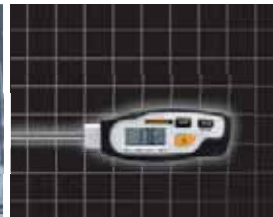
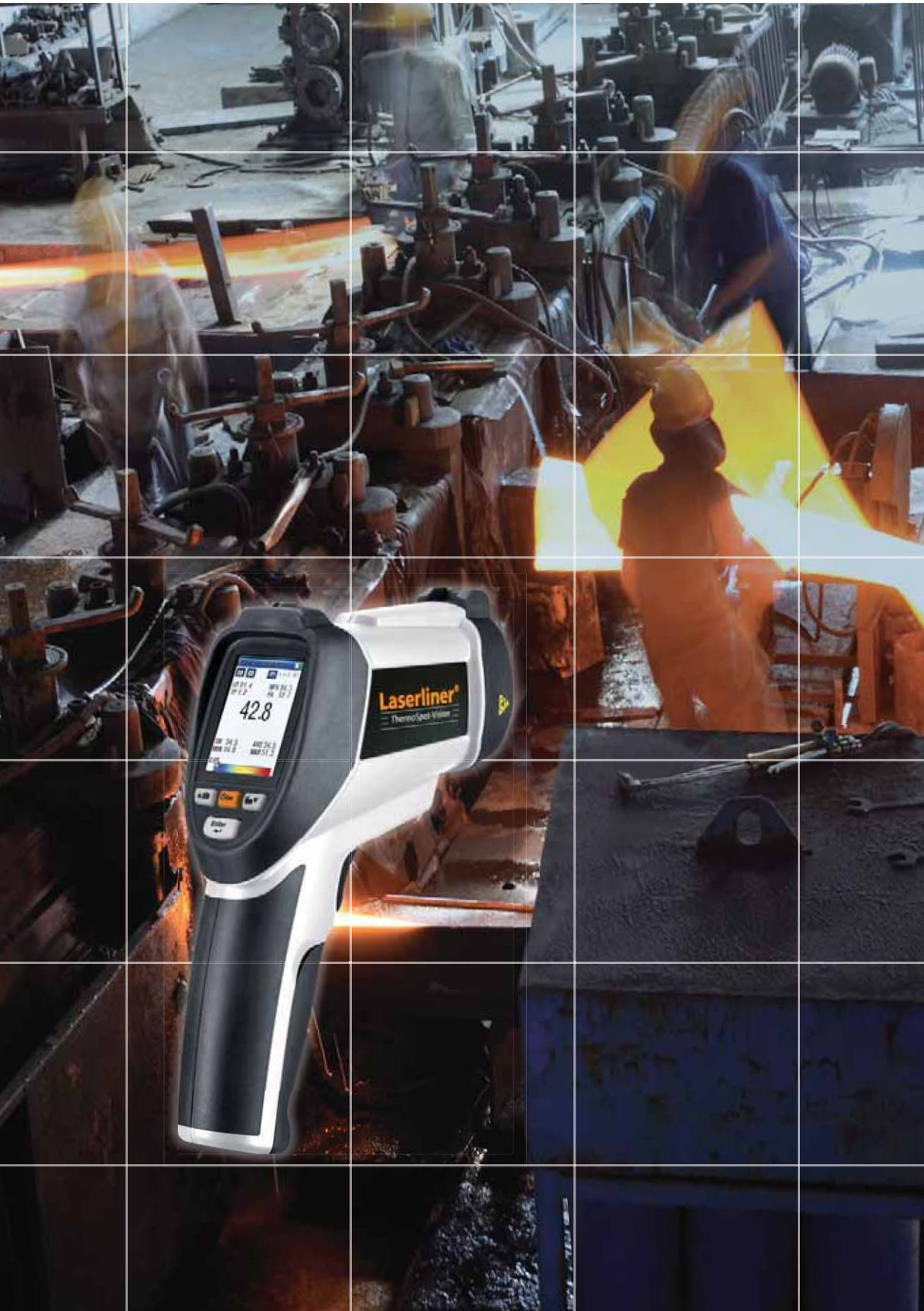


Temperature measurement



TEMPERATURE MEASUREMENT

Contact and non-contact temperature measurement used in a wide range of applications – also in difficult to reach places – at home, in the office, laboratory and in industry. Locating, inspecting and assessing damage with suitable measuring instruments avoids energy loss and overheating.

Overview



	ThermoTester	ThermoMaster	ThermoSpot Laser	ThermoSpot Pro Laser	CondenseSpot Pro	ThermoSpot-Vision
Measuring system	NTC sensor	K-type sensor	Infrared	Infrared	Infrared + rH / + NTC	Infrared + K-type + rH / + NTC
Measuring range	-40°C...250°C	-50°C...1300°C	-20°C...315°C	-40°C...600°C	-40°C...600°C	-50°C...1300°C
Accuracy	1,5% ± 2°C	± 0,5% of displayed value + 1°C (0°C...1000°C) ± 0,8% of displayed value + 1°C (1000°C...1300°C) ± 2°C (-50°C...0°C)	± 1,5°C (-10°C...60°C) ± 2°C (< -10°C and > 60°C) or ± 2% depending on the higher value	± 1°C (-10°C...60°C) ± 1,5°C (< -10°C and > 60°C) or ± 1,5% depending on the higher value	± 1°C (-10°C...60°C) ± 1,5°C (< 10°C and > 60°C) or ± 1,5% depending on the higher value	± 1,0% ± 1°C (20°C...500°C) ± 1,5% (500°C...1000°C) ± 3,5°C (-50°C...20°C)
Measuring range K-type sensor		-50°C...200°C				-50°C...1370°C
Accuracy K-type sensor		± 2,5°C (-50°C...200°C) ThermoProbe K				± 0,5% ± 1,5°C (0°C...1370°C) ± 2,5°C (-50°C...0°C)
Ambient temperature		with ThermoSensor Air (-50°C...800°C)			-10°C...60°C	0°C...50°C
Dew point calculation					•	•
Relative humidity					•	•
K-type sensor		•				•
Emissivity coefficient			0,95	0,10...0,99	0,10...0,99	0,10...0,99
Optics			8 : 1	8 : 1	8 : 1	50 : 1
Audio/video function						•
Memory						•
USB interface						•
Laser class			2M	2M	2M	2

• = available



Temperature measuring instruments

ThermoTester

NEW



Digital thermometer for household, gastronomy, trade, craft and industrial applications

- Can be dipped or inserted into material
- Large temperature measuring range: -40 °C...250 °C
- Quick response time
- Measurement in °C or °F
- Hold function: the current measured value is held in the display
- Min/Max display
- Large LC display

Soon available.



Measuring range: -40 °C...250 °C

Accuracy: 1,5% ± 2°C

Inclusive: ThermoTester, protective cover, battery

ORDER NO.	EAN-CODE	PU
082.030A	4 021563 664986	5

PT

1x
LR 44

ThermoMaster



Digital thermometer with contact thermocouple for use in laboratories and industry

- Large temperature measuring range: -50 °C ...1300 °C
- Dual K-type inputs for thermocouple for direct differential measurement of two temperatures
- Two flexible thermocouples for a wide range of industrial applications
- The MAX function determines when limit values are exceeded during prolonged measuring procedures
- Fold-out base for laboratory use
- 1/4" stand connection for flexible arrangement in stationary setups
- Tough enclosure with rubber guard
- Illuminated, clearly arranged display



Measuring range: -50°C...1300°C

Accuracy: ± 0,5% of displayed value + 1°C (0°C...1000°C)
± 0,8% of displayed value + 1°C (1000°C...1300°C)
± 2°C (-50°C...0°C)

ThermoProbe K measuring range: -50°C...200°C

Accuracy: ± 2,5°C (-50°C...200°C)

Inclusive: ThermoMaster, 2x ThermoProbe K thermocouple, battery, carrying case

ORDER NO.	EAN-CODE	PU
082.035A	4 021563 676293	2

IQ

1/4" 9V

HARD

ThermoSensor Air

K-type temperature sensor for measuring air and gas temperature

- Heat resistant handle
- Temperature sensor protected by metal sleeve (ø 6,5 mm)
- Sensor length: 165 mm
- Measuring range: -50 °C to 800 °C, accuracy class 2

For ThermoMaster and ThermoSpot-Vision only.



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082.035.1	4 021563 676309	2

IQ

ThermoSensor Tip

K-type temperature sensor for inserting in soft, highly viscous materials

- Heat resistant handle
- Sensor length: 165 mm
- Measuring range: -50 °C to 1300 °C, accuracy class 2

For ThermoMaster and ThermoSpot-Vision only.

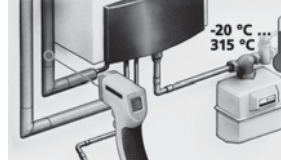


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082.035.2	4 021563 676316	2

IQ

IR temperature measuring instruments

ThermoSpot Laser



Non-contact infrared temperature instrument with integrated laser

- This non-contact measuring method is ideal for taking temperature measurements at locations that are difficult to access.
- It can also be used to take measurements in hazardous zones, such as where there are moving machine parts or in electrical installations
- Emission ratio: 0,95
- Lens: 8:1

Infrared measuring range: -20 °C ... 315 °C
Accuracy: ± 1,5 °C (-10 °C ... 60 °C)
 ± 2 °C / ± 2% (< 10 °C and > 60 °C)

Inclusive: ThermoSpot Laser, battery

ORDER NO.	EAN-CODE	PU
082.040A	4 021563 664993	5



ThermoSpot Pro Laser



Non-contact infrared temperature instrument with integrated laser

- This non-contact measuring method is ideal for taking temperature measurements at locations that are difficult to access.
- It can also be used to take measurements in hazardous zones, such as where there are moving machine parts or in electrical installations
- Large temperature measurement range (-40 °C ... 600 °C)
- Emission ratio: 0,10 ... 0,99 (adjustable)
- Max. function: The highest value is displayed, if required.
- Lens: 8:1
- Illuminated display

Infrared measuring range: -40 °C ... 600 °C,
Accuracy: ± 1 °C (-10 °C ... 60 °C)
 ± 1,5 °C / ± 1,5 % (< 10 °C and > 60 °C)

Inclusive: ThermoSpot Pro Laser, battery, softbag

ORDER NO.	EAN-CODE	PU
082.041A	4 021563 665013	5



CondenseSpot Pro



Non-contact, infrared temperature instrument for localising thermal bridges and condensation moisture

- With integrated laser for measured surface targeting
- Additional relative humidity measurement (20 % ... 90 %), assessment of dew point and ambient temperature
- Large temperature measurement range (-40 °C ... 600 °C)
- Emission ratio: 0,10 ... 0,99 (adjustable)
- Bar graph condense water indicator
- Min./Max./Avg. display: the smallest, largest or average value will be displayed.
- Lens 8:1
- Illuminated display

Infrared measuring range: -40 °C ... 600 °C
Accuracy: ± 1 °C (-10 °C ... 60 °C);
 ± 1,5 °C / ± 1,5 % (< 10 °C and > 60 °C)

Ambient temperature: -10 °C ... 60 °C
Accuracy: ± 2 °C

Hygrometer: 20% ... 90% relative air humidity
Accuracy: ± 3,0%

Dew point assessment: -20 °C ... 60 °C

Inclusive: CondenseSpot Pro, battery, softbag

ORDER NO.	EAN-CODE	PU
082.045A	4 021563 665020	2



IR temperature measuring instruments

In many applications infrared temperature measurement with integrated moisture sensors has become indispensable wherever it is necessary to safely determine surface temperatures or detecting harmful thermal bridges. An extensive range of accessories and functions enable complete documentation. All measured data can be stored together with images or video sequences – the sound foundation for professional evaluation and fault analysis.



Display
All relevant measured data shown in on-screen video image for direct assessment of measuring situation.



- E = Emission coefficient
- AT = Ambient Temperature
- DP = Dewpoint
- RH% = Relative humidity
- WB = Wet Bulb
- MIN = Minimum
- MAX = Maximum
- DIF = Difference
- AVG = Average

= Surface temperature of infrared measurement

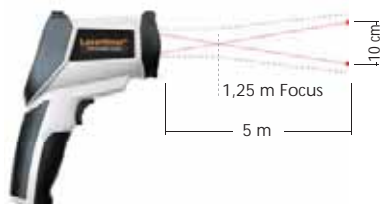
a: date, time, battery status, laser active, infrared measurement stopped, high/low alarm function

ThermoSpot-Vision



Contactless temperature and moisture measuring instrument with real-time video image and memory function for perfect documentation

- Precision infrared thermometer with large measuring range: -50 °C ... 1300 °C
- Real-time video display of measuring point with all relevant data
- Measuring point marked by dual laser and target mark in display for exact object pinpointing
- Adjustable emission coefficient with material display
- Integrated sensors for humidity and ambient temperature to assess room climate (Dew point assessment)
- Additional K-type thermocouple connection for contact temperature measurement
- High-grade infrared optics: 50:1
- Visual and acoustic high/low alarm function
- Min./Max./Avg./Dif. display: Display of minimum, maximum, average and differential value.
- Playback function for image and video recordings
- All measured data recorded in internal memory or on micro SD card
- Powerful li-ion rechargeable battery
- USB interface
- Software evaluation



Infrared:	-50 °C ... 1300 °C
Accuracy:	± 1,0 % / ± 1 °C (20 °C ... 500 °C) ± 1,5 % (500 °C ... 1000 °C) ± 2,0 % (1000 °C ... 1300 °C) ± 3,5 % (< 20 °C)
Measuring rate:	150 ms
Spectral sensitivity:	8 ... 14µm
Ambient temperature:	0 °C ... 50 °C
Accuracy:	± 0,5% ± 0,5°C (10 °C ... 40 °C)
Relative air humidity:	0% ... 100% rH
Accuracy:	± 3,0 %rH (40 % ... 60 %rH)
Dew point temperature:	-20 °C ... 50 °C
Accuracy:	± 0,5 °C (10 °C ... 40 °C)
K-type sensor:	-50 °C ... 1370 °C
Accuracy:	± 0,5 % ± 1,5 °C (0 °C ... 1370 °C) ± 2,5 % (< 0 °C)
Emission coefficient:	0,10 ... 1,0 adjustable
DS-Ratio:	50:1

Inclusive: ThermoSpot-Vision, lithium ion battery, USB cable, software, carrying case

ORDER NO.	EAN-CODE	PU
082.080A	4 021563 676361	2

