



## Quick Reference Guide



# SELF TUNED DIGITAL TEMPERATURE CONTROLLER H3TX-ST

### **ELECTRONIC AUTOMATION (P) LTD**

P. B. # 6414, Yelahanka, Bangalore - 560064  
Phones: 0091 - 080 -28567561  
/28567562 Fax : 080 - 28567129

E-mail: [eaplindia@vsnl.com](mailto:eaplindia@vsnl.com) URL: [www.eaplindia.com](http://www.eaplindia.com)

## INTRODUCTION

Thank you for purchasing EAPL'S digital temperature controller. This instruction manual describes every aspect of installation, set-up and operation of the digital temperature controller. If you run into difficulties and need technical assistance, feel free to call our technical support at (080) 28567561 available between 9 AM – 5:30PM IST or visit our web site at [www.eaplindia.com](http://www.eaplindia.com).

EAPL, an ISO 9001 company, leaders in Timer Technology Brings to you a new range of micro controller based programmable timers. High reliability, accuracy, compactness are some of the striking design features.

Uncompromising quality with cost effectiveness has been the watchword at EAPL.

### For Customer Use

Enter below the serial Number which is located on the cabinet. Retain this information for future reference.

Model No:

Serial No:

Batch No:

Date of Purchase:

Purchase Point:

### Accessories

- Digital Temperature Controller H3TX-ST - 1 no.
- Quick reference guide

**Note:** Please acknowledge that we reserve the right to make changes in product performance or specifications without prior notice. Also please note that we bear no responsibility for mistakes, misprints or omissions of the instruction manual Specifications.

## Salient Feature

0.28 inch display.  
 Simultaneous process value/Set value display.  
 Automatic ambient compensation.  
 Indication for relay status and sensor failure.

## Ordering Information

Model	Sensor	Range	Source Voltage	OUTPUT
H3TX-ST	J	0 to 600°C	240 V AC	1 C/O Relay
H3TX-ST	K	0 to 1200°C	240 V AC	1 C/O Relay
H3TX-ST	PT100	0 to 300°C	240 V AC	1 C/O Relay

## Specification

Self Tuned Temperature Controller	J Type	K Type	PT100 Type
Operating Voltage Range	-15% to +10% of the rated voltage		
Rated Frequency	50 Hz + 5%		
Control Output	1 C/O Contact rated for 5A @ 250V AC / 28 V DC resistive load.		
Recovery Time	2 Sec minimum		
Variation due to temp.change	0.25°C per degree change in ambient temperature(ref.25°C)		NA
Ambient temperature	Operation : +5°C to + 45°C Storage : -10°C to +85°C		
Humidity	Up to 85% RH @ 40°C		
Connections	Screw type terminals with self lifting clamps.		
Dimensions	48 X 48 X 94 (W X H X D)		
Power Consumption	AC Approx. 4VA / 1W		
Range	0°C - 600°C	0°C - 1200°C	0°C - +300°C
Insulation Resistance	> 100M ohms @ 500V DC		
Display Accuracy	+(0.8% of full scale)+ 1 digit	+(0.5% of full scale)+ 1 digit	+ 3°C
Input	J	K	PT100(RTD)
Dielectric Strength	a) 2.5KV AC, 50Hz for 1 minute.(Between Current carrying & noncurrent carrying parts) b)1.5KV AC, 50Hz for 1 Minute.(between contacts & control circuit)c) 1KV AC, 50Hz for 1 minute.(between non-continuous relay contacts)		

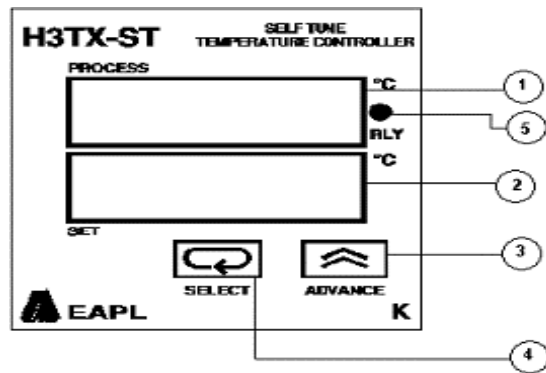
# Operating Instructions



## Caution

- Do not apply power to sensor terminals.
- Connect appropriate sensors.
- Check the sensor polarity before switching on the unit.

### Front Panel



#### 1 PROCESS

It displays the process value.

#### 2 SET

It displays the set value.

#### 3 ADVANCE

This switch is to increase the set programmed value.

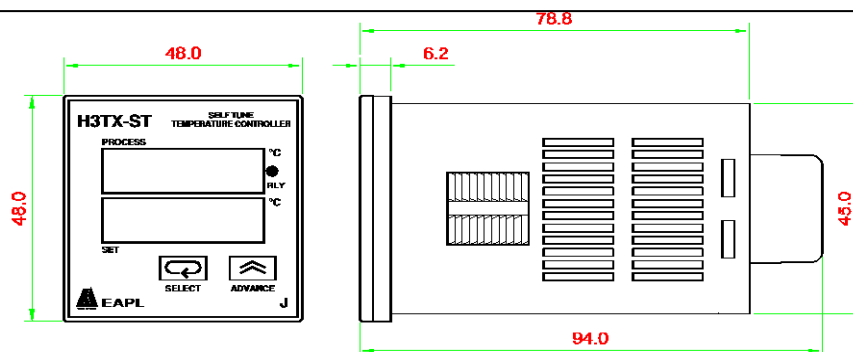
#### 4 SELECT

This switch is to bring the temp controller to program mode and to select individual digits to program.

#### 5 RELAY LED

It indicates the relay status when the relay changeover takes place.

### Dimensions



NOTE: ALL DIMENSIONS ARE IN mm  
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Digital Temperature Controller

## Terminal Details

### For J / K Type

1	:	Thermocouple -ve
2	:	Thermocouple +ve
4, 7, 8	:	NC, C, NO
5, 6	:	Source

### For PT100

1, 2, 3	:	For PT100 Sensor
4, 7, 8	:	NC, C, NO
5, 6	:	Source

## How to Operate H3TX-ST

On power application set display shows the set value and Process display shows the ambient temperature/process temperature and if process temperature is less than 50% of set temperature relay comes ON and remains in this state.

Once process temperature crosses 50% of set value, relay on-off action starts. And only when process value crosses set value relay is 100% off.

Process temperature shall oscillate around set temperature and settles down to set temperature.

## How to Program H3TX-ST

Press select switch, relay goes off and the process display shows PROG and the set display shows the previous set value with Most Significant Digit blinking.

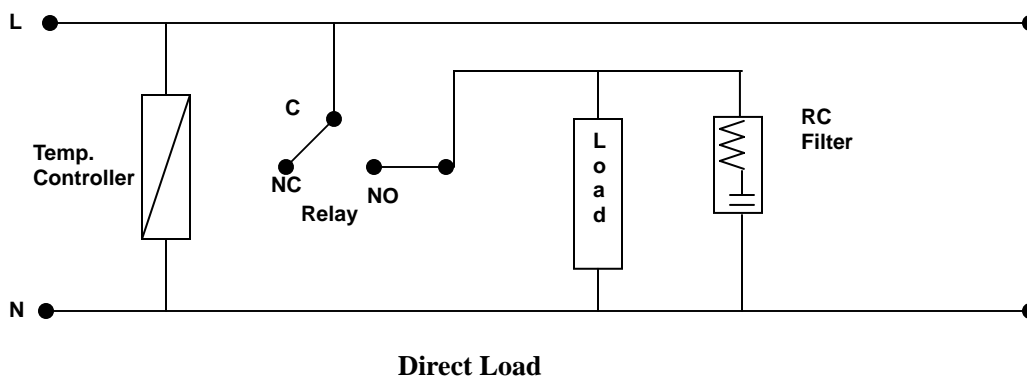
Blinking digit can be incremented using advance switch

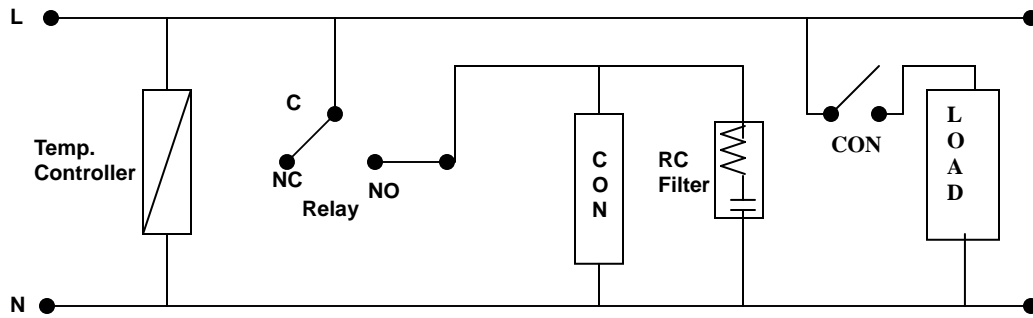
Use select switch for digit selection.

Once unit is programmed for required set value, press select switch to come out of the program mode.

## Typical Connections

- To avoid noise interference pickup, we recommend using RC Filter as close as possible across the load.





**With Contactor**