KIMO INSTRUMENTS

Technical Data Sheet

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

Supplied with* Calibration certificate

New

Thermocouple thermometers

TK 100 - TK 102

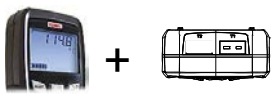
Functions

- Temperature
- Selection of units
- HOLD function
- Simplified mode function
- Minimum and maximum values
- Adjustable backlight
- Delta T *(TK 102)*
- *Adjustable automatic* shut-off

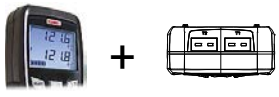
Technical features

Measuring elements.....Thermocouple K, J, T or S class 1
Display.....2 lines, LCD technology. Sizes 50 x 34.9 mm.
1 line of 5 digits with 7 segments (value)
1 line of 5 digits with 16 segments (unit)
Housing.....Shock-proof made of ABS, IP54 protection or IP67 with CEP 150 protective cover
Keypad.....Metal-coated with 5 keys
Conformity.....electromagnetical compatibility (NF EN 61326-1 guideline)
Power supply.....1 alcaline battery 9V 6LR61
Operating temperature.....from 0 to 50°C
Storage temperature.....from -20 to +80°C
Auto shut-off.....5 choices: "Off", 3, 6, 10 or 15 minutes
Weight.....190g
Languages.....French, english

TK 100 – *1 channel*



TK 102 – *2 channels*



*except class 100S

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Specifications

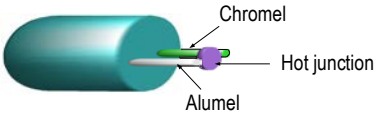
	Measuring units	Measuring ranges	Accuracy*	Resolutions
THERMOCOUPLE PROBES (see related datasheet)				
Thermocouple K	°C, °F	from -200 to 1300°C	±1.1°C or ±0.4% of reading**	0.1 °C
Thermocouple J	°C, °F	from -100 to 750°C	±0.8°C or ±0.4% of reading**	0.1 °C
Thermocouple T	°C, °F	from -200 to 400°C	±0.5°C or ±0.4% of reading**	0.1 °C
Thermocouple S	°C, °F	from 0 to 1760 °C	±1°C or ±0.4% of reading**	0.5 °C

*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.
**the accuracy is expressed either by a deviation in °C, or by a percentage of the value concerned. Only the bigger value is considered.

Working principle

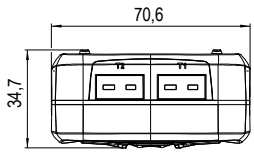
According to the Seebeck effect, when two wires composed of different metals are joined at both ends, an electric circuit is formed. The voltage increases with temperature.

I.E : Thermocouple K

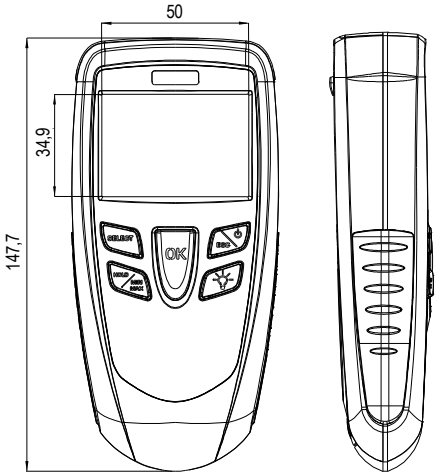


Dimensions

• Top view



• Front view • Side view



Supplied with ...

● Included ○ Optionnal

DESCRIPTION	TK 100	TK 102
Thermocouple probes	○	○
Protective cover IP67	○	○
Calibration certificate*	●	●
Transport case	●	●

*except class 100S

Large choice of temperature probes (See related datasheet) :
- ambient
- contact
- penetration
- food industry penetration
- general use
- Etc...

Accessories *(See related datasheet)*

CE 100

Protective cover with magnet and holding system.

CEP 100

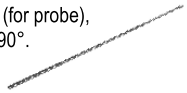
Protective cover against water spray

GST

Silicone heat-conductive grease for temperature probes

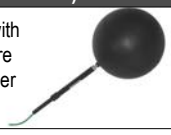
RTS

Telescopic extension (for probe), 1m long and bent at 90°.



BN (See related data sheet)

Black ball Ø 150mm with junction for temperature probe Ø 4,5mm. Further dimensions available.



Warranty period

Instruments have 1-year guarantee for any manufacturing defect (return to our After-Sales Service required for appraisal).

KIMO INSTRUMENTS

Technical Data Sheet

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

Thermometers

special food industry

Supplied with* Calibration certificate

TK 150 / TN 150 - TN 151 / TR 150 - TR 151

New

CE

"Supplied with CEP 150 protective cover"

Functions

- Selection of units
- HOLD function
- Simplified mode function
- Minimum and maximum value
- Adjustable automatic shut-off
- Adjustable back-light
- Delta T
- Adjustable alarms
- Auto-Hold function
- *In accordance with HACCP repository*

Technical features

Display.....2 lines, LCD technology. Size 50 x 34,9 mm.
1 line of 5 digits of 7 segments (value)
1 line of 5 digits of 16 segments (unit)

Housing.....Shock-proof made of ABS, IP67 protection with CEP 150 food industry protective cover

Keypad.....Metal coated with 5 keys

Cable.....Straight, lg. 1 meter

Connectics.....Mini-DIN connectors *(TN150-TN151)* compensated miniature female connectors *(TK150)*

Conformity.....Electromagnetical compatibility (NF EN 61326-1 guideline)

Power supply.....1 alkaline battery 9V 6LR61

Environment.....Neutral gas

Operating temperature.....from 0 to 50°C

Storage temperature.....from -20 to +80°C

Auto-extinction.....5 choices: "Off", 3, 6, 10 or 15 minutes

Weight.....190g

Languages.....French, English

Measuring element

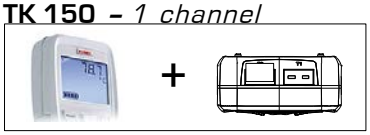
TK 150.....Thermocouple K, J, T or S class 1

TN 150 – TN 151.....CTN : resistance à 25°C, R_{25} = 10KΩ Nominal Beta value B25/85 = 3,695K ±1%

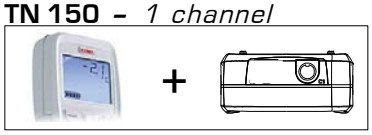
TR 150 – TR151.....Pt 1000 class A

*except class 150S

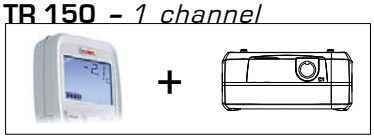
TK 150 – *1 channel*



TN 150 – *1 channel*



TR 150 – *1 channel*



TN 151 – ***Fixed probe***

TR 151 – ***Fixed probe***

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Specifications

TK 150	Measuring units	Measuring ranges	Accuracy*	Resolutions
THERMOCOUPLE PROBES (see related data sheet)				
Thermocouple K	°C, °F	from -200 to +1300°C	±1.1°C or ±0.4% of reading**	0.1 °C
Thermocouple J	°C, °F	from -100 to +750°C	±0.8°C or ±0.4% of reading**	0.1 °C
Thermocouple T	°C, °F	from -200 to +400°C	±0.5°C or ±0.4% of reading**	0.1 °C
Thermocouple S	°C, °F	from 0 to 1760 °C	±1°C or ±0.4% of reading**	0.5 °C

*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.
**the accuracy is expressed either by a deviation in °C, or by a percentage of the value concerned. Only the bigger value is considered.

TN 150-TN151	Measuring units	Measuring ranges	Accuracy*	Resolutions
TEMPERATURE				
TN 151 *Fixed probe*	°C, °F	from -40 to +120°C	±0.3°C (-40°C<T<+70°C) ±0.5°C beyond	0.1 °C
TN 150 *1 channel*	°C, °F	from -40 to +120°C	±0.3°C (-40°C<T<+70°C) ±0.5°C beyond	0.1 °C

*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.

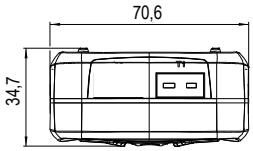
TR 150	Measuring units	Measuring ranges	Accuracy*	Resolutions
TEMPERATURE				
TR 151 *Fixed probe*	°C, °F	from -50 to +250°C	±0.4% ±0.3°C	0.1 °C
TR 150 *Pt 1000 1 channel*	°C, °F	from -100 to +400°C	±0.4% ±0.3°C	0.1 °C

*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.

Dimensions

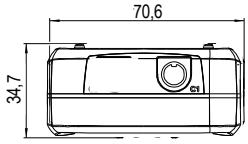
TK 150

• Top view



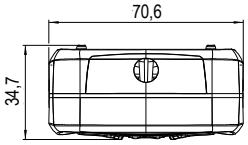
TN 150 / TR 150

• Top view



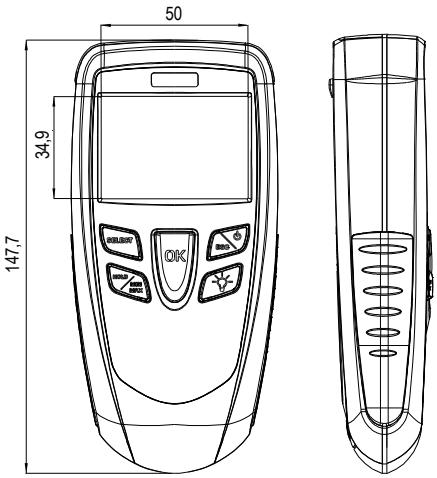
TN 151 / TR 151

• Top view



TK 150 / TN 150-TN 151 / TR 150-TR151

• Front view • Side view

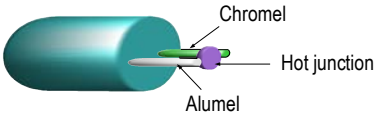


Working principle

TK 150

According to the Seebeck effect, when two wires composed of different metals are joined at both ends, an electric circuit is formed. The voltage increases with temperature.

I.E : Thermocouple K



TN 150 – TN 151

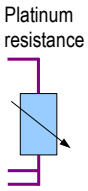
Thermometer : NTC probe
Negative temperature coefficient probe are thermistance with a resistance that decreases with temperature according to the equation below :

$$R_{(T)}=R_{(T0)}e^{(\frac{\alpha}{100} \times (T_0+273.15)^2 \times (\frac{1}{T+273.5}-\frac{1}{T_0+273.5}))}$$

RT= resistance sensor value at temperature T
$R(T_0)$= resistance sensor value at reference temperature T0. T and T0 in °C
α et T_0 are sensor specific constants

TR 150 – TR151

Thermometer : Pt1000 probe
Pt100 is a resistance with a positive temperature coefficient which varies according to the temperature. The higher the temperature is, the more the value of the resistance increases.
Ie : For 0°C ≈ 1000 Ω
For 100°C ≈ 1385 Ω.



Supplied with ...

● Supplied with ○ Optional

DESCRIPTION	TK 150	TN 150	TN 151	TR 150	TR 151
Thermocouple probe	○				
NTC temperature probe		○			
Pt1000 food industry penetration probe			●		
Food industry penetration probe					●
Choice of Pt 1000 temperature probe				○	
Food industry protective cover IP67	●	●	●	●	●
Calibration certificate*	●	●	●	●	●
Transport case	●	●	●	●	●

*except class 150S

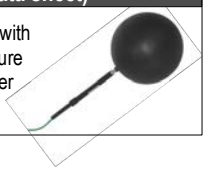
Large choice of temperature probes (See related data sheet) :
- ambient
- contact
- penetration
- food industry penetration
- general use
- Etc...

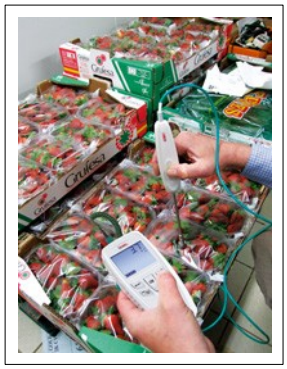
Accessories *(See related data sheet)*

CE 100
Protective cover with magnet and holding system

GST
Silicone heat-conductive grease for temperature probes

BN (See related data sheet)
Black ball Ø 150mm with junction for temperature probe Ø 4,5mm. Other on request.





Warranty period

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