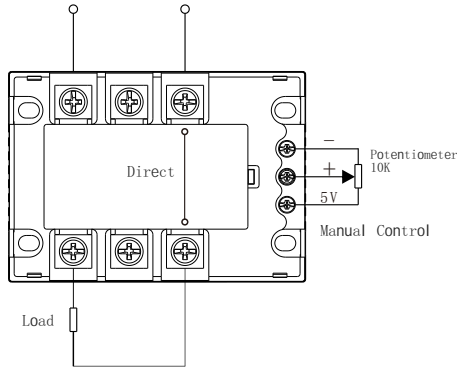


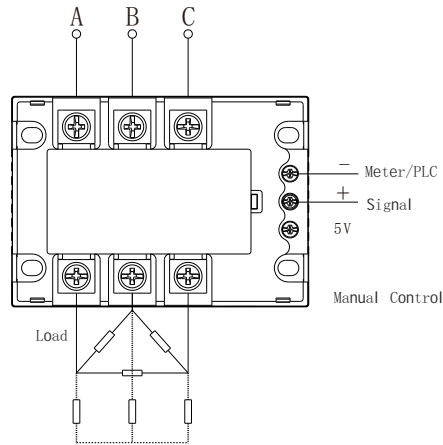
VII. Instructions for Use

1. Wiring Diagram Illustration Wiring Diagram of HHT3 - 1

Power Supply: AC380V±20%
AC220V±20%



Wiring Diagram of HHT3-3
Power Supply: AC380V±20%



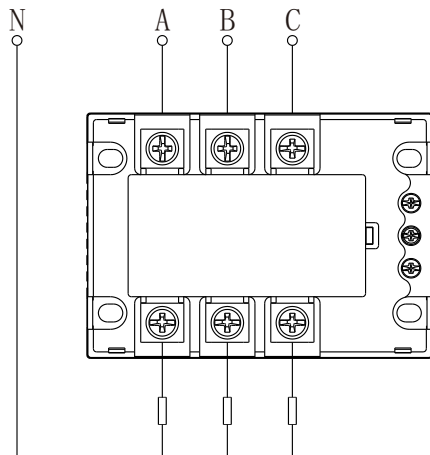
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VIII. Precautions:

1. Installation method: Wall-mounted vertical installation. The power supply should enter from the top and exit from the bottom. When wiring, remove impurities from each copper terminal and tighten the screws; otherwise, the terminals may overheat and be damaged.
2. For the incoming lines A, B, and C of the three-phase AC circuit, there is no phase sequence requirement. The thickness of the wires should be selected according to the actual operating current. Connect the load to the output terminals a, b, and c.
3. Overcurrent protection: If an overcurrent occurs during use, first check whether the load has a short-circuit fault. A quick fuse can be installed in front of the incoming lines A, B, and C of the product, and its rating can be selected as 1.5 times the actual load current.
4. The product should be used with a heat sink. Ensure there is sufficient heat dissipation space between it and other devices in the cabinet. If necessary, install a fan for forced heat dissipation. The heat dissipation effect is related not only to the actual operating current and the size of the heat sink but also to factors such as ambient temperature (summer, winter), ventilation conditions (natural cooling, forced cooling, air volume), and installation density.
5. When selecting the product model, derating is required: resistive loads should be derated to 60% of the rated value, silicon carbide rod loads to 30% of the rated value, and motor loads to 15% of the rated value.

7

Wiring Diagram of HHT3-5
Power Supply: AC380V ±20%

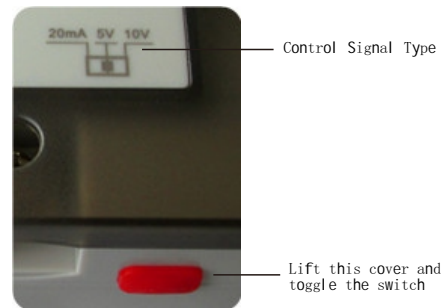


2. Control Mode Selection

20mA: 4--20mA

5V: 0--5V signal

10V: 0--10V signal



Note: When adjusting with the manual potentiometer, select the 5V signal mode.

6

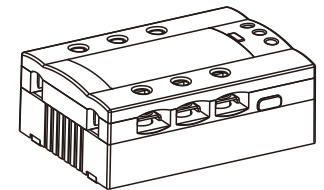
Ordering Information:

When placing an order, please specify the product model, voltage and current ratings, and quantity. If there are special requirements, they should be noted separately. For example: HHT3-3/38 40A, 100 units

C-Lin 欣灵电气股份有限公司
XINLING ELECTRIC CO., LTD
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C-Lin

使用说明书



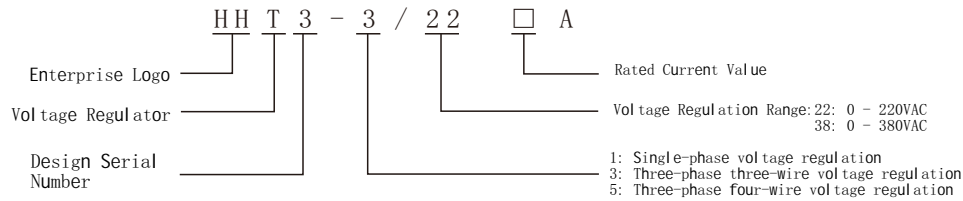
HHT3-1、HHT3-3、HHT3-5
Intelligent Solid-State Voltage Regulator

Thank you very much for using C-Lin brand solid-state voltage regulators. Please read the instruction manual before use!

I. Introduction

This product is an intelligent integrated module that integrates the thyristor trigger circuit, single-chip microcomputer control phase-shifting circuit, signal detection and sensing circuit, and voltage regulation circuit. It is a complete open-loop power phase-shifting control system, capable of regulating the load voltage. It has a built-in RC resistance-capacitance absorption loop and varistor protection, and is compatible with 4 - 20mA/0 - 5V/0 - 10V signals. Under the control of signals, it enables stepless adjustment of three-phase load voltage from 0V to the full voltage of the power grid, and is applicable to both 50HZ and 60HZ frequencies. With a linear control circuit, it features high precision and good stability. It is widely used in various inductive and resistive loads, such as AC motor speed regulation, industrial automation, electric heating control, mechatronics, various power supplies, chemical industry, textile communication, and other fields; it can realize manual and automatic control interfaces, and there is no phase sequence requirement for the AC input of the main circuit.

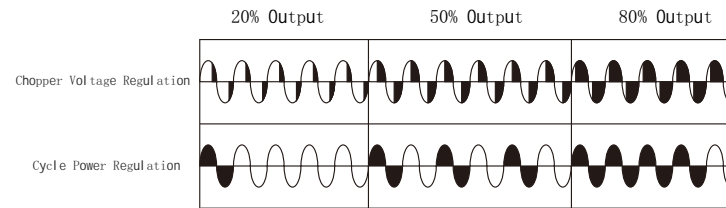
II. Model Naming



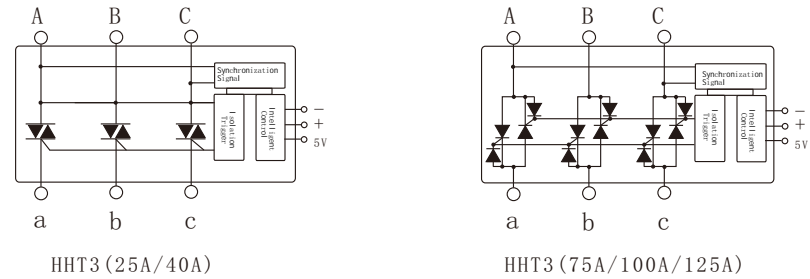
1

IV. Output Waveforms

The differences between chopper voltage regulation and cycle power regulation are shown in the following figure.



V. Internal Circuit



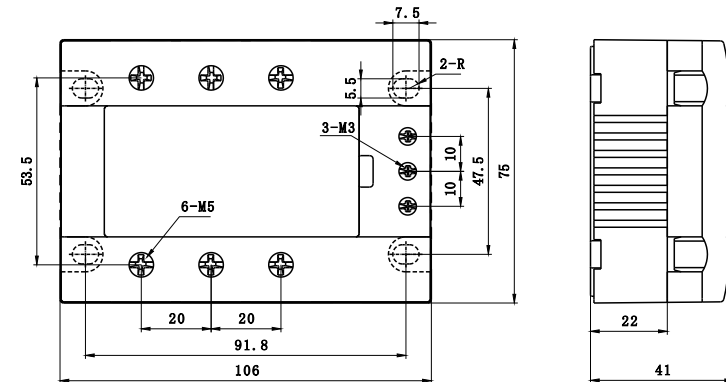
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III. Technical Parameters

Product Function	Thyristor power regulator - Chopper voltage regulation or cycle power regulation (customized)					
Input Voltage Range	380V±20% (A/B/C)					
Auxiliary Power Supply	Built-in synchronous power supply					
Control Signal	0-10VDC or 0-5VDC, Input Impedance: 10KΩ; 4-20mA, Input Impedance: 250Ω					
Manual Adjustment	10KΩ Potentiometer Resistance					
Cooling Method	External radiator with air cooling, wind speed should be 6m/s					
Operating Ambient Temperature	-30~+60°C					
Output Voltage Asymmetry	≤1%					
Product Model	HHT3-1	HHT3-3		HHT3-5		
Load Wiring Method	Single-phase load	Star, Delta		Star with center connected to neutral wire		
Adjustable Phase Shift Angle	0-175 degrees	0 - 150 degrees	0 - 175 degrees			
Nominal Current	Arms	25A	40A	75A	100A	125A
Operating Current	Arms	0.1-25A	0.1-40A	0.5-75A	0.5-100A	0.5-125A
Thyristor Blocking Voltage	V _{pk}	1200				
AC Frequency	Hz	50/60				
Rate of Rise of Off-state Voltage dv/dt	V/μs	500				
Rate of Rise of Off-state Current di/dt	A/μs	100				
Off-state Leakage Current	MArms	≤10	≤10	≤10	≤15	≤20
On-state Voltage Drop	V _{rms}	1.5	1.5	1.8	1.8	1.8
Insulation Voltage	V _{rms}	Terminals and base plate 2000		Main power terminals and signal terminals 2000		
Weight	Kg	0.38		0.52		

2

VI. Outline and Mounting Dimensions



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