# **AH9/CCS8 SERIES**



Overheat Protector

## Introduction

AH9 series thermal protector, which is a product with the features of temperature sense, it is characterized by advanced structure, small volume, sensitive action, big in contact capacity and long service life





## **AH9/CCS8 SPECIFICATIONS**

# Application Range

It is widely used in the overheating protection of fractional motor, shade-pole motor, series excited motor, electricheating appliance, fluorescent lamp ballast, transformer, automotor, integrated circuit and general electrical equipment

# Reliable assembly method

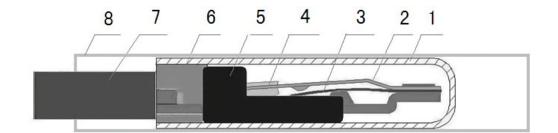
Bimetallic sheet temperature sensing rate is controllable and riveted assembly method is used to prevent bimetallic sheet from loosening and falling.

## Highly customized

Metal housing provides enhanced temperature sensitivity requires polyester fiber sleeve during use .Materials can be adjusted per customer requirments.

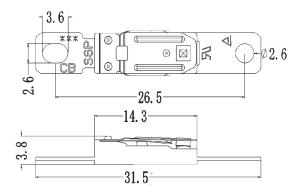
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# **S6 SERIES STRUCTURE**

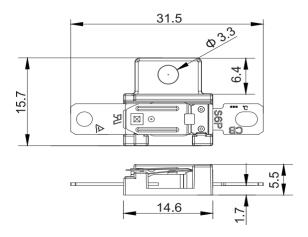


## **DIMENSION AND DIAGRAMS**

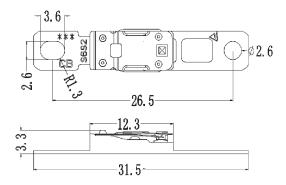
Dimensions in mm (Inches)



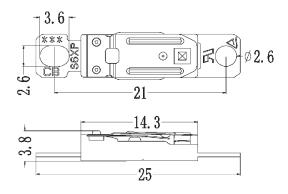
S6P(Power-off Reset Model



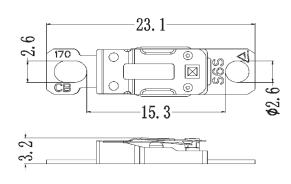
S6P(Bracket Model)



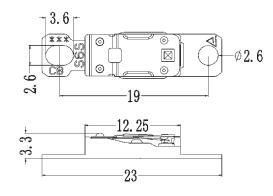
S6S2(Auto-Reset Model)



S6XP(Power-off Reset Model



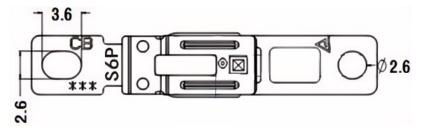
S6S(Auto-Reset Model)



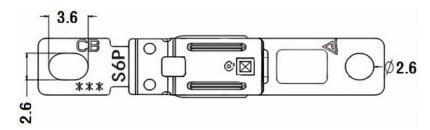
S6C(Auto-Reset Model)



# S6P:

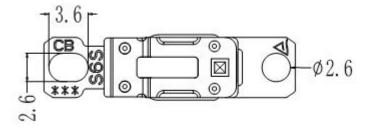


Long temperature sensing window

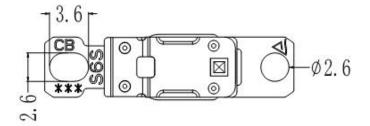


Short temperature sensing window

# S6S:



# Long temperature sensing window



Short temperature sensing window



# NOMINAL PERFORMANCE

S6P/S6XP					
Rated current	Temp. Range	Reset Temperature			
AC 250V/16A	45-170℃	±5	According halou table		
AC 125V/18A			According below table		

# Standard operating temperature

Ratedacting temperature	Acting tempt.	Reset temperature	Ratedacting temperature	Acting tempt	Reset temperature
45℃	50±5℃		110℃	110±5℃	
50℃	<b>50±5</b> ℃		115℃	115±5℃	
55℃	55±5℃		120℃	120±5℃	
60℃	60±5℃		125℃	125±5℃	
65℃	65±5℃	Automatic reset after power off	130℃	130±5℃	Automatic
70℃	70±5℃		135℃	135±5℃	reset after
75℃	<b>75±5</b> ℃		140℃	140±5℃	power off
80℃	80±5℃		145℃	145±5℃	
85℃	85±5℃		150℃	150±5℃	
90℃	90±5℃		155℃	155±5℃	
95℃	95±5℃		160℃	160±5℃	
100℃	<b>100±5</b> ℃		165℃	165±5℃	
105℃	<b>105±5</b> ℃		170℃	170±5℃	

# NOMINAL PERFORMANCE

S6S/S6S2					
Rated current	Temp. Range	Reset Temperature			
AC 250V/16A	45-170℃	±5	According halou table		
AC 125V/18A			According below table		

# Standard operating temperature

Rated acting temperature	Disconnected temperature	Reset temperature
45℃	45±5℃	above30℃
50℃	<b>50±5</b> ℃	above30℃
55℃	55±5℃	above30℃
60℃	60±5℃	above30℃
65℃	65±5℃	above30℃
70℃	70±5℃	above35℃
75℃	75±5℃	35∼55℃
80℃	80±5℃	50±15℃
85℃	85±5℃	55±15℃
90℃	90±5℃	60±15℃
95℃	95±5℃	65±15℃
100℃	100±5℃	60±15℃
105℃	105±5℃	65±15℃
<b>110</b> ℃	110±5℃	70±15℃
115℃	115±5℃	75±15℃
120℃	120±5℃	80±15℃
125℃	125±5℃	85±15℃
<b>130</b> ℃	130±5℃	90±15℃
135℃	135±5℃	95±15℃
140℃	140±5℃	100±15℃
145℃	145±5℃	<b>105±15</b> ℃
150℃	150±5℃	<b>110±15</b> ℃
155℃	155±5℃	<b>115±15</b> ℃
160℃	160±5℃	<b>120±15</b> ℃
165℃	165±5℃	<b>125±15</b> ℃
170℃	170±5℃	130±15℃

# NOMINAL PERFORMANCE

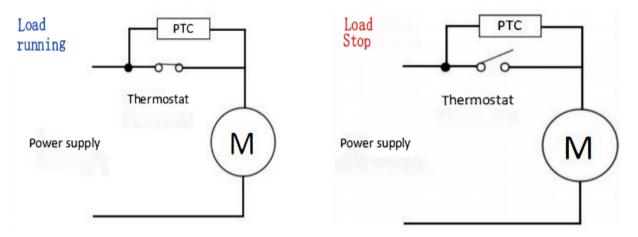
S6C				
Rated current	Temp. Range	Reset Temperature		
AC 250V/13A	65-170℃	±5	A coording halou table	
AC 125V/16A			According below tabl	

# Standard operating temperature

Ratedacting temperature	Disconnected temperature	Reset temperature
65℃	65±5℃	above30℃
70℃	70±5℃	above35℃
75℃	75±5℃	35∼55℃
80℃	80±5℃	50±15℃
85℃	85±5℃	55±15℃
90℃	90±5℃	60±15℃
95℃	95±5℃	65±15℃
100℃	100±5℃	60±15℃
<b>105</b> ℃	105±5℃	65±15℃
<b>110</b> ℃	110±5℃	70±15℃
<b>115</b> ℃	<b>115±5</b> ℃	75±15℃
<b>120</b> ℃	120±5℃	80±15℃
<b>125</b> ℃	<b>125±5</b> ℃	85±15℃
<b>130</b> ℃	130±5℃	90±15℃
<b>135</b> ℃	135±5℃	95±15℃
<b>140</b> ℃	140±5℃	100±15℃
145℃	145±5℃	105±15℃
<b>150</b> ℃	<b>150±5</b> ℃	<b>110±15</b> ℃
<b>155</b> ℃	155±5℃	<b>115±15</b> ℃
<b>160</b> ℃	160±5℃	<b>120±15</b> ℃
<b>165</b> ℃	165±5℃	<b>125±15</b> ℃
<b>170</b> ℃	170±5℃	<b>130±15</b> ℃

## **EIECTRICAL SCHEMATIC DIAGRAM**

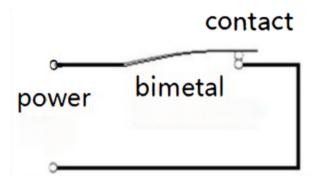
## S6P/S6XP:



The thermal protector forms a parallel circuit with the PTC element, and then in series with the load (electrical appliance). PTC will not produce high temperature when the load runs normally.

When the electrical equipment is abnormal, the high temperature or large current will cause the thermal prote ctor to break. At this time, the PTC element will produce hight temperature and high resistance value, which will keep the thermal protect or in the broken state and the load will stop running.

## S6S/S6S2/S6C:



#### 1. Contact resistance:

In the closed state the contact resistance between the two contactor should be 50m or less.

#### 2. Insulation resistance:

The insulation resistance is more than 10m .

## 3. Withstand voltage test:

Apply the basic sine wave test voltage (effective value) of 50Hz between the following parts of the thermostat for 1min with out flashover and breakdown.

- 3.1 The contact is disconnection, the test voltage is 600V between the two terminals.
- 3.2 The terminal and insulating support:1500V.

#### 4. Moisture-proof:

Under the ambient temperature is 25,and relative humidity is 95%, after placed 10 hours, the product could meet the item ( *With stand voltage test* ) ,and the appearance and structure is normal.

## 5. Circulation heating:

On every 2 hours, placed on at 20 and +90 temperature, after 10 times circulation, it could meet the requirements of the items ( *ActingTemperature / Insulation resistance* ) , and the appearance and structure is normal.

#### 6.Heat resisting to base:

The plastic part of base is placed in 300 temperature for 2 hours, and without burning or deformation; meet the item (*Insulation resistance*).

#### 7.Cold resisting

Placed the product in - 20 senvironment for 10 hours, the product still meet the item (*Withstand voltage test*) and (*Insulation resistance*), while the and the appearance and structure is normal.

7.1 The acting temperature variation to the initial value with in +/-5

#### 8.ON-OF Endurance:

At room temperature, after 5000 tests under rated load conditions of AC 50Hz, voltage 250V and current 12A, the rated operating temperature value should be within ±5 of the initial value(±5% of the initial value above100), and no fusion weld ing occurs to the contact, continue to test 5000 times, and the rated operating temperature value should be within ±6 after the first 5000 tests. And it still works.

#### 9. Vibration resisting:

Under the vibration frequency is 50Hz, the amplitude is 0.35mm, and test lasted for 90min, the disconnected temperature should meet the item (*ActingTemperature*)



## 10. Impact resising to fall:

After falling to the groundf or 3times from a height of 1000mm, the appearance structure is normal and the heacting temperature variation to the initial value within+/-5

## 11.Low temperature limit for reset temperature:

After acting, keep the power supply always connecting, while put the thermal proctor into the

constant temperature box for 7 hours, it should not reset.

## 12.Manual reset operating:

After acting, keep the power supply always connecting, in the 25 ,it isn't reset, while disconnect the power supply for 3-5minutes ,the thermal protector could Automatic reset

# PRODUCT SAFETY CERTIFICATION









## S6P/S6XP/S6S/S6S2

	CQC	TUV	UL	СВ	CE
File	CQC22002346845	R50553185	E465826	CN57445	AN 50553191 0001
Temp. Range	45-170	45-170	50-170	50-170	50-170
Contact Rating	AC 250V 16A	AC 250V 16A	AC 125V 18A	AC 250V 16A	AC 250V 16A

## S<sub>6</sub>C

	CQC	TUV	UL	СВ	
File	CQC24002440559	R50553185	E465826	CN66676	
Temp. Range	65-170	65-170	65-170	50-170	
Contact Rating	AC 125/250V 13A	AC 250V 13A	AC 250V 16A	AC 125/250V 13A	

# **GENERAL PRINCIPLES**

This product specification only puts forward the minimum technical requirements and not applicable to all technical requirements and standard. The seller shall provide the high-quality products and corresponding services that meet the requirements in this Technical Agreement.

The requirements of national compulsory standard concerning safety and environmental protection shall also be met.

In case the supplier not raise any objection to the terms of this spectification, the supplier shall provide products that completely meet the requirements that description in the spection

If the standards used in this specification are inconsistent with those used by the supplier , the higher standards shall be applied

Standards to follow
GB/T14536.1 "Automatic Electrical Controllers for House hold and Similar Use Part1:
General Requirements"

GB/T14536.10 《Automatic Electrical Controls-Part10:Particular Requirements For Temperature Sensing Controls》

UL60730-2-9 《Automatic Electrical Controls For House hold and Similar Use;Part2 Particular Requirements For Temperature Sensing Controls》

ENIEC60730-2-9 《Automatic Electrical Controls For House hold and Similar Use; Part2:Particular Requirements For Temperature Sensing Controls》

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