

# NTC Temperature Sensors Profile

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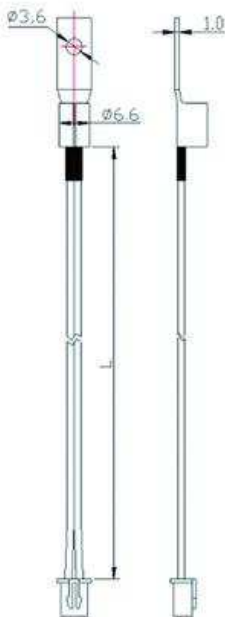
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## 锂电池温度传感器（四）

Lithium battery temperature sensor(四)



### 产品系列 Series

CWF 4

### 产品描述 Description

应用描述：适用于锂电池温控模块

Application: apply to Temperature control module of lithium battery

装配方式：螺栓连接

Assembly: fixed by thread

### 性能参数 Techno-parameter

25℃零功率阻值精度：±1%

Zero power resistance tolerance at 25℃: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：黄铜镀镍

Head material: Nickel plated brass

线材规格：FEP、PVC

Wire material: FEP, PVC

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40 ~ +105℃/ +150℃

Operating temperature: -40 ~ +105℃/ +150℃

### 产品特点 Characteristics

产品防潮、防水性好

Moisture proof, waterproof

装配方式简单、牢固

Easily assemble, stable

阻值、B值可依客户需求制定

Resistance, B-value by user determine

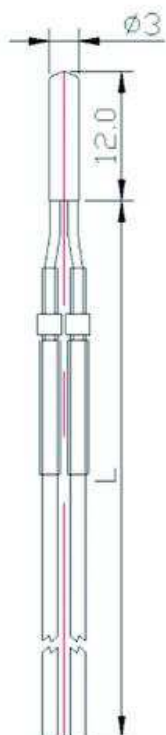
五金件与线材可做定制

Metal part and wire by user determine



## 汽车充电桩温度传感器

Auto charging temperature sensor



### 产品系列 Series

CWF2

### 产品描述 Description

应用描述：适用于充电桩温控模块

Application: Apply to temperature control module of charging pile

装配方式：插入 $\Phi$ 径孔锁定

Assembly: insert  $\Phi$  hole and lock

### 性能参数 Techno-parameter

25°C零功率阻值精度： $\pm 1\%$

Zero power resistance tolerance at 25°C:  $\pm 1\%$

B值精度： $\pm 1\%$

B-value tolerance:  $\pm 1\%$

端头材质：不锈钢壳

Head material: stainless cap

线材规格：FEP

Wire material: FEP

产品耐压： $\geq 1500\text{V/AC}$

Withstand voltage:  $\geq 1500\text{V/AC}$

使用温度： $-40 \sim +200^\circ\text{C}$

Operating temperature:  $-40 \sim +200^\circ\text{C}$

### 产品特点 Characteristics

温控反应速度快

Fast response time,

防潮、耐高温

Moisture proof, waterproof

装配方式简单

Easily assemble



## 汽车空调温度传感器（一）

Auto air condition temperature sensor (一)



### 产品系列 Series

CWF 2

### 产品描述 Description

应用描述：测量空调温度变化  
Application: test temperature variation of air condition

装配方式：Φ 径孔锁定或线束固定  
Assembly: Φ diameter hole locking or wire fixing

### 性能参数 Techno-parameter

25°C零功率阻值精度：±1%  
Zero Power Resistance tolerance at 25°C:±1%

B值精度：±1%  
B-value tolerance: ±1%

端头材质：塑胶或TPE  
head material: plastic or TPE

线材规格：PVC、FEP  
Wire material: PVC, FEP

产品耐压：≥1500V/AC  
Withstand voltage: ≥1500V/AC

使用温度：-40 ~ +105°C/ +150°C  
Operating temperature: -40~+105°C/+150°C

### 产品特点 Characteristics

装配方式简单、牢固  
Easy assembly, stable

阻值、B值可依客户需求制定  
Resistance, B-value by user determine

五金件与线材可做定制  
Metal part and wire by user determine

## 汽车空调温度传感器（二）

Auto air condition temperature sensor (二)



### 产品系列 Series

CWF 2

### 产品描述 Description

应用描述：测量空调温度变化

Application: test temperature variation of air condition

装配方式：Φ 径孔锁定或线束固定

Assembly: Φ diameter hole locking or wire fixing

### 性能参数 Techno-parameter

25℃零功率阻值精度：±1%

Zero Power Resistance tolerance at 25℃: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：TPE

Head material: TPE

线材规格：XLPE

Wire material: XLPE

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40~+105℃

Operating temperature: -40~+105℃

### 产品特点 Characteristics

产品防潮、防水性好

Moisture proof, waterproof

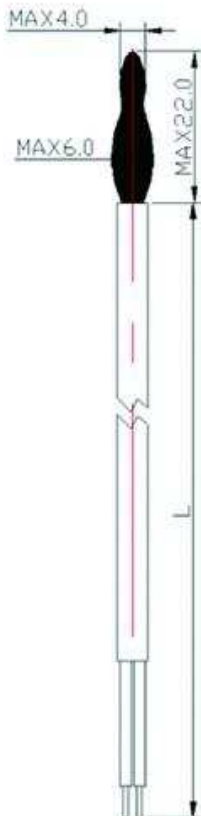
阻值、B值可依客户需求制定

Resistance, B-value by user determine



## 汽车空调温度传感器（三）

Auto air condition temperature sensor (三)



产品系列 Series

CWF1

产品描述 Description

应用描述：测量空调温度变化

Application: test temperature variation of air condition

装配方式：线束扎结固定

Assembly: fixed by thread

性能参数 Techno-parameter

25℃零功率阻值精度：±1%

Zero Power Resistance tolerance at 25℃: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：环氧树脂

Head material: epoxy resin

线材规格：PVC、FEP

Wire material: PVC、FEP

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40~+105℃/ +150℃

Operating temperature: -40~+105℃/+150℃

产品特点 Characteristics

温控反应速度快

Moisture proof , waterproof

防潮防水性好

Fast response to temperature control



## 自动变速箱油温度传感器（一）

Automatic transmission oil temperature sensor(一)



### 产品系列 Series

CWF5

### 产品描述 Description

应用描述：适用于变速箱内温控模块  
Application: apply to temperature control module of transmission

装配方式：螺栓连接  
Assembly: fixed by thread

### 性能参数 Techno-parameter

25°C 零功率阻值精度：±1%  
Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%  
B-value tolerance: ±1%

端头材质：不锈钢壳  
Head material: stainless cap

线材规格：FEP  
Wire material: FEP

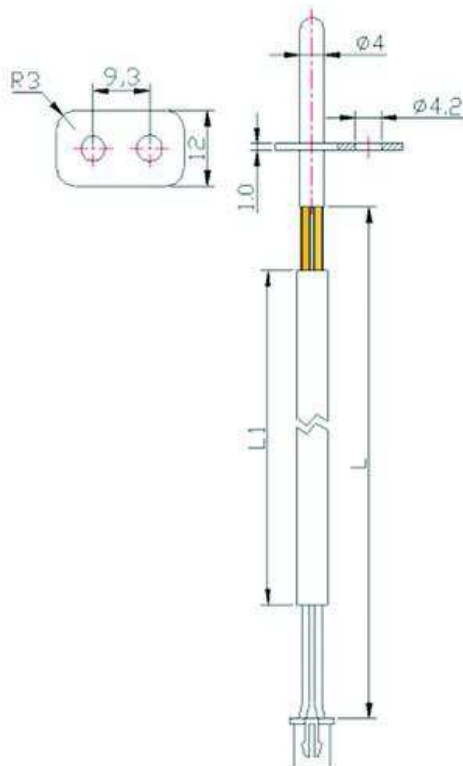
产品耐压：≥1500V/AC  
Withstand voltage: ≥1500V/AC

使用温度：-40~+125°C/+150°C  
Operating temperature: -40~+125°C/+150°C

### 产品特点 Characteristics

装配方式简单、牢固  
Easily assemble、stable

阻值、B值可依客户需求制定  
Resistance, B-value by user determine



## 自动变速箱油温度传感器（二）

Automatic transmission oil temperature sensor (二)



### 产品系列 Series

CWF 4

### 产品描述 Description

应用描述：适用于变速箱内温控模块  
Application: apply to temperature control module of transmission

装配方式：螺栓连接  
Assembly: fixed by thread

### 性能参数 Techno-parameter

25°C零功率阻值精度：±1%  
Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%  
B-value tolerance: ±1%

端头材质：黄铜镀镍  
Head material: Nickel plated brass

线材规格：FEP  
Wire material: FEP

产品耐压：≥1500V/AC  
Withstand voltage: ≥1500V/AC

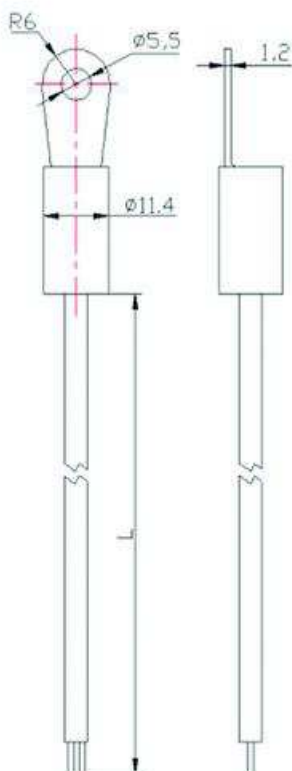
使用温度：-40 ~ +105°C / +150°C  
Operating temperature: -40 ~ +105°C / +150°C

### 产品特点 Characteristics

装配方式简单、牢固  
Easily assemble, stable

阻值、B值可依客户需求制定  
Resistance, B-value by user determine

五金件与线材可做定制  
Metal part and wire by user determine





## 水温传感器

Water temperature sensor



### 产品系列 Series

CWF5

### 产品描述 Description

应用描述：测量水温箱温度变化

Application: test temperature change of water tank

装配方式：螺纹固定

Assembly: fixed by thread

### 性能参数 Techno-parameter

25°C零功率阻值精度：±1%

Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：黄铜

Head material: brass

线材规格：PVC、XLPE

Wire material: PVC, XLPE

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40 ~ +105°C/+125°C

Operating temperature: -40 ~ +105°C/+125°C

### 产品特点 Characteristics

装配方式简单、牢固

Easily assemble, stable

阻值、B值可依客户需求制定

Resistance, B-value by user determine

五金件与线材可做定制

Metal part and wire by user determine



## 高精度水温传感器

High precision water temperature sensor.



### 产品系列 Series

CWF 2

### 产品描述 Description

应用描述：用于水温箱内的温控模块

Application: apply to temperature control module of water tank

装配方式：使用硅胶套或锁铜环固定

Assembly: Silicone Case or Copper lock loop

### 性能参数 Techno-parameter

25°C零功率阻值精度：±1%

Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：不锈钢壳+黄铜环

Head material: stainless cap + brass metal ring

线材规格：PVC、FEP

Wire material: PVC, FEP

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40 ~ +105°C/+125°C

Operating temperature: -40 ~ +105°C/+125°C

### 产品特点 Characteristics

高精度监测温度

High precision temperature monitoring

产品防潮、防水性好

Moisture proof, waterproof

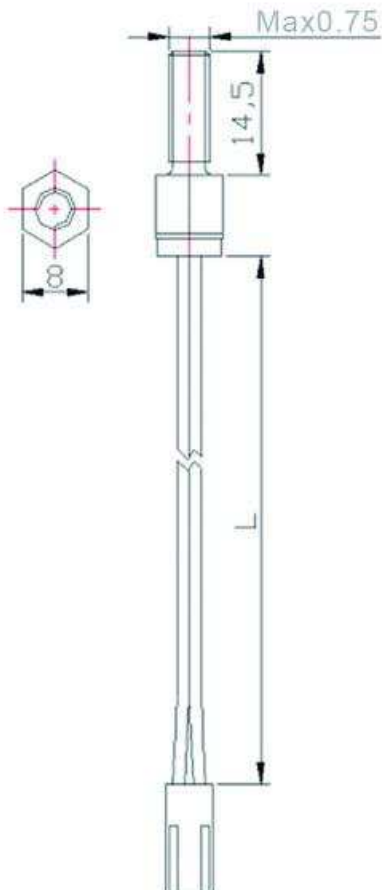
阻值、B值可依客户需求制定

Resistance, B-value by user determine



## 车内测温传感器 (一)

In-car temperature sensor (一)



### 产品系列 Series

CWF5

### 产品描述 Description

应用描述：用于汽车内温控模块

Application: apply to in-car temperature control module

装配方式：螺纹固定

Assembly: fixed by thread

### 性能参数 Techno-parameter

25℃零功率阻值精度：±1%

Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：黄铜

Head material: brass

线材规格：PVC、XLPE

Wire material: PVC, XLPE

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40~+105℃/+125℃

Operating temperature: -40~+105℃/+125℃

### 产品特点 Characteristics

装配方式简单、牢固

Easily assemble, stable

阻值、B值可依客户需求制定

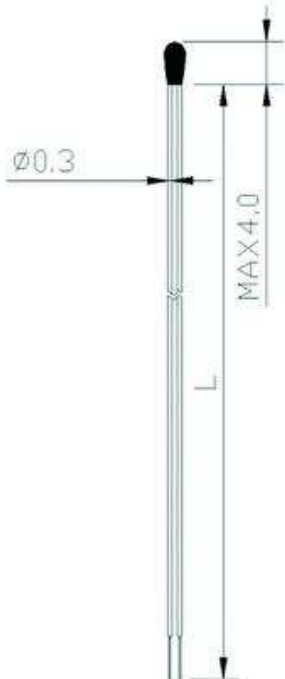
Resistance, B-value by user determine

五金件与线材可做定制

Metal part and wire by user determine



## 车内测温传感器 (二) In-car temperature sensor (二)



### 产品系列 Series

MF52B

### 产品描述 Description

应用描述：用于汽车内温控模块

Application: apply to in-car temperature control module

装配方式：线夹或打胶固定

Assembly: Clamp or glue

### 性能参数 Techno-parameter

25°C零功率阻值精度：±1%

Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：环氧树脂

Coating material: epoxy resin

线材规格：漆包线

Wire material: enameled cu wire

产品耐压：≥500V/AC

Withstand voltage: ≥500V/AC

使用温度：-40 ~ +125°C / +150°C

Operating temperature: -40 ~ +125°C / +150°C

### 产品特点 Characteristics

体积小、反应速度快

Small size and fast response

阻值、B值可依客户需求制定

resistance, B-value by user determine



## 蒸发器温度传感器

Evaporator temperature sensor



### 产品系列 Series

CWF5

### 产品描述 Description

应用描述：测量蒸发器温度变化

Application: test evaporator temperature

装配方式：Φ径孔锁定或线束固定

Assembly: insert Φ hole and lock, or Fixed wiring harness

### 性能参数 Techno-parameter

25°C零功率阻值精度：±1%

Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：铝

Head material: aluminum

线材规格：PVC

Wire material: PVC

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40~+80°C/+105°C

Operating temperature: -40~+80°C/+105°C

### 产品特点 Characteristics

温控反应速度快

Fast response to temperature control

产品防潮、防水性高

Moisture proof, waterproof

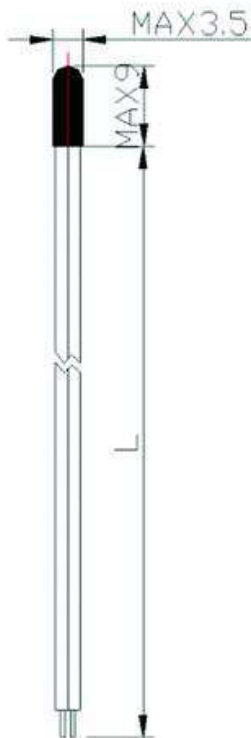
阻值、B值可依客户需求制定

Resistance, B-value by user determine



## 座垫加热温度传感器

Cushing heating temperature sensor



### 产品系列 Series

CWF 1

### 产品描述 Description

应用描述：测量坐垫温度变化

Application: test temperature variation of auto cushion

装配方式：线夹或打胶固定

Assembly: Clamp or glue

### 性能参数 Techno-parameter

25°C零功率阻值精度：±1%

Zero Power Resistance tolerance at 25°C: ±1%

B值精度：±1%

B-value tolerance: ±1%

端头材质：环氧树脂

Coating material: epoxy resin

线材规格：PVC、FEP、XLPE

Wire material: PVC, FEP, XLPE

产品耐压：≥1500V/AC

Withstand voltage: ≥1500V/AC

使用温度：-40 ~ +80/+105/+125°C

Operating temperature: -40~+80/+105/+125°C

### 产品特点 Characteristics

温控反应速度快

fast response to temperature control

阻值、B值可依客户需求制定

resistance, B-value by user determine

环氧头尺寸可定制

epoxy head dimension by user determine

● Reliability Test

Test Item	Test Standard	Test method	Performance requirements
Zero Power Resistance	IEC 60539-1	Immerse samples in the constant temperature bath at 25°C±0.005°C, test steady resistance	Resistance tol ±1%
B value	IEC60539-1	Immerse samples in the constant temperature bath at 25°C, 50°C (or 85°C), test steady resistance, and calculate B value	Resistance tol ±1%
Free fall	IEC60068-2-32	Fall height: 1.5±0.1m, Surface: Cement, 1 time	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Insulation	IEC60539-1	500V pressure on insulation shell test insulation resistance	>500MOhm
Withstand voltage	IEC60539-1	Withstand voltage: 1500V/AC, Leakage current: 2mA Lasting: 60sec	No obvious damage
Tension	IEC60068-2-21	Pull uniform speed at the end, F>4.0KG (requested by customer)	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Vibration	Q/HBm 108-94	Test frequency: 10~500Hz, swing: 1.2mm acceleration: 30m/s <sup>2</sup> Direction X,Y,Z Time: 8Hour/direction	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Steady humidity and heat	IEC60068-2-78	Temp: 40±2°C Humidity: 92-95%RH Time: 1000±24Hour	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Thermal time constant	IEC60539-1	Immerse in 25°C water, after thermal balance, immerse in 85°C, resistance arrives 63.2%, calculate total time	<10 sec
High temperature storage	IEC60068-2-2	Temp: 125°C±5°C Time: 1000±24Hour	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Cold and thermal shock	IEC60068-2-14	-40°C~+125°C T1: 30min Cycle time: 1000	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Knock experiment	IEC60068-2-77	Acceleration: 250m/s <sup>2</sup> Pulse lasting: 6ms Knock times: 1000 Recovery time: 2 Hour	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Low temperature storage	IEC60068-2-1	Temp: 40±2°C Time: 1000±24Hour	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$
Salt spray	IEC60068-2-11	Temp: 35±2°C Collection hour: 1.0mL~2.0mL Time: determine per as actual demand	No obvious damage, R25 $\Delta R/R \leq \pm 1\%$

- Introduction of test and inspection equipments



Name: High/Low-Thermal Shock Chamber  
Function: test product withstand high/low-thermal shock chamber



Name : Constant temperature and humidity chamber  
Function: test products storage state under steady damp and heat



Name : Vibration testing equipment  
Function : test the effect on product during transportation generated by vibration frequency and amplitude



Name : Salt spray test machine  
Function: Test product resistance to oxidation, corrosion





Name : Constant temp oil bath instrument  
 Function : test ambient temperature at constant point  
 resistance (tolerance  $\pm 0.002^{\circ}\text{C}$ )



Name : Low Temperature precision test sink  
 Function : Test temperature at constant point  
 resistance during  $-70^{\circ}\text{C}\sim 0^{\circ}\text{C}$  (tolerance  $\pm 0.01^{\circ}\text{C}$ )



Name : DC constant voltage and constant current  
 power supply (high current)  
 Function : Test U-I Curve



Name : High precision thermistor sorter  
 Function : Test resistance of thermistor



Name : Laser particle size analyzer  
Function : Analyse material of laser particle size



Name : Vacuum & high temperature dry oven  
Function : high temperature aging test



Name : Spectrum analyzer  
Function : analyze harmful substance content of products



Name : Electrolytic thickness gauge  
Function : Used for testing coating thickness of raw material



Name : Dissipation and thermal time constant testing instrument  
 Function : Test dissipation and thermal time constant



Name : NTC Impact tester  
 Function : Test impulse capacitance which products can endure



Name : Withstand voltage test instrument  
 Function : Test insulation withstand voltage



Name : DC constant voltage power supply  
 Function : Test rated power consumption



Name : Projector

Function : Test out appearance and inner structure



Name : Elongation rate instrument

Function : Test elongation rate of leads



Name : Overload aging test machine

Function : Electricity aging test of temp measurement products



Name : Chemical experiment table

Function : Chemical blending



Name : Aging stage  
Function : Test aging reliability of product