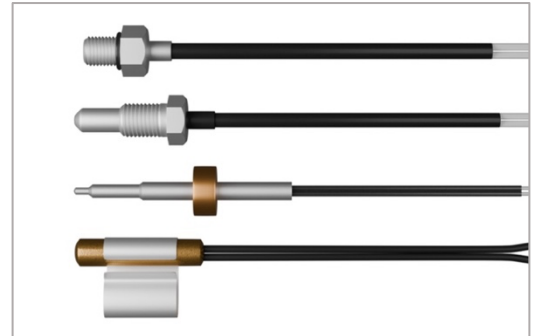


SENSOR_CNSF Series Metal Tube (Housing) Structure



◆ Product Introduction

The thermistor sensor with a metal tube (housing) head structure is a temperature sensing component based on thermistor technology, widely used in industrial, electronic, medical, and other applications. The core component of this sensor is the thermistor chip, which is highly sensitive to temperature variations and can accurately convert temperature changes into corresponding resistance changes.

The metal tube (housing), serving as the protective structure of the sensor head, is typically made of materials such as stainless steel or copper alloy, offering excellent thermal conductivity and mechanical strength.

This metal encapsulation not only provides reliable protection for the thermistor chip against moisture, mechanical impact, vibration, and wear, but also efficiently transfers external heat to the sensing element. As a result, it enables faster response time and improves temperature measurement accuracy.

◆ Features

1. Temperature measurement accuracy up to $\pm 0.1^{\circ}\text{C}$, meeting high-precision application requirements
2. Wide operating temperature range from -40°C to $+180^{\circ}\text{C}$
3. Excellent moisture and humidity resistance
4. Fast response characteristics, enabling real-time detection of temperature changes

◆ Applications

1. New Energy Vehicles (NEVs)
2. AI Servers, Server Power Supplies, Robotics
3. Smart Toilets and Water Treatment Equipment
4. Water Heaters and Temperature-Controlled Faucets
5. Heat Sink Temperature Measurement, Liquid and Oil Temperature Sensing
6. Industrial and Commercial Temperature Control Systems

◆ Coding Principles

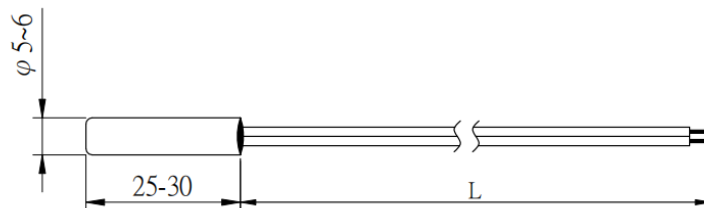
1	2	3	4	5	6	7	8	9	10	11	12~18
Product Type			Series		Resistance Value		Resistance value accuracy		B value		Internal Control Code
CNS	NTC Chip	F0	105°C	Metal Tube (Case) Structure	103	10KΩ	F	±1%	34	B(25/85)=3435	
		F1	150°C		473	47KΩ	G	±2%	38	B(25/50)=3800	
		F2	80°C		502	5KΩ	H	±3%	39	B(25/50)=3950	
		F3	125°C				J	±5%	40	B(25/85)=4000	

◆ Specifications

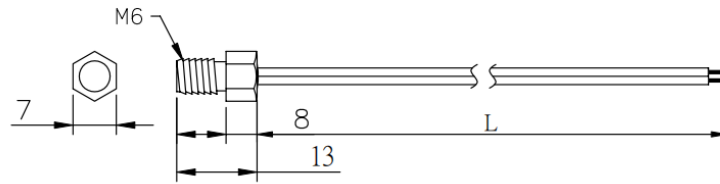
Part Number (Model No.)	Zero Power Resistance at 25°C	Tolerance of Resistance	B-Value	Thermal Dissipation Constant	Thermal Time Constant	Operating Temperature Range
	(KΩ)	(±%)	(K)	(mW/°C)	(s)	(°C)
CNSKC202@MM	2	1,2,3,5	(B25/85)3530	≤ 3	≤ 30	-40°C ~ 150°C
CNSKC4A2@MM	4.7		(B25/100)3985			
CNSKC502@MM	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

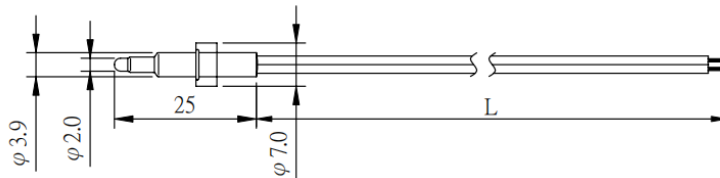
◆ Products



Application Range	Air Conditioners, Refrigerators and Freezers
Features	Excellent Thermal Conductivity, Accurate Temperature Sensing
Operating Temperature (°C)	-40°C ~ +105°C
Thermal Time Constant (s)	Approx. 30 seconds



Application Range	Automotive Engines, Engine Oil Temperature Sensing
Features	High Accuracy, Threaded Temperature Sensor, Excellent Heat Resistance
Operating Temperature (°C)	-40°C~+150°C
Thermal Time Constant (s)	Approx. 16 seconds



Application Range	Water Dispensers, Coffee Machines
Features	Fast Response, Accurate Temperature Measurement, Excellent Moisture Resistance
Operating Temperature (°C)	-40°C~+125°C
Thermal Time Constant (s)	Approx. 10 seconds