SENSOR_CNSA Series
Electrical Terminal Structure

◆ Product Description

The CNSA Series is a temperature sensor featuring a terminal-type structure at the sensing head. It is a precision electronic component that converts temperature variations into electrical signals and is widely used in temperature measurement and control applications.

The core component of the sensor is an NTC thermistor chip, which is a highly temperature-sensitive semiconductor device capable of accurately changing its resistance value according to temperature variations.

The terminal structure at the sensor head is one of its key features. The terminals are typically made of highly conductive metal materials, such as copper alloy, and undergo special surface treatments, including tin plating or gold plating, to enhance oxidation resistance and ensure stable thermal and electrical connections.

These terminals not only provide reliable electrical connection points for the thermistor chip, enabling convenient connection with external circuits or mechanical structures, but also offer additional mechanical protection for the chip.

◆ Features

1.High stability
2.Wide operating temperature range: –40°C to +150°C
3.Excellent moisture resistance and durability
4.Easy installation by screw fastening or spot welding
5.Standard boss-type terminal sensor design for easy mounting

◆ Applications

1.New Energy Vehicles (NEV)
2.AI Servers, Server Power Supplies, and Robotics
3.EV Charging Stations and Energy Storage Systems
4.Data Projectors, Inverters, and Heat Pumps
5.Fans and Heaters
6.Surface Temperature Measurement

◆ Coding Principles

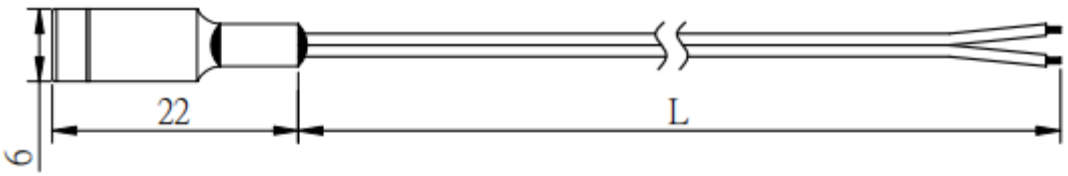
1	2	3	4	5		6	7	8	9		10	11	12~18
Product Type			Series			Resistance Value			Resistance value accuracy		B value		Internal Control Code
CNS	NTC Chip		A0	105℃	Electrical terminal structure	103	10KΩ		F	±1%	34	B(25/85)=3435	
			A1	150℃		473	47KΩ		G	±2%	38	B(25/50)=3800	
			A2	80℃		502	5KΩ		H	±3%	39	B(25/50)=3950	
			A3	125℃					J	±5%	40	B(25/85)=4000	

◆ Specifications

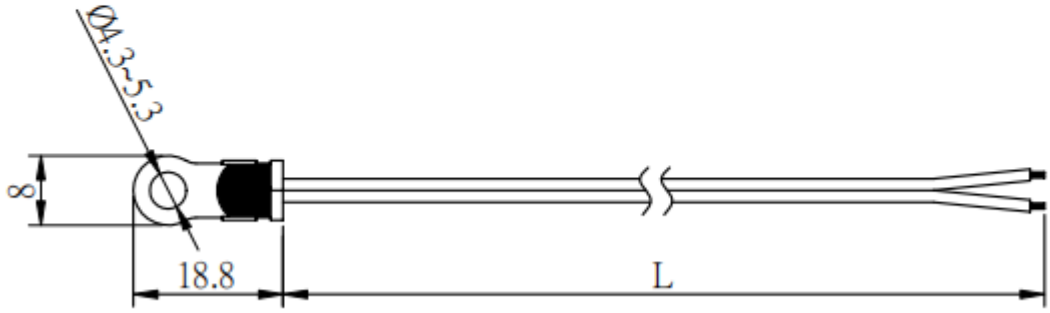
Part Number (Model No.)	Zero Power Resistance at 25℃	Tolerance of Resistance	B-Value	Thermal Dissipation Constant	Thermal Time Constant	Operating Temperature Range
	(KΩ)	(±%)	(K)	(mW/℃)	(s)	(℃)
CNSKC202@MM	2	1,2,3,5	(B25/85)3530	≤ 3	≤ 30	-40℃ ~ 150℃
CNSKC4A2@MM	4.7		(B25/100)3985			
CNSKC502@MM	5		(B25/50)3950			
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 Constant

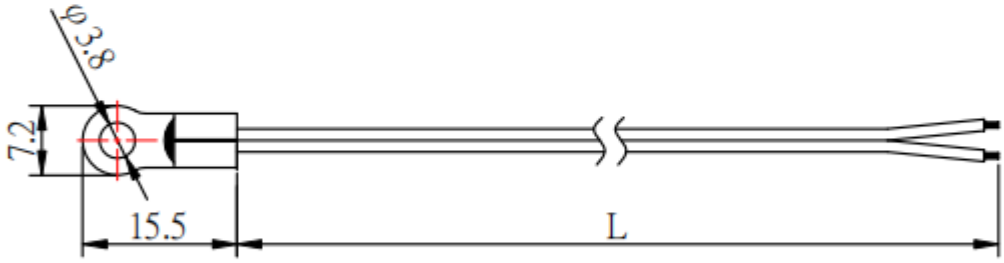
◆ Product



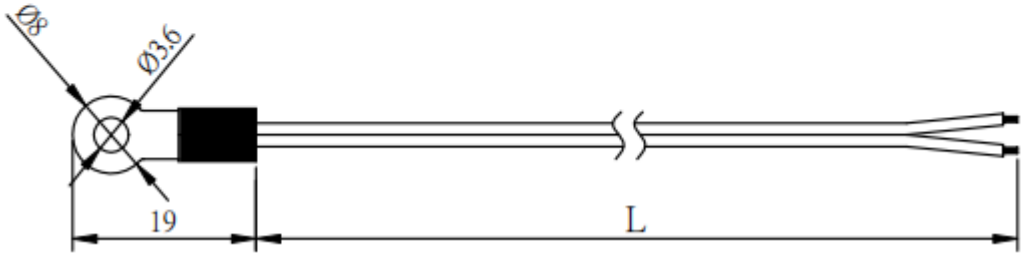
Application Range	New Energy Vehicles (NEVs), Energy Storage Equipment
Features	Excellent Thermal Conductivity, Good Corrosion Resistance, High Electrical Conductivity
Operating Temperature (℃)	-40℃~+125℃
Thermal Time Constant (s)	Approx. 15 seconds



Application Range	Variable Frequency Drive (VFD)
Features	Encapsulated with high heat-resistant and oil-resistant epoxy resin, Fast Thermal Response
Operating Temperature (℃)	-40℃~+125℃
Thermal Time Constant (s)	Approx. 15 seconds



Application Range	New Energy Vehicles (NEVs), Photovoltaic Energy Storage Systems, Wind Power, Energy Storage Systems
Features	High Accuracy and Excellent Heat Resistance
Operating Temperature (℃)	-40℃~+125℃
Thermal Time Constant (s)	Approx. 15 seconds



Application Range	Automotive Temperature Detection
Features	Fixed Ring Terminal, High Temperature Resistance, Easy Installation
Operating Temperature (℃)	-40℃~+125℃
Thermal Time Constant (s)	Approx. 15 seconds