighing space (Ø x H): 125 x 70mm
 Weight: approx: 2.5kg

Type	Capacity	Readability	Reproducibility	Linearity	Plate diam.	PK Cat. No.
	g	g	± g	± g	mm	
PLE 420-3N	420	0.001	0.002	0.004	80	1 9.901 329 2
PLE 4200-2N	4200	0.01	0.02	0.04	135	1 9.901 356 3
ALT-A02 Density set						1 9.900 968

2



9.901 329

3



9.901 356

1 Precision balances type EW-N and EG-N

High quality laboratory balances, housed in a robust and stable plastic casing. With bar graph capacity display which shows the current available weighing range remaining. Fitted with protective working cover for casing and keyboard. Suitable for EC verification (factory option at additional cost - details on request). Convenient, internal automatic calibration (only type EG-N) as well as extensive configuration and a menu of applications. Draught shield supplied with all 0.001g readability models. Additionally supplied with parts counting facility, percentage weighing function, flush-mounted platform. Optional available: Thermal printer, statistics printer, internal Akku-Pack, DKD calibration certificate for balance and optional test weight.

Kern & Sohn



Type	Capacity	Readability	Reproducibility	Linearity	Plate dimensions	External dimensions (W x D x H)	PK	Cat. No.
	g	g	± g	± g	mm	mm		
EW220-3NM	220	0.001	0.001	0.002	∅ 118	182 x 235 x 75	1	9.901 007
EW420-3NM	420	0.001	0.001	0.003	∅ 118	182 x 235 x 75	1	9.901 008
EW620-3NM	620	0.001	0.001	0.003	∅ 118	182 x 235 x 75	1	9.901 009
EW820-2NM	820	0.01	0.01	0.01	170 x 142	182 x 235 x 75	1	9.901 010
EW2200-2NM	2200	0.01	0.01	0.01	180 x 160	192 x 265 x 87	1	9.901 011
EW4200-2NM	4200	0.01	0.01	0.02	180 x 160	192 x 265 x 87	1	9.901 012
EW6200-2NM	6200	0.01	0.01	0.03	180 x 160	192 x 265 x 87	1	9.901 013
EW12000-1NM	12000	0.1	0.1	0.2	180 x 160	192 x 265 x 87	1	9.901 014
EG220-3NM*	220	0.001	0.001	0.002	∅ 118	182 x 235 x 75	1	9.901 018
EG420-3NM*	420	0.001	0.001	0.003	∅ 118	182 x 235 x 75	1	9.901 019
EG620-3NM*	620	0.001	0.001	0.004	∅ 118	182 x 235 x 75	1	9.901 015
EG2200-2NM*	2200	0.01	0.01	0.01	180 x 160	192 x 265 x 87	1	9.901 016
EG4200-2NM*	4200	0.01	0.01	0.02	180 x 160	192 x 265 x 87	1	9.901 017

*calibratable
Outer dimensions without wind shield.

2 Precision balance PKT

Touchscreen laboratory balance with extensive range of functions

Kern & Sohn

- Large touch-sensitive, backlit screen with very good contrast for easy operation and convenient reading, digit height 15mm, screen diagonal 4.3" (approx. 109mm): Easy input of text and values, clear menu structure, weighing with tolerance range (checkweighing), 40 memories for each mode
- Robust metal housing, ensures stability, protects the weighing technology elements and is robust enough to cope with everyday use
- Ring-shaped draft shield standard for models with weighing plate sizes of 106mm, weighing space (∅ x H): 157mm x 57mm

Modes: weighing, counting, dispensing, recipe weighing, checkweighing, totalising with daily total, percentage determination, animal weighing, surface weight

Functions: capacity display, dispensing assistance (subtractive, additive), Net/Gross display, permanently on, variable reference quantity, automatic reference optimisation, tare deduction numerical or from the memory unit, input of item or batch description, operator etc., freely programmable weighing unit, e.g. display directly in special units such as length of thread g/m, paper weight g/m², or similar, date/time, statistical function, GLP printout, individual printout configuration



Specifications

Overall dimensions, without draught shield (WxDxH): 180 x 310 x 90 mm
 Dimensions weighing space (∅ x H): 157 x 57 mm
 Permissible ambient temperature: 10°C/40°C

Type	Capacity	Readability	Reproducibility	Linearity	Plate dimensions	PK	Cat. No.
	g	g	± g	± g	mm		
PKT 300-3	300	0.001	0.002	0,005	∅ 106	1	9.901 423
PKT 420-3	420	0.001	0.002	0,005	∅ 106	1	9.901 424
PKT 3000-2	3000	0.01	0.02	0.05	∅ 150	1	9.901 425
PKT 12K0.05	12000	0.05	0.05	0.15	160 x 200	1	9.901 426
PKT 16K0.1	16000	0.1	0.1	0.3	160 x 200	1	9.901 427
PKT 24K0.1	24000	0.1	0.1	0.3	160 x 200	1	9.901 428

Balances/Precision balances



1 2 Precision balance EWJ



Kern & Sohn

Verifiable entry level model in the upper laboratory class with EC type approval

- Concept of easy use: All primary functions have their own key on the keypad
- Automatic internal adjustment time-controlled every 4 hours. Guarantees high degree of accuracy and makes the location irrelevant
- Ideal for mobile applications which require verification, such as ambulatory gold and jewellery purchasing
- Compact size, practical for small spaces
- Capacity display: A bar lights up to show how much of the weighing range is still available
- Draft shield with removable cover and opening for using a pipette standard on all models 80mm and 135mm plate diameter. Weighing space (WxDxH): 145 x 160 x 80mm
- RS-232 and USB interfaces for transferring weighing data to the PC, printer, USB sticks etc.

Type	Weighing range g	Readability g	Reproducibility ± g	Linearity ± g	Plate dimensions mm	PK	Cat. No.
EWJ 300-3	300	0.001	0.001	0.003	Ø 80	1	9.900 938
EWJ 600-2M	600	0.01	0.01	0.03	Ø 135	1	9.900 939
EWJ 6000-1M	6000	0.1	0.1	0.2	155 x 145	1	9.900 940

Precision balance Type PLS

Kern & Sohn

- ergonomically optimised keypad for left and right-handed users
- ring-shaped glass draught shield standard for all models with 0.001g resolution. Removable metal cover with pipette opening. Weighing space 150mm dia., height 60mm
- count/weight switchover at the press of a button
- precise counting. The automatic optimisation of reference weight gradually improves the average value of the piece weight. The automatic optimisation of reference weight gradually improves the average value of the piece weight
- weighing with tolerance range Input of an upper/lower limit value. A visual signal assists with portion division, dispensing or grading
- percentage determination makes it possible to store a given weight value (100%) and to determine deviations from this target value in %
- density determination of liquids and solids with immediate display of the density on the display
- pre-Tare function for manual deduction of a known container weight. Useful for checking fill-levels

Type	Weighing range g	Readability g	Reproducibility ± g	Linearity ± g	Plate dimensions mm	PK	Cat. No.
PLS 420-3F	420	0.001	0.001	0.004	Ø 110	1	9.901 442 3
PLS 720-3A	720	0.001	0.001	0.002	Ø 110	1	9.901 413
PLS 1200-3A	1200	0.001	0.001	0.002	Ø 110	1	9.901 414
PLS 4200-2F	4200	0.01	0.01	0.04	Ø 160	1	9.901 422
PLS 6200-2A	6200	0.01	0.01	0.03	Ø 160	1	9.901 418 4
PLS 8000-2A	8000	0.01	0.01	0.03	Ø 160	1	9.901 443
PLS 20000-1F	20000	0.1	0.1	0.4	200 x 175	1	9.901 444 5



9.901 442



9.901 418



9.901 444

➔ Brushes please see page 1072.

Precision balance Type PCB



Compact scale for your laboratory. Due to the Recipe and piece counting function, as well as the grand precision this scale is perfect for the daily use in the Laboratory.

Kern & Sohn

- Protective working cover over keyboard and housing is enclosed o standard.
- Modern, backlit LCD display, digit height 15 mm
- Optional battery operation, 9V Block, not included.
- AUTO-OFF funktion to preserve the battery, can be switched off
- Stainless steel weighing plate

Overall (WxDxH): 163 x 245 x 79mm
Weight: approx. 1kg

Type	Capacity	Readability	Reproducibility	Linearity	Plate dimensions	PK Cat. No.
	g	g	± g	± g	mm	
PCB 100-3	100	0.001	0.001	0.003	Ø 81	1 7.619 757 1
PCB 250-3	250	0.001	0.001	0.005	Ø 81	1 6.238 044
PCB 350-3	350	0.001	0,002	0.005	Ø 81	1 6.241 856
PCB 200-2	200	0.01	0.01	0.02	Ø 105	1 7.635 868 2
PCB 1000-2	1000	0.01	0.01	0.03	130 x 130	1 6.228 513 3
PCB 2500-2	2500	0.01	0.01	0.05	130 x 130	1 6.235 556
PCB 3500-2	3500	0.01	0.02	0.05	130 x 130	1 6.240 408
PCB 1000-1	1000	0.1	0.1	0.2	130 x 130	1 6.235 098
PCB 2000-1	2000	0.1	0.1	0.2	130 x 130	1 6.229 399
PCB 6000-1	6000	0.1	0.1	0.3	150 x 170	1 6.231 685 4
PCB 10000-1	10000	0.1	0.1	0.3	150 x 170	1 7.625 237
PCB 6000-0	6000	1	1	2	150 x 170	1 9.901 300



Precision balance Type PFB



Low-cost model based on a concept of easy use: All primary functions have their own key on the keypad

Kern & Sohn

- Calibratable
 - Compact size, practical for small spaces
 - Capacity display: A bar lights up to show how much of the weighing range is still available
 - Level indicator and foot screws to level the balance precisely, fitted as standard, to give the most accurate weighing results
 - Draft shield standard for models with weighing plate sizes diam. 120mm. Removable metal cover with pipette opening.
 - Separate second display standard for models PFB 600-1M and PFB 6000-0M. Suitable for direct sales to the public when the verification value is the same as the readout. Large backlit LCDdisplay, Digit height 15 mm. Interface cable to the balance, Cable length approx. 1 m, and Mains adapter external standard.
- Dimensions (WxDxH): 250 x 180 x 105mm



Specifications

Overall dimensions, without draft shield (WxDxH): 200 x 260 x 87mm
Dimensions weighing space (WxDxH): 158 x 143 x 64mm
Weight: approx: 2kg

Type	Capacity	Readability	Reproducibility	Linearity	Verifiable readability	Plate dimensions	PK Cat. No.
	g	g	± g	± g	g	mm	
PFB 600-2M	600	0.01	0.01	0.02	0.1	Ø 120	1 9.901 357 5
PFB 600-1M	600	0.1	0.1	0.1	0.1	Ø 120	1 9.901 358
PFB 6000-1M	6000	0.1	0.1	0.3	1	155 x 145	1 7.658 057 6
PFB 6000-0M	6000	1	1	1	1	155 x 145	1 9.901 359

Balances/Precision balances-Analytical balances

1



6.264 386

Precision balance PLJ-C/PLJ-GM

NEW!

Kern & Sohn

- Automatic internal adjustment in the case of a change in temperature $\geq 3^{\circ}\text{C}$ and time-controlled every 3 hours
- Draft shield standard (on all models with readout $d = 0.001\text{g}$).
Dimensions weighing space (WxDxH): 140 x 140 x 65mm
- Large backlit LCD display, PLJ-C: Digit height 17mm, PLJ-GM: Digit height 19mm
- For applications that require verification, please order verification at the same time, initial verification at a later date is not possible. PLJ 700-3C without verification.

Characteristics KERN PLJ-C:

- Weighing principle: Force compensation
- Alibi memory: paperless form of the archive of weighing results
- Internal memory for up to 999 weighing results, 1000 items, 100 container weights, 100 users
- USB interface for transferring weighing data to the PC, printer, USB sticks etc.

Characteristics KERN PLJ-GM:

- Weighing principle: Strain gauge
- Rechargeable battery pack internal, standard, operating time up to 45h without backlight, charging time approx. 12h

Specifications

Overall dimensions, without draft shield (WxDxH):	206 x 335 x 85mm
Overall dimensions, with draft shield (WxDxH):	206 x 335 x 157mm
Permissible ambient temperature:	15°C/30°C
Net weight:	approx. 3.6kg
Weight with draft shield:	approx. 4kg

2



6.253 037

Type	Capacity	Readability	Reproducibility	Linearity	Plate dimensions mm	PK	Cat. No.
	g	g	\pm g	\pm g			
PLJ 700-3C	750	0.001	0.002	0.003	128 x 128	1	6.264 742
PLJ 300-3CM	360	0.001	0.001	0.004	128 x 128	1	6.264 743
PLJ 600-3CM	600	0.001	0.002	0.004	128 x 128	1	7.671 919
PLJ 600-2GM	600	0.01	0.02	0.02	128 x 128	1	6.238 826
PLJ 3000-2CM	3500	0.01	0.01	0.04	195 x 195	1	6.264 386 1
PLJ 6000-1GM	6000	0.1	0.2	0.2	195 x 195	1	6.253 037 2

3 Analytical balance Entris®

NEW!

3

Get the reliability and quality of a Sartorius balance and only pay for the features you really need. The new Entris® was specially designed for effective and reliable every day weighing. The simple and clearly structured user surface, with its logical key assignment and last but not least the very good readability, are ideal conditions for safe working.

Sartorius Lab Instruments

- Easy-to-use: Excellent readability by the backlit and high-contrast display, navigation with the function keys and the easy-to-read water level on the front allows for easy and fast operation.
- Basic applications: Entris® supports you in your daily weighing with integrated basic applications like animal weighing, density determination, counting, percent weighing or convert.
- Easy cleaning: For cleaning of the windshield, the side windows, the sliding cover and all stainless steel parts are easily removable.
- High accuracy: The monolithic weighing system guarantees a permanently high measurement accuracy and represents the reliability and quality of a Sartorius balance.
- i-Type balances have internal calibration, balances without i in Type designation have external calibration
- Dimensions (WxDxH): 230 x 303 x 330mm, Height weighing space: 240mm



Supplied with: Universal power adapter, installations and operation manual, windshield as indicated

Type	Weighing range g	Readability mg	Reproducibility \pm mg	Linearity \pm mg	Plate diam. mm	Calibration	PK	Cat. No.
ENTRIS64i-1S	60	0.1	0.1	0.2	90	internal	1	6.262 574
ENTRIS64-1S	60	0.1	0.1	0.2	90	external	1	6.262 575
ENTRIS124i-1S	120	0.1	0.1	0.2	90	internal	1	6.262 327
ENTRIS124-1S	120	0.1	0.1	0.2	90	external	1	6.262 573
ENTRIS224i-1S	220	0.1	0.1	0.2	90	internal	1	6.262 468
ENTRIS224-1S	220	0.1	0.1	0.2	90	external	1	6.262 572

1



6.260 896

Analytical balances Practum®



Unmatched reliability with the world-class weighing instrument. Made in Germany.

Sartorius Lab Instruments

- Overload protection for years of reliability
- Supervisor lock for protection against unintentional changes
- Coloured Touchscreen Display
- Simple data transfer to printer or PC ("Plug & Work" Technology). Direct data transfer to Microsoft® Windows programs without further software
- Integrated underfloor weighing
- External calibration, weights are included in delivery
- Easy cleaning: For cleaning of the windshield, the side windows, the sliding cover and all stainless steel parts are easily removable.
- Extra large adjustable feet for easy levelling

Specifications

Overall dimensions (WxDxH): 216 x 360 x 320mm
 Height weighing space: 209mm
 Permissible ambient temperature: +10 to+30°C
 Mains adapter: 100 - 240V, 50/60Hz

Type	Weighing range g	Readability mg	Reproducibility ± mg	Linearity ± mg	Plate diam. mm	PK Cat. No.
PRACTUM64-1S	60	0.1	0.1	0.2	90	1 6.262 847
PRACTUM124-1S	120	0.1	0.1	0.2	90	1 6.262 320
PRACTUM224-1S	220	0.1	0.1	0.2	90	1 6.260 896 1

Analytical balances Quintix®



2

Intuitive application guidance, start of applications with only one keystroke. Maximum accuracy at all times. Made in Germany.

Sartorius Lab Instruments

- The balance automatically adjusts itself when the pre-set temperature and time is exceeded
- Coloured Touchscreen Display
- Easy cleaning
- "Plug & Work" connectivity to printer or computer via USB port for simple GLP-compliant logging, direct data transfer to Microsoft® Windows programs without further software
- Password protection and supervisor lock for protection against unintentional changes
- Integrated underfloor weighing
- Easy cleaning: For cleaning of the windshield, the side windows, the sliding cover and all stainless steel parts are easily removable.
- Extra large adjustable feet for easy levelling



6.262 424

Specifications

Overall dimensions (WxDxH): 216 x 360 x 320mm
 Height weighing space: 209mm
 Permissible ambient temperature: +10 to+30°C
 Mains adapter: 100 - 240V, 50/60Hz

Type	Weighing range g	Readability mg	Reproducibility ± mg	Linearity ± mg	Plate diam. mm	PK Cat. No.
QUINTIX64-1S	60	0.1	0.1	0.2	90	1 6.262 848
QUINTIX124-1S	120	0.1	0.1	0.2	90	1 6.262 421
QUINTIX224-1S	220	0.1	0.1	0.2	90	1 6.262 424 2



Balances/Analytical balances

1



1 Analytical balance KERN ABS-N/ABJ-NM

Kern & Sohn

The bestseller in analytical balances, now with high-quality single-cell weighing system and EC type approval (Type ending M)

- Only ABJ-N: Automatic internal adjustment in the case of a change in temperature >2°C or time-controlled every 4 hours
- Only ABS-N: Adjusting program CAL, external test weights at an additional price
- Dosage aid: High-stability mode and other filter settings can be selected
- Simple recipeweighing and documenting with a combined tare/print function. In addition, the mixing ingredients for the recipe are numbered automatically and printed out with their corresponding number and weight value
- Identification number: 4 numeric positions, printed on calibration protocol
- Automatic data output to the PC/printer each time the balance reaches a steady state

Single-cell advanced technology:

- Fully automatic manufactured weighing cell from one piece of material
- Stable temperature behaviour
- Short stabilisation time: Steady weight values within approx. 3sec under laboratory conditions
- Shock proof construction
- High corner load performance

Specifications

Overall dimensions (WxDxH):	210 x 340 x 325mm
Dimensions weighing space (WxDxH):	174 x 162 x 227mm
Permissible ambient temperature:	10°C/30°C
Net weight:	approx. 6kg

Type	Capacity	Readability	Reproducibility	Linearity	Plate diam. mm	PK	Cat. No.
	g	mg	± mg	± mg			
ABS 80-4N	82	0.1	0.2	0.3	91	1	9.901 451
ABS 120-4N	120	0.1	0.2	0.3	91	1	9.901 452
ABS 220-4N	220	0.1	0.2	0.3	91	1	9.901 453
ABS 320-4N	320	0.1	0.2	0.3	91	1	9.901 454
ABJ 80-4NM	82	0.1	0.2	0.3	91	1	9.901 455
ABJ 120-4NM	120	0.1	0.2	0.3	91	1	9.901 456
ABJ 220-4NM	220	0.1	0.2	0.3	91	1	6.257 572
ABJ 320-4NM	320	0.1	0.2	0.3	91	1	9.901 457

2



2 Analytical balances AES-C/AEJ-CM

NEW!

Kern & Sohn

- Only AEJ-CM: Automatic internal adjustment in the case of a change in temperature >0.8°C and time-controlled every 3 hours. For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.
- Intuitive pipette calibration function to ensure data integrity and to minimise the risks in the daily work with your pipettes
- Higher weighing speed by switching off the last digit
- Modern all glass draft wind shield for optimal visibility of the weighing object
- Large backlit LCD display, digit height 17 mm
- Dispensing mode: By pressing one key you can set all relevant parameters for this dispensing process
- Alibi memory: Paperless archiving of up to 100 000 weighing results.
- Internal memory for up to 999 weighing results, 1000 items or recipe ingredients, 100 container weights, 100 users

Specifications

Overall dimensions (WxDxH):	206 x 335 x 335mm
Dimensions weighing space (WxDxH):	168 x 160 x 225mm
Permissible ambient temperature:	18°C/30°C
Net weight:	approx. 5.4kg

Type	Weighing range	Readability	Reproducibility	Linearity	Plate diam. mm	PK	Cat. No.
	g	mg	± mg	± mg			
AES 100-4C	160	0.1	0.2	0.2	85	1	6.264 740
AES 200-4C	220	0.1	0.2	0.2	85	1	6.263 805
AEJ 200-5CM	80 / 220	0.01 / 0.1	0.04 / 0.1	0.1 / 0.2	85	1	6.264 836
AEJ 100-4CM	160	0.1	0.2	0.3	85	1	6.264 741
AEJ 200-4CM	220	0.1	0.2	0.3	85	1	7.671 856

1 Balances, electronic, analytical, "Precise" ABT series

Analytical and semi-microbalances which are suitable for verification. All models have automatic calibration adjustment function by internal, motor-driven, calibration weight. It is possible to log ISO/GLP-compliant weighing or calibration data at any time via an accessory printer (not supplied) or data interface (bi-directional RS232-C). Additionally, the balances have formulation, piece counting and percentage determination functions, as well as a flush-mounted weighing platform. All models are supplied with a modern, all-glass draught shield with sliding doors to the left, right and top. Also available with DKD certified, calibration weight, ionizer, thermal printer, statistic printer at additional cost.

Kern & Sohn

1



Single-cell advanced technology:

- Fully automatic manufactured weighing cell from one piece of material
- Stable temperature behaviour
- Short stabilisation time: Steady weight values within approx. 5 sec under laboratory conditions
- Shock proof construction
- High corner load performance

Weighing pan, stainless steel: 80mm dia.
 Weighing chamber (WxDxH): 168 x 172 x 223mm
 Dimensions (WxDxH): 217 x 356 x 338mm
 Mains adapter: 220V

Type	Weighing range g	Readability mg	Reproducibility ± mg	Linearity ± mg	Plate diam. mm	PK	Cat. No.
ABT 120-4M	120	0.1	0.1	0.2	80	1	9.900 955
ABT 220-4M	220	0.1	0.1	0.2	80	1	9.900 956
ABT 320-4M	320	0.1	0.1	0.3	80	1	9.900 957
ABT 100-5M	101	0.01	0.05	0.15	80	1	6.241 274
ABT 120-5DM	42 / 120	0.01 / 0.1	0.02 / 0.1	0.05 / 0.2	80	1	9.900 958
ABT 220-5DM	82 / 220	0.01 / 0.1	0.05 / 0.1	0.1 / 0.2	80	1	9.900 959

2 Analytical balance Pioneer™

Designed to meet simple weighing needs at the best price. Weighing (18 units + 1 custom unit), parts counting, percentage weighing - LCD readout - Mains power - RS232 for outputting balance ID and weight - Solid, diecast, metal housing, stainless steel pan - Fixed, integral, weigh-below hook, all-glass draught shield with 3 sliding doors, front levelling bubble, menu and calibration locks - EC Type approved versions also available (models ending in M)

OHAUS

2



Type	Weighing range g	Readability mg	Plate diam. mm	PK	Cat. No.
PA64	65	0.1	90	1	6.234 827
PA64C	65	0.1	90	1	9.902 151
PA64CM	65	0.1	90	1	9.902 152
PA114	110	0.1	90	1	6.233 682
PA114C	110	0.1	90	1	9.902 154
PA114CM	110	0.1	90	1	9.902 155
PA214	210	0.1	90	1	9.902 156
PA214C	210	0.1	90	1	6.233 795
PA214CM	210	0.1	90	1	9.902 158

Balances/Analytical balances

1 Analytical and Precision Balances Explorer®

Highest performance, most technically advanced balance from OHAUS

OHAUS

- High resolution multi-lingual colour VGA touch display with icons for simple operation
- Programmable multi-functional touch-free sensors for cleanliness, speed and safety
- Multiple application modes plus library for storage of personal application settings
- External calibration, High capacity and EC type approved models also available

Application: Weighing (17 units + custom units), Parts Counting, % weighing, Animal/Dynamic Weighing, Checkweighing, Filling, Totalization, Formulation, Differential weighing, Density determination, Peak hold, Ingredient costing, Pipette adjustment, Gross/Net/Tare Weighing

Display: High resolution full-color VGA graphic display (5.7" diagonal), 4-wire resistive touch screen. QWERTY keyboard and numeric keypad to quickly input GLP and GMP data and other application data.

Operation: Mains Operation

Communication: Easy access communication ports including USB host, USB device, RS232 and an optional 4th port for either RS232 or Ethernet. GLP/GMP Data Output with Real Time Clock. Direct Data Transfer Function.

Construction: Metal base, ABS top housing, stainless steel pan, anti-static glass draftshield with flip-top door, replaceable in-use cover, automatic draftshield doors on selected models

Design features: 3-door frameless draftshield with removable panels on 0.1mg and 1mg models. Optional automatic draftshield doors on 0.1mg and 0.01mg models, with built in ionizer on 0.01mg automatic draftshield door models. Modular display design with adjustable angle (attach to base, wall or optional tower). AutoCal™ fully-automatic internal calibration system. Level assist feature with illuminated level indicator. Selectable environmental and auto-print settings. Integral weigh below hook. Protective in-use cover. Software lock switch.

Type	Weighing range g	Readability	Plate dimensions mm	PK	Cat. No.
EX125D	52 / 120**	0.01 / 0.1 mg	Ø 80	1	6.268 201
EX124	120	0.1 mg	Ø 90	1	9.902 370
EX124/AD*	120	0.1 mg	Ø 90	1	6.268 206
EX125	120	0.01 mg	Ø 80	1	6.268 202
EX223	220	1 mg	Ø 130	1	9.902 375
EX224	220	0.1 mg	Ø 90	1	9.902 371
EX224/AD*	220	0.1 mg	Ø 90	1	6.266 074
EX225D	120 / 220**	0.01 / 0.1 mg	Ø 80	1	6.268 203
EX225D/AD*	120 / 220**	0.01 / 0.1 mg	Ø 80	1	6.268 204
EX225/AD*	220	0.1 mg	Ø 80	1	6.268 205
EX324	320	0.1 mg	Ø 90	1	9.902 373
EX324/AD*	320	0.1 mg	Ø 90	1	6.268 207
EX423	420	1 mg	Ø 130	1	9.902 376
EX623	620	1 mg	Ø 130	1	9.902 378
EX1103	1100	1 mg	Ø 130	1	9.902 379
EX2202	2200	0.01 g	190 x 200	1	9.902 381
EX4202	4200	0.01 g	190 x 200	1	9.902 382
EX6201	6200	0.1 g	190 x 200	1	9.902 387
EX6202	6200	0.01 g	190 x 200	1	9.902 384
EX10202	10200	0.01 g	190 x 200	1	9.902 385
EX10201	10200	0.1 g	190 x 200	1	9.902 388

*Automatic door

**Dual range

1



Accessories for analytical balance Explorer®

(NEW)

OHAUS

Type	PK	Cat. No.
Second RS232 interface	1	9.902 360
Ethernet interface	1	9.902 361
Terminal extension cable	1	9.902 362
Density determination kit	1	9.902 363
Tower kit	1	9.902 364
Foot switch	1	9.902 365
Draft Shield Kit	1	9.902 366
USB Interface Cable (Type A to B)	1	9.902 368
Theft protection clamp	1	9.947 316

1 Analytical balances Adventurer®



OHAUS

1

- Fast stabilization and reliable operation to ensure solid weighing performance and accurate, repeatable results.
- Two USB ports with GLP/GMP tracking capabilities assist the monitoring and reporting of the data.
- The wide viewing angle colour touchscreen provides access to all applications.
- Reduced footprint due to two pieces, top-mounted draft shield doors
- AutoCal™ automatic internal calibration system or traditional external calibration (external calibration models -/E)
- EC Type Approved models available

Applications: Weighing (17 units + custom unit), parts counting, percentage weighing, check weighing, dynamic weighing, totalization/statistics, formulation, density determination, display hold.

Display: 4.3" (109 mm) Full-colour VGA graphic touchscreen with user-controlled brightness,

Operation: Mains operation.

Communication: RS232, USB Host, USB Device (included). GLP/GMP compliant data output

Construction: Die-cast metal base, ABS top housing, stainless steel pan, glass draft shield with two piece top mounted side doors and sliding top door, replaceable in-use cover

Design features: Two-piece, top mounted, space-saving draftshield with removable panels on 0.1mg and 0.001g models. AutoCal™ automatic internal calibration or external calibration. Level assist feature with illuminated level indicator. Selectable environmental and auto-print settings. Integral weigh below hook. Protective full housing in-use cover. Software lock switch.



Type	Readability mg	Weighing range g	Plate diam. mm	PK	Cat. No.
AX124	0.1	120	90	1	6.268 193
AX124/E	0.1	120	90	1	6.268 195
AX224	0.1	220	90	1	6.268 196
AX224/E	0.1	220	90	1	6.268 198
AX324	0.1	320	90	1	6.268 199

2 Platform balance "Precise" Type IKT



Kern & Sohn

2

- Innovative touchscreen: Large touch-sensitive, backlit screen (digit height 18mm) with very good contrast for easy operation and convenient reading
- Maximum transparency: All function keys are labelled with plain text which ensures that they are easily understood. The menu tree overlay in the info bar allows you to see at a glance which function is currently in use
- No more errors or lost time through keys which have several functions or unclear markings
- Large keys, which can also be operated while wearing gloves
- Convenient recipe weighing: 5 recipes each with 7 components can be stored in plain text
- Permissible ambient temperature 10°C/40°C
- only IKT-M: with EC type approval

Standard Data interfaces:

- Data interface RS-232 to connect the balance to a printer, PC or network
- Control outputs (optocoupler, digital I/O) to connect relays, signal lamps, valves etc. (35V/80mA)



Type	Readability g	Capacity g	Min. piece weight (PW min) g/piece	Plate dimensions mm	PK	Cat. No.
IKT 3K0.01S	0.01	3000	0.01	228 x 228	1	9.901 460
IKT 8K0.05	0.05	8000	0.05	305 x 315	1	9.901 461
IKT 10K0.1S	0.1	10000	0.1	228 x 228	1	9.901 462
IKT 30K0.1	0.1	30000	0.1	305 x 315	1	9.901 463
IKT 60K0.2L	0.2	60000	0.2	450 x 350	1	9.901 464
IKT 6K1M	1.0	6000	1	305 x 315	1	9.901 465
IKT 12K2M	2.0	12000	2	305 x 315	1	9.901 466
IKT 30K5M	5.0	30000	5	305 x 315	1	9.901 467
IKT 60K10LM	10.0	60000	10	450 x 350	1	9.901 468

Balances/Moisture balances

1 Halogen Moisture Analyser MLB 50-3C



Kern & Sohn

- Halogen quartz glass heater, 400W
- 10 sample dishes included
- 3 displays for temperature, drying in %, drying time
- Application table. Various examples in the user manual
- CAL adjustment programme. External calibration weights are available at additional cost
- The last value measured remains on the display until it is replaced by a new measurement
- RS 232 interface

Optional accessories: aluminum sample plates, round fiber-glass filter, temperature calibration set, thermo-printer, DKD-calibration certificate for analyzer and optional test weight.

Specifications

Readability:	0.01%/0.001g
Weighing range, max:	50g
Reproducibility, weight of sample 2 g:	0.24%
Reproducibility, weight of sample 10 g:	0.04%
Linearity:	±0.003g
Temperature range:	+40 to +160°C
Dimensions (WxDxH):	206 x 333 x 195mm

Type	PK	Cat. No.
MLB 50-3C	1	7.940 273

2 Halogen Moisture Analyser DBS 60-3

Modern moisture analyser with 10 memories and graphic display

Kern & Sohn

- Halogen quartz glass heater 400 W
- Backlit LCD display, digit height 15 mm: Previous drying time, current temperature, unit for displaying the results, current moisture content in %, drying mode/Status display drying
- Observation window over the sample, useful during initial adjustment
- Internal memory for automatic sequence of 10 drying programs and 100 drying processes carried out
- The last value measured remains on the display until it is replaced by a new measurement
- Sample description for up to 99 samples, 2 digits, freely programmable, and is printed in the measuring protocol
- Date and time display as standard
- 10 sample plates included
- Table of applications: There are many practical examples in the operating instructions

Specifications

Readability:	0.01 %/0.001g
Weighing range, max:	60g
Reproducibility, weight of sample 2 g:	0.15%
Reproducibility, weight of sample 10 g:	0.02%
Temperature range:	+50 to +200°C
Dimensions (WxDxH):	202 x 336 x 157mm

Type	PK	Cat. No.
DBS 60-3	1	9.901 441

1



2



Sample dishes - please see page 366

1 Moisture analyser DLT 100-3N



Kern & Sohn

- Halogen quartz glass heater 400 W
- Innovative touchscreen: Touch-sensitive, backlit LCD touch tablet with very good contrast for easy operation and convenient reading
- Clear menu structure with plain text captions on the display. The menu and processes are self-explanatory. This reduces training times, avoids operating errors and in this way, ensures a more efficient functionality
- High mobility thanks to tablet operation, data is available any time, anywhere
- High-performance Android® operating system
- Lots of memory for your applications
- Memory for automatic run of 300 complete drying processes (12 free digits per memory) and 100 drying processes already executed, which can be called up individually
- Practical weighing assistance to arrive at a defined target value (g) with an adjustable tolerance range of 1 to 25% of the target value
- 10 sample plates included
- Wireless connection to a Bluetooth printer allows for the printing of weighing data and drying curves for archiving purposes
- Colour LCD Display, digit height 12 mm, screen diagonal 7" (approx. 178 mm),

Specifications

Readability:	0.01 %/0.001g
Weighing range, max:	160g
Reproducibility, weight of sample 10 g:	0.001g
Temperature range:	35°C to 160°C in steps of 1°C
Dimensions (WxDxH):	210 x 340 x 225mm

Type	PK	Cat. No.
DLT 100-3N	1	9.901 439

2 Moisture balances MB23 and MB25

OHAUS

The Ohaus MB Series Moisture Analyzers MB-23 and MB-25 provide stable results with 0.1% or 0.05% moisture resolution because of precision weighing technology. They are supplied with either an infra-red, or halogen, heating system. Applicable for most applications. Graphical interface control. No programming necessary.

- Halogen (MB-25) or infra-red (MB23) technology
- 110g capacity
- Operating temperature 50°C to 160°C, set in 5°C
- Displayed data: 0.005g/0.05% (MB25) and 0.001g/0.1% (MB23)
- Sample holder included in MB25 but as option in MB23
- Delivered with 50 x 90mm aluminium sample dishes and protective cover

Specifications

Capacity (g):	110
Electricity supply:	100 to 240V 50/60 Hz a.c.
Dimensions (WxHxD):	17 x 13 x 28cm
Net weight (kg):	2.3

Type	Heating	Reproducibility	Readability	PK	Cat. No.
		± g	mg		
MB23	Infra-red heating (no glass)	0.2% (10g sample)	10	1	9.947 604
MB25	Halogen heating	0.05% (10g sample)	5	1	9.947 605

Halogen moisture balances MB35 and MB45

OHAUS

- Halogen heating technology
- 35g capacity (MB35)/45g capacity (MB45) with 0.01%/0.001g readability
- Temperature range: 50°C to 160°C (5°C increments) MB35/50 to 200°C (1°C stages) MB45
- Large, back-lit graphical LCD display
- One automatic shutoff mode (MB35)/three selectable automatic shutoff modes (MB45)
- 50 User defined drying programs (MB45 Only)
- RS232 Interface

Type	Readability	Weighing range	Plate diam.	PK	Cat. No.
		g	mm		
MB35	0.01% / 0.001 g	35	90	1	9.947 500 3
MB45	0.01% / 0.001 g	45	90	1	9.950 065

➔ Sample dishes - please see page 366



9.947 500

1

1 Moisture Analyser MA35
NEW!

Sartorius Lab Instruments

- Fully automatic heating of a sample by two powerful metal tubular-shaped heating elements (also called dark radiators)
- Ideally suited for robust production applications
- Particularly simple operator guidance using self-explanatory pictograms
- Sample quantity 5-15g
- % moisture content, % dry weight, ATRO value, g residue, mg weight loss
- Temperature range and settings: 40 to 160°C, in increments of 1 degree
- Standard drying
- Shutoff criteria (optional): fully automatic, timer setting (0.1-99min.), manual
- Access to sample chamber through hinged cover with large opening angle
- 1 program saved in a non-volatile memory (freely selectable parameters)
- Data storage results are saved until the start of the next measurement
- Printout using an optional, external printer (Cat. No. 6.238 838)
- Fixed standard configuration GLP report for measuring results, calibration, adjustment (5 languages selectable)
- External calibration using optional weight sets
- Data interface RS232 C-S/V24-V28, 7 data bits (ASCII) 1 parity bit

Specifications

Readability:	1mg, 0.01%
Weighing range, max:	35g
Reproducibility, weight of sample 1g:	±0.2%
Reproducibility, weight of sample 5g:	±0.05%
Power consumption:	400VA
Dimensions (WxDxH):	224 x 366 x 191mm

Type	Description	PK	Cat. No.
MA35	Moisture Analyser with metal tubular-shaped heating element	1	6.235 500
YDP20-OCE	Data printer (external)	1	6.238 838
6965542	Disposable sample dishes, aluminium, round	80	9.902 612
6906940	Glass fibre filter, hard quality	80	9.601 426
6906941	Glass fibre filter, soft quality	200	6.232 716

2

2 Moisture Analyser MA150C/MA150Q
NEW!

Sartorius Lab Instruments

- Sample heating Infrared heating using a round ceramic heating element (MA150C) or a coiled quartz (CQR) heating element (MA150Q)
- 20 program memory modules for quick method changing
- Very even heat distribution, ideally suited for thermally sensitive samples
- Optional version without glass, for use in food production applications
- Sample quantity 5-15g
- Reading display: % moisture content, % dry weight, RATIO value, mg weight loss, g residue, g/kg residue, g/l residue
- Temperature range and settings: 40 to 220°C, stand-by temperature selectable from 40 to 100°C in increments of 1 degree
- Heating programs: standard drying and gentle drying
- Shutoff criteria (optional): fully automatic, semi-automatic (1-50mg/5-300sec.), semi-automatic (0.1-5.0%/5-300sec.), timer setting (0.1-99.9 min.), manual
- Access to sample chamber through hinged cover
- 20 programs saved in a non-volatile memory (freely selectable parameters)
- Results are saved until the start of the next measurement
- Printout using an optional, external printer (Cat. No. 6.238 838), configurable GLP-report for measuring results, calibration, adjustment (5 languages selectable)
- External calibration using optional weight sets, automatic temperature calibration with optional temperature adjustment set (Cat. No. 6.264 042)
- Safety Parameter settings password-protected against unauthorized access

Specifications

Readability:	1 mg, 0.01%
Weighing range, max:	150g
Reproducibility, weight of sample 1g:	±0.2%
Reproducibility, weight of sample 5g:	±0.05%
Power consumption:	700VA
Dimensions (WxDxH):	213 x 320 x 181mm

Type	Description	PK	Cat. No.
MA150C	Moisture Analyser with ceramic heater	1	6.231 903
MA150Q	Moisture Analyser with quartz heater	1	6.227 492
YDP20-OCE	Data printer (external)	1	6.238 838
YTM03MA	Temperature adjustment set	1	6.264 042
YDB05MA	Carrying case	1	9.902 607
6965542	Disposable sample dishes, aluminium, round	80	9.902 612
6906940	Glass fibre filter, hard quality	80	9.601 426
6906941	Glass fibre filter, soft quality	200	6.232 716

OIML classes

Classes of Accuracy Nominal value	(Tolerance ±)						
	E1	E2	F1	F2	M1	M 2	M 3
1mg	± 0.003 mg	± 0.006 mg	± 0.020 mg	± 0.006 mg	± 0.20 mg		
2mg	± 0.003 mg	± 0.006 mg	± 0.020 mg	± 0.006 mg	± 0.20 mg		
5mg	± 0.003 mg	± 0.006 mg	± 0.020 mg	± 0.006 mg	± 0.20 mg		
10mg	± 0.003 mg	± 0.008 mg	± 0.025 mg	± 0.008 mg	± 0.25 mg		
20mg	± 0.003 mg	± 0.010 mg	± 0.03 mg	± 0.10 mg	± 0.3 mg		
50mg	± 0.004 mg	± 0.012 mg	± 0.04 mg	± 0.12 mg	± 0.4 mg		
100mg	± 0.005 mg	± 0.016 mg	± 0.05 mg	± 0.16 mg	± 0.5 mg	± 1.6 mg	
200mg	± 0.006 mg	± 0.020 mg	± 0.06 mg	± 0.20 mg	± 0.6 mg	± 2.0 mg	
500mg	± 0.008 mg	± 0.025 mg	± 0.08 mg	± 0.25 mg	± 0.8 mg	± 2.5 mg	
1g	± 0.010 mg	± 0.03 mg	± 0.10 mg	± 0.3 mg	± 1.0 mg	± 3.0 mg	± 10 mg
2g	± 0.012 mg	± 0.04 mg	± 0.12 mg	± 0.4 mg	± 1.2 mg	± 4.0 mg	± 12 mg
5g	± 0.016 mg	± 0.05 mg	± 0.16 mg	± 0.5 mg	± 1.6 mg	± 5.0 mg	± 16 mg
10g	± 0.020 mg	± 0.06 mg	± 0.20 mg	± 0.6 mg	± 2.0 mg	± 6.0 mg	± 20 mg
20g	± 0.025 mg	± 0.08 mg	± 0.25 mg	± 0.8 mg	± 2.5 mg	± 8.0 mg	± 25 mg
50g	± 0.03 mg	± 0.10 mg	± 0.3 mg	± 1.0 mg	± 3.0 mg	± 10 mg	± 30 mg
100g	± 0.05 mg	± 0.16 mg	± 0.5 mg	± 1.6 mg	± 5.0 mg	± 16 mg	± 50 mg
200g	± 0.10 mg	± 0.3 mg	± 1.0 mg	± 3.0 mg	± 10 mg	± 30 mg	± 100 mg
500g	± 0.25 mg	± 0.8 mg	± 2.5 mg	± 8.0 mg	± 25 mg	± 80 mg	± 250 mg
1kg	± 0.5 mg	± 1.6 mg	± 5.0 mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg
2kg	± 1.0 mg	± 3.0 mg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1000 mg
5kg	± 2.5 mg	± 8.0 mg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2500 mg
10kg	± 5.0 mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg	± 1600 mg	± 5000 mg
20kg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1000 mg	± 3000 mg	± 10 g
50kg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2500 mg	± 8000 mg	± 25 g
100kg		± 160 mg	± 500 mg	± 1600 mg	± 5000 mg	± 16 g	± 50 g
200kg		± 300 mg	± 1000 mg	± 3000 mg	± 10 g	± 30 g	± 100 g
500kg		± 800 mg	± 2500 mg	± 8000 mg	± 25 g	± 80 g	± 250 g
1000kg		± 1600 mg	± 5000 mg	± 16 g	± 50 g	± 160 g	± 500 g
2000kg			± 10 g	± 30 g	± 100 g	± 300 g	± 1000 g
5000kg			± 25 g	± 80 g	± 250 g	± 800 g	± 2500 g

1 Calibration weights, class M1



Brass, finely turned (also available in stainless steel). Plastic box with internal foam support available on request. Also available with internationally recognised DKD calibration certification on request.

Kern & Sohn

1



Weight g	Accuracy ± mg	PK	Cat. No.
1	1.0	1	9.900 501
2	1.2	1	9.900 502
5	1.5	1	9.900 505
10	2.0	1	9.900 510
20	2.5	1	9.900 512
50	3.0	1	9.900 515
100	5.0	1	9.900 520
200	10	1	9.900 522
500	25	1	9.900 525
1000	50	1	9.900 531
2000	100	1	9.900 532
5000	250	1	9.900 535
10000	500	1	9.900 540

Also available: Single weights from 1mg - 2000 kg or complete weight sets from 1mg - 10kg in OIML-classes E1, E2, F1, F2, M1, M2, M3.

2 Calibration weights, class F1



Nickel plated brass (also available in stainless steel). Plastic box with internal foam support available on request. Also available with internationally recognised DKD calibration certification on request.

Kern & Sohn

2



Weight g	Accuracy ± mg	PK	Cat. No.
1	0.1	1	9.900 566
2	0.12	1	9.900 567
5	0.15	1	9.900 568
10	0.2	1	9.900 569
20	0.25	1	9.900 570
50	0.3	1	9.900 571
100	0.5	1	9.900 572
200	1.0	1	9.900 573
500	2.5	1	9.900 574
1000	5.0	1	9.900 575
2000	10.0	1	9.900 576
5000	25.0	1	9.900 577
10000	50.0	1	9.900 578

Also available: Single weights from 1mg to 2000 kg or complete weight sets from 1 mg to 10 kg in OIML-classes E1, E2, F1, F2, M1, M2, M3

Balances/Weights-Accessories



1

1 Undergloves, Cotton

100% Cotton. Monofilament, ideal to wear under chemical protection gloves. 1 pair per pack. **Cat. I**

Size	Length mm	PK	Cat. No.
6	250	1	6.235 155
7	250	1	7.623 809
8	250	1	9.005 222
9	250	1	7.625 555
10	250	1	7.623 881
11	250	1	7.623 810
12	250	1	9.005 223
13	250	1	6.224 187



2

2 Balance brush

Oval. Size 2/6mm, size 4/9mm and size 6/12mm

NEW!

Type	Size	Diam. mm	PK	Cat. No.
Brush	2	6	1	6.266 807
Brush	4	9	1	6.074 169
Brush	6	12	1	6.266 808
Brush set*			1	6.266 825

*consisting of one brush each size 2/6mm, size 4/9mm and size 6/12mm



3

3 Forceps with silicone-coated tips, stainless steel

NEW!

Kern & Sohn

Length mm	Type	PK	Cat. No.
105	for weights 1mg to 200g, for E1 to F1	1	9.900 790 3
250	for weights 500g to 2kg, for E1 to F1	1	6.054 809

9.900 790



4

4 LLG weighing scoops, porcelain

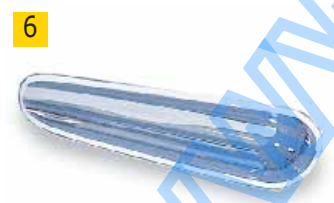
Length mm	PK	Cat. No.
37	1	9.115 350
53	1	6.241 255
64	1	9.115 351



5

5 Weighing scoops, stainless steel 18/10

Capacity ml	PK	Cat. No.
3	1	6.238 169
6	1	6.238 170
10	1	6.238 171



6

6 Weighing scoops, aluminium

Without counterweight.

Length mm	Material	PK	Cat. No.
70	Aluminium	1	9.301 006
90	Aluminium	1	9.301 008
105	Aluminium	1	9.301 010

Weighing scoops, glass

NEW!

Without counterweight.

Length mm	Material	PK	Cat. No.
60	Glass	1	9.301 026
80	Glass	1	9.301 028
100	Glass	1	9.301 030

1 Weighing scoops, glass

Glass. Ideal for powders or granules which are dispensed via the tubular stem.

Capacity ml	PK	Cat. No.
3	1	9.301 066
6	1	9.301 067
10	1	9.301 068



2 Kjeldahl weighing boat 609, parchment paper, nitrogen-free

Ideal for weighing and transporting all types of sample. Especially for determination of nitrogen according to Kjeldahl (e.g. determination of total protein content in foodstuff). Made of nitrogen-free parchment paper. Can be dropped into the Kjeldahl flask and be dissolved together with the sample. GE Healthcare

Width mm	Length mm	Height mm	PK	Cat. No.
10	55	10	100	9.069 011



3 Weighing boats MN 808, Paper, nitrogen-free

Pack of 100 pieces. MACHERY-NAGEL

Paper
Dimensions: 58mm x 10mm x 10mm

Type	PK	Cat. No.
MN 808	100	9.301 069

Other sizes and weighing aids available on request.



4 Weighing paper MN 226

Transparent, smooth. Block of 100 sheets. MACHERY-NAGEL

Type	Width mm	Length mm	PK	Cat. No.
MN 226	90	115	100	9.058 975

Further weighing aids available on request.



5 Weighing Papers

- Especially suitable for Kjeldahl digestion
- Nitrogen free for a very smooth surface and good sample recovery
- Strong enough to support dense material

Heathrow Scientific

Dimensions (D x W) mm	PK	Cat. No.
76 x 76	500	9.059 016
102 x 102	500	9.059 017
152 x 152	500	9.059 018



6 Playing card rejects

Standard size for use as disposable sample carriers or spatulas. Printed and laminated on both sides. Pack size: 1kg, not sorted.

Type	PK	Cat. No.
Playing card rejects	1	9.190 940





1 LLG-Weighing bottles with NS lid, Borosilicate glass 3.3

With writing area.
Available in tall or low shape.

Form	Capacity ml	Diam. mm	Height mm	NS	PK	Cat. No.
low	6	25	25	19/12	1	9.300 151
low	15	35	30	29/12	1	9.300 152
low	15	40	25	34.5/12	1	9.300 150
low	30	50	30	45/12	1	9.300 153
low	45	60	30	50/12	1	9.300 154
low	80	80	30	80/12	1	9.300 155
tall	10	25	40	19/12	1	9.300 160
tall	20	30	50	24/12	1	9.300 161
tall	45	35	70	29/12	1	9.300 162
tall	70	40	80	34.5/12	1	9.300 163
tall	110	50	80	45/12	1	9.300 164



2 Weighing bottles DURAN® with NS lid

DURAN®, DIN 12605. With interchangeable NS lid. With white inscription label.
Burned-in imprint of capacity and size.
Available in high or low shape.

Form	Capacity ml	Diam. mm	Height mm	NS	PK	Cat. No.
low	6	25	25	24/12	1	9.300 022
low	15	40	25	40/12	1	9.300 021
low	15	35	30	34/12	1	9.300 023
low	30	50	30	50/12	1	9.300 032
low	45	60	30	60/12	1	9.300 037
low	80	80	30	80/12	1	9.300 041
high	10	25	40	24/12	1	9.300 113
high	45	35	70	34/12	1	9.300 123
high	70	40	80	40/12	1	9.300 124
high	110	50	80	50/12	1	9.300 127



3 LLG- Sample dishes, Aluminium (NEW!)

High quality aluminium sample dishes, for moisture determination.

Diam. mm	Height mm	PK	Cat. No.
100	7	80	6.265 408



4 LLG-Aluminium weighing dish 📦

Aluminium foil, for sample handling. With a flanged, crimped wall for rigidity. Finger-tab handle can be etched for identification prior to weighing (Not included on Cat. No. 6.236 854). Made from oil-free, lightweight aluminium.

Diam. mm	Height mm	PK	Cat. No.
43	12	100	6.238 138
57	14	100	6.238 139
70	16	100	6.238 140
101	8	50	6.236 854



5 LLG-Weighing boats, antistatic, PS 📦

Biologically inert and resistant to dilute and weak acids, aqueous solutions, alcohols, and bases.
Temperature range -10 to +70°C. Can be used with microwave moisture analysers.
Features a diamond shape that easily flexes for accurate pouring and a wide, flat bottom to resist tipping.

Capacity ml	Dimensions mm	Colour	PK	Cat. No.
5	55 x 35 x 6	white	1000	9.900 788
30	78 x 56 x 14	white	500	9.950 194
100	119 x 90 x 19	white	250	9.950 195
5	55 x 35 x 6	black	1000	9.900 801
30	78 x 56 x 14	black	500	9.950 196
100	119 x 90 x 19	black	250	9.950 197

1 LLG-Hexagonal weighing boats, antistatic, PS

Biologically inert and resistant to dilute and weak acids, aqueous solutions, alcohols, and bases. Temperature range -10 to +70°C. Can be used with microwave moisture analyzers. Bend flexible boats at points to form pour spouts. Flat bottoms to resist tipping. Sloping sides provide accurate transfer.

Size	Dimensions mm	Colour	PK	Cat. No.
Small	38 x 25 x 9	white	500	9.900 893
Medium	64 x 51 x 19	white	500	9.900 894
Large	102 x 76 x 22	white	500	9.900 895
X-Large	127 x 89 x 31	white	500	9.900 896



2 LLG-Square weighing boats, antistatic, PS

Biologically inert and resistant to dilute and weak acids, aqueous solutions, alcohols, and bases. Temperature range -10 to +70°C. Can be used with microwave moisture analysers. Boats are shallow with a wide, flat bottom to resist tipping. Rounded corners simplify transfer.

Capacity ml	Dimensions (W x D x H) mm	Colour	PK	Cat. No.
7	46 x 46 x 8	White	1000	9.900 785
100	85 x 85 x 24	White	1000	9.900 786
250	140 x 140 x 22	White	1000	9.900 787
7	46 x 46 x 8	Black	1000	9.900 789
100	85 x 85 x 24	Black	1000	9.900 791
250	140 x 140 x 22	Black	1000	9.900 800



3 Weighing bottles, PP

PP. Transparent. with push-on lid.

Kartell

Capacity Litres	Diam. mm	Height mm	PK	Cat. No.
30	30	50	1	9.300 805
25	40	30	1	9.300 810
65	40	60	1	9.300 815
65	60	35	1	9.300 820
50	50	30	1	9.300 825
200	60	90	1	9.300 830
400	70	120	1	9.300 835



4 Planar weighing apparatus

Glass. For all weighing procedures involving the dispersal of material into a thin layer.

Type	PK	Cat. No.
Planar weighing apparatus	1	9.300 500



5 Anti-vibration platform, Vibrasorb

For absorbing and damping vibrations down to 16Hz. Comprises of a moulded terrazo slab supported on four vibration absorbers with non-slip feet. Suitable for isolating sensitive analytical instruments such as balances and microscopes. Will support up to 16kg.

Bel-Art Products

Width mm	Depth mm	Height mm	Weight kg	PK	Cat. No.
350	350	76	19	1	9.941 600
450	560	76	39	1	9.951 600



6 Weighing tables TWK I and TWK II

High quality, robust weighing table. Proven to avoid impact and touch vibrations. For use with analytical instruments. Cast stone balance plate insert 450 x 450mm mounted shock absorbing. Stable wood-panelled steel tube construction (TWK1) or solid stone (TWK 2). Damping ratio TWK 1: 7.5% at 5.5 to 16Hz vertical and horizontal natural frequency. Damping ratio TWK 2: 7.5% at 13 to 29Hz vertical and horizontal natural frequency

NEW!
MAXLABO

Type	Dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
TWK I	900 x 600 x 750	120	1	9.733 060
TWK II	900 x 600 x 750	260	1	9.733 070



Thermometers/Laboratory thermometers



1 LLG-General purpose thermometer, red filling

NEW!

Graduation resistant against acids and alkalis.

Breakage protected versions with FEP-coating available on request.

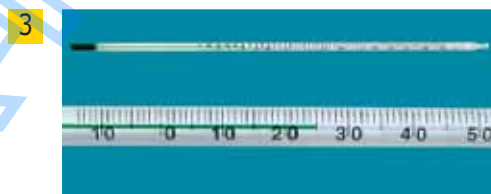
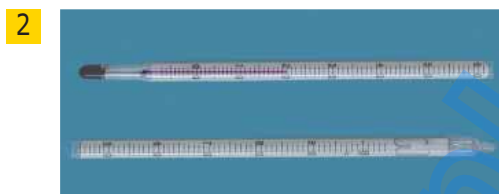
Measuring range °C	Length mm	Graduations °C	Diam. mm	Immersion depth	Capillary	PK	Cat. No.
-35 ... +50	300	1	6 ±1	total	white enameled, round	1	9.236 720
-20 ... +110	300	1	6 ±1	total	white enameled, round	1	6.206 594
-20 ... +150	300	1	6 ±1	total	white enameled, round	1	9.236 723
-20 ... +150	300	1	6 ±1	76 mm	white enameled, round	1	9.236 731
-10 ... +110	260	1	6 ±1	total	yellow enameled, round	1	9.236 721
-10 ... +110	270	1	6 ±1	76 mm	yellow enameled, round	1	9.236 727
-10 ... +150	260	1	6 ±1	total	yellow enameled, round	1	9.236 722
-10 ... +200	300	1	6 ±1	total	yellow enameled, round	1	9.236 724
-10 ... +200	300	1	6 ±1	total	white enameled, round	1	9.236 725
-10 ... +200	300	1	6 ±1	76mm	white enameled, round	1	9.236 730
-10 ... +250	300	1	6 ±1	total	yellow enameled, round	1	9.236 726

2 LLG- General-purpose thermometers, red filling

Enclosed-scale type, with eyelet. With uncoated, prismatic measuring capillary. Red spirit filling (except 9.235 265: blue).

Measuring range °C	Length mm	Graduations °C	Diam. mm	Immersion depth	PK	Cat. No.
-10/0 ... +50	200	1	7 - 8	total	1	9.235 245
-10/0 ... +100	260	1	7 - 8	total	1	9.235 250
-10/0 ... +150	260	1	7 - 8	total	1	9.235 255
-10/0 ... +200*	300	1	7 - 8	total	1	9.235 260
-10/0 ... +250*	300	1	7 - 8	total	1	9.235 265

* Note: With these types the colour can fade after extended periods of use at higher temperatures.



3 LLG- General-purpose thermometers, green filling

Glass, solid stem, with loop, white backed. Environmentally friendly thermometer, with biodegradable, green spirit filling.

Measuring range °C	Length mm	Graduations °C	Diam. mm	Immersion depth mm	PK	Cat. No.
-10/0 ... +110	300	1.0	6-7	76	1	9.235 275
-10/0 ... +110	300	0.5	6-7	76	1	9.235 276
-10/0 ... +150	300	1.0	6-7	76	1	9.235 277
-10 ... +250	300	2.0	6-7	76	1	9.235 278
-10 ... +360	300	2.0	6-7	76	1	9.235 279

4 LLG-Precision thermometer, calibratable, red filling

NEW!

Capillary: yellow enameled, round. Optional available with official calibration certificate, works certificate or DKD-calibration certificate. Please specify with order.

Breakage protected versions with FEP-coating available on request.

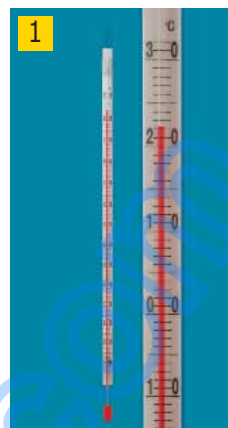
Measuring range °C	Length mm	Graduations °C	Diam. mm	PK	Cat. No.
-100 ... +30	300	1.0	6 ±1	1	6.259 873
-50 ... +50	280	1.0	6 ±1	1	9.236 800
-10 ... +100	305	1.0	6 ±1	1	9.236 783
-10 ... +150	305	1.0	6 ±1	1	9.236 784
-10 ... +200	350	1.0	6 ±1	1	9.236 788
-50 ... +50	300	0.5	6 ±1	1	9.236 801
-10 ... +100	270	0.5	6 ±1	1	9.236 785
-10 ... +150	350	0.5	6 ±1	1	9.236 786
-1 ... +101	610	0.1	6 ±1	1	9.236 790
-0 ... +50	420	0.1	6 ±1	1	9.236 787

3. Analytical measurement and testing Thermometers/Laboratory thermometers

1 LLG-Low temperature thermometers, -200 to +30°C

Suitable for official calibration. Enclosed scale type, 8 to 9mm diameter, with translucent glass scale and Richter seal. Prismatic, uncoated measuring capillary. The -200 to +30°C thermometer has a luminous blue measuring capillary, and is pentane filled. Further thermometers are available, red toluene filled with uncoated measuring capillary. Graduated every 1°C.

Measuring range °C	Length mm	PK	Cat. No.
-50 ... +50	300	1	9.235 705
-80 ... +30	300	1	9.235 708
-100 ... +30	300	1	9.235 710
-200 ... +30	300	1	9.235 720



2 Laboratory thermometers

To DIN standards as indicated. Calibrated with state certificate. Enclosed scale type, 8 to 9 mm diameter. Prismatic measuring capillary, uncoated. Mercury filled.

Measuring range °C	Resolution °C	Length mm	DIN	PK	Cat. No.
0 to +50	1 / 2	220	12775	1	9.235 505
0 to +50	1 / 10	420	12775	1	9.235 545
0 to +50	1 / 5	350	12775	1	9.235 546
0 to +100	1 / 2	270	12775	1	9.235 510
0 to +100	1 / 1	305	12775	1	9.235 547
0 to +100	1 / 5	420	12775	1	9.235 548
0 to +100	1 / 10	550	12775	1	9.235 549
0 to +150	1 / 1	305	12775	1	9.235 550
0 to +250	1 / 1	350	12778	1	9.235 525
0 to +360	1 / 1	380	12778	1	9.235 536



3 ASTM-Thermometers "ACCU-SAFE"



Schneider

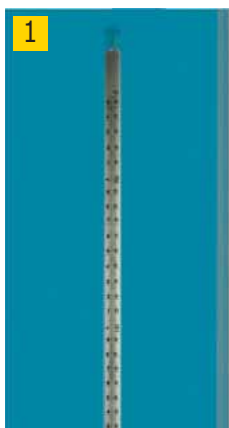
High precision and mercury free. ASTM-Thermometers with blue, environmental safety filling, suitable for calibration, immersion total. With DAKKS-calibration or works calibration certificate on request.

Further types available on request, also in °F.

Measuring range °C	Resolution °C	Tolerance ± °C	Length mm	PK	Cat. No.
-38 ... +50	1	0.5	300	1	9.236 850
-20 ... +102	0.2	0.2	435	1	9.236 852
-2 ... +80	0.2	0.2	415	1	9.236 854
+34 ... +42	0.1	0.1	300	1	9.236 936
+95 ... +103	0.1	0.1	300	1	9.236 858
+19 ... +35	0.1	0.1	610	1	9.236 860
-34 ... +49	0.3	0.3	300	1	9.236 862
-18 ... +82	0.3	0.3	300	1	9.236 864
-32 ... +2	0.1	0.1	401	1	9.236 866
-8 ... +32	0.1	0.1	401	1	9.236 868
+25 ... +55	0.1	0.1	401	1	9.236 870
+50 ... +80	0.1	0.1	401	1	9.236 872
+75 ... +105	0.1	0.1	401	1	9.236 874
+95 ... +155	0.2	0.2	401	1	9.236 876
+18,9 ... 25,1	0.1	0.1	615	1	9.236 879
23,9 ... 30,1	0.1	0.1	615	1	9.236 880
38,6 ... 41,4	0.1	0.1	300	1	9.236 881
-7 ... 105	0.1	0.1	300	1	9.236 882



Thermometers/Laboratory thermometers



1 Thermometers, ground glass joint

With NS14.5/23 cone. With fixed immersion (immersion length = lower section + ground joint). Enclosed-scale type, NS 14.5/23. Translucent glass scale. Upper section approx. 11mm diameter, lower section 7.5mm diameter. Richter-top finish seal without button. Suitable for official calibration. Graduated every 1°C.

Measuring range	Corpus	Immersion length	Charge	PK	Cat. No.
°C	mm	mm	colour		
-10 to +150:1	250	75	red	1	9.236 021
-10 to +150:0.5	350	75	red	1	9.236 022
-10 to +250:1	300	75	blue	1	9.236 023
-10 to +360:1	350	75	green	1	9.236 024
-10 to +150:1	250	100	red	1	9.236 025
-10 to +150:0.5	350	100	red	1	9.236 026
-10 to +250:1	300	100	blue	1	9.236 027
-10 to +360:1	350	100	green	1	9.236 028



2 Support Labo-Clip

Stable support for clamping test tubes, thermometers, pH electrodes and other laboratory instruments onto laboratory containers (e.g. beakers). Extensive chemical resistance, with strong flexible foam rubber plate perforated with 5 apertures of varying diameters. Metal components are corrosion-resistant. Applicable from -40°C to +120°C. Amarell

Type	PK	Cat. No.
Labo-Clip	1	9.234 990



3 Adapter for thermometer, borosilicate glass 3.3

Manufactured from borosilicate glass 3.3 according to DIN 12257 standard, ideal to use for thermometers with Ø 6 - 8 mm. Screw joint provides easy depth adjustment of thermometer. Seal material: NBR Isolab

Neck thread	Cone	Adapter bore diam.	PK	Cat. No.
GL	NS	mm		
14	14/23	6 - 8	1	4.008 360
14	29/32	6 - 8	1	6.244 589



4 Contact thermometers

With MS 121st2 flat plug or MS 121st3 diode plug as indicated. **NEW!**
Heju

Further contact thermometers available on request.

Measuring range	Grad.	Length*	Connector	PK	Cat. No.
°C	°C				
0 ... +100	1	50	Flat	1	9.233 010
-20 ... +150	1	50	Flat	1	9.233 015
0 ... +100	1	150	Flat	1	9.233 210
0 ... +250	2	200	Flat	1	9.233 325
-20 ... +150	1	300	Flat	1	9.233 365
0 ... +250	1	300	Flat	1	6.090 811
0 ... +250	2	300	Flat	1	9.233 367
0 ... +360	1	300	Flat	1	9.233 369
-20 ... +150	1	100	Diode	1	9.233 116
0 ... +250	2	100	Diode	1	9.233 126
-20 ... +150	1	150	Diode	1	9.233 216
0 ... +250	2	150	Diode	1	9.233 226
0 ... +250	2	200	Diode	1	9.233 326
-20 ... +150	1	300	Diode	1	6.072 628
0 ... +250	1	300	Diode	1	9.233 372
0 ... +360	1	300	Diode	1	6.085 906

* Probe length (mm)

Contact thermometers, accessory connecting cable

With flat coupling and diode connection for relay. Heju

For	Cable m	PK	Cat. No.
Contact thermometers with flat plug MS 121st2	0.8	1	9.233 400
Contact thermometers with diode plug MS 121st3	1.5	1	6.091 756

➔ Temperature controllers - please see page 784.

1 LLG-Exact-Temp thermometers

For monitoring critical temperature conditions in

- deep freezes
- refrigerators
- cold rooms
- blood bank refrigerators
- incubators, warming chambers

Characteristics:

- thermometer certifiable to National Standards
- supplied with works test certificate
- thermometer stem safely encapsulated in PTFE
- each thermometer is mounted in a square-shaped shatter-proof plastic bottle filled with a liquid to ensure accurate readings despite the opening and closing of instrument doors.
- each thermometer has an individual serial number.



LLG-Exact-Temp Standard thermometers, red spirit-filled

For	Measuring range	Grad.	Length	Bottle filling	PK	Cat. No.
	°C	°C	mm			
Ultra Low Freezers	-90 ... +20	1.0	145	Sand	1	9.235 663
Freezers	-30 ... 0	0.5	125	Ethylene Glycol	1	9.235 664
Blood banks	-5 ... +20	0.5	145	Ethylene Glycol	1	9.235 665
Coolers	-5 ... +15	0.5	125	Ethylene Glycol	1	9.235 666
Incubators	+18 ... +50	0.5	135	Ethylene Glycol	1	9.235 667
Warming rooms, ovens	+20 ... +130	1.0	135	Vermiculite	1	9.235 668
Warming rooms, ovens	+35 ... +200	1.0	145	Vermiculite	1	9.235 669

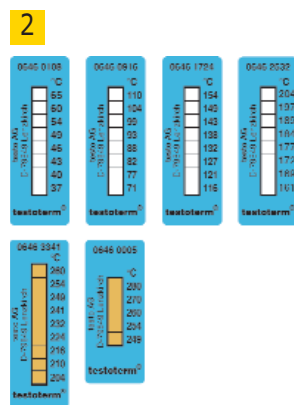
LLG-Precision thermometers Exact-Temp, blue spirit-filled

For	Measuring range	Grad.	Length	Bottle filling	PK	Cat. No.
	°C	°C	mm			
Freezers	-25 ... -5	0.1	210	Ethylene Glycol	1	9.235 675
Refrigerators	-2 ... +10	0.1	180	Ethylene Glycol	1	9.235 676
Blood banks	-2 ... +10	0.1	180	Ethylene Glycol	1	9.235 677
Incubators	+15 ... +30	0.1	180	Ethylene Glycol	1	9.235 678
Incubators	+25 ... +45	0.1	190	Ethylene Glycol	1	9.235 679
Warming rooms, ovens	+50 ... +115	0.1	200	Vermiculite	1	9.235 680

2 8-step irreversible temperature strips testoterm®

Strips for 8 temperatures. 5 types cover the measuring range +37 to +280°C, each strip displays 8 different temperatures. Each strip measures 50 x 18mm.

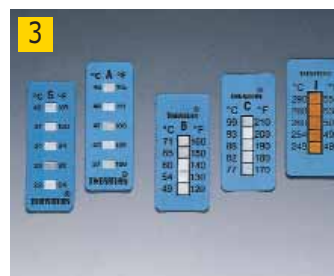
Type	Measuring range °C	Description	PK	Cat. No.
06460108	+37 ... +65	8 temperature changing points	10	9.246 002
06460916	+71 ... +110	8 temperature changing points	10	9.246 003
06461724	+116 ... +154	8 temperature changing points	10	9.246 004
06462532	+160 ... +199	8 temperature changing points	10	9.246 005
06463341	+204 ... +260	8 temperature changing points	10	9.246 006



3 5-step irreversible temperature strips Thermax®

5-step irreversible temperature measuring strips covering the temperature range 29 to 290°C. Each strip measures 35 x 15mm.

Type	Measuring range °C	PK	Cat. No.
S	+29 ... +40	10	9.246 310
A	+37 ... +46	10	9.246 311
B	+49 ... +71	10	9.246 312
C	+77 ... +99	10	9.246 313
D	+104 ... +127	10	9.246 314
E	+132 ... +154	10	9.246 315
F	+160 ... +182	10	9.246 316
G	+188 ... +210	10	9.246 317
H	+ 216 ... +249	10	9.246 318
I	+249 ... +290	10	9.246 319



Thermometers/Laboratory thermometers



1 Refrigerator thermometer

Plastic, with loop or hook clip mountings. Measuring range -40 to +40°C. Graduated every 1°C. Dimensions (L x dia.) 185 x 20mm.

Type	PK	Cat. No.
Refrigerator thermometer	1	9.242 340



2 Maxima-Minima-Thermometer

- ivory plastic
- beige
- with push button
- mercury-free

TFA Dostmann

Dimensions: 230 x 60mm
Weight: 120g

Type	PK	Cat. No.
Maxima-Minima-Thermometer	1	9.241 134



3 LLG Min/Max Thermometer with outdoor sensor

Digital thermometer with outdoor sensor.
- Two-tier LCD display
- Measuring temperature range -50°C to +70°C
- Display resolution 0.1°C
- Accuracy ±1°C
- Dimensions 110 x 70 x 20mm
- Display size 40 x 30mm
- AAA 1.5V battery included
- Length of the cable 190cm

Type	PK	Cat. No.
LLG Min/Max Thermometer with outdoor sensor	1	9.243 165



4 Maximum/Minimum Indoor/outdoor thermometer

Optimal for controlling of refrigerator and freezer temperatures. Measuring range -50 to +70°C, accuracy 0.1°C. External remote sensor cable, length 3m, with stand and accessories for wall mounting. Dimensions: approx. 80 x 55 x 20mm, with battery.

Amarell

Official calibration certificate with one or two test points available on request.

Type	PK	Cat. No.
Maximum/Minimum indoor/outdoor thermometer	1	9.235 120



5 Digital Maxima-Minima-Thermometer

Digital thermometer, wall hanging, for indoor or outdoor use. With blue, splash-proof casing, selectable °C/°F ranges and battery.
weight: 161g

TFA Dostmann

Measuring range °C	Width mm	Depth mm	Height mm	PK	Cat. No.
-20 ... +50	75	44	115	1	9.241 131



6 Laboratory Max./Min. thermometer

Display of current, highest and lowest temperature, hold function, alarm at freely adjustable temperature values (upper/lower limit), measuring range -50 to +70°C, accuracy ±0.5°C at -20 to +25°C, otherwise ±1°C, selectable °C/°F readout. Supplied with table stand and magnet, probe with 3m cable and 3V Lithium CR2032 button cell (acc. to EN 13485).

Type	PK	Cat. No.
Laboratory Max./Min. thermometer	1	9.851 022

1 Thermometer Checkridge

- specially designed to monitor the internal temperature of freezers and refrigeration units
- magnetic backing provides an easy way to attach the thermometer to all metal refrigerators and freezers
- the sensor with 1 metre cable can be easily placed within the freezer/fridge cabinet
- Very high accuracy
- The unique Cal Check Function enables the user to check the internal electronics of the thermometer

Hanna



Specifications

Measuring range/Resolution: -50 to +150°C/ 0.1°C
 Accuracy: ±0.3°C (-50 to +90°C)
 Probe: 40 x 5mm, with 1 metre cable
 Battery type: 1 x 1.5V
 Dimensions (B x T x H): 93 x 39 x 31 mm
 Weight: 100g

Type	PK	Cat. No.
Checkridge	1	9.851 098

2 Digital Maxima-Minima-Thermometers Exact-Temp

High-precision instruments to monitor freezers, blood bank freezers, incubators, climate chambers and ovens.
 The unbreakable plastic bottle is filled with a special medium to ensure accurate measurements even at open doors.

Schneider



- Thermometers traceable to international standards (with certificate of conformance and accuracy)
- Accuracy: ±0.5°C, resolution 0.1°C
- Temperature units: °C or °F
- 3 display modes: maximum, minimum and ambient temperature
- Alarm function
- 3 m long cable (diameter: 1mm)
- Alkaline battery (AAA) included
- Breakage protected PETG plastic bottles (with 30ml ethylene glycol mixture)
- Bottles with magnets attached for easy wall or door mounting
- Individual serial numbers
- The instruments are available with works certificate on request.

Application	Measuring range °C	Certified Temperature °C	PK	Cat. No.
Freezers	-50 to 70	-20	1	9.236 710
Freezing point	-50 to 70	0	1	9.236 711
Refrigerators	-50 to 70	4	1	9.236 712
Incubators/Water baths	-50 to 70	37	1	9.236 713
Climate chambers	-50 to 70	21	1	9.236 714

3 LLG-Digital pocket thermometer Type 12060

Measuring range -50 to +150°C, accuracy ±1°C. With hold function. Probe made of stainless steel, 125 x 3.5mm, with protective plastic sleeve and clip, with battery 1 x 1.5V (LR44). Dimensions (L x W): 60 x 20mm.

3



Type	PK	Cat. No.
LLG-Digital pocket thermometer Type 12060	1	9.236 701

4 LLG-Digital pocket thermometer Type 12090

Waterproof. Measuring range -50 to +150°C/-58 to +302°F, accuracy ±1°C. With hold function. Probe made of stainless steel, 85 x 3.5mm, with protective plastic sleeve, with battery 1 x 1.5V (LR44). Overall dimensions (L x W): 185 x 30mm.

4



Type	PK	Cat. No.
LLG-Digital pocket thermometer Type 12090	1	9.236 707

5 LLG-Digital pocket thermometer Type 12080

Waterproof. Measuring range -50 to +300°C/-58 to +572°F, accuracy ±1°C until 150°C, above ±2°C. With hold function and Max/Min function. Probe made of stainless steel, 85 x 3.5mm, with protective plastic sleeve, with battery 1 x 1.5V (LR44). Overall dimensions (L x W): 195 x 50mm.

5



Type	PK	Cat. No.
LLG-Digital pocket thermometer Type 12080	1	9.236 703

Thermometers/Surface, Insertion thermometers



1 Thermometer Pocket-Digitemp

Waterproof instrument in plastic housing (food-grade).
Low budget, durable instrument for measuring temperature in air, gas, liquid and platical substances (acc. to EN 13485).

Range of applications: Food (HACCP), industry, agriculture and hobby.

Features: waterproof, 1-second measuring frequency, Max-Min-Hold function, °C/°F-selectable.

Sensor:	NTC
Measuring range:	-40°C to +200°C
Resolution:	0.1°C
Accuracy:	±0.8°C (at 0°C to 100°C) others 1.5°C
Dimensions:	202 x 20 x 16mm (long version) 150 x 20 x 16mm (short version)
Probe dimensions:	126 x 3.5mm (long version) 75 x 3.5mm (short version)
Weight:	40g

Type	PK	Cat. No.
short version	1	9.851 028
long version	1	9.851 029



2 3 Mini-Thermometer TDC 110

- Probe: Stainless steel, diam. 4mm, length 120 mm
- Pointed probe, fixed
- Robust and impact-resistant
- Exchangeable battery
- °C/°F switchable
- Automatic deactivation after approx. 10 min.
- With needle guard and spare battery

Specifications

Measuring range:	-50°C to +150°C
Sensor:	NTC
Accuracy (±1 Digit):	±1°C (-10°C ... -120°C). ±2°C for remaining measuring range
Readability:	0.1°C
Operating range:	0 to +50°C
Batterie:	1.5 V, G 10-A
Dimensions:	50 x 40 mm
Weight:	approx. 13g

Type	PK	Cat. No.
Mini-Thermometer TDC 110	1	6.237 979



3 Digital pocket thermometer ThermoJack/ThermoJack PRO

Foldable pocket thermometer, watertight. Ideal for measuring foods (acc. to EN13485), liquids etc. ThermoJack PRO with calibration certificate.

Dostmann electronic

Type	Measuring range	Accuracy	Resolution	Probe	PK	Cat. No.
	°C	°C	°C			
ThermoJack	-40 ... +250	± 0.5 (-20 ... +150)*	0.1	70	1	9.851 997 4
ThermoJack PRO	-50 ... +350	± 0.5 (-30 ... +150)*	0.1	110	1	9.851 999

*otherwise ±1.0°C or 1%, the larger value applies



9.851 997



5 Core Thermometer TDC 150

NEW!

- Fast temperature checks
- Including needle protection
- Battery exchangeable

Specifications:

Accuracy:	±1°C (-30°C to 150°C)
Battery lifetime:	approx. 5000 hours
Battery:	1.5 V, LR44, G13
Dimensions:	24 x 26 x 85mm
Sensor:	NTC
Measuring range:	-50°C to +150°C
Operating Temperature:	0°C to +50°C
Resolution:	0.1°C (-20°C to +150°C)
Response time (t99):	10 sec (water)
Display:	LCD-7mm
Housing material:	ABS
Protection class:	IP 65 (waterproof)
Temperature probe:	Stainless steel, diam. 3.5mm, L = 125mm, pointed

Type	Description	PK	Cat. No.
TDC 150	Core Thermometer	1	6.233 287

1 Digital pocket thermometer TLC 700



ebro

The practical folding thermometer TLC 700 is suitable for measuring the core temperature during transport, storage and receiving of goods. Thanks to the foldable penetration probe the waterproof thermometer (IP 65) can be stored safely. The device is primarily characterized by its small size and the large display and comes with a calibration certificate.

Specifications

Measuring range/Resolution: -30 to +220°C/ 0.1°C
 Accuracy: ±0.5°C (-30 to +100°C)
 ±1.0°C (remaining range)
 Probe: 70mm
 Battery type: 1 x 3V (CR 2032)
 Dimensions (WxDxH): 118 x 33 x 15mm
 Weight: approx. 41g

Type	PK	Cat. No.
Digital pocket thermometer TLC 700	1	9.908 018



2 Digital thermometer, Checktemp C

Hanna

With very high measurement accuracy of ±0.3°C (-20 to +90°C) and integral stainless steel insertion probe. Equipped with the unique "Checkcal" function which tests internal instrument electronics when the Checktemp is switched on.

Range: -50 to +150°C
 Resolution: 0.1°C
 Accuracy: ±0.3°C (-20 to 90°C)
 ±0.5°C (rest of range)
 Overall L x W x H: 170 x 50 x 25mm
 Probe L x dia.: 105 x 3mm
 Weight: 100g

Type	PK	Cat. No.
Checktemp C	1	9.950 179



3 Digital thermometer Checktemp 1 C

Hanna

With very high measurement accuracy of ±0.3°C (-20 to +90°C) and integral stainless steel insertion probe with handle and 1 metre cable, ensuring flexibility in use. Equipped with the unique "Checkcal" function which tests internal instrument electronics when the Checktemp 1 is switched on.

Specifications

Range: -50 to +150°C
 Resolution: 0.1°C
 Accuracy: ±0.3°C (-20 to 90°C) ±0.5°C (rest of range)
 Overall L x W x H: 170 x 50 x 25mm
 Probe length L x dia.: 106 x 3mm
 Weight: 80g

Type	PK	Cat. No.
Checktemp 1 C	1	9.950 180



4 Digital hand held thermometer Type 12200

Waterproof. Measuring range -50 to +300°C/-58 to +572°F, accuracy ±1°C until 150°C above ±2°C. With hold function and Max/Min function. Penetration probe made of stainless steel, 140 x 3.5mm with 1m cable and handle. With battery 1 x 1.5V AAA. Overall dimensions (L x W): 140 x 75mm.

Type	PK	Cat. No.
Digital hand held thermometer Type 12200	1	9.236 705





Core Thermometer TTX 100/110

The robust and shock-resistant insertion thermometer TTX 100 and TTX 110 are suitable for HACCP core temperature measurement during transport, storage and incoming goods department in accordance with DIN EN 13485 as well as for laboratory temperature measurements. ebro

- **Inexpensive calibrated thermometer**
- Battery included and replaceable by the user if required
- Splash-proof
- factory calibration certificate
- Temperature probe for TTX 100 is permanently attached, with 60 cm silicone cable, probe with grip, needle Ø 3 mm, length = 105 mm, pointed
- Temperature probe for TTX 110 is permanently attached, needle Ø 3 mm, length = 90 mm, pointed



Specifications

Measuring range:	-50 to +350°C
Accuracy:	±0.8°C or ±0.8%, with the bigger value being applicable
Resolution:	0.1°C from -60°C to + 199°C and 1°C for the remaining measuring range
Housing material:	ABS
Operating temperature:	-20°C to +50°C
Storage temperature:	-30°C to +70°C
Reaction time (90%):	5s
Dimensions:	90 x 42 x 17 mm (without probe)
Battery lifetime:	typical 100 h with uninterrupted use
Battery:	CR 2032, replaceable
Protection class:	IP 55

Type	Description	PK	Cat. No.
TTX 100	Fixed probe with cable	1	6.231 995 1
TTX 110	Fixed probe without cable	1	6.230 658 2
TTX-WM	Wall holder for TTX 100/TTX 110	1	9.908 026



3 Hand held thermometer Type 13100 NEW!

Digital temperature measuring device with 2 input channels, incl. 1 sensor with flat plug (measuring range up to approx. +150°C, cable length: 3 m). For measuring sensors type K (NiCr-Ni). Measuring range: -200...+1370°C/-328...+2498°F. Resolution: 0.1°C/F. Accuracy: ±0.1%. With hold function, with max/min memory and automatic switch-off after 30 min. With PC interface and bag. Battery: 1 x 9 V block. Dimensions: 184 x 64 x 30 mm Schneider

Description	PK	Cat. No.
Hand held thermometer Type 13100	1	9.236 715
Power adapter (100-240V, 50-60Hz)	1	9.236 716
Insertion sensor with handle type K, measuring range: -50 to +600°C (±2.5°C)	1	9.236 717
Surface sensor with handle type K, measuring range: -50 to +400°C (±2.5°C)	1	9.236 718
90° Surface sensor with handle type K, measuring range: -50 to +400°C (±2.5°C)	1	9.236 719



4 Digital thermometer ama-digit ad 14 th

Temperature range: -35 to +500°C, resolution 1°C. Rapid response and ergonomic design. Dimensions (WxDxH) 90 x 60 x 25mm. With stainless steel probe (L x dia.) approx. 100 x 2.5mm. With battery. Amarell

Type	PK	Cat. No.
ama-digit ad 14 th	1	9.243 100



5 Digital thermometer ama-digit ad 15 th

Color back (available in 4 additional colors) Range: -40 to +120°C, resolution 0.1°C. Precise and cost-effective. Dimensions (WxDxH) 90 x 60 x 25mm. With stainless steel probe approx. 30 x 2.5mm (L x dia). With battery. Amarell

Type	PK	Cat. No.
ama-digit ad 15 th	1	9.243 101

3. Analytical measurement and testing Thermometers/Surface, Insertion thermometers

1 Digital thermometer ama-digit ad 20 th

Temperature range: -50 to +300°C. Resolution 0.1°C from -50 to +180°C, 1°C for the rest of the range. Dimensions (WxDxH) 90 x 60 x 25mm. With battery. For appropriate temperature probes see order no. 9.243 111 to 114.

Amarell



Type	PK	Cat. No.
ama-digit ad 20 th	1	9.243 102

2 Temperature probes, Pt100 for ama-digit ad 20 th

Class A. Stainless steel sheathed probe, approx. 105 x 3mm L x dia. With handle and approx. 1m cable.

Amarell



Type	PK	Cat. No.
Pt100 immersion probe	1	9.243 111
Pt100 penetration probe	1	9.243 112
Pt100 surface probe	1	9.243 113
Pt100 air probe	1	9.243 114

3 Temperature meter, digital, testo 925

Without probe. Economical. Very robust. With 1 measuring input. **With battery and calibration protocol.** For °C, °F, °K. Hold function and battery display.

Testo



Digital thermometers, testo 925, accessory probes:

- Waterproof immersion/penetration probe
- Precise and rapid, waterproof immersion probe
- Rapid reaction surface probe
- Robust, economical, air probe

Measuring range: -50 to +1000°C
 Sensor: Type K (NiCr-Ni)
 Accuracy: -40 to +900°C : ±0.5°C, ±0.3%
 remaining range: ±0.7°C, 0.5%
 Battery: 9V, 6F22

Type	PK	Cat. No.
Temperature meter, digital, testo 925	1	9.851 324
TopSafe testo 925, protective cover against impact and dust	1	9.718 011
Immersion / penetration probe	1	9.718 200
Immersion probe	1	9.718 202
Surface probe	1	9.718 222
Air probe	1	9.718 230

Digital thermometer testo 110

(NEW!)

Without probe. For use with accessory NTC sensor probes. For control measurements in the food industry and laboratories. Features: switchable °C readout, with Hold function, low battery indicator and battery saving automatic switch-off after a period without use. **With battery and calibration certificate.**

Testo



Accuracy: System accuracy using immersion/penetration probes.
 - 20 to +80°C : ±0.2°C, ±0.3°C: rest of range
 Battery: 9V, 6F22

Description	Measuring range °C	PK	Cat. No.
Digital thermometer testo 110	-50 ... +150	1	9.851 300 4
TopSafe (IP68 protective boot)		1	9.718 020
NTC immersion/penetration probe, diam. 4mm, length 110mm	-50 ... +150	1	9.851 716
NTC surface probe, with widened measuring tip, diam. 5mm, length 115mm	-50 ... +150	1	9.851 720
NTC air probe, robust, diam. 5mm, length 115mm	-50 ... +125	1	9.851 723
Robust food penetration probe with special handle, diam. 5mm, length 115mm	-25 ... +150	1	9.851 352

9.851 300

1



1 Electronic Contact Thermometer GFX 460

(NEW!)

ebro

Applications:

- control of magnetic stirrers, stirrer/hotplates, etc.
- laboratory
- process monitoring

Attributes:

- high accuracy through fuzzy logic algorithm
- minimizes temperature overshoot
- suitable for all magnetic stirrers

Safety features: Probe failure identification, Probe limit warning.

Safety and control circuit according to DIN 12878 Class 1 and 2

Also suitable for Heidolph Magnetic stirrers MR-Hei Standard constructed up to June 2014.

Specifications

Measuring range:	-50 to +300°C
Resolution:	1°C
Accuracy:	±1°C
Measuring rate:	1s
Measuring probe:	Pt1000
Operating temperature:	-5 to +60°C
Storage temperature:	-30 to +70°C
Type of control:	Fuzzy logic control
Protection class:	IP 65
Connection:	5-pin diode plug DIN 45322
Display:	Background illumination LED display for control status
Power supply:	external 9-12V d.c., 20mA
Dimensions (WxDxH):	54 x 22 x 110mm without probe
Housing material:	Polyamide, acid-resistant
Weight:	approx. 150g

Type	Description	PK	Cat. No.
GFX 460	with V2A probe, 205 x 3 mm L x dia.	1	9.908 056
GFX 460 G	with glass-coated probe, 235 x 7 mm L x dia.	1	9.908 057
Relay box		1	9.908 059

2



2 Laboratory Thermometer TFX 410-1

Robust and impact resistant temperature measurement device for Pt 1000 penetration probe (connection Lemo size 0). For control measurements in laboratories, food sector, storage and incoming goods. For temperature determination of air, liquids, plastic substances and food. Conform to HACCP and DIN EN 13485. With battery and factory calibration certificate.

ebro

- Probes made of stainless steel, for temperatures up to +400°C
- Accuracy: exceeds DIN IEC 584, class 1

Please order probes separately.

Specifications:

Measurement range:	-50°C to +300°C
Accuracy:	±0.3°C
Resolution:	0.1°C
Sensor:	Pt 1000 (connection Lemo size 0)
Operating temperature:	-25°C to +50°C
Automatic switch-off:	After 2 hours, optional
Dimensions (L x W x H):	54 x 22 x 109 mm (without probe)
Weight:	Approximately 90 g
Battery:	3.0 V Lithium, replaceable
Battery lifetime:	Approximately 5 years
Protection class:	IP 67

Type	Description	Length mm	Diam. mm	PK	Cat. No.
TFX 410-1	Laboratory thermometer (without probe)			1	6.207 171
TPX 100	Blunt probe, without cable	120	3	1	9.908 021
TPX 200	Pointed probe, without cable	120	3	1	6.251 438
TPX 200-20	Pointed probe, without cable	200	3	1	9.908 022
TPX 200-30	Pointed probe, without cable	300	3	1	9.908 023
TPX 200-40	Pointed probe, without cable	400	3	1	9.908 024
TPX 400	Pointed probe with 60 cm silicone cable (red) and grip	120	3	1	6.233 543
TPX 400-40	Pointed probe with 40 cm silicone cable (red) and grip	120	3	1	9.908 025
TPX 400-150	Pointed probe with 150 cm silicone cable (red) and grip	120	3	1	6.254 169

E & OE.

1 Laboratory Thermometer TFX 422C



ebro

1

Due to the new German calibration law, which became effective on January 01 2015, we were forced to stop the sales of the TFX 422 Laboratory Thermometer with PTB certification. The so called certification of conformity replaces the calibration by the measurement office. Our new Conformity Certified Laboratory Thermometer TFX 422C is the equivalent successor: same properties, same quality.

- PTB approved
- Robust and impact resistant
- High accuracy
- Waterproof IP 67
- Approx. 5 years battery life
- According to EN 13485
- With fixed Pt 1000 probe
- 2 cable lengths (60cm, 150cm) available

Specifications:

Measurement range:	-50°C to +200°C
Accuracy:	±0.3°C
Resolution:	0.1°C
Sensor:	Pt 1000 (l 120mm, Ø 3mm)
Operating temperature:	-25°C to +50°C
Deactivation:	Automatically after 2 hours, deactivatable
Dimensions (L x W x H):	109 x 54 x 22 mm (without probe)
Weight:	Approximately 90 g
Battery:	3.0 V Lithium, 1 Ah, type CR 2477, replaceable
Battery lifetime:	Approximately 5 years
Protection class:	IP 67



Type	Description	PK	Cat. No.
TFX 422C-60	Thermometer with certification of conformity, with 60 cm cable	1	6.266 921
TFX 422C-150	Thermometer with certification of conformity, with 150 cm cable	1	6.266 922

Precision thermometer TFX 430 (without probe)



ebro

2

- Features:
- high accuracy
 - four-wire measuring system
 - waterproof IP67
 - approx. 5 years battery life
 - factory calibration certificate
 - different probes for different applications

Specifications

Measuring range:	-100 to +500°C
Accuracy:	±0.05°C (from -50 to +199.99°C); remaining measuring range: ±0.2°C
Resolution:	0.01°C (from -100 to +199.99°C); remaining measuring range: 0.1°C
Operating temperature:	-20 to +50°C
Storage temperature:	-30 to +70°C
Probes:	Pt100
Measurement interval:	1 to 15 secs, adjustable
Battery:	Lithium 3V, 1Ah, Type CR2477
Deactivation:	Automatically after 2 hours, deactivatable
Dimensions:	109 x 54 x 22mm
Weight:	approx. 90g
Protection class:	IP67
Housing material:	ABS



9.908 075

Type	Description	PK	Cat. No.
TFX 430	Precision-Thermometer, without probe	1	9.908 075 2
TFX 430 + TPX 130	Precision-Thermometer, with probe (length 130mm, 3mm dia., blunt)	1	9.908 076
TFX 430 + TPX 230	Precision-Thermometer, with probe (length 130mm, 3mm dia., pointed)	1	9.908 077
TFX 430 + TPX 330	Precision-Thermometer, with probe (length 190mm, 8mm dia., glass-coated)	1	9.908 078
TPX 230	Probe, length 130mm, 3mm dia., blunt for TFX 430	1	6.233 571
TPX 130	Probe, length 130mm, 3mm dia., pointed for TFX 430	1	6.235 806
AX 110	Extension cable, length 1m, silicone for TFX 430	1	6.226 725

1



6.227 520

Digital thermometer testo 735-2

NEW!

3 channel temperature instrument testo 735-2, certified acc. to DIN EN ISO 13485. Highly accurate temperature measurement in corrosive media.

Testo

Suitable for precise temperature measurements in chemicals at 338°C and 98 % acid content. With the robust and yet highly precise 3-channel temperature measuring instrument testo 735-2, and the corresponding Pt100 laboratory probe, you measure temperature reliably even in corrosive media. Thanks to its glass coating, the Pt100 probe is ideally suited to typical temperature measurements in laboratories. **Please order Pt100 probe separately.**

- Ideally suitable for use in a laboratory thanks to a glass-coated Pt100 probe
- Implementation and recording of measurement series
- Evaluation, visualization, documentation with free software ComSoft Professional
- Consistent compliance with quality standards
- Norm-compliant work
- Measurement, analysis and documentation of results with one instrument
- Highest level of precision over entire measuring range due to system adjustment
- Recording of measurement series (instrument store 10.000 measurement values) with freely selectable cycle

2



9.851 718

Specifications

Measuring range with Pt100 probe:	-50 to +400°C
Working temperature:	-20 to +50°C
Housing material:	ABS/TPE/metal
Batterie type:	Alkali manganese, AA
Dimensions (L x W x H)	220 x 74 x 46mm
Weight:	428g
Protection class:	IP 65
Guarantee:	2 year

Description	PK	Cat. No.
Temperature measuring instrument testo 735-2 incl. ComSoft Professional Software	1	6.227 520 1
Laboratory probe Pt100, glass-coated, glass tube DURAN®	1	9.851 718 2
Mains unit, 5VDC 500 mA with Euro plug, 100-250 VAC	1	7.633 482
Service case for basic equipment measuring instrument and probes	1	6.207 195

3



3 Infrared-Thermometer Slim Flash

Non-contact temperature measurement via infrared. Response time 1 second. Measuring range -33 to +199°C, Accuracy ±2°C or 2%, incl. CR2032 button cell.

Dostmann electronic

Type	PK	Cat. No.
Infrared-Thermometer Slim Flash	1	9.851 998

4



6.241 105

Combination Infrared and Penetration Thermometer TLC 730

Handy, waterproof infrared thermometer with large measurement range for noncontact measurement of the surface temperature and secure core temperature measurement with the folding penetration probe. For time-saving, precise temperature measurements at incoming goods, production and storage of diverse goods and food. Conform to HACCP and DIN EN 13485. With battery and factory calibration certificate.

ebro

Specifications:

Measurement range:	-50°C to +350°C
Accuracy infrared:	±4°C at -50°C to -30.1°C ±2.5°C at -30°C to -18.1°C ±1.5°C at -18°C to -0.1°C ±1.0°C at 0°C to +65°C ±2.0°C or 2 % at +65°C to +350°C
Accuracy penetration probe:	±0.5°C at -18°C ... +120°C Otherwise ±1°C [1%], whichever is larger
Resolution:	0.1°C
Sensor:	Type K
Operating temperature:	-25°C to +50°C
Dimensions (L x W x H):	48 x 24 x 172 mm (without probe)
Weight:	Approximately 140 g
Battery:	2 x 1.5 V AAA, replaceable
Deactivation:	Automatically after 15 sec., deactivatable
Protection class:	IP 55

Type	Description	PK	Cat. No.
TLC 730	Combination infrared and penetration thermometer	1	6.241 105 4
AG 121	Nylon case for TLC 730	1	6.207 112

1 2 Infrared thermometer, DualTemp Pro, with penetration probe

For simple, rapid, non-contact, temperature measurement.

- dual display
- wide measurement ranges:
- infra-red: -33 to +250°C
- conventional penetration probe: -55 to + 250°C
- measuring spot: distance ratio 2.5:1
- Max./ Min., Hold functions
- auto-off after 15 secs.
- belt-clip included
- accessories: certificate of calibration & pilot drill for taking measurements from frozen items

Resolution:	0.2°C
Accuracy (IR):	-33°C to 0°C ±1.0°C ±0.1/1°C 0°C to +65°C ±1.0°C +65°C to +200°C ±1.5%
Accuracy (penetration probe):	below -5°C ±1.0°C -5°C to +65°C ±0.5°C above +65°C ±1%
Spectral sensitivity:	6 to 14µm
Adjustable emissivity:	0.10 to 1.00
Operating temperature:	0 to 50°C
Battery:	Lithium cell CR2032
Dimensions:	24.2 x 39.8 x 156mm
Weight:	380g (incl. packaging)

Type	PK	Cat. No.
DualTemp Pro	1	9.851 023

3 Infra-red thermometer ScanTemp 385

With IR thermometers you can measure surface temperature. A short response time and non-contact measurement are key advantages. ideal for monitoring applications such as:

- moving parts (running paper webs...)
- registering the surface temperature of gears and motors
- checking live electrical parts (components, transformers...)
- newly coated or painted parts
- food and corrosive substances

Specifications

Temperature range:	-35°C to +365°C
Precision:	±2% or 2°C, the higher value counts
Response time:	< 1 sec
Spectral sensitivity:	6 to 14µm
Operating temperature:	0 to 50°C
Optical resolution:	12:1
Laser:	Spot laser
Dimensions (L x W x H):	147.9 x 112.6 x 41.4mm
Weight:	150g (incl. packaging)
Battery:	2 x 1.5V AAA Batteries

Type	PK	Cat. No.
ScanTemp 385	1	9.851 996

4 Infra-red thermometer ScanTemp 410

Infra-red thermometer with laser aiming. For quick, easy and safe measurement of surface temperatures. Easy to use: just point, press the button and read the measurement from the large, illuminated display.

Specifications

Temperature range:	-33°C to 500°C
Precision:	±2 % of measurement or 2°C
Response time:	0.5 secs.
Spectral sensitivity:	7 to 18µm
Operating temperature:	0 to 50°C
Optical resolution:	11:1
Laser:	Spot laser
Dimensions (L x W x H):	175 x 39 x 79mm
Weight:	300g (incl. packaging)
Battery:	2 x 1.5V AAA Batteries

Type	PK	Cat. No.
ScanTemp 410	1	9.851 919



Thermometers/Temperature meters

1


9.908 031

Infrared Thermometers TFI 250/TFI 54

Non-contact measurement of the surface temperature with infrared. Ideal for fast and secure measurements of moving or energized parts and food. With batteries and factory calibration certificate.

ebro

Specifications:

Measurement range:	-60°C to +550°C
Accuracy:	±2°C or 2% (at 0°C to +550°C), whichever is larger
Resolution:	0.1°C
Optical resolution:	12:1
Operating temperature:	0°C to +50°C
Response time:	1 sec.
Emissivity factor:	0.95 fixed (0.1 to 1.0 possible)
Dimensions (L x W x H):	153 x 115 x 48mm (TFI 250) 144 x 117 x 43mm (TFI 54)
Weight (with batteries):	177g (TFI 250), 180g (TFI 54)
Battery:	2 x 1.5V AAA, replaceable
Protection class:	IP 20 (TFI 250), IP 54 (TFI 54)

Type	Description	PK	Cat. No.
TFI 250	Infrared thermometer	1	9.908 031 1
TFI 54	Splash water proof infrared thermometer	1	9.908 032

2


2 Dual Infrared Thermometer TFI 550 with NiCr-Ni Connection

Additional connection for NiCr-Ni temperature probes with SMP-connection.

ebro

Please order probes separately.

- Optics D:S = 30:1
- Dual laser
- NiCr-Ni connection for core temperature measurement with penetration probe
- Alarm when Min/Max exceeded
- Factory calibration certificate

Specifications:

Measurement range:	-60°C to +550°C (-76°F to 1022°F)
Accuracy:	±2°C at -18°C to +23°C (±3.6°F at 0°F to 73°F) ±1 % of measurement ±1°C (whichever is larger) at +23°C to +510 C ±1.8°F (whichever is larger) at 73°F to 950°F
Resolution:	0.1°C at -9.9°C to +199°C, otherwise 1°C (0.2°F at 14°F to 391°F, otherwise 1.8°F)
Response time (t ₉₉):	Approximately 1 s
Emissivity factor:	0.1 to 1.0
Distance : spot ratio:	30:1
NiCr-Ni probe measurement:	
Measurement range:	-64°C to +1400°C (-83°F to 2552°F)
Connection:	SMP
Accuracy:	±1 % of measurement value/±1°C (±1.8°F), whichever is larger
Battery:	2 x AAA (Micro)
Battery lifetime:	Typically 180 hours
Operating temperature:	0°C to +50°C (32°F to 122°F)
Storage temperature:	-20°C to +65°C (-4°F to 149°F)
Protection class:	IP 20
Weight:	approx. 180g

Type	Description	PK	Cat. No.
TFI 550	Dual Infrared Thermometer (without probe)	1	6.238 001

We can supply this
manufacturer's
 whole
product range !

-ebro-
 a xylem brand

partner of the
LLG
 Lab Logistics Group

Disposable data logger TEMPDATE-PDF

1

The innovative single-use data logger with a built-in USB connector, is ideal solution for low-cost temperature monitoring of transports. TEMPDATE-PDF loggers will be supplied according each customer's specifications.

Dostmann electronic



9.726 424

Product features

- Recording cycle 6, 15 or 90
- ON-Board PDF report generator, no software required
- Built-in USB connector, no hardware required
- Bank-card size
- Quick-start with START button
- Easy to read LED ind
- Food-safe packaging
- Free costumisation service
- Includes Certificate

At quantities of 100 pieces, the TM logger can be customized. Following pre-programmed settings can be made free of charge:

- Upper and lower alarm set point (e.g. <+2°C and >+8°C)
- Alarm delay (default: 30 min.)
- Start delay (default: 0 min.)

Specifications:

Temperature Range:	-30°C to +70°C
Accuracy:	±0.5°C
Resolution:	0.1°C
Data Memory:	12960 measurements
Recording Cycle*:	up to 90 days
Sampling Interval*:	1 min 6 days/ 2 min 15 days/ 10 min 90 days
Shelf Life:	12 months
Dimensions (L x W x H):	80mm x 52mm x 4mm
Weight:	10g
Protection Class:	IP 67
System Requirements:	Adobe® Reader
Certifications:	Calibration Certificate, CE, RoHS, EN 12830 S, T, C, D, 1

For	Interval	PK	Cat. No.
6 days	1 min	1	9.726 426
15 days	2 min	1	9.726 428
90 days	10 min	1	9.726 424 1

*dependent on model

2 Data Logger LOG32T

NEW!

2

- Memory size: 60 000 measurements
- Usable without software (default settings) (15-minute-interval, without alarm settings)
- Optional free of charge software download for alarm setting and free adjustable recording interval (30sec to 24h)
- Automatic PDF creation
- Battery lifetime > 3 years (recording interval >15 minutes)
- Status and Alarm-LEDs, acoustic signal
- Includes wall mount
- HACCP (EN12830) conform
- IP65 watertight

Dostmann electronic



Applications

The LOG32T is perfectly designed for product transportation or storage applications.

- Quality surveillance in laboratories during production in storage areas
- Monitoring conditions in manufacturing facilities
- Maintaining product storage according to HACCP
- Ambient conditions in power plants
- Monitoring of fridges for the pharmaceutical industry

Specifications

Measuring range:	-40 ... +70°C
Accuracy:	±0.5°C (-10 ... +40°C), otherwise ±1.0°C
Resolution:	0.1°C
Memory:	60 000 measurements
Interface:	USB (integr.)
Housing:	ABS
Dimensions (L x W x H):	100 x 19 x 19mm
Weight:	70g
Battery:	1 x 3.6 Volt Lithium ½ AA

Type	PK	Cat. No.
LOG32T	1	9.726 431

Thermometers/Temperature data logger

1



7.626 604

Mini data logger testo 174T

The mini data logger for temperature, testo 174T, is ideal for accompanying transports. Simply positioned close to the goods, e. g. in containers and refrigerated rooms, the data logger monitors temperature continuously, securely and unobtrusively. The free software ComSoft testo 174 allows fast programming of the data logger and easy analysis. Testo

- High data integrity, even with empty battery
- Large measurement data memory
- Watertight in accordance with IP65
- Compact and robust
- Conforms to EN12830
- Issue of alarms via display
- Data transfer to the PC via USB interface
- Reliable temperature measurement for the monitoring of sensitive goods and cold chain during storage and transport

Specification

Probe type:	Internal NTC temperature sensor
Measuring range:	-30 to +70°C
Accuracy:	±0.5°C
Resolution:	0.1°C
Operating temperature:	-30 to +70°C
Storage temperature:	-40 to +70°C
Battery type:	2 x 3V button cell (2 x CR 2032 lithium), can be changed by user
Battery life:	500 days (15 min measuring cycle, +25°C)
Protection class:	IP65
Meas. cycle:	1min - 24h (can be selected)
Memory:	16.000 readings
Software:	can be used with Windows XP, Vista, Win7

Type	Description	PK	Cat. No.
testo 174T	Mini data logger, 1-channel, incl. wall bracket, battery (2 x CR 2032 Lithium) and calibration protocol	1	7.626 604 1
testo 174T set	Mini data logger, 1-channel, incl. USB interface for programming and reading out the logger, wall bracket, battery (2 x CR 2032 lithium) and calibration protocol	1	7.626 614

2



9.908 069

Data Logger EBI 20-T1/EBI 20-TE1



ebro

- Applications:
- reliable temperature recording
 - transport
 - storage monitoring
 - refrigeration areas and coldrooms
- Features:
- excellent price/performance ratio
 - waterproof
 - visual Alarm
 - max/min values on display
 - stores 40.000 readings, can be read off at any time
 - replaceable battery

Specifications

Measuring range temperature:	-30 to +70°C
Accuracy, temperature:	±0.5°C (-20 to +40°C); ±0.8°C for remaining measuring range
Resolution temperature:	0.1°C
Memory:	40.000 samples
Sensor:	NTC
Operating temperature:	-30 to +70°C
Storage temperature:	-40 to +70°C
Measuring period:	1 minute to 24 hours
Measuring mode:	immediate loop measurement, measurement from starting point, start immediately until memory full, start/stop measuring, start when button pressed
Battery:	3V lithium (CR 2450), can be replaced by user
Protection class:	IP 67
Housing :	ABS
Dimensions:	69mm x 48mm x 22mm
Weight:	approx. 45g

3



6.240 382

Type	Description	PK	Cat. No.
EBI 20-T1-Set	Starter-Set (Temperature Logger, evaluation software, Interface)	1	9.908 073
EBI 20-TE1-Set	Starter-Set (Temperature Logger with external sensor, evaluation software, Interface)	1	6.240 382 3
EBI 20-T1	Temperature Logger	1	9.908 069 2
EBI 20-TE1	Temperature Logger with external probe	1	6.228 382
EBI 20-IF	Interface incl. evaluation software Winlog.basic	1	9.908 072
EBI 20-WM	Wall mounting incl. padlock	1	9.908 079
EBI 20-WM1	Truck wall holder	1	6.242 239

1 Temperature data logger LOG100



Large display for actual value, battery status display, easy to use software.
Perfect designed instrument for transportation or storage.

Dostmann electronic

1



- quality surveillance in laboratories, at the production or in the storage
- ambient conditions in manufacturing facilities
- monitoring from storages after HACCP
- ambient conditions in power plants
- monitoring of fridges for the pharma industry
- memory for 60 000 data sets

Please order Software with USB-Cabel separately (9.726 413)

Specifications

Measuring range:	-30 to +70°C
Accuracy:	0.1°C
Precision:	±0.5°C (0 to +40°C), otherwise ±0.7°C
Housing:	Plastic (ABS)
Battery:	1 x CR2032 3V
Dimensions:	92 x 55 x 21mm
Weight:	95g (incl. packaging)
Alarm function:	Alarm for too low or too high temperatur and/or humidity values Calibration reminder

Type	PK	Cat. No.
Temperature data logger LOG 100	1	9.726 411
Windows Software DE-Graph for LOG 100 and LOG 110 with USB-cabel	1	9.726 413
external temperature sensor, 3 x 40 mm, -50 to +120°C with 3 m wire	1	9.726 416
external temperature sensor, 3 x 40 mm, -50 to +120°C with 8 m wire	1	9.726 417

Standard USB Data Logger EBI 300



- For temperature monitoring related to HACCP/IFS issues or other perishable goods
- Transportation of fresh, cool and deep cool products
- Monitoring of fridges and deep freezers
- Evaluation without software

ebro

2



7.655 865

Benefits:

- Access the data anywhere with the automatically generated PDF report and any PDF software
- Minimise training, user errors and IT costs using EBI 300's simple, easy to use design and standard software.
- Ensure data integrity since no data manipulation is possible
- EN 12830, ATP, VO(EG) 37/2005 Compliant
- Factory calibration certificate included
- Programmable via the free online configurator at www.ebi300.com

Specifications

Measuring range without probe:	-30°C to +70°C
Measuring range with probe TPC 300:	-35°C to +70°C
Accuracy:	±0.5°C (-20°C to +40°C); ±0.8°C for remaining measuring range
Resolution:	0.1°C
Memory:	40.000 samples
Sensor:	NTC for temperature
Battery life time:	up to two years
Measuring period:	1 minute to 24 hours
Maximum Start Delay:	72 hrs
Housing material:	Polycarbonate
Measuring modes:	Start/Stop, endless loop, start with button
Alarms:	High and low limits
Weight:	35g
Protection class:	IP 65
Programming Software:	Winlog.basic, Winlog.light and Winlog.pro

3



9.908 027

Type	Description	PK	Cat. No.
EBI 300	Standard USB data logger with calibration certificate	1	7.655 865
TPC 300	External NTC probe	1	9.908 027
EBI 300-WM2	Wall Bracket	1	9.908 017
EBI 300 TH	Temperature + humidity data logger incl. humidity probe TPH 400	1	6.266 910
EBI 300 TE	Temperture data logger incl. temperature probeTPC300	1	6.266 911

Thermometers/Temperature data logger

1



9.908 098

High Precision USB Data Logger EBI 310

NEW!

ebro

- Automatic pdf-report creation with temperature/time values
- Transport of drugs, inoculants, blood products and primary products
- Transport of all temperature sensitive products
- Storage of reference samples in refrigerators and deep-freezers
- Minimize training costs and user errors through simple, easy to use design
- Eliminate costly and time consuming IQ/OQ procedures through standardized software and standard reporting process
- GMP, pharmaceutical law compliant; EN 12830, ATP, VO (EG) 37/205 compliant, 21 CFR Part 11 conform (Winlog.basic)

Attributes:

- USB-Port for PC and Notebook
- easy battery exchangeable
- "traffic light principle" by limit exceeded
- waterproof
- Programmable via the free online configurator at www.ebi300.com

2



9.908 017

Specifications

Operating Temperature:	-30°C to +75°C
Accuracy:	±0.2°C (-30°C to +30°C) ±0.5°C for the remainder
Resolution:	0.1°C
Sensor:	Pt1000/NTC
Channel:	1
Memory Capacity:	120.000 measurements
Battery Life:	2 Years
PDF/LED:	Yes
Weight with battery:	35g
Protection class:	IP 65

Type	Description	PK	Cat. No.
EBI 310	High Precision USB Data Logger	1	9.908 098 1
EBI 300-WM2	Wall Bracket	1	9.908 017 2
EBI 310 TH	Temperature + humidity data logger incl. humidity probe TPH 400	1	6.266 912
EBI 310 TE	Temperture data logger incl. temperature probeTPC300	1	6.266 913

3



6.264 938

External 2-channel probe for USB Data Logger EBI 310

NEW!

ebro

Adapter for EBI 310 to measure two temperatures parallel.
Please order 2 sensors separatly.

Specifications TPX 310

Measuring range (sensor):	-200 to +400°C
Working range (logger):	-30 to +70°C
Accuracy:	±2.0°C to -200 to -100°C ±1.0°C to -100 to -20°C ±0.2°C to -20 to +60°C ±0.5°C to +60 to +250°C ±1.0°C to +250 to +400°C
Protection class:	IP65

TPX 310-P1

Measuring range:	-200 to +200°C
Cable:	PTFE, 3 meters

4



6.264 939

Type	Description	PK	Cat. No.
TPX 310	External 2-channel temperature sensor for EBI 310	1	6.264 938 3
TPX 310-P1	External sensor, length 45mm, 5mm diam., blunt for TPX 310	1	6.264 939 4

Further sensors available on request.

1 Temperature/Humidity data logger LOG 110

Dostmann electronic

Large display for actual value, battery status display, easy to use software.
Perfect designed instrument for transportation or storage.

- quality surveillance in laboratories, at the production or in the storage
- ambient conditions in manufacturing facilities
- monitoring from storages after HACCP
- ambient conditions in power plants
- monitoring of fridges for the pharma industry
- memory for 60 000 data sets

Please order Software with USB-Cabel separately (9.726 413)

Specifications

Temperature

Measuring range: -30 to +70°C
Accuracy: 0.1°C
Precision: ±0.5°C (0 to +40°C), otherwise ±0.7°C

Humidity

Measuring range: 0 to 99% R.H.
Resolution: 0.1% R.H.
Accuracy: ±3% R.H.
Housing: Plastic (ABS)
Battery: 1 x CR2032 3V
Dimensions: 92 x 55 x 21mm
Weight: 95g (incl. packaging)
Alarm function: Alarm for too low or too high temperature and/or humidity values
Calibration reminder

Type	PK	Cat. No.
Temperature / Humidity data logger LOG 110	1	9.726 412
Windows Software DE-Graph for LOG 100 and LOG 110 with USB-cabel	1	9.726 413
external temperature sensor, 3 x 40 mm, -50 to +120°C with 3 m wire	1	9.726 416
external temperature sensor, 3 x 40 mm, -50 to +120°C with 8 m wire	1	9.726 417

2 Temperature/Humidity logger LOG32TH

NEW!

Dostmann electronic

- Memory size: 60 000 measurements
- Usable without software, 5-minute-interval default setting
- With free software, free adjustable recording interval: 30 seconds to 24 hours
- Automatic PDF creation (no drivers required)
- Battery lifetime >2 years (recording interval >15 minutes)
- Status and Alarm-LEDs
- Includes wall mount

Application profile:

The LOG 32TH is perfectly designed for product transportation or storage applications.

- Quality surveillance in laboratories during production in storage areas
- Monitoring conditions in manufacturing facilities
- Maintaining product storage according to HACCP
- Ambient conditions in power plants
- Monitoring of fridges for the pharmaceutical industry

Specifications

Measuring range: -40 to +70°C
Accuracy: 0.1°C
Precision: ±0.5°C (-10 to +40°C), otherwise ±1.0°C
Measuring range: 0 to 100%R.H.
Resolution: 0.1% R.H.
Accuracy: ±3% R.H. (40 to 60%), ±3.5% R.H. (20 to 40% and 60 to 80%), otherwise ±5% R.H.
Interface: USB (integr.)
Housing: Plastic (ABS)
Battery: 1 x 3.6V ½ AA Lithium
Dimensions: 100 x 19 x 19mm
Weight: 70g

Type	PK	Cat. No.
Temperature/Humidity logger LOG32TH	1	9.726 422

1

2



1



9.908 070

Humidity Logger EBI 20-TH1

(NEW!)

ebro

Applications:

- reliable temperature and temperature/humidity recording
- transport
- storage monitoring
- refrigeration areas and coldrooms

Features:

- excellent price/performance ratio
- visual Alarm
- max/min values on display
- stores 40.000 readings, can be read off at any time
- replaceable battery

Specifications

Measuring range temperature:	-30 to +70°C
Measuring range humidity:	0% to 100% R.H.
Accuracy, temperature:	±0.5°C (-20 to +40°C); ±0.8°C for remaining measuring range
Accuracy, humidity:	±3% R.H. (10 to 90% R.H.)
Resolution temperature:	0.1°C
Resolution humidity:	0.1% R.H.
Memory:	40.000 samples
Sensor:	NTC for temperature/capacitive for humidity
Measuring period:	1 minute to 24 hours
Measuring mode:	immediate loop measurement, measurement from starting point, start immediately until memory full, start/stop measuring, start when button pressed
Battery:	3V lithium (CR 2450), can be replaced by user
Protection class:	IP 52
Housing :	ABS
Dimensions:	69mm x 48mm x 22mm

Type	Description	PK	Cat. No.
EBI-20 TH1-Set	Starter-Set (Temperature Humidity Logger, evaluation software, Interface)	1	9.908 074
EBI-20 TH1	Temperature Humidity Logger	1	9.908 070 1
EBI-20 IF	Interface incl. evaluation software Winlog.basic	1	9.908 072
EBI 20-WM	Wall mounting incl. padlock	1	9.908 079
EBI 20-WM1	Truck wall holder	1	6.242 239

2



6.239 884

Mini data logger testo 174H

Testo

The mini data logger for temperature and humidity, testo 174H, is ideal for monitoring temperature and humidity sensitive goods in storage. The testo 174H also monitors building climate, continuously, securely and unobtrusively. The free software ComSoft testo 174 allows fast programming of the data logger and easy analysis.

- Humidity sensor with long-term stability
- High data integrity, even with empty battery
- Large measurement data memory
- Display of the current temperature or humidity value
- Large measuring range
- Compact and robust
- Issue of alarms via display
- Data transfer to the PC via USB interface

Specification

Probe type:	NTC temperature sensor and internal capacitive humidity sensor
Measuring range:	0 to 100% RH, -20 to +70°C
Accuracy:	±0.5°C, ±3% RH
Resolution:	0.1% RH, 0.1°C
Operating temperature:	-20 to +70°C
Storage temperature:	-40 to +70°C
Battery type:	2 x CR 2032 lithium
Battery life:	1 year (15 min measuring cycle, +25°C)
Protection class:	IP20
Meas. cycle:	1min to 24h (can be selected)
Memory:	16000 readings
Software:	can be used with Windows XP, Vista, Win7

Type	Description	PK	Cat. No.
testo 174H	Mini data logger, 2-channel, incl. wall bracket, battery (2 x CR 2032 lithium) and calibration protocol	1	6.239 884 2
testo 174H-Set	Mini data logger, 2-channel, incl. USB-interface for programming and reading out the logger, wall bracket, battery (2 x CR 2032 lithium) and calibration protocol	1	6.239 883

1 LLG Timer with Triple Alarms, 1-channel



1

Choice of vibration, sound and/or light alarms makes this timer perfect for high noise locations.

- Vibration, light and loud buzzer sound alarms can function at one time, or be independently turned off
- Switchable timing capacity: 19 hours: 59 minutes/99 minutes: 59 seconds
- Timer accuracy: ±5 seconds/day
- Count direction: up/down; displays elapsed time after countdown
- Last time set memory
- Key press confirmation feature gives an audible indication of data entry
- Lay flat on a bench, use the flip-open stand for a vertical view, carry it on a lab coat with the convenient pocket clip, or use the magnetic back for metal surface attachment
- Requires two AAA batteries (included)
- Individually tested, inspected, and calibrated using NIST
- Includes Certificate of Calibration with unique report number, stated corrections and standard used for the calibration, and multi-language instructions (English, French, German, Italian, Portuguese and Spanish)
- CE mark, RoHS compliant



Dimensions (WxDxH): 45 x 75 x 20mm (without clip portion)

Type	PK	Cat. No.
LLG Timer with Triple Alarms, 1-channel	1	6.266 707

2 LLG Timer with White Board, 4 channel



2

This four channel timer has a built in white board that helps keep track of time and other critical information.

- Audible alarm for each channel
- Built in white board and dry erase marker with eraser tip (included) helps keep track of crucial information
- Programs: hours/minutes; Displays: hours/minutes/seconds
- Switchable timing capacity: 23 hours: 59 minutes/59 seconds
- Timer accuracy: ±5 seconds/day
- Count direction: up/down; displays elapsed time after countdown
- Last time set memory
- Key press confirmation feature gives an audible indication of data entry
- Lay flat on a bench, use the flip-open stand for a vertical view, or use the magnetic back for metal surface attachment
- Requires two AAA batteries (included)
- Individually tested, inspected, and calibrated using NIST
- Includes Certificate of Calibration with unique report number, stated corrections and standard used for the calibration, and multi-language instructions (English, French, German, Italian, Portuguese and Spanish)
- CE mark, RoHS compliant



Dimensions (WxDxH): 114.3 x 88.9 x 25.4mm

Type	PK	Cat. No.
LLG Timer with White Board, 4 channel	1	6.266 706

3 LLG-Short period timer with alarm

3

Timer and stopwatch at the same time, from/up to 99min. and 59sec.

Easy-to-use, with large display and alarm function.

With magnet for easy fixing.

Battery LR 44 inclusive.

Dimensions (Ø x H): 54 x 16.5mm

Weight: approx.40g

Type	PK	Cat. No.
LLG-Short period timer with alarm	1	9.260 150



4 Interval timer with alarm

4

Benchtop mechanical timer. Suitable for standing, hanging and in addition on the back of two magnets, which allows the fitting of metal parts. Casing and rotary setting knob are white, the dial is black. Running time max. 60mins. Metal movement.

Dimensions (W x H x D): 65 x 65 x 35mm

Type	PK	Cat. No.
Interval timer with alarm	1	9.260 020



Timing/Timers



1 Short period timer

Electronic timer and stopwatch with large display and 10-key setting. Counts up or down from 10 hours to 1 second. With pocket clip, bench stand, magnetic attachment and AAA 1.5V battery.

Dimensions (W x H x D): 60 x 70 x 25mm
Weight: 95g

Type	PK	Cat. No.
Timer II	1	9.851 027



2 Short period timer KT188

- countdown timer from max. 99 mins., 59 secs.
- 30 Sec. loud audible alarm sounds when 'zero' reached
- with magnet.
- supplied with 'SR 44' 1.5 V button cell.

Dimensions (WxDxH): 88 x 12 x 46 mm
Weight: 30 g

Type	PK	Cat. No.
Short period timer KT188	1	9.260 188



3 Electronic timer clock

Count down/count up timer with loud alarm signal at end of timed period. With Clock, Stopwatch and Memory functions. Timer up to 24 hours. Fittings: magnet, stand and clip. Dimensions (WxDxH): 68mm x 53mm x 20mm, with battery.

Amarell

Type	PK	Cat. No.
Electronic Timer Clock	1	9.235 145



4 3-channel-short period timer

Indispensable for laboratories. Triple timer with large display.

Dostmann electronic

- Indicates three separate times simultaneously, Measuring range: 1sec to 20hours
- Stopwatch function
- Integrated quartz watch
- Supplied with magnet and clip
- Operating temperature: 0 to 50°C
- Battery 1.5V AAA inclusive

Dimensions (W x H x D): 71 x 88 x 24mm
Weight: 115g

Type	PK	Cat. No.
3-channel-timer	1	6.233 690



5 Laboratory Short period timer Compact

Compact.
Countdown/Countup.
Digital reading, with alarm and repeat function.
12hr. clock function.
Countdown and countup display: 23hrs, 59mins, 59secs.
Battery SR 44 inclusive.

Dimensions (W x H x D): 64 x 60 x 16mm
Weight: 40 g

Type	PK	Cat. No.
Compact	1	9.262 071

1 Short period timer with clock

Easy to operate.
 Quartz-accurate. With electronic alarm signal.
 Adjustable from 1 sec. to 24 hrs.
 Memory.
 Dimensions (WxDxH): 80 x 45 x 85 mm
 Weight: 120 g

Type	PK	Cat. No.
Microchronometer with clock	1	9.260 187



2 Short period timer WB 388

Three separate timers in one instrument. Countdown/countup. Audible alarm sounds when 'zero' reached.
 12/24 hour clock. Loud/soft alarm switch.
 Dimensions (WxDxH): 83 x 22 x 70mm
 Weight: 80g

Type	PK	Cat. No.
WB 388	1	9.260 184



3 Dual short period timer WB 388 TR 118 OS

- Large, 6 digit, LCD readout
- 2 separate timers in one instrument
- Countdown/countup 99 hrs. 59 mins. 59 secs.
- Clock function switch
- Audible alarm sounds when 'zero' reached
- With pocket clip/bench stand and magnet
- Supplied with AAA 1.5V battery

Dimensions (W x H x D): 73 x 66 x 18mm
 Weight: 63g

Type	PK	Cat. No.
TR 118 OS	1	9.260 186



4 Digi-Clock timer, TR 119 OS

- Large, 6-digit LCD display
- Programmable for up to 23 hrs, 59 mins, 59 secs.
- 1-minute audible alarm when timed period has expired
- Countdown or countup functions
- Time display
- Case incorporates combined bench stand/pocket clip with magnet.
- Supplied with 1 x 1.5V AAA battery.

Dimensions (WxDxH): 73 x 70 x 19mm
 Weight: 50g

Type	PK	Cat. No.
TR 119 OS	1	9.260 189



5 Microchronometer, TR 112 OS

- 4-figure LCD time readout for minutes and seconds
- Programmable for up to 99 mins, 59 secs.
- 30-second audible alarm when timed period has expired
- Countdown
- Timer memory function
- Case incorporates combined bench stand/pocket clip with magnet
- Supplied with 1 x 1.5V AAA battery

Dimensions (WxDxH): 66 x 56 x 18mm
 Weight: 45g

Type	PK	Cat. No.
TR 112 OS	1	9.260 181



Timing/Timers-Stopwatches



1 Benchtop timers, countdown/countup, Prisma series

- Prisma 200.
- ABS plastic case
 - Large, easy to read LCD display
 - Stopwatch function
 - Normal time display
 - Selectable time resolution 999mins., 59 secs. or 9 hrs., 59 mins., 59 secs., 1/10 sec.
 - Loud audible alarm
 - 2 channels with start/stop operation, either separately or together.

- Prisma 400.
Generally as Prisma 200, but additionally with:
- Sequence programming
 - Function window
 - 4 channels.

Both models:
Temperature Range: -10° to +55° (in use), -20° to +60° (in storage)
Battery Type: AA (R6)

Type	Colour	PK	Cat. No.
Prisma 200	white	1	9.260 178
Prisma 400	white	1	9.260 179



2 Time switches

- With earthed plug. *Theben*
- Timer 26**
- Daily programme adjustable in 15 min. segments
- Eltimo 020 S**
- Switch-on intervals: 10 to 120 min.
 - Switching capacity 3500 W
 - Power reserve 500 h
 - Shortest switching time: 1 min
 - Digital plug-in timer with weekly program

Type	PK	Cat. No.
Timer 26	1	9.000 030
Eltimo 020 S	1	9.000 031



3 Mechanical stopwatch

Start/stop/reset by single crown, clockwork mechanism, 13 jewels, chrome metal case, measuring range 15 minutes, 1/10 second increments. Supplied with lanyard and soft case, diam. 50mm, 250g (incl. packaging)

Type	PK	Cat. No.
Mechanical stopwatch	1	9.851 021



4 Stopwatch, mechanical

Amigo. Impact resistant. Unbreakable spring movement. 55mm diameter ABS case. *Hanhart*
Supplied with 120cm lanyard.

Time intervals secs.	Display mins.	PK	Cat. No.
1 / 10	15	1	9.262 410
1 / 5	30	1	9.262 411

1 Stopwatch, mechanical

Impact resistant, dustproof and water resistant. With diamond-turned metal case. 55mm diameter. Built-in strap ring.

Hanhart

Time intervals	Display	PK	Cat. No.
secs.	mins.		
1 / 5	30	1	9.262 005
1 / 10	15	1	9.262 010

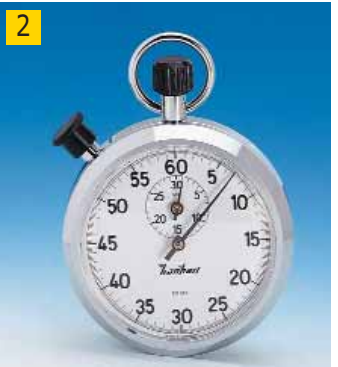


2 Stopwatch, mechanical

Impact resistant, dustproof, water resistant. With diamond-turned metal case. 55mm diameter. Built-in strap ring. 2 push-buttons.

Hanhart

Time intervals	Display	PK	Cat. No.
secs.	mins.		
1 / 5	30	1	9.262 205
1 / 10	15	1	9.262 210



3 Stopwatch

1/100 seconds, split time, clock, date with weekday, hourly chime, alarm with snooze function, lanyard.
Measuring range: Time up to 23h, 59min, 59sec. Dimensions: 65 x 21 x 79mm, weight: 50g, incl. 1x 1.5V LR44 battery, EK-EL

TFA Dostrmann

Type	PK	Cat. No.
Stopwatch	1	9.851 018



4 Stopwatch Stopstar 2, digital

Stopstar 2. ABS housing with lanyard. Temperature range -10 to +55°C. With 7-digit, 7mm high LCD readout. Start/Stop/Reset, Cumulative (as often as required), Split interval timing (as often as required), dual measurement of two events in quick succession.
Time display: 9hrs, 59mins, 59.99sec.
Battery life approx. 2 to 3 years.
Supplied with button cell (IEC R 6).

Dimensions: 82 x 61 x 28mm
Weight: 70g

Type	PK	Cat. No.
Stopstar 2	1	9.262 062



Timing/Stopwatches-Clocks



1 Stopwatch, digital

Profile LCD.
2 button operation, with 5 event memory, each with split and lap times, 8 mm high LCD readout, 7-figure + 2 event counter, display range: 9hrs, 59mins, 59.99secs. With Start/Stop/Reset, Add./Split/Lap, time functions.

Type	PK	Cat. No.
Stopwatch, digital	1	9.262 111



2 Stopwatches, Delta E series

Delta E 100
 - 65 memories with evaluation, fast run/memory functions
 - Large, clear, 2.5-line LCD readout with 7mm high digits
 - Battery status indicator
 - Function window for Lap, Short-Lap and time. Date indicator and pre-settable split time from the real-time clock
 - Mode function button
 - Display and memory button.

Delta E 200
 Generally as Delta E 100 model, but additionally with:
 - Pacer function (1 to 300 strokes/min.)
 - Countdown function
 - Countdown and stopwatch can be used simultaneously.

Type	Colour	PK	Cat. No.
Delta E 100	red	1	9.262 521
Delta E 200	black	1	9.262 530



3 Stopclock, analogue, Mesotron

Quartz-accurate timer with large, analogue display. Measuring range: 0 to 60 secs, 0 to 60 mins.
 Inner scale 1 to 100 secs/100 mins.
 110 mm dia.
 Battery life over 18 months with a 1.5 V button cell.
 Dimensions (WxDxH): 130 x 40/95 x 175 mm
 Weight: 375 g

Type	PK	Cat. No.
Mesotron stopclock	1	9.262 080



4 Radio controlled wall clock

- Highest precision radio-controlled clock
 - Analogue display with second hand
 - Digital display of date
 - Large dial
 - Ideal for home, office, waiting room, lobby or entrance hall and as a gift
 - Ø 300mm
 - Battery included 1.5 V AA

Type	PK	Cat. No.
Radio controlled wall clock	1	9.851 019

1 Thermohygrometer, Klimatherm

Spun metal case with dial, separate humidity and temperature indicators, and brass hanging ring.

TFA Dostmann

Measuring range

Relative humidity: 15 to 100%
 Temperature: 0 to 40°C
 Weight: 90g

Diam. mm	PK	Cat. No.
100	1	9.726 404



2 Thermohygrometer, analogue

Synthetic hair, spun metal case with dial and brass hanging ring.

TFA Dostmann

Measuring range

Relative humidity: 0 to 100%
 Temperature: -15 to 55°C
 Weight: 105g

Diam. mm	PK	Cat. No.
100	1	9.726 403



3 Thermohygrometer

Universal application thermohygrometer with outdoor probe and stand/attachment device. Accessory wall mounting (screws or adhesive tape) are available on request.

Amarell

Specifications

Measuring range: 0 to +50 x 0.1°C
 switchable to °F
 20 to 90 x 1% R.H.
 Dimensions (WxDxH): approx. 65mm x 20mm x 97mm

Type	PK	Cat. No.
Thermohygrometer	1	9.235 135



4 Thermohygrometer, TA 100

- Very fast humidity sensor
- Dewpoint and max./min. function
- °C/°F-switchable
- Hi-Lo alarm with red warning LED

TFA Dostmann

Specifications

Temperature
 Measuring range: -40°C to +70°C
 Display resolution: 0.1°C
 Accuracy: ±1°C
 Humidity
 Measuring range: 0% to 99% R.H.
 Display resolution: 0.1%
 Accuracy: ±4% from 35% to 75% remaining range ±5%
 Working temperature: -40°C to +70°C
 Batteries: 2 x 1.5 Volt AAA
 Dimensions: 105mm x 105mm x 44mm
 Weight: 150g (incl. packaging)

Type	PK	Cat. No.
TA 100	1	9.726 405





9.726 964

Thermohygrometer testo 608



Continuous monitoring of indoor climate

The economic thermohygrometer testo 608-H1 measures humidity, temperature and dewpoint continuously. The large display is easy to read even at a distance. With wall mounting and table holder for flexible positioning.

The accurate testo 608-H2 alarm hygrometer reliably indicates when humidity and temperature limits have been exceeded, for example in greenhouses, warehouses, cleanrooms, museums, laboratories etc.

- Continuous display of temperature and humidity or dewpoint
- With dew point calculation and max/min display
- Battery monitoring

Additional features testo 608 H2:

- LED alarm, warns if limits are exceeded
- High accuracy $\pm 2\%rH$

Specifications

Measuring rate:

Battery type:

Dimensions:

Housing:

Display:

Sensor type NTC:

Measuring range:

Accuracy (at 25°C):

Resolution:

Sensor type testo humidity sensor capacitive:

Measuring range:

Accuracy (at 25°C):

Resolution:

Operating temperature:

testo 608-H1/testo 608-H2

18sec

9V block battery

111 x 90 x 40mm

ABS

LCD, 2 lines

0 ... +50°C/-10 ... +70°C

$\pm 0.5^\circ\text{C}$ (± 1 digit)

0.1°C

+10 ... +95%rH/+2 ... +98%rH

$\pm 3\%rH$ / $\pm 2\%rH$

0.1%rH

0 ... +50°C/-10 ... +70°C

Type	PK	Cat. No.
testo 608-H1	1	9.726 964 1
testo 608-H2	1	9.726 965



2 Hygrothermograph with quartz clock



White plastic-coated metal casing, with high quality bimetallic temperature measuring system.

Measuring range:

-10 to +50°C/10 to 100% R.H.

Operation period:

1, 7 and 31 days selectable

Other measuring ranges are available on request.

Type	Dimensions (W x D x H) mm	PK	Cat. No.
Quartz clock	280 x 138 x 285	1	9.726 531
Quartz clock, with plastic hood	280 x 138 x 270	1	9.726 533
Recording charts, 7 days		100	6.051 813



3 Digital Anemometer



Digital Anemometer to measure wind speed and temperature.

Useful for the functional check of fume hoods and safety cabinets.

- Wind speed range: 0 to 30 m/s
- Wind temperature range: -10 to 45°C (14 to 113°F)
- Current/MAX/Average wind speed reading
- Wind speed units: m/s, km/h, ft/min, knots, mph
- Temperature display in °C/°F
- LCD backlight display
- Auto/Manual power off
- Battery: 3V CR2032 (included)

Type	PK	Cat. No.
Digital Anemometer	1	6.264 198

1 Precision handheld instruments P700 series

1

For temperature, moisture and airflow.

Dostmann electronic

For highly accurate temperature measurements with USB PC online interface.

(Optional: Windows SmartGraph software for graphical and tabular documentation, etc). Integral probe calibration for sensor tolerance compensation. Min.- Max.- Hold- and AVG- functions. The large LCD shows two measurements synchronously, even temperature differences can be displayed (P705, P755, P755-Log, P770).

Specifications

General (all models):

USB interface, Max-Min memory, Hold function, true average calculation over a freely selectable period, Auto-off function, measured quantities can be freely assigned to instrument channels, comprehensive calibration options (selectable 1-point, 2-point or 3-point calibration), large display with bar graph for simultaneous display of 2 measured values

P700/P705:

1/2 measurement channels (Pt100 4-wire probe, thermocouples type J, K, L, N, T, R, S), measurement ranges and accuracies: Pt100: -200 to +850°C (±0.1°C -100 to +200°C, otherwise ±0.1% of measurement value) thermocouples, DIN types (-200 to +1760°C)

P710/P715:

1/2 measurement channels (Pt100 4-wire probe, thermocouples type K, J, L, N, T), measurement ranges and accuracies: Pt100: -200 to +1370°C (±0.2°C -40 to +200°C, ±0.5 to 1000°C otherwise ±0.1°C of measurement value) Thermocouples acc. to EN 60584-1

P750/P755/P755-Log:

1/2 measurement channels (Pt100 4-wire probe, thermocouples type J, K, L, N, T, R, S, moisture, flow), measurement ranges and accuracies: Pt100: -200 to +850°C (±0.03°C -50 to +200°C, ±0.05°C -200 to +200°C, otherwise ±0.05% of measurement value), thermocouples, DIN type (types J, K, L, N, T 0 to 200°C, ±0.3°C, +200 to +1000°C ±1.0°C, otherwise ±.5°C; type R, S ±1.0°C +0.1% of measurement value) humidity 0 to 100% R.H. (±0.5%R.H.), flow 0 to 40 m/s (±0.5% of measurement value +1.0% of final value)

P770:

2 measurement channels (Pt100, thermocouples type J, K, L, N, T, R, S, moisture, flow), measurement ranges and accuracies: Pt100: -200 to +850°C (±0.1°C -100 to +200°C, otherwise ±0.1% of measurement value) thermocouples, DIN types, humidity 0 to 100%R.H. (±0.5%R.H.), flow 0 to 40 m/s (±0.5% of measurement value) Dimensions (L x W x D)/ weight: 200 x 85 x 40mm/300g

P700-P755 for Ex-use Zone 1 and Zone 2 according to ATEX approval II 2 G Ex ib IIB T4 Gb available on request.



Type	Description	PK	Cat. No.
P700	1 channel, Pt100	1	9.852 000
P705	2 channel, Pt100	1	9.852 001
P710	1 channel thermocouples Type K, J, L, N, T	1	9.852 002
P715	2 channel thermocouples Type K, J, L, N, T	1	9.852 003
P750	1 channel, Pt100, moisture, dew point, flow	1	9.852 004
P755	2 channel, Pt100, moisture, dew point, flow	1	9.852 005
P755-Log	2 channel, Pt100, moisture, dew point, flow, with datalogger for 6000 values	1	9.852 006
P770	2 channel, Pt100, moisture, dew point, flow	1	9.852 007
P770-Log	2 channel, Pt100, moisture, dew point, flow, with datalogger for 6000 values	1	9.852 008

Accessories for hand-held meters Serie P700

NEW!

Description	PK	Cat. No.
Immersion probe Pt100, -50 to +350°C, Cl. B, 150x3mm	1	9.851 935
Immersion probe Pt100, -50 to +350°C, Cl. B, 300x3mm	1	9.851 936
Immersion probe Pt100, -200 to +450°C, ±0.03°C, 150x3mm	1	9.851 937
Immersion probe Pt100, -200 to +450°C, ±0.03°C, 300x3mm	1	9.851 938
Insertion probe Pt100, -200 to +500°C, Cl. B, 150x4mm	1	9.851 948
Immersion probe NiCr-Ni/Type K, -40°C to +1100°C, Cl. 1, 300x1.5mm	1	9.851 949
Surface probe NiCr-Ni/Type K, T90 3 sec., -65 to +550°C, 150 x 15.0mm	1	9.851 961
Temp. / relative Humidity -40 to 80°C / 0 to 100%, 120x20mm	1	9.851 954
Airflow Turbine probe 0 to 20m/s, diam. 22 x 28mm, 150mm lg.	1	9.851 955
Software DE-Graph for 95 / 98 / 2000 / NT / Vista	1	9.851 925
P700 adapter for type K probe with mini plug	1	9.851 995
Service case suitable up to 3 probes & accessories	1	9.851 924
ISO certificate for temperature CERT	1	9.851 992
PC-Cable for USB port	1	6.242 171
Power supply 230 V	1	9.851 959

1 CO₂ Meter, Air CO₂ntrol 3000

- Large display
- Measuring range: 0 to 3000ppm
- Incl. Power supply for 230 VAC
- 24-hour data logger
- Adjustable Alarm
- C°/°F-selectable
- Relay output for ventilation control

Applications:

Ideal for monitoring the environment (CO₂ concentration) in public buildings, such as universities, schools
 - Hospitals, Education, Office, Production plants, Public Facilities

Specifications

CO₂	
Range:	0 up to 3000ppm
Resolution:	1ppm (0 up to 1000ppm); 5ppm (1000 up to 2000ppm); 10ppm (<2000ppm)
Accuracy:	50ppm or 5%, larger value applies
Temperature	
Range:	0 up to +50°C
Resolution:	0.1°C
Accuracy:	±1% or 1°C, larger value applies
Display:	7 segment LCD(twin-lined)
Housing:	Plastic (ABS)
Supply requirements:	230 VAC adapter or 4 x AA Batteries
Dimensions:	165 x 80 x 23mm
Weight:	600g (incl. packaging)

Type	PK	Cat. No.
Air CO ₂ ntrol 3000	1	9.726 408

2 Weather station, Diva Plus

- transmission of outdoor temperature and humidity via up to 3 transmitters (max. 100m)
- indication of indoor temperature and humidity,
- Max./min. function
- weather forecast, tendency of atmospheric pressure, bar graph indication of atmospheric pressure of the last 24 hours
- radio controlled clock with date, time zone ±12 hrs
- interchangeable °C/°F display
- wall or table mounting

TFA Dostmann

Supplied with: Outdoor temperature and humidity transmitter, batteries 5 x 1.5V AA.

Specifications

Temperature range	
outdoors:	-40 to +60°C (-14 to 140°F)
indoors:	-10 to +60°C (-4 to 140°F)
Humidity:	1 to 99%
Dimensions basis station:	180 x 100 x 35mm
Dimensions transmitter:	160 x 43 x 28mm
Weight:	520g

Type	PK	Cat. No.
Diva Plus	1	9.726 410

1



2



3. Analytical measurement and testing Density determination/Density meter, Pycnometer

1 Pycnometers, calibrated, Borosilicate glass 3.3.

DIN 12797. Individually calibrated to contain (In) to 0.001ml. Net volume capacity is engraved on the body. Each bottle is calibrated together with its stopper. In order to differentiate easily, both the body and the stopper have the same code numbers printed on themselves.

Isolab

Capacity ml	PK	Cat. No.
5	1	4.008 327
10	1	6.241 602
25	1	4.008 328
50	1	6.241 603
100	1	4.008 329



2 Pycnometers, BLAUBRAND®, Borosilicate glass 3.3.

DIN ISO 3507, gay-lussac type. Including individual certificate. Adjusted. Reference temperature 20°C.

BRAND

With NS10/19 capillary stopper. Stopper top ground and polished. Inscription in highly contrasting blue enamel. The volume in cm³ is specified to a precision of 3 decimal places. Calibrated to contain. Every pycnometer is calibrated with its own stopper; hence, stoppers are not interchangeable. Each bottle and its stopper is marked with a unique matching identification number.

Nom. capacity cm ³	PK	Cat. No.
5	1	9.277 305
10	1	9.277 310
25	1	9.277 325
50	1	9.277 350
100	1	9.277 400



3 LLG-Precision-Hydrometer, Alcoholmeters, with thermometer, calibratable

Measuring range, graduation: 0.1% vol, with thermometer 0 to +30°C, graduation: 0.5°C, calibrated at 20°C.

Filling: blue. Overall length: 380mm

Optionally available with official calibration certificate, works certificate or DKD-calibration certificate. Please specify with order.

Type	Measuring range % vol	PK	Cat. No.
1	0 - 10	1	9.236 810
2	10 - 20	1	9.236 811
3	20 - 30	1	9.236 812
4	30 - 40	1	9.236 813
5	40 - 50	1	9.236 814
6	50 - 60	1	9.236 815
7	60 - 70	1	9.236 816
8	70 - 80	1	9.236 817
9	80 - 90	1	9.236 818
10	90 - 100	1	9.236 819



4 ASTM Hydrometers

NEW!

Precision hydrometers acc. to ASTM E2995-14 for determination of density for mineral oil, with thermometer "mercury free".

Schneider

Hydrometer with thermometer, error-limit for density: ±0.5 kg/m³, with thermometer -20 to +65°C in 1°C, blue filling, error-limit ±1°C. With works calibration on request. With blue, environmental friendly filling of thermometers. Each item packed in plastic tubes for breakage protection.

Measuring range kg/cm ³	Scale	Length mm	Reference temperature °C	PK	Cat. No.
600 - 650	0,5	380	15	1	6.267 132
650 - 700	0,5	380	15	1	6.267 133
700 - 750	0,5	380	15	1	6.267 134
750 - 800	0,5	380	15	1	6.267 135
800 - 850	0,5	380	15	1	6.267 136
850 - 900	0,5	380	15	1	6.267 137
900 - 950	0,5	380	15	1	6.267 138
950 - 1000	0,5	380	15	1	6.267 139
1000 - 1050	0,5	380	15	1	6.267 140
1050 - 1100	0,5	380	15	1	6.267 141
775 - 825	0,5	380	15	1	6.267 142





1 Hydrometers, relative density (S.G.)

Shot poised. Without thermometer. Reference temperature: +20°C.

Measuring range g / ml	Sub-divisions g / ml	Length mm	PK	Cat. No.
0.600 - 0.800	0.002	280	1	9.004 006
0.800 - 1.000	0.002	280	1	9.004 008
1.000 - 1.200	0.002	280	1	9.004 010
1.200 - 1.400	0.002	280	1	9.004 012
1.400 - 1.600	0.002	280	1	9.004 014
1.600 - 1.800	0.002	280	1	9.004 016
0.700 - 1.000	0.005	300	1	9.004 057
1.000 - 1.500	0.005	300	1	9.004 060
1.500 - 2.000	0.005	300	1	9.004 065

Further models available on request.

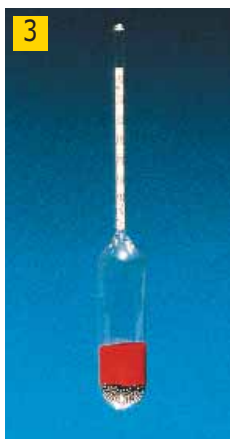


2 Hydrometers, density, adjustable

DIN 12791 (and BS718). Adjustable. M100 series. Shot poised. Without thermometer. Reference temperature: +20°C.

Measuring range g / ml	Sub-divisions g / ml	Length mm	PK	Cat. No.
0.800 - 0.900	0.002	250	1	9.004 108
0.900 - 1.000	0.002	250	1	9.004 109
1.000 - 1.100	0.002	250	1	9.004 110
1.100 - 1.200	0.002	250	1	9.004 111
1.200 - 1.300	0.002	250	1	9.004 112
1.300 - 1.400	0.002	250	1	9.004 113
1.400 - 1.500	0.002	250	1	9.004 114
1.500 - 1.600	0.002	250	1	9.004 115

Further models available on request.



3 Hydrometers, density

Shot poised. Without thermometer. Reference temperature: +20°C.

Measuring range g / ml	Sub-divisions g / ml	Length mm	PK	Cat. No.
0,760 - 0,820	0.001	160	1	9.004 153
0,820 - 0,880	0.001	160	1	9.004 154
0,880 - 0,940	0.001	160	1	9.004 155
0,940 - 1,000	0.001	160	1	9.004 156
1,000 - 1,060	0.001	160	1	9.004 157
1,060 - 1,120	0.001	160	1	9.004 158
1,120 - 1,180	0.001	160	1	9.004 159
1,180 - 1,240	0.001	160	1	9.004 160
1,240 - 1,300	0.001	160	1	9.004 161
1,300 - 1,360	0.001	160	1	9.004 162
1,360 - 1,420	0.001	160	1	9.004 163

Further models available on request.



4 Hydrometers, Baumé

Baumé type. Shot poised. Without thermometer. Reference temperature: +15°C.

Measuring range Bé	Sub-divisions Bé	Length mm	PK	Cat. No.
0 - 5	0,1	260	1	9.004 305
0 - 10	1,0	220	1	9.004 310
0 - 15	1,0	230	1	9.004 315
0 - 20	1,0	230	1	9.004 320
0 - 30	1,0	250	1	9.004 330
0 - 40	1,0	250	1	9.004 340
0 - 50	1,0	280	1	9.004 350
0 - 70	1,0	300	1	9.004 370

Further models available on request.

1 Hydrometers, mineral oil

With -10 to +60°C thermometer.
Adjustable.
Reference temperature: +15°C.

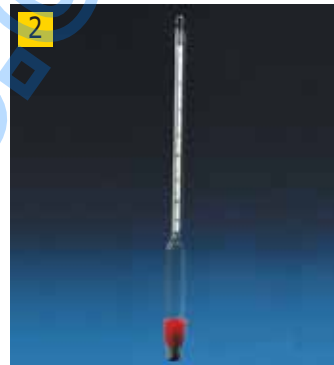
Measuring range g / ml	Sub-divisions g / ml	Length mm	PK	Cat. No.
0,610 - 0,700	0,001	390	1	9.004 561
0,680 - 0,770	0,001	390	1	9.004 568
0,750 - 0,840	0,001	390	1	9.004 575
0,820 - 0,910	0,001	390	1	9.004 582
0,890 - 0,990	0,001	390	1	9.004 589



2 Hydrometers, lime water Ca(OH)₂

For lime water Ca(OH)₂.
Without thermometer.
Reference temperature: +20°C.

Measuring range g / ml	Length mm	PK	Cat. No.
0 - 340 g/l	300	1	9.004 640



3 Salinometers, Bischoff type

For common salt.
Without thermometer.

Measuring range g / ml	Length mm	PK	Cat. No.
0 - 27	240	1	9.004 650



4 Hydrometers for acids/bases in %

Without thermometer.
Total length: 250mm to 280mm

For	Measuring range	Reference temperature °C	PK	Cat. No.
Ammonia	0 to 35 x 0.5 %	20	1	9.004 651
Sodium hydroxide	0 to 27 x 1 %	15	1	9.004 652
Sodium hydroxide	0 to 10 x 0.1 %	15	1	9.004 653
Nitric acid	0 to 47 x 1 %	15	1	9.004 654
Hydrochloric acid	0 to 39 x 1 %	15	1	9.004 655
Sulphuric acid	0 to 45 x 1 %	15	1	9.004 656
Hydrogen peroxide	0 to 30 x 1 %	15	1	9.004 657



5 Alcoholometer

Richter-Tralles type.
0 to 100% at reference temperature: +20°C.
Without thermometer.

Type	PK	Cat. No.
Alcoholometer	1	9.004 400



1



1 Hydrometers, high-quality plastics

NEW!

Schneider

We use state-of-the-art processes to manufacture hydrometers made of high-quality plastics (polycarbonate). Each hydrometer is accurately adjusted, passes strict quality control and is marked with its individual serial number. Therefore, the determined values are traceable to the measurement device. Hydrometers made of plastics can even be used as test medium within quality management systems with the highest standards of quality, safety and reliability due to an optional calibration of our accredited calibration lab.

- Breakage protected (no glass breakage)
- Fully made of resistant polycarbonate (PC)
- High transparency (like glass), easy-to-read scales
- High precision and reproducibility
- Suitable for applications in food, pharmaceutical and cosmetic industries as well as many others
- Measuring units: specific gravity, density, Oechsle, % mass, Brix, saturation, ° Baumé, etc.
- Made in Germany: We are the only German manufacturer producing both precision glass and plastic hydrometers
- DAkkS or works certificates on request
- Food safety according to HACCP

Measuring range	Scale	Length mm	Reference temperature °C	For	PK	Cat. No.
1.000 - 1.220g/cm ³	0.002g/cm ³	300	20	Density	1	9.236 840
1.200 - 1.420g/cm ³	0.002g/cm ³	300	20	Density	1	9.236 841
1.400 - 1.620g/cm ³	0.002g/cm ³	300	20	Density	1	9.236 842
0 - 100°	1°	300	20	Salt saturation	1	9.236 843
0 - 26%mas.	0.2%	300	20	Sodium chloride	1	9.236 847
0 - 12°Bé	0.2°Bé	250	15	Sugar / Salt	1	9.236 844
9 - 21°Bé	0.2°Bé	250	15	Sugar / Salt	1	9.236 845
19 - 31°Bé	0.2°Bé	250	15	Sugar / Salt	1	9.236 846
0 - 35%mas./Brix	0.5%mas.	300	20	Sugar	1	9.236 848
0 - 50%mas./Brix	0.5%mas.	300	20	Sugar	1	9.236 849

2



2 Hydrometer jars, PP

With overflow chamber so that hydrometer can be read when cylinder is completely full. Impact resistant and flexible. With spout.

BRAND

Capacity ml	Int. diam. mm	Height mm	PK	Cat. No.
500	50	350	1	9.004 900

3



3 Hydrometer jars, glass

With spout and base.

Height mm	Diam. mm	PK	Cat. No.
150	38	1	9.950 034
200	38	1	9.950 035
200	50	1	9.950 036
250	50	1	9.950 037
300	50	1	9.950 038
350	63	1	9.950 039

4



4 Battery hydrometer

Battery acid tester 1.10 to 1.30.

Boxed complete with glass tube, rubber bulb and hydrometer.

Type	PK	Cat. No.
Battery hydrometer	1	9.004 710

1 Dipping flow cups Frikmar (NEW)

Aluminium. DIN 53211 viscometer. With brass nozzle.
 For all types of liquid chemicals, varnishes, fluid enamels,
 gravure printing inks and leather dyes, oils, fats, foodstuffs etc.
 Beaker volume 100ml.

Flow nozzle mm	PK	Cat. No.
3	1	6.056 477
4	1	9.149 898
5	1	6.058 370
6	1	6.056 922
8	1	6.084 496



2 Flow cups with fixed nozzle (NEW)

With fixed nozzle made of stainless steel. Housing made of titanium anodised aluminium,
 Cat. No. 6226 824 with stainless steel housing.

Flow nozzle mm	DIN	PK	Cat. No.
2	similar to DIN 53 211	1	6.057 808
3	similar to DIN 53 211	1	6.091 529
4	according to DIN 53 211	1	9.149 862
4	according to DIN 53 211	1	6.226 824
6	similar to DIN 53 211	1	6.301 841
8	similar to DIN 53 211	1	6.302 759
3	according to ISO 2431	1	6.223 165
4	according to ISO 2431	1	6.088 604
5	according to ISO 2431	1	6.901 466
6	according to ISO 2431	1	6.088 605



3 Immersion flow cup with fixed nozzle (NEW)

With fixed nozzle from stainless steel or aluminium.

Flow nozzle mm	DIN	Material Nozzle	PK	Cat. No.
4	DIN 53 211	Aluminium	1	9.149 894
6	similar to DIN 53 211	Aluminium	1	6.080 098
4	DIN 53 211	Stainless Steel	1	6.264 682
6	similar to DIN 53 211	Stainless Steel	1	6.225 937
2	ISO 2431	Aluminium	1	6.705 831
4	ISO 2431	Aluminium	1	6.302 328
5	ISO 2431	Aluminium	1	6.705 832
6	ISO 2431	Aluminium	1	6.314 566



4 Flow cups, without nozzles

For 2, 3, 4, 5, 6, 7 and 8mm outlet detachable nozzles, please order separately.
 Flow cups and nozzles similar to DIN 53211.

Type	Flow nozzle mm	PK	Cat. No.
Flow cups		1	9.149 860
Nozzle	2	1	9.149 872
Nozzle	3	1	9.149 873
Nozzle	4	1	9.149 874
Nozzle	5	1	9.149 875
Nozzle	6	1	9.149 876
Nozzle	7	1	9.149 877
Nozzle	8	1	9.149 878



Flow cup stands (NEW)

Stainless steel.

Type	PK	Cat. No.
Flow cup stand, ring stand	1	9.149 881 5
Flow cup stand, tripod stand	1	9.149 884 6



9.149 881

9.149 884

Density determination/Viscosimeter

1


1 Viscosimeters, glass, kinematic, Ubbelohde

To ISO/DIS 3105. DIN 51562. BS 188. NF T 60 to 100.
Without documentation of the constants.
For manual and automatic relative measurements.

SI Analytics

Type	Capillary	Constant K	PK	Cat. No.
53001	0a	0.005	1	9.268 301
53003	0c	0.003	1	9.268 303
53010	I	0.01	1	9.268 310
53013	Ic	0,03	1	9.268 313
53020	II	0.1	1	9.268 320
53023	IIC	0.3	1	9.268 323
53030	III	1	1	9.268 330
53033	IIIC	3	1	9.268 333
53040	IV	10	1	9.268 340

2


2 Viscosimeters Ubbelohde, glass, kinematic

ISO 3105, DIN 51562, NF T60-107

SI Analytics

For manual (type 501 ..) or automatic (type 532 ..) measurements.
Constants documented in manufacturer's certificate.

Type	Capillary	Capillary i.d.	Constant	Measuring range	PK	Cat. No.
		mm	K	mm ² / sec		
501 00	0	0.36	0.001	0.2 - 1	1	9.268 100
501 03	0c	0.47	0.003	0 - 3	1	9.268 103
501 01	0a	0.53	0.005	0.8 - 5	1	9.268 101
501 10	I	0.63	0.01	1.2 - 10	1	9.268 110
501 13	Ic	0.84	0.03	3 - 30	1	9.268 113
501 11	Ia	0.95	0.05	5 - 50	1	9.268 111
501 20	II	1.13	0.1	10 - 100	1	9.268 120
501 23	IIC	1.50	0.3	30 - 300	1	9.268 123
501 21	Ila	1.69	0.5	50 - 500	1	9.268 121
501 30	III	2.01	1	100 - 1000	1	9.268 130
501 33	IIIC	2.65	3	300 - 3000	1	9.268 133
501 31	IIIa	3.00	5	500 - 5000	1	9.268 131
501 40	IV	3.60	10	1000 - 10000	1	9.268 140
532 00	0	0.36	0.001	0.3 - 1	1	7.023 176
532 03	0c	0.47	0.003	0.5 - 3	1	9.268 203
532 01	0a	0.53	0.005	0.8 - 5	1	9.268 201
532 10	I	0.63	0.01	1.2 - 10	1	9.268 210
532 13	Ic	0.84	0.03	3 - 30	1	9.268 213
532 11	Ia	0.95	0.05	5 - 50	1	7.023 177
532 20	II	1.13	0.1	10 - 100	1	9.268 220
532 23	IIC	1.50	0.3	30 - 300	1	9.268 223
532 21	Ila	1.69	0.5	50 - 500	1	7.023 178
532 30	III	2.01	1	100 - 1000	1	9.268 230
532 31	IIIa	3.00	5	500 - 5000	1	7.023 179
532 33	IIIC	2.65	3	300 - 3000	1	9.268 233
532 40	IV	3.60	10	1000 - 10000	1	9.268 240

3


3 Viscosimeter holders

Type 05392. VA steel.

SI Analytics

Suitable for all Ubbelohde viscosimeters without TC sensors. For manual and automatic measurements. Holds the viscosimeter perpendicularly. Accuracy <1°. Protects the viscosimeter from damage.

Type	PK	Cat. No.
05392	1	9.268 790

4


4 Viscosimeter heating jacket

With support plate for Ubbelohde and capillary viscosimeters. Can be thermoregulated in mantles in the temperature range 0 to 180°C.

SI Analytics

Type	PK	Cat. No.
Viscosimeter heating jacket	1	9.269 420

1 Measuring instrument for viscosity analysis ViscoClock

Introductory model for automatic viscosity analysis.
For determining absolute and relative viscosity.

SI Analytics

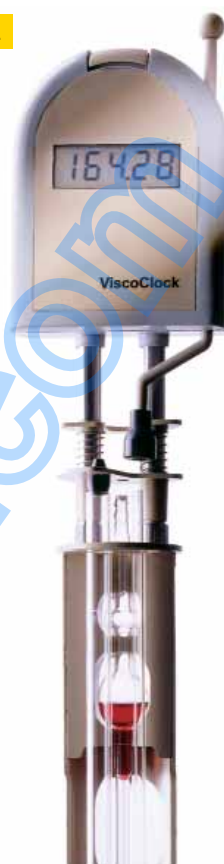
The most precise method for determining the viscosity of liquids is to measure it in capillary viscometers. The ViscoClock works in accordance with this method. Optical fibres precisely determine the liquid meniscus on two measuring planes, the running time is determined and displayed with a resolution of 0.01 secs. Since the measuring process runs automatically, subjective sources of error are reliably excluded. The 0.01% accuracy of the measured time for calculating the absolute and relative viscosity is given as a measuring uncertainty with a confidence level of 95 %.

The ViscoClock was designed to use Ubbelohde, micro Ubbelohde or micro Ostwald viscometers and can be operated in all thermostatic baths with transparent tanks.

Specifications

Measuring range: Up to 999.99 secs./resolution 0.01 sec.
 Timing accuracy: ±0.01 sec. ±1 digit, but not more accurate than 0.1%, given as measuring uncertainty with a confidence level of 95%
 Measuring range viscosity: 0.35 to 10000 mm²/sec. (cSt)
 The absolute, kinematic viscosity is also dependent on the uncertainty of the numerical value of the viscometer constants and on the measuring environment, in particular the measuring temperature
 RS 232C interface: For connecting a printer with a serial interface or a computer (PC) for documenting the data
 Operating temperature: Stand: -40 to +150°C
 Electronic measuring unit: +10 to +40°C
 Dimensions (WxDxH): approx. 95 x 50 x 490 mm
 Weight: approx. 450g (without viscometer)
 Power pack approx. 220g
 Viscometers accepted: Ubbelohde (DIN, ISO, ASTM, micro), micro Ostwald.

1



Type	PK	Cat. No.
ViscoClock	1	9.269 480

2 Density meter Densito 30PX

Portable instrument for determining the specific gravity.

Mettler-Toledo Online

- Wide range of applications
- Easy to use: take a sample and read the final result
- Results within seconds displayed in the unit of your choice
- Choice of temperature correction coefficient before each measurement
- Intuitive user guidance and plain language display
- Clearly visible measuring cell
- External sample tip/external syringe connection for high viscosity samples

Supplied with: Protective case, density standards, cleaning tissues, instruction manual, flasks for cleaning solution, batteries, LabX® direct DE/RE data transfer software for data collection and manipulation.

Specifications

Density measuring range: 0 to 2g/cm³
 Resolution: 0.0001g/cm³
 Accuracy: ±0.001 g/cm³
 Measuring units: Density, relative density, density temperature compensated, relative density temperature compensated, Brix %, alcohol (gravity-%, volume-%, US Proof and UK Proof), Baumé, Plato, API (scales A, B and D), %sulphuric acid (gravitypercents), user-defined units
 Temperature: 0 to 40°C
 Measuring range: 0.1°C
 Resolution: either in °C or °F
 Calibration: with dry air and pure water or other density standards
 Data storage: storage space for up to 1100 results
 Display: Matrix-LCD with background lighting
 Interface: Infrared, protocol selectable (IrDA or RS232C)

2



Type	PK	Cat. No.
Densito 30PX	1	9.947 550
Density standards (6mL), 10-piece set with certificate	1	9.947 551

Density determination/Viscosimeter

1



1 Density Meter DS7800



A.KRÜSS Optronic

Digital density meters with up to four decimal places for measuring density, relative density and concentration of aqueous solutions in a range of 0.0000 - 1.9999 g/cm³. Calibration is performed with pure water and dry air.

An integrated SQL database stores up to 99 userdefined measurement methods and the last 999 measurement.

- Density measurement based on the oscillating U-tube principle
- Bright touchscreen display with intuitive operation in 6 languages
- Very efficient integrated Peltier temperature regulation (10-40°C) with high precision
- Desiccation unit and peristaltic pump included
- Can be filled using the integrated peristaltic pump or by injection
- Resistance to samples: all parts that come into contact with samples are made of glass or PTFE
- LUER or UNF couplings
- Includes built-in air pressure sensor
- USB interface for data export and firmware updates and for connecting keyboard or barcode scanner
- RS-232 interface for serial printer
- Ethernet interface for direct connection to a PC (with possibility of remote maintenance via internet)
- PDF Export
- Full cGMP/GLP capability: password protection, data backup, automatic printout or data output in CSV-Format
- Meets the relevant international standards such as Pharmacopoe, OIML, ASTM
- Calibration certificate in accordance with N.I.S.T.
- IQ/OQ/PQ-start-ups possible
- 3-year warranty on registration

Includes the following accessories

- Desiccation cartridge
- Rinsing and filling pump
- Tube set - standard: 4 pc. adapter connection, Specimen tube, Pump tubing, 10 pc. syringe 5 ml Luer, 1 T-piece
- Waste vessel
- Operating manual
- Test report and calibration certificate in accordance with N.I.S.T.

Specifications

Measurement range:	0.0000-1.9999g/cm ³
Accuracy:	0.0001g/cm ³
Repeatability:	0.0001g/cm ³
Sample volume by manual injection:	0.9ml
Temperature range:	10-40°C
Temperature stability:	±0.02°C
Measurement time approx:	5min
Ambient temperature:	10-40°C
Calibration:	Automatic menu-driven calibration with dried air and distilled water
Manufacturers calibration:	4-10 sampling points for air, water with 9 temperatures
Case Cast:	aluminium, powder-coated
Display:	LCD TFT 5.7", 640x480pixel colour display (VGA)
Interfaces:	RS-232 (printer) USB (data export, firmware updates), Ethernet (LIMS, remote monitoring)
Power supply:	90-264V, 50/60Hz
Power consumption:	(measuring mode) 25W
Power consumption:	(max.) 100W
Methods:	99 freely definable methods
Result storage:	999 last measurements
Printer port:	serial
User administration/Password protection:	activatable
LIMS access:	possible
Dimensions (WxDxH):	220 x 220 x 430mm
Weight:	5.3kg

Type	PK	Cat. No.
Density Meter DS7800	1	6.265 000

1 LLG-Melting point apparatus



Ideal for determination of the melting point of powders and substances that do not have a clear transparent melting point.

Both models have the following properties:

- Digital temperature control
- Sample can be monitored through a magnifying glass with integrated light
- For capillaries with 1.4mm outer diameter
- Automatic fan cooling that activates to cool off the device after completion of the measurement
- Text display of error messages
- Keyboard covered with foil for easy cleaning
- With operating instructions in German and English; brief instructions right at the device
- With integrated printer for saving space (only HV2)

H2 for visual, semi-automatic measurement with magnifying glass, without printer:

In this model, the melting point is determined visually and then saved by pushing the "Save" key. The starting temperature (approx. 3°C below the expected melting point) is set. A signal sounds when this temperature is reached. The sample is introduced and observed at a heating rate of 1°C/min. after the "start" key is pushed again. When the melting point is determined, the value can be stored by pushing the memory button and read on the display until the device is switched off or a new measurement is performed.

HV2 for visual measurement with magnifying glass or automatic measurement, with printer:

Either fully automatic or visual measurements, 1 sample each.

With this version, you can specify whether you want to observe the melting process through the magnifying glass or have the melting point determined automatically after the pre-set starting temperature is reached (indicated by sound signal). The device starts the heating rate of 1°C/min after introduction of the capillaries into the corresponding opening for automatic measurements. If you chose automatic measurement, a transparency progression is printed from the time the substance starts to become transparent (melting process) to absolute transparency (light-permeability). For visual measurement, only the melting point determined by you will be printed.

The scope of delivery contains 100 melting point determination capillaries and a device protection hood. Refill pack melting point tubes for LLG-Melting point apparatus please order Cat. No. 9.208 131.

Specifications

Measuring range:	25.0°C to 360.0°C
Resolution:	0.1°C
Accuracy:	±0.5°C (+25°C to +200°C) ±0.5% of measured value °C (rem. measuring range)
Heating rate at fast heating:	to 200°C, approx. 4 min to 350°C, approx. 8 min
Heating rate when measuring:	1°C/min
Magnifying glass:	10x
Lighting:	2 x LED
Dimensions (WxDxH):	230mm x 220mm x 315mm
Dimensions capillaries:	1.4mm x 80mm
Weight:	4.5kg
Power supply:	115-230V, 50Hz

Type	Description	PK	Cat. No.
MPM-H2	Visual measuring / magnifier	1	9.208 120
MPM-HV2	Visual or automatical measuring with printer	1	9.208 121
Melting point tubes	Sealed one end, length 80mm, OD 1.40mm	100	9.208 131



1

1 2 Melting point apparatus, model SMP10/SMP20

Supplied with 100 melting point tubes, open one end.
With BioCote, silver-based, antimicrobial protection.

Stuart
Specification

	SMP10/SMP20
Number of samples:	2
Temperature range:	Ambient to 300°C
Temperature accuracy:	±1.0°C at 20°C, ±2.5°C at 300°C
Display:	Three digit LED/Four digit LED
Display resolution:	1°C/0.1°C
Display hold facility:	No/ Yes
Ramp rates:	20°C per minute to plateau, 2°C per minute to melt/20°C per minute to plateau, variable between 1 and 10°C per minute to melt
Dimensions (w x d x h):	160 x 220 x 170mm
Net weight:	1.8kg
Electrical supply:	230V, 50Hz, 75W

2


Type	PK	Cat. No.
SMP10	1	9.950 177
SMP20	1	9.830 430

3

3 4 Melting point apparatus, Electrothermal IA 9100/9200/9300

Electrothermal

With microprocessor heating oven control. Up to 3 melting points can be quickly and accurately determined simultaneously. The starting temperature of the approximate melting range can be input via the keyboard. The unit quickly heats up to this temperature and gives an optical and acoustic signal once it has been reached. When the operator then presses another key, the device begins to heat up at a constant rate (IA 9100 fixed at 1°C/min., IA 9200 and IA 9300 adjustable between 0.2 to 10°C/min. in increments of 0.1°C). Up to 4 melting points(IA 9300 up to 6 melting points) can be recorded and transferred to the memory as discreet temperatures for later recall on the display. The different phases of a melt or the critical melting temperatures of various samples can be investigated under the same conditions in this way. Model IA 9200/9300 provides the opportunity for computer-supported data analysis. The initial temperature and heating rate can be set via the keyboard in order that various test protocols are available. An accessory printer enables documentation of the results, date, time (real time) and sample number. Model IA 9200/9300 can allocate continuous sample numbers or recall data via the keyboard. Information can be transferred directly to a LIMS computer via the RS 232 C interface. The 8X magnifier has a Ø of 40mm and an adjustable focal point. Units comply with VDE requirements (CE marked). Model IA 9300 can be used for pharmacopeia requirements.

4


Dimensions (WxDxH):	200mm x 350mm x 85mm
Weight:	2.5kg
Input:	220V -240V
Output:	12V
Power:	45W
Oven output:	18W
Oven chamber illumination:	12V/ 2.2W
Oven temperature range:	45 to 400°C
Digital thermometer	
Sensor:	linearised industrial platinum resistance thermometer, compensated.
Measuring range:	Amb. to 400°C
Resolution:	0.1°C
Accuracy:	±0.6°C at 20°C ±1 digit ±1.0°C at 350°C ±1 digit
Display:	Four-digit, 12mm high LCD

Type	PK	Cat. No.
Cold finger	1	9.830 445
Capillary tubes, 2.0 mm Ø	100	9.830 447
Printer with connection cable	1	9.830 448
IA 9100	1	9.830 441
IA 9200	1	9.830 442
IA 9300	1	9.830 443
Capillary tubes, 1.5 mm Ø	100	9.830 463

3. Analytical measurement and testing Analytical instruments and systems/Melting point determination

1 Melting Point Meter M5000



A.KRÜSS Optronic

With this instrument, powdery substances with a melting point up to 400°C can automatically be examined. A fan cooling allows fast measurements in every range of temperature. The display provides a clearly-arranged readout of all important measuring data.

- Fully automatic measuring instrument
- Digital temperature control via LCD-display
- Sealed keyboard for easy cleaning
- Alarm function when reaching the melting point
- Digital display of all important data
- Display in German and English
- Automatic quick cooling by integrated fan
- Inclusive instrument protective cover and 100 melting point tubes
- With RS-232 interface for printer CBM910

Specifications

Measuring range:	25 - 400°C
Resolution:	0.1°C
Accuracy:	±0.3°C (25 - 200°C) ±0.5°C (200 - 400°C)
Reproducibility:	±0.2°C
Safety class:	IP 20
Preheating rate:	up to 300°C approx. 4.0min up to 400°C approx. 7.5min
Heating rate during measurement:	1°C min ⁻¹
Capillary-Ø:	1.4mm
Capillary intake:	1
Power supply:	90 - 264V
Dimensions (WxDxH):	230 x 210 x 110mm
Weight:	approx. 1.8kg



1

Type	PK	Cat. No.
Melting Point Meter M5000	1	6.264 452

2 3 Melting Point Apparatus, advanced, SMP30



Stuart

- Maximum temperature 400°C
- Patented head up display
- Integrated cooling 350°C to 50°C in 12 minutes
- Large easy to read user friendly interface

The SMP30 can take three samples simultaneously within the optimised heating block. To allow maximum flexibility a plateau facility is included with variable ramp rate between 0.5 and 10°C in 0.1°C increments. The tubes are illuminated with bright white LED's to give the clearest view of the samples during the melt. The block has been designed for easy access for cleaning. To allow the most comfortable viewing angle the SMP30 features a two stage head adjustment. The SMP30 features the patent pending head up display, this unique feature displays a floating image of the block temperature, visible through the eyepiece, in front of the tubes.

An accessory printer is available separately to produce a written record of the melt.

Specifications

No of samples:	3
Temperature range:	Ambient to 400°C
Temperature resolution:	0.1°C
Display:	40 x 4 segment LCD
Ramp rates:	0.5 to 10°C in 0.1°C increments
Memory:	8 results per tube
Date/time display:	Yes
Cool down time:	350 to 50°C (~12 mins)
Heat up time:	50 to 350°C (~ 6 mins)
Supply requirements:	120V/230V 50Hz
Language variants:	English, German, French, Italian
Temperature unit:	°C



2



3

Type	PK	Cat. No.
Melting point apparatus, complete with pack of 100 melting point tubes, closed at one end.	1	9.950 188
Melting point tubes, closed at one end.	100	6.803 067
Accessory printer with power supply	1	9.950 399



1 2 Automatic Melting Point Apparatus, SMP40

- maximum temperature 400°C
- utilises latest technology in digital imaging
- 5.7" colour VGA touch screen display
- unique split design concept
- integrated cooling: 350°C to 50°C in 10 minutes

Stuart

The SMP40 automatic melting point uses the latest technology in digital image processing to accurately identify the melt of up to three samples simultaneously. The unit comes with a 5.7" colour VGA display, on which the melt can be watched real time, or the melt video will automatically be saved as an AVI file that can be reviewed later, either on the unit or via PC. The result can also be overridden if for any reason the operator does not agree with the result calculated by the image processing algorithm. The SMP40 has an innovative split design concept, the unit can be used as normal or the control side and the melt side can be separated, allowing maximum footprint flexibility. Once the unit has been split the control panel side can be used in two orientations, either landscape or portrait to allow the perfect viewing angle whether you are sat or stood at the bench, the screen automatically changes orientation with the unit. The unit can store up to 200 result files with videos, if required data can be easily transferred from the unit to a flash memory drive or PC via one of the USB connectors. All units are supplied with a calibration certificate showing individual serial numbers for traceability. The SMP40 conforms to Pharmacopeia and GLP.

The SMP40 is also available with IQ/OQ documentation according to FDA guidelines.

Specifications

No of samples:	3 simultaneously
Temperature range:	Ambient to 400°C
Temperature resolution:	0.1°C
Display:	5.7" Colour VGA touchscreen
Ramp rates:	0.1 to 20°C in 0.1°C increments
Memory:	200 results with video
Date/time display:	Yes
Cool down time:	350 to 50°C (approx. 10 mins)
Heat up time:	50 to 350°C (approx. 6 mins)
Flash memory/PC interface:	USB
Supply requirements:	120V, 230V 50Hz a.c.
Language:	English
Temperature units:	°C, °F

Type	PK	Cat. No.
Melting point apparatus, incl. 100 melting point tubes, closed at both ends	1	9.950 398
Glass melting point tubes, closed at both ends	100	9.950 400



3 Melting point tubes

NEW!

Capillary tubes for melting point analysis. Clear glass, different diameters and lengths. Special remarks are available. Other sizes on request.

Ext. diam. mm	Int. diam. mm	Length mm	Type	Material	PK	Cat. No.
1.00	0.80	80	Sealed one end	Duran®	100	9.208 081
1.00	0.80	80	Open both ends	Duran®	100	9.208 080
1.00	0.80	100	Sealed one end	Duran®	100	9.208 101
1.00	0.80	100	Open both ends	Duran®	100	9.208 100
1.40	1.00	80	Sealed one end	Soda glass	100	9.208 131
1.50	0.90	100	Closed both ends	Soda glass	100	9.830 463
1.55	1.15	75	Sealed one end	Soda glass	100	9.208 076
2.00	1.50	100	Closed both ends	Soda glass	100	9.830 447



4 Hot bench, Kofler system

Very easy to use. Various characteristics can be observed simultaneously. Linear temperature scale adjustment. Enables quick identification of organic substances. Supplied with test and standard material sets. CE marked.

Wagner & Munz

Dimensions (WxDxH):	430 x 100 x 140mm
Supply requirements:	230 V/50 Hz, 100 W
Temperature range:	+50 to +260°C

Type	PK	Cat. No.
Hot bench	1	9.830 160