

# **Technical Data Sheet**

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



# *NTC Thermometers* **TN 100, 101, 102 & TN 150, 151**





#### Functions

- Temperature
- Selection of units
- HOLD function
- Minimum and maximum values
- Adjustable automatic shut-off
- Adjustable backlight
- Delta T (TN 102)
- Adjustable alarms
  (TN 150 & TN 151)
- Auto-Hold function (TN 150 & TN 151)

#### Technical features

Beta B25/85 value = 3,695K ±1%  Display	Measuring element	<b>NTC :</b> resistance at 25°C, $R_{25} = 10K\Omega$ Nominal
1 line of 5 digits with 7 segments (value) 1 line of 5 digits with 16 segments (unit)  Housing		Beta B25/85 value = 3,695K ±1%
1 line of 5 digits with 16 segments (unit)  Housing	Display	2 lines, LCD technology. Size 50 x 34.9 mm.
Housing		1 line of 5 digits with 7 segments (value)
or IP65 with food industry protective cover  Keypad		1 line of 5 digits with 16 segments (unit)
Keypad	Housing	Shock-proof made of ABS, IP54 protection
Cableretractable, length 450 mm, up to 2.4 m when released (TN101) straight, white, Ig. 2 m (TN151)  Conformityelectromagnetical compatibility (NF EN 61326-1 guideline)  Power supply		or IP65 with food industry protective cover
up to 2.4 m when released (TN101) straight, white, Ig. 2 m (TN151)  Conformityelectromagnetical compatibility (NF EN 61326-1 guideline)  Power supply	Keypad	Metal-coated with 5 keys
straight, white, Ig. 2 m (TN151)  Conformityelectromagnetical compatibility (NF EN 61326-1 guideline)  Power supply	Cable	retractable, length 450 mm,
Conformityelectromagnetical compatibility (NF EN 61326-1 guideline)  Power supply		up to 2.4 m when released (TN101)
Power supply1 alcaline battery 9V 6LR61		straight, white, lg. 2 m (TN151)
	Conformity	electromagnetical compatibility (NF EN 61326-1 guideline)
Operating temperaturefrom 0 to 50°C	Power supply	1 alcaline battery 9V 6LR61
	Operating temperature	from 0 to 50°C
Storage temperaturefrom -20 to +80°C	Storage temperature	from -20 to +80°C
Auto shut-offadjustable from 0 to 120 min	Auto shut-off	adjustable from 0 to 120 min
<b>Weight</b> 190g	Weight	190g
	Languages	French, English
-	-	•



TN 101 - Fixed probe



TN 100 - 1 channel



TN 102 - 2 channels



TN 150 - 1 channel



TN 151 - Fixed probe



	Measuring units	Measuring ranges	Accuracy*	Resolutions	
TEMPERATURE					
TN 101 fixed probe	°C, °F	from -40 to 120°C	±0.3°C (-40°C <t<+70°c) ±0.5°C beyond</t<+70°c) 	0.1 °C	
TN 100 1 channel	°C, °F	from -40 to 120°C	±0.3°C (-40°C <t<+70°c) ±0.5°C beyond</t<+70°c) 	0.1 °C	
TN 102 2 channels	°C, °F	from -40 to 120°C	±0.3°C (-40°C <t<+70°c) ±0.5°C beyond</t<+70°c) 	0.1 °C	
TN 151 fixed probe	°C, °F	from -40 to 120°C	±0.3°C (-40°C <t<+70°c) ±0.5°C beyond</t<+70°c) 	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</t<+70°c) 	0.1 °C	

<sup>\*</sup>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.

### Working principle

#### Thermometer : NTC probe

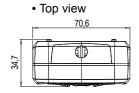
Negative temperature coefficient probe are thermistance with a resistance that decreases with temperature according to the equation below:

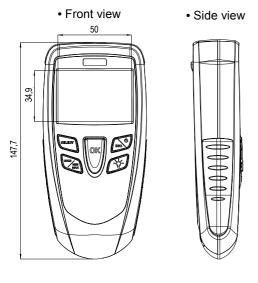
$$R_{(T)} = R_{(T0)} e^{-\left(\frac{\alpha}{100} \times (T_0 + 273.15)^2 \times (\frac{1}{T + 273.5} - \frac{1}{T_0 + 273.5})\right)}$$

RT= resistance sensor value at temperature T R(T $_0$ )= resistance sensor value at reference temperature T and T $_0$  in °C

 $\alpha$  and  $T_{\mbox{\tiny 0}}$  sensor specific constants

#### Dimensions





## Supplied with ...

● Included ○ Optionnal

DESCRIPTION	TN 100	TN 101	TN 102	TN 150	TN 151
NTC temperature probe	0	0	0	0	0
Penetration NTC probe	1 1 1 1	•		 	1 1 1
Food industry penetration probe	1			1	•
Protective cover IP65	•	•	•	•	•
Calibration certificate*	•	•	•	•	•
Transport case	•	•	•	•	•



Large choice of temperature probes

(See related datasheet) :
• ambient • food indust

ambientfood industrypenetration

• general use

465 mm

\*except class 100S and 150S



CE 100	BN (See related datasheet)
Protective cover with magnet and holding system.	Black ball Ø 150mm with junction for temperature probe Ø 4,5mm. Further dimensions available.
RTS	GST
Telescopic extension (for probe), 1m long and bent at 90°.	Silicone heat-conductive grease for temperature probes

## Warranty period

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

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FTang – TN 100-TN150 - 05/08 B – We reserve the right to modify the characteristics of our products without notice.

215 mm

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