

## CALSYS C-4004 PLUS

(With Autocalibration Facility)

CALSYS C-4004 PLUS is fully characterized for all major sensors (thermocouples such as B, C, D, E, J, K, N, R, S, T and RTD's like PT-100, PT-50, PT-10, PT-200, PT-500, PT-1000, SPRT). The instrument can be used in industries where high accuracy temperature measurement is essential. Two channel input provides A, B & A-B measurement on LCD Display. The device is providing exceptionally stable cold junction compensation with choices for user like Automatic, Off and External.

CALSYS C-4004 PLUS comes with front panel keys for easy operation like unit selection ( $^{\circ}\text{C}/^{\circ}\text{F}$ ), Resolution (0.01/0.001) and Data Logging.

Overall stability is optimized by utilizing high quality components with high precision. There are four input ports, two for thermocouple and two for RTD.

In order to measure temperature suitable probe should be connected to TC & RTD input. The temperature measured by the device will be displayed in bigger fonts and the actual resistance (ohms) in case of RTD and voltage (mV) in case of Thermocouple will be displayed in smaller fonts. All channel details and configuration will be displayed on the LCD display.

CALSYS C-4004 PLUS can accept two RTD's, or two Thermocouples or one RTD and one Thermocouple at a time. Measured temperature can be displayed from one of the inputs or Difference of both the input channels.

### Data Logging

The CALSYS C-4004 PLUS includes an inbuilt data logger internally storing upto 4000 values for both the channels with date and time.

### High Accuracy

Highest accuracy is for PT-100 input, CALSYS C-4004 PLUS is providing accuracy of  $0.01^{\circ}\text{C}$  in the temperature range of  $-100$  to  $+500^{\circ}\text{C}$ ,  $0.02^{\circ}\text{C}$  accuracy for  $-200$  to  $-100^{\circ}\text{C}$  and  $0.02^{\circ}\text{C}$  for  $+500$  to  $+800^{\circ}\text{C}$ .

Accuracy for thermocouple measurement (B, C, D, E, J, K, N, R, S, T) is  $0.1^{\circ}\text{C}$ .



FRONT VIEW



BACK VIEW

### Features

- High stability
- High accuracy of RTD measurement  $0.01^{\circ}\text{C}$
- High accuracy of T/C measurement  $0.1^{\circ}\text{C}$
- High Resolution (0.01/0.001)
- 2 measuring inputs
- 12 Thermocouples B, C, D, E, J, K, N, R, S, T
- 12 RTD's PT-100, PT-10, PT-50, PT-500, PT-200, PT-1000, SPRT
- Thermocouple reference junction external, internal and off
- Units  $^{\circ}\text{C}/^{\circ}\text{F}$
- Data Logging 4000 values
- Suitable for 2/3/4 wire RTD

**Note :** CALSYS C-4004 PLUS gives standard two channel input for TC & two channel input for RTD. If user wants more than two input channels for that CALSYS C-4004 PLUS gives inbuilt multiplexer module.

Display	192x64 LCD Graphic Panel with back light
Inputs	2 Channels for RTD and Thermocouple via lemo 1-S series connector
Reference Junction	Reference Junction compensation may be selected for the following modes : <b>Automatic</b> : Internal reference junction range 0 to +100 °C <b>External</b> : Via Pt 100 sensor connected to channel A and B range to 0 to +100 °C <b>Off</b> : Turns the Reference Junction OFF = 0° C
Working Temperature	0...50°C rel. humidity Less than 90% non condensing condition
Storage Temperature	-20 to +55 °C
Mains Supply	85-264 VAC / 120-370 VDC 47-63 Hz
Data Logging	Up to 4000 values can be stored along with date and time
Dimensions	244 x 350 x 114

## Input Sensor Range

THERMOCOUPLE SENSOR TYPE	TEMPERATURE RANGE	RESOLUTION	ACCURACY @ 20±5°C
Type K Thermocouple	-200°C to 1372°C	0.01	±(0.01°C + 0.006% FS)
Type J Thermocouple	-210°C to 1200°C	0.01	±(0.008°C + 0.007% FS)
Type E Thermocouple	-200°C to 1000°C	0.01	±(0.01°C + 0.007% FS)
Type N Thermocouple	-200°C to 1300°C	0.01	±(0.01°C + 0.006% FS)
Type R Thermocouple	0°C to 1768°C	0.01	±(0.005°C + 0.015% FS)
Type S Thermocouple	0°C to 1768°C	0.01	±(0.005°C + 0.015% FS)
Type B Thermocouple	400°C to 1820°C	0.01	±(0.02°C + 0.006% FS)
Type T Thermocouple	-250°C to 400°C	0.01	±(0.005°C + 0.015% FS)
Type C Thermocouple	0°C to 2315°C	0.01	±(0.075°C + 0.005% FS)
Type D Thermocouple	0°C to 2315°C	0.01	±(0.075°C + 0.005% FS)

RTD SENSOR TYPE	TEMPERATURE RANGE	RESOLUTION	ACCURACY @ 20±5°C
PT-100	-200°C to -100°C	0.001	0.02°C
PT-100	-100°C to +500°C	0.001	0.01°C
PT-100	+500°C to +800°C	0.001	0.02°C
PT-10	-200°C to +800°C	0.001	0.02°C
PT-50	-200°C to +800°C	0.001	0.02°C
PT-200	-200°C to +800°C	0.001	0.02°C
PT-500	-200°C to +800°C	0.001	0.02°C
PT-1000	-200°C to +800°C	0.001	0.02°C
SPRT	-196°C to +660.323°C	0.001	0.02°C

## Multiplexer Module (Optional)

CALSYS C-4004 PLUS offers three modes of configuration, which are user configurable. These three modes are : Only TC mode : In this mode user can connect maximum 12 TC input at a time.

Only RTD mode : In this mode user can connect maximum 12 RTD inputs at a time.

Mix Mode (TC + RTD) : In this mode user can connect maximum 6 TC input and 6 RTD input at a time.

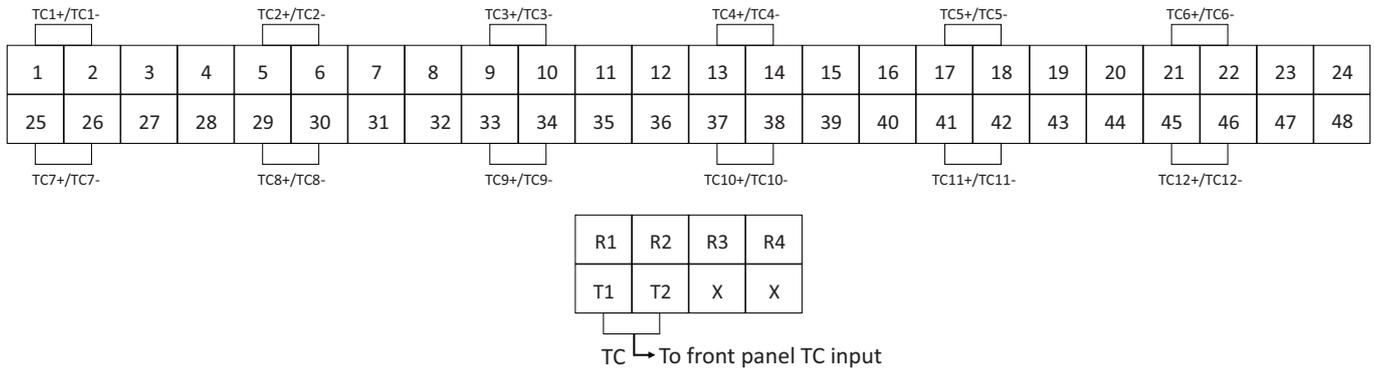
Over size screw terminal connection blocks are standard for easier connections.

Autocalibration facility of multiple channel using a PC software.

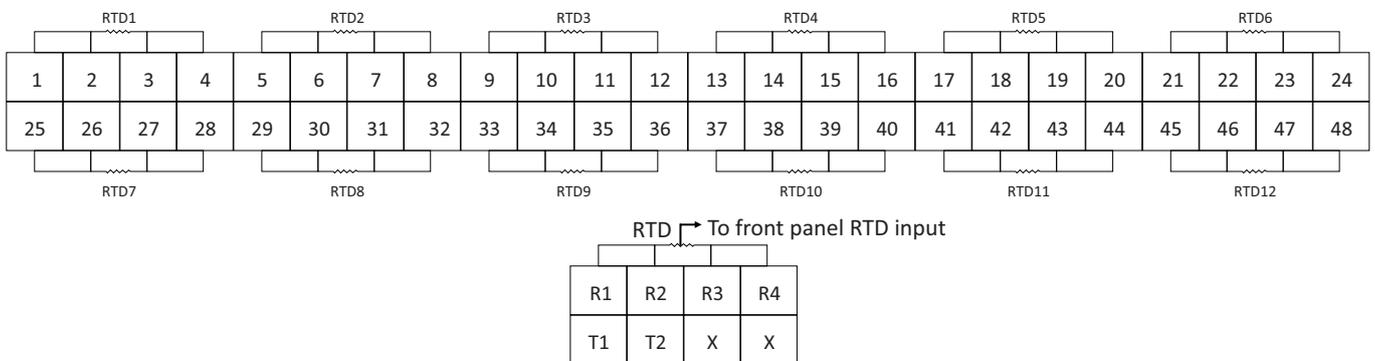


It has three modes of configuration.

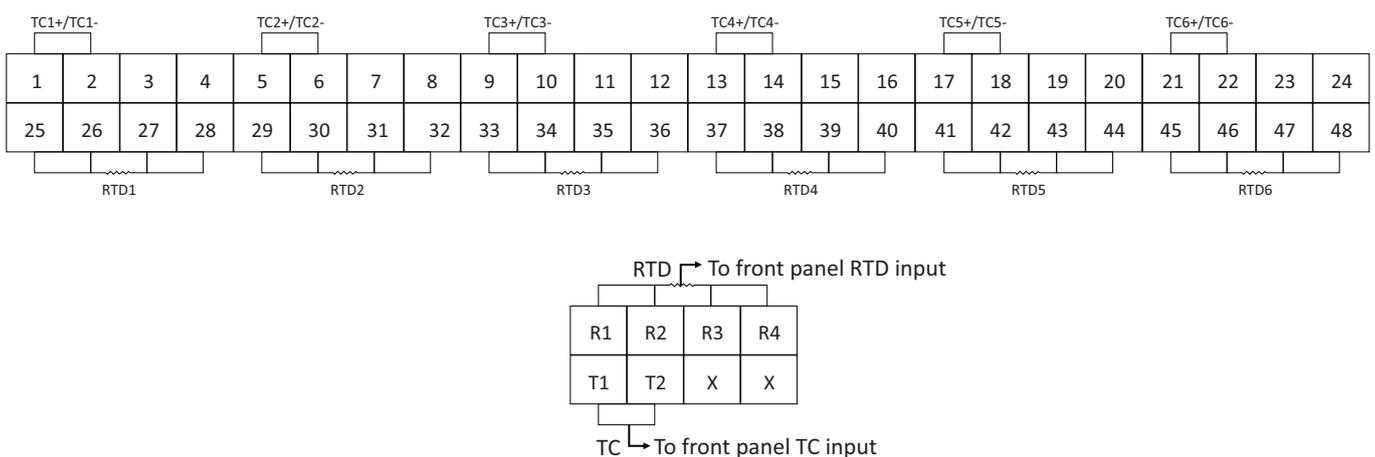
**1. Only Thermocouple Mode :** User can connect 12 thermocouple input at a time. When using this multiplexer module, user will have to connect TC Probe from rear panel connector pins T1 & T2 to the front panel input channel A or input channel B of the TC input channel.



**2. Only RTD Mode :** User can connect 12 RTD input at a time. When using these channels, user will have to connect RTD Probe from rear panel connector pins R1, R2, R3 & R4 to the front panel input channel A or input channel B of the RTD input channel.



**3. Mix Mode(TC+RTD) :** User can connect 6 TC input and 6 RTD input at a time. When using this mode, user will have to connect TC Probe from rear panel connector pins T1 & T2 to the front panel input channel A or input channel B of the TC input channel as well as connect the RTD probe from rear panel connector pins R1, R2, R3 & R4 to the front panel input channel A or input channel B of the RTD input channel.



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