

Thermocouple Temperature controller 1 setpoint

Type J,K,R,S,N,T&E, (ver 8.7)
Operating instructions
and
Guarantee Certificate

www.icon-electronics.com

Description:

This device interfaces directly with Type J/K/R/S/N/T/E probes and offers a 1 °C display resolution, adjustable offset, hysteresis and upper and lower limits for the pre-set temperature setting. It can be configured for heating and cooling applications. The settings may be locked and code protected to avoid changes from being made by unauthorized personnel.

Operation:

Heating mode:

Temperature must rise to set point value before relay de-energizes, then it must drop by the hysteresis amount before being re-energized.

Cooling mode:

Temperature must drop to set point value before relay de-energizes, then it must rise by the hysteresis amount before being re-energized.

Menu operation:

Press the "MENU" button repeatedly until the desired setting is reached, press "SELECT" to display the current value.

Use "+" and "-" buttons to change the value. "ENTER" will return the device to the menu. The "BACK" button will exit the menu.

Adjustable parameters:

1 Pre-set temperature "°C" (default value: 25)

When the probe temperature reaches this value, the relay is de-energized.

2. Hysteresis "HySt" (default value: 2, range 1-200 °C)

Once the pre-set temperature has been reached (and the relay has de-energized), it must change (in the opposite direction) by this amount before the relay is re-energized.

3. Offset "OFSt" (default value: 0, range -100 to +100 °C)

This value is added (or subtracted if negative) to the current temperature.

3-4. Maximum "Hi" and minimum "LO" user setting

(Default: probe type J: 950, -30; probe type K: 1350, -30)

These are the upper and lower limits obtainable via the set point (setting number 1 "°C").

5. Relay function "Func" (default: Heating)

Type of elements connected to the relays:

"HEAt" relay is used with heating elements.

"COOL" relay is used with cooling elements.

6. Probe type "Prob" (default value: type J)

Set this value to correspond to the type of sensor being used

Type J: "tYP.J", Type K: "tYP.H", Type R: "tYP.r",

Type S: "tYP.S", Type N: "tYP.n", Type T: "tYP.t",

Type E: "tYP.E".

7. Ambient temperature "°C A" (not adjustable)

Selecting this setting displays the ambient temperature of the device. (Cold junction)

8. Reset "RESt"

By selecting this setting, the device is reset to the factory defaults.

Menu options:

Exit the menu before making the following adjustments.

Lock / unlock parameters: (default: unlocked)

Press "BACK", then "ENTER" and hold the 2 buttons until the desired option is displayed. The display cycles between "Loc" (no changes allowed) & "u.Loc" (parameters may be adjusted)

Full / reduced menu (default: Full)

Press "SELECT", then "ENTER" and hold the 2 buttons until the desired option is displayed. The display cycles between "rEdu" (limited menu) & "Full" (all parameters are accessible)

Access Code: (default: no code)

Once the above options have been set as required, Press "BACK" and "SELECT" simultaneously until "CODE" is displayed. Now use the "+" & "-" to enter a code.

Once a code is entered, access to the options above is not permitted. To clear the code, re-enter the same code again. If the code is forgotten. Press and hold "+" & "-" until "CODE" is displayed while re-applying power to the device.

Notes:

1. If the temperature being read is outside the device's temperature range (for the probe used), the message "t Lo" or "t Hi" is displayed.
2. A probe Error (open circuit) will cause the relay to de-energize and "P.Err" is displayed
3. Make all adjustments and reset device before connecting the relay.

Menu operation example: To set the temperature to 30 °C:

Press "MENU" to display "°C". Press "SELECT" to view the current value. Use the "+" and "-" buttons to change the value to 30. Press "ENTER" to return to the menu. Press "BACK" to exit the menu.

Specifications:

Temperature range:	Type J: -40 to 920°C	Type K: -50 to 1320 °C
	Type R: -50 to 1760°C	Type S: -50 to 1760 °C
	Type N: -80 to 1300°C	Type T: -50 to 400°C
	Type E: -30 to 680°C	
	Type K: -30 to 1350°C	
Accuracy:	± 0.3% of full scale	
Input voltage:	±15% of rated input	
Probe:	Type J/K/R/S/N/T/E thermocouple	
Led indication:	Relay status	

12 Month guarantee:

Our product is guaranteed for a 12 (twelve) month period from date of purchase. This guarantee is valid for defects arising from failure during specified conditions. This guarantee does not cover damage due to abuse, tampering or improper installation. Our company does not accept liability for any consequential damage or loss arising from product malfunction. Should this product prove to be defective, kindly return for inspection or repair.

For further information, please visit us at

www.icon-electronics.com

