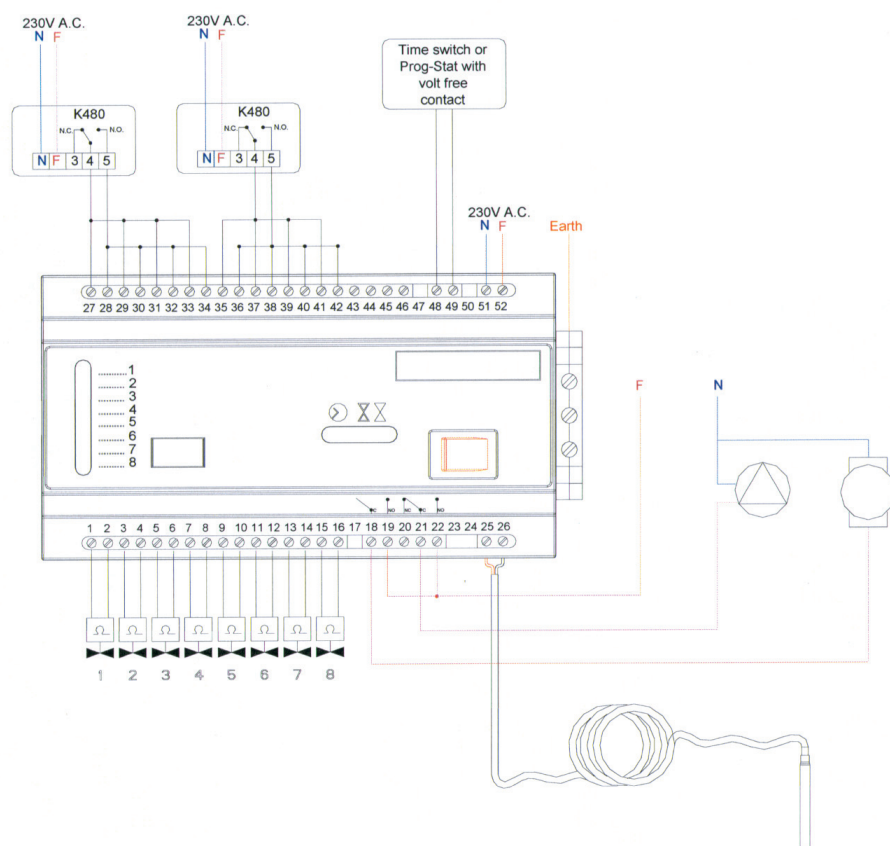


Wiring diagrams Scheme C: n°2 ambient thermostats, which drive n°4 electrical actuator N.C. 230 V~; "indirect" Control n°1 circulator and n°1 supplementary consumption; presence of timer or time switch

Wiring diagrams type C

R473 230V - Normally Closed thermoelectrical actuator



| Technical Specification PM100W | |
|--------------------------------|---|
| Model | PM100W art.code PM100Y103 |
| Supply | 230 V ~ ± 10% |
| Line fuse | 6.3 A delayed |
| Functioning condition | LED lamps |
| Inlets from thermostats | Contacts free from voltage (min. 1 A @ 230 V ~)* |
| Inlets chrono function | Contact free from voltage (max. 8 A @ 230 V ~) |
| Outlet for actuators | 230 V ~ |
| Outlet for circulator | Contacts free from voltage (10 A res. - 5 A ind.) @ 230 V ~ |
| Driven outlet | Protect by a fuse and driven by the chrono function |
| Connection binding-screws | Terminal with screw for 1.5 mm ² |
| Ground binding-screw | Terminal screw max 4 mm ² |
| Protections | IP30 (IEC44) without the main cover |
| Working ambient conditions | 0 - 50°C 10 - 90% U.R. without condense |
| Storage ambient conditions | -20 - 70°C 10 - 90% U.R. without condense |
| Dimensions | 183 x 160 x 56 mm |



Additional information
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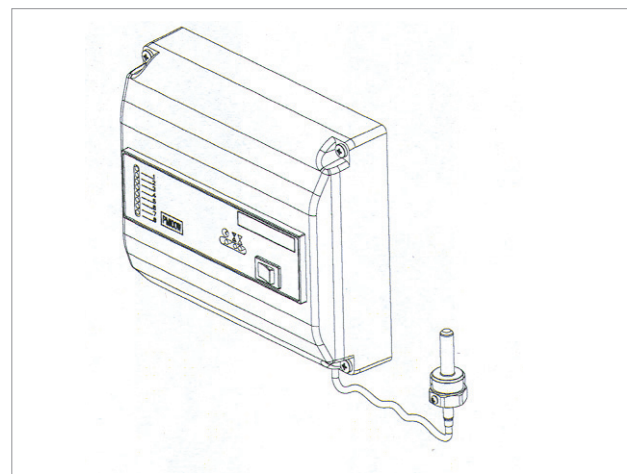
Description & Function

The PM100W is designed to control heating installations where temperature control is made by ambient thermostat that operate electric actuators controlling water supply to individual circuits.

It contains a control relay with time delay for the UFH circulating pump and relay for switching external controls. Time switches with volt free contacts can be connected to the unit.

The PM100W control unit give to the final users some opportunities, such as:

- *) Deactivation of the circulator/pump when every electrical actuator are in off-position; this avoid unnecessary wastes of energy, and the circulator does work uselessly;
- *) Deactivation of the circulator/pump with a 4 minutes delay from the moment when a thermostat notify the necessity of opening the electrical actuators which are connected to it; this relay guarantee the complete opening of the linked hydraulic circuits;
- *) Constant monitoring of the supply and of the deactivation of the circulation pump, when the pre-imposed temperature limit has been exceeded for more than 4 minute. This avoid the annoying ignition and extinction systems linked to the eventual bad regulation of the temperature of the mixer valve;
- *) Enable the control of supplementary consumption (ex. Boilers) with auxiliary connections;
- *) Daily or weekly event program (connecting a timer or a time switch)
- *) Night set back function (connecting a time switch);
- *) Installation of electrical actuations 230 V Normally Close and status control (by mean of LED indicators);
- *) Direct installation of the product on the wall avoiding the specific exchanges but with a high degree of security for children and non-qualified people.



Features

- *) Power 230 V ~ ± 10%;
- *) Possibility to manage independently up to 8 free contacts from ambient thermostats;
- *) Possibility to drive up to 16 electrical actuators at 230 V (max 2 for everyone in the 8 zones);
- *) Visualisation of the control state of the actuators, by means of LED indicators;
- *) Delay in starting the circulator (-4 minutes) with the opening of one of the hydraulic circuits, after the condition of complete closing;
- *) Connection for the *time switch* (free contact) for activation of the circulator;
- *) Integrated line fuse;
- *) Line switch with luminous indicator.

Dimensions

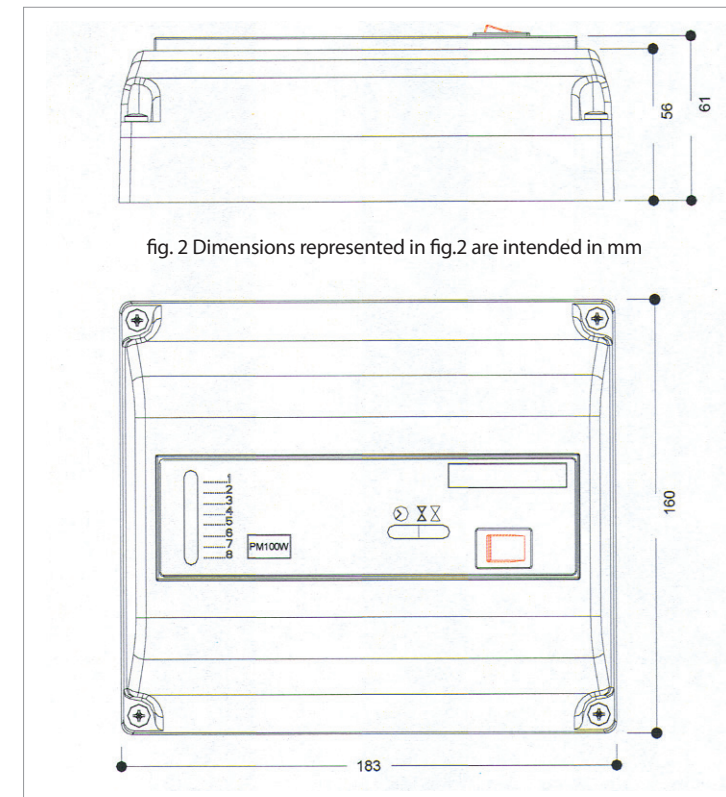


fig. 2 Dimensions represented in fig.2 are intended in mm

Description

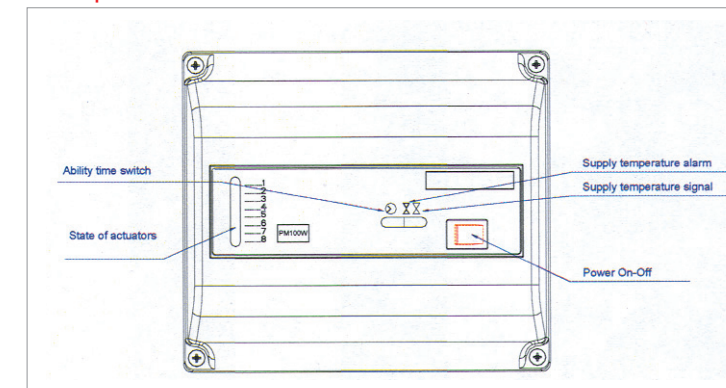


fig. 3

Supply temperature alarm

This LED (red) is a warning of over-temperature. When it is lighted up, the circulator could still be functioning if at least one thermostat had made a request for flow within 4 minutes of delay from the switching-off. When the *time switch* contact will be opened, the LED will switch-off

Supply temperature signal

This LED (green) is a warning of the absence of over-temperature alarm signal from safety thermostat.

When the LED is green, at least one thermostat had made a request for flow from 4 minutes. The illumination of the LED also signifies that the circulator is ON. When the *time switch* contact opens, the LED will switch-off.

Ability of time switch

This LED indicate that the time switch give the authorization to start

Electrical actuators state

The switching-on of one or more LED (numbered from 1 to 8) shows the demand for opening position of one or more electrical actuators, from the ambient thermostat.

Safety thermostat

As mentioned in the introducing paragraph, the PM100W control unit is also a safety thermostat.

This function is made by a temperature signal, sent to the PM100W from the appropriate sensor.

When the PM100W receives from the delivery temperature sensor a temperature signal higher than the set point value, for more than 4 minutes, the control unit intervenes and it disables the circulator. This aspect is fundamental in order to avoid continuous intervention of the safety thermostat, caused by the intervention slowness of the mixing gears.

The safety thermostat is set as default on the value of 70°C, but the user can easily modify (from a min. of 40°C to a max of 80°C) according to the installation needs.

The regulation can be made by adjusting the graduate potentiometer on the motherboard.

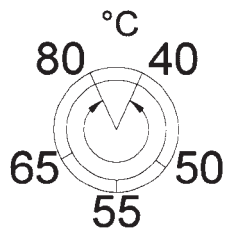
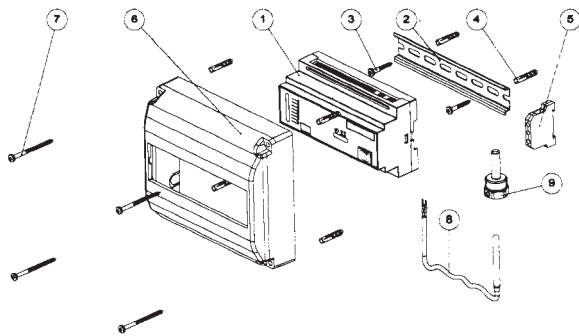
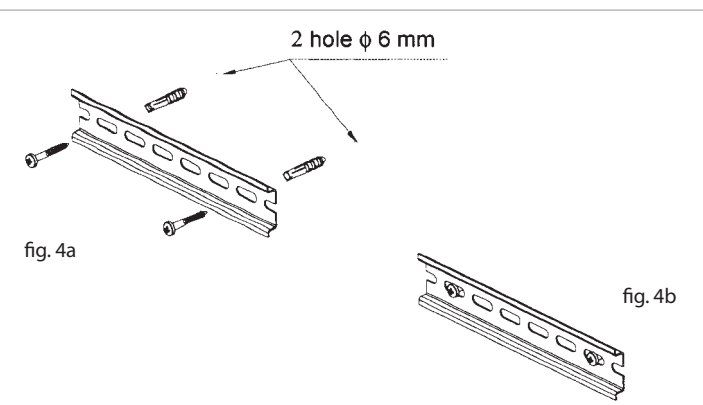
**Composition**

fig. 3

| Pcs. | Description | Quantity |
|------|------------------------------------|----------|
| 1 | Controller | 1 |
| 2 | DIN bar | 1 |
| 3 | Screw lenght 30 mm | 2 |
| 4 | Plastic plug | 6 |
| 5 | Earth connection 4 mm ² | 1 |
| 6 | Main cover | 1 |
| 7 | Screw lenght 60 mm | 4 |
| 8 | Temperature sensor $\phi = 6$ mm | 1 |
| 9 | Temperature housing 1/2"Mx6mm | 1 |

Installation

1. By using the two screws (comp. n°3) and the two bosses (comp. n°4) fix the bar DIN (comp. n°2) on wall 7



2. Then install the controller (comp. n°1) and the ground connector (comp. n°5) on the bar DIN (comp n°3)

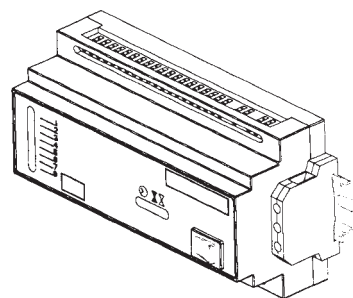


fig. 5

3. Now fix the Main Cover on the wall (comp. n°6) using the four long screws (comp. n°7) and four bosses (comp. n°4)

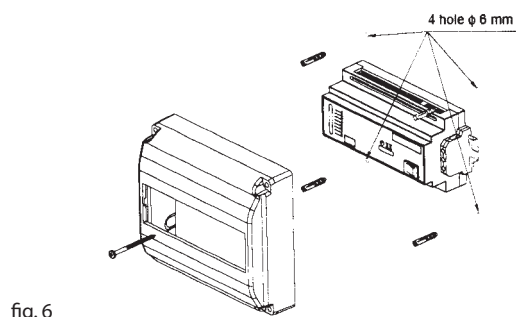


fig. 6

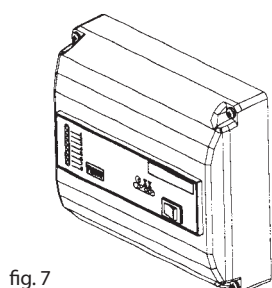
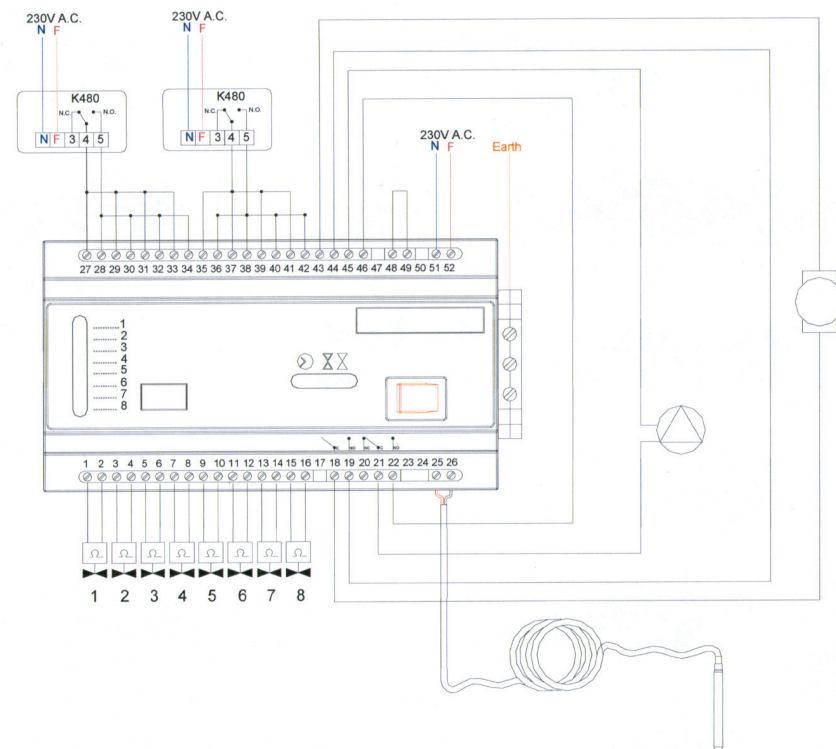


fig. 7

3. Remove the Main Cover (comp. n°6) and start the realisation of electrical connections.

Wiring diagrams Scheme A: n°2 ambient thermostats, which drive n°4 electrical actuator N.C. 230 V~; Control n°1 circulator and n°1 supplementary consumption; absence of timer - or time switch

Wiring diagrams type A**R473 230V - Normally Closed thermoelectrical actuator**

Wiring diagrams Scheme B: n°2 ambient thermostats, which drive n°4 electrical actuator N.C. 230 V~; Control n°1 circulator and n°1 supplementary consumption; presence of timer or time switch

Wiring diagrams type B**R473 230V - Normally Closed thermoelectrical actuator**