

D4-TC2 / P49-TC2
Temperature controller 2 setpoint

(ver 8.7)
Operating instructions
and
Guarantee Certificate

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Description:

In addition to offering a 0.1 degree resolution, adjustable offset and the ability to limit the adjustable range of the temperature set points, this device incorporates two relays controlled by individually adjustable temperature and hysteresis parameters. They may be configured for heating, cooling or climate control 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.

Climate control mode:

Both relays are controlled via 1 set point & hysteresis parameter. Relay 1 works in heating mode, and relay 2 in cooling mode.

Menu operation:

All adjustments are made via the three front mounted buttons. Press the "MENU" button repeatedly until the desired setting is reached, press "SELECT" to display the current value of the selected setting, or sub menu (if applicable). The "+" and "-" buttons are used 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 for relay 1 "°C. 1"(default value: 25.0)
When the probe temperature reaches this value, the relay 1 is de-energised.
2. Pre-set temperature for relay 2 "°C. 2" (default value: 25.0)
When the probe temperature reaches this value, the relay 2 is de-energised.
3. Hysteresis for relay 1 "HYS.1" (default value: 1, range 0-20.0 °C)
Once the pre-set temperature has been reached, it must change by this amount before relay 1 is re-energized.
4. Hysteresis for relay 2 "HYS.2" (default value: 1, range 1-20.0 °C)
Once the pre-set temperature has been reached, it must change by this amount before relay 2 is re-energized.
- 5-6. Maximum "Hi" and minimum "LO" user setting (default value: 45.0, -10.0)
This is the maximum and minimum value obtainable via the first two settings ("°C. 1").
7. Relay Function "Func" (default: Heating)
Type of elements connected to the relays:
"HEAT" both relays are used with heating elements.
"COOL" both relays are used with cooling elements.
"C.Cnt" relay 1 = heating element, relay 2 = cooling
8. Offset "OFSt" (default value: 0.0, range 10.0 to +10.0°C)
This value is added (or subtracted if negative) to the current temperature.
9. 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.

Specifications:

Temperature range	- 20.0 °C to + 105.0 °C
Accuracy:	+/-1.2 °C
Input voltage:	+/-15% of rated input voltage
Led indication:	Relay 1 and relay 2 status
Probe:	3-wire digital
Probe length:	2m, extendable to 200m (With external 220uF 16V capacitor)

Notes

1. The display will show "Err" if the sensor is not connected correctly, or is faulty.
2. To avoid damage to the sensor, ensure that it is connected correctly BEFORE applying power.

Programming Example:

To set the temperature at which relay 1 de-energizes to 30 °C:

Press "MENU" to display "°C 1". 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.

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

Relay specifications:

Contact rating:	10A 250 VAC 2500VA (Resistive)
Mechanical life:	30 million operations
Electrical life:	250 000 operations (at maximum load)

