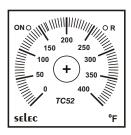
## BLIND TEMPERATURE CONTROLLER TC52HP

**OPERATING MANUAL** 



#### **CONTROL ACTION SELECTION**

Given below is the comparison of control features of ON-OFF Vs Proportional, to aid user in selection of mode.

CONTROL ACTION	RELAY OPERATING FREQUENCY	OVER/ UNDER SHOOT ABOUT SET POINT
ON - OFF	SLOW (as per process)	GREATER
PROPORTIONAL	FREQUENT (once per 12 sec.)	MINIMUM

## **SPECIFICATIONS**

INPUT: (Factory set)

Thermocouple (T/C) : Type  $\bf J$  - Fe/K. Range (in  ${}^{\circ}{\rm F}$ ) : 400.

Inbuilt cold junction compensation for thermocouple type models.

### **ACCURACY:**

Setting: ± 3% of full scale Control: ± 0.5% of full scale

## **CONTROL ACTION (USER SELECTABLE):**

1)TIME PROPORTIONAL:

Proportional band: 3% of full scale.

Cycle time: 12 seconds

2) ON - OFF: Dead band: 0.5% of full scale

#### SENSOR BREAK CONDITION: Relay off

OUTPUT: Relay: 1C/O relay contacts 5A@230 VAC, resistive load (SSR drive available on request)

**TEMPERATURE SETTING:** By front panel

Knob on a calibrated dial.

INDICATION: 1) Relay status 2) Power ON

POWER: 90 to 270 VAC/DC, @ 50/60 Hz.

OPERATING TEMPERATURE: 0 - 50 °c

**HUMIDITY: 95% RH** 

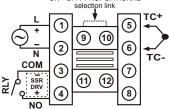
HOUSING: ABS plastic

WEIGHT: 175 gms. Approx.

# OVERALL DIMENSIONS (All dimensions in mm) 46 - 48 100 - 46

#### WIRING DIAGRAM

ON - OFF/ PROPORTIONAL

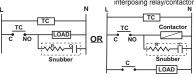


- Live
- Neutral
- 3 COM of relay
- 4 NO of relay
- 5 TC+ 6 TC-
- Open for ON-OFF / 9&10

Short for Proportional

#### TYPICAL CONNECTIONS FOR LOADS

1) For load current less than 0.5A 2) For bigger loads; use interposing relay/contactor



NOTE: Use snubber as shown above to increase life of internal relay of temperature controller.

#### Selec Controls Pvt. Ltd., India.

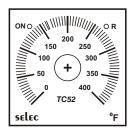
(Formerly Selectron Process Controls Pvt. Ltd.)
Tel: 91-22-2852 6443, Fax: 91-22-2852 1733

E-mail: sales@selecindia.com Website: www.selecindia.com

Document name: Operating/0804/TC52/Ver 01 OP131V01

## **BLIND** TEMPERATURE CONTROLLER TC52HP

**OPERATING MANUAL** 



## **CONTROL ACTION SELECTION**

Given below is the comparison of control features of ON-OFF Vs Proportional, to aid user in selection of mode.

CONTROL ACTION	RELAY OPERATING FREQUENCY	OVER/ UNDER SHOOT ABOUT SET POINT		
ON - OFF	SLOW (as per process)	GREATER		
PROPORTIONAL	FREQUENT (once per 12 sec.)	MINIMUM		

## **SPECIFICATIONS**

INPUT : (Factory set)

Thermocouple (T/C) : Type  $\bf J$  - Fe/K. Range (in  ${}^{\circ}{\rm F}$ ) : 400. Inbuilt cold junction compensation for

thermocouple type models.

#### **ACCURACY:**

Setting: ± 3% of full scale Control: ± 0.5% of full scale

## **CONTROL ACTION (USER SELECTABLE):**

1)TIME PROPORTIONAL:

Proportional band: 3% of full scale.

Cycle time: 12 seconds

2) ON - OFF: Dead band: 0.5% of full scale

## SENSOR BREAK CONDITION: Relay off

OUTPUT: Relay: 1C/O relay contacts 5A@230 VAC, resistive load (SSR drive available on request)

**TEMPERATURE SETTING:** By front panel Knob on a calibrated dial.

INDICATION: 1) Relay status 2) Power ON

POWER: 90 to 270 VAC/DC, @ 50/60 Hz.

**OPERATING TEMPERATURE:** 0 - 50 °c

**HUMIDITY: 95% RH** 

**HOUSING:** ABS plastic

WEIGHT: 175 gms. Approx.

# OVERALL DIMENSIONS (All dimensions in mm) Panel Cutout 46 - 48 <del>----</del> -100 46

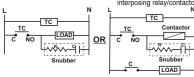
## WIRING DIAGRAM

ON - OFF/ PROPORTIONAL 10) (9) 2 6 N COM 3 7 SSR DRV (11) (12) **(4)** (8) 오. NO

- Live
- Neutral
- COM of relay 3
- 4 NO of relay
- 5 TC+ TC-6
- 9&10 Open for ON-OFF /
- Short for Proportional

### TYPICAL CONNECTIONS FOR LOADS

1) For load current less than 0.5A 2) For bigger loads; use interposing relay/contactor



**NOTE**: Use snubber as shown above to increase life of internal relay of temperature controller.

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