

Thermometers

On the next pages you will find a broad range of thermometers with fixed probes or exchangeable probes, with rigid probes or probes with cable and hand grip. The thermometers are applicable at the broadest site of applications.

Applications

- Core temperature measurement
- Surface temperature measurement
- Temperature measurement of fluids
- Environmental temperature measurement
- Process monitoring
- Temperature regulation



Find your perfect thermometer:

Probe Thermometers	Measurement range	High accuracy	Probe type	Probe connection	Channels	Fast response time	MIN/MAX/hold	Waterproof housing	Conformity valued	Control Thermometer
TFX 430 Precision Thermometer	-100 °C ... +500 °C	✗	Pt 100	Lemo , probe not included	1		✗	✗		
TFX 422C Laboratory Thermometer	-50 °C ... +200 °C	✗	Pt 1000	Fixed	1		✗	✗	✗	
TFX 420 Core Thermometer	-50 °C ... +400 °C	✗	Pt 1000	Lemo , probe not included	1		✗	✗		
TFX 410-1 Core Thermometer	-50 °C ... +300 °C	✗	Pt 1000	Lemo , probe not included	1			✗		
TFX 410 Core Thermometer	-50 °C ... +300 °C	✗	Pt 1000	Fixed	1			✗		
TFE 510-1 Core Thermometer	-50 °C ... +300 °C		Thermocouple type T	Lemo , probe not included	1	✗		✗		
GFX 460 Electronic Control Thermometer	-50 °C ... +300 °C		Pt 1000	Fixed	1			✗		✗
GFX 460G Electronic Control Thermometer	-50 °C ... +300 °C		Pt 1000	Fixed glass-coated probe	1			✗		✗
GFX 460B Electronic Control Thermometer	-50 °C ... +300 °C		Pt 100	Lemo	1			✗		✗
TFN 520 Type K Thermometer	-200 °C ... +1,200 °C	✗	Thermocouple type K	Lemo or SMP, probe not included	1		✗			
TFN 520 Type J Thermometer	-100 °C ... +800 °C	✗	Thermocouple type J	Lemo or SMP, probe not included	1		✗			
TFN 520 Type T Thermometer	-50 °C ... +300 °C	✗	Thermocouple type T	Lemo or SMP, probe not included	1		✗			
TFN 520 Type E Thermometer	-100 °C ... +600 °C	✗	Thermocouple type E	Lemo or SMP, probe not included	1		✗			
TFN 530 Type K Thermometer	-200 °C ... +1,200 °C	✗	Thermocouple type K	Lemo or SMP, probe not included	2		✗			
TFN 530 Type J Thermometer	-100 °C ... +800 °C	✗	Thermocouple type J	Lemo or SMP, probe not included	2		✗			
TFN 530 Type T Thermometer	-50 °C ... +300 °C	✗	Thermocouple type T	Lemo or SMP, probe not included	2		✗			
TFN 530 Type E Thermometer	-100 °C ... +600 °C	✗	Thermocouple type E	Lemo or SMP, probe not included	2		✗			
TTX 110 Type T Thermometer	-50 °C ... +350 °C		Thermocouple type T	Fixed	1	✗				
TTX 200 Type T Thermometer	-30 °C ... +199.9 °C		Thermocouple type T	Fixed cable probe	1	✗		✗		
TTX 210 Type T Thermometer	-30 °C ... +199.9 °C		Thermocouple type T	pluggable, probe not included	1	✗		✗		
TDC 110 Basic Thermometer	-50 °C ... +150 °C		NTC	Fixed	1					
TDC 150 Basic Thermometer	-50 °C ... +150 °C		NTC	Fixed	1			✗		

TFX 430 Precision Thermometer
Reference thermometer with
exchangeable Pt 100 probe



TFX 430 set

Various probes available
(please see page 45).

- MIN/MAX and hold options
- Approximately 5 years battery life time

TFX 430 without probe TFX 430 + TPX 130 TFX 430 + TPX 230 TFX 430 + TPX 330

Technical Data

Measurement range	-100 °C ... +500 °C (-148 °F ... +932 °F)
Measurement accuracy	0.05 °C (-50 °C ... +199.99 °C) ±0.2 ° for the remaining measurement range
Resolution	0.01 °C (-10.00 °C ... +199.99 °C) 0.1 °C for the remaining measurement range
Operating temperature	-20 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Sensor	Pt 100
Sampling rate	1 sec to 15 sec
Battery	Lithium battery 3 V / 1 Ah, Type CR 2477
Battery lifetime	Approximately 5 years
Deactivation	Automatic after 2 hours, deactivatable
Dimensions (L x W x H)	109 x 54 x 22 mm
Housing material	ABS
Protection class	IP67
Weight	Approximately 90 g
Factory calibration certificate	-50 °C, 0 °C, +121 °C and +250 °C

Type	Description	Part No.
TFX 430	Thermometer Pt 100 (without probe)	1340-5430A
TFX 430 + TPX 130	Thermometer Pt 100 with probe (needle length = 200 mm, Ø 3 mm, blunt)	1340-5437A
TFX 430 + TPX 230	Thermometer Pt 100 with probe (needle length = 200 mm, Ø 3 mm, pointed)	1340-5438A
TFX 430 + TPX 330	Thermometer Pt 100 with probe (needle length = 190 mm, Ø 8 mm, glazed)	1340-5439A
TFX 430 set	TFX set (Thermometer TFX 430, blunt probe TPX 130, extension cable AX 110, DAkKS calibration, Aluminum case AG130)	1340-5432

Accessories for TFX devices



AG 120 Artificial leather case



AG 130 Small case



AG 140 Protective cover for handheld devices, red



AG 150 Plastic bracket, suitable for 10 mm and 12 mm lamus tripods



AX 110 Extension cable for TFX 430 only



AG 170 Battery exchange set

Type	Description	Part No.
AG 120	Plastic case	1341-0619
AG 130	Transport case	1341-3854
AG 140	Protective cover for handheld devices, red	1340-5005
AG 150	Plastic bracket	1340-5000
AX 110	Extension cable for TFX 430 (1m silicone)	1340-5020
AG 170	Battery-change set (incl. 3V lithium CR 2477 battery, needle, screws, tamping, O-ring, manual)	1100-0106

Alternate probes for TFX 430

Pt 100, 4 conductors class A, Lemo size 1

TPX 130 blunt probe

(Needle length= 200 mm, Ø 3 mm, stainless steel needle, up to +400 °C)



TPX 230 pointed probe

(Needle length = 200 mm, Ø 3 mm, stainless steel needle, up to +400 °C)



TPX 330 blunt, glass coated probe

(Needle length= 190 mm, Ø 8 mm, stainless steel needle, up to +400 °C)



Technical Data

Accuracy Pt 100, 4 conductors class A, Lemo size 1

Type	Description	Part No.
TPX 130	Blunt probe, needle length = 200 mm, Ø 3 mm	1341-5437
TPX 230	Pointed probe, needle length = 200 mm, Ø 3 mm	1341-5438
TPX 330	Blunt, glass coated probe, blunt, needle length = 190 mm, Ø 8 mm	1341-5439

TFX 422C **Conformity Certified Laboratory Thermometer**
with fixed Pt 1000 probe



The device has been certified together with the EB 4401 food inspection case (please see page 93).



Due to the new German calibration law which became effective on January 01 2015, we were forced to stop the sales of the TFX 422 Laboratory Thermometer with PTB certification. The so called certification of conformity replaces the calibration by the measurement office. Our new Conformity Certified Laboratory Thermometer TFX 422C is the equivalent successor: same properties, same quality.

Technical Data

Measurement range	-50 °C ... +200 °C
Operating temperature	-25 °C ... +50 °C
Accuracy	± 0,3 °C
Sensor	Pt 1000, stainless steel, Ø 3 mm, L = 120 mm, pointed probe
Cable	Silicone, L = 60 cm or 150 cm, waterproof, oil resistant, food safe
Response time (t ₉₉)	Approximately 8 Sec. (moving water)
Resolution	0,1 °C
Storage Temperature	-30 °C ... +70 °C
Dimensions (L x W x H)	109 x 54 x 22 mm, without probe
Weight	90 g
Housing material	ABS
Protection class	IP67
Battery	Lithium battery (CR 2477), 3V
Battery life time	Up to 5 years, dependent pn the application
Factory calibration certificate	0 °C, +60 °C and +120 °C

- MIN/MAX and hold options
- High precision
- Approximately 5 years battery life time
- Waterproof (IP67)

Type	Description	Part No.
TFX 422C-60	Conformity Certified Thermometer, with 60 cm cable	1340-5433A
TFX 422C-150	Conformity Certified Thermometer, with 150 cm cable	1340-5434A

TFX-410/420 Series **Core Thermometers**



TFX 410



TFX 410-1



TFX 420

General Technical Specifications

Accuracy	±0.3 °C
Resolution	0.1 °C
Sensor	Pt 1000
Operating temperature	-25 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Battery lifetime	Approximately 5 years
Housing material	ABS
Protection class	Waterproof (IP67)
Weight	Approximately 90 g
Dimensions (L x W x H)	109 x 54 x 22 mm (without probe)
Deactivation	Automatic after 2 hours, deactivatable

TFX 410 Core Thermometer with fixed Pt 1000 probe



- High precision
- Approximately 5 years battery life time
- Waterproof (IP67)

Technical Data

Measurement range	-50 °C ... +300 °C (-58 °F ... +572 °F)
Battery	3.0 V lithium, user replaceable
Certificate	3-point factory calibration (-20 °C, 0 °C and +120 °C)

Type	Description	Part No.
TFX 410	Thermometer with TPX 410 probe, pointed, 60 cm silicone cable	1340-5410A
AG 190	Drill for frozen food	1341-3834

TFX 410-1 Core Thermometer without Probe for various Pt 1000 probes



Various probes available
(see page 48).

- High precision
- Approximately 5 years battery life time

Technical Data

Measurement range	-50 °C ... +300 °C (-58 °F ... +572 °F)
Sensor connection	Lemos size 0
Battery	3.0 V Lithium, replaceable
Certificate	3-point factory calibration (-20 °C, 0 °C and +120 °C)

Type	Description	Part No.
TFX 410-1	Thermometer without probe	1340-5415A
AG 190	Drill for frozen food	1341-3834
TFX 410-1 & TPX 400	Thermometer with TPX 400 probe	1340-5416
TFX 410-1 & TPX 100	Thermometer with TPX 100 probe	1340-5417
TFX 410-1 & TPX 200	Thermometer with TPX 200 probe	1340-5418
TFX 410-1 & TPX 300	Thermometer with TPX 300 probe	1340-5419

TFX 420 Core Thermometer without Probe with MIN/MAX and hold options



Various probes available
(see page 48).

- High precision
- Approximately 5 years battery life time

Technical Data

Measurement range	-50 °C ... +400 °C (-58 °F ... +752 °F)
Sensor connection	Lemos size 0
Battery	3.0 V Lithium, replaceable
Extra functions	Hold, MIN / MAX
Certificate	3-point factory calibration (-20 °C, 0 °C, +120 °C and +250 °C)

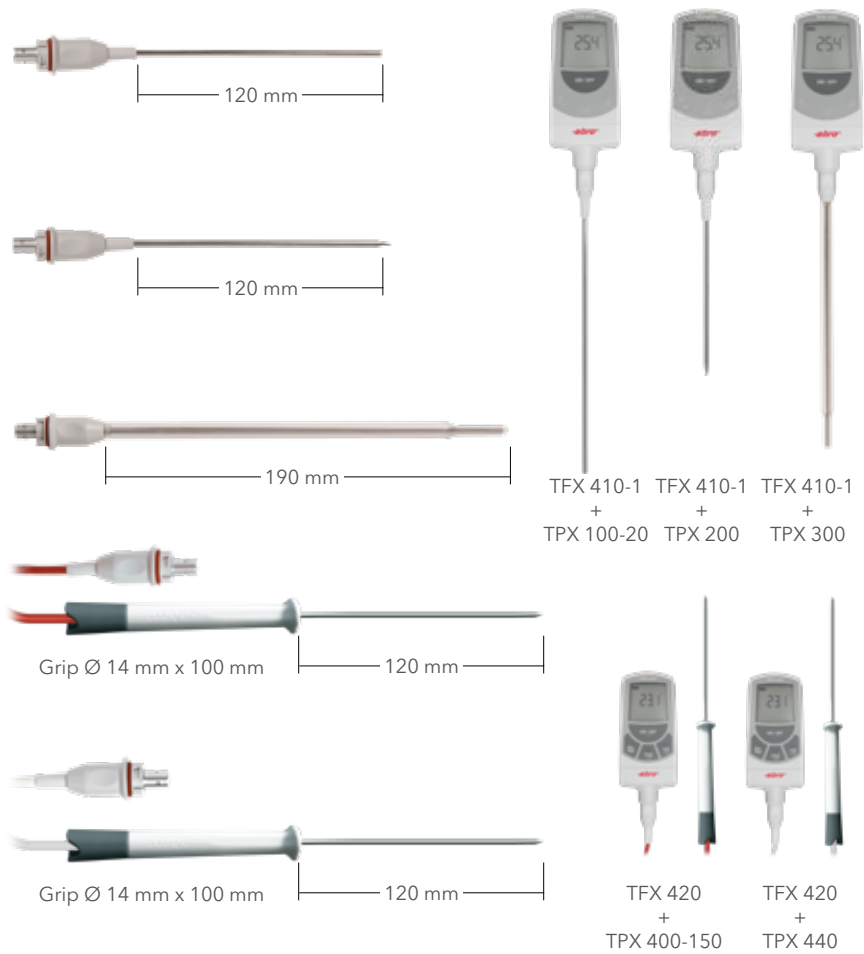
Type	Description	Part No.
TFX 420	Thermometer without probe	1340-5425A
AG 190	Drill for frozen food	1341-3834
TFX 420 & TPX 400	Thermometer with TPX 400 probe	1340-5426
TFX 420 & TPX 100	Thermometer with TPX 100 probe	1340-5427
TFX 420 & TPX 200	Thermometer with TPX 200 probe	1340-5428
TFX 420 & TPX 300	Thermometer with TPX 300 probe	1340-5429

Probes for TFX 410-1 / TFX 420

Pt 1000 Probe (with Lemosa size 0)

The probes of the TFX 410-1 and TFX 420 core thermometers are all changeable – and yet the devices have protection class IP67, i.e. protection against immersion up to 1 m. Even little mishaps like plummeting the device into a bucket of water won't have consequences. The various probes and cables allow for a use in many different applications, e.g. heating of food (PTFE) or in rough and humid environments (silicone).

- TPX 100** blunt probe
(Needle length = 120 mm, Ø 3 mm, blunt, stainless steel needle, up to +400 °C)
- TPX 200** pointed probe
(Needle length= 120 mm, Ø 3 mm, pointed, stainless steel needle, up to +400 °C)
- TPX 300** glass-coated probe
(Needle length = 190 mm, Ø 8 mm, glass-coated, stainless steel needle, up to +400 °C)
- TPX 400** pointed probe
(Needle length = 120 mm, Ø 3 mm, pointed, with 60 cm silicone cable, stainless steel needle, up to +400 °C)
- TPX 440** pointed probe
(Needle length = 120 mm, Ø 3 mm, with 150 cm PTFE cable, stainless steel needle, up to +400 °C)



Technical Data

Accuracy	Exceeds DIN EN 60584, class 1
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TF 410 – still working, thanks to IP67

Type	Description	Part No.
TPX 100	Blunt probe, needle length = 120 mm, Ø 3 mm, without cable	1341-5417
TPX 200	Pointed probe, needle length = 120 mm, Ø 3 mm, without cable	1341-5418
TPX 200-20	Pointed probe, needle length = 200 mm, Ø 3 mm, without cable	1341-4182
TPX 200-30	Pointed probe, needle length = 300 mm, Ø 3 mm, without cable	1341-4183
TPX 200-40	Pointed probe, needle length = 400 mm, Ø 3 mm, without cable	1341-4184
TPX 300	Glass-coated probe, needle length = 120 mm, Ø 8 mm, without cable	1341-5419
TPX 400	Pointed probe with 60 cm silicone cable (red) and grip, needle length = 120 mm, Ø 3 mm	1341-5416
TPX 400-40	Pointed probe with 40 cm silicone cable (red) and grip, needle length = 120 mm, Ø 3 mm	1341-4164
TPX 400-150	Pointed probe with 150 cm silicone cable (red) and grip, L = 120 mm, Ø 3 mm	1341-4168
TPX 440	Pointed probe with 150 cm PTFE cable (white) and grip, L = 120 mm, Ø 3mm	1341-4169

TFE 510-1 Core Thermometer without Probe with fast response time



TFE 510

TPE 400

- With replaceable probe
- Approximately 5 years battery life time

Technical Data

Measurement range	-50 °C ... +300 °C (-58 °F ... +572 °F)
Accuracy	±0.5 °C (0.9 °F)
Resolution	0.1 °C (0.2 °F)
Measurement probe	Thermocouple, type T
Operating temperature	-25 °C ... +50 °C (-13 °F ... +122 °F)
Storage temperature	-30 °C ... +70 °C (-22 °F ... +158 °F)
Thermal constant (t_{99})	3s
Battery	Lithium 3.0 V
Battery lifetime	Approximately 5 years
Dimensions (L x W x H)	109 x 54 x 22 mm
Housing material	ABS
Weight	Approximately 90 g
Protection class	IP67
Sampling rate	0.5 s to 15 s
Certificate	3-point factory calibration (-20 °C, 0 °C and +120 °C)
Automatic shut off	After 2 hours, optional

Type	Description	Part No.
TFE 510-1	Thermometer without probe	1340-5510A
TFE 510 + TPE 400	Thermometer with probe, with blue silicone cable, 0.6 m	1340-5516A
TPE 400	Probe with blue silicone cable, 0.6 m, for TFE 510	1341-5516
AG 140	Protective cover for handheld devices, red	1340-5005
AG 190	Drill for frozen food	1341-3834

Accessories for TFX- and TFE-Thermometers



AG 130 Transport case



AG 140 Protective cover for handheld devices, red



AG 150 Plastic bracket suitable for 10 mm and 12 mm lamus tripods



AX 100 Extension cable for TFX devices, 1m, Lemos size 0



AG 170 Battery exchange set



AG 160 Stainless steel bracket



AG 161 Stainless steel bracket for thermometers

The stainless steel brackets can only be used with TFN 520 or TFN 520-SMP

Type	Description	Part No.
AG 130	Transport case	1341-3854
AG 140	Protective cover for handheld devices, red	1340-5005
AG 150	Plastic bracket	1340-5000
AG 160	Stainless steel bracket	1340-0595
AG 161	Stainless steel bracket for TFX devices with protective cover AG 140	1340-0596
AG 170	Battery-change set (incl. 3V lithium CR 2477 battery, needle, screws, tamping, O-ring, manual)	1100-0106
AX 100	Extension cable 1m for TFX devices (Lemos size 0)	1340-5015

GFX 460 Series **Electronic Contact Thermometers**



GFX 460



GFX 460 G



GFX 460 B

General Technical Specifications

Measurement range	-50 °C ... +300 °C (-58 °F ... +572 °F)
Resolution	1 °C
Measurement accuracy	±1 °C
Measurement interval	1 sec
Operating temperature	-5 °C ... +60 °C
Storage temperature	-30 °C ... +70 °C
Regulation	Fuzzy regulation
Security features	• Identification of probe breakage • Identification of probe access • Security and regulation cycle according to DIN 12878 class 1 / 2
Access	DIN 45322 Diode plug, 5-pole
Other options	Green display background lighting
Protection class	IP65

GFX 460 **Electronic Contact Thermometer**
with fixed stainless steel Pt 1000 probe



- Fuzzy control
- Control loop according to DIN EN 12878 class 1 and 2
- Green display background light

Technical Data

Probe	Pt 1000, permanently attached	
Type	Description	Part No.
GFX 460	Electronic contact thermometer with fixed stainless steel Pt 1000 probe, L = 205 mm, Ø 3 mm, cable length 70 cm	1340-5460A

GFX 460 G Electronic Contact Thermometer with fixed glass-coated Pt 1000 probe



- Fuzzy control
- Control loop according to DIN EN 12878 class 1 and 2
- Green display background light

Technical Data

Probe	Pt 1000, glass-coated, permanently attached
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Type	Description	Part No.
GFX 460 G	Electronic contact thermometer with glass coated probe, L = 235 mm, Ø 7 mm, cable length 70 cm	1340-5462A

GFX 460 B Electronic Contact Thermometer for replaceable Pt 100 probes



- Fuzzy control
- Control loop according to DIN EN 12878 class 1 and 2
- Green display background light

Technical Data

Probe	Pt 100, replaceable, see next page
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Type	Description	Part No.
GFX 460 B	Electronic contact thermometer without probe	1340-5464A

Accessories for GFX 460 Series



AG 151 Stand adapter



AX 110 Extension cable for GFX 460 B only



AX 400 Relay box

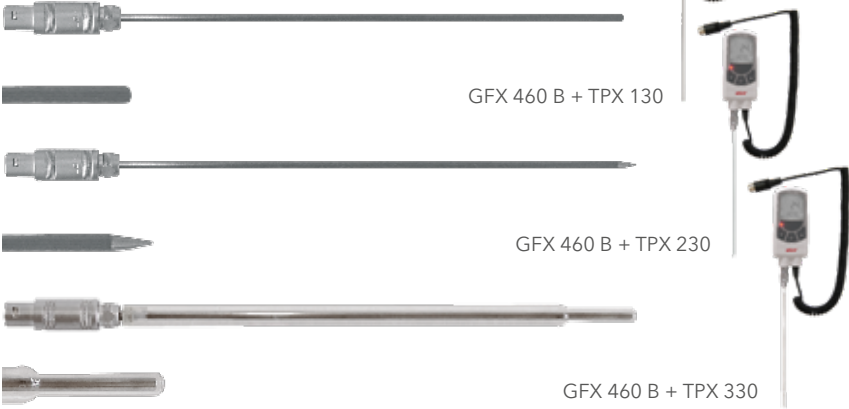
Type	Description	Part No.
AG 151	Stand bracket	1340-5001
AX 110	Extension cable for GFX 460 B, silicone cable, L = 1 m	1340-5020
AX 400	Relay box	1340-0157

External Probes for GFX 460 B
Pt 100, 4 conductors class A, Lemo size 1

TPX 130 blunt probe
(Needle length = 200 mm,
Ø 3 mm, stainless steel needle,
up to +400 °C)

TPX 230 pointed probe
(Needle length = 200 mm,
Ø 3 mm, stainless steel needle,
up to +400 °C)

TPX 330 blunt, glass coated
probe
(Needle length = 190 mm,
Ø 8 mm, stainless steel needle,
up to +400 °C)



Technical Data

Accuracy	Pt 100, 4 conductors class A, size 1	
Type	Description	Part No.
TPX 130	Blunt probe, needle length = 200 mm, Ø 3 mm	1341-5437
TPX 230	Pointed probe, needle length = 200 mm, Ø 3 mm	1341-5438
TPX 330	Blunt, glass coated probe, needle length = 190 mm, Ø 8 mm	1341-5439

TFN-520/530 Series **1-/2-Channel-Thermometers**



General Technical Specifications

Measurement range type K	-200 °C ... +1,200 °C (-328 °F ... +2,192 °F)
Measurement range type J	-100 °C ... +800 °C (-148 °F ... +1472 °F)
Measurement range type T	-100 °C ... +300 °C (-148 °F ... +572 °F)
Measurement range type E	-100 °C ... +600 °C (-148 °F ... +1,112 °F)
Accuracy at +25 °C, type K	±0.3 °C (-99.9 °C ... +250 °C)
Accuracy at +25 °C, type J	±0.3 °C (-50 °C ... +190 °C)
Accuracy at +25 °C, type T	±0.3 °C (-50 °C ... +220 °C)
Accuracy at +25 °C, type E	±0.3 °C (-50 °C ... +150 °C) ±0.5 % for the remaining measurement range
Resolution type K	0.1 °C (-99.9 °C ... +250 °C), 1 °C for the remaining measurement range
Resolution type J	0.1 °C (-99.9 °C ... +190 °C), 1 °C for the remaining measurement range
Resolution type T	0.1 °C (-99.9 °C ... +220 °C), 1 °C for the remaining measurement range
Resolution type E	0.1 °C (-99.9 °C ... +150 °C), 1 °C for the remaining measurement range
Operating temperature	-5 °C ... +50 °C
Storage temperature	-25 °C ... +60 °C
Sampling rate	0.5 sec to 15 sec
Sensor	External; Thermocouple type K, J, T, E
Battery	Lithium, 3V CR 2477
Battery lifetime	5 years
Dimensions (l x w x h)	115 x 54 x 22 mm
Weight	Approximately 90 g
Housing material	ABS
Factory calibration certificate	-100 °C, 0 °C, +200 °C and +1,000 °C

TFN 520 Type K, J, T, E Thermometer 1-channel high accuracy thermocouple thermometer



- With Lemo connection
- Robust design for years of industrial use
- Approximately 5 year battery life time

Without probe. Please find probe variants starting on page 72.

Technical Data

Sensor connection	LEMO size 0
Channels	1 external
Protection class	IP52

The accuracy of the used probe adds to the accuracy of the device. E.g. probes with class 1 of DIN EN 60584 have $\pm 0,5\text{ }^{\circ}\text{C}$ between $-40\text{ }^{\circ}\text{C}$... $+125\text{ }^{\circ}\text{C}$.

Type	Description	Part No.
TFN 520	1-channel thermometer with Lemo connection	1340-5520A

TFN 520-SMP Type K, J, T, E Thermometer 1-channel high accuracy thermocouple thermometer



- With SMP connection
- Robust design for years of industrial use
- Approximately 5 year battery life time

Without probe. Please find probe variants starting on page 72.

Technical Data

Sensor connection	SMP
Channels	1 external
Protection class	IP40

The accuracy of the used probe adds to the accuracy of the device. E.g. probes with class 1 of DIN EN 60584 have $\pm 0,5\text{ }^{\circ}\text{C}$ between $-40\text{ }^{\circ}\text{C}$... $+125\text{ }^{\circ}\text{C}$.

Type	Description	Part No.
TFN 520-SMP	1-channel thermometer with SMP connection	1340-5522A

TFN 530 Type K, J, T, E Thermometer 2-channel high accuracy thermocouple thermometer



- With Lemo connections
- Robust design for years of industrial use
- Approximately 5 year battery life time

Without probe. Please find probe variants starting on page 72.

Technical Data

Sensor connection	LEMO size 0
Channels	2 external
Protection class	IP52

The accuracy of the used probe adds to the accuracy of the device. E.g. probes with class 1 of DIN EN 60584 have $\pm 0,5\text{ }^{\circ}\text{C}$ between $-40\text{ }^{\circ}\text{C}$... $+125\text{ }^{\circ}\text{C}$.

Type	Description	Part No.
TFN 530	2-channel thermometer with Lemo connection	1340-5530A

TFN 530-SMP Type K, J, T, E Thermometer 2-channel high accuracy thermocouple thermometer



- With SMP connections
- Robust design for years of industrial use
- Approximately 5 year battery life time

Without probe. Please find probe variants starting on page 72.

Technical Data

Sensor connection	SMP
Channels	2 external
Protection class	IP40

The accuracy of the used probe adds to the accuracy of the device. E.g. probes with class 1 of DIN EN 60584 have $\pm 0,5\text{ }^{\circ}\text{C}$ between $-40\text{ }^{\circ}\text{C}$... $+125\text{ }^{\circ}\text{C}$.

Type	Description	Part No.
TFN 530-SMP	2-channel thermometer with SMP connection	1340-5532A

Accessories for TFN devices



AG 120 Synthetic leather case



AG 170 Battery exchange set



AN 141 Adapter cable, 1 m silicone (SMP/Lemo size 0)



AG 140 Protective cover for handheld devices, red



AG 130 Small case



AN 150 Large case (without device and accessories)



AG 160 Stainless steel bracket



AG 161 Stainless steel bracket for TFN devices

The stainless steel brackets can only be used with TFN 520 or TFN 520-SMP

Type	Description	Part No.
AG 120	Synthetic leather case	1341-0619
AG 130	Small case	1341-3854
AG 140	Protective cover for handheld devices, red	1340-5005
AG 160	Stainless steel bracket	1340-0595
AG 161	Stainless steel bracket for TFN devices in protective cover AG 140	1340-0596
AG 170	Battery-change set (incl. 3V lithium CR 2477 battery, needle, screws, tamping, O-ring, manual)	1100-0106
AN 140	Extension cable, 1 m silicone, Lemo size 0	1341-2626
AN 141	Adapter cable, 1 m silicone SMP/Lemo size 0	1341-2629
AN 142	Extension cable, 1 m silicone, SMP	1343-2626
AN 143	Extension cable, 2.5 m silicone, Lemo size 0	1341-2627
AN 144	Extension cable, 2.5 m silicone, SMP	1343-2627
AN 150	Large case for TFN devices and several large sensors	1341-3857

TDC 110 Basic Core Thermometer with spare battery



Technical Data

Measurement range	-50 °C ... +150 °C (-58 °F ... +302 °F)
Resolution	0.1 °C
Measurement accuracy	± 1 °C (-10 °C ... +120 °C), ± 2 °C for the remaining measurement range
Sensor	NTC
Probe needle	Stainless steel, Ø 4 mm, L = 120 mm, pointed
Response time (t ₉₉)	19 sec (water)
Operating temperature	0 °C ... +50 °C
Storage temperature	-10 °C ... +60 °C
Display	7 mm LCD
Battery	1.5 V, G 10-A
Dimensions (L x W)	50 x 40 mm; needle length = 120 mm
Weight	Approximately 13 g

- Automatic shut off after approximately 10 minutes
- Including needle guard

Type	Description	Part No.
TDC 110	Low-Cost Thermometer, incl. needle protection and spare battery	1340-5121
AG 190	Drill for frozen food	1341-3834

TDC 150 Basic Core Thermometer with handy housing



Technical Data

Measurement range	-50 °C ... +150 °C (-58 °F ... +302 °F)
Resolution	0.1 °C (-20 °C ... + 150 °C)
Measurement accuracy	± 1 °C (-30 °C ... +150 °C)
Sensor	NTC
Probe	Stainless steel, Ø 3.5 mm, L = 125 mm, pointed
Response time (t ₉₉)	10 sec (water)
Operating temperature	0 °C ... + 50 °C
Storage temperature	-10 °C ... + 60 °C
Display	LCD-7 mm
Battery	1.5 V LR44, G13
Battery lifetime	Approximately 5,000 h
Dimensions (L x W x H)	24 x 26 x 85 mm
Housing material	ABS

- Approximately 5000 hours battery lifetime
- Waterproof housing (IP65)
- Including needle protection

Type	Description	Part No.
TDC 150	Thermometer, incl. needle protection	1340-1611
AG 190	Drill for frozen food	1341-3834

TTX 200 Type T Core Thermometer
with fixed probe with cable and handle



TTX 200

Technical Data

Measurement range type T	-30 °C ... +199.9 °C (-22 °F ... +392 °F)
Accuracy type T (at +25 °C)	± 0.5 °C (-30 °C ... +100 °C) ± 1 °C for the remaining measurement range
Resolution	0.1 °C
Housing material	ABS
Operating temperature	-20 °C ... +60 °C
Storage temperature	-30 °C ... +70 °C
Response time (t ₉₀)	4 sec
Dimensions (L x W x H)	127 x 60 x 16 mm (without probe)
Battery	CR 2032, replaceable
Battery lifetime	Typically 100 hours of uninterrupted use
Temperature probe	Permanently attached to the device, with 60 cm silicone cable, probe with grip, needle Ø 3 mm, L = 120 mm, pointed
Protection class	IP65
Factory calibration certificate	-20 °C and 0 °C

- Very large display with big numbers for easy reading
- Easy to use
- Replaceable battery

Type	Description	Part No.
TTX 200	Thermometer (Thermocouple type T) with cable	1340-5150A
AG 190	Drill for frozen food	1341-3834

TTX 110 Type T Core Thermometer
Thermocouple thermometer



TTX 110

Technical Data

Measurement range type T	-50 °C ... +350 °C (-58 °F ... +662 °F)
Accuracy type T (at +25 °C)	± 0.8 °C or ± 0.8 %, whichever is larger
Resolution	0.1 °C (-60 °C ... +199.9 °C) 1 °C for the remaining measurement range
Housing material	ABS
Operating temperature	-20 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Response time (t ₉₀)	4 sec
Dimensions (L x W x H)	90 x 42 x 17 mm (without probe)
Battery	CR 2032, replaceable
Battery lifetime	Typically 100 hours of uninterrupted use
Temperature probe	Permanently attached to the device, needle Ø 3 mm, L = 90 mm, pointed
Protection class	IP55
Factory calibration certificate	0 °C

- Automatic shut off
- Replaceable battery
- Including needle protection

Type	Description	Part No.
TTX 110	Thermometer (Thermocouple type T) with fixed probe, including needle protection	1340-5110A
TTX-WM	Wall bracket for TTX 110	1340-5040
AG 190	Drill for frozen food	1341-3834

TTX 210 Type T Core Thermometer for changeable probes



TTX 210

Technical Data

Measurement range type T	-30 °C ... +199.9 °C (-22 °F ... +392 °F)
Accuracy type T (at +25 °C)	± 0.5 °C (-30 °C ... +100 °C) ± 1 °C for the remaining measurement range
Resolution	0.1 °C
Housing material	ABS
Operating temperature	-20 °C ... +60 °C
Storage temperature	-30 °C ... +70 °C
Response time (t ₉₀)	4 sec
Dimensions (L x W x H)	127 x 60 x 16 mm (without probe)
Battery	CR 2032, replaceable
Battery lifetime	Typically 100 hours of uninterrupted use
Temperature probe	Permanently attached to the device, with 60 cm silicone cable, probe with grip, needle Ø 3 mm, L = 120 mm, pointed
Protection class	IP65
Factory calibration certificate	-20 °C and 0 °C

The TTX 210 enhances the benefits of the TTX 200 by the flexibility of several changeable probes. As required, a blunt probe for measurement in fluids or semisolid material, or a pointed probe with grip can be used. The latter is available with two different cable lengths. Apart from serving different applications, this allows for easy replacement of a defective probe.

TPE 100 blunt probe
(Needle length= 120 mm,
Ø 3 mm, stainless steel needle)



Similar to photo

TPE 200 pointed probe
(Needle length = 200 mm,
Ø 3 mm, stainless steel needle,
grip, cable length 60 cm)



Similar to photo

Type	Description	Part No.
TTX 210	Thermometer (Thermocouple Type T) for changeable probes	1340-5151A
TPE 100	Blunt probe, NL = 120 mm, Ø 3 mm	1341-5152
TPE 200	Pointed probe, NL = 120 mm, Ø 3 mm, 60 cm silicone cable, grip	1341-5153
TPE 200-150	Pointed probe, NL = 120 mm, Ø 3 mm, 150 cm silicone cable, grip	1341-5154
TTX 210 & TPE 100	Thermometer with blunt probe	1340-5152A
TTX 210 & TPE 200	Thermometer with pointed probe, cable length 60 cm	1340-5153A
TTX 210 & TPE 200-150	Thermometer with pointed probe, cable length 150 cm	1340-5154A
AG 190	Drill for frozen food	1341-3834