SHIVA Amvaj
شیوا امواج

ترموستات96 شیوا امواج

TEMPERATURE CONTROLLER 96

VER :9801

۳سال ضمانت تعویض بدون سؤال محصولات ما
از جمله حقوق تعریف شده و مسلم مشتری در شیوا امواج است
که افتخار انجام این وظیفه را داریم .

3 year GUARANTEE

TEMPERATURE CONTROLLER 96

SCAN QR TO VIEW THE PRODUCT

MODEL : TCD-PID
CODE : 15D1
WEIGHT : 315 gr
(96x96x115)mm
IP 30

TEMPERATURE CONTROLLER 0 .. 900

MODEL : TRB - 900
CODE : 15B2
WEIGHT : 175 gr
(72 x86 x60) mm
IP 30

TEMPERATURE CONTROLLER -50 .. 125

MODEL : TRB-125D
CODE : 15B3
WEIGHT : 118 gr
(72x86x60) mm
IP 30

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3 year GUARANTEE

Respecting the customer is our duty

3 year no question asked guarantee under these conditions;

1-at most it should be within 3 years from the date printed on the label of the product

2-the label on the product should be safe and sound

Shiva Amvaj products in accordance with international standards and with a 3 year no question asked guarantee are presented

ISO 9001-2015 CE

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Device Introduction

Shiva Amvaj Temperature Controller 96 is capable of measuring and controlling temperature with high accuracy using PID system and Termocouple type K.

Features

- **Two-way temperature Control of ON/OFF or PID**
- **Having indicators of**
  - PV : real temperature
  - SV : adjusted temperature
- 5 indicators to announce
  - UP: temp increase
  - DOWN : temp decrease
  - AUTO TUNING: selecting parameters of PID controller automatically
  - RELAY : relay connection
  - ALARM : connection of Alarm relay(blinking)
- Capability to
  - Measure temp with 1ºC accuracy
  - Adjust relay connection and disconnection temp inON/OFFcontrollermod
  - Recognize Sensor disconnection
  - Set ALARM relay disconnection and connection band (HYSTERSIS)
  - Calibrate device based on intended reference
- Installation instruction of wiring is available on device terminals

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Technical Specifications

Supply voltage : 180-250 VAC / 50-60Hz

Temperature measurement range: -100ºC .. +1350ºC

Sensor type : thermocouple K

Efficiency at Temperature : -20ºC.. +65ºC

Humidity : 70%

Output : two 10A relays

Setting

The device must be adjusted before using. Device setting includes two categories, main setting and value setting.

- **Main setting**
  - 1-Device calibration (oFS)
  - 2-Operation range
    - Maximum (S-h)
    - Minimum(S-L)
  - 3-Controller type(Cont)
- **Value setting**
  - 1-Desired temperature(SU)
  - 2-Hystersis(hYS)
  - 3-Alarm temperature range
    - minimum Alarm temp (AL L)
    - maximum Alarm temp(AL h)
  - 4-Alarm Hystersis AhYS

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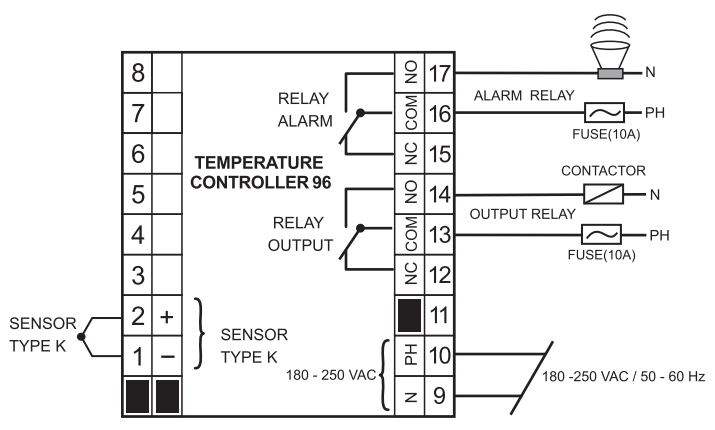
Installation Instruction



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Note3: in alarm setting step if oFF is not selected and AL L and AL h are initialized, by exceeding temp from AL h and decreasing from AL L alarm relay will be activated and ALARM indicator gets on. Hysteresis value setting is for Schmitt of alarm relay disconnection.

Device utilization in AUTO TUNING mode

By choosing controller as PID it is possible to calculate PID parameters automatically. Choosing AUTO TUNING mode is available by pressing ▲ key consecutively for 5sec which is accompanied with blinking of AUTO TUNING indicator. Calculation time for PID parameters depends on control environment and warming sections. When device is in AUTO TUNING mode, it doesn't enter to value setting step. So hold ▲ key for 5 seconds in order to pause AUTO TUNING, then enter to desired setting.

Note4: if AUTO TUNING setting gets done when device is selected as a ON/OFF controller, the device will be switched to PID automatically.

Note5: if sensor gets disconnected, PV indicator displays SEn blinking.

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Main setting

By holding down ↵ key for 5 seconds, main parameters are adjustable based on following steps:

Warning: if and values are selected how that SV will not be in new range, after exiting message will appear instead of displaying SV and SV value must be selected again.

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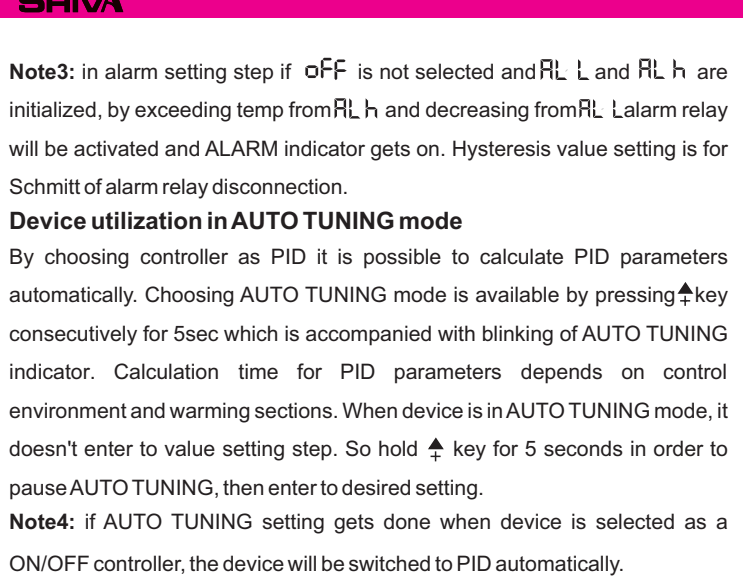
Value setting

Note1: if controller type is selected PID in main setting, the items which is marked by * are not considered in value setting step.

Press ↵ key , enter to value setting step



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If AL L value and AL h value are not selected from proper range, .ErrL and Errh messages will be displayed respectively and values must be selected again.

Example: if desired temp is 120ºC and alarm is expected to be activated for temperatures lower than 70ºC and higher than 150ºC, setting will be activated as following :

Choose SV, ALL and ALh equal to 120, 70 and 150 respectively.

Hysteresis temp and hysteresis alarm are adjustable from 1 to 12(%10*SV=%10*120=12) and from 1ºC to 3ºC respectively.

Calculation of maximum bound of alarm hysteresis : the difference between alarm temp and SV in high temp is 150-120=30 and in low temp is 120-70=50 so minimum difference is 30ºC(Min=30ºC) then %10Min=3ºC

Note2: if no key is pressed for 10 seconds in setting step, device will exit setting menu and no change is saved