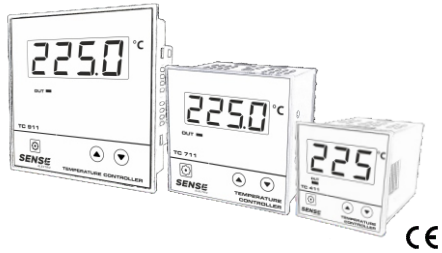
SENSE ELECTRIC



Temperature Controller

TC-911, TC-711, TC-411

Features

- Factory Set Input
- Economical Model
- User Friendly & Easy to Program
- 4 Digit 0.8inch* Bright LED Display with RED and WHITE color option

TECHNICAL SPECIFICATION

INPUT SPECIFICATION:

	Input	Range
Input Types	J / K PT-100 2W/3W	**For TC 911 & 711** : J : 0 to 850°C, K : 0 to 1200°C, PT-100: -50.0 to 400.0°C **For TC 411** : J : 0 to 850°C, K : 0 to 999°C, PT-100: -50 to 400°C
Resolution		**For TC 911 & 711** 1°C for (J,K), 0.1°C (PT-100) **For TC 411** 1°C for (J,K), 1°C (PT-100)
Indication Accuracy		±1% of FSD ± 1°C (FSD:- Full Scale Deflection)

DISPLAY AND KEYS:

Display	4 Digit, 7 Segment LED, ***0.8 inch in TC-911, 0.56 inch in TC-711*** ***3 Digit 0.56 inch in TC-411***
Keys	SET, UP, DOWN

DIMENSION:

TC-911

Size (mm)	96 (H) x 96 (W) x 40 (D) mm
Panel Cutout	92 (H) x 92 (W) mm

TC-711

Size (mm)	**72 (H) x 72 (W) x 50 (D) mm**
Panel Cutout	**68 (H) x 68 (W) mm**

TC-411

Size (mm)	48 (H) x 48 (W) x 50 (D) mm
Panel Cutout	44 (H) x 44 (W) mm

CONTROL ACTION

Control Mode	ON-OFF Control

OUTPUT SPECIFICATION:

Relay	1 Nos
Relay Type	1C/O (NO-C-NC)
Rating	10A for Resistive Load

SSR	SSR O/P parallel to Relay
Rating	12VDC @ 25mA

POWER SUPPLY:

Supply Voltage	100V to 270V AC, 50/60Hz
Power Consumption (VA Rating)	<4VA @ 270V AC MAX

ENVIRONMENT CONDITION:

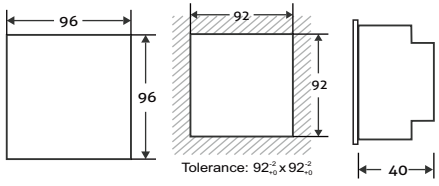
Operating Temp.	0°C to 55°C
Relative Humidity	UP to 95% RH (non-condensing)
Protection Level (As per request)	IP-65 (Front side) As per IS/IEC 60529 : 2001

KEY OPERATION

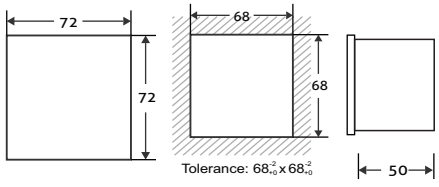
Key	Funtion
	SET Key (Press to change Set Point, Long Press to enter the parameter menu)
	UP Key (To increase the value/navigate in menu)
	Down Key (To decrease the value/navigate in menu)

MECHANICAL DIMENSIONS

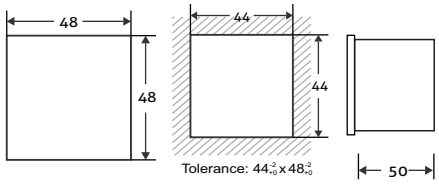
Dimensions for TC-911



Dimensions for TC-711



Dimensions for TC-411



INSTALLATION

For installing the meter

1. Prepare the panel cutout with proper dimensions as shown above.
2. Push the meter into the panel cutout.
   Secure the meter in it's place by fitting the clamp on the rear side. Fit the clamps on both the sides in diagonally opposite location for optimum fitting.
3. For proper sealing, tighten the screws evenly with required torque.

Terminal screw tightening torque:
0.68 Nm to 0.79 Nm (6.018ln-Lb to 6.992 ln-Lb)
Screw clamp tightening torque: 0.1N-m
(0.885 Lb-inch)

⚠ SAFETY PRECAUTIONS :

All safety related conditions, symbols and instruction that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not used in a manner specified by the manufacturer it might impair the protection provided by the equipment.

- Do not use the equipment if there is any mechanical damage
- Ensure that the equipment is supplied with correct voltage

If there is physical damage to the unit then do not use it.

Read complete instruction prior to installation and operation of the unit.

Wiring Guidelines:

⚠ CAUTION :

1) To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement.
2) Wiring shall be done strictly accordingly to the terminal layout with the shortest connection. Confirm that all connection are correct.

ORDERING CODE

Order Code	Specs
TC-911-T	**Input: Thermocouple J/K (Selectable)** Size: 96x96mm, ON-OFF Control, Supply: 230V AC
TC-911-P	**Input: PT-100 2W/3W** Size: 96x96mm, ON-OFF Control, Supply: 230V AC
TC-711-T	**Input: Thermocouple J/K (Selectable)** Size: 72x72mm, ON-OFF Control, Supply: 230V AC
TC-711-P	**Input: PT-100 2W/3W** Size: 72x72mm, ON-OFF Control, Supply: 230V AC
TC-411-T	**Input: Thermocouple J/K (Selectable)** Size: 48x48mm, ON-OFF Control, Supply: 230V AC
TC-411-P	**Input: PT-100 2W/3W** Size: 48x48mm, ON-OFF Control, Supply: 230V AC

INSTRUMENT CONFIGURATION

ERROR CONDITIONS

◆ If the display shows below message

It means Input **Sensor Not Connected**
or any error with connected sensor.
In such case please check the sensor connections

◆ If the display shows below message

This means Input **Sensor Reverse**;
In such case please check the sensor connections

SET POINT MENU

Press **SET** key

Display will show the present **SET POINT**

Now To adjust the **SET** point,
use the **Up/Down** key while
pressing the **SET KEY**.
When releasing the **SET KEY**, the controller
will automatically store the most recent **SET Value**.

** **Important Note:**
Range for J Type Input : 0 to 850°C
Range for K Type Input : 0 to 1200°C
Range for PT 100 Input : -50.0 to 400.0°C

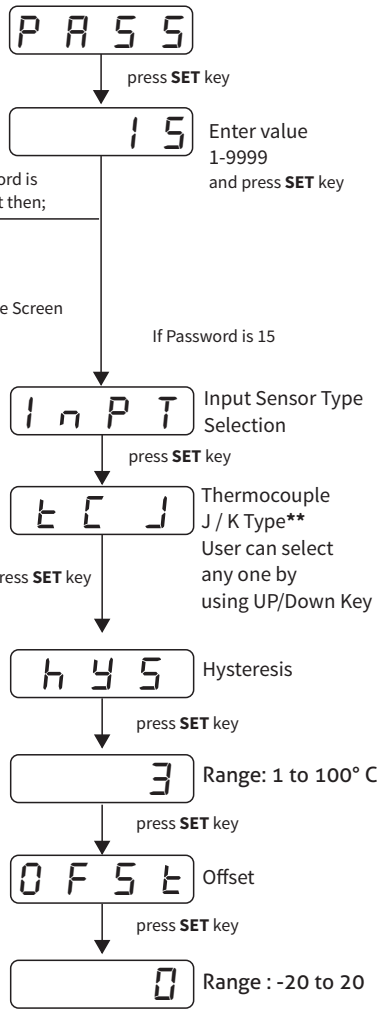
***Note**: If the instruments stays in idle condition while inside the **Configuration Menu** for more than **30 seconds**, then it will automatically exit the configuration menu.

***Installation Note**:
It is been advised that the settings should be done by a professional, after going through user operating manual and after having understood the application.

SENSE ELECTRIC

Input Selection Menu

Long press key for 4 Seconds
to enter the parameter setting menu

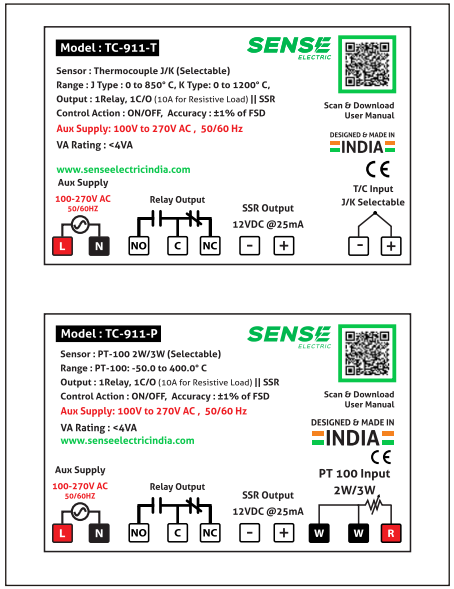


Leave the controller idle for 3 seconds
to **SAVE** and **EXIT**

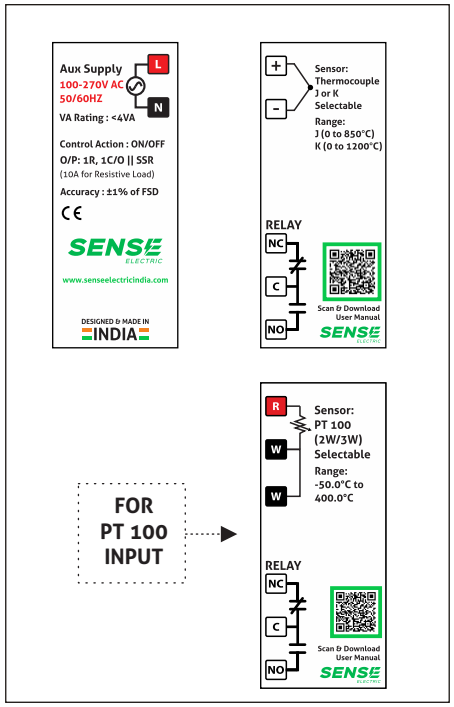
****Important Note:**
In case of PT-100 Input Selection the sub menu of input would not be present; and the rest of the settings would same as above.

TERMINAL DIAGRAM

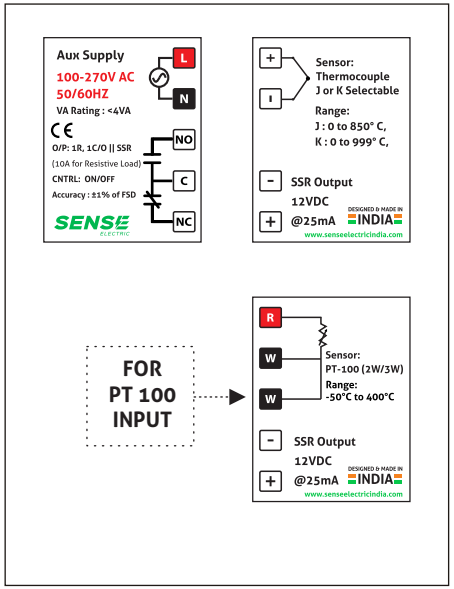
TC 911



TC 711



TC 411



Designed & Manufactured in India

Product up-gradation is a continuous process. Hence, data in this manual is subject to change without prior notice.

For latest information, please get in touch with our Sales Office.

SENSE ELECTRIC

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