

帝科微深圳市帝科微电子有限公司 DIKEWEI DIKEWEI ELECTRONICS TECHNOLOGY., TLD. SHENZHEN

# NTC热敏电阻

NTC THERMISTOR





优良品质・诚信经营 起 携・手・共 创 煌



### CWF 精密型温度传感器

#### **CWF PRECISION TEMPERATURE SENSOR**

#### 产品简介 PRODUCTS BRIEF INTRODUCTION

将高精度、高灵敏、高可靠的 NTC 热敏电阻器与 PVC 导线连接,用绝缘、导热、防水材料封装成需要,的形状,便于安装与远距离测控温。

That combining the high precision, Sensitive and security NTC thermistor with PVC wire, packing into the needed shape with the insulating, heat-conduction and water-protection material will be convenient for installation and long-distance temperature measurement and contro.

#### 特点 CHARACTERISTIC

- 1、CWF 系列产品为 NTC 热敏电阻深加工型温度传感器。
- 2、电阻值及 B 值精度高、一致性好、灵敏度高、反应速度快。
- 3、提供客制化线、R-T 特性及连接器。
- 4、具有良好的绝缘密封性和抗机械碰撞、抗折弯能力、可靠性高。

#### 应用范围 APPLIED RANGE

- 1、家电:空调、冰箱、洗衣机、电饭煲、电压力锅、电磁炉、微波炉、热水器、电水壶、咖啡壶、洗碗机、巧克力机、养生壶、电熨斗、智能灶、榨汁机、榨油机、油榨锅等等。
- 2、汽车: 汽车空调、车载冰箱、发动机、后视道、新能源汽车电池等等。
- 3、电源: PC 电源等。
- 4、电池:新能源汽车电池等。
- 5、医疗: 电子体温计、医疗器械。
- 6、消防:烟雾感应器。

特殊码



#### 应用范围

#### **APPLIED RANGE**

产品类别

CWF 精密型温度 传感器

系列号

A0/A1:电工端子结构 B0/B1:其他外形结构

E0:包封料涂装结构 F0/F1:金属结构

G0/G1:塑料壳结构 H0/H1:组合型结构

电阻值(R25) 阻值精度

102	1kΩ
103	10kΩ
104	100kΩ

D	±0.5%
Е	±0.759
F	±1%
G	±2%

 $\pm 3\%$ J  $\pm 5\%$ Κ  $\pm 10\%$ L  $\pm 15\%$ 

> $\pm 20\%$ 其他

Μ

Χ

A001-Z999

流水号



#### 家用电器类

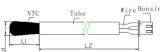
#### **HOUSEHOLD APPLIANCES CATEGORY**

产品性能简述 Product characteristic description

### 空调室内盘管 温度传感器 (1)

#### Temperature sensor



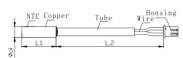


		9 - 7				
代码 Code	d		L1	L2		
尺寸 Size	客户自	定义 Cus	tomerization	≥50mm		
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~AC200 3、绝缘: DC500V Min 100M 4、使用温度范围: -30℃~10 -30℃~1	lΩ, 3Sec 5℃	<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage: AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C~ 105°C</li> <li>-30°C ~ 125°C</li> </ol>			
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、室内盘管温传感器独立设 方便	学封装,测量 潮湿环境工	1. using element component with high pencapsulation can narrow down the temperature and raise the predimensurement  2. the product is waterproofing and dame it stable in damp conditions  3. The product is easy to install and statemperatures. It also possesses he makes it able to work to full capacity for the product of	precision and stability for the range of measuring cision of temperature approofing, which makes table in under all range of tigh performance which		
产品用途 Product Use	适用于空调室内盘管温控模均	<del>.</del>	Suitable for indoor coil temperature of airconditioning	control module of		

### 空调室内盘管 温度传感器 (2)

#### Temperature sensor





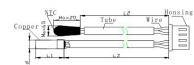
代码 Code	D		L1	L2	
尺寸 Size	客户自	定义 Cus	tomerization	≥50mm	
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~AC200 3、绝缘: DC500V Min 100M 4、使用温度范围: -30℃~10 -30℃ ~ 1	MΩ, 3Sec 5°C	1. Wire specification: By Customer's Requirements 2. withstand voltage: AC1000V ~ AC2000V, 3Sec 3, insulation: DC500V Min 100MΩ, 3Sec 4, Use temperature range: -30°C ~ 105°C -30°C ~ 125°C		
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、室内盘管温传感器独立设 方便	潮湿环境工	using element component with high pencapsulation can narrow down the temperature and raise the premeasurement     the product is waterproofing and dame it stable in damp conditions     The product is easy to install and statemperatures. It also possesses he makes it able to work to full capacity.	ne range of measuring cision of temperature approofing, which makes able in under all range of tigh performance which	
产品用途 Product Use	适用于空调室内环温温控模均	₹	Suitable for indoor coil temperature airconditioning	control module of	



### 空调室外盘管 温度传感器 (3)

#### Temperature sensor



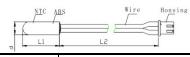


代码 Code	d	L1		L2	L3	
尺寸 Size	客户自定义(	Customerization		≥50mm		
产品性能 Product Property	1、线材规格:依客户需求 2、耐压: AC1000V ~AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩ, 3Sec 4、使用温度范围: -30℃~105℃ -30℃ ~ 125℃		2. 3,	1. Wire specification: By Customer's Requirements 2. withstand voltage : AC1000V ~ AC2000V, 3Sec 3, insulation: DC500V Min 100MΩ, 3Sec 4, Use temperature range: -30°C~ 105°C -30°C ~ 125°C		
产品特点 Product Characteristics	1、采用高精度、高稳定性元件封装,测量温差小,温度更准确。 2、产品特殊防水、防潮处理,潮湿环境工作稳定。 3、室温、管温传感器一体式设计,安装更方便。		<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>			
产品用途 Product Use	适用于空调室内盘管	温控模块			perature control module of air	

### 冰箱 温度传感器 (4)

#### Temperature sensor



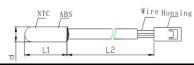


代码 Code	d		L1	L2
尺寸 Size	客户自定义	Customeri	zation	≥50mm
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~AC200 3、绝缘: DC500V Min 100M 4、使用温度范围: -30℃~10 -30℃ ~ 2	MΩ, 3Sec 5°C	•	
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、产品安装方便、抗寒、耐热 长期负荷工作。	潮湿环境工	<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>	
产品用途 Product Use	适用于冰箱温控模块		Suitable for refrigerato	or temperature control module



### 冰箱 温度传感器 (5) Temperature sensor



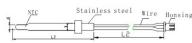


代码 Code	d		L1	L2	
尺寸 Size	客户自定义	Customeriz	zation	≥50mm	
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~AC200 3、绝缘: DC500V Min 100M 4、使用温度范围: -30℃~10 -30℃ ~ 2	MΩ, 3Sec 5°C	1. Wire specification: By Customer's Requirements 2. withstand voltage: AC1000V ~ AC2000V, 3Sec 3, insulation: DC500V Min 100MΩ, 3Sec 4, Use temperature range: -30°C ~ 105°C -30°C ~ 125°C		
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、产品安装方便、抗寒、耐热 长期负荷工作。	潮湿环境工	<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>		
产品用途 Product Use	适用于冰箱温控模块			ntor temperature control module	

### 制冰设备 温度传感器 (6)







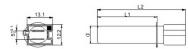
代码 Code	d	D	L1	L2	
尺寸 Size	客	户自定义 Custome	erization	≥50mm	
产品性能 Product Property	3、绝缘: DC500V M 4、使用温度范围: -	~AC2000V, 3Sec //in 100MΩ, 3Sec	<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage: AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C~ 105°C</li> <li>-30°C ~ 125°C</li> </ol>		
产品特点 Product Characteristics	1、采用高精度、高稳温差小,温度更然 2、产品特殊防水、防作稳定。 3、产品安装方便、抗长期负荷工作。	主确。 潮处理,潮湿环境工	temperature measurement  2. the product is waterproofing and dampproofing, which makes it stable in damp conditions		
产品用途 Product Use	适用于制冰设备温控	模块	Suitable for temperature co equipment	ntrol module of ice making	



### 洗衣机 温度传感器 (7)

### Temperature sensor



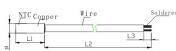


代码 Code	d		L1	L2
尺寸 Size	10mm		30.5mm	44.5mm
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~ AC200 3、绝缘: DC500V Min 100M 4、使用温度范围: -45℃ ~ ~	2. withstand voltage : 3, insulation: DC500V		: By Customer's Requirements : AC1000V ~ AC2000V, 3Sec V Min 100MΩ, 3Sec range: -45°C ~ 125°C
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、产品安装方便、抗寒、耐热 长期负荷工作。	1. using element of stability for encapted of measuring term temperature meature makes it stable in temperature of stable in temperature meature makes it stable in temperature of temperature meature makes it stable in temperature of temperature meature makes it stable in temperature of tem		component with high precision and psulation can narrow down the range experience and raise the precision of asurement atterproofing and dampproofing, which is damp conditions asy to install and stable in under all eratures. It also possesses high sich makes it able to work to full term $\square$
产品用途 Product Use	适用于洗衣机温控模块			erature control module of washing

### 太阳能 温度传感器 (8)

### Temperature sensor





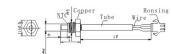
	3				
代码 Code	d	L1	L2	L3	
尺寸 Size	客	户自定义 Custome	erization	≥50mm	
产品性能 Product Property	3、绝缘: DC500V M 4、使用温度范围: -	~ AC2000V, 3Sec Min 100MΩm, 3Sec	<ol> <li>Wire specification: By C</li> <li>withstand voltage AC10</li> <li>insulation: DC500V Min</li> <li>Use temperature range:</li> </ol>	00V ~ AC2000V, 3Sec 100MΩ, 3Sec	
产品特点 Product Characteristics	1、采用高精度、高稳温差小,温度更次 2、产品特殊防水、防作稳定 3、产品安装方便、抗长期负荷工作。	達确 潮处理,潮湿环境工 	1. using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement  2. the product is waterproofing and dampproofing, which makes it stable in damp conditions  3. The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long tem		
产品用途 Product Use	适用于太阳能温控模	块	Suitable for solar temperatu	ure control module	



### 热水器 温度传感器 (9)

#### Temperature sensor





代码 Code	d	L1		L2
尺寸 Size	客户自定义	Customeriz	zation	≥50mm
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~ AC200 3、绝缘: DC500V Min 100M 4、使用温度范围: -30℃ ~ - -30℃ ~ -	MΩm, 3Sec 105°C 125°C	withstand voltage     insulation: DC50	n: By Customer's Requirements a AC1000V ~ AC2000V, 3Sec 0V Min 100MΩ, 3Sec range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、产品安装方便、抗寒、耐热 长期负荷工作。	1. using element stability for enca of measuring te temperature meaning in the product is with makes it stable in the product is earing of temperformance with stability and the product is earing to the product is early the product i		component with high precision and psulation can narrow down the range mperature and raise the precision of asurement and dampproofing, which in damp conditions asy to install and stable in under all eratures. It also possesses high lich makes it able to work to full term
产品用途 Product Use	适用于热水器温控模块		Suitable for tempera	ture control module of water heater

### 洗碗机 温度传感器 (10) Temperature sensor





代码 Code	d	D		L1	L2	L3
尺寸 Size	3.9mm	6.8mm	10	0mm	23mm	≥50mm
产品性能 Product Property	3、绝缘: DC50	放客户需求				AC2000V, 3Sec 2, 3Sec
产品特点 Product Characteristics	-30°C ~ 150°C  1、采用高精度、高稳定性元件封装,测量温差小,温度更准确  2、产品特殊防水、防潮处理,潮湿环境工作稳定  3、产品安装方便、抗寒、耐热性能优良可长期负荷工作			stabilit of mea tempe 2. the pro makes 3. The pr range perfori	element component wi y for encapsulation can assuring temperature and rature measurement duct is waterproofing an it stable in damp condition oduct is easy to install of temperatures. It mance which makes it	narrow down the range I raise the precision of d dampproofing, which ons and stable in under all also possesses high
产品用途 Product Use	适用于洗碗机温			Suitable fo	or temperature control mo	odule of dishwasher



### 咖啡机 温度传感器 (11)

#### Temperature sensor

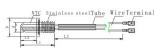




代码 Code	d	L1	L2	L3	
尺寸 Size	客	户自定义 Custome	rization	≥50mm	
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~ AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩm, 3Sec 4、使用温度范围: -30°C ~ 105°C		<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C</li> </ol>		
产品特点 Product Characteristics			stability for encapsulation of measuring temperature measuremed 2. the product is waterproof makes it stable in damp 3. The product is easy to range of temperature	fing and dampproofing, which	
产品用途 Product Use	适用于咖啡机温控模	块	Suitable for temperature co	ntrol module of coffee machine	

### 电水壶 温度传感器 (12) Temperature sensor



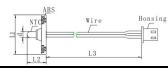


代码 Code	d	D	L	_1	L2	L3
尺寸 Size		客户自定》	义 Custo	omerizatio	on	≥50mm
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~ AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩm, 3Sec 4、使用温度范围: -30℃ ~ 105℃ -30℃ ~ 125℃ -30℃ ~ 150℃			<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C</li> </ol>		
产品特点 Product Characteristics	17.5			stabilit of mea tempe 2. the pro makes 3. The pr range perforr	element component wi y for encapsulation can a asuring temperature and rature measurement duct is waterproofing an it stable in damp condition oduct is easy to install of temperatures. It mance which makes it ty for long term	narrow down the range raise the precision of d dampproofing, which ons and stable in under all also possesses high
产品用途 Product Use	适用于电水壶温	控模块		Suitable fo	or temperature control mo	odule of electric kettle



#### 暖奶器 温度传感器 (13) Temperature sensor





代码 Code	d	L1		L2	L3
尺寸 Size	5.0mm	33.0mm		16.0mm	≥50mm
产品性能 Product Property	1、线材规格: 依客F 2、耐压: AC1000V 3、绝缘: DC500V M 4、使用温度范围: -	~ AC2000V, 3Sec //in 100MΩm, 3Sec	<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C</li> </ol>		
产品特点 Product Characteristics	4、使用温度范围: -30℃ ~ 105℃  1、采用高精度、高稳定性元件封装,测量温差小,温度更准确  2、产品特殊防水、防潮处理,潮湿环境工作稳定  3、产品安装方便、抗寒、耐热性能优良可长期负荷工作		2. th 3. T	stability for encapsulation of measuring temperature measurements temperature measurements waterproof makes it stable in damp. The product is easy to range of temperature	fing and dampproofing, which
产品用途 Product Use	适用于暖奶器温控模	块	Suit	table for temperature co	ntrol module of milk heater

### 咖啡机 温度传感器 (14) Temperature sensor





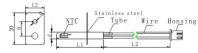
代码 Code	d	D		L1	L2
尺寸 Size	5.0mm	33.0mm		客户自定义 Customerization	≥50mm
产品性能 Product Property	1、线材规格:依客户需求 2、耐压: AC1000V ~ AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩm, 3Sec 4、使用温度范围: -30℃ ~ 105℃ -30℃ ~ 125℃ -30℃ ~ 150℃		<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C</li> </ol>		
产品特点 Product Characteristics	1、采用高精度、高稳 温差小,温度更次 2、产品特殊防水、防 作稳定 3、产品安装方便、抗 长期负荷工作	達确 潮处理,潮湿环境工	2.	stability for encapsulation of measuring temperature temperature measurement the product is waterproof makes it stable in damp. The product is easy to range of temperature	fing and dampproofing, which
产品用途 Product Use	适用于咖啡机温控模	块	Sı	uitable for temperature co	ntrol module of coffee machine



### 烤箱 温度传感器 (15)

#### Temperature sensor

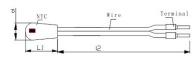




代码 Code	d	D	L1	L2	
尺寸 Size	客	户自定义 Custome	rization	≥50mm	
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~ AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩm, 3Sec 4、使用温度范围: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C		<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C</li> </ol>		
产品特点 Product Characteristics			stability for encapsulation of measuring temperate temperature measurem 2. the product is waterproduct is table in damp 3. The product is easy to range of temperature	ofing and dampproofing, which	
产品用途 Product Use	   适用于烤箱温控模块 		Suitable for oven temperate	ure control module	

### 电暖器 温度传感器 (16) Temperature sensor





代码 Code	d	L1		L2		
尺寸 Size	客户自定义	Customeriz	zation	≥50mm		
产品性能 Product Property	. – -	线材规格:依客户需求 绝缘:DC500V Min 100MΩ,3Sec 使用温度范围:-30℃~105℃		<ol> <li>Wire specification: By Customer's Requirements</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C~ 105°C</li> </ol>		
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、产品安装方便、抗寒、耐热 长期负荷工作。	潮湿环境工	stability for encal of measuring ter temperature mea 2. the product is wa makes it stable ir 3. The product is e range of temp	terproofing and dampproofing, which a damp conditions asy to install and stable in under all eratures. It also possesses high ich makes it able to work to full		
产品用途 Product Use	适用于电暖器温控模块		Suitable for tempera	ture control module of electric heater		



### 地暖 温度传感器 (17)

### Temperature sensor

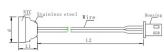




代码 Code	d	D	L1	L2
尺寸 Size	客	户自定义 Custome	rization	≥50mm
产品性能 Product Property	1、线材规格:依客户需求 2、耐压: AC1000V ~ AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩm, 3Sec 4、使用温度范围: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C		<ol> <li>Wire specification: By C</li> <li>withstand voltage AC1C</li> <li>insulation: DC500V Mir</li> <li>Use temperature range</li> </ol>	000V ~ AC2000V, 3Sec 1 100MΩ, 3Sec
产品特点 Product Characteristics		定性元件封装, 测量 生确 潮处理, 潮湿环境工	stability for encapsulati of measuring temperat temperature measurem 2. the product is waterpromakes it stable in damp 3. The product is easy to range of temperature	nent with high precision and on can narrow down the range ure and raise the precision of ent ofing and dampproofing, which
产品用途 Product Use	适用于地暖温控模块		· · · ·	ting and temperature control

### 锅炉 温度传感器 (18) Temperature sensor





//s						
代码 Code	d	L1		L2		
尺寸 Size	客户自定义	Customeriz	zation	≥50mm		
产品性能 Product Property	3、绝缘: DC500V Min 100M 4、使用温度范围: -30℃ ~ -30℃ ~	线材规格: 依客户需求 耐压: AC1000V ~ AC2000V, 3Sec 绝缘: DC500V Min 100MΩm, 3Sec 使用温度范围: -30℃ ~ 105℃ -30℃ ~ 125℃ -30℃ ~ 150℃		<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C</li> </ol>		
产品特点 Product Characteristics	1、采用高精度、高稳定性元件 温差小,温度更准确 2、产品特殊防水、防潮处理, 作稳定 3、产品安装方便、抗寒、耐热 长期负荷工作。	潮湿环境工	stability for encal of measuring ter temperature mea 2. the product is wa makes it stable ir 3. The product is e range of temp	terproofing and dampproofing, which n damp conditions asy to install and stable in under all eratures. It also possesses high nich makes it able to work to full		
产品用途 Product Use	适用于锅炉温控模块		It is suitable for the t	emperature control module of the		



#### 汽车类

#### **AUTOMOBILE CATEGORY**

产品性能简述 Product characteristic description

### 汽车锂电池 温度传感器 (1)

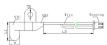


#### Lithium battery temperature sensor

代码 Code	В	d		D	L1	L2	L3
尺寸 Size		客户自	定义(	Custome	rization		≥50mm
产品性能 Product Property	1、线材规格:依客户需求 2、耐压:AC1000V~AC2000V, 3Sec 3、绝缘:DC500V Min 100MΩm, 3Sec 4、使用温度范围:-30℃~105℃ -30℃~125℃ -30℃~150℃			1、Wire specification: By Customer's Requirements 2、withstand voltage AC1000V ~ AC2000V, 3Sec 3、insulation: DC500V Min 100MΩ, 3Sec 4、Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C			
产品特点 Product Characteristics	-30°C ~ 150°C  1、采用高精度、高稳定性元件封装,测量温差小,温度更准确 2、产品特殊防水、防潮处理,潮湿环境工作稳定 3、产品安装方便、抗寒、耐热性能优良可长期负荷工作			for e measi tempe 2. the pr makes 3. The pro of ten	ncapsulation car uring temperature erature measurem oduct is waterpro s it stable in damp oduct is easy to in nperatures. It als	nt with high precis n narrow down re and raise th nent oofing and damp	the range of e precision of proofing, which under all range gh performance
产品用途 Product Use	适用于锂电池温	控模块		Apply to	Temperature cont	rol module of lithi	um battery

### 汽车空调 温度传感器 (2)





#### Auto air condition temperature sensor

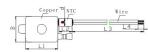
Auto all condition temperature sensor				D.		
代码 Code	d	D		L1	L2	
尺寸 Size	5mm Max	8mm		客户自定义 Customerization	≥50mm	
产品性能 Product Property	3、绝缘: DC500V M 4、使用温度范围: - -	~ AC2000V, 3Sec Min 100MΩm, 3Sec 30°C ~ 105°C 30°C ~ 125°C		<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C</li> <li>-30°C ~ 125°C</li> <li>-30°C ~ 150°C</li> </ol>		
产品特点 Product Characteristics	-30℃ ~ 150℃  1、采用高精度、高稳定性元件封装,测量温差小,温度更准确  2、产品特殊防水、防潮处理,潮湿环境工作稳定  3、产品安装方便、抗寒、耐热性能优良可长期负荷工作		2.	stability for encapsulation of measuring temperature temperature measurement the product is waterproduct makes it stable in damp. The product is easy to range of temperature.	fing and dampproofing, which	
产品用途 Product Use	适用于汽车空调温控	模块	Αŗ	oply to Temperature contr	ol module of lithium battery	



### 汽车充电桩 温度传感器 (3)

#### Auto charging temperature sensor



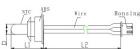


代码 Code	В	D	L1		L2	L3	L4
尺寸 Size	25mm	6mm	절	字户自	定义 Custome	rization	≥50mm
产品性能 Product Property	3、绝缘: DC50	000V ~ AC2000V, 00V Min 100MΩm 围: -30°C ~ 105°C -30°C ~ 125°C	, 3Sec C	2、w 3、in	ithstand voltage <i>A</i> sulation: DC500\	By Customer's Ro AC1000V ~ AC200 / Min 100MΩ, 3Se ange: -30°C ~ 105 -30°C ~ 150 -30°C ~ 150	00V, 3Sec ec 5°C 5°C
产品特点 Product Characteristics	-30°C ~ 150°C  1、采用高精度、高稳定性元件封装,测量温差小,温度更准确  2、产品特殊防水、防潮处理,潮湿环境工作稳定  3、产品安装方便、抗寒、耐热性能优良可长期负荷工作			st ra pr 2. the m 3. Th ra	ability for encapinge of measuritecision of tempers product is waterpakes it stable in company of tempers of tempers	v to install and statures. It also p n makes it able	and raise the ent opproofing, which able in under all possesses high
产品用途 Product Use	适用于汽车充电	桩温控模块		Apply	to Temperature	control module of	lithium battery

### 汽车风道模块 温度传感器 (4)

#### lithium battery temperature sensor





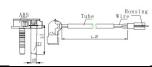
代码 Code	D		L1	L2	
尺寸 Size	客户自定义	Custom	erization	≥50mm	
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~ AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩm, 3Sec 4、使用温度范围: -30℃ ~ 105℃ -30℃ ~ 125℃ -30℃ ~ 150℃		<ol> <li>Wire specification: By Customer's Requirements</li> <li>withstand voltage AC1000V ~ AC2000V, 3Sec</li> <li>insulation: DC500V Min 100MΩ, 3Sec</li> <li>Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C</li> </ol>		
产品特点 Product Characteristics	1、采用高精度、高稳定性元件基 温差小,温度更准确 2、产品特殊防水、防潮处理,潮 作稳定 3、产品安装方便、抗寒、耐热性 长期负荷工作	湿环境工	stability for encapsulation of measuring temperature measurements. It is product is waterproof makes it stable in dampers. The product is easy to range of temperature	fing and dampproofing, which	
产品用途 Product Use	适用于风道温控模块		Apply to Temperature control	ol module of lithium battery	



#### 汽车蒸发器温控模块 温度传感器 (5)







代码 Code	d	L1		L2
尺寸 Size	4mm	客户自定义 Customerization		≥50mm
产品性能 Product Property	1、线材规格:依客户需求 2、耐压: AC1000V ~ AC2000V, 3、绝缘: DC500V Min 100MΩn 4、使用温度范围: -30°C ~ 105° -30°C ~ 150°	n, 3Sec C C	1. Wire specification: By C 2. withstand voltage AC10 3. insulation: DC500V Min 4. Use temperature range:	00V ~ AC2000V, 3Sec 100MΩ, 3Sec
产品特点 Product Characteristics	1、采用高精度、高稳定性元件封装,测量温差小,温度更准确 2、产品特殊防水、防潮处理,潮湿环境工作稳定 3、产品安装方便、抗寒、耐热性能优良可长期负荷工作		<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>	
产品用途 Product Use	适用于蒸发器温控模块		Apply to Temperature control	ol module of lithium battery

#### 汽车空调温控模块 温度传感器 (6)

#### Auto charging temperature sensor





					F +	
代码 Code	d	D		L1	L2	L3
尺寸 Size	4mm max	6mm max	客户自定义 Customerization ≥50mn			≥50mm
产品性能 Product Property	3、绝缘: DC500V I 4、使用温度范围: - -	/ ~ AC2000V, 3Sec 2、withstand voltage AC1000V ~ AC2000V, 3 Min 100M $\Omega$ m, 3Sec 3、insulation: DC500V Min 100M $\Omega$ , 3Sec			00V, 3Sec ec 5°C 5°C	
产品特点 Product Characteristics	1、采用高精度、高稳定性元件封装,测量温差小,温度更准确 2、产品特殊防水、防潮处理,潮湿环境工作稳定 3、产品安装方便、抗寒、耐热性能优良可长期负荷工作		<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>			
产品用途 Product Use	适用于空调温控模块	:		Apply to Temp	perature control module of	lithium battery



#### 工具类

#### **INDUSTRIAL EQUIPMENT CATEGORY**

产品性能简述 Product characteristic description

### 电源模块 温度传感器 (1)



#### Temperature sensor

NTC Copper	Wire	Hons
	Lê	Ī

代码 Code	d	D	L1	L2	
尺寸 Size	客	户自定义 Customer	ization	≥50mm	
产品性能 Product Property	1、线材规格:依客户需求 2、耐压:AC1000V~AC2000V, 3Sec 3、绝缘:DC500V Min 100MΩm, 3Sec 4、使用温度范围:-30℃~105℃		Wire specification: By C withstand voltage AC10 insulation: DC500V Min Use temperature range:	00V ~ AC2000V, 3Sec 100MΩ, 3Sec	
产品特点 Product Characteristics	1、采用高精度、高稳定性元件封装,测量温差小,温度更准确2、产品特殊防水、防潮处理,潮湿环境工作稳定3、产品安装方便、抗寒、耐热性能优良可长期负荷工作		<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>		
产品用途 Product Use	适用于电源温控模块	:	Suitable for power supply to	emperature control module	

#### 灭蚊机 温度传感器 (2)



#### Temperature sensor

7	NTCCopper	Wire	Honsin
Ø	•		=6
4		L3	

代码 Code	d	L1	L2	L3
尺寸 Size	3.6mm	9.6mm	29.0mm	≥50mm
产品性能 Product Property	1、线材规格: 依客户需求 2、耐压: AC1000V ~ AC2000V, 3Sec 3、绝缘: DC500V Min 100MΩm, 3Sec 4、使用温度范围: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C		1、Wire specification: By Customer's Requirements 2、withstand voltage AC1000V ~ AC2000V, 3Sec 3、insulation: DC500V Min 100MΩ, 3Sec 4、Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C	
产品特点 Product Characteristics	1、采用高精度、高稳定性元件封装,测量温差小,温度更准确 2、产品特殊防水、防潮处理,潮湿环境工作稳定 3、产品安装方便、抗寒、耐热性能优良可长期负荷工作		<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>	
产品用途 Product Use	适用灭蚊机温控模块			control module of mosquito



### 消防器材 温度传感器 (3)



#### Temperature sensor



代码 Code	d	L1		L2
尺寸 Size	客户自定义	Customerization		≥50mm
产品性能 Product Property	1、线材规格:依客户需求 2、耐压:AC1000V~AC2000V, 3Sec 3、绝缘:DC500V Min 100MΩm, 3Sec 4、使用温度范围:-30℃~105℃ -30℃~125℃ -30℃~150℃		1、Wire specification: By Customer's Requirements 2、withstand voltage AC1000V ~ AC2000V, 3Sec 3、insulation: DC500V Min 100MΩ, 3Sec 4、Use temperature range: -30°C ~ 105°C -30°C ~ 125°C -30°C ~ 150°C	
产品特点 Product Characteristics	1、采用高精度、高稳定性元件封装,测量温差小,温度更准确 2、产品特殊防水、防潮处理,潮湿环境工作稳定 3、产品安装方便、抗寒、耐热性能优良可长期负荷工作		<ol> <li>using element component with high precision and stability for encapsulation can narrow down the range of measuring temperature and raise the precision of temperature measurement</li> <li>the product is waterproofing and dampproofing, which makes it stable in damp conditions</li> <li>The product is easy to install and stable in under all range of temperatures. It also possesses high performance which makes it able to work to full capacity for long term</li> </ol>	
产品用途 Product Use	适用于消防器材温控模块			control module of fire fighting



## NTC热敏电阻注意事项

请遵循以下事项,否则可能会造成 NTC 热敏电阻损坏,使用设备损伤或引起误动作等后果。

- 1、请勿在使用温度范围以外使用,请勿施加超出使用温度范围上下限的急剧温度变化。
- 2、请在额定功率条件下使用 NTC 热敏电阻。各规格最大额定功率为中 φ5—
   0.7W φ7—1.2W φ9—1.9W φ11—2.3W φ13—3W φ15—3.5W φ20—4W。
- 3、在高湿高温环境下使用护套型 NTC 热敏电阻时应采取仅使护套封闭部分暴露于环境(水中、湿气)中,而护套开口部分不会直接接触到水及蒸汽的设计。
- 4、配线时应确保导线端部(含连接器)不会深入水、蒸汽、电解质液等否则会造成接触不良。
- 5、请勿在腐蚀性气体的环境(C12、NH3、SOx、NOx)以及会接触到电解质液、盐水、酸、碱、有机溶剂的场所中使用。
- 6、请勿过度拉伸及弯曲导线,请勿施加过度的振动、冲击及压力。
- 7、金属腐蚀可能会造成设备功能故障,故在选择材质时应确保金属护套型及螺钉紧固型 NTC 热敏电阻与安装的金属件之间不会产生接触的电位差。
- 8、功率型 NTC 周围应避免安装发热和易燃元件,建议选用弯脚上部引线较高的产品,使 NTC 热敏电阻在线路板上高出其它元件,以免发热影响其它元件正常工作。
- 9、NTC 热敏电阻是按不同的功能用途分别进行设计的,如有疑问可与我司联络。



#### MATTERS NEEDING ATTENTION FOR NTC THERMISTORS

Please follow the rules listed below when using NTC thermistors. Otherwise, you may cause damage to the NTC thermistor and relevant equipment or hurt yourself.

Do not use the thermistor under temperature beyond the operating temperature range. Do not apply rapid temperature changes which exceed the upper and lower limits of the operating temperature range.

Please use the NTC thermistor under the standard power. The maximum standard powers of each specification are: φ5—0.7W φ7 — 1.2W φ9 — 1.9W φ11—2.3W φ13—3W φ15—3.5W φ20—4W.

When using the sheath type NTC thermistors in the high humidity and high temperature environment, the sealing part of the sheath should be exposed to the environment (moisture or water) while the opening part of the sheath is not directly exposed to the water or steam.

When wiring, the ends of the wire (including connectors) should not be posited deeply inside water, steam. electrolyte solution, etc. Otherwise, it will result in poor contact.

Please do not expose the thermistor to corrosive gas (NH3, SOx, NOx, Cl2) or any saline solution, acid solution, alkaline solution and electrolyte solution.

Do not over stretch or bend the wire. Please do not apply excessive vibration, pressure and impact on the thermistor. To avoid equipment faults caused by metal corrosion, please choose the right material to make sure there is no potential difference at the contact point between metal sheath type or screw fastening type NTC thermistor and the metal components.

Do not install any flammable component or component generating heat surrounding the power type NTC Our recommendation is to avoid the negative effect brought by the heat from the NTC, please use products with higher lead wire on the bending feet to make the NTC thermistor on the circuit board higher than the other components. NTC thermistors have specific designs for different functions. Feel free to contact us if you have any question.



# 附录

#### 参数定义

**热敏电阻器** 

其首要特性是随着阻体温度的变化,电阻值呈现显著变化的热敏感半导体电阻器。

₩ 负温度系数热敏电阻器(NTC)

温度升高时,电阻值下降的热敏电阻器。

**最大允许电容量** 

在负载状态下,与一个热敏电阻器连接的电容器的最大允许电容量值。

**剩余电阻值** 

当热敏电阻器上流过最大电流并达到热平衡时的直流电阻值。以欧姆(Ω)表示。

**一** 冲击电流

比如已放电的电容器,已冷却的灯丝或者一个静止的马达等等,有极低的起始阻抗,当负载的初期有较高的初始电流称为冲击电流。

**受** 零功率电阻

在规定温度下测得的热敏电阻器的直流电阻值。

**②** 25℃环境温度下的最大电流

在 **25**℃环境温度下,可以连续施加在热敏电阻器上的电流(直流或正弦波交流有效值)最大值。

**純** 耗散系数

使热敏电阻器的温度升高 K 所需消耗的功率。通常为规定的环境温度下功耗变化与热敏电阻器阻体温度变化之比。通常以 $(mW/\mathbb{C})$ 表示。

热时间常数

在规定的介质中,热敏电阻器自热后冷却其温升的 63.2%所需要的时间(单位为 S)。

❷ B值

NTC 热敏电阻在某一温度之电阻与另一温度之电阻的比较值,可由下面的公式计算得到。材料常数是 R1,R2 分别为 T1,T2 温度下的零功率电阻 T1=298.15K(25℃)

T2=323.15K(50°C)

B=Ln(R1/R2)/(1/T1-1/T2)

**沙** 冲击能量

热敏电阻能承受最少 6000 次而电阻值变化率在±20%以内之冲击能量。此能量与所加之电压及电容值有关。



### **APPENDIX**

#### PARAMETER DEFINITION

Thermistor

The primary characteristic of a thermally sensitive semiconductor resistor is with a significant change in resistance as the resistance body temperature changes.

Negative temperature coefficient

A thermistor exhibits a decrease in resistance when temperature rises.

Maximum allowable capacitance

The maximum allowable capacitance of a capacitor connected to a thermistor in a load state.

Residual resistance

The DC resistance when the maximum current is passed through the thermistor and the thermal balance is reached. Expressed in ohms( $\Omega$ ).

Impact current

For example, a capacitor that has been discharged, a cooled filament, or a stationary motor, etc., has a very low initial impedance, and when the initial stage of the load has a higher initial current, it is called an impact current.

Zero-power resistance

The DC resistance of a thermistor measured at specified temperature.

Max. current at25°C ambient temperature

At25  $^{\circ}$ C ambient temperature, the maximum value of current(DC or sinusoidal AC RMS)that can be applied continuously on a thermistor.

Dissipation factor

The power required to increase the temperature of a thermistor by 1K.it is the ratio of the change in power consumption to the temperature of the thermistor body at the specified ambient temperature. Expressed in mW/°C.

Thermal time constant

In a specified medium, the time required for the thermistor to cool its temperature rise by 63.2% after heating itself (the unit is S)

B constant

B=Ln(R1/R2)/(1/T1-1/T2)

A comparison of the resistance of a NTC thermistor at a temperature to that of another, which can be calculated by the below formula. The material constants R1,R2 are zero-power resistances at T1 and T2 respectively.T1=298.15K(25 $^{\circ}$ C) T2=323.15K(50 $^{\circ}$ C) B=Ln(R1/R2)/(1/T1-1/T2)

Impact energy

Thermistors can withstand impact energy at least 6000 times, while resistance rates change within ±2%. This energy is related to the added voltage and capacitance.