

# PID Temperature Controller

# TC



## SALIENT FEATURES

- ◆ Auto-tuning
- ◆ PV, SV display
- ◆ TC/ RTD Input
- ◆ 1 Alarm Output
- ◆ 100-240 VDC/ AC
- ◆ Relay/ SSR Output

## Model Number Legend

**TC** -  $\square$   $\square$   
 1    2    3

### 1. Series

TC

### 2. Output Type

R: Relay Output

S: SSR Output

### 3. Power Supply

230AD: 230V AC/ DC

### #. Accessories included

Panel Mounting Kit : 1 Set

### Example:

TC-R230AD

TC Series - Relay Output Type, 230V AC/ DC Power Supply

**NOTE:** Contact us for models not shown in catalogue.

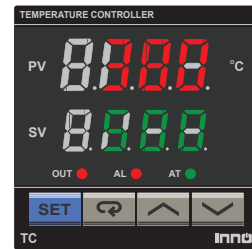
## Product Highlights

### ◆ Dual Display

The TC series temperature controller has separate displays for Process and Set Values. The PV display is in Red LED & SV display is in Green LED

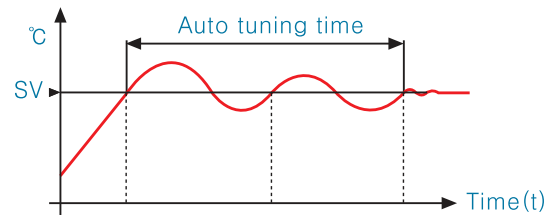
### ◆ SSR/ Relay Outputs

Selection of either Voltage driver for SSR output or 3A Relay output. In addition a 1A SPST alarm output with various alarm modes is provided



### ◆ Auto-tuning PID Controller

Manual and Auto-tuning PID control options are available. To enable Auto-tuning function press the left arrow key after setting SV for 3 seconds. The AT indication LED glows to show AT progress. Once the light goes off, auto-tuning is complete.



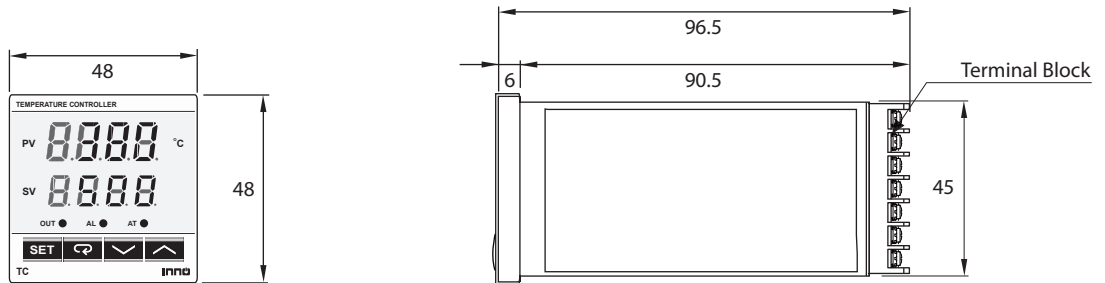
## Ratings and Specifications

Output Type		Relay Output	SSR Output
Models		TC-R230AD	TC-S230AD
Power Supply		100-240 VAC/ DC $\pm$ 10%	
Power Consumption		30mA at 220 VAC	
Sensor Input		Thermocouple: K, J, E, T; RTD: Pt100, CU50, CU100	
Control Output	Type	SPDT - NO, Relay Output	Voltage Output for driving SSR
	Specification	250 VAC, 3A (Resistive Load); Electrical life: 100,000 operations, minimum load: 5V, 10mA	24V, 30mA, with short-circuit protection circuit
Alarm Output	Type	SPST - NO, Relay Module	
	Specification	250 VAC, 1A (Resistive Load); Electrical life: 100, 00 operations, minimum load: 5V, 10mA	
Control Method		ON/ OFF control or 2 - PID control with auto-tuning	
PV Display		4 digit, 7 Segment RED LED; Height: 9mm	
SV Display		4 digit, 7 Segment GREEN LED; Height: 7mm	
Resolution		Thermocouple: 1° C; RTD: 0.1° C	
Sampling Time		min. 0.5ms	
Dielectric Strength		At power terminals 2000 VAC, 50Hz, 1 min	
Ambient Temperature		Operation: 0° ~ 50°C; Storage: -10° ~ 60°C (non-freezing; non-condensing)	
Ambient Humidity		Operation: 45 ~ 85% RH; Storage: 25 ~ 85% RH (non-condensing)	
Protection Class		IP20, Front panel IP65	
Weight		approx. 150 grams	
Material		Front Panel: PU Cladding Housing: ABS or Equiv.	

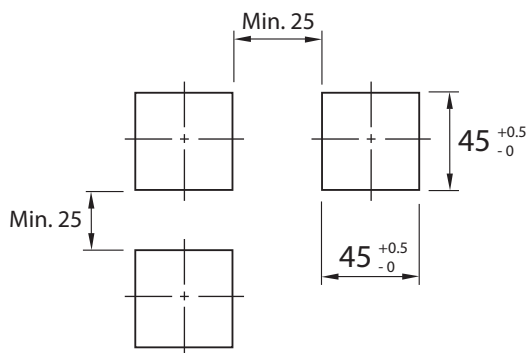
Note: The IP65 protection rating is valid only if the meter is fixed on the panel with the requisite rubber gasket

## Dimension Drawing

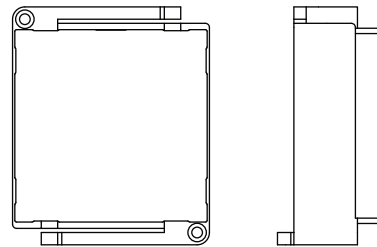
TC



### ① Panel Cut-out

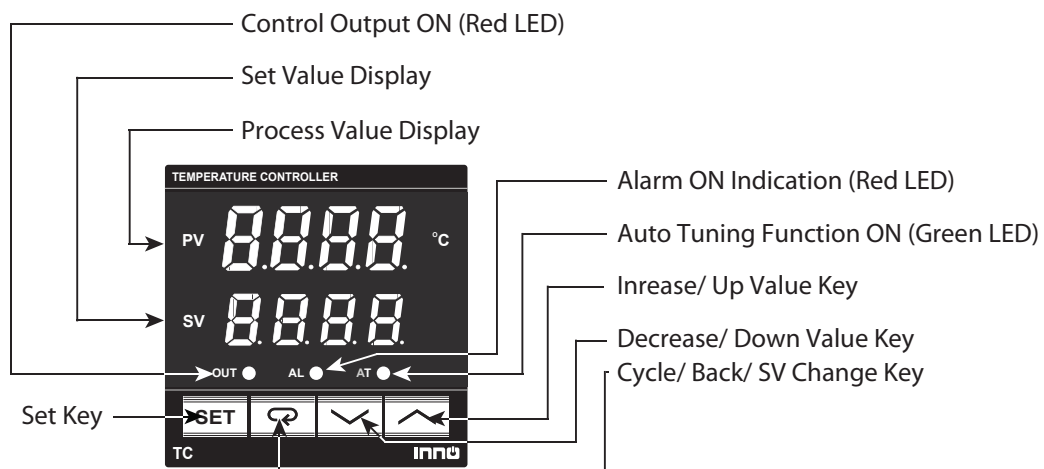


### ① Panel Adapter



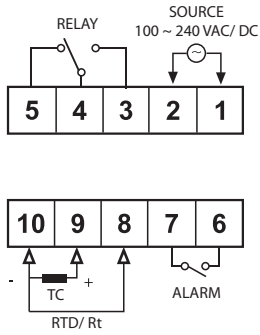
All dimensions are in mm

## Component Names and Function

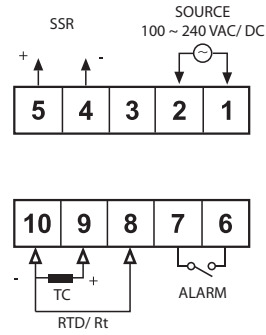


Connections

◆ TC-R230AD



◆ TC-S230AD



Sensing

Digital Panel Meters

Temperature Controllers

Timers & Counters

Level Controllers

Convertors & Amplifiers

Weighing

Automation

Components

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