

# TENMARS

TM-311N Single K Type Thermometer

TM-321N Dual K Type Thermometer

## User's Guide


### Accessories:

9V NEAD1604, IEC6F22, JIS006P x1 pc

TP-01 K-type thermocouple x1 pc

User's manual x 1 pc

### General specification:

LCD display digits	4 digit LCD display, the largest display 9999.
Polarity indicator	No indicator in positive, negative indicator "-"
Overload indicator	Positive overload show "OL", negative overload show "-OL"
Low power indicator	When  display indicator the battery power is low.
Power	9V NEAD1604, IEC6F22, JIS006P x1pc
Battery life	Approximately 100 hours / alkaline battery
Operating temperature	0°C ~ 50°C (32°F ~ 122°F), < 80% RH
Storage temperature	-10°C ~ 60°C (-4°F ~ 140°F), < 70% RH
Weight	Approximately 180g (include batteries)

### Electrical specification:

Measurement range	-200°C to +1372°C (-328°F to +2501°F)	
Resolution	0.1	≤999.9
	1	≥1000
Reading update	1 times/sec	
Accuracy (23°C±5°C) (73.4°F±9°F)	±0.1% reading + 0.5°C (1°F) Below -100°C (-148°F): ±(0.2% rdg+ 1°C(2°F))	
Temperature coefficient	-100°C~+1372°C(-148°F to +2501°F): 0.01% reading +0.05°C /°C (0.1°F /°F) outside the specified +18°C to 28°C (+64°F to +82°F) Below -100°C (-148°F): 0.02% rdg+0.1°C/°C(0.2°F/ °F)	
Temperature Scale	ITS-90	
Accuracy is specified for ambient temperatures between 18~28°C (64~82 °F). The above specifications do not include error of thermocouple.		

### TENMARS ELECTRONICS CO., LTD













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### Operation:

-  : Power key.
-  : Temperature unit selection key.
-  : Memory and inquiry (MAX/MIN/AVG) value of the function key, every press inquiry (MAX/MIN/AVG), press and hold 2 seconds leave function.
-  : Relative value function key. (Only for TM-311N)
-  : T1, T2 Input channel switching. (only for TM-321N)
-  : Hold the LCD display function key.
- Disable APO : Press and hold () key for 2 seconds , disable or enable Auto Power Off function.
- 0°CAdj : Press the ()key and () key to enter the digital 0°Cadjust settings, Press () key or Press() key the bottom window plus or minus 0.1, press() key to complete the 0°Cadjust.

### Introduction:

This product is a portable microcontroller design, high measurement accuracy and high stability. Rugged easy one-hand operation, digital 0°C adjustment, reading and (maximum / minimum / average) value can be displayed simultaneously.