Description
The TCS Series controllers are designed for many heating and cooling, high temperature applications. The probe temperature is displayed on the bright 3-digit display. The user is able to program 13 different parameters including set point, hysteresis, cycle time and ambient probe adjustment using the silicone front keypad. The unit features error or alarm warning, internal buzzer and password protection. Select between thermocouple J, K or S type, temperature display in °C or °F and 115VAC, 230VAC or 12VDC power supplies.

Model references
The model reference is given by: TCS - WXYZ
Where each suffix can take the following values:

W = Thermocouple Type
   4 = J, 5 = K, 6 = S, 7 = PTC1000
X = Display Color
   0 = Red, 1 = Green
Y = Supply Voltage
   1 = 115VAC, 2 = 230VAC, 3 = 12VAC/DC
Z = Units
   0 = °F, 1 = °C

Installation
NOTE: Unit must be mounted away from vibration, impacts, water and corrosive gases.

• Cut hole in panel 71 x 28 mm (2.80 x 1.14 inches)
• Apply silicone (or rubber gasket) around the perimeter of the hole to prevent leakage.
• Insert unit into hole of panel.
• Slide removable fitting clips onto unit from the back until secure to panel.
• Remove back cover to wire unit
• Wiring diagram is displayed on the top of the unit

List of parameters

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<th>Range</th>
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<td>A1 Alarm 1 threshold</td>
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<td>Seconds 0 to 999</td>
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</table>

Parameter programming

Set Point (SP) is the only parameter the user can access without code protection.
• Press SET. SP text will appear on the display.
• Press SET again. The real value is shown on the display.
• The value can be modified with the UP and DOWN arrows.
• Press SET to enter any new values.
• Press SET and DOWN at the same time to quit programming or wait one minute and the display will automatically exit programming mode.

Access to all code protected parameters.
• Press SET for 8 seconds. The access code value 00 is shown on the display (unit comes with code set at 00 from factory).
• With the UP and DOWN arrows, code can be set to user needs.
• Press SET to enter the code. If the code is correct, the first parameter label is shown on the display (SP).
• Move to the desired parameter with the UP and DOWN Keys.
• Press SET to view the value on the display.
• The value can be modified with the UP and DOWN arrows.
• Press SET to enter the value and exit.
• Repeat until all necessary parameters are modified.
• Press SET and DOWN at the same time to quit programming or wait one minute and the display will automatically exit programming mode.

*The keyboard code can be reset to ZERO by turning off the controller and turning it on again while keeping the SET key depressed.

Led indication, buzzer and display messages
The led OUT indicates if the load is connected or not.

In normal operation, the probe temperature will be shown on the display. In case of alarm or error, the following messages can be shown:
• E = Memory Error
• OL = Over Load Error
• CO = Open Circuit Error
• HI = Ambient temperature out of range

In case of alarm or error the internal buzzer is activated. The buzzer can be silenced pressing the SET and DOWN arrows at the same time (when a new alarm or error occurs the buzzer sounds again).

Maintenance, cleaning and repair

After final installation of the unit, no routine maintenance is required.

Clean the surface of the display controller with a soft and damp cloth. Never use abrasive detergents, petrol, alcohol or solvents.

All repairs must be made by authorised personnel.