

INTIEL

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**TWO CHANNEL PROGRAMMABLE TEMPERATURE
CONTROLLER**
type: **TR4.2.1**

User's Manual



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Instructions for safe handling:

- Before installation to check the integrity of the device and accession to it wires.
- If damaged any of the above can not be installed to removing the fault.
- Assembly and disassembly of the device to be performed by qualified staff who has familiarized herself with the product manual.
- Install the dry and ventilated place away from heat sources and flammable gases and liquids.
- Make sure the mains voltage corresponds to the voltage on the rating plate of the device.
- Use power consumers consistent with the output power of the unit.
- In case of malfunction of the device immediately disconnect the unit and seek authorized service for troubleshooting.
- In case of fire, use powder extinguisher.
- In order to protect the environment do not dispose of electric tools, accessories and their packaging marked with the sign  crossed out bin with household waste.

Packaging content:

- Controller
- User Manual (warranty card)
- Temperature sensor type: Pt1000 - 2 pcs.

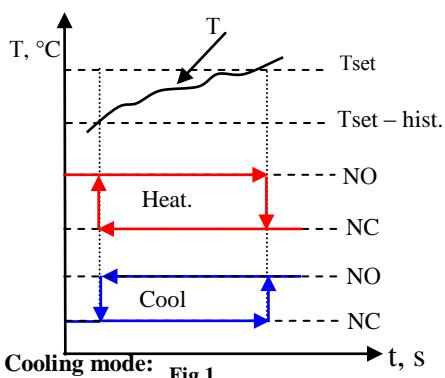
I. Application

The controller is designed for installation in systems and equipment that are required to maintain the temperature within certain limits.

II. Operation

The device monitors the temperature measured by temperature sensor Pt1000, and depending on the difference between the set and actual temperature, switches on or off consumers connected to it

Heating mode:



When the measured temperature is less than the difference between the set temperature and hysteresis is closed (NO) contact and (NC) contact opens, the indicator "—/—" lights up condition continues until the measured temperature reaches the set.

When the measured temperature exceeds the set temperature is closed (NC) contacts and open (NO) contact indicator "—/—" is dead and remains so until the measured temperature reaches the set temperature minus hysteresis.

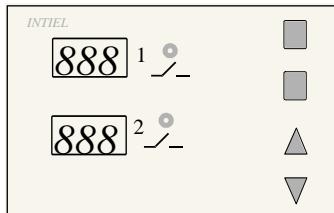
Cooling mode: Fig.1

When the measured temperature is above the set temperature (NO) contact closes and opens (NC) contact, "—/—" indicator lights, the state continues until the measured temperature reaches the set temperature minus hysteresis

When the measured temperature is less than the difference between the set temperature and hysteresis is closed (NC) contacts and open (NO) contact, "—/—" indicator is extinguished and the state continues until the measured temperature reaches the set.

III. Front panel

"1" and "2" - digital display shows the actual temperature or set parameters in programming mode.



"—" - Indicator Relay.

"█" - button entry / exit programming mode.

"▲" - button to select the channel 1 / review and change in programming mode.

"▼" - button to select the channel 2 / review and change in programming mode.

Digital display is indication "Err" in the following cases:

- There is no (not fitted) temperature sensor
- Interruption or short in acceding cable temperature sensor
- Damaged temperature sensor

IV. Programming

With the buttons "▲" and "▼" is selected respectively channel 1 or channel 2 - selected Indicator flashes, by pressing "█" to enter the programming mode.

With the buttons "▲" and "▼" to choose between the following parameters setup indication

<u>Setting parameters</u>	<u>Display of indication</u>	<u>Settings</u>
- Setpoint temperature	- SET-	(from 0 ° to 250 ° C)
- Hysteresis	- Hys -	(1 ° to 40 ° C)
- Changing modes	- reG -	(H- heating / C- cooling)
- Exit from programming mode	- End -	

With each pressing, one of the two buttons "▲" or "▼" setpoint changes by one, while holding starts automatically changes direction corresponding to the button.

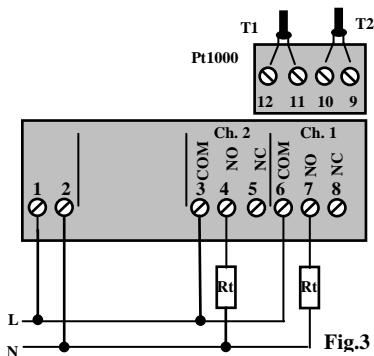
Setting temperature - with the buttons "▲" and "▼" scrolls indication on the display until the appear symbol "Set", again press the button "█", the display flashes. By pressing the buttons "▲" and "▼" to increase or decrease the set temperature range from 0 to 250 ° C. To save the desired value is necessary to press button "█".

Hysteresis - with the buttons "▲" and "▼" scrolls indication on the display until the appear symbol "Hys", again press the button "█", the display flashes. By pressing the buttons "▲" and "▼" to increase or reduce the degree of hysteresis in the range of 1 to 40 ° C. To save the desired value is necessary to press button "█".

Changing the modes - changes the characteristics of the output. With the buttons "▲" and "▼" scrolls indication on the display until the appear symbol "reG", again press the button "█", and display shows the symbol for the current mode flashes. By pressing the buttons "▲" and "▼" you can choose between "H" (heating) or "C" (cooling). To save the desired value is necessary to press button "█".

Exit programming mode - With the buttons "▲" and "▼" scrolls indication on the display until the appear symbol "End", and press the button "█".

V. Installation:



Supply voltage ~ 230V / 50Hz
Rated commutated current 10A/~ 250V
Number two switching contacts
Hysteresis 1 ° - 40 ° C
Sensor: Pt1000 (-50 ° to + 250 ° C)
Measuring range -35 ° to + 300 ° C
Adjustment range 0 ° to + 250 ° C
Display 3 digit, digital
Unit of measurement 1 ° C
Humidity 0-80%
Protection IP 20

VI. Warranty

The warranty period is 24 months following the purchase date of the unit or its installation by an authorized Engineering Company, but not exceeding 28 months after the production date. The warranty is extended to the malfunctions that occur during the warranty period and are result of the production reasons or defective used parts.

The warranty does not relate to malfunctions corresponding to not-qualified installation, activities directed to the product body interference, not regular storage or transport.

The repairs during the warranty period can be done after correct filling of the manufacturer warranty card