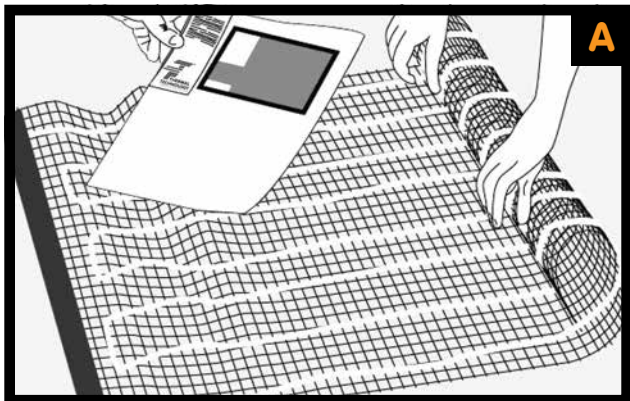
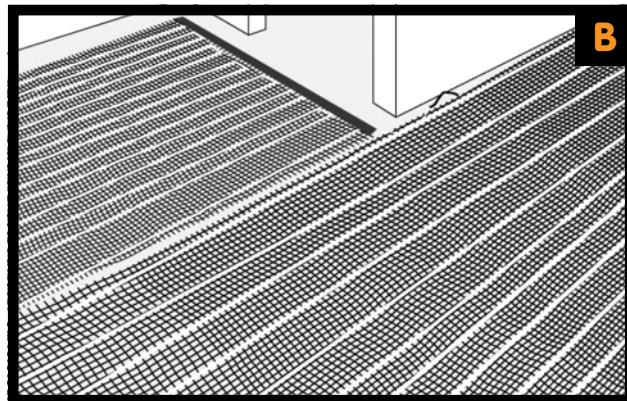


## MOUNTING GUIDE

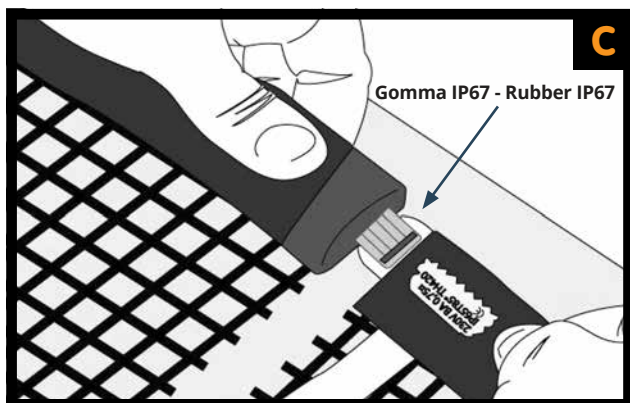
**WARNING:** only qualified personnel must perform installation.



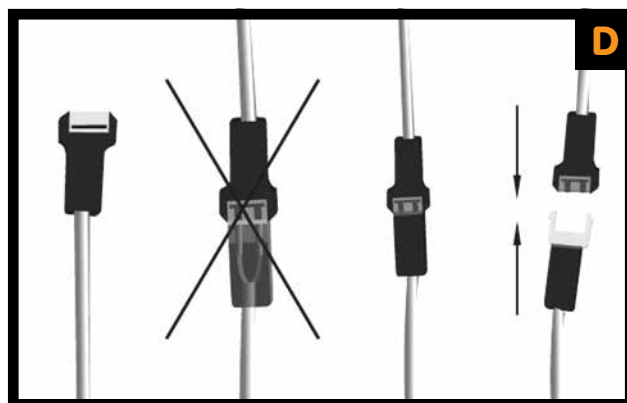
A. Before starting the montage it is indispensable to know exactly how the elements must be disposed on the floor surface, by following the project, which indicates their disposal and the points of power supply. Lay out the elements ensuring that the floor surface is flat and clean.



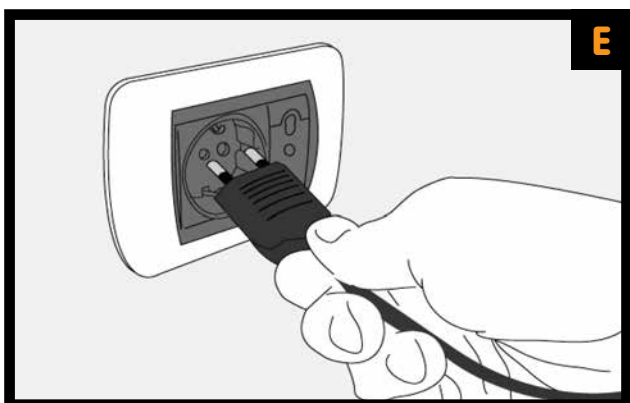
B. Each element has a label on the margin with the text "LATO SCALDANTE/HEATING SURFACE". The elements must be laid side by side, they must not overlap and/or fold and they must not be larger than the laying surface.



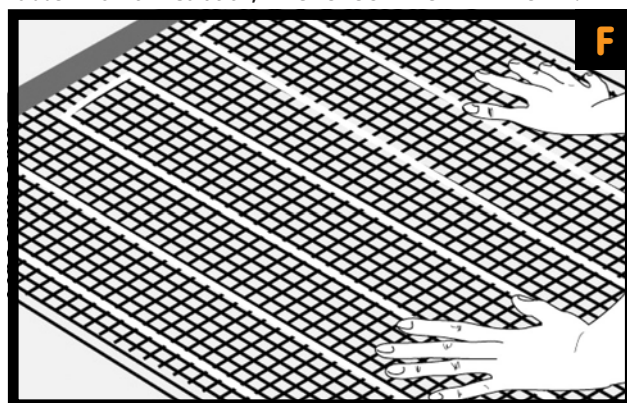
C. Afterwards you can proceed with elements linkage using special connectors, placed on the corner of each heating element.



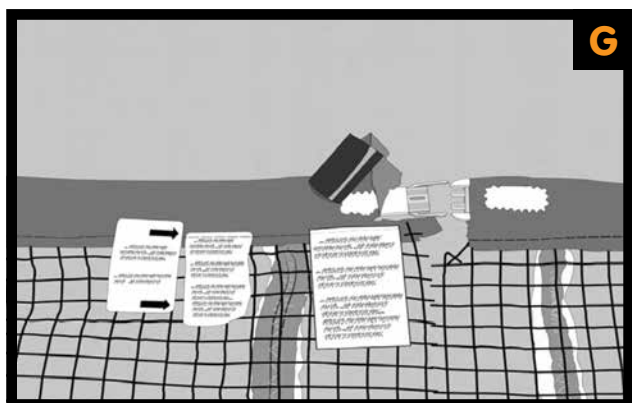
D. The connectors have a mandatory direction of linkage, which must be respected. The male connector is equipped with black rubber IP 67 for insulation, WHICH SHOULD NOT BE REMOVED.



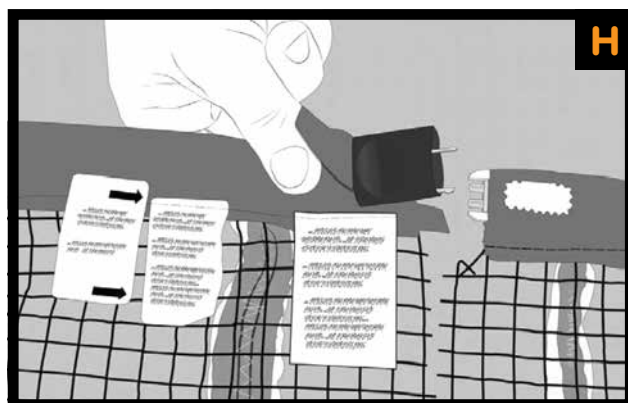
E. Proceed with installation testing by inserting temporarily the power cord plug into the electric outlet. Do not let the heaters powered more than 2 minutes.



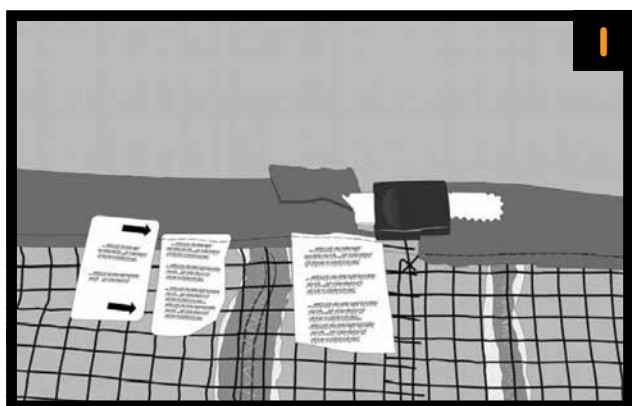
F. Check whether each element heats. Using a current clamp, check the correct power consumption confronting it with power indicated on the label of each element. The measurement could slightly differ from the indicated values (grid tension is not constantly at 230 Vac). The measurement must be performed after each phase of installation: element laying, screed application, tiling or else.



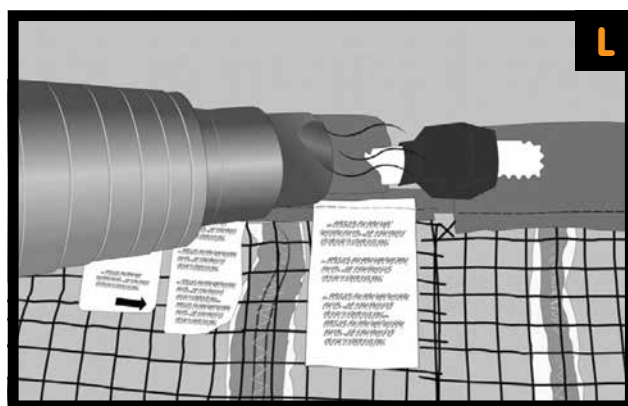
**G.** The modules are equipped with heat-shrinking sheath for connector insulation, which is fixed near male connector.



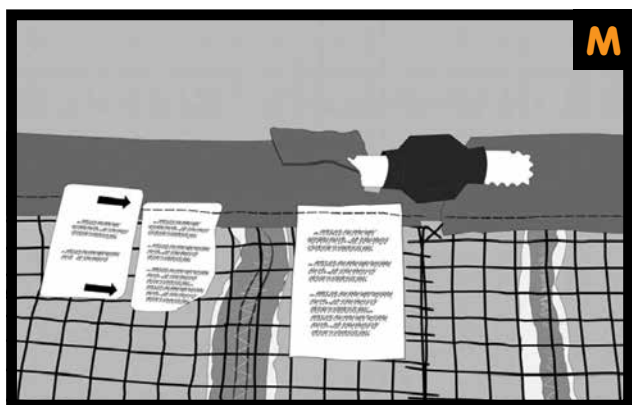
**H.** If the heating test is positive, the sheath must be detached and inserted on the male connector. If the testing was negative, control each element until you find the defected heater, which must be replaced.



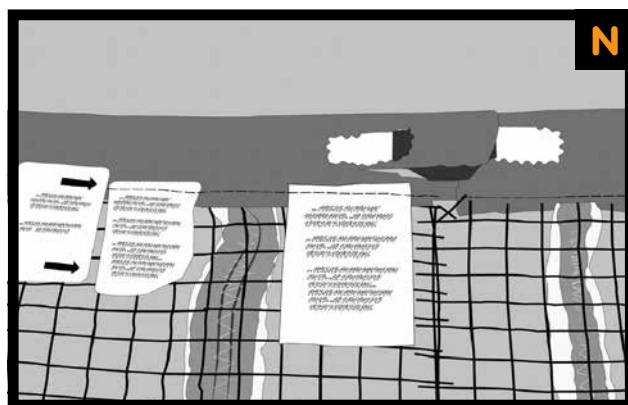
**I.** Link the male connector with female connector of the next module, paying attention to the blocking tabs, they should be well inserted. Male connector is equipped with black rubber IP 67 for insulation, WHICH SHOULD NOT BE REMOVED. Apply the heat shrinking sheath to cover the connection.



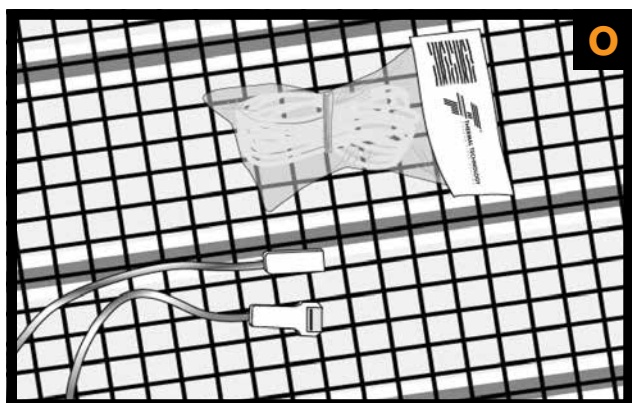
**L.** Heat the sheath by aim of hot air gun or something similar.



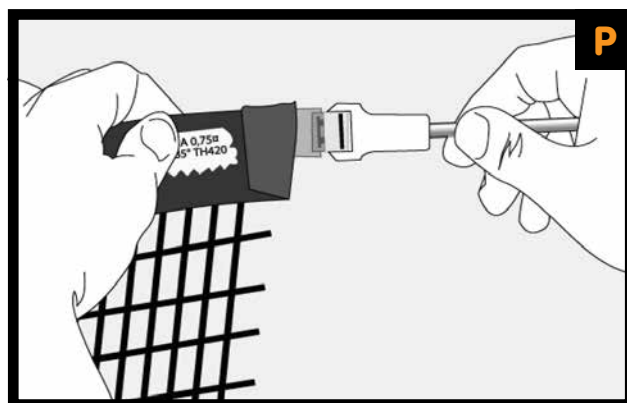
**M.** Verify the sheath, which must adhere perfectly on all the connector's surface.



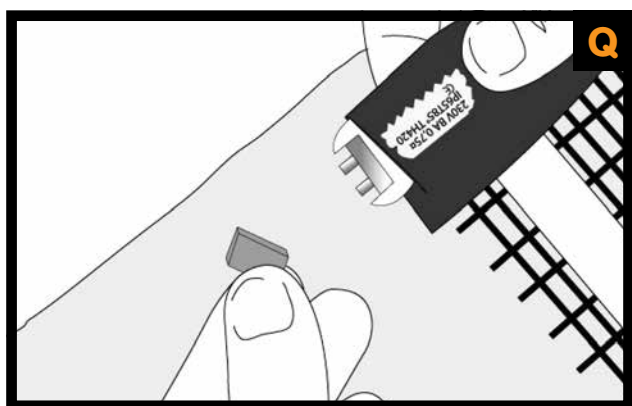
**N.** Cover the connection with provided tissue.



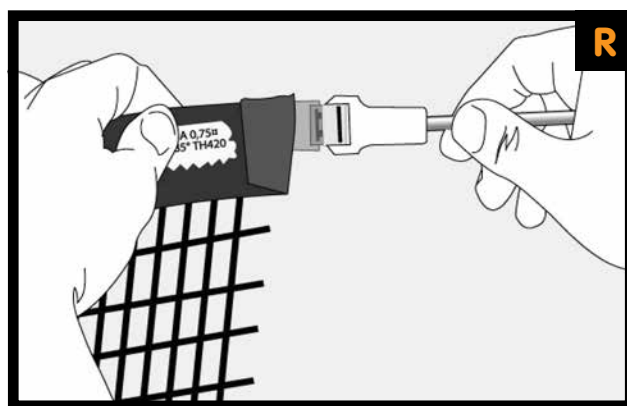
O. If two enclosed heating elements do not have coincident connectors, use the extension cord (see table 2 at page 4) for their connection.



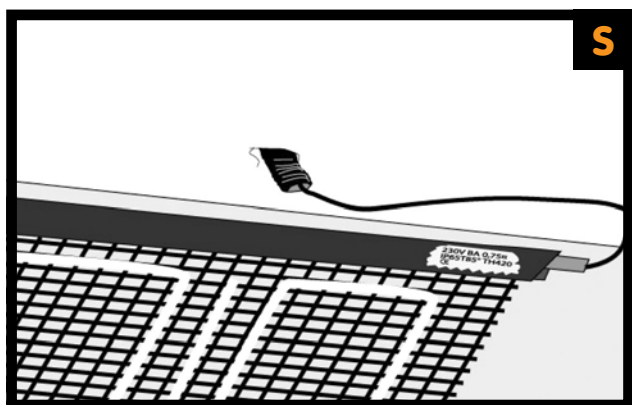
P. Extension cord linkage with a connector.



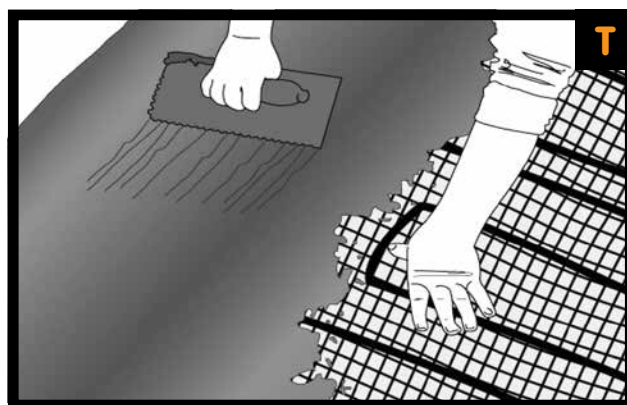
Q. Once all the elements are connected, it is necessary to insulate with a tap the connector of the first installed element, left free. NOT BE REMOVED BLACK RUBBER.



R. Link the connector left free of the last installed heating element, with a proper power cord (see table 2 at page 4).



S. Once made all the necessary links, verify the connectors are well joint, than insert the power cord into the outlet, or, eliminating the outlet, link it with a chrono thermostat.



T. Use elastic adhesive (for example Mapei Keraflex or Mapei Keraflex Maxi) and plastic toothless spatulas and tools to apply the glue. Apply a light glue layer; the adhesive must cover the mesh. Let the glue to dry. Start floor finishing application, using again, an adhesive on elastic basis and plastic, toothless tools. It's possible to cover the mesh with a self-leveling.

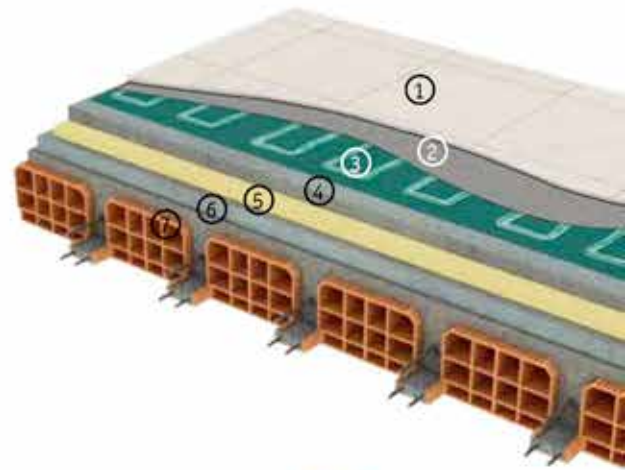


## HEATING MESH BETWEEN CEMENT SCREED AND CERAMIC-SANDSTONE-MARBLE FLOOR

Installation between screed and floor allows fast heating of the room and rapid achievement of thermal inertia due to the small thick of the system. The system is recommended for places with occasional use, for example: holiday homes, offices, shops, meeting rooms, restaurants, hotel rooms, etc...

### Layers:

1. Ceramic-marble floor.
2. Elastic bond.
3. Heating Mesh.
4. Cement screed.
5. Insulating panel.
6. Filling sub-base.
7. Floor slab.

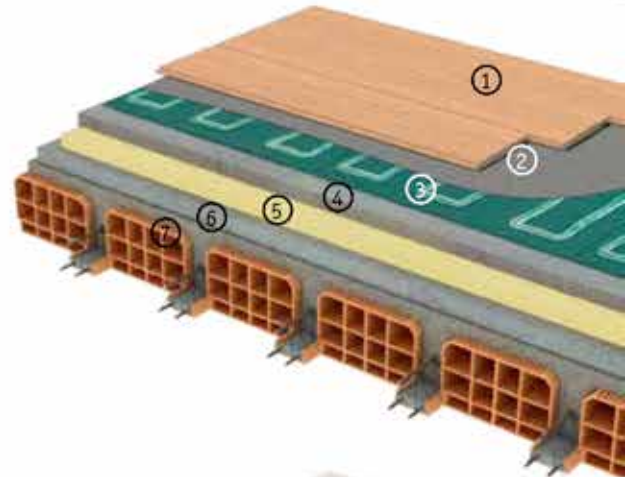


## HEATING MESH BETWEEN CEMENT SCREED AND WOOD/LAMINATE FLOOR

Installation between screed and floor allows fast heating of the room and rapid achievement of thermal inertia due to the small thick of the system. The system is recommended for places with occasional use, for example: holiday homes, offices, shops, meeting rooms, restaurants, hotel rooms, etc...

### Layers:

1. Wooden/laminate floor, glued or floating.
2. Elastic bond.
3. Heating Mesh.
4. Cement screed.
5. Insulating panel.
6. Filling sub-base.
7. Floor slab.

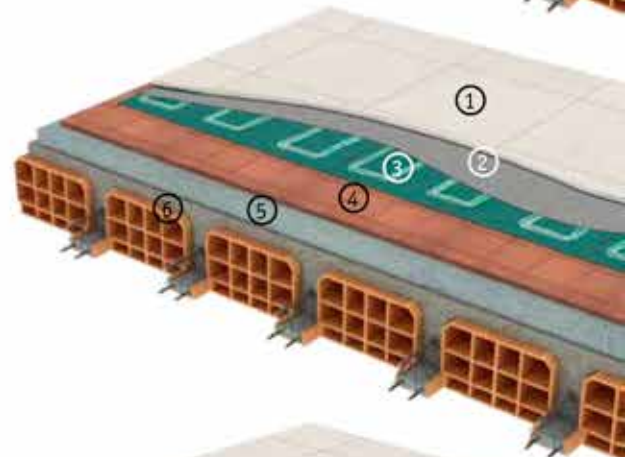


## HEATING MESH ON TOP OF EXISTING FLOOR

This installation method is ideal for renovation works, when should be avoided the overloading of the floor slab, and inside height maintained. Installation between cement screed and new floor allows fast heating of the room and rapid achievement of thermal inertia due to the small thick of the system. The system is recommended for places with occasional use, for example: holiday homes, offices, shops, meeting rooms, restaurants, hotel rooms, etc...

### Layers:

1. Ceramic/marble floor
2. Elastic bond.
3. Heating Mesh.
4. Old tiles floor.
5. Filling sub-base.
6. Floor slab.

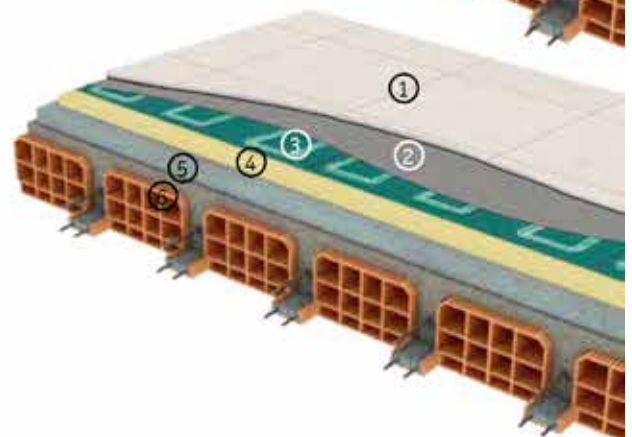


## HEATING MESH ABOVE INSULATING PANEL

The installation involves gluing the tiles or wood directly on an insulating panel (polystyrene panel with a special resin surface). This method of installation creates a mass to be heated only 1.5 cm thick (tile + adhesive) allowing to achieve the desired surface temperature in the shortest time.

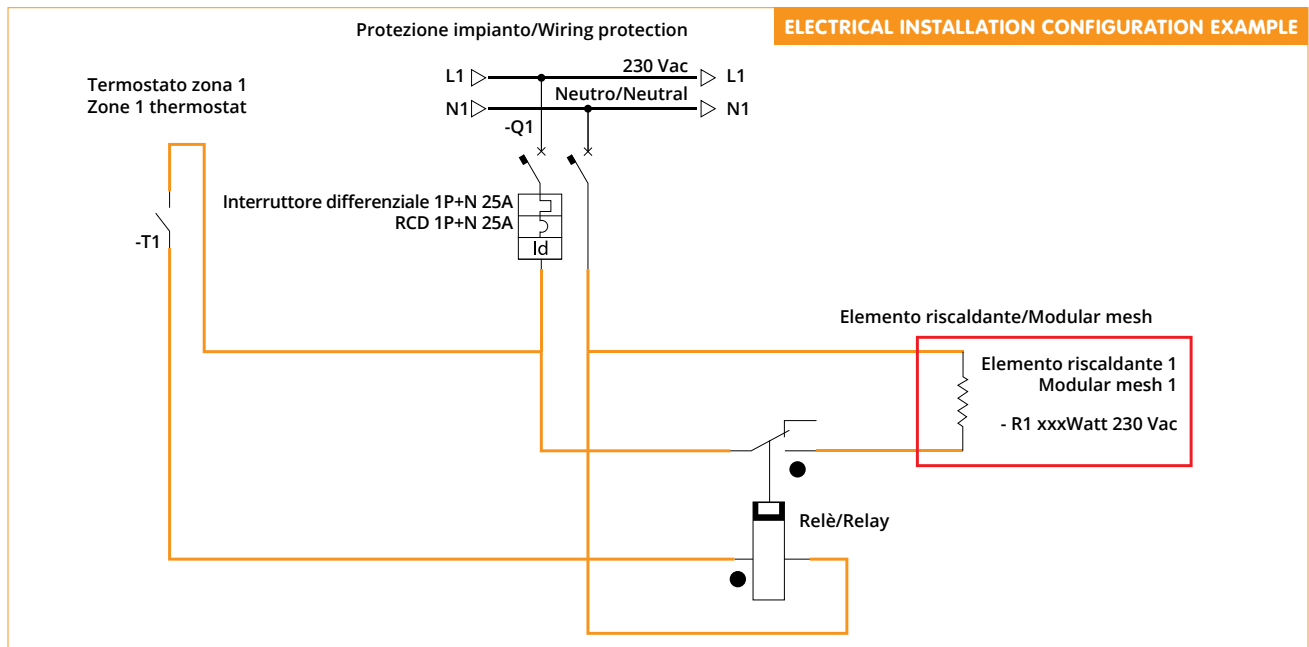
### Layers:

1. Ceramic/marble floor
2. Elastic bond.
3. Heating Mesh.
4. Insulating carrier panel.
5. Filling sub-base.
6. Floor slab.
6. Solaio.



## CONNECTION TO POWER SUPPLY

The module provides two output cables for the electrical connection. It must be powered at 230Vac.  
The temperature is regulated through a thermostat.



**TABLE 1 - DIMENSIONS OF STANDARD MODULES**

CODE	DIMENSIONS (cm/in)	m <sup>2</sup> /ft <sup>2</sup>	POWER
PVMR.060100	60X100 / 23.62x39.37	0,60/6.46	60W
PVMR.060150	60X150 / 23.62x59.05	0,90/9.67	90W
PVMR.060250	60X250 / 23.62x98.42	1,50/16.15	150W
PVMR.060350	60X350 / 23.62x137.79	2,10/22.60	210W
PVMR.090150	90X150 / 35,43x59.05	1,35/14.53	135W
PVMR.090250	90X250 / 35.43x98.42	2,25/24.22	225W
PVMR.090350	90X350 / 35.43x137.79	3,15/33.91	315W
PVMR.090450	90X450 / 35.43x177.16	4,05/43.59	405W
PVMR.150150	150X150 / 59.05x59.05	2,25/24.22	225W
PVMR.150250	150X250 / 59.05x98.42	3,75/40.36	375W
PVMR.150350	150X350 / 59.05x137.79	5,25/56.51	525W
PVMR.150450	150X450 / 59.05x177.16	6,75/72.66	675W

**TABLE 2 - MODULAR MESH ACCESSOIRES**

CODE	DESCRIPTION
PVMM.00PL80	Extension cord module-module 80 cm (31.50 in)
PVMM.00PL200	Extension cord module-module 200 cm (78.74 in)
PVMM.00PL400	Extension cord power - module 400 cm (157.48 in)

**TABLE 3 - TECHNICAL FEATURES**

CODE	DESCRIPTION
Power supply	230 Vac 50/60 Hz max 8A
Power consumption	from 25W/m <sup>2</sup> to 100W/m <sup>2</sup>
Protection degree	IP67
Cables and Connectors	FG7 power cable - IP67 connectors

## INSTALLATION IN AMBIANCES WITH OCCASIONAL OR CONSTANT PRESENCE OF WATER

- Install a metallic grid above the heating elements, which must cover the entire installation including fixing points
- The grid must be protected against the corrosion but not insulated electrically.
- The grid must be connected to earthing system.
- The grid must have adequate clamps for connection of 2 conductible cables, each having a section of 4 mm<sup>2</sup> if not protected mechanically, and a section of 2,5 mm<sup>2</sup> if mechanically protected.
- Perform operational tests for electric continuity before proceeding with following installation phases.

## WARNINGS

- The relays, cables and the residual-current breaker must be dimensioned in dependence of the rated power of the installed elements sum.
- The circuit must be protected by a device able to interfere and section the power line in case of short circuit; it must be installed an automatic "cut out" residual current breaker with  $I_{\Delta n} \leq 30\text{mA}$  current or with insulation transformer.
- A planimetric map should be placed near the distribution switchboard, with indication of the supply points of the heating system.
- The power line minimal section must be of 1,5 mm<sup>2</sup> from the protective switch to the heater; respecting the rated current of the source protection.
- Each circuit must have elements linked together for a maximum power of 1.700W / 8A; in case this power is exceeded it must be divided in several circuits.
- Do not use the heating elements on surfaces with an inclination over the 45° on vertical.
- The heating system should not be used by persons (including children) whose physical, sensory or mental capabilities; or lack of experience and knowledge prevents them from using the appliance safely without supervision or instruction.
- Do not let children play with the appliance.
- If one or several power cables are damaged, they must be replaced by qualified personnel, indicated by manufacturer or distributor.
- In case of installation under a metallic finishing, it must be connected to earthing.

## CAUTIONS

- Do not pierce, cut, or damage the heating elements.
- Do not pour liquids.
- Do not burn.
- Do not lay the heaters on the disconnected surfaces.
- Do not power the heater if it is rolled.
- Do not install outdoor.
- Do not power with different voltage from that indicated by manufacturer.
- Install the elements by orienting their heating surface upwards, respecting the indication label "Heating surface".
- The heating elements must be kept away from another heat sources as lighting equipment or fireplaces
- If you want to use different products than those specified here, please contact the manufacturer
- The thickness of the finishing material (ceramics, laminate, etc.) must be at least 5,00 mm.
- Do not use this heating system if outside temperature is lower than 30°C.
- The heating elements must be installed at a distance of at least 30 mm from the conductive parts of the building, like pipes (methane gas pipelines included, if not protected by sheathing or cement/mortar).
- Maximal power of each circuit with connected elements is of 1.700W / 8A; if this power is exceeded it must be divided in several circuits.

**IF YOU NEED ANOTHER INFORMATION CONTACT THE SUPPLIER (The manufacturer declines all responsibility in case of improper use.)**



**Appropriate for installation under flooring**



**Do not burn or fire**



**Do not install on disconnected surfaces**



**Do not wet**



**Equipped with reinforced insulation**

## SAFETY REGULATIONS

- The device should only be operated with a voltage of 230 Va 50/60 Hz.
- Users must not perform any reparation of the product. In case of short circuit and/or another damage, please contact the manufacturer.
- The connection to the electric grid must be performed by qualified personnel from authorized companies by normative 46/90 D.M. 37, January 2008.
- ATTENTION!!!! Risk of electric shock.
- Close the connectors before powering the circuit.

## CONFORMITY



This product is manufactured in conformity with the electrical safety standards set by Low Voltage Directive 2014/35/EU. This product is in conformity with Electromagnetic Compatibility Directive 2014/30/EU, concerning the standards for electromagnetic emissions.



Do not dispose the product in environment in order to avoid potential damage to people and objects. To facilitate the disposal of the components/materials and protect the environment itself, take the product to special collection centres. Product disposal in the environment or common waste is penalized in accordance with current legislation.

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