HCR-031N
Temperature regulator

The HCR-031N temperature controller can work as a temperature and humidity controller or a controller compatible with transducers with an output signal in the 4-20 mA, 0-10V standard. When working with analog signals, the regulator can power the transducers with 15VDC/30mA. Due to the use of the regulator in the baking industry, we can offer the following types of scale: 0...400°C, 0...100°C, 0...100%. For versions with Fe-CuNi and NiCr-NiAl thermocouples, the scale is 0...600°C.

view HCR-031/PT100/400°C (typical bread baking controller)

Safety Information

• It is required, under pain of losing the warranty regarding the regulator, to comply with the following operating conditions.
• Installation, electrical connection, maintenance and commissioning of the controller may only be performed by trained service personnel
• All provisions and comments available in the documents provided by the manufacturer or distributor should be strictly observed.
• Due to the possibility of powering the regulator with 230 V AC and the ability to switch 230 V AC, the device can only operate when mounted in a panel and in conditions that do not cause condensation of water vapor inside the device.
• The regulator must be used only for the purposes described and confirmed in the catalog card. Other uses not as stated or beyond the description will be considered unauthorized unless written consent has been obtained. Damage resulting from such unauthorized use does not involve the manufacturer's liability and in this case falls entirely on the user.

Transport and storage

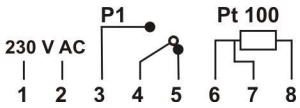
• The device must be transported in packaging that prevents mechanical damage and access to external weather conditions.
• Particular attention should be paid to damage to the packaging or device.
• The device should be stored in a dry room, free from exposure to weather conditions; otherwise, remember to protect it against dirt and weather conditions until final installation.
• During transportation, storage and operation, avoid exposing the device to very high and very low temperatures.

Connection and operation – procedure:

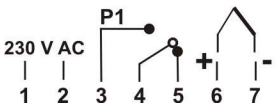
Taking the necessary precautions, connect the power cable (no voltage connected) and the sensor with which the regulator is to cooperate (types of sensors and connection method below) to the marked connectors on the rear wall of the regulator. The type of power supply and the type of sensor are described on the nameplate, including the factory number. The device prepared in this way can be powered with the appropriate voltage. The currently measured value will appear on the display, and the LED will indicate whether or not the output relay is switched on. The adjustable value is set using the setting knob.
Before connecting the wires to the relay output, disconnect the regulator from the power supply and check whether the connected wires are also free from any power supply.
NOTE: maximum relay load without using an external contactor max 1500 W(VA)

Description of connections:

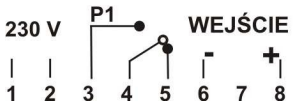
Podłączenia dla czujnika Pt100



Podłączenie dla czujnika termoparowego



Podłączenie do czujnika wilgotnośći w systemie 4-20mA
bez wykorzystania zewnętrznego zasilania linii prądowej



Podłączenie do czujnika wilgotności w systemie 0-10V
bez wykorzystania zewnętrznego zasilania

Technical data:

- **sensor input:** *Pt100, J, K, 4-20mA, 0-10V*
- **control output:** *relay NO/NC 8A/230VAC*
- **transducer power output:** *15 VDC/30mA*
- **calibration accuracy:** *0,15%*
- **supply** *230 V AC lub 24 V AC*
  operating temperature range: *50°C*
- **relative humidity range:** *0-90% no condensation*
- **external dimensions:** *96x96x90 mm*
- **mounting hole:** *92x92 mm*
- **power consumption:** *< 3 VA*
- **protection** *IP65 (forward), 2 kV*
- **EMC compatibility:** *PN-EN 61000-6-1:2002(U)*
  PN-EN 61000-6-3:2002(U)

Types of regulators / ordering method:

HCR-031N/PT100/400°C/230 VAC
HCR-031N/PT100/100°C/230 VAC
HCR-031N/PT100/400°C/24 VAC
HCR-031N/PT100/100°C/24 VAC

HCR-031N/J/400°C/230 VAC
HCR-031N/K/400°C/230 VAC
HCR-031N/J/600°C/230 VAC
HCR-031N/K/600°C/230 VAC
HCR-031N/J/400°C/24 VAC
HCR-031N/K/400°C/24 VAC
HCR-031N/J/600°C/24 VAC
HCR-031N/K/600°C/24 VAC

HCR-031N/4...20mA/100%/230 VAC
HCR-031N/4...20mA/100%/24 VAC

HCR-031N/0...10V/100%/230 VAC
HCR-031N/0...10V/100%/24 VAC