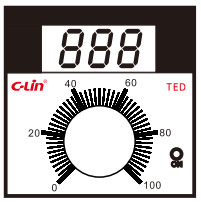
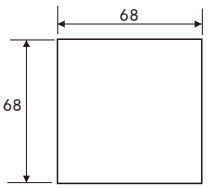


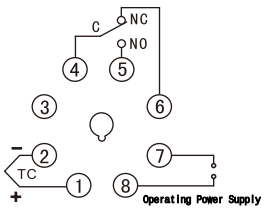


Mounting Hole Dimensions

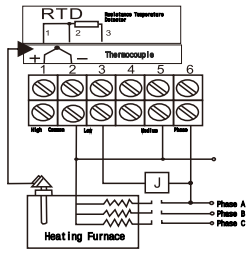
TED-2001 2002
TED-2301 2302

VI.Application Wiring Diagram

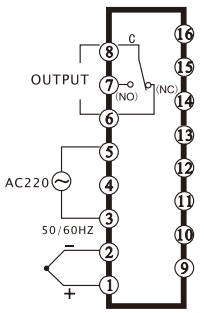
Operating Power Supply: AC220V
Contact Capacity: 3A AC220V (Resistive Load)



HH48-N/M



TED-2001 2002
TED-2301 2302



TDB-N/M

Note:
C----indicates the common terminal
NC----indicates the normally closed contact
NO----indicates the normally open contact

❸

VII.Ordering Instructions

When placing an order, please specify the model, specification, type of input signal, and display value range of the regulator.
Example: HH48-N101
K (improved type)
Temperature measurement range: 0～999℃

产品合格证

符合标准: GB/T 13639

检 验 员: 检 01

出厂日期: 见产品或盒贴出厂编号

本产品经检验合格,准予出厂。

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

C-Lin 产品合格证

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

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Telephone: 0577-6273 5555 Fax: 0577-6272 2883
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Technical Consultation: 400-8236-775

RECYCLABLE

National High-Tech Enterprise Zhejiang Provincial High-Tech Enterprise

C-Lin 欣灵

使用说明书
Products Instructions

TED Improved Type
TDB-N(M)
HH48-N(M)
Series Temperature Regulator

Thank you very much for using the C-Lin brand temperature regulator! Please read the user manual before using the product!

09A036O0

I.Overview

The TDB-N(M), HH48-N(M), and TED improved-type temperature regulators (hereinafter referred to as "the regulator") adopt large-scale integrated circuits, featuring strong vibration resistance, high reliability, and easy installation. The product is widely used for temperature measurement and automatic control in industries including chemical engineering, light industry, textiles, metallurgy, medical care, household appliances, laboratories, mushroom cultivation, vegetable greenhouses, aquaculture, plastic machinery, food ovens, refrigeration, photographic developing, clothing setting, heat treatment, fermentation, sugar making, and rubber vulcanization.
This model of regulator complies with the relevant requirements of GB/T 13639.

II.Main Technical Performance and Specifications

1.Display accuracy: ≤1.0% of full scale (F.S.) (for HH48-N, TDB-N); ≤1.5% of F.S. (for HH48-M, TDB-M, TED).
2.Control sensitivity: ≤0.75% of F.S. (for two-position switch type).
3.Time proportional regulation:
a) Proportional band: 3%~6%
b) Zero cycle: 30±10s
4.Output contact capacity: AC220V 3A (resistive load), AC220V 1A (inductive load).
5.Operating power supply: AC220V±10V 50Hz~60Hz, power ≤2W; custom special power supplies are available.
6.Operating environment: Environments with no corrosive gases, temperature ranging from -10℃ to 50℃, and relative humidity ≤85%.

III.Instrument Model Naming Rules

HH48-□-1□ □
- Thermocouple
- Regulation Mode:
  0: Two-position switch type
  3: Time proportional type
- Setting and Indication Mode:
  M: Potentiometer setting, no indication
  N: Key setting (replaces code setting), full-range digital display

TDB-□
- M: Time proportional regulation, deviation indication
- N: Time proportional regulation, digital display

TED-2□ 0 □
- 1: Thermocouple input (K-type/E-type)
  2: Thermal resistor input (Pt100)
- 0: Two-position regulation, digital display
  3: Time proportional regulation, digital display

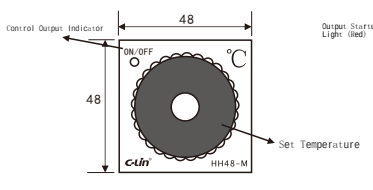
IV.Instructions for Instrument Control Mode

1.Operation Instructions for HH48-N:
After the instrument is correctly wired according to the wiring diagram and powered on, the instrument display will show the following parameters in sequence: version number, input type (sensor index number), output mode, and finally the current temperature measurement value.
(1) After the instrument is correctly wired according to the wiring diagram and powered on, the measurement indicator light turns on, and the digital tube window displays the current measurement value.
(2) In the measurement state, pressing the "SET" key allows switching between the measurement value and the set value in the display window.

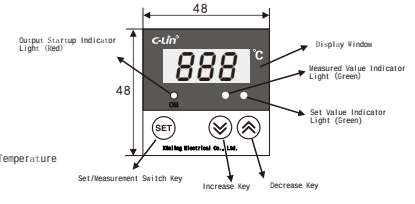
(3) When the decimal point of the last digit of the set value lights up, it indicates that modification is allowed. Adjust the value using the increase key and decrease key. If no operation is performed for 30 seconds, the system will automatically exit the modification interface; alternatively, press the "SET" key once to confirm the modification, and the modified set value will be automatically saved.

2.Two-position control: This refers to high-low position action. For example, in a heating process: heating stops when the temperature rises to the set value, and restarts when the temperature drops below the set value, realizing cyclic control. When starting up initially, first set the set value to 80% of the required temperature. After the instrument switches several times, reset the set value to the required temperature. This can reduce temperature overshoot at startup.
3.Time proportional control: After the actual temperature enters the proportional band determined by the set value, the manipulated variable (control output) performs on-off proportional actions of the relay contacts on the deviation value with a certain cycle. After operating for a period of time, the actual temperature can stabilize within a small range.

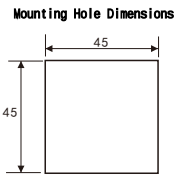
V.Instrument Panel Description and Mounting Hole Dimensions (mm)



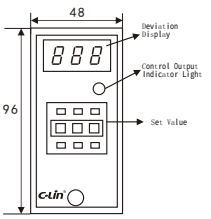
HH48-M
(48×48×107)



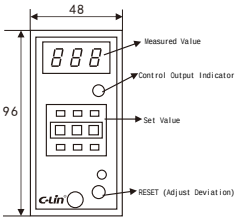
HH48-N
(48×48×95)



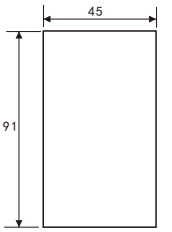
HH48-N/M
(45×45)



TDB-M
(48×96×113)



TDB-N
(48×96×113)



TDB-N/M
(45×91)