# **Temperature °Controls Pty Ltd** Specialists in Industrial Temperature Measurement

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## No more problems with your temperatures!

**Temperature measurement according to HACCP** 

**Robust and reliable** thermometers for food control!



DUAL 91.3









#### Suitability of measuring instruments for food use

The measuring instruments have been tested and due to the type, the materials used, the technology and the measurement precision, they are applicable for all kind of temperature measurements for the control of food safety.



Measuring instruments with calibration certificate

A calibration certificate is issued based on comparison measurements with a reference standard, which has been DKD-certificated and accepted by the PTB. Therefore the measuring instrument is traceable to national standards and is compliant with the requirements of the ISO 9000 quality standard.



#### Swiss Precision Sensor

In collaboration with a Swiss high tech company TFA developed high quality sensors for hygrometers and barometers with the precision of industrial measuring instruments:  $\pm 3\%$  relative humidity and  $\pm 1$  hPa. All products using such precision sensors are labelled in the catalogue and on the packaging with this red quality seal.



#### Conform EN 13485

According to the European standard specifications for thermometers for the transport, storage and distribution of chilled, frozen and deep-frozen food and ice cream.



#### Conform EN 12830

According to the European standard specifications for temperature recorders for the transport, storage and distribution of chilled, frozen and deep-frozen food and ice cream.

## Calibration

All instruments are able to be calibrated against instruments with NATA certification.

Calibration of instruments and temperature sensing probes with NATA certification is available at extra cost.

Contact our office for more information and pricing.

Response time t90 = is the time, in seconds, required for the sensor to reach 90% of the final temperature (in running water).





## Temperature measurement

Production/Goods receipt	
P400W - Pt100-temperature measuring instrument P300	4 4
Pocket-DigiTemp	5
LabTherm	5
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Temperature measurement with and without contact		
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Temperature measurement witho	ut contact
Goods receipt/Production/Warehouse	
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Data logger			
Transport/Warehouse			
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LOG20	14		
LOG100	14		

#### **Temperature measurement**

#### Production / Goods receipt

#### Waterproof precision thermometer

Ideal for measurements in accordance with HACCP. The meter is designed especially for the operating conditions of the food branch. The instrument is IP65 protected. The measurement accuracy ( $\pm 0.3^{\circ}$ C)

CONFORM

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- P400W Pt100-temperature instrument
   for all HACCP temperature controls
   Splashwater protected and washable (IP65)
   Pt100, 4-wire technology (±0.3°C)
   Storage of MAX- and MIN-values
   HOLD-function for measurements in
- inaccessible places

  Integrated sensor holder for one
- hand operation
- adjustment function
- PC-interface
- Storing of 19 measuring values
- °C/°F-switchable



#### Applications:

#### Food industry

- Incoming inspection
- Cooling and freezing plant control
- Market
- Rapid temperature control

#### Technical data

Technical data		
Input:		Pt100, 4-wire
Measuring range:		-99.9+850°C
Accuracy:		±0.3°C, (±1 Digit - only instrument)
Resolution:		0.1°C from -99.9+399.9°C, otherwise 1°C
Memory:		19 measurements
Connector:		4-pole special connector IP65
Storage temperatur	re:	0+50°C
Display:		1-Line LCD
Housing:		plastic (ABS)
Dimensions:		130 x 65 x 25 mm (L x W x H)
Weight:		240 g
Power supply:		2 x 1.5 Volt AA
Battery life time:		appr. 160 h
Order No.		
<b>5000-0405</b> without probe	P400 hand-held measuring instrument, -99.9+850°C, (IP65 protected)	
6000-3006W	Stainless steel insertion probe, L = 150 mm, ø = 4,0 mm	
6000-3471W	Insertion probe, stainless steel with PTFEhandle and cable (2000 mm), fully heat resistant up to +250°C, L = 140 mm, ø = 4.0 mm	
5990-0017	Spare battery, 1.5 Volt AA	
5020-0551	Pre-drill for frozen goods	

• Kitchen / Restaurant

Bakery

• Catering

Laboratory

#### Robust hand-held measuring instrument

The P300 splashwater protected, robust and handy instruments are ideal for measuring operations under harsh ambient conditions.



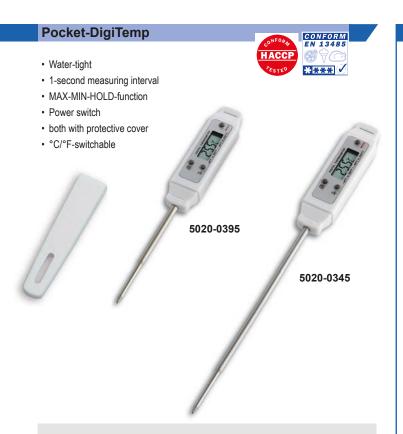
Technical data		
Sensor:		NTC
Measuring range:		-40+200°C
Resolution:		0.1°C
Accuracy:		±0.5°C (0 +100°C, remaining range ±1.5°C)
Work temperature:		0+40°C
Storage and transportemperature:	t	-20+70°C
Display:		LCD, numerical height 15 mm
Power supply:		2 x 1.5 V Batterie AA Size
Battery life time:		> 12 month (without illumination)
Dimensions:		130 x 65 x 25 mm (L x W x H)
Tube:		120 x 3,5 mm (L x Ø)
Weight:		240 g
Order No.		
5000-0300	P300 hand-held measuring instrument incl. insertion probe	
5000-0300Z	P300 hand-held measuring instrument incl. insertion probe and calibration certificate at 0°C and +60°C	
5600-0016	Storage case for P300/P400	
5990-0017	Spare battery, 1.5 Volt AA	
5020-0551	Pre-drill for frozen goods	





#### Robust and handy insertion thermometer

Ideal for simple temperature check on food. Universally used in liquid, powdered and plastic materials.



#### Applications:

- Food industry
- Incoming inspectionCold store
- Market

- Kitchen / Restaurant
- Bakery
- Catering

•	Laborat	ory
•	Laborat	ory

Technical data		
Sensor:		NTC
Measuring range:		-40+200°C
Resolution:		0.1°C
Accuracy:		±0.8°C (-20+100°C) remaining range ±1.5°C
Response time t90	:	approx. 7 seconds in water
Dimensions:		150 x 20 x 16 mm (short version) 202 x 20 x 16 mm (long version)
Probe:		75 x 3,5 mm (short version) 126 x 3,5 mm (long version)
Weight:	60 g	
Battery life:	typical 200 hrs continuous use	
Power supply:		1.5 V button cell LR44
Order No.		
5020-0395	Pocket-Digitemp (short version)	
5020-0345	Pocket-Digitemp (long version)	
5990-0022	Spare battery, 1.5 Volt LR44	
5020-0551	Pre-drill for frozen goods	



#### Applications:

- Food industry
- Incoming inspection
- Cold store
- Market

- Kitchen / Restaurant
- Bakery
- Catering
- Laboratory

Technical data	
Sensor:	NTC
Measuring range:	-40+250°C
Resolution:	0.1°C
Accuracy:	±0.5°C (-10+100°C) remaining range ±1.5°C
Response time t90:	approx. 7 seconds in water
Work temperature:	0+50°C
Battery life:	typical 200 hrs continuous use
power supply:	1.5 V button cell LR44
Dimensions:	220 x 25 x 20 mm (L x W x H)
Probe:	106 x 3,5 mm (L x Ø)
Weight:	50 g

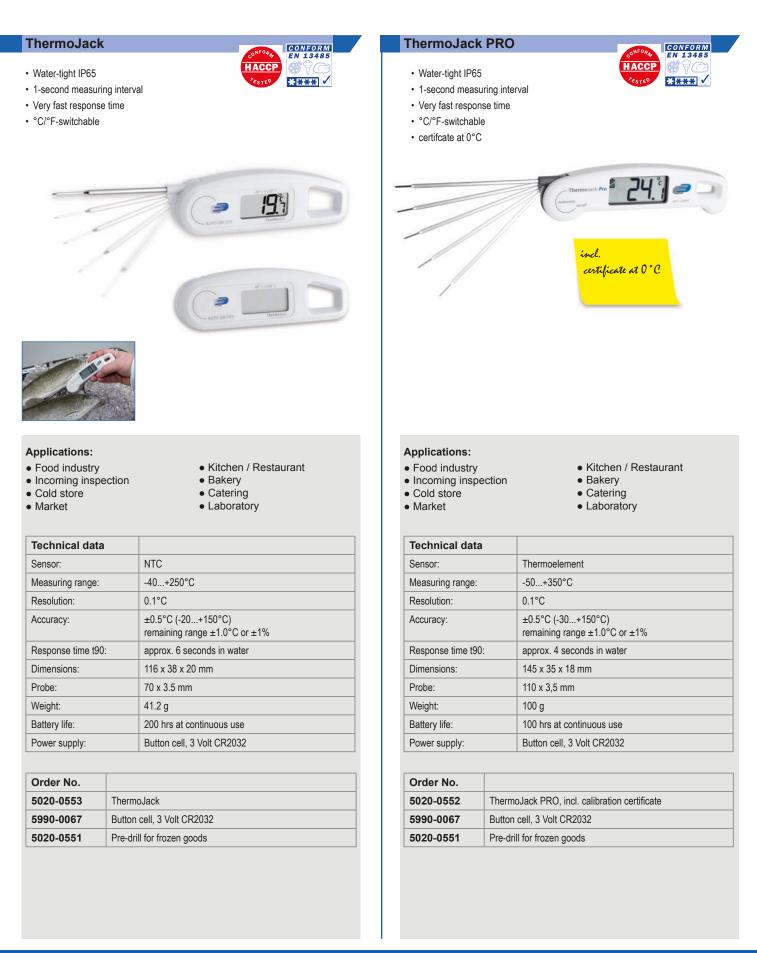
Order No.	
5020-0398	LabTherm Pocket thermometer
5990-0022	Spare battery, 1.5 Volt LR44
5020-0551	Pre-drill for frozen goods

Production/Goods receipt



#### Robust and handy insertion thermometer

Fold-out thermometer in pocket-size, for easy temperature measurements in liquid, powdered and plastic materials. The food safe housings are completely water-tight and easy to clean!



### Temperature measurement

Production/Goods receipt



#### Insertion thermometer in T-Bar design

Robust instrument with reduced insertion tip (GT1) or with corkscrew tip for frozen food (GT2). The T-Bar design enables safe working with solid measurement mediums (meat, vegetables...).

# GT1 Insertion thermometer in T-Bar design with reduced insertion tip

- Splash water proof
- 1-second measuring interval
- MAX-MIN-function
- · Protective cover and pocket clips included

## GT2 Frozen food thermometer in T-Bar design with corkscrew tip

- Splash water proof
- 1-second measuring interval
- MAX-MIN-function
- · Protective cover and pocket clips included
- Corkscrew tip





#### Applications:

- Food industry
- Incoming inspection
- Cold store
- Market

Kitchen / RestaurantBakery

128.7c

- Catering
- Laboratory

Technical data	
Sensor:	NTC
Measuring range:	-50+150°C
Resolution:	0.1°C
Accuracy:	± 1.0°C (-10+100°C)
Response time t90:	approx. 12 seconds
Dimensions:	84 x 26 x 175 mm
Probe:	120 x 5.0 mm
Weight:	101 g (incl. packaging)
Battery life:	Typical for 2000 hours at continuous operation
Power supply:	Button cell 1.5 Volt 357A

Order No.	
5020-0350	GT1 Robust insertion thermometer in T-design
5990-0022	Spare battery, 1.5 Volt 357A / LR 44

- Applications:
- Food industry
- Incoming inspection
- Cold store

Market

- Kitchen / Restaurant
- Bakery
- Catering
- Laboratory

Technical data	
Sensor:	NTC
Measuring range:	-50+150°C
Resolution:	0.1°C
Accuracy:	± 1.0°C (-10+100°C)
Response time t90:	approx. 30 seconds
Dimensions:	100 x 50 x 166 mm
Probe:	120 x 8,0 mm
Weight:	141 g (incl. packaging)
Battery life:	Typical for 2000 hours at continuous operation
Power supply:	Button cell 1.5 Volt 357A

Order No.	
5020-0351	GT2 Robust thermometer with drill for frozen materials in T-design
5990-0022	Spare battery, 1.5 Volt 357A / LR 44

#### Production / storage

#### Our kitchen helpers



#### · plastic, rotating

- . -40...**4** 5°C
- 215 mm
- 35 g
- 10 KA
- 10 SB



#### Freez r-fridge-thermometer

- plastic
- -30...4 0°C
- 153 x 24 mm
- 20 g
- . 10 KA
- 10 SB



Order No.	
5014-4003	Freezer-fridge-thermometer

#### Digital-freez r-fridge-thermometer

- · Indication of temperature with corresponding freezer-fridge symbol, highest and lowest temperature
- -30...5 0°C (-22°F...1 22°F)
- with stand and frame for mounting on surfaces or behind glass (display fridge, vegetable drawer)
- 91 x 13 x 72 mm
- 66 g •
- including battery







Order No.	
5020-0542	Digital-freezer-fridge-thermometer

Order No.	
5014-4000	Freezer-fridge-thermometer

#### Digital-free **r**-fridge-thermometer

- plastic •
- · For indoor temperature and fridge,
- flexible support for wall mounting and table standing, with magnet, measuring range
- -20...5 0°C
- °C/°F-switchable •
- Fridge symbol from 4 ... 8 °C
- 43 x 68 x 14 mm
- 60 g
- EK-EL
- including battery CR2025 button cell



Order No.	
5014-2028	Digital-freezer-fridge-thermometer

CONFORM En 13485

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incl. calibration certificate

HACCP

91.3

Goods receipt/Production/Warehouse

Two in One - Insertion & Infrared thermometer Ideal for simple temperature measurements in food control. Unie rsally usable in liquid, powdered and plastic materials.

#### **DualTEMP Pro**

- · Temperature measurement optional contact-free with infrared or with probe
- · Display of current, highest or lowest temperature during the measurement
- · HACCP-LED indicates HI/LO-Level for food
- Waterproof IP 65
- MAX-MIN-HOLD-LOCK-function
- °C/°F-switchable
- · LED spot size indicator
- · Bag included
- · incl. calibration certificate



#### Applications:

- Food industry
- Incoming inspection
- Cold store
- Meat
- Temperature control

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#### • Kitchen / Restaurant

#### Bakery

- Catering
- Laboratory

Technical data		
Sensor:		Infrared / Probe
Measuring range:		-55 <del>2</del> 50°C
Resolution:		0.2°C
Resolution: (infrared)		-330°C ±1.0°C ±0.1/1°C, 0+65°C ±1.0°C, +65⊉ 00°C ±1.5%,
Resolution: Thermocouple sensor (Type K - probe)		below -5°C ±1.0°C, -5€ 5°C ±0.5°C, above € 5°C ±1%
Reproducibility:		±1.0°C or 1%
Response time:		approx. 0,5 seconds (Infrared)
Spectral response:		614 µm
Work temperature:		0 <del>5</del> 0°C
Storage temperature:		-20 <del>5</del> 0°C
Emissivity:		0.01 1.00
Optical resolution:		2.5 : 1
Power supply:		2 x 1.5 V AAA
Housing:		plastic, withe
Dimensions:		160 x 38 x 22 mm (L x W x H)
Weight:		380 g
Order No.		
5020-0413	DualTE	MP Pro, Infrared-probe thermometer
5990-0071	Spare	battery, 1.5 Volt AAA
5020-0551	Pre-dri	II for frozen goods



#### K üchen-Chef" 2 in 1 digital meat / oven thermometer

- simultaneous monitoring of the oven and the internal temperature, for the optimal preparation of meat and poultry, can be used for the oven or grill, also ideal for cooking at low temperatures, individual temperature requirements can be programmed, alarm warning when the target temperature is reached, timer and stop watch function, stainless steel probe with 1 m cable, magnet for fixing
- •
- 72 x 24 x 87 mm
- 112 g
- incl. battery 1x 1,5 V AAA,





Order No.	
5014-1503	"Küchen-Chef"
	2 in 1 digital meat / oven thermometer

#### Thermometer for roast

- · Thermometer for roast with recipes
- · Stainless steel
- 0...+110°C
- 120 x 50 mm
- 58 g
- EK



Order No.	
5014-1002	Thermometer for roast



#### Infrared - non-contact temperature measurement

Goods receipt/Production/Warehouse

Non contact thermometers use infrared technology to measure the surface temperature of materials close up or from a distance. You simply aim, pull the trigger, and read the temperature (response time appr. 0.5 second). Due to the fact you are not touching the surface you are able to measure safely hot, hazardous, or hard-to-reach materials without contaminating or damaging the material's surface.



#### Applications:

- Food industry
- Incoming inspection
- Cold store
- Meat

- Kitchen / Restaurant
- Bakery
- Catering
- Laboratory

Technical data	
Sensor:	Infrared
Measuring range:	-33+500°C
Resolution:	0.1°C
Accuracy:	±2°C or 2%, the larger value applies
Reproducibility:	±1.0°C or 1%
Response time:	approx. 1 second
Spectral response:	614 µm
Work temperature:	0+50°C
Storage temperatur:	-20+50°C
Laser:	Class 2
Emissivity:	fixed 0,95
Optical resolution:	11 : 1
Power supply:	2x 1.5V AAA
Housing:	plastic
Dimensions:	175 x 39 x 79 mm (L x W x H)
Weight:	300 g

Order No.	
5020-0503	ScanTemp 410, Infrared thermometer
5990-0071	Spare battery, 1.5 Volt AAA

#### Infrared thermometer with double-laser sighting



- · IR- temperature instrument with double laser
- Large display area: Simultaneous display of reading and Max-temperature
- Backlight
- Wide temperature range -60...+550°C
- 12:1 optical resolution

ScanTemp 430

- HOLD-, MAX-function
- Adjustable emissivity
- Hi-Lo Alarm
- · IP54 splash water protected
- Belt bag included





#### Applications:

- Food industry
- Incoming inspection
- Cold store
- Meat

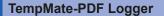
- Kitchen / Restaurant
- Bakery
- Catering
- Laboratory

Technical data			
Sensor:		Infrared	
Measuring range:		-60+550°C	
Resolution:		0.1°C (above 200°C / 1°C)	
Accuracy:		±2°C or 2%, whichever is greater	
Reproducibility:		±2.0°C or 2%	
Response time:		< 1 second	
Spectral response:		614 µm	
Work temperature:		0+50°C	
Storage temperatur:		-20+50°C	
Laser:		Classe 2	
Emissivity:		adjustable 0.101.00	
Optical resolution:		12 : 1	
Battery life:		typical 18 hrs at continuous use	
Power supply:		2x 1.5V AAA	
Housing:		plastic	
Dimensions:		165 x 43 x 77 mm (L x W x H)	
Weight:		330 g	
Order No.			
5020-0430	ScanTe	emp 430, Infrared thermometer	
5990-0071	Spare battery, 1.5 Volt AAA		

Transport

#### Disposable data logger TempMate-PDF with installed USB port

The innovative single-use data logger TempMate-PDF with USB port is the perfect escort for food or drug during transportation.





- · 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 indication
- · IP67 waterproofe
- · Food-safe packaging
- · Free costumization service
- Incl. certificate







#### 5005-0063



5005-0065

#### Applications:

control of transport conditions in accordance with HACCP

Technical data		
Measuring range	-30+70°C	
Resolution:	0.1°C	
Accuracy:	±0.5°C	
Memory:	12,960 measurements	
Recording Time:	6 days to 90 days	
Shelf Life:	12 months	
IP-protection:	IP67	
Interface:	Integrated USB	
System requirements:	Adobe® Reader	
Certification:	Calibration Certificate, CE, RoHS, EN 12830 S,T,C,D,1	
Dimensions:	80 mm x 47 mm x 4 mm (L x W x T)	
Weight:	10 g	

Order No.	
<b>5005-0061</b> ③	TempMate (6 days), 1 min. intervall Disposable data logger
<b>5005-0063</b> ③	TempMate (15 days), 2 min. intervall Disposable data logger
<b>5005-0065</b> ③	TempMate (90 days), 10 min. interval Disposable data logger

Packaging unit 20 pcs. per box

#### Temperature data logger

**MicroLite** 

Perfectly designed data logger for the food branch. The robust and water-tight housing is perfect for use in rough condition during transport and storage.



Technical data		
Measuring range	-25+80°C	
Resolution:	0.1°C	
Accuracy:	±0.3°C	
Memory:	8,000 or 32,000 measurements	
Interface:	USB-Interface 2.0	
Connector:	integrated USB-plug	
Display:	7 Segment LCD	
Battery life:	2 years (interval 1 minute)	
Power supply:	1x CR2032	
Housing:	plastic (ABS)	
Dimensions:	110 x 39 x 26 mm (L x W x H)	
Weight:	70 g	

Order No.	
<b>5005-0040</b> ③	Microlite Data logger, 8,000 measurements
<b>5005-0041</b> ③	Microlite Data logger, 32,000 measurements
5990-0067	Spare battery, 3 Volt CR2032



#### Transport/Warehouse

#### LOG32T PDF-Data Logger for temperature

Platform-independent data recording in a compact design!

CONFORM En 12830

X\*\*\*

HACCP

PDF-Logger -

without software

usable

LOG32TH PDF-Data Logger for temperature and humidity Platform-independent data recording in a compact design!

PDF

LOG32T CONFORM En 12830 PDF НАССР · Memory for 60,000 measurments \*\*\*\* · Usable without software (default settings, 15 minutes interval preconfigurated) Automatic PDF creation (no software required) · Free setup software (to change the configuration) free adjustable recording interval: 30 seconds...24 hours) · Battery lifetime > 2 years (recording interval >15 minutes) PDF-Logger -· Status- and Alarm-LEDs with Buzzer usable · Includes wall mount without software · IP65 watertight · Firmware and software updatable Online Includes wall mount

#### Applications:

- Quality surveillance in laboratories during production in storage areas Monitoring conditions in
- Maintaining product storage
- Ambient conditions in power plants
- manufacturing facilities
- according to HACCP
- Monitoring of fridges for the
- pharmaceutical industry

Technical data	
Temperature:	
Measuring range:	-40+70°C
Resolution:	0.1°C
Accuracy:	±0.5°C (-10+40°C), otherwise ±1.0°C
Memory:	60,000 measurements
Interface:	USB (integrated)
Power supply:	1x 3.6 Volt Lithium 1/2 AA
Housing:	plastic (ABS)
Dimensions:	100 x 19 x 19 mm (L x W x H)
Weight:	70 g

Order No.	
5005-0170	LOG32T, Temperature Logger,
5020-0375	Spare battery, 3.6 Volt 1/2 AA

LO	G32	2TH
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- · Memory for 2 x 60,000 measurments · Usable without software
- (default settings, 5 minutes interval preconfigurated)
- Automatic PDF creation (no software required)
- · Free setup software (to change the configuration) free adjustable
- recording interval: 30 seconds...24 hours) • Battery lifetime > 2 years
- (recording interval >15 minutes)
- · Status- and Alarm-LEDs with Buzzer
- · Includes wall mount
- · Firmware and software updatable Online



• Quality surveillance in

Monitoring conditions in

manufacturing facilities

in storage areas

**Applications:** 

## Maintaining product storage

- laboratories during production according to HACCP • Ambient conditions in power
  - plants • Monitoring of fridges for the pharmaceutical industry

Technical data		
Temperature:		
Measuring range:	-40+70°C	
Resolution:	0.1°C	
Accuracy:	±0.5°C (-10+40°C), otherwise ±1.0°C	
Relatie Humidity:		
Measuring range:	0 100% rF	
Resolution:	0.1%	
Accuracy:	±3% (4060% ±3.5% (2040% and 6080% , otherwise ±5%	
Memory:	2 x 60,000 measurements (Temp. + Humidity)	
Interface:	USB (integrated)	
Power supply:	1x 3.6 Volt Lithium 1/2 AA	
Housing:	plastic (ABS)	
Dimensions:	100 x 19 x 19 mm (L x W x H)	
Weight:	70 g	

Order No.	
5005-0172	LOG32TH, Temperature-humidity Logger,
5020-0375	Spare battery, 3.6 Volt 1/2 AA

Easy to use data monitoring without costly installation. The simple and complete record of your temperature data!

#### LOG10 Temperature Logger

- Large display for actual measurements and Max-Min-Avg-measurements
- · Low battery indication
- · Easy to use software
- Memory for 20,000 measurements
- Visual LED (red) Hi-Lo-Alarm
- Adjustable logging interval from 30 seconds to 24 hours
- · IP65-splash water protection
- · Easy to change battery
- High accuracy: ±0.5°C



HACCE

CONFORM EN 12830



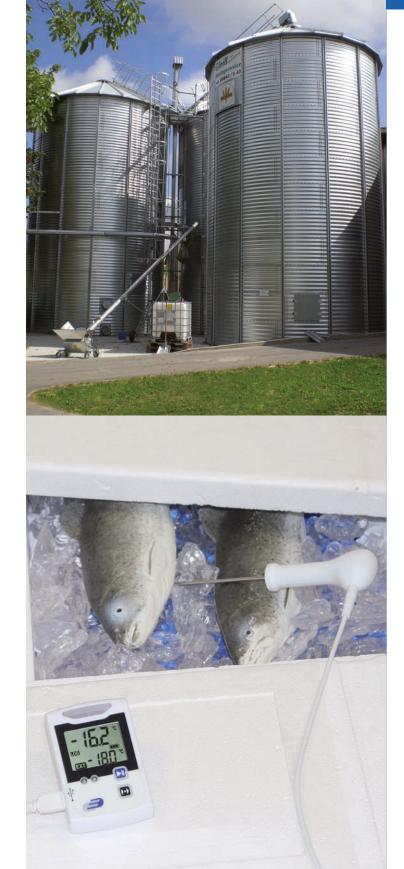


Windows Software Wall Mount LOG-Graph

#### Applications:

 Monitoring of inventory, production and transportation conditions in accordance with EN 12830 and HACCP

Technical dat	a		
Temperature:			
Measuring range:		-30+60°C	
Resolution:		0.1°C	
Accuracy: ±1 digit		±0.5°C from -20+50°C ±0.7°C (remaining range)	
IP protection:		IP65	
Work temperature	):	-10+60°C	
Memory:		20,000 measurements	
Interface		USB Interface 2.0	
Display:		7 segment LCD (2-line)	
Power supply:		1 x CR2032 3 V	
Housing:		plastic (ABS)	
Dimensions:		88 x 55 x 20 mm (L x W x H)	
Weight:		95 g	
Order No.			
5005-1001	Starter-Set LOG 10 (Data logger + Software+ USB-cable)		
5005-0001	Temperature Logger, LOG 10, (without software & data cable)		
5090-0001	Windows Software DE-Graph & data cable for LOG 10 / LOG20		
5600-0098	Lockable wall mount with magnet for LOG10 / LOG20 / LOG100 / LOG100 CRYO / LOG110		
5990-0067	Spare battery, CR2032		
5090-0100	Spare USB-cable		
<b>5600-0068</b> ③	Calibration certificate (2x temperature) at -18°C and +2°C		



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#### Transport/Warehouse

Easy to use data monitoring without costly installation. The simple and complete record of your temperature and humidity data!



**LOG20** Temperature-humidity Logger

- Large display for actual measurement and MAX/MIN/AVG indication
- Battery status indication
- · Easy to use Windows software
- Visual Hi-Lo-Alarm
- Memory for 2 x 20,000 measurements
- Adjustable logging interval from 30 second to 24 hours
- Easy to change battery
- High accuracy: ±0.5°C / ± 3%



HACCI

#### **Applications:**

- Monitoring of inventory, production and transportation conditions
- Monitoring of food in the freezer section

Technical da	ta		
		Temperature:	int. relative humidity:
Measuring range:		-30+60°C	099% F
Resolution:		0.1°C	0.1% F
Accuracy: ±1 digit		±0.5°C from -20+50°C ±0.7°C (remaining range)	±3% F
IP protection:		-	
Work temperatur	e:	-10+60°C	
Memory:		2 x approx. 20,000	) measurements
Interface:		USB Interface 2.0	
Display:		7 segment LCD (2-line)	
Power supply:		1 x CR2032 3 V	
Housing:		plastic (ABS)	
Dimensions:		88 x 55 x 20 mm (L x W x H)	
Weight:		95 g	
Order No.			
5005-1002	Starter-Set LOG 20 (Data logger + Software+ USB-cable)		
5005-0002	Temperature-humidity Logger, LOG 20, (without software & data cable)		
5090-0001	Windows Software DE-Graph & data cable for LOG10 / LOG 20		
5600-0098	Lockable wall mount with magnet for LOG10 / LOG20 / LOG100 / LOG100 CRYO / LOG110		
5990-0067	Spare battery, CR2032		
5090-0100	Spare USB-cable		
<b>5600-0067</b> 3	Calibration certificate (3x humidity + 1x temperature) at 30/50/70%rH and +23°C		



#### Applications:

- Monitoring of inventory, production and transportation conditions in accordance with EN 12830 and HACCP
- Monitoring of food in the freezer section

Technical da	ta				
		Temperature:	external Temperature:		
Measuring range:		-30+70°C	-50+125°C		
Resolution:		0.1°	C		
Accuracy: ±1 digit		±0.5°C from -20+50°C ±0.7°C (remaining range)	±0.5°C from 0+40°C ±1.0°C (remaining range)		
IP protection:		IP65			
Work temperatur	re:	-10+70°C			
Memory:		2 x approx. 60,000 measurements			
Interface		USB Inter	face 2.0		
Display:		7 segment L	CD (2-line)		
Power supply:		1 x CR20	032 3 V		
Housing:		plastic (	(ABS)		
Dimensions:		88 x 55 x 20 mm (L x W x H)			
Weight:		95 g			
Order No.					
5005-1100	Starter-Se	et LOG 100 (Data logger + So	ftware+ USB-cable)		
5005-0100		Temperature Logger, LOG 100, (without software & data cable)			
5090-0110	Windows Software DE-Graph & data cable for LOG100 / LOG100 CRYO / LOG110 & LOG10 / LOG20				
6040-0103	External to -50+125	External temperature probe 3 m cable -50+125°C, 40 x Ø 3mm			
6040-0108	External temperature probe 8 m cable -50+125°C, 40 x Ø 3mm				
6040-0104	External Insertion probe, with robust handle temperature resis- tant to 80°C, 3m Silicone cable, -50+125°C, 120 x Ø 3,0				
5600-0098	Lockable wall mount with magnet				
5600-0088	Temperature delay for external temperature probes				
5990-0067	Spare battery, CR2032				
5090-0100	Spare USB-cable				
<b>5600-0068</b> ③	Calibration certificate (2x temperature) at -18°C and +2°C				

Transport/Warehouse

Easy to use data monitoring without costly installation. The simple and complete record of your temperature and humidity data!

#### LOG100 CRYO Temperature Logger

- Large display for actual measurements and Max-Min-Avg-measurements
- · External temperature probe input
- · Low battery indication
- Easy to use software
- Memory for 2 x 60,000 measurements
- · Visual LED (red) Hi-Lo-Alarm
- Adjustable logging interval from 1 seconds to 24 hours
- Easy to change battery
- High accuracy: ±0.3°C



#### Applications:

5090-0110

6040-0113

6040-0112

5600-0098

5600-0088

5990-0067

5090-0100

5600-0068<sup>3</sup>

- Monitoring of inventory, production and transportation conditions in accordance with EN 12830 and HACCP
- Monitoring of food in the freezer section

Technical dat	a			
		Temperature:	external Temperature:	
Measuring range:		-10+70°C	-200+350°C	
Resolution:		0.1°C		
Accuracy: ±1 digit		±0.3°C from -10+50°C ±0.7°C (remaining range)	±0.5°C from -200+250 °C* ±1.0°C (remaining range) * plus probe inaccuracy	
IP protection:		IP65		
Work temperature	e:	-10+70°C		
Memory:		2 x ca. 60,000 measurements		
Interface:		USB Interface 2.0		
Display:		7 Segment LCD (2-line)		
Power supply:		1 x CR2032 3 V		
Housing:		plastic (ABS)		
Dimensions:		88 x 55 x 20 mm (L x W x H)		
Weight:		95 g		
Order No.				
5005-1105	Starterset LOG100 CRYO (Data logger + Software+ USB-cable)			
5005-0105	Temperaturlogger, LOG100 CRYO, (without software & data cable)			

Windows Software DE-Graph & data cable for LOG100 / LOG100 CRYO / LOG110 & LOG10 / LOG20

External temperature probe for LOG 100 CRYO 3 m cable, -50°C...+125°C, 50 x Ø 4mm

External temperature probe for LOG 100 CRYO 3 m cable, -200°C...+250°C, 50 x Ø 4mm

LOG10 / LOG20 / LOG100 / LOG100 CRYO / LOG110

Temperature delay for external temperature probes

Lockable wall mount with magnet for

Calibration certificate (2x temperature)

Spare battery, CR2032

Spare USB-cable

at -18°C and +2°C

#### LOG110 Temperature-humidity Logger

- Memory for 60,000 measurements at 3 parameters
- External temperature probe input
- · Visual and acoustic Hi-Lo-Alarm
- Adjustable logging interval from 1 second to 24 hours
- · Easy to change battery
- High accuracy: ±0.5°C / ±3%

#### LOG110-EXF

• with external humidity-temperature sensor (fix connection 2 meter cable)





Technical data		int. temperature:	ext. temperature:	int. relative humidity	
Measuring range:		-30+70°C -50+125°C		099% F	
Resolution:		0.1	1°C	±0.1% F	
Accuracy: ±1 digit		±0.5°C from -20+50°C ±0.7°C (remaining range)	±0.5°C from 0+40°C ±1.0°C (remaining range)	±3% F	
Work temperature	:	-10+70°C			
Memory:		3 x approx. 60,000 measurements			
Interface			USB Interface 2.	.0	
Display:			7 segment LCD (2-	line)	
Power supply:		1 x CR2032 3 V			
Housing:		plastic (ABS)			
Dimensions:		88 x 55 x 20 mm (L x W x H)			
Weight:		95 g			
Order No.					
5005-1110	Starter-Set LOG 110 (Data logger + Software+ USB-cable)				
5005-0110	Data logger for temperature and humidity, LOG 110, (without software & data cable)				
5005-0111	Data logger for temperature and humidity, LOG 110-EXF with external humidity-temperature probe (2m cable)				
5090-0110	Wind	dows Software DE-Graph & data cable for LOG 100/110			
6040-0103	External temperature probe 3 m cable -50+125°C, 40 x Ø 3mm				
6040-0108	External temperature probe 8 m cable -50125°C, 40 x Ø 3mm				
6040-0104	External Insertion probe, with robust handle temperature resis- tant to 80°C, 3m Silicone cable, -50+125°C, 120 x Ø 3,0				
5600-0098	Lockable wall mount with magnet for LOG10 / LOG20 / LOG100 / LOG100 CRYO / LOG110				
5600-0088	Temperature delay for external temperature probes				
5990-0067	67 Spare battery, CR2032				
5090-0100	Spare USB-cable				
5600-0067 ③	Calibration certificate (3x humidity + 1x temperature) at 30/50/70%rH and +23°C				
	o	bration certificate (2x temperature) 18°C and +2°C			



Transport/Warehouse

For temperature monitoring during sterilization, pasteurization and other applications up to 140°C.

The ideal data logger for monitoring and recording temperature data for food, pharmaceutical and laboratory applications. To determine the F0-, Z- and N-value of food.

#### SterilDisk / SterilDisk 10 / SterilDisk 20 / SterilDisk 50 / SterilDisk 100 / SterilDisk 150

- Wide temperature range up to 140°C
- Water- and pressure-resistant to 10 bar
- Made of food-safe stainless steel AISI316L
- Large memory for 20,200 measurements
- Adjustable interval: 1sec
- High accuracy: ± 0.2°C
- Easy to change battery
- Optional with validated software CFR 21 part 11
- Export-function for Excel
- · Automatic calculation of F0, Z and N-values possible
- · Several curves can be displayed in one graph simultaneously (TS-Software)



5005-0800



5005-0801 SterilDisk10 Datenlogger mit Eintauchsonde 10mm



Applications:

 food, pharmaceutical and laboratory areas

Technical data	SterilDisk         SterilDisk 10 - 5005-0801           5005-0800         SterilDisk 20 - 5005-0802           SterilDisk 50 - 5005-0803         SterilDisk 100 - 5005-0804           SterilDisk 150 - 5005-0805         SterilDisk 150 - 5005-0805		
Temperature:			
Measuring range:		-20+140°C up to 10 bar	
Resolution:	0.01°C		
Accuracy:	±0.2°C		
IP protection:	IP68		
Memory:	20.200 measurements		
Interface:	Disk Interface		
Battery life:	approximately 1,400,000 measurements at 1-second clock Battery user replaceable		
Housing:	Food safeAISI316L		
Dimensions:	18 x Ø 36 mm 18 + 10 -150 x Ø 36 mm		
Weight:	appr. 80 g appr. 85 g		
Probe:	Immersion probe 10/20/50/100/150 mm		



5090-0800



5005-0896

r	1			
Order No.				
5005-0800 3	SterilDisk Data logger			
5005-0801 ③	SterilDisk10 Data logger with immersion probe 10mm			
5005-0802 ③	SterilDisk20 Data logger with immersion probe 20mm			
5005-0803 ③	SterilDisk50 Data logger with immersion probe 50mm			
5005-0804 ③	SterilDisk100 Data logger with immersion probe 100mm			
5005-0805 ③	SterilDisk150 Data logger with immersion probe 150mm			
5090-0800 3	SPD USB-Kit Software and disk interface with USB port for connection to the PC for SterilDisk Data logger			
5090-0801 ③	TS-Manager Software according to CFR21 Part 11 Incl. USB-Keycode with temperature and pressure sensor (Article 5090-0800 required)			
5990-0881 3	Battery replacement set for SterilDisk			
5005-0896 <sup>(3)</sup>	<ul> <li>Complete Set Mounting system for SterilDisk data logger and other instruments for cans, bottles, caps and other reservoirs. The set includes:</li> <li>1 x riveting tool,</li> <li>20 x M5 rivets for SterilDisk system with probe of 4.0 mm diameter and minimum 50 mm length,</li> <li>20 x M8 rivets for SterilDisk system with probe of 3.0 mm diameter and minimum 30 mm length,</li> <li>1 x clamp connection to attach the sensor to the required depth.</li> </ul>			

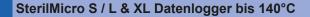
Transport/Warehouse

For temperature monitoring during sterilization, pasteurization and other applications up to 140°C.

The ideal data logger for monitoring and recording temperature data for food, pharmaceutical and laboratory applications. To determine the F0-, Z- and N-value of food.

smallest logger

up to 140°C



- Wide temperature range up to 140°C
- · S-Micro S is the smallest logger for autoclaves only 14 mm long and a diameter of 17 mm S-Micro S is the
- Water- and pressure-resistant up to 5 bar
- Made of food-safe stainless steel AISI316L
- Large memory for 20,200 measurements
- · Adjustable interval: 1 sec
- High accuracy: ± 0.1°C
- Optional with validated software CFR 21 part 11
- Export-function for Excel
- · Automatic calculation of F0, Z and N-values possible with validated Software also A80, A90, PU, Overkilling possible
- · Several curves can be displayed in one graph simultaneously (TS-Software)



5090-0800



5005-0896



5005-0820



5005-0820







5005-0830

Applications:	<ul> <li>food, pharmaceutical and laboratory areas</li> </ul>			
Technical data	SterilMicro S Data logger 5005-0820 - 0824	SterilMicro L Data logger 5005-0825 - 0829	SterilMicro XL Data logger 5005-0830 - 0834	
Temperature:				
Measuringrange:	0+140	)°C up to 5 bar pressure	e-tight	
Resolution:		0.01°C		
Accuracy:		±0.1°C		
IP protection:		IP68		
Memory:	:	20,200 Observations		
Interface:	Disk Interface NS			
Battery life:	Measured in a 1-second intervals at 25°C. for about 6 ½ days	Measured in a 1-second intervals at 25°C for about. 115 days	Measured in a 1-second intervals at 25°C for about. 195 days	
Housing:	food-safe AISI316L			
Dimensions:	imensions: 14 x Ø 17 mm		64 x Ø 17 mm	
Weight:	ca. 35g	ca. 50g	ca. 60g	
Probe:	with Insertion probe 20/50/100/150/OD mm x Ø 3,0 mm (OD = other lengths of 11 mm to 175 mm available)			

Order No.			
5005-0820 3	SterilMicro S 20 Data logger		
	with Insertion probe 20 mm		
5005-0821 ③	SterilMicro S 50 Data logger with Insertion probe 50 mm		
5005-0822 ③	SterilMicro S 100 Data logger with Insertion probe 100 mm		
5005-0823 ③	SterilMicro S 150 Data logger with Insertion probe 150 mm		
5005-0824 ③	SterilMicro S OD Data logger with Insertion probe (lengths of 11 mm to 175 mm available)		
<b>5005-0825</b> ③	SterilMicro L 20 Data logger with Insertion probe 20 mm		
<b>5005-0826</b> ③	SterilMicro L 50 Data logger with Insertion probe 50 mm		
<b>5005-0827</b> ③	SterilMicro L 100 Data logger with Insertion probe 100 mm		
<b>5005-0828</b> ③	SterilMicro L 150 Data logger with Insertion probe 150 mm		
5005-0829 3	SterilMicro L OD Data logger with Insertion probe (lengths of 11 mm to 175 mm available)		
<b>5005-0830</b> ③	SterilMicro XL 20 Data logger with Insertion probe 20 mm		
5005-0831 ③	SterilMicro XL 50 Data logger with Insertion probe 50 mm		
5005-0832 ③	SterilMicro XL 100 Data logger with Insertion probe 100 mm		
5005-0833 ③	SterilMicro XL 150 Data logger with Insertion probe 150 mm		
5005-0834 ③	SterilMicro XL OD Data logger with Insertion probe (lengths of 11 mm to 175 mm available)		
5090-0800 3	SPD USB-Kit Software and disk interface with USB port for connection to the PC for SterilDisk Data logger		
5090-0801 ③	SPD USB-Kit Software and disk interface with USB port for connection to the PC for SterilDisk Data logger		
<b>5990-0882</b> ③	Battery replacement set for SterilMicro Standard 20 Data logger		
<b>5990-0883</b> ③	Battery replacement set for SterilMicro L Data logger		
5990-0884 ③	Battery replacement set for SterilMicro XL Data logger		
<b>5990-0894</b> ③	Opening tool for SterilMicro data logger for battery replacement		
5005-0896 ③	<ul> <li>Complete Set Mounting system for SterilDisk Data logger and other instruments for cans, bottles, caps and other reservoirs. The set includes:</li> <li>1 x riveting tool,</li> <li>20 x M5 rivets for SterilDisk system with probe of 4.0 mm diameter and minimum 50 mm length,</li> <li>20 x M8 rivets for SterilDisk system with probe of 3.0 mm diameter and minimum 30 mm length,</li> <li>1 x clamp connection to attach the sensor to the required depth.</li> </ul>		





## THERMOCOUPLES

Temperature Controls operate a full workshop in Sydney manufacturing thermocouples for Plastic, Petrochemical, Steel, Furnace & Metal processing industries.

- Mims Thermocouples 0.5 mm to 12.7 mm dia.
- Multipoint Thermocouples
- High Temperature Ceramics / Platinum Wire

Temperature Controls have IECEx Certificate of Conformance for Ex d Flameproof, Ex e Increased Safety and Ex tD Dust atmosphere use.

## RTD SENSORS PT 100 $\Omega$ PT 1000 $\Omega$

A complete range of RTD sensors for use from -200°C up to +600 °C, vibration resistant and rugged depending upon the configuration. High Accuracy 3 or 4 wire sensors in Class A or 1/10th DIN tolerances custom made to order.

Applications

- Electric Motor Windings Food / Beverage Triclover Environmental monitoring
- Pharmaceutical
- Autoclave



## THERMOWELLS

Using CNC lathes and Gun drilling machinery Temperature Controls manufacture barstock flanged, weld-in & screwed thermowells as well as protection tubes for extreme temperature and corrosive industrial applications.

Quality Assurance

• Welding Procedures • Wake Frequency Calculations • Pressure Testing • Weld X ray

Materials Available

• Stainless Steel 316 / 304 / Duplex • Inconel 600/601 • Hastelloy • Titanium



## **THERMOCOUPLE CABLE EXTENSION & COMPENSATING**

## THERMOCOUPLE COLOUR CODE CONNECTION CHART

EXTENSION/COMPENSATING CABLE COLOURS				THERMOCOUPLE MATERIALS		
CODE	AMERICAN TO ANSI /MC 96.1	INTERNATIONAL IEC 584-3	GERMAN TO DIN 43714	<b>JAPAN</b> JIS C 1610 (1995)	POSITIVE CONDUCTOR	NEGATIVE CONDUCTOR
к	+	+	+	+	NICKEL CHROMIUM Also Known as Chromel KP or Ni-Cr	NICKEL ALUMINIUM Also known as Alumel, KN or Ni-Al (Magnetic)
v		+		+	COPPER	COPPER-NICKEL Also known as Constantan
т	+	+	+	+	COPPER	COPPER-NICKEL Also known as Constantan
J	+	+	+	+	<b>IRON</b> Also known as Fe (Magnetic)	COPPER-NICKEL Also known as Constantan
Е	+	+	+	+	NICKEL CHROMIUM Also Known as Chromel KP or Ni-Cr	COPPER-NICKEL Also known as Constantan
N	+	+			NICKEL-CHROMIUM- SILICON	NICKEL-CHROMIUM- MAGNESIUM Also known as Nisil (Lightly Magnetic)
R	+	+		+	PLATINUM / 13% RHODIUM	PLATINUM
S	+	+	+	+	PLATINUM / 10% RHODIUM	PLATINUM
В	+				PLATINUM / 30% RHODIUM	PLATINUM / 6% RHODIUM

With reference to the ANSI MC 1=96.1 colour coding it is noted that a brown overall sheath colour replacing that shown denotes the incorporation of thermocouple grade conductors where relevant.

Download a copy from our web site : Reference No . SD 1514

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