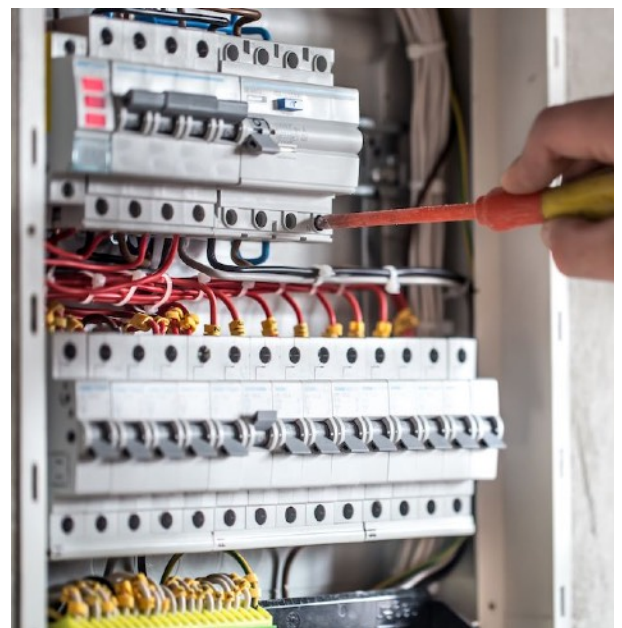


Power is nothing without control... these are systems complementary to the heating system, defined based on the customer's needs, the type of thermoregulation, the amount of energy required and the limits imposed by the contractual power.

How does it work?

The electromechanical, electronic and home automation components work together to achieve the goal. A standard PLYTERM management system can be simplified as follows:

- Plyterm electric heating
- Analogue or digital thermoregulation for each individual zone. Home automation control via Android/iOS app
- Single/Three Phase power relay (civil/industrial) for each single electromechanical or static Zerocrossing zone with 12/24 V control or directly 230 V
- Load management unit which activates or deactivates the relays which transfer electricity in the areas where a supply of thermal energy is required. The different types of control units work by activating the rotating loads and setting a maximum power ceiling (instantaneously monitored by the TA) beyond which it is not allowed to go, to prevent the meter from tripping and interrupting the general power supply.



There are endless ways to manage a Plyterm electric heating system.

The installer is free to associate any management and power system as they see fit, compatibly with the basic needs required by Plyterm products, first of all the applied voltage.

We have adopted standard models that differ and are put into action based on the situations, type of applications and the result required by the customer.

The types are as follows:

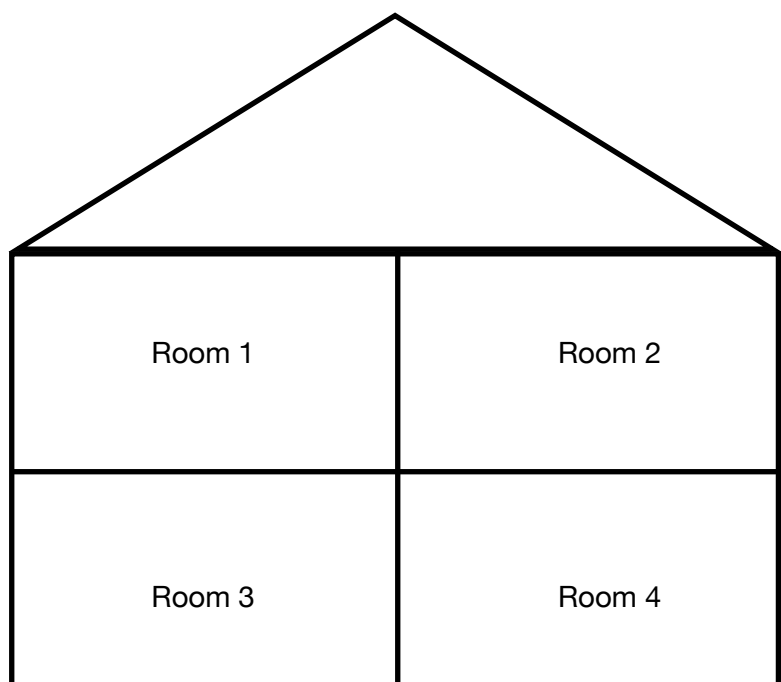
- PRIVATE HOUSE (Apartment, Detached house, Loft, Holiday home)
- OFFICES AND SHOPS
- PUBLIC PLACES (churches and other places of worship, theatres, cinemas, outdoors and verandas)
- INDUSTRIAL AND AGRICULTURAL ENVIRONMENTS (warehouses, agricultural fields, greenhouses, defrosting roads/ramps)

○ **PRIVATE HOMES - OFFICES - SHOPS**

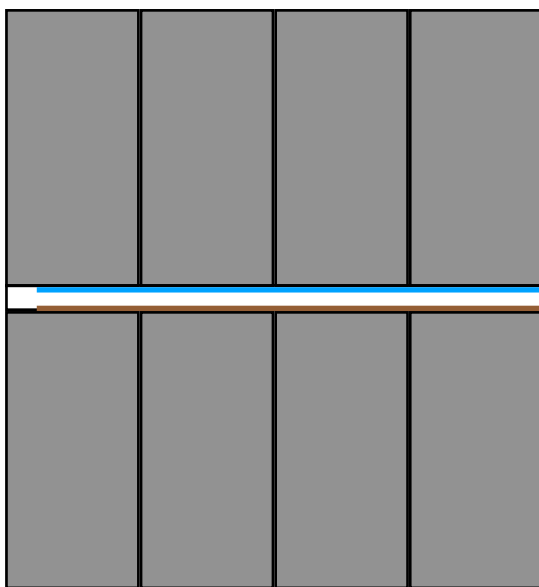
Devices used for X rooms:

- No. 1 Load management unit with TA50 up to 12 zones - DIN (4 modules) - Continuously monitors the consumption of the entire building and prevents the contractual power from being exceeded. With extra-daily utilities on (such as oven, induction hob, hairdryer, etc.) the control unit rotates the loads.
- No. X_Mechanical or static serial relays 12 Amp 230 Vac for inside box or DIN support (3 modules). Opto isolated input. Maximum distance from the control unit 150 metres. Opens and closes the circuit, turning the room heating on and off. For large rooms and halls greater than 12 Amp, 2 or more relays are associated. All the relays in the entire building communicate with the control unit via a single 2-pole cable with a section of 0.5 mm² or greater.
- No. X_Wifi Touch Chrono-thermostats with Android/iOS available App. With N.O. dry contact and floor probe. There are thousands of types and brands of Chrono-thermostats and all are compatible with temperature management and load management. Specifically, we recommend Fantini and Cosmi which will be the one used in the example.
- No. X_Magnetothermal switches for each room. Supply and sizing to be carried out by the installer.
- No.1_Magnetothermal-differential general switch for the entire heating system. Supply and sizing to be carried out by the installer.

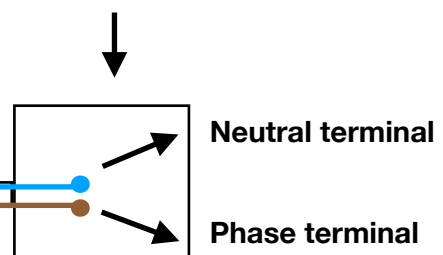
Example of a building with 4 rooms:



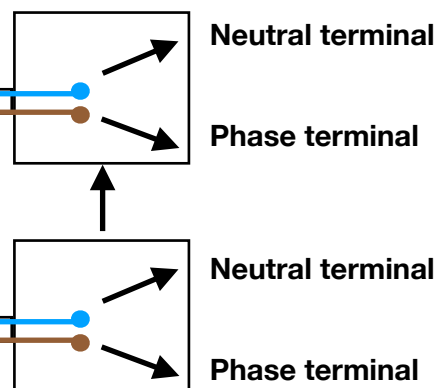
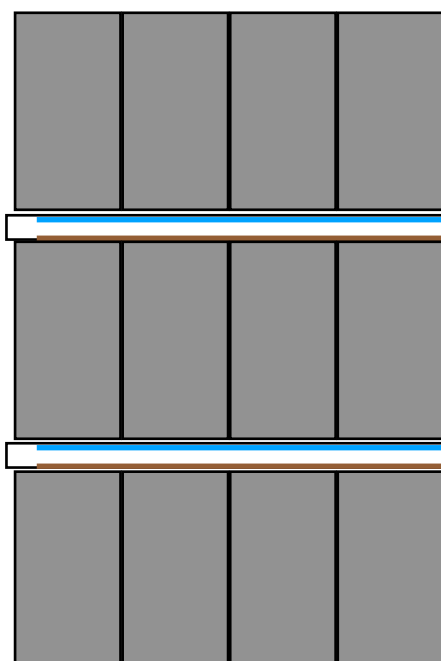
Each room is composed as follows (depending on the project):



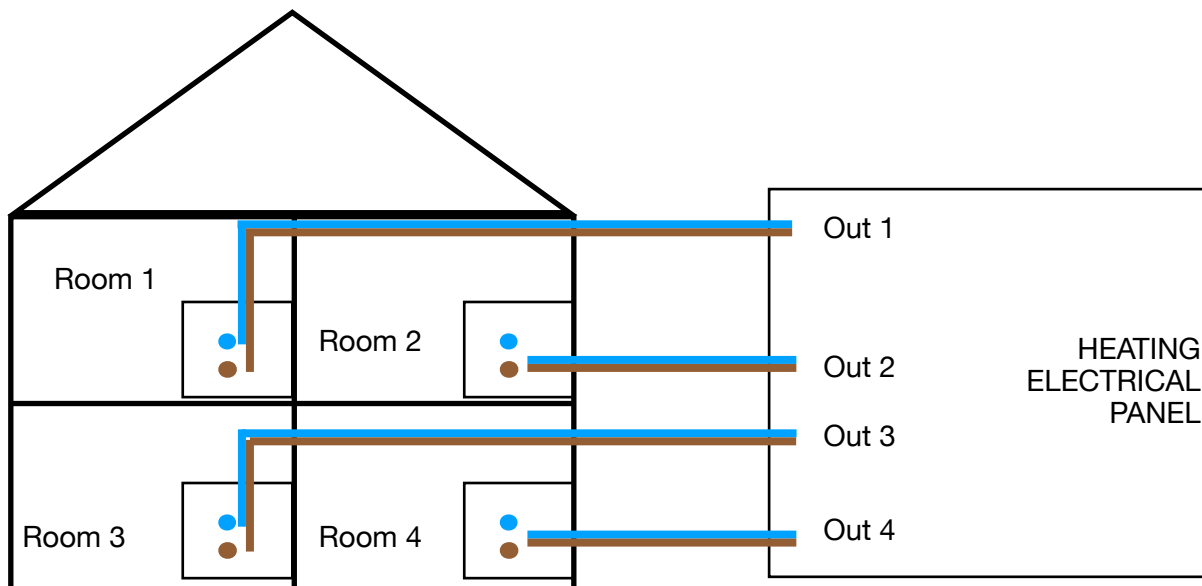
Room junction box.
 All the phases and neutrals of the modules are connected to the 2 main terminals with parallel connection.



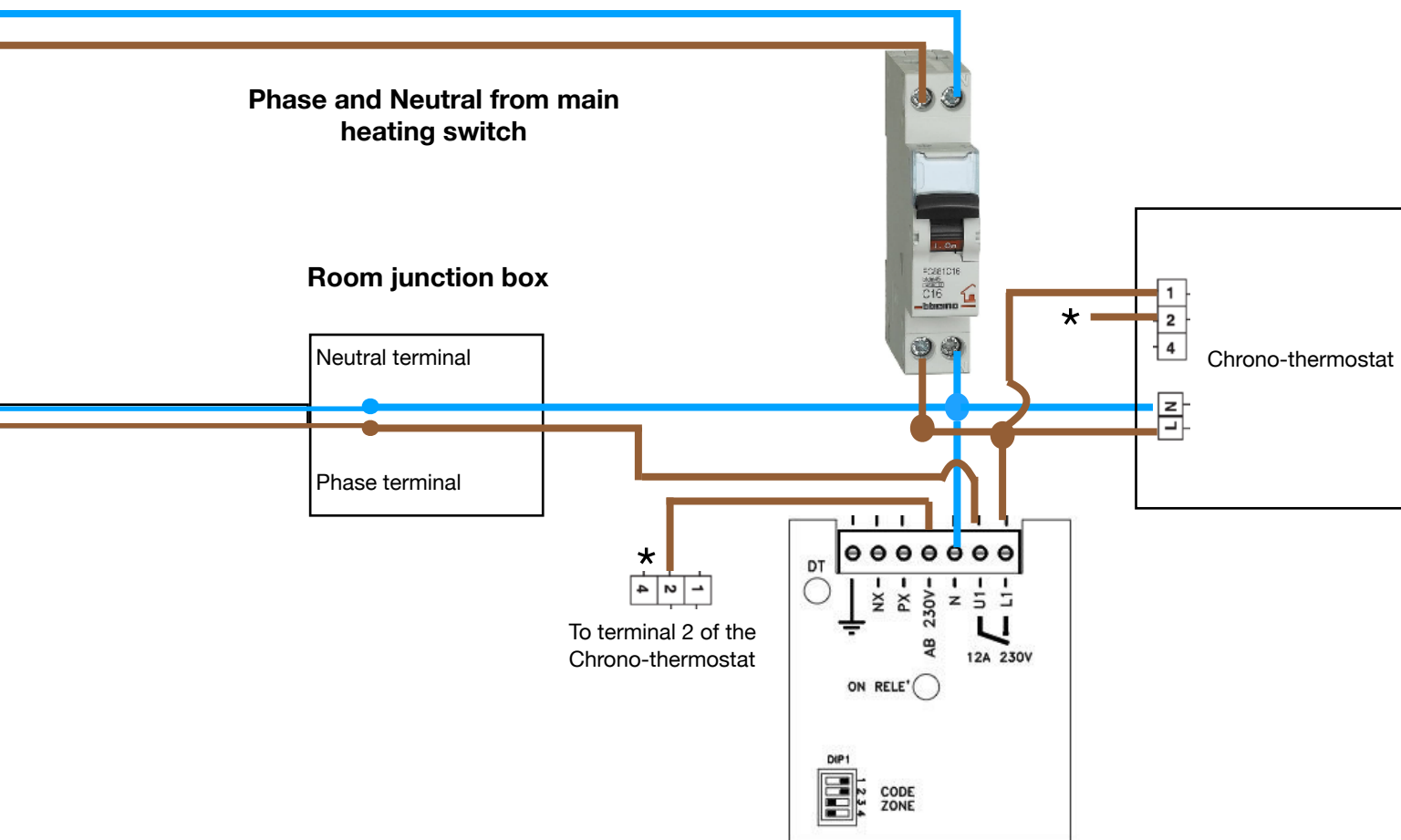
Each room is composed as follows (depending on the project): Room with Max Amperage > 12 Amps
 At that point 2 or more relays are used.
 Each relay is associated with 1 Phase and 1 Neutral.



Room junction box.
 All the phases and neutrals of the modules are connected to the 2 main terminals with parallel connection.



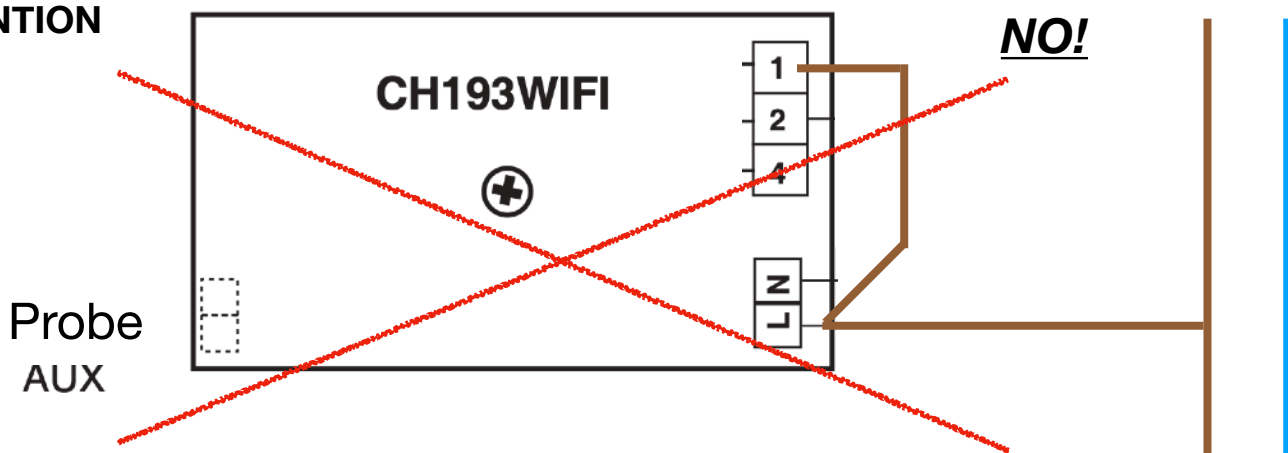
A magneto-thermal switch connected as follows is recommended for each room:



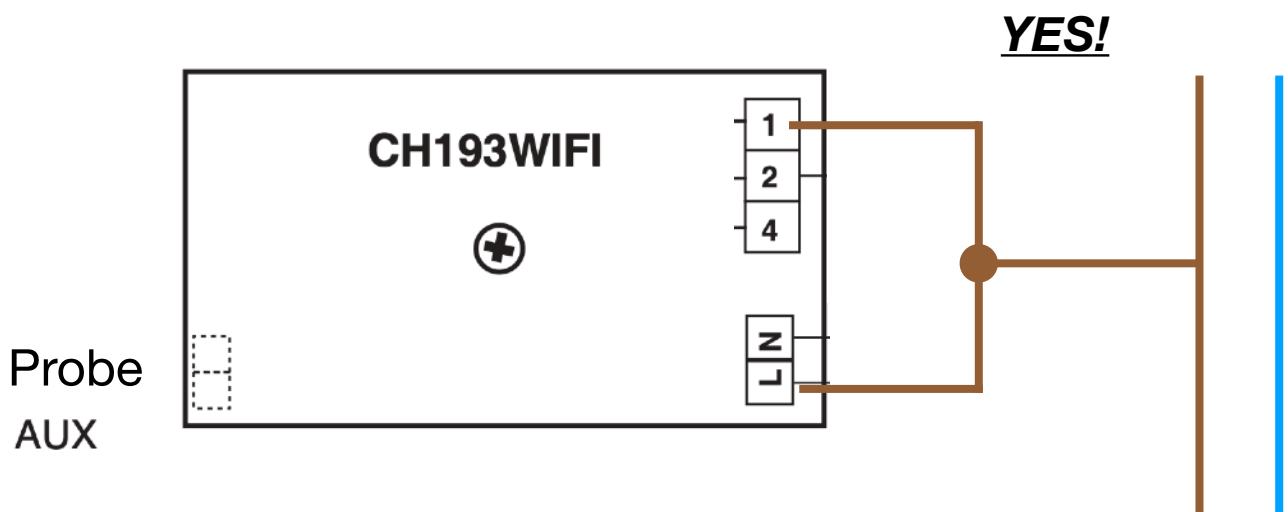


ATTENTION

CHRONO-THERMOSTAT CH193 WIFI OR SIMILAR:



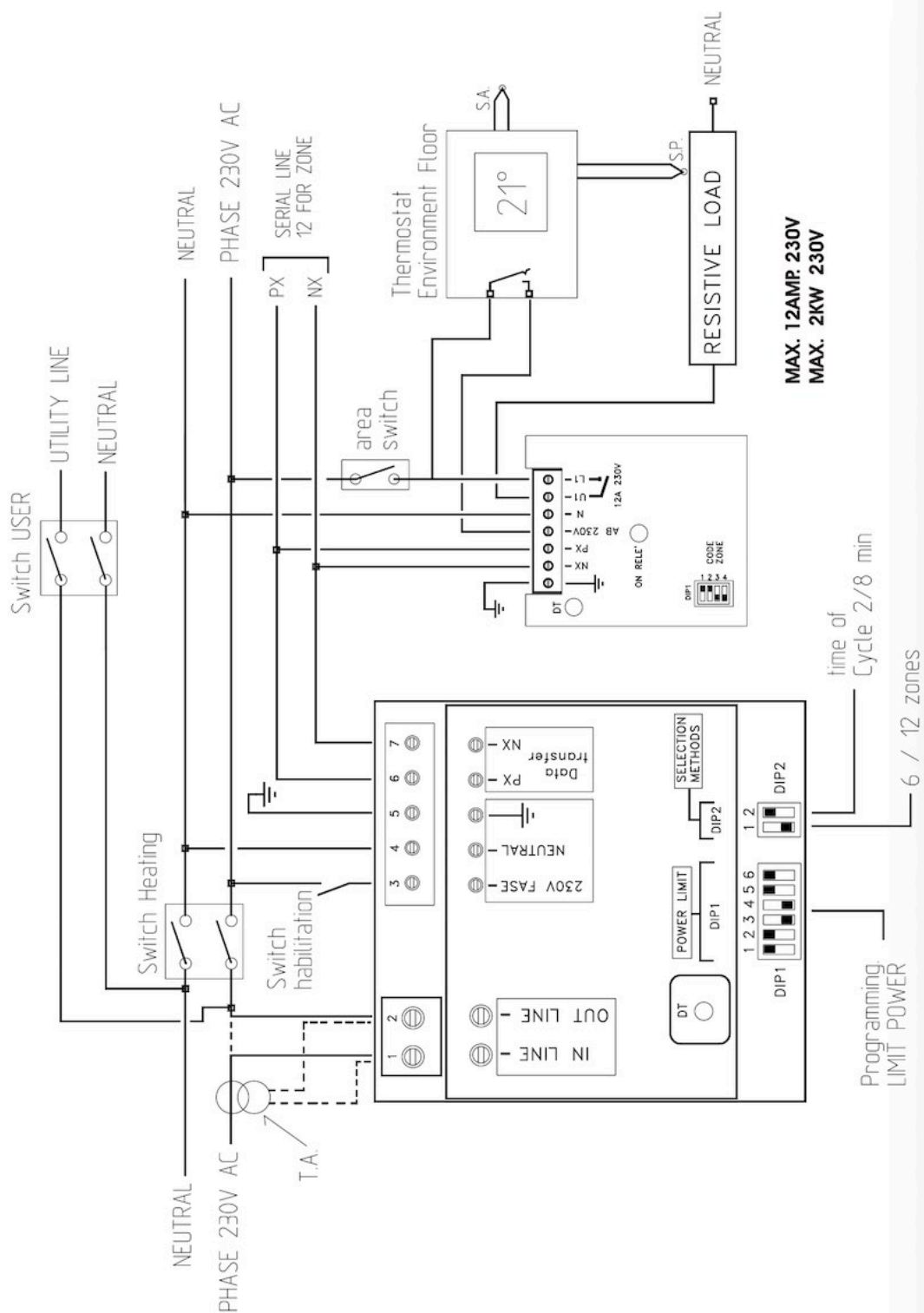
**The phase connection of the N.O. dry contact must not be in direct bridge with the power supply phase of the chrono!!!
 Make a common terminal.**



ATTENTION! The floor probe must be positioned correctly between the heating module (at least about 10 cm from the perimeter of the module on both the long and short sides) and the floor surface.

Management of the auxiliary probe input is described on page 21 of the indicated chrono-thermostat manual. It is wholly recommended to set the maximum surface temperature safety limit ("UP" FUNCTION).

GENERAL WIRING DIAGRAM:



WIRING DIAGRAM WITHOUT CONTROL UNIT WITH CLASSIC RELAY:

