A. Calibration and Testing Procedure for STC1000P (Proportional).

Power on unit and leave for 15 mts

1. CALIBRATION OF ROOM TEMPERATURE PRESET AND FULL SCALE TRIMPOT.

Feed 0.00 mV to the TC input using a millivolt source and adjust P1 (PR1) Z for Display to read Room temperature as shown by a mercury thermometer.

Feed mV corresponding to maximum temperature and adjust P2 (FS) for Display to read full scale temperature.
Verify Room temperature again by feeding 0 mV repeat three iterations till the Zero an Full-scale readings are set to Room temp (RT) and FS temp + RT respectively.

e.g. If room temp. is 26 deg. C and as per tables 0 mV is 0 deg C and 16.39 mV is 400 deg C for K type then feeding 0 mV we should read 26 deg C on TC and feeding 16.39 mV we read 400 + RT i.e. 426 deg C.

Range		Input mV	Temperature	Reading on TC
Zero		**0.00 mV**		
25 % FS				
50 % FS				
75 % FS				
Full Scale				

2. Testing of Proportional Control and Settings.

Adjust Setpoint to Read 300 deg C, Feed mV for unit to read same PV. Set Proportional Band to MIN fully anticlockwise till end (100K Ohms).

If Process ON Led in ON turn anticlockwise till it just turns OFF or flickers.
If Process ON Led in OFF turn clockwise till it just turns ON or flickers.

Now the error cal is calibrated at 300 deg C (for other temperatures it may differ)

Set Proportional Band to MAX fully clockwise till end (000 Zero Ohms).
(Now SP must be at 300 and PV must be at 300).
Now LED will turn ON for 5 Seconds (approx.) and OFF for 5 seconds for 10 Sec cycle time for shorter cycle times just observe symmetrical flashing.

Decrease mV (PV) till LED turns fully ON no flickering note this Value T1.
Increase mV (PV) till LED turns fully OFF no flickering note this Value T2.

T1 is lower end of PB and T2 upper end T2 - T1 = PB i. e. the Prop Band .

e.g. T1 = 295 T2 is 305 305 - 295 = 10 hence PB = 10 deg C.

3. Verification of Relay operation.

GET RELAY TO TURN ON	RESISTANCE "NO" TO "C" ..... OHMS
	RESISTANCE "NC" TO "C' ..... OHMS
GET RELAY TO TURN OFF	RESISTANCE "NO" TO "C" ..... OHMS
	RESISTANCE "NC" TO "C' ..... OHMS

Danger ! DMM is in Ohms Mode, Even if one probe touches 230 V DMM is Gone, so take extra care while doing this test probe only relay contacts.

For Pulse Output model for SSR e.g. STC1000KPP Use a DMM 20 V mode to observe 12V DC when Process ON and 0 V when Process off.

Process ON ..... V ***Process OFF ..... V***

4. Earth and isolation and safety related tests..

Off Unit before this Test

GND TO EARTH RESISTANCE	.....	OHMS
TRANSFORMER RESISTANCE L to N	.....	OHMS
WINDING TO EARTH RESISTANCE L to E	.....	OHMS
CHASSIS TO EARTH RESISTANCE	.....	OHMS

5. General Checklist to ensure optimum quality.

I	DOES LED TURN ON WHEN RELAY IS ON AND VISE VERSA	.....
2	DOES DISPLAY READING JUMP WHEN RELAY OPERATES	.....
3.	ARE ALL SCREWS LOCKED WITH ADHESIVE AND ALL POTS TURNING SMOOTHLY.	.....
4.	ARE ALL STICKERS STUCK PROPERLY WITHOUT FOLDS	.....
5.	HAVE EXTRA HOLES AND SCREWS COVERED BY B TAPE	.....
6.	HAS THE SENSOR POLARITY BEEN MARKED WITH PAINT	.....
7.	HAS THE DB / PB KNOB MARKED BY A WHITE PAINT LINE.	.....

6. Operation of displays and Controls.

1. Note SP Min ..... SP max .....
2. Note PB Min ..... PB max .....
3. Feed mV for display to read 1234 Counts reading .....
   Feed mV for display to read 345 Counts reading .....
   Feed mV for display to read -456 Counts reading .....
   Feed mV for display to read 1xxx Overrange rdg. .....
4. Verify Decimal Point has been connected record in this > **1 9 9 9**
5. Display should have uniform brightness without modulation.

6. Process ON LED must be bright and Visible outside.
7. Push-button switch should not get stuck on repeated operation.