

## The controller for central heating culm and coal boilers

# G-406-P01



### APPLICATION

The G-406-P01 is the controller designed for central heating culm and coal boilers with air blow in. It stabilizes the temperature of water and controls process of combustion in the boiler preventing a fire from burning out.

The G-406-P01 is adapted for TS-35 rail assembly, it has specially designed casing making it possible to install the controller in many different positions on the boiler.

The G-406-P01 makes possible connection of the additional pump that controls heating in the hot water tank.

### PROPERTIES

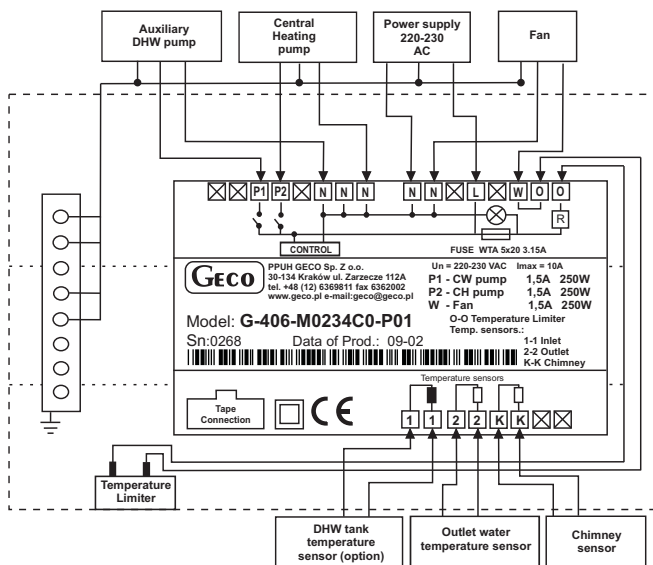
- Modern visualization of casing.
- Simple and user-friendly method of programming and service.
- Two-piece construction (executive module + keyboard)
- Possibility for direct connection of the equipment working under 230V voltage.
- Control over the hot water preparation system (it is possible to connect additional hot water pump or mixing pump)
- Smooth control over the fan rotations.
- The temperature sensor of the outlet water from the boiler
- Sound signal for the alarm.
- Provides storage of all controller settings while loss of network power.
- Chimney temperature sensor.

### TECHNICAL DATA

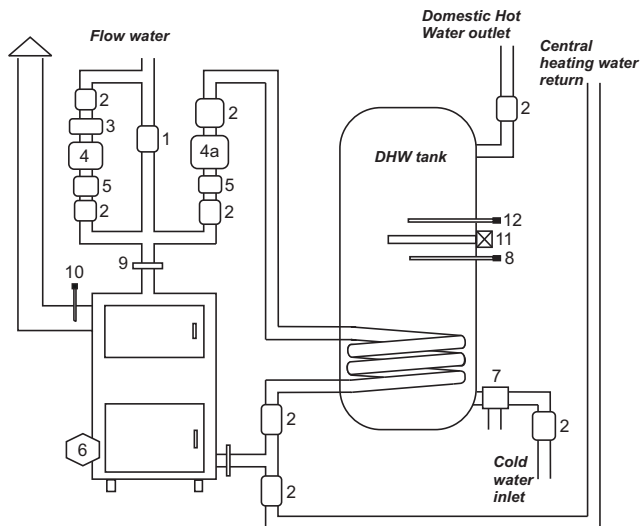
| OUTPUT                    | TRIAC/RELAY | RECOMMENDED CONSTANT CARRYING COPACITY |     |      |
|---------------------------|-------------|--|-----|------|
|                           |             | 4A                                     | 1HP | 750W |
| P1 - Hot Water Pump       | 16A         | 4A                                     | 1HP | 750W |
| P2 - Central Heating Pump | 16A         | 4A                                     | 1HP | 750W |
| W - Fan                   | 16A         | 3A                                     | -   | 600W |

|                         |   |
|-------------------------|---|
| Operating voltage       | 230V  |
| Environment temperature | From +5°C to + 40°C                           |
| Relative humidity       | 20% ÷ 80% RH                                  |
| Protection degree       | IP65 from the front side of the control panel |
| Sensors type            | NTC - range: from -40°C to +100°C             |

## Diagram of connections



## Hot Water Installation System



Legend:

1. Residual valve
2. Ball Cut-off valve
3. Non-Return valve
4. Circulation pump
- 4a. DHW tank supplying pump
5. Reticular filter
6. Boiler fan
7. Tank safety valve
8. Domestic (Utility) hot water temperature sensor of the G-406-P01
9. Boiler water temperature sensor of the G-406-P01
10. Exhaust gases temperature sensor of the G-406-P01
11. Tank electric heater
12. The temperature sensor of the tank electric heater

## Controller description

The G-406-P01 controller was designed for central heating cum and coal boilers with air blow in. It controls combustion process inside the boiler no matter which type of fuel is used.

Due to guarantee optimal controller and boiler operation, the G-406-P01 is equipped with two kinds of parameters, first one configured by the user and the second one by the boiler producer.

I User parameters available for users

| Parameter | Description                   | Range   | Producer Settings |
|-----------|-------------------------------|---------|-------------------|
| U0        | Temperature set on the boiler | 45+90°C | 45°C              |
| U1        | Temperature set on the DHW    | 35+55°C | 35°C              |

II Service parameters accessible for the boiler manufacturer

| Parameter | Description   | Range     | Producer Settings |
|-----------|---|-----------|-------------------|
| C0        | Blow-down time  | 1+50 s    | 5 s               |
| C1        | Time of the stop, between blow-down.  | 1+15 min  | 2 min             |
| C2        | Elapsed time, after which the boiler is considered to be burnt out.   | 0+240 min | 60 min            |
| C3        | Gain of the proportional flue controller for the minimum temperature in the stack. For "c3=0" no minimum adjustment of the boiler temp. and only limitation of the upper stack temperature. | 0+30      | 24                |
| C4        | How many degrees earlier than the preset temperature {T <sup>set</sup> } lighting up ends.  | 5+15°C    | 5°C               |
| C5        | Dynamics of the boiler with C.H installation.   | 1+80      | 40                |
| C6        | C.H. pump start temperature.  | 30+50     | 40                |
| D0        | Min. temperature on the boiler  | 15+50°C   | 40°C              |
| D1        | Max. temperature on the boiler  | 55+90°C   | 80°C              |

## Set includes

### I. General equipment:

1. Executive module G-406-M0234C0-P01
2. Control panel G-406-P01
3. Tape connecting the panel with the module
4. Outlet water temperature sensors CZT-CZ-OD-xxx
5. Chimney temperature sensor
6. Measuring drain

### II. Additional equipment:

1. Metal case
2. Hot water tank temperature sensor CZT-CZ-OD-xxx
3. Temperature limiter
4. Measuring drain
5. Supplying wire

## Dealer

