

TFE 510 Core Thermometer with fast response time



TFE 510

TPE 400

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 90g
Protection class	IP 67
Sampling rate	0.5 s to 15 s
Certificate	3-point factory calibration
Automatic shut off	After 2 hours, optional

- With replaceable probe
- Approximately 5 years battery life time

Type	Description	Part No.
TFE 510-1	Thermometer without probe	1340-5510
TFE 510 + TPE 400	Thermometer with probe, with blue silicone cable, 0.6 m	1340-5516
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

TFX-410/420/422 Series Laboratory Thermometers



TFX 410



TFX 410-1



TFX 420



TFX 422

General Technical Specifications

Accuracy	±0.3 °C
Resolution	0.1 °C
Operating temperature	-25 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Battery lifetime	Approximately 5 years
Housing material	ABS
Protection class	IP 67
Weight	Approximately 90 g
Deactivation	Automatic after 2 hours, deactivatable

TFX 410 Laboratory Thermometer with fixed Pt 1000 probe



- High precision
- Approximately 5 years battery life time

Technical Data

Measurement range	-50 °C ... +300 °C
Sensor	Pt 1000
Battery	3.0 V lithium, user replaceable
Dimensions (L x W x H)	54 x 22 x 109 mm (without probe)
Certificate	3-point factory calibration

Type	Description	Part No.
TFX 410	Thermometer with TPX 410 probe, pointed, 60 cm silicone cable	1340-5410

TFX 410-1 Laboratory Thermometer without probe for various Pt 1000 probes



Various probes available
(see page 87)

- High precision
- Approximately 5 years battery life time

Technical Data

Measurement range	-50 °C ... +300 °C
Sensor	Pt 1000
Sensor connection	Lemosia size 0
Battery	3.0 V Lithium, replaceable
Dimensions (L x W x H)	54 x 22 x 109 mm (without probe)
Certificate	3-point factory calibration

Type	Description	Part No.
TFX 410-1	Thermometer without probe	1340-5415

TFX 420 Laboratory Thermometer without probe with MIN/MAX and hold options



Various probes available
(see page 87)

- High precision
- Approximately 5 years battery life time

Technical Data

Measurement range	-50 °C ... +400 °C
Sensor	Pt 1000
Sensor connection	Lemosia size 0
Battery	3.0 V Lithium, replaceable
Dimensions (L x W x H)	54 x 22 x 109 mm (without probe)
Extra functions	Hold, MIN / MAX
Certificate	3-point factory calibration

Type	Description	Part No.
TFX 420	Thermometer without probe	1340-5425

TFX 422 Laboratory Thermometer with fixed Pt 1000 probe and PTB Certification



The device has been certified together with the EB 4401 food inspection case (please see page 139).



Technical Data

Measurement range	-50 °C ... +200 °C
Sensor	Pt 1000 (length 120 mm, Ø 3 mm)
Cable length	60 cm, silicone
Response time (t ₉₉)	Approximately 8 sec (moving water)
Battery	Lithium battery 3 V / 1 Ah, Type CR 2477
Dimensions (L x W x H)	109 x 54 x 22mm

Type	Description	Part No.
TFX 422- with PTB certification	Thermometer, with PTB certification, with 0.6 m cable	1340-5423
TFX 422-PTB certification possible	Thermometer, PTB certification possible, with 0.6 m cable	1340-5422
TFX 422-150	Thermometer, with PTB certification, with 1.5 m cable	1340-5424
TFX 422-150	Thermometer, PTB certification possible, with 1.5 m cable	1340-5421

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

Accessories for TFX Thermometers



AG 130 Transport case



AG 140 Protective cover, red



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



AG 160 Stainless steel bracket



AG 170 Battery exchange set



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



AG 161 Stainless steel bracket for thermometers with protective cover AG 140

Type	Description	Part No.
AG 130	Transport case	1341-3854
AG 140	Protective cover	1340-5005
AG 150	Plastic bracket	1340-5000
AG 160	Stainless steel bracket	1340-0595
AG 161	Stainless steel bracket for TFX devices in protective cover AG 140 (AG 140 not included)	1340-0596
AG 170	Battery-change set (incl. 3V lithium CR 2477 battery, needle, screws, tamping, O-ring, direction)	1100-0106
AX 100	Extension cable 1m for TFX devices (Lemosa size 0)	1340-5015

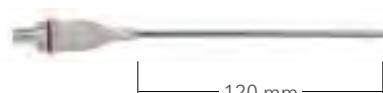
Probes for TFX 410-1 / TFX 420

Pt 1000 Probe (with Lemosa size 0)

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 IEC 584, class 1



Type	Description	Part No.
TPX 100	Blunt probe, needle length = 120mm, 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

TFX 430 Precision Thermometer

Reference thermometer with exchangeable Pt 100 probe



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

TFX 430 set

Various probes available
(see page 89)

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

Technical Data

Measurement range	-100 °C ... +500 °C
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	IP 67
Weight	Approximately 90 g

Type	Description	Part No.
TFX 430	Thermometer Pt 100 (without probe)	1340-5430
TFX 430 + TPX 130	Thermometer Pt 100 with probe (needle length = 200 mm, Ø 3 mm, blunt)	1340-5437
TFX 430 + TPX 230	Thermometer Pt 100 with probe (needle length = 200 mm, Ø 3 mm, pointed)	1340-5438
TFX 430 + TPX 330	Thermometer Pt 100 with probe (needle length = 190 mm, Ø 8 mm, glazed)	1340-5439
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, red



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



AX 110 Extension cable for TFX 430 only

Type	Description	Part No.
AG 120	Plastic case	1341-0619
AG 130	Transport case	1341-3854
AG 140	Protective cover, red	1340-5005
AG 150	Plastic bracket	1340-5000
AX 110	Extension cable for TFX 430 (1m silicone) *	1340-5020

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
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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