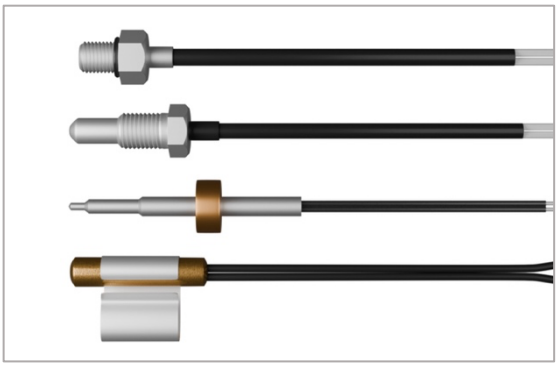
SENSOR_CNSF Series

Metal Tube (Case) Structure



◆ Product Introduction

The thermistor sensor with a metal tube (case) structure at the head is a temperature measurement component based on thermistor technology, playing a key role in numerous fields such as industry, electronics, and medical applications.

The core component of this sensor is the thermistor chip, which is extremely sensitive to temperature changes and can accurately convert temperature variations into changes in resistance value.

The metal tube (case) serving as the encapsulation structure for the sensor's head is typically made from metal materials with good thermal conductivity and mechanical strength, such as stainless steel or copper alloy.

This metal encapsulation not only provides reliable physical protection and moisture resistance for the thermistor chip, shielding it from external mechanical impact, vibration, and wear, but also efficiently conducts heat from the environment, quickly and accurately transmitting ambient temperature changes to the thermistor chip, significantly enhancing the sensor's response speed and measurement accuracy.

◆ Features

1. Temperature measurement accuracy up to ±0.1℃, meeting high-precision application requirements
2. Supports a temperature measurement range of -40℃ to +180℃
3. Strong moisture and humidity resistance
4. The thermistor has fast response characteristics, enabling real-time reflection of temperature changes

◆ Applications

1. New Energy Vehicles
2. AI Servers, Server Power Supplies, Robots
3. Smart Toilets, Water Treatment Equipment
4. Water Heaters, Thermostatic Faucets
5. Heat Sink Temperature Measurement, Liquid or Oil Temperature Sensing
6. Industrial/Commercial Temperature Control Systems

◆ 编码原则

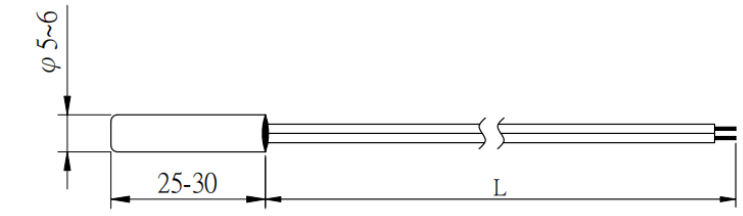
1	2	3	4		5		6	7	8	9		10	11	12~18
Product Type			Series				Resistance Value			Resistance value accuracy		B value		Internal Control Code
CNS	NTC Chip		F0	105℃	Metal Tube (Case) Structure		103	10KΩ		F	±1%	34	B(25/85)=3435	
			F1	150℃			473	47KΩ		G	±2%	38	B(25/50)=3800	
			F2	80℃			502	5KΩ		H	±3%	39	B(25/50)=3950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

◆ 规格

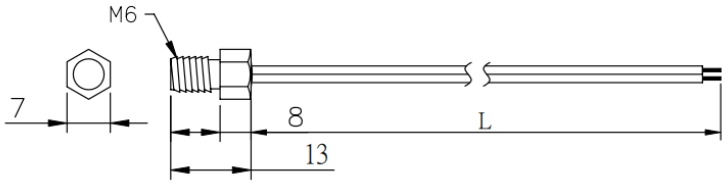
Part Number (Model No.)	Zero Power Resistance at 25℃	Tolerance of Resistance	B-Value	Thermal Dissipation Constant	Thermal Time Constant	Operating Temperature Range
	(KΩ)	(±%)	(K)	(mW/℃)	(s)	(℃)
CNSKC202@MM	2	1,2,3,5	(B25/85)3530	≤ 3	≤ 10	-40℃ ~ 150℃
CNSKC4A2@MM	4.7		(B25/100)3985			
CNSKC502@MM	5		(B25/50)3950			
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℃)、1(150℃)、2(80℃)、3(125℃)
@ Resistance value accuracy:F:±1%; G:±2%; H:±3%; J:±5% or difference tolerance of the R25
MM B value

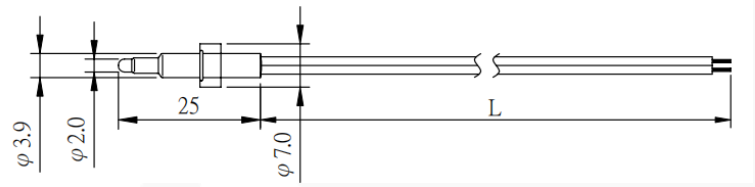
◆ 产品



Application Scope	Air conditioner, freezer and refrigerator
Characteristics	Good heat transfer and precise temperature sensing
Working Temperature	-40℃~+105℃
Thermal Time Constant	About 30 seconds



Application Scope	Car engine, car oil temperature
Characteristics	High precision, threaded temperature sensor with good heat resistance
Working Temperature	-40℃~+150℃
Thermal Time Constant	About 16 seconds



Application Scope	Water dispenser, coffee machine
Characteristics	Quick response, precise temperature measurement, strong moisture resistance
Working Temperature	-40℃~+125℃
Thermal Time Constant	About 10 seconds