

AC Temperature Controller






CN032-S30

User manual

IM19H10-E

Notices
<ul style="list-style-type: none"> ● The reproduction, transmission or use of this document or its contents is not permitted without express written authority. ● Information and specifications in this document are subject to change without notice. ● While information in this document is well edited and checked, mistake or omission may exist. Please don't hesitate to contact SUPCON if you have any question about this document. ● Please contact SUPCON via email "SMS@supcon.com" if you have any question.

Trademarks
<p>Trademarks or marks SUPCON, SPlant, Webfield, ESP-iSYS, MultiF, InScan, SupField are all registered, registering or using by Zhejiang SUPCON Technology Co., Ltd., which owns the properties of all trademarks or marks above. Without the written authority from Zhejiang SUPCON Technology Co., Ltd, no individual or company shall use any trademarks or marks above. We reserve the right to take legal action for any individual or company using trademarks or marks above illegally.</p>

Symbol Definition	
	WARNING: Indicates information that a potentially hazardous situation which, if not avoided, could result in serious injury or death.
	RISK OF ELECTRICAL SHOCK: Indicates information that Potential shock hazard where HAZARDOUS LIVE voltages greater than 30V RMS, 42.4V peak, or 60V DC may be accessible.
	ESD HAZARD: Indicates information that Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices
	ATTENTION: Identifies information that requires special consideration.
	TIP: Identifies advice or hints for the user.

Security& Caution Symbols

The following table lists Security& Caution symbols used on equipments.














No.	Symbol	Description
1		Direct current (DC)
2		Alternating current (AC)
3		Ground (Earth) terminal
4		Protective earth (ground) terminal
5		Reference ground (Earth) terminal
6		Frame or chassis
7		Equipotentiality
8		On (power)
9		Off (power)
10		Caution, risk of electric shock
11		Caution, hot surface
12		Caution, risk of danger
13		Electrostatic sensitive devices (ESD)

Table of Contents

- AC Temperature Controller CN032-S301**
- Section 1 Overview.....1**
- Section 2 Technical Specifications2**
- Section 3 Usage.....3**
 - 3.1 Appearance3
 - 3.2 LED Indicators3
 - 3.3 Interface Features4
 - 3.4 Wiring5
 - 3.5 Install and Uninstall5
 - 3.6 Maintenance.....7
- Section 4 Application8**
 - 4.1 Notes8
 - 4.2 Troubleshooting.....8
- Section 5 Revision.....9**

AC Temperature Controller CN032-S30

Section 1 Overview

The AC temperature controller are used to implement contact output of cabinet temperature high-limit alarm, contact output of fault detecting about AC fan, start/stop control of the fan and power supply of AC fan in the cabinet.

Section 2 Technical Specifications

Table 2-1 Technical specifications

Parameter	Instruction	
Module Model	CN032-S30	
Controllable AC fans	4	
Temperature Detecting Precision	±2°C	
Temperature of Fan when Starting	20°C, 23°C, 26°C, 29°C, 32°C, 35°C Adjustable	
Over Temperature Alarm limit	Alarm when >40°C	
Fan Power Alarm	Fan Power Loop Fault When Fan Started	
Input Voltage	220VAC±10%	
Output Voltage (Fan Power Supply)	Voltage: 220VAC±10%; Current 1A(Max)	
Over Temperature, Fan Alarm Contact Type	Photoelectric Isolation Transistor	
Over Temperature, Fan Alarm Contact Specifications	Voltage : 60V(Max); Current :50mA(Max)	
Temperature	Operating Temperature	(-20~70)°C
	Storage Temperature	(-40~70)°C
Humidity	Operating Humidity	10%RH~90% RH, No Condensation
	Storage Humidity	5%RH~95%RH, No Condensation

Section 3 Usage

3.1 Appearance

Diemnsion of temperature controller (length×width×height): 92mm×76mm×60mm

The appearance of temperature controller is shown in Figure 3-1:

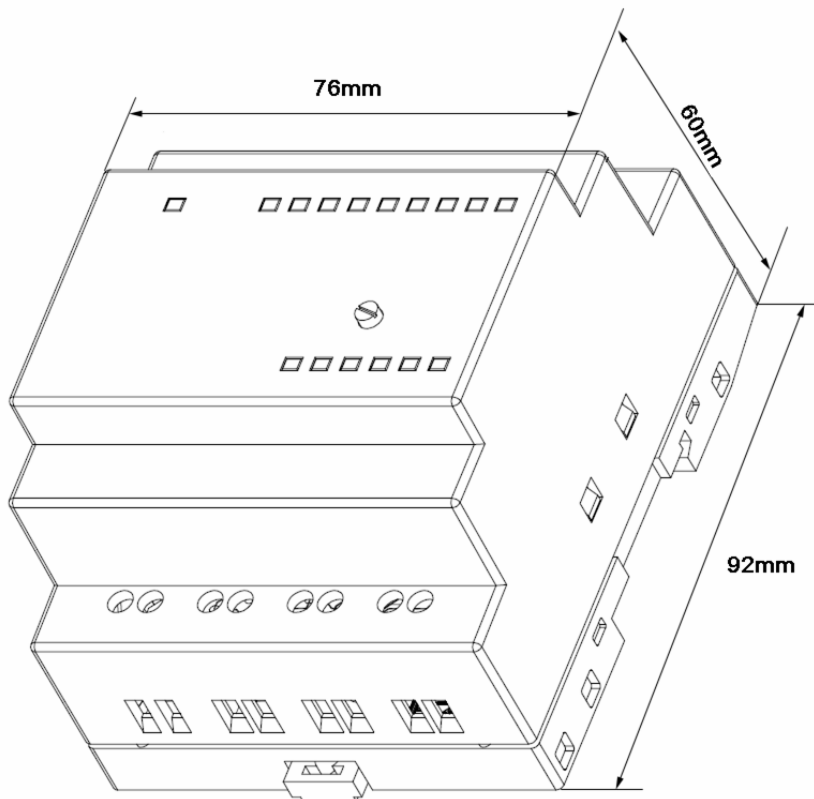


Figure 3-1 Appearance and dimension of CN032-S30

3.2 LED Indicators

There is a LED indicator marked “Power” on the front of module, whose status instruction is shown in Table 3-1.

Table 3-1 Instruction of module indicator

Led Indicator	Power Instruction(green)
Off	Module Power Supply Fault
On	Normal
Flash	--

3.3 Interface Features

AC temperature controller can implement the power supply for the four fans in cabinet, output of over temperature alarm contact output, startup and stop of temperature-control fan, and failure detection of fans.

AC temperature controller panel is shown in Figure 3-2.

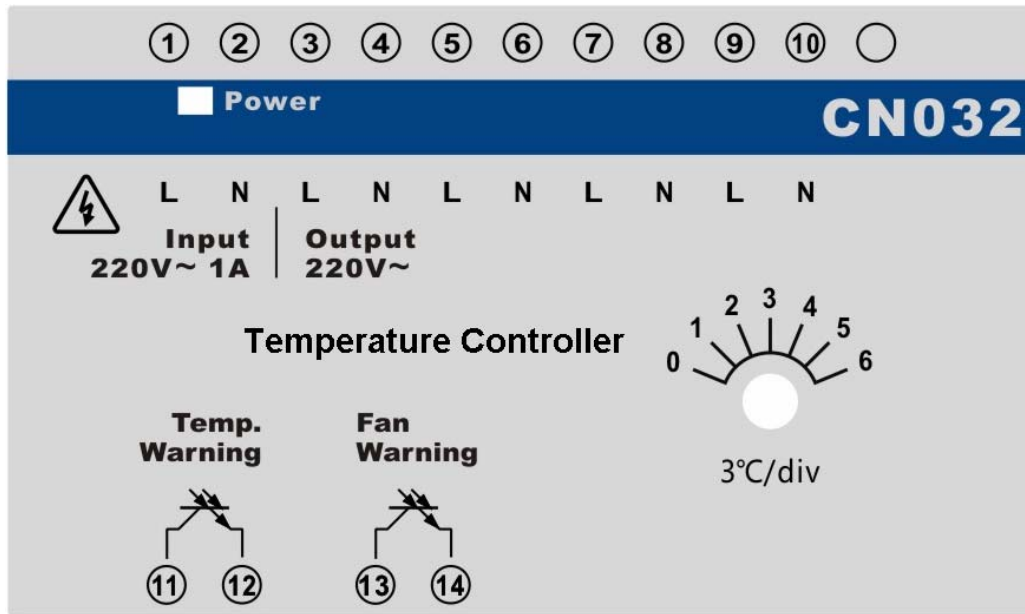


Figure 3-2 Panel of module CN032-S30

A knob on the panel can set the cabinet temperature when starting fan, it has 7 grades. Please refer to Table 3-2 for the starting temperature and grades.

Table 3-2 Relation between grade and temperature

Grade	Temperature	Meaning
0	0°C~70°C	Debug grade, fan is normally-open, start/stop of fan is not related to cabinet temperature.
1	20°C	Check the cabinet temperature, control cabinet fan to start when the its temperature reaches the limit.
2	23°C	
3	26°C	
4	29°C	
5	32°C	
6	35°C	

3.4 Wiring

Terminal wiring mode is applied in the output and input of AC temperature controller CN032-S30. input terminals are on the upside of module and the output terminals are on the underside. The wiring of CN032-S30 is shown in the Table 3-3 and Table 3-4.

Table 3-3 Wiring of input terminals

Terminal No.	Function Structure	Upside Terminals
1	Module Power Supply	Module 220V AC power L
2		Module 220V AC power N
3	Channel 1 Fan Power	L
4		N
5	Channel 2 Fan Power	L
6		N
7	Channel 3 Fan Power	L
8		N
9	Channel 4 Fan Power	L
10		N

Table 3-4 Wiring of output terminals

Terminal No.	Function Structure	Underside Terminals
11	Over Temperature Alarm	Over Temperature Alarm Output +
12		Over Temperature Alarm Output -
13	Fan Power Alarm	Fan Power Alarm Output +
14		Fan Power Alarm Output -

3.5 Install and Uninstall



Risk of electrical shock:

The power of module must be cut off before install and uninstall the module.

CN032 Installation adopts standard DIN guide. It generally installed in the cabinet or air vent of operation platform.

Steps to install the module include:

1. Install one side of the module to the rail, as shown in ❶ in Figure 3-3.

2. Rotate the module and install the other side to the rail, as shown in ② in Figure 3-3.
3. Wire and manage them.

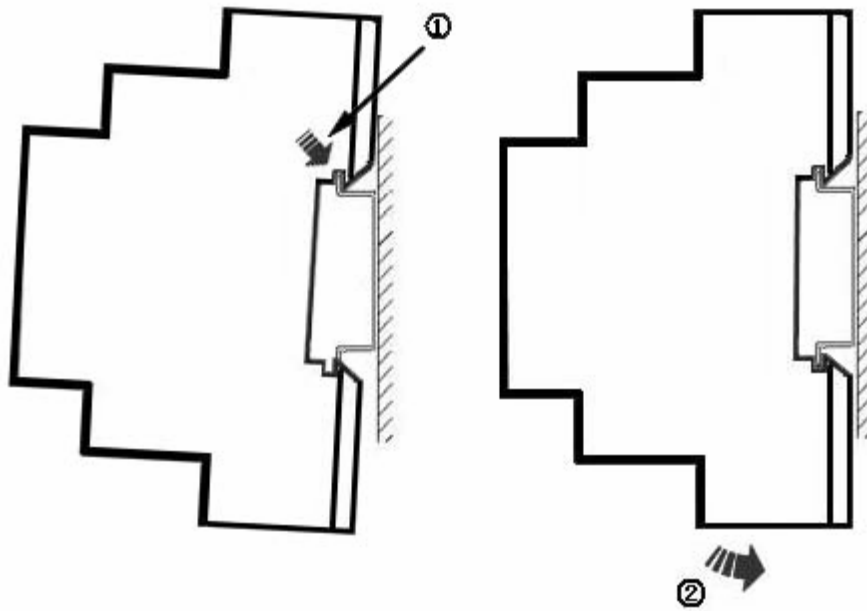


Figure 3-3 Install module

Steps to uninstall the module include:

1. Cut off the power and remove the wires.
2. Remove the buckle in random side by slotted screwdriver (medium size or small size), as shown in ① in Figure 3-4.
3. Rotate the module, as shown in ② in Figure 3-4.
4. Remove module from the rail to finish the uninstalling, as shown in ③ in Figure 3-4.

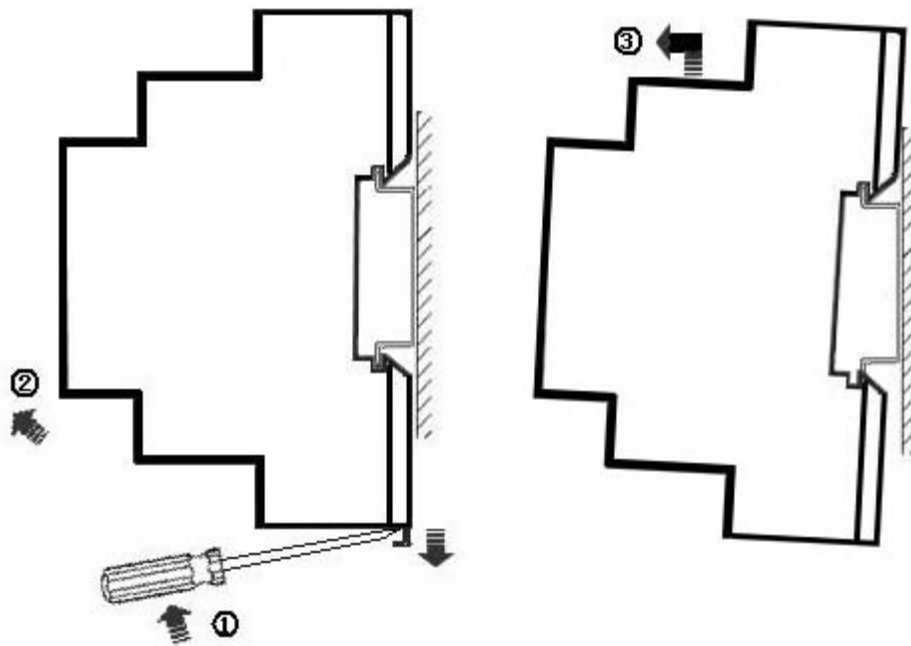


Figure 3-4 Uninstall module

3.6 Maintenance

When using the AC temperature controller, it needs regularly checking of whether the status of indicator is normal or not.

When the system is stopped for recondition, check whether the input/output interface wirings are loose, fan power is normal and the output of alarm is normal or not.

Section 4 Application

4.1 Notes

- AC temperature controller should work with digital input module and send the status of channel to the system status diagnosis software as the input mode of dry contact signal. Please connect based on the polarity instruction of over temperature alarm output terminal (11 and 12) and the fan supply alarm output terminal (13 and 14) in Table 3-3.
- Because the AC Temperature Controller output 220VAC without a fuse, please insert a 1A fuse to protect the circuit from short-circuit when connecting the fan power.

4.2 Troubleshooting

When “Power” indicator is off, it indicates power supply abnormal, please check power supply or replace the module.

Section 5 Revision

Table 5-1 Retrofit list of the version

Manual Version	Applicable Model Version	Remarks
V2.0(20140711)	CN032-S30 V11.00.00 and later versions.	Modify the format and some contents.
V2.1(20160608)	CN032-S30 V11.00.00 and later versions.	Modify the format and change over temperature, fan alarm contact specifications.
V2.2(20170801)	CN032-S30 V11.00.00 and later versions.	Add code.