

## Non-contact temperature measurement with infrared technology

On the next pages you will find various infrared thermometers for non-contact surface temperature measurements. The infrared thermometers are suitable for measurements wherever direct contact is impossible or impractical.



## Applications

- Surface temperature measurement
- Core temperature measurement with penetration probe
- Process monitoring

## Find your perfect infrared thermometer:

Infrared Thermometers	Measurement range	Probe type	Probe connection	Channels	Distance:spot ratio	Fast response time	Splashproof housing
TFI 650 Infrared Dual Thermometer	-60 °C ... +1,500 °C	Infrared and Thermoelement Typ K	SMP	2	50:1	✗ (Infrared)	
TFI 550 Infrared Dual Thermometer	-60 °C ... +550 °C	Infrared and Thermoelement Typ K	SMP	2	30:1	✗ (Infrared)	
TFI 260 Basic Infrared Thermometer	-60 °C ... +550 °C	Infrared		1	12:1	✗	
TFI 54 Infrared Thermometer	-60 °C ... +550 °C	Infrared		1	12:1	✗	✗
TLC 750i Dual Infrared/Fold-Back Thermometer	-50 °C ... +250 °C	Infrared and Thermocouple Type T		2	8:1	✗ (Infrared)	✗

## TFI 650 Infrared Dual Thermometer

with wide measurement range and connection for thermo elements type K



Optional external NiCr-Ni probes with SMP connection available (starting on page 72).

- Double laser pointer
- Distance:spot ratio = 50:1
- Alarm when MIN/MAX exceeded

### Technical Data

Measurement range	-60 °C ... +1,500 °C (-76 °F ... +2,732 °F)
Accuracy	±2% of measurement value / ±2 °C (whichever is larger)
Resolution	0.1 °C
Response time	Approximately 1 sec
Emissivity factor	0.1 ... 1.0
Distance:spot ratio	50:1
Probe	With SMP connection
Operating temperature	0 °C ... +50 °C
Storage temperature	-20 °C ... +65 °C
Housing material	ABS
Protection class	IP 20
Battery	2 x AAA (Micro)
Battery lifetime	Typically 140 hours
Dimensions (L x W x H)	47 x 197 x 203.3 mm
Weight	Approximately 385 g (with battery)
Certificate	Factory calibration certificate

Type	Description	Part No.
TFI 650	Infrared Thermometer with NiCr-Ni connection	1340-1783
AN 144	Extension cable, 2.5 m silicone, SMP	1343-2627

## TFI 550 Infrared Dual Thermometer

with connection for thermo elements type K



Optional external NiCr-Ni probes with SMP connection available (starting on page 72).

- Double laser pointer
- Distance:spot ratio = 30:1
- Alarm when MIN/MAX exceeded

### Technical Data

Measurement range	-60 °C ... +550 °C (-76 °F ... 1022 °F)
Accuracy	±2 °C at -18 °C ... +23 °C (±3.6 °F at 0 °F ... 73 °F) ±1 % of measurement ±1 °C (whichever is larger) at +23 °C ... +510 °C ±1.8 °F (whichever is larger) at 73 °F ... 950 °F
Resolution	0.1 °C at -9.9 °C ... +199 °C, otherwise 1 °C (0.2 °F at 14 °F ... 391 °F, otherwise 1.8 °F)
Response time (t <sub>99</sub> )	Approximately 1 s
Emissivity factor	0.1 ... 1.0
Distance : spot ratio	30:1

### NiCr-Ni probe measurement

Measurement range	-64 °C ... +1,400 °C (-83 °F ... 2,552 °F)
Connection	SMP
Accuracy	±1 % of measurement value / ±1 °C (±1.8 °F), whichever is larger
Battery	2 x AAA (Micro)
Battery lifetime	Typically 180 hours
Operating temperature	0 °C ... +50 °C (32 °F ... 122 °F)
Storage temperature	-20° C ... +65 °C (-4 °F ... 149 °F)
Housing material	ABS
Protection class	IP 20
Weight	Approximately 180 g
Certificate	Factory calibration certificate

Type	Description	Part No.
TFI 550	Infrared thermometer with NiCr-Ni connection	1340-1786
AN 144	Extension cable, 2.5 m silicone, SMP	1343-2627

## TFI 260 Basic Infrared Thermometer with circular laserpointer



- Measurement area perfectly marked due to circular laserpointer
- Bright display backlight
- Distance: spot ratio = 12:1

### Technical Data

Measurement range	-60 °C ... +550 °C (-76 °F... 1,022 °F)
Accuracy	±2 °C + 0.05 °C per °C below 0 °C (at -60 °C ... 0 °C) ±2 °C (at 0 °C ... +15 °C) ±1.5 °C (at +15 °C ... +35 °C) ±2 °C or 2%, larger value is applicable (at +35 °C ... +550 °C)
Resolution	0.1 °
Operating temperature	0 °C ... +50 °C (+32 °F ... 122 °F)
Response time	1 s
Emissivity factor	0.95 fixed
Distance : spot ratio	12:1
Battery	2 x AAA (Micro)
Battery lifetime	Approximately 7 hours of continuous use
Housing material	ABS
Dimensions (L x W x H)	115 x 162 x 40 mm
Weight	179 g (with batteries)
Protection class	IP 20
Certificate	Factory calibration certificate

Type	Description	Part No.
TFI 260	Infrared thermometer incl. factory calibration	1340-1755

## TFI 54 Infrared Thermometer with splash proof housing



- Single laser pointer
- Distance:spot ratio = 12:1
- Replaceable battery

### Technical Data

Measurement range	-60 °C ... +550 °C (-76 °F ... +1,022 °F)
Accuracy	±2 °C + 0,05 °C per °C below 0 °C (at -60 °C ... 0 °C) ±2 °C (at 0 °C ... +15 °C) ±1,5 °C (at +15 °C ... +35 °C) ±2 °C or 2%, larger value is applicable (at +35 °C ... +550 °C)
Resolution	0.1 °C (-9.9 °C ... +199.9 °C) 1 °C for the remaining measurement range
Operating temperature	0 °C ... +50 °C (+32 °F ... +122 °F)
Response time	1 s
Emissivity factor	0.95 standard, adjustable from 0.1 to 1.0
Distance : spot ratio	12:1
Battery	2 x AAA (Micro)
Battery life time	Approximately 14 hours of continuous use
Housing material	Rubberized
Dimensions (L x W x H)	144 x 117 x 43 mm
Weight	180 g (with batteries)
Protection class	IP 54
Certificate	Factory calibration certificate

Type	Description	Part No.
TFI 54	Infrared Thermometer including factory calibration certificate	1340-1754

## TLC 750i Dual Infrared/Fold-Back Thermometer with foldable penetration probe and infrared sensor



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

### Technical Data

Measurement range	-50 °C ... +250 °C (-58 °F ... 482 °F)
Accuracy infrared	±4 °C at -50 °C ... -30.1 °C (±7.2 °F at -58 °F ... -22 °F) ±2.5 °C at -30 °C ... -18.1 °C (±4.5 °F at -22 °F ... -0.4 °F) ±1.5 °C at -18 °C ... -0.1 °C (±2.7 °F at -0.4 °F ... 32 °F) ±1.0 °C at 0 °C ... +65 °C (±1.8 °F at 32 °F ... 149 °F) ±2.0 °C or 2 % at +65 °C ... +250 °C (±3.6 °F at 149 °F ... 482 °F)
Accuracy penetration probe	±0.5 °C at -30 °C ... +99.9 °C (±0.9 °F at -22 °F ... 212 °F) ±1 °C (±2 °F) or 1 % for the remaining measurement range (whichever is larger)
Resolution	0.1 °C / 0.2 °F
Distance : Spot ratio	8:1
Sensor	Thermocouple type T
Operating temperature	-25 °C ... +50 °C (-13 °F ... 122 °F)
Storage temperature	-30 °C ... +70 °C (-40 °F ... 158 °F)
Battery	2 x AAA (Micro), user replaceable
Battery lifetime	Approximately 15 h of continuous use
Dimensions (L x W x H)	169.5 x 44x23mm (without probe), needle length=100mm
Housing material	ABS
Weight	Approximately 140 g
Protection class	IP 65
Automatic deactivation	Automatically after 15 seconds, deactivatable
Certificate	Factory calibration certificate

Type	Description	Part No.
TLC 750i	Dual Infrared / Fold-Back Thermometer	1340-5736

