

1. WARNING

1.1 PLEASE READ BEFORE USING THIS MANUAL

This manual is part of the product and should be kept close to instrument for easy and quick reference. The instrument shall not be used for purposes different from those described hereunder. It is not to be used as a safety device. Check the application limits before proceeding.

SAFETY PRECAUTIONS

1. Check the supply voltage is correct before connecting the instrument.
2. Do not expose to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation
3. Warning: disconnect all electrical connections before any kind of maintenance.
4. Fit the probe where it is not accessible by the End User. The instrument must not be opened.
5. Consider the maximum current which can be applied to each relay (see Technical Data).
6. Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.

2. GENERAL DESCRIPTION

Model C1204 is supplied with 1 x NTC probe input for temperature measurement.

3. FRONT PANEL



3.1 PARAMATER SETTINGS

- SET:** To display target set point; in programming mode it selects a parameter or confirm an operation.
▲ (UP): in programming mode it browses the parameter codes or increases the displayed value
▼ (DOWN): to see the last temperature alarm happened; in programming mode it browses.

KEY COMBINATIONS:

- ▲ + ▼.** Lock & unlock the keyboard.
SET To enter programming mode.

3.2 USE OF LEDS

Each LED function is described in the following table.

LED	MODE	FUNCTION
PR1	ON	Display sensor 1 temperature
SET	ON	Setup

3.3 HOW TO SET ALARM TEMPERATURE POINTS

1. Push and immediately release the **SET** key 1 second: the display will show the Set value, Led will display Pr1,Pr2, Pr3..
2. Select the required parameter with **▲** or. **▼**
3. Press the **SET** key to display its value.
4. Select the required parameter with **▲** or. **▼**
5. Press the **SET** key to display its value.
6. Use **▲** or **▼** to change its value.
7. Press **SET** key to store the new value and move to the following parameter.
8. Select End exit setup or wait 10s without pressing a key

3.4 HOW TO CHANGE THE PARAMETER VALUE

1. Push the **SET** key 1 second enter the Programming mode.
2. Select the required parameter with **▲** or. **▼**
3. Press the **SET** key to display its value (and **SET** LED starts blinking).
4. Use **▲** or **▼** to change its value.
5. Press **SET** key to store the new value and move to the following parameter.
6. Select End or wait 10s without pressing a key.

3.5 DIAGNOSTIC FUNCTIONS

In addition to its standard function, the C1204 – B contains a number of diagnostic functions and can show the following alarm signals:

- t1E:** There is sensor failure that is very likely caused by a loose connection of the sensor 1(2 or 3) wire in the terminal block of the instrument.
t1H: The temperature of sensor 1(2 or 3) is higher than the setting value **rA**.
t1L: The temperature of sensor 1(2 or 3) is lower than the setting value **rn**.

3.6 HOW TO LOCK / UNLOCK THE KEYBOARD

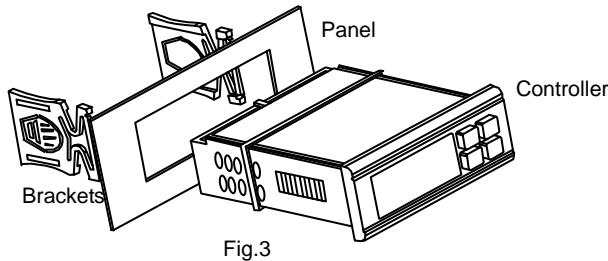
1. TO LOCK THE KEYBOARD:- Press the ▲ and ▼ buttons simultaneously and hold for more than 3 secs.
2. TO UNLOCK THE KEYBOARD:- Press the ▲ and ▼ buttons simultaneously and hold for more than 3secs.

4. PARAMETER LIST

- rC1:** Calibration of PR1 temperature 1, and the range is -10°C to10°C. The default is 0.
- rC2:** Calibration of PR2 temperature 2, and the range is -10°C to10°C. The default is 0.
- rC3:** Calibration of PR3 temperature 3, and the range is -10°C to10°C. The default is 0.
- rA:** Set the highest working control temperature, 0~ +60°C , and the default is 60°C (the highest working temperature point)
- rn:** Set the lowest working control temperature, 0~ -40°C, and the default is -35°C (the lowest working temperature point)
- rP:** Display sensor temperature cycle time. Range1- 60sec, the default is 6s.
- rS:** Set the numbers of the sensors. Range 1, the default is1.
- HF:** Select HF =1 all parameters will revert to default values
- End:** Exit the program parameter setting
The customer can make relative adjustments of the above parameters according to their requirements

5. INSTALLATION AND MOUNTING

Instruments shall be mounted on vertical panel, in a 71x30 mm hole, and fixed using the special bracket supplied. To obtain an IP54 protection grade use the front panel rubber gasket (mod. RG-C) as shown in fig.3.
The temperature range allowed for correct operation is 0 ~60 °C. Avoid places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes. Let air circulate by the cooling holes.



6. TECHNICAL DATA

Case Material:	Self extinguishing ABS.
Mounting:	Mounting size 71x30
Protective classification:	Front, IP54
Connection:	Screw terminal
Working Condition:	-10°C ~55°C, RH<85%, no condensing
Storage Condition:	-10°C ~60°C , RH<85%, no condensing
Measure Range:	-40°C ~60°C
Resolution:	0.1°C
Power Supply:	220VAC, ±10%, 50Hz
Power Consumption:	no more than 2W
External Fuse:	0.5A
Shockproof:	qualified to the demands of I and II instruments
Heat Insulation and Fire Resistance:	D
Input :	1 NTC , 4 keys
Output:	no
Display:	3- digits red LED display,

7. CONNECTIONS

