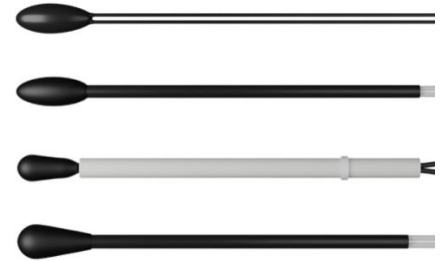


SENSOR_CNSE Series Epoxy Resin Encapsulation Structure



◆ Product Introduction

The thermistor sensor with an epoxy resin encapsulated head is an electronic measuring component that integrates temperature sensing capability and reliable protection performance. The core component of this sensor is the thermistor chip, which is highly sensitive to temperature variations and can efficiently convert temperature changes into corresponding resistance signals.

Epoxy resin is used as the encapsulation material for the sensor head and provides several excellent characteristics. With its high mechanical strength and good toughness, epoxy resin provides robust physical protection for the thermistor chip. It effectively protects the chip from external mechanical impacts, vibration, and abrasion, ensuring stable and reliable operation even under harsh environmental conditions.

Meanwhile, epoxy resin offers excellent electrical insulation properties, preventing electrical short circuits between the chip and external components, thereby ensuring safe and reliable sensor operation.

In addition, epoxy resin features outstanding chemical stability and resistance to various chemical substances, allowing the sensor to operate reliably in a wide range of application environments.

◆ Features

1. High temperature measurement accuracy up to $\pm 0.1^{\circ}\text{C}$, meeting the requirements of high-precision applications.
2. Supports a wide operating temperature measurement range from -40°C to $+150^{\circ}\text{C}$.
3. Available with dual epoxy resin encapsulation design, providing enhanced moisture resistance.
4. The thermistor features fast thermal response characteristics, enabling real-time detection of temperature variations.

◆ Applications

1. New Energy Vehicles (NEVs)
2. AI Servers, Server Power Supplies, and Robotics
3. Air Conditioning Systems and Refrigeration Systems
4. Automotive Interior Temperature Sensing
5. Fan Air Temperature Measurement
6. Ambient Temperature and Indoor Temperature Measurement

◆ Coding Principles

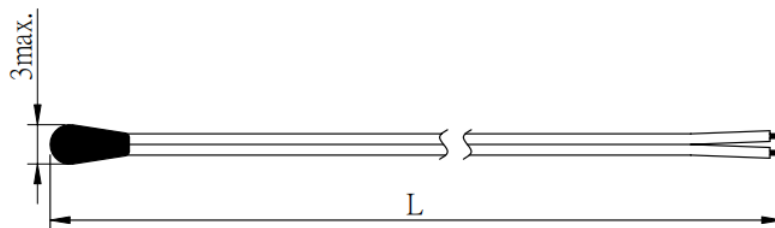
1	2	3	4	5	6	7	8	9	10	11	12~18
Product Type			Series		Resistance Value		Resistance value accuracy		B value		Internal Control Code
CNS	NTC Chip	E0	105°C	Epoxy Resin Encapsulation Structure	103	10KΩ	F	±1%	34	B(25/85)=3435	
		E1	150°C		473	47KΩ	G	±2%	38	B(25/50)=3800	
		E2	80°C		502	5KΩ	H	±3%	39	B(25/50)=3950	
		E3	125°C				J	±5%	40	B(25/85)=4000	

◆ Specifications

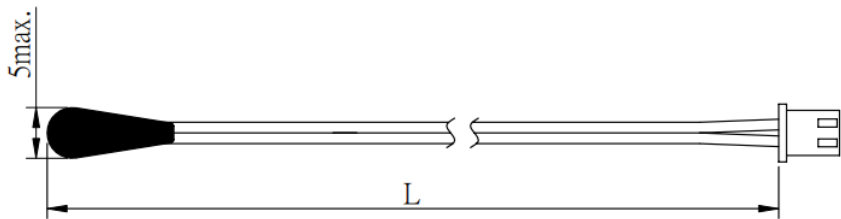
Part Number (Model No.)	Zero Power Resistance at 25°C	Tolerance of Resistance	B-Value	Thermal Dissipation Constant	Thermal Time Constant	Operating Temperature Range
	(KΩ)	(±%)	(K)	(mW/°C)	(s)	(°C)
CNSKC202@MM	2	1,2,3,5	(B25/85)3530	≤ 3	≤ 30	-40°C ~ 150°C
CNSKC4A2@MM	4.7		(B25/100)3985			
CNSKC502@MM	5		(B25/50)3950			
CNSKC6A2@MM	6.8		(B25/50)3950			
CNSKC103@MM	10		(B25/85)3435			
CNSKC153@MM	15		(B25/50)4150			
CNSKC473@MM	47		(B25/50)3950			
CNSKC104@MM	100		(B25/85)3950			
CNSKC204@MM	200		(B25/50)3899			

K Customer application code May be A, E, F, G, H
 C Temperature resistance rating: 0(105°C), 1(150°C), 2(80°C), 3(125°C)
 @ Resistance value accuracy: F: ±1%; G: ±2%; H: ±3%; J: ±5% or difference tolerance of the R25
 MM B Constant

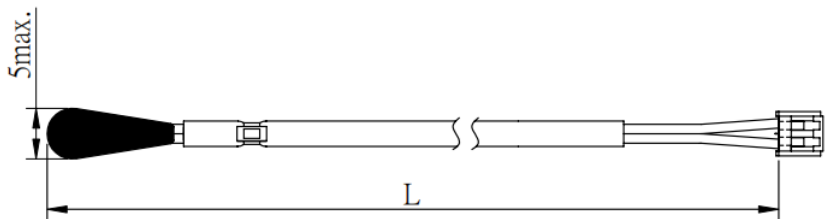
◆ Products



Application Range	Industrial Control Motors, Power Tools
Features	Compact Size and Fast Thermal Response
Operating Temperature (°C)	-40°C ~ +125°C
Thermal Time Constant (s)	Approx. 10 seconds



Application Range	Smart Toilets, Ambient Temperature Detection, Electric Bicycles / E-Bikes
Features	Excellent Stability
Operating Temperature (°C)	-40°C~+125°C
Thermal Time Constant (s)	Approx. 10 seconds



Application Range	Air conditioning room temperature measurement
Features	Fast response time
Operating Temperature (°C)	-40°C~+105°C
Thermal Time Constant (s)	Approx. 10 seconds