

# Electronic controller

# GC209



## APPLICATION

GC209 is designed to control of cooling devices working both in low and high ranges of the temperature. It is a replacement for: G-209-P00

For low and medium power equipment the device allows direct connection of all controlled appliances: the compressor, the heater, the fan and light, straight into the controller without need to connect additional contactors. It is possible thanks to 16A and 30A relays.

## PROPERTIES

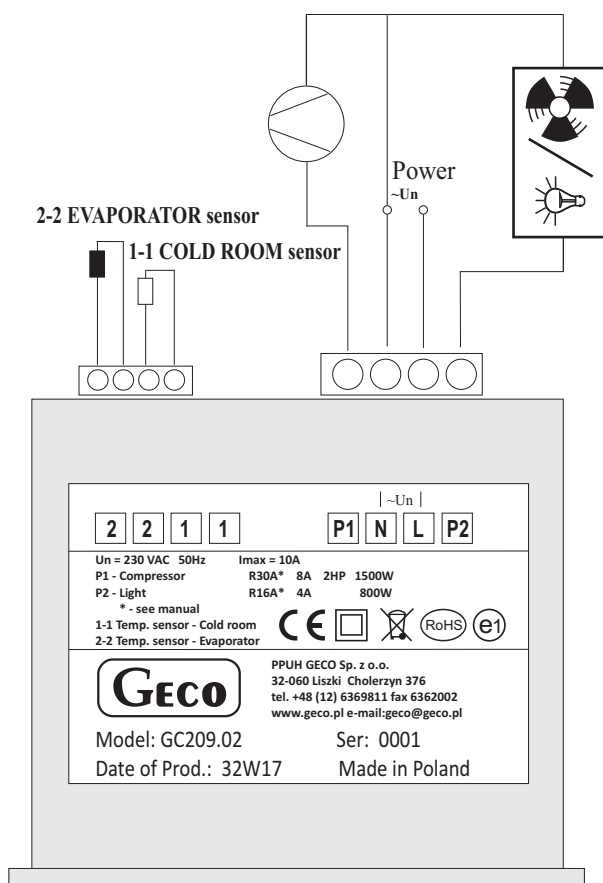
- ON/OFF switch built in.
- Network power supply and outputs operating under 230V voltage.
- Possibility to work with 1 or 2 temperature sensors
- Possibility to work with following temperature sensors: NTC 2,2kΩ or NTC 10kΩ
- Signaling about the compressor's work and the entire defrosting process
- Buttons for automatic control of light and defrosting.
- It signals the stage of work of the compressor and whole process of the defrosting.
- Programmable choice for second device (the heater, the fan, the light, the valve)
- Signaling (sound and optical) of damage in circuits of sensors and emergency work.
- The controller's keyboard with touch buttons

## TECHNICAL DATA

| OUTPUT          | RELAY | Recommended constant carrying capacity |       |     |
|-----------------|-------|--|-------|-----|
| P1 – Compressor | 30A   | 8A cos φ > 0,85                        | 1500W | 2HP |
| P2 – Universal  | 16A   | 4A                                     | 800W  | -   |

|                         |  |
|-------------------------|--|
| Operating Voltage       | ~230V AC +10% / -15%   |
| Environment Temperature | From +5°C to +45°C   |
| Humidity                | From 20% to 80% RH   |
| Protection Level        | IP65 Front side of the control panel   |
| Sensors type            | T1: NTC - range: from -40°C to +60°C<br>T2: NTC - range: from -40°C to +60°C |

## SCHEME OF CONNECTIONS



## LABELING METHOD

Model Label: **GC209.0X**

where **0X** stands for the driver version:

**01** - 2-relay controller with the option of configuration equipment connected to the other relay: **valve / fan or heater**. Controller's keypad keyboard without a light button.

**02** - 2-relay controller with the option of configuration equipment connected to the other relay: **light/ fan / heater or valve**. Version dedicated for users who want to use second relay to control the light. Controller's panel keyboard with a light button.

## SET CONTENT

### • Thermostat

Additionally you need to order one or two, of ordered length, temperature sensors (typically: 2,5m or 3,0m long).

## DESCRIPTION

GC209 is the controller for cooling devices.

Controller is equipped with ON / OFF function activated by holding ON/OFF button for 5 second. After turning off the compressor, the heaters and lights are turned off.

If the controller has a light function, it works independently of the off button.

GC209 uses the compressor to stabilize the temperature in the cold room. The compressor control includes protections against too frequent turning on and off.

In defined periods of time device enters the mode of automatic defrosting of the evaporator. Depending on the second relay function defrosting has a various run for instance: using the heater or the valve, the drip phase starts after the defrosting phase.

GC209 has a defrosting button. It can be used during difficult conditions of device operation.

Manual and automatic defrosting are the same.

User sets temperature in the cold room.

The controller displays temperature measured with the cold room sensor. User can turn on temporary view of the temperature measured with the evaporator when this sensor is operated by controller.

The evaporator sensor can be blocked in the service parameters and the controller will supports only the chamber sensor.

In the event of exceeding the temperature programmed by the manufacturer in the chamber, an alarm is given.

In case of the cold room sensor failure the controller displays alarm code and controls compressor using a clock mode.

In case of the evaporator sensor (if it is operated by the controller) failure the controller displays alarm code and it does not permit to enter automatic or manual defrosting mode. If the evaporator sensor is blocked in the service parameters, defrosting is carried out temporarily.

The controller has service internal parameters that describe its methods of work. These parameters can be programmed by choosing specific mode in the controller.

## CASE DIMENSIONS

