3. Analytical measurement and testing
Thermometers/Laboratory thermometers

LLG-General purpose thermometers *economy*

Solid stem, with loop, capillary yellow enameled, graduation resistant against acids and alkalis. Red filling or environmentally friendly blue filling.

Measuring range °C	Graduations °C	Length mm	Diam. mm	Immersion depth	Charge colour	PK	Cat. No.
-10 ... +50	1	300	6	total	red	1	9.237 010
-10 ... +100	1	300	6	total	red	1	9.237 011
-10 ... +150	1	300	6	total	red	1	9.237 012
-10 ... +200	1	300	6	total	red	1	9.237 013
-10 ... +250	1	300	6	total	red	1	9.237 014
-10 ... +110	1	300	6	76 mm	blue	1	9.237 015
-10 ... +110	0.5	300	6	76 mm	blue	1	9.237 016
-10 ... +150	1	300	6	76 mm	blue	1	9.237 017
-10 ... +250	1	300	6	76 mm	blue	1	9.237 018
-10 ... +360	2	300	6	76 mm	blue	1	9.237 019

9.237 012   9.237 016

3 LLG-General purpose thermometer, red filling

Graduation resistant against acids and alkalies.

Measuring range °C	Graduations °C	Length mm	Diam. mm	Immersion depth	Capillary	PK	Cat. No.
-35 ... +50	1	300	6 ±1	total	white enameled, round	1	9.236 720
-20 ... +110	1	300	6 ±1	total	white enameled, round	1	6.206 594
-20 ... +150	1	300	6 ±1	total	white enameled, round	1	9.236 723
-20 ... +150	1	300	6 ±1	76 mm	white enameled, round	1	9.236 731
-10 ... +110	1	260	6 ±1	total	yellow enameled, round	1	9.236 721
-10 ... +110	1	270	6 ±1	76 mm	yellow enameled, round	1	9.236 727
-10 ... +150	1	260	6 ±1	total	yellow enameled, round	1	9.236 722
-10 ... +200	1	300	6 ±1	total	yellow enameled, round	1	9.236 724
-10 ... +200	1	300	6 ±1	total	white enameled, round	1	9.236 725
-10 ... +200	1	300	6 ±1	76mm	white enameled, round	1	9.236 730
-10 ... +250	1	300	6 ±1	total	yellow enameled, round	1	9.236 726

4 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	Graduations °C	Length mm	Diam. mm	Immersion depth	PK	Cat. No.
-10/0 ... +50	1	200	7 - 8	total	1	9.235 245
-10/0 ... +100	1	260	7 - 8	total	1	9.235 250
-10/0 ... +150	1	260	7 - 8	total	1	9.235 255
-10/0 ... +200*	1	300	7 - 8	total	1	9.235 260
-10/0 ... +250*	1	300	7 - 8	total	1	9.235 265

* Note: With these types the colour can fade after extended periods of use at higher temperatures.

## 5 LLG- General-purpose thermometers, green filling

Glass, solid stem, with loop, white backed. Environmentally friendly thermometer, with biodegradable, green spirit filling.

Measuring range °C	Graduations °C	Length mm	Diam. mm	Immersion depth mm	PK	Cat. No.
-10/0 ... +110	1.0	300	6-7	76	1	9.235 275
-10/0 ... +110	0.5	300	6-7	76	1	9.235 276
-10/0 ... +150	1.0	300	6-7	76	1	9.235 277
-10 ... +250	2.0	300	6-7	76	1	9.235 278
-10 ... +360	2.0	300	6-7	76	1	9.235 279

E & OE.

ARA SPECTRON
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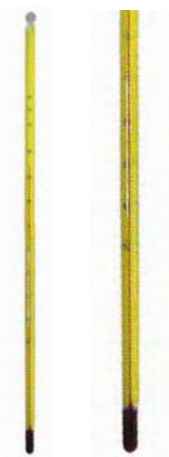
1 LLG-Precision thermometer, calibratable, red filling

Capillary: yellow enameled, round.

Measuring range °C	Graduations °C	Length mm	Diam. mm	PK	Cat. No.
-50 … +50	1.0	280	6 ±1	1	9.236 800
-10 … +100	1.0	305	6 ±1	1	9.236 783
-10 … +150	1.0	305	6 ±1	1	9.236 784
-10 … +200	1.0	350	6 ±1	1	9.236 788
-50 … +50	0.5	300	6 ±1	1	9.236 801
-10 … +100	0.5	270	6 ±1	1	9.236 785
-10 … +150	0.5	350	6 ±1	1	9.236 786
-1 … +101	0.1	610	6 ±1	1	9.236 790
-0 … +50	0.1	420	6 ±1	1	9.236 787
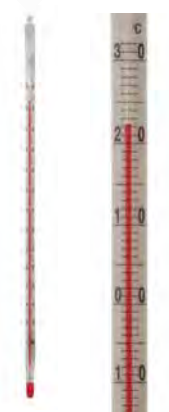
2 LLG-Low temperature thermometers, -200 to +30°C

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
-100 … +30	300	1	9.235 710
-200 … +30	300	1	9.235 720

3 Thermometers, ground glass joint

With NS14.5/23 cone. 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 °C	Graduations °C	Corpus mm	Immersion depth mm	Charge colour	PK	Cat. No.
-10 … +150	1	250	52	red	1	9.236 021
-10 … +15	0.5	350	52	red	1	9.236 022
-10 … +25	1	300	52	blue	1	9.236 023
-10 … +360	1	350	52	green	1	9.236 024
-10 … +150	1	250	77	red	1	9.236 025
-10 … +150	0.5	350	77	red	1	9.236 026
-10 … +250	1	300	77	blue	1	9.236 027
-10 … +360	1	350	77	green	1	9.236 028

(Built-in length = Immersion depth + 23 mm for ground joint)
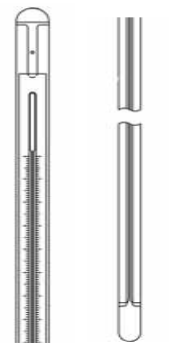
4 Precision ground thermometer, enclosed-scale type, with works calibration certificate

Acc. to DIN 12784, with standard ground joint NS 14.5/23. Enclosed-scale type, capillary: **transparent prismatic**, diam. top: 11 mm (±0.5 mm), suitable for calibration. *Ludwig Schneider*

Measuring range °C	Graduations °C	Built-in length mm	Charge	Joint size NS	PK	Cat. No.
-10 … +150	1	175	blue	14,5/23	1	6.289 969
-10 … +150	1	200	blue	14,5/23	1	6.289 970

5 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*

Adapter bore diam. mm	Cone NS	Neck thread GL	PK	Cat. No.
6 - 8	14/23	14	1	4.008 360
6 - 8	29/32	14	1	6.244 589

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1 ASTM-Thermometers ACCU-SAFE, stem type

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.

Ludwig Schneider

Further types available on request, also in °F.

Measuring range	Graduations	Length	Immersion depth	Charge	Type		PK	Cat. No.
°C	°C	mm			ASTM			
-38 … +50	1,0	260	108	blue	S 5C		1	9.236 850
-20 … +102	0,2	435	total	blue	S12C		1	9.236 852
-2 … +80	0,2	415	total	blue	S15C		1	9.236 854
+34 … +42	0,1	300	total	blue	S18C		1	9.236 856
+95 … +103	0,1	300	total	blue	S22C		1	9.236 858
+19 … +35	0,02	610	total	blue	S56C		1	9.236 860
-34 … +49	0,5	300	total	blue	S58C		1	9.236 862
-18 … +82	0,5	300	total	blue	S59C		1	9.236 864
-38 … +2	0,1	401	total	blue	S62C		1	9.236 866
-8 … +32	0,1	401	total	blue	S63C		1	9.236 868
+25 … +55	0,1	* 401	total	blue	S64C		1	9.236 870
+50 … +80	0,1	* 401	total	blue	S65C		1	9.236 872
+75 … +105	0,1	* 401	total	blue	S66C		1	9.236 874
+95 … +155	0,2	* 401	total	blue	S67C		1	9.236 876
+18,9 …25,1	0,01	615	total	blue	S116C		1	9.236 879
23,9 … 30,1	0,01	615	total	blue	S117C		1	9.236 880
38,6 … 41,4	0,05	* 300	total	blue	S120C		1	9.236 881
-7 … 105	0,5	300	total	blue	S130C		1	9.236 882
+20 … +50	0,1	390	76	blue	S91C		1	9.236 878

*With auxiliary scale at 0 °C

2 Precision thermometer, calibrated, enclosed form

Capillary: colourless prismatic, diam. Ø 9 ±1 mm, environmentally friendly red filling, with DAkkS calibration certificate. 3 checkpoints.

Ludwig Schneider

Measuring range	Graduations	Length	Immersion depth	PK	Cat. No.
°C	°C	mm			
-10 … +100	1	305	total	1	4.658 575
-10 … +150	1	305	total	1	4.658 580
-10 … +100	0,5	270	total	1	4.658 576
-10 … +150	0,5	350	total	1	6.289 516
-5 … +100	0,2	420	total	1	4.658 577
0 … +50	0,1	420	total	1	4.658 579
-10 … +50	0,1	420	total	1	4.658 578

3 Precision thermometer, calibrated, stem type

Capillary: yellow back round, diam. 6 ±1 mm, environmentally friendly red filling, with DAkkS calibration certificate, 3 points.

Ludwig Schneider

Measuring range	Graduations	Length	Immersion depth	PK	Cat. No.
°C	°C	mm			
-10 … +100	1	305	total	1	4.658 581
-10 … +150	1	305	total	1	4.658 582
-10 … +100	0.5	270	total	1	4.658 583
-5 … +100	0.2	420	total	1	4.658 584
0 … +50	0.1	420	total	1	4.658 585
-10 … +50	0.1	420	total	1	4.658 586

4 Thermometer holder

Bel-Art. PP.
For mounting standard glass thermometers onto the rims of containers. Temperature resistant up to 121 °C. Holds thermometer from 3.2 mm to 11 mm diam.

Type	PK	Cat. No.
BEL-ART	1	9.207 922

E & OE.

1   LLG-Exact-Temp thermometers

For monitoring critical temperature conditions in deep freezes, refrigerators, cold rooms, blood bank refrigerators, incubators and warming chambers.

- 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

Measuring range °C	Length mm	Graduations °C	Bottle filling	PK	Cat. No.
-90 ... +20	145	1.0	Sand	1	9.235 663
-30 ... 0	125	0.50	Ethylene Glycol	1	9.235 664
-5 ... +20	145	0.50	Ethylene Glycol	1	9.235 665
-5 ... +15	125	0.50	Ethylene Glycol	1	9.235 666
+18 ... +50	135	0.50	Ethylene Glycol	1	9.235 667
+20 ... +130	135	1.0	Vermiculite	1	9.235 668
+35 ... +200	145	1.0	Vermiculite	1	9.235 669

LLG-Exact-Temp precision thermometers, blue spirit-filled

Measuring range °C	Graduations °C	Length mm	Bottle filling	PK	Cat. No.
-2 ... +10	0.10	180	Ethylene Glycol	1	9.235 676
+15 ... +30	0.10	180	Ethylene Glycol	1	9.235 678
+25 ... +45	0.10	190	Ethylene Glycol	1	9.235 679
+50 ... +115	0.10	200	Vermiculite	1	9.235 680

2   Digital Maxima-Minima-Thermometers Exact-Temp

The unbreakable plastic bottle is filled with a special medium to ensure accurate measurements even at open doors.

Ludwig 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 ... 70	-20	1	9.236 710
Freezing point	-50 ... 70	0	1	9.236 711
Refrigerators	-50 ... 70	4	1	9.236 712
Incubators/Water baths	-50 ... 70	37	1	9.236 713
Climate chambers	-50 ... 70	21	1	9.236 714

E & OE.

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Mini temperature indicators

Self-adhesive, temperature-sensitive films that respond to certain temperature increases by changing colour. If the respective temperature is exceeded, the corresponding field changes colour permanently within 2-3 seconds. For monitoring products or processes where a certain maximum temperature should not be exceeded.

Testo
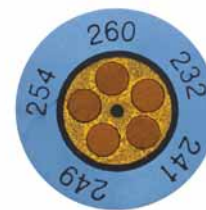
Specifications
Dimensions: diam. 15 mm
Storing conditions: max. 25 °C (storage in freezer recommended)

Temp. range °C	Accuracy	PK	Cat. No.
60 ... 82	±1.5 °C	10	7.036 852 [1]
88 ... 110	±1.5 °C	10	7.036 853
116 ... 138	±1.5 °C	10	7.036 854
143 ... 166	±2 °C (+143 ... +154 °C) ±(1 °C + 1 % of measured value) (remaining range)	10	7.036 855
171 ... 193	±(1 °C + 1 % of measured value)	10	7.036 856
199 ... 224	±(1 °C + 1 % of measured value)	10	7.036 857

7.036 852

Temperature indicators WarmMark™

Self-adhesive indicators to monitor temperature exceedance and duration, e.g. when transporting temperature-sensitive goods. The indicator reliably indicates whether the temperatures were above the selected temperature limit by red dots. In addition, the indicator provides information on the duration of the temperature exceedance (the time is based on a constant temperature overrun of 2 °C above the limit value of the indicator).

Transport Control

- Selection of different temperatures
- Clear display of temperature exceedances and the duration of the exceedance
- Self-adhesive, easy to apply
- ISO-certified
- Dimensions (W x D x H): 19 x 46 x 1.5 mm

Type	PK	Cat. No.
-18 °C	100	4.668 449
0 °C	100	4.668 450
8 °C	100	4.668 451 [2]
25 °C	100	4.668 452

4.668 451

Temperature indicators 3M™ Freeze Watch™

The Freeze Watch consists of a highly sensitive indicating liquid inside a specially designed ampule. The ampule fractures when exposed to freezing temperatures, irreversibly staining the paper backing of the ampule, reliably indicates if the product has been exposed to too high or too low a temperature.
- Selection of different temperatures
- Self-adhesive, easy to apply

3M Deutschland

Type	Temp. range °C	PK	Cat. No.
9800FW	-4 °C	400	4.668 640
9805FW	0 °C	400	7.672 572 [3]

7.672 572

Time/Temperature indicators 3M™ MonitorMark™

3M™ MonitorMark™ Time Temperature Indicator 9860C solves the challenge of monitoring thermal exposure of temperature-sensitive products during transportation and storage. The large indicator window displays exposure, the smaller windows to the right indicate for how long temperature exposure took place.
- Clear display of temperature exceedances and the duration of the exceedance
- Self-adhesive, easy to apply

3M Deutschland

Type	Temp. range °C	For	PK	Cat. No.
9860C	10 °C	48 H	500	4.668 641 [4]
9860H	31 °C	1 Week	500	4.668 642
9860E	26 °C	48 H	500	4.668 643
9861A	10 °C	2 Week	500	6.274 756
9860D	10 °C	1 Week	500	6.284 635

4.668 641

E & OE.

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1

9.246 310

2

9.246 314

5-step irreversible temperature strips Thermax®

5-step irreversible temperature measuring strips covering the temperature range 29 to 290°C.
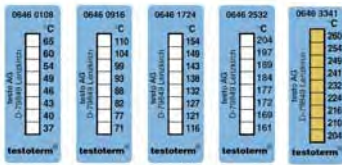Each strip measures 35 x 15mm.

Type	Measuring range °C	PK	Cat. No.
S	+29 ... +40	10	9.246 310 [1]
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 [2]
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

3

3 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.

Testo

Measuring range °C	PK	Cat. No.
+37 ... +65	10	9.246 002
+71 ... +110	10	9.246 003
+116 ... +154	10	9.246 004
+161 ... +204	10	9.246 005
+204 ... +260	10	9.246 006

4

4 Min/Max-Thermometer

- ivory plastic
- beige
- with push button
- mercury-free

TFA Dostmann

Type	Dimensions mm	Weight g	PK	Cat. No.
Min/Max-Thermometer, beige	85 x 45 x 232	88	1	9.241 134

5

5 LLG-Min/Max Thermometer with outdoor sensor

Digital thermometer with outdoor sensor.
- Two-tier LCD display
- Measuring temperature range -50°C to +70°C, can be switched to °F
- 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

6

6 Maximum/Minimum Indoor/outdoor thermometer

Optimal for controlling of refrigerator and freezer temperatures. With temperature alarm.

Amarell

- Measuring range: -50 to +70°C
- Accuracy: 0.1°C
- External remote sensor cable PVC, length 3m
- Dimensions: approx. 65 x 67 x 23 mm

Type	PK	Cat. No.
Dual Thermo Max / Min with temperature alarm	1	6.273 798

E & OE.

ARA SPECTRON
cientifid and Laboratory Equipment Trading LLC

Min/Max alarm thermometer, type 13030, digital

Display of 3 temperatures, with min/max alarm, memory date/time and pull-out stand.　　　　*Ludwig Schneider*
- Without Certificate: temperature sensor with 3 m cable, response time T 90 = 10 sec.
- With Certificate: temperature sensor with 3 m cable attached in 5 ml plastic bottle filled with ethylene glycol/water
  (for measuring delay/alarm lag during opened door). With serial number, certified at a defined temperature,
  certificate traceable to international standards (PTB, NIST, ILAC)

Type	Description	PK	Cat. No.
Without Certificate	-	1	6.263 179
With Certificate	for freezers, approved at -20 °C	1	6.261 440
With Certificate	for refrigerators, approved at +4 °C	1	6.261 441

6.263 179

2　Digital Maxima-Minima-Thermometer

Digital thermometer, wall hanging, for indoor or outdoor use. With blue, splash-proof　　*TFA Dostmann*
casing, selectable °C/°F ranges and battery.
weight:　　　　　　161g

Width mm	Depth mm	Height mm	Description	PK	Cat. No.
75	44	115	-20 … +50 °C	1	9.241 131

3　Laboratory Max./Min. thermometer

Display of current, highest and lowest temperature, hold function, alarm at freely adjustable temperature values optical
and audibly (upper/lower limit), selectable °C/°F readout. Supplied with table stand and magnet.
3V Lithium CR2032 button cell (acc. to EN 13485).

Specifications	LT101	LT102
Sensor:	NTC
Resolution:	0.1 °C
Response time t90:	appr. 15 seconds in water
Dimensions (L x W x H):	86 x 57 x 30 mm
Sensor tube (L x diam.):	100 x 3.5 mm | 30 x 5 mm
Weight:	100 g

Type	Measuring range °C	Accuracy (±) °C	Cable m	PK	Cat. No.
LT101	-40 … +200	2	1	1	6.234 373

Refrigerator thermometers TMX series

Digital minimum/maximum thermometers for monitoring refrigerator temperatures.　　　　*ebro*
Display of the current temperature and the set minimum/maximum limit values. Models
310 and 320 are equipped with an internal and an external temperature sensor, models 410 and 420 with
2 external temperature sensors.

- Visual and acoustic alarm when limit values are exceeded
- The external temperature sensor is located in a glycol bottle or in a metal capsule, depending on the device.
- With 3-point calibration option
- Incl. factory calibration certificate for -20 and 60 °C

4.666 540

Specifications
Temperature range external sensor:	-50 … 70 °C
Temperature range internal sensor:	0 … 50 °C
Resolution:	0.1 °C
Accuracy:	-20 … 40 °C: ±0.5 °C/±1.0 °C for remaining temperature range
Cable length:	3 m
Housing material:	ABS
IP code:	IP 20
Dimensions (W x D x H):	100 x 23 x 110 mm
Power supply:	1 x AAA

Type	PK	Cat. No.
310, with internal and external sensor in glycol bottle	1	4.666 540
320, with internal and external sensor in metal capsule	1	4.666 541
410, with 2 external sensors in glycol bottle	1	4.666 542
420, with 2 external sensors in metal capsule	1	4.666 543

4.666 541

E & OE.

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1 LLG-Digital pocket thermometer Type 12050

Measuring range -50 to +150°C, accuracy ±1°C. Probe made of stainless steel, 120 x 3.5mm, with protective plastic sleeve and clip, with battery 1 x 1.5V (LR44). Overall dimensions (L x W): 75 x 20mm.

Type	PK	Cat. No.
LLG-Digital pocket themometer Type 12050	1	9.236 706

2 LLG-Digital pocket themometer 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 plastice sleeve and clip, with battery 1 x 1.5V (LR44). Dimensions (L x W): 60 x 20mm.

Type	PK	Cat. No.
LLG-Digital pocket themometer Type 12060	1	9.236 701

3 LLG-Digital pocket themometer Type 12070

Measuring range -50 to +300°C, accuracy ±1°C until 150°C, above ±2°C. With hold function. Probe 200 x 3.5mm with tip made of stainless steel, with adjustable protective plastic sleeve and clip, with battery 1 x 1.5V (LR44). Dimensions (L x W): 78 x 25mm.

Type	PK	Cat. No.
LLG-Digital pocket themometer Type 12070	1	9.236 702

4 Thermometer Pocket-Digitemp

Waterproof instrument in plastic housing (food-grade). *Dostmann electronic*
Low budget, durable instrument for measuring temperature in air, gas, liquid and ductile substances (acc. to EN 13485).
Range of applications: Food (HACCP), industry and agriculture.
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
Protection class:	IP65

Type	PK	Cat. No.
short version	1	9.851 028
long version	1	9.851 029

5 Digital pocket themometer ThermoJack/ThermoJack PRO

Foldable pocket themometer, watertight. Ideal for measuring foods (acc. to EN13485), *Dostmann electronic* liquids etc. ThermoJack PRO with calibration certificate.

Type	Measuring range °C	Accuracy °C	Resolution °C	Probe	PK	Cat. No.
ThermoJack	-40 … +250	± 0.5 (-20 … +150)*	0.1	70	1	9.851 997
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

E & OE.

ARA SPECTRON
cientifid and Laboratory Equipment Trading LLC

1   Digital pocket thermometer TLC 700

The practical folding thermometer TLC 700 is suitable for measuring the core *ebro*
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 primarly 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 (W x D x H):	118 x 33 x 15mm
Weight:	approx. 41g

Type	PK	Cat. No.
Digital pocket thermometer TLC 700	1	9.908 018

2   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 110

The robust and shock-resistant insertion thermometer TTX 110 are suitable for HACCP *ebro*
core temperature measurement during transport, storage and incoming goods department
in accordance with DIN EN 13485 as well as for laboratory temperature measurements.

- Battery included and replaceable by the user if required
- Splash-proof
- Factory calibration certificate
- 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
IP code:	IP 55

6.230 658

Type	Description	PK	Cat. No.
TTX 110	Fixed probe without cable	1	6.230 658 3
TTX-WM	Wall holder for TTX 100/TTX 110	1	9.908 026

1

1   Digital hand held thermometer TTX 200

For measuring the core temperature with fixed probe with cable and handle.   *ebro*
- Very large display with large figures
- Easy handling, easy to read
- Replaceable battery
- Factory calibration certificate

Specifications

Temperature range:	-30 … +199.9 °C
Resolution:	0.1 °C
Accuracy:	±0.5 °C (-30 … +100 °C), otherwise ±1 %
Temperature sensor:	Type T
Sensor length/diam.:	120 mm/3 mm
Cable length:	600 mm
Housing:	ABS
Working temperature:	-20 .. +60 °C
Storage temperature:	-30 .. +70 °C
Dimensions (L x W x H):	127 x 60 x 16 mm (without sensor)
Weight:	approx. 220 g
Power supply:	CR 2032
Battery life time:	approx. 100 h (continuous use)
Protection class:	IP 55

Type	PK	Cat. No.
TTX 200	1	6.291 272

2

2   Hand held thermometer Type 13100

Digital temperature measuring device with 2 input channels, incl. 1 sensor with flat plug   *Ludwig Schneider*
(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

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
Insertion/immersion sensor with handle type K, measuring range: -100 to +200 °C (±2.5 °C)	1	6.313 326
Immersion sensor with handle type K, measuring range: -100 to +800 °C (±2.5 °C)	1	6.313 337
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

3

3   Precision hand-held measuring instrument Type 13760

NEW

Precision hand-held measuring instrument with Pt100 temperature sensor and data   *Ludwig Schneider*
logger function for resistance thermometers.
- Functions: °C/°F selection, min/max memory, freeze display, calibration mode, data logger, automatic switch-off
- Relative measurement: saves the last measured temperature and shows the difference to the most similar
  measurement
- Display: date/time, backlit, battery status
- Pt100 temperature sensor 4-wire, class A, IEC751 (replaceable)

Scope of supply: Thermometer, Pt100 temperature sensor, carrying case, power adapter

Specifications

Measuring range:	-100 … +400 °C
Accuracy:	±0.2 °C (-50 … +150 °C)
Resolution:	0.01 °C
Ambient temperature:	0 … +50 °C
Memory:	16000 values
Material Thermometer/Probe:	plastic/platinum
Dimensions Thermometer (W x D x H)/Probe (Ø x L):	185 x 65 x 36 mm/5 x 230 mm
Cable length:	1.5 m
Power supply:	9 V battery or 9 V DC power adapter

Type	PK	Cat. No.
13760	1	6.313 342

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Scientifid and Laboratory Equipment Trading LLC

1 Core thermometer Testo 106

Testo

Ideal for quick, simple core temperature measurements in various fields, e.g. restaurants, hotels, service kitchens, supermarkets etc. Wide measurement range and highly accurate. With Auto-Hold function for final reading.
Includes sensor protection cap and battery. Calibration certificate on request.

The testo 106-T1 kit also contains a TopSafe protective case and a holster clip for belt or wall.

Specifications

Temperature range (°C):	-50 to +275
Accuracy ±1 digit (°C):	±1% of measurement value (+100 to +275)
	±0.5 (-30 to +99.9)
	±1 (-50 to -30.1)
Resolution (°C):	0.1
Battery type:	Lithium (CR2032)

Type	PK	Cat. No.
Testo 106	1	9.718 208
Testo 106-T1 Kit	1	9.718 209
TopSafe protective sleeve (IP67)	1	9.718 232

2 Digital thermometer ama-digit ad 15 th

Amarell

- Available in five colours
- Precise and cost-effective
- With stainless steel sensor approx. 30 x 2.5 mm (L x dia)
- With battery

Colour	Dimensions (W x D x H) mm	Temp. range °C	Resolution temperature °C	PK	Cat. No.
blue	90 x 60 x 25	-40 … 120	0.1	1	6.077 362
yellow	90 x 60 x 25	-40 … 120	0.1	1	6.084 555
red	90 x 60 x 25	-40 … 120	0.1	1	6.084 856
green	90 x 60 x 25	-40 … 120	0.1	1	6.200 783
black	90 x 60 x 25	-40 … 120	0.1	1	9.243 101

3 Digital thermometer ama-digit ad 20 th

Amarell

Temperature range: -50 to +300°C. Resolution 0.1°C from -50 to +180°C, 1°C for the rest of the range. Dimensions (W x D x H) 90 x 60 x 25mm. With battery. For appropriate temperature probes see order no. 9.243 111 to 114.

Type	PK	Cat. No.
ama-digit ad 20 th	1	9.243 102

4 Temperature probes, Pt100 for ama-digit ad 20 th

Amarell

Class A. Stainless steel sheathed probe, approx. 105 x 3mm L x dia.
With handle and approx. 1m cable.

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

5 Temperature measuring instrument testo 108

Testo

- Easy operation and handling
- Instrument and probe waterproof (IP67)
- Conform to HACCP and EN 13485
- Universally applicable

Specifications

Measuring range:	-50 to +300 °C
Accuracy:	±0.5 °C (-30 to +70 °C)
	±0.5 °C ±0.5 % of mv (Remaining Range)
Resolution:	0.1 °C
Battery type:	3 x AAA

Description	PK	Cat. No.
testo 108	1	6.254 472

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1
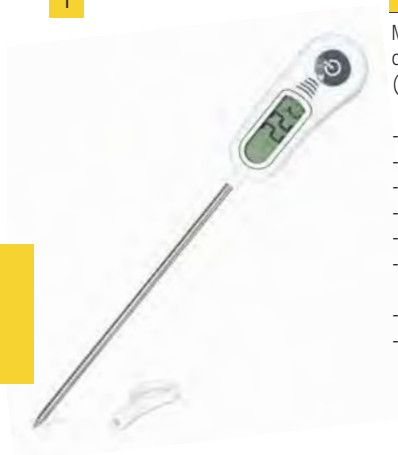
1   Stem thermometer, bluetooth H-B®, stainless steel

NEW

Monitor the temperature of critical environments remotely with Bluetooth wireless data transfer from the thermometer to the THERMSmart app (available for iPhone and Android devices).

Bel-Art Products

- Maximum signal distance is approximately 40 meters
- Alarm sounds to alert user if temperature falls outside of the set parameters
- Includes countdown timer function
- Alarm and timer settings savable for reuse
- LCD screen
- Includes certificate of compliance indicating accuracy for 4 temperature points and multi-language (English, French, German, Italian, Portuguese and Spanish) instructions
- Individually serialised and RoHS compliant
- Batteries included (CR2032)

Specifications

Temperatur range: -50 ... 300 °C
Accuracy: ±1 °C (0 - 40 °C)
±2 °C (-50 - 0 °C, 40 - 200 °C)
±2 % (>200 °C)

Type	PK	Cat. No.
Stem thermometer, bluetooth	1	4.674 979

2

2   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

3

3   Thermocouples with TC adapter for testo 925

Flexible, TC adapter type K.

Testo

Length mm	Material	PK	Cat. No.
800	Fibre glass	1	9.851 724
1500	Fibre glass	1	7.036 710
1500	PTFE	1	7.036 711

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Digital thermometer testo 110

1

Testo

Without probe. For use with accessory NTC sensor probes (option). 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.
Accuracy: System accuracy using immersion/penetration probes.

Measuring range:	-50 to +150 °C
Sensor:	±0.2 °C (-20 to +80 °C)
	±0.3 °C (Remaining Range)
Accuracy:	0.1 °C
Battery:	9V block battery

9.851 300

Description	Measuring range °C	PK	Cat. No.
Digital thermometer testo 110	-50 … +150	1	9.851 300 1
TopSafe (IP68 protective boot)		1	9.718 020
NTC foodstuffs sensor	-35 - +120	1	9.851 714
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

2 Electronic Contact Thermometer GFX 460

2

ebro

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
IP code:	IP 65
Connection:	5-pin diode plug DIN 45322
Display:	Background illumination LED display for control status
Power supply:	external 9-12 V d.c., 20 mA
Dimensions (W x D x H):	54 x 22 x 110 mm without probe
Housing material:	Polyamide, acid-resistant
Weight:	approx. 150 g

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 diam.	1	9.908 057
GFX 460-B	without probe	1	6.235 187
Relay box		1	9.908 059

E & OE.

1

1 Laboratory Thermometer TFX 410-1/TFX 420

ebro

Robust and impact resistant temperature measurement device for Pt 1000 penetration probe (connection Lemo size 0). TFX 420 with MIN, MAX & Hold function. 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.
- Probes made of stainless steel, for temperatures up to +400 °C
- Accuracy: exceeds DIN IEC 584, class 1

Specifications:

Measurement range TFX 410-1/TFX 420:	-50 … +300 °C/-50 … +400 °C
Accuracy:	±0.3 °C
Resolution:	0.1 °C
Sensor:	Pt 1000 (connection Lemo size 0)
Housing material:	ABS
Certificate:	3-point factory calibration
Operating temperature:	-25 °C to +50 °C
Storage temperature:	-30 °C to +70 °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
IP code:	IP 67

Type	Description	Length mm	Diam. mm	PK	Cat. No.
TFX 410-1	Laboratory thermometer (without probe)			1	6.207 171
TFX 410-1 + TPX 400-150	Laboratory thermometer with probe			1	6.243 018
TFX 410-1 + TPX 440	Laboratory thermometer with probe			1	6.224 896
TFX 420 + TPX 400-150	Laboratory thermometer with probe			1	6.243 019
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 400-150	Pointed probe with 150 cm silicone cable (red) and grip	120	3	1	6.254 169
TPX 400-40	Pointed probe with 40 cm silicone cable (red) and grip	120	3	1	9.908 025

2

2 Precision thermometer TFX 430

ebro

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 22 mm
Weight:	approx. 90 g
IP code:	IP 67
Housing material:	ABS

Type	Description	PK	Cat. No.
TFX 430	Precicion-Thermometer, without probe	1	9.908 075
TFX 430 + TPX 130	Precicion-Thermometer, with Pt100 probe (length 130 mm, 3 mm diam., blunt)	1	9.908 076
TFX 430 + TPX 230	Precicion-Thermometer, with Pt100 probe (length 200 mm, 3 mm diam., pointed)	1	9.908 077
TFX 430 + TPX 330	Precicion-Thermometer, with Pt100 probe (length 190 mm, 8 mm diam., glass-coated)	1	9.908 078
TPX 130	Probe, Pt100, length 130mm, 3mm dia., blunt	1	6.235 806
TPX 230	Probe, Pt100, length 200 mm, 3mm diam., pointed	1	6.233 571
AX 110	Extention cable, length 1 m, silicone for TFX 430	1	6.226 725

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1 **Temperature data logger Type 15210**

NEW

1

Temperature data logger with 4 channels, suitable for temperature sensors type K, J, E, T, N, R, S.
- Functions: °C/°F selection, min/max/AVG memory, freeze display, hi/low alarm, Bluetooth, data logger, automatic switch-off
- Display: 4 channels at the same time, date/time, backlit, battery status
- Data transfer via Bluetooth or USB

Ludwig Schneider

Scope of supply: Data logger, 2 x cable sensors type K with flat plug (1 m length), software, Bluetooth adapter, micro USB cable, carrying case

Specifications

Temperature range:	-200 ... +1370 °C
Resolution:	0.1 °C (> 600 °C 1 °C)
Accuracy:	±0.1 % (> 600 °C 0.7 °C) of measured value
Memory:	32000 data per input
Dimensions (L x W x H):	187 x 75 x 29 mm
Weight:	290 g
Power supply:	4 x 1.5 V battery UM-4 or AAA

Type	PK	Cat. No.
15210	1	**6.313 339**

2 **Combination Infrared and Penetration Thermometer TLC 750i**

2

Handy, waterproof infrared thermometer with large measurement range for non-contact 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

- Display with backlight for reading in dark environments
- Display can be upside down for reading from both sides
- Double laser pointer

Specifications

Measurement range:	-50 to +250 °C
Accuracy infrared:	±4 °C (-50 to -30.1 °C)
	±2.5 °C (-30 to -18.1 °C)
	±1.5 °C (-18 to -0.1 °C)
	±1.0 °C (0 to +65 °C)
	±2.0 °C or 2 % (+65 to +250 °C)
Accuracy penetration probe:	±0.5 °C (-30 to +99 °C)
	otherwise ±1 °C (1 %), larger value applies
Resolution:	0.1 °C
Distance : spot ratio:	8 : 1
Sensor:	Type T
Operating temperature:	-25 to +50 °C
Dimensions (L x W x H):	169.5 x 44 x 23 mm
Weight:	approx. 140 g
Battery:	2 x AAA (Micro), replaceable
Deactivation:	automatically after 15 sec., deactivatable
IP code:	IP 65

Type	PK	Cat. No.
TLC 750i	1	**6.289 927**

E & OE.

1

1 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

2

2 Infrared-Thermometer Slim Flash

Non-contact temperature measurement via infrared. Response time 1 second.   *Dostmann electronic*
Measuring range -33 to +199°C, Accuracy ±2°C or 2%, incl. CR2032 button cell.

Type	PK	Cat. No.
Infrared-Thermometer Slim Flash	1	9.851 998

3

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 … 365°C
Precision:	±2% or 2 °C, the higher value counts
Response time:	< 1 sec
Spectral sensitivity:	6 … 14µm
Operating temperature:	0 … 50 °C
Optical resolution:	12:1
Laser:	Spot laser
Dimensions (L x W x H):	147.9 x 112.6 x 41.4mm
Weight:	150 g (incl. packaging)
Battery:	2 x 1.5V AAA Batteries

Type	PK	Cat. No.
ScanTemp 385	1	9.851 996

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1 Infra-red thermometer with double-laser sighting, ScanTemp 485

For contact-free measuring of surface temperature, highest precision due to special glass lens, with double-laser sighting.

TFA Dostmann

Specifications
Temperature range:	-50 … +800°C
Precision:	±2 % or 2 °C, the higher value counts
Response time:	0.5 seconds
Dimensions (L x W x H):	42 x 85 x 152 mm
Weight:	140 g
Battery:	1x 9V battery included

Type		PK	Cat. No.
ScanTemp 485		1	6.240 840

2 Infrared Thermometers TFI 260/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
Distance : spot ratio:	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 48 mm (TFI 260)
	144 x 117 x 43 mm (TFI 54)
Weight (with batteries):	177 g (TFI 260), 180 g (TFI 54)
Battery:	2 x 1.5 V AAA, replaceable
IP code:	IP 20 (TFI 260), IP 54 (TFI 54)

Type	Description	PK	Cat. No.
TFI 260	Infrared thermometer	1	6.272 762
TFI 54	Splash water proof infrared thermometer	1	9.908 032

3 Infra-red thermometers, testo 830-T1

NEW

Infrared thermometer for non-contact measurement of surface temperatures. Laser measurement point marker and large optics for exact measurement even at medium distances.
- Fast recording of measurement values at 2 measurements per second
- Adjustable emissivity
- 2 adjustable alarm limit values
- Hold function and display of min./max. values

Testo

Scope of supply: Thermometer, batteries, works calibration certificate

Specifications
Measuring range:	-30 … +400 °C
Accuracy:	±1.5 °C or 1.5 % of measured value (+0.1 … +400 °C)
	±2 °C or ±2 % of measured value (-30 … 0 °C)
	larger value counts
Resolution:	0.1 °C
Measuring spot marking:	1-point-laser
Distance to measured spot:	10:1
Dimensions (W x D x H):	38 x 75 x 190 mm
Weight:	200 g
Power supply:	9 V block batterie

Type		PK	Cat. No.
testo 830-T1		1	9.718 418

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ARA SPECTRON
cientifid and Laboratory Equipment Trading LLC

1

1   Disposable data logger TempMate-S1

The single-use data logger TempMate-S1 with its built-in USB connector, is the ideal *Dostmann electronic*
solution for low-cost temperature monitoring of transports. TempMate-PDF loggers
directly useable with pre-programmed configuration or reprogrammable with Tempbase Software
according to each customer's specifications. To download the recorded data, simply connect TempMate-S1
directly to the USB port. A PDF and CSV report will automatically be generated, covering temperature graph,
detailed data list and statistical information. No hardware (cable, interface) or software is required.

- Auto generating PDF and CSV format data report
- 110 days run time 16.000 measurements, 10 minuteinterval
- Reprogrammable with Tempbase Software free of charge
- Up to 5 alarm points configurable
- Integrated USB connector
- LED Alarm indicators
- Serial number sticker
- Inclusive certificate
- Food proof according to HACCP

Specifications

Temperature Range:	-30 ... 70 °C
Accuracy:	±0.5 °C at -20 ... +40 °C/±1.0 °C in remaining range
Resolution:	0.1 °C
Data Memory:	16.000 measurements
Recording Cycle:	110 days
Sampling Interval:	10 min
Shelf Life:	24 months
Dimensions (L x W x H):	80 x 47 x 7 mm
Weight:	14.6 g
IP code:	IP 67/NEMA 6
Certifications:	Calibration Certificate, EN 12830 S, T, C, D, 1

Type	PK	Cat. No.
TempMate-S1	1	6.285 049

2

2   Data Logger LOG32T

The LOG32T is perfectly designed for product transportation or storage applications. *Dostmann electronic*
Ambient conditions in power plants.
- 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

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

E & OE.

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Data Logger EBI 20-T1/EBI 20-TE1

ebro

Applications:
- transport
- storage monitoring
- refrigeration areas and coldrooms

Features:
- waterproof
- visual Alarm
- max/min values on display
- stores 40.000 readings, can be read off at any time
- replaceable battery

9.908 069

Scope of supply:
EBI 20-T1: Temperature Logger
EBI 20-T1-Set: Temperature Logger, evaluation software, Interface
EBI 20-TE1: Temperature Logger with external probe
EBI 20-TE1-Set: Temperature Logger with external sensor, evaluation software, Interface

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
IP code:	IP 67
Housing:	ABS
Dimensions:	69 x 48 x 22 mm
Weight:	approx. 45 g

6.240 382

Type	PK	Cat. No.
EBI 20-T1	1	9.908 069
EBI 20-T1-Set	1	9.908 073
EBI 20-TE1	1	6.228 382
EBI 20-TE1-Set	1	6.240 382

3 Temperature data logger LOG200

Dostmann electronic

- Memory size: 150.000 measurements
- Usable without software (default settings) (15-minute-interval, without alarm settings)
- Automatic PDF creation
- Free adjustable recording interval: 10 seconds to 24 hours
- Max-Min-Display memory (resettable)
- Time marking functions for measuring results
- Movement sensor for shock recording e.g.: door or windows closing
- Battery lifetime approx. 4 years (recording interval >15 minutes)
- Includes wall mount
- Status- and Alarm-LEDs
- HACCP conformity according EN 12830

Free software LogConnect, for configuring (alarms, interval, changing display settings) or LogGraph2 for comfortable graphical and tabular display of measured values, incl. drag and zoom. Software is available as download.

Specifications

Measuring range:	-40 to +70 °C
Accuracy:	0.1 °C
Precision:	±0.5 °C (-20 to +50 °C), otherwise ±1.0 °C
Interface:	USB (integr.)
Housing:	Plastic (ABS)
Battery:	1 x 3.6 Volt Lithium 1/2 AA
Dimensions:	91.5 x 42 x 20 mm
Weight:	approx. 70 g

Type	PK	Cat. No.
LOG200	1	6.284 757

E & OE.

1

7.626 604

Mini data logger testo 174T

Testo

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.

- 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

testo 174T: Mini data logger, 1-channel, incl. wall bracket, battery (2 x CR 2032 Lithium) and calibration protocol.
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.

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	PK	Cat. No.
testo 174T	1	7.626 604
testo 174T-Set	1	7.626 614

2

2 Temperature logger LOG200E

NEW

Dostmann electronic

Data logger with motion sensor, integrated USB interface for automatic PDF output and
wall mount. For internal temperature measurement and recording. With connection for
an external PT100 temperature sensor.

- Freely adjustable recording interval from 10 seconds to 24 hours
- Min- and Max-values can be reset in the display
- Time marking function ("Time Marker") during data recording
- With movement sensor for shock recording
- Memory for approx. 60000 measurements
- Automatic output as PDF file, device can also be used without software
- No driver installation needed
- Status and alarm LEDs, with buzzer
- Display can be switched off
- Battery life > 4 years at > 15 min measuring interval
- Software available for download on the manufacturer's website (free of charge)

Temperature sensors are available as accessory.

Scope of supply: Data logger, wall mount, battery, USB cover, screws and dowels

Specifications

Temperature range internal:	-40 … 70 °C
Temperature accuracy internal:	±0.4 °C (-10 … 40 °C), otherwise ±1 °C
Temperature range external:	-200 … 850 °C
Temperature accuracy external:	±0.2 °C or 0.3 % (the greater value applies)
Temperature resolution:	0.1 °C
Housing:	ABS
Dimensions (W x D x H):	42 x 20 x 91.5 mm
Weight:	70 g
Power supply:	1/2 AA 3.6 V

Type	PK	Cat. No.
LOG200E	1	6.311 945

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Standard PDF Data Logger EBI 300

PDF data logger with different temperature sensors. *ebro*
- 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, PDF are automatically generated
- 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
- No separate interface for programming and reading

EBI 300: PDF data logger with internal temperature sensor
EBI 300 TE: PDF data logger with external temperature sensor, internal temperature sensor can be used additionally.
EBI 300 TH: PDF data logger with external humidity and temperature sensor, internal temperature sensor can also be used.

7.655 865

6.266 910

6.266 911

Specifications

Ambient Temperature:	-30 to +70 °C
Measuring range Temp. EBI 300/300 TH:	-30 to +70 °C
Measuring range Temp. EBI 300 TE:	-35 to +70 °C
Measuring range Humidity EBI 300 TH:	0 to 100 % r.F.
Accuracy Temperature:	±0.5 °C (-20 to +40 °C), ±0.8 °C for remaining range
Accuracy Humidity:	±3 % (10 to 90 % rh), ±5 % for remaining range
Resolution Temperature/Humidity:	0.1°C/0.1 % rh
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 h
Housing material:	Polycarbonate
Measuring modes:	Start/Stop, endless loop, start with button
Alarms:	2 values, high and low limits
Weight:	35 g
IP code:	IP 65

Type	PK	Cat. No.	
EBI 300	1	7.655 865	1
EBI 300 TH	1	6.266 910	2
EBI 300 TE	1	6.266 911	3

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9.908 098

High Precision PDF Data Logger EBI 310

PDF data logger with different temperature sensors. Compared to the EBI 300, the EBI 310 is characterized by shorter measuring intervals and higher storage capacity.

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
- "Traffic light principle" by limit exceeded
- IQ/OQ procedures through standardized software and standard reporting process possible
- GMP, pharmaceutical law compliant; EN 12830, ATP, VO (EG) 37/205 compliant, 21 CFR Part 11 conform (Winlog.basic)
- Programmable via the free online configurator at www.ebi300.com

EBI 310: Data logger with internal temperature sensor
EBI 310 TE: Data logger with external precision temperature sensor, internal temperature sensor can be used additionally. Measurements in high and low temperature range
EBI 310 TH: Data logger with external humidity and temperature sensor, internal temperature sensor can be used additionally. Monitoring the relative humidity in storage and transport
EBI 310 DI: Data logger with external precision temperature sensor, internal temperature sensor can be used additionally. Precise temperature measurement for dry ice and freezers. Logger also works in dry ice.
EBI 310 TX: Data logger with temperature dual adapter for two exchangeable temperature sensors (not included in the scope of supply), internal temperature sensor can be used additionally.

Specifications

Ambient Temperature:	-30 to +75 °C
Measuring range Temp. EBI 310/310 TH:	-30 to +75 °C
Measuring range Temp. EBI 310 TE:	-200 to +250 °C
Measuring range Humidity EBI 310 TH:	0 to 100 % rh
Accuracy Temperature:	±0.2 °C (-30 to +30 °C); ±0.5 °C for remaining range
Accuracy Humidity EBI 310 TH:	±3 % (10 to 90 % rh)
Resolution Temperature/Humidity:	0.1 °C/0.1 % rh
Memory Capacity:	120.000 measurements
Sensor:	Pt1000/NTC
Battery life time:	up to two years
Measuring period:	1 s to 24 h
Maximum Start Delay:	72 h
Housing material:	Polycarbonate
Measuring modes:	Start/Stop, endless loop, start with button
Alarms:	5 values
Weight:	35 g
IP code:	IP 65

Type	PK	Cat. No.
EBI 310	1	9.908 098 [1]
EBI 310 TE	1	6.266 913
EBI 310 TH	1	6.266 912
EBI 310 DI	1	6.282 436
EBI 310 TX	1	7.643 731

Accessories for PDF Data Logger EBI 300/EBI 310

ebro

9.908 017

6.281 570

Type	Description	PK	Cat. No.
EBI 300-WM2	Wall Bracket	1	9.908 017 [2]
EBI 300 WM3	Wall Bracket, stainless steel	1	6.281 570 [3]
TPC 300	Replacement probe for EBI 300 TE	1	9.908 027
TPX 220	Replacement probe for EBI 310 TE	1	9.908 099
TPX 250	Replacement probe for EBI 310 DI	1	9.908 100
TPH 500	Replacement probe for EBI 310 TH	1	6.263 842
AH 300	Stainless Steel-Sinter-Filter	1	6.281 569

E & OE.

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Wireless temperature data loggers EBI 25-T/TE

Wireless temperature data loggers for storage rooms and refrigerated cabinets.   *ebro*

- Readout via wireless interface
- Replaceable battery
- High protection class IP67
- LCD display
- Memory for 288 values

EBI 25-T: with internal NTC temperature sensor
EBI 25-TE: with external NTC temperature sensor

The IF 400 base station and the Winlog.web/Winlog.wave PC software (see "Accessories for EBI 25 data loggers) are required for programming and evaluating the EBI 25-T/TE data loggers.

Scope of delivery: temperature data logger, operating manual

Specifications

Sensor:	NTC
Channels:	1
Measuring cycle:	1 min. … 24 Hrs. user definable
Measuring range EBI 25-T:	-30 … 60 °C
Measuring range EBI 25-TE:	-40 … 85 °C
Accuracy EBI 25-T (±1 digit):	±0.5 °C (-20 … 40 °C)
	±0.8 °C (40.1 … 60 °C)
Accuracy EBI 25-TE (±1 digit):	±0.5 °C (-20 °C … 40 °C)
	±0.8 °C (-30 °C … -20 °C; 40 °C … 60 °C)
	±1.5 °C (-40 °C … -30 °C; 60 °C … 85 °C)
Resolution:	0.1 °C
IP code:	IP 67
Battery life:	approx. 2 years
Operation and storage temperature:	-30 … 60 °C/-40 … 85 °C
Dimensions (W x D x H):	48 x 27 x 95 mm
Power supply:	1 x Lithium battery 3.6 V, replaceable

Type	Description	PK	Cat. No.
EBI 25-T	with internal temperature sensor	1	6.252 642
EBI 25-TE	with external temperature sensor	1	6.252 678

6.252 642

Temperature data logger testo 175 T3

Temperature data logger with 2 connections for external temperature sensors, e.g.   *Testo*
immersion sensor, surface or air sensor. Data is stored even if the battery is changed or empty.

- Suitable for rough environmental conditions
- Protected against splashing and jetting water
- With the appropriate temperature sensors, temperatures from -50 to 1000 °C can be measured and recorded
- Memory for 1 million values
- With easy-to-read LCD display
- Battery life up to 3 years
- With Mini USB connection and SD card slot
- Software for reading out the values is available as free download on the manufacturer's website

Scope of delivery: Temperature data logger with 2 connections for external temperature sensors type T and type K, flexible immersion probe type K, wall bracket, lock, batteries and calibration protocol.

Specifications

Channels:	2 x external
Measurement cycle:	10 sec. … 24 Hrs. user definable
Measuring range:	-50 … 1000 °C
Accuracy ±1 digit:	±0.5 °C (-50 … 70 °C)
	±0.7 % (+70.1 … 1000 °C)
Resolution:	0.1 °C
Protection class:	IP65
Battery life:	3 years
Operation and storage temperature:	-20 … 55 °C
Dimensions (W x D x H):	55 x 30 x 95 mm
Power supply:	3 x AAA

Type	Description	PK	Cat. No.
testo 175 T3	Device only	1	6.243 831
testo 175 T3	testo 175 T3 incl. flexible immersion probe, type K	1	6.268 630

6.243 831

E & OE.

1

1   Wireless temperature data logger EBI 25-TX

Wireless temperature data logger for low temperatures. With external temperature sensor.   *ebro*

- Measuring range down to -200 °C
- External temperature sensor with 3 m cable
- Readout via wireless interface
- Replaceable battery
- High protection class IP67
- LCD display
- Memory for 288 values

The IF 400 base station and the Winlog.web/Winlog.wave PC software (see "Accessories for EBI 25 data loggers) are required for programming and evaluating the EBI 25-TX data logger.

Scope of delivery: temperature data logger, operating manual

Specifications

Sensor:	PT1000, Binder series 620
Channels:	1
Measuring cycle:	1 min. ... 24 Hrs. user defineable
Measuring range:	-200 ... 199.9 °C
Accuracy (±1 digit):	±2.0 °C (-200 °C ... -100 °C)
	±0.5 °C (-100 °C ... -20 °C)
	±0.2 °C (-20 °C ... 60 °C)
	±0.5 °C (60 °C ... 199.9 °C)
Resolution:	0.1 °C
IP code:	IP 67
Battery life:	approx. 2 years
Operation and storage temperature:	-30 ... 60 °C/-40 ... 85 °C
Dimensions (W x D x H):	48 x 27 x 95 mm
Power supply:	1 x Lithium battery 3.6 V, replaceable

Type	Description	PK	Cat. No.
EBI 25-TX	With external temperature sensor	1	7.659 065

2

2   Temperature/Humidity logger LOG32TH

- Memory size: 60 000 measurements   *TFA Dostmann*
- 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 >5 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.
LOG32TH		1	9.726 422

E & OE.

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1 Temperature/Humidity data logger LOG 210

1

Dostmann electronic

- PDF-data logger with display
- Memory size: 100.000 measurements
- Usable without software (default settings) (5-minute-interval, without alarm settings)
- Automatic PDF creation
- Movement sensor for shock recording e.g.: door or windows closing
- Free adjustable recording interval: 10 seconds to 24 hours
- Max-Min-Display memory (resettable)
- Time marking functions for measuring results
- Battery lifetime approx. 4 years (recording interval >15 minutes)
- Status- and Alarm-LEDs
- Includes wall mount

Free software LogConnect, for configuring (alarms, interval, changing display settings) or LogGraph2 for comfortable graphical and tabular display of measured values, incl. drag and zoom. Software is available as download.

Specifications
Temperature

Measuring range:	-40 to +70 °C
Accuracy:	0.1 °C
Precision:	±0.5 °C (0 to +60 °C), otherwise ±1.0 °C

Humidity

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 3.6 Volt Lithium ½ AA
Dimensions:	91.5 x 42 x 20 mm
Weight:	approx. 70 g

Type	PK	Cat. No.
LOG210	1	6.284 758

2 Temperature and humidity logger LOG210 TC

NEW

2

Dostmann electronic

Data logger with motion sensor, integrated USB interface for automatic PDF output and wall mount. For measurement and recording of temperature and humidity and 2 connections for external type K thermocouples.
- Freely adjustable recording interval from 10 seconds to 24 hours
- Min- and Max-values can be reset in the display
- Time marking function ("Time Marker") during data recording
- With movement sensor for shock recording
- Memory for approx. 60000 measurements
- Automatic output as PDF file, device can also be used without software
- No driver installation needed
- Status and alarm LEDs, with buzzer
- Display can be switched off
- Battery life > 4 years at > 15 min measuring interval (free of charge)
- USB interface for data transfer
- Software available for download on the manufacturer's website

Temperature and humidity sensors are available separately.

Scope of supply: Data logger, 2 thermocouples type K (1 m length), wall mount, battery, USB cover, screws and dowels

Specifications

Temperature range internal:	-40 … 70 °C
Temperature accuracy internal:	±0.5 °C (0 … 60 °C), otherwise ±1 °C
Temperature range external:	-150 … 1370 °C
Temperature accuracy external:	±0.5 °C or 0.5 % (the greater value applies)
Temperature resolution:	0.1 °C
Humidity range:	0 … 100 % r.H.
Humidity accuracy:	±3 % r.H. (40 … 60 % r.H.), ±3.5 % r.H., (20 … 40 and 60 … 80 % r.H.), otherwise ±5 % r.H.
Humidity resolution:	0.1 % r.H.
Housing:	ABS
Dimensions (W x D x H):	42 x 20 x 91.5 mm
Weight:	70 g
Power supply:	1/2 AA 3.6 V

Type	PK	Cat. No.
LOG210 TC	1	6.311 944

E & OE.

1

9.908 070

Temperature/Humidity data logger EBI 20-TH1

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
IP code:	IP 52
Housing:	ABS
Dimensions:	69mm x 48mm x 22mm

Type	PK	Cat. No.
EBI 20-TH1	1	9.908 070 **1**
EBI 20-TH1-Set	1	9.908 074

2

6.239 884

Temperature/Humidity data logger testo 174 H

Testo

The mini data logger for temperature and humidity, testo 174 H, is ideal for monitoring temperature and humidity sensitive goods in storage. The testo 174 H also monitors building climate, continuously, securely and unobtrusively. The free software ComSoft basic allows fast programming of the data logger and easy analysis.
- Humidity sensor with long-term stability
- High data integrity, even with empty battery
- Display of the current temperature or humidity value
- Issue of alarms via display
- Data transfer to the PC via USB interface

testo 174H: Mini data logger, 2-channel, incl. wall bracket, battery (2 x CR 2032 lithium) and calibration protocol.
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.

Specification

Probe type:	NTC temperature sensor and internal capacitive humiditiy 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:	ComSoft basic (Windows)

Type	PK	Cat. No.
testo 174H	1	6.239 884 **2**
testo 174H-Set	1	6.239 883

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1 Temperature/Humidity data logger LOG 110

Large display for actual value, battery status display, easy to use software. *Dostmann electronic*
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 3 V
Dimensions:	92 x 55 x 21mm
Weight:	95 g (incl. packaging)
Alarm function:	Alarm for too low or too high temperature and/or humidity values
	Calibration reminder

Type	PK	Cat. No.
LOG 110	1	**9.726 412**

2 Wireless temperature data logger EBI 25-TH

Wireless temperature and humidity data logger. With internal temperature sensor and *ebro*
external humidity sensor.

- Readout via wireless interface
- Replaceable battery
- LCD display
- Memory for 288 values per channel

The IF 400 base station and the Winlog.web/Winlog.wave PC software (see "Accessories for EBI 25 data loggers)
are required for programming and evaluating the EBI 25TH data logger.

Scope of delivery: temperature and humidity data logger, operating manual

Specifications
Sensors:	Temperature: NTC/Humidity: capacitive
Channels:	1 x internal, 1 x external
Measuring cycle:	1 min ... 24 Hrs..
Temperature measuring range:	-30 ... 60 °C
Humidity measuring range:	0 ... 100 % r.H
Temperature accuracy (±1 digit):	±0.5 °C (-20 °C ... 40 °C)
	±0.8 °C (40.1 ... 60 °C)
Humidity accuracy (±1 digit):	±3 %
Temperature resolution:	0.1 °C
Humidity resolution:	0.1 % r.H
IP code:	IP 20
Battery life:	approx. 2 years
Operation and storage temperature:	-30 ... 60 °C/-40 ... 85 °C
Dimensions (W x D x H):	48 x 27 x 95 mm
Power supply:	1 x Lithium battery 3.6 V, replaceable

Type	PK	Cat. No.
EBI 25-TH	1	**7.656 516**

E & OE.

1

1 Temperature/Humidity/Pressure data logger LOG 220

Dostmann electronic

- PDF-data logger with display
- Memory size: 60.000 measurements
- Usable without software (default settings) (5-minute-interval, without alarm settings)
- Automatic PDF creation
- Free adjustable recording interval (10 seconds to 24 hours
- Max-Min-Display memory (resettable)
- Time marking functions for measuring results
- Movement sensor for shock recording e.g.: door or windows closing
- Battery lifetime approx. 4 years (recording interval >15 minutes)
- Includes wall mount
- Status- and Alarm-LEDs

Free software LogConnect, for configuring (alarms, interval, changing display settings) or LogGraph2 for comfortable graphical and tabular display of measured values, incl. drag and zoom. Software is available as download.

Specifications
Temperature
Measuring range:	-40 to +70 °C
Accuracy:	0.1 °C
Precision:	±0.5 °C (0 to +60 °C), otherwise ±1.0 °C

Humidity
Measuring range:	0 to 100 % R.H.
Accuracy:	0.1% R.H.
Resolution:	±3 % R.H. (40 to 60 %), ±3.5 % R.H. (20 to 40 % and 60 to 80 %), otherwise ±5 % R.H.

Pressure
Measuring range:	300 to1100 hPa
Accuracy:	0.1 hPa
Precision:	±1 hPa (900 to 1100 hPa), otherwise 0.5 % of end value
Interface:	USB (integr.)
Housing:	Plastic (ABS)
Power supply:	1 x 3.6 Volt Lithium ½ AA
Dimensions:	91.5 x 42 x 20 mm
Weight:	approx. 60 g

Type	PK	Cat. No.
LOG220	1	6.284 759

2

2 Data logger LOG32THP

Dostmann electronic

Temperature-humidity-pressure logger with integrated USB-interface and automatic PDF-creation, inclusive wall mount.
- Memory for 3 x 60.000 measurements
- Useable without software (default settings with 5 minuteintervals)
- Automatic PDF creation (no drivers required), optional software download
- Free adjustable recording interval 30 seconds up to 24 hours (via Software Log Connect)
- Battery lifetime > 2 years (recording interval >15 minutes)
- Statusand alarm-LEDs, includes wall mount

Specifications
Measuring range:	-40 … +70 °C, 0 … 99 %rh, 300 … 1100 hPa
Accuracy:	±0.5 °C (-10 … 40 °C) ±3 % (40 … 60 % rh), ±1 hPa (900 … 1100 hPa) otherwise 0.5 %
Resolution:	0.1 °C/0.1 %rh/0.1 hPa
Memory:	3x 60 000 measurements
Interface:	USB (intergr.)
Housing:	ABS
Dimensions (L x W x H):	102 x 20 x 21 mm
Weight:	70 g
Battery:	1x 3.6 V lithium 1/2 AA

Type	PK	Cat. No.
LOG32THP	1	7.971 350

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1 Temperature, humidity, pressure and CO_2 logger LOG220E

Dostmann electronic

Data logger for temperature, humidity and pressure recording with an external connection for a CO_2 sensor or humidity, pressure and temperature sensor. Incl. wall mount.

- Freely adjustable recording interval from 10 seconds to 24 hours
- Min- and Max-values can be reset in the display
- Time marking function ("Time Marker") during data recording
- With movement sensor for shock recording
- Memory for approx. 60000 measurements
- Automatic output as PDF file, device can also be used without software
- No driver installation needed
- Status and alarm LEDs, with buzzer
- Display can be switched off
- Battery life > 4 years at > 15 min measuring interval
- USB interface for data transfer
- Software available for download on the manufacturer's website (free of charge)

Temperature, pressure humidity and CO_2 sensors are available separately.

Scope of supply: Data logger, wall mount, battery, USB cover, screws and dowels

Specifications

Temperature range internal:	-40 ... 70 °C
Temperature accuracy internal:	±0.5 °C (0 ... 60 °C), otherwise ±1 °C
Temperature range external:	-200 ... 850 °C
Temperature accuracy external:	±0.2 °C or 0.3 % (the greater value applies)
Temperature resolution:	0.1 °C
Humidity range:	0 ... 100 % r.H.
Humidity accuracy:	±3% r.H. (40 ... 60 % r.H.), ±3.5 % r.H. (20 ... 40 % and 60 ... 80 % r.H.), otherwise ±5 % r.H.
Humidity resolution:	0.1 %
Pressure range:	300 ... 1100 hPa
Pressure accuracy:	±1 hPa (900 ... 1100 hPa), otherwise 0.5 % of end value
Pressure resolution:	0.1 hPa
Housing:	ABS
Dimensions (W x D x H):	42 x 20 x 91.5 mm
Weight:	70 g
Power supply:	1/2 AA 3.6 V

Type	PK	Cat. No.
LOG220E	1	6.311 947

We can **supply** this

manufacturer's whole

product range !

LLG
Lab Logistics Group

DOSTMANN electronic GmbH