

# INSTALLATION MANUAL

## WARM FLOOR



### Innovative infrared film heater module type Zebra.

#### Introduction

Thank you for purchasing the innovative infrared film heater module type Zebra. Please register as a customer by filling out a short form on our website [www.mercurybg.com](http://www.mercurybg.com). This procedure does not take much time, but it will allow us, if necessary, to provide you with the most qualified support. In addition, our products and their components are constantly changing and improving, and after a while we will be able to offer you something much better than today's solution.

#### Security

Before you get started, carefully study the following information !!!! This is important for your safety!

Voltage 220 volts is dangerous for life and health.

After completing the assembly, do not remove this manual for future use.

Observe the safety measures established by law.

Installation, connection, testing and placement must be performed by certified specialists by a third and higher qualification group.

The requirements of this manual do not allow incorrect installation, connection and configuration, since this has negative consequences.

Do not change the structure of the heating elements.

Do not use heaters for other purposes.

The heater is not designed for use in aggressive environments and in explosive environments.

The heater is not intended for outdoor use.

Do not expose the heating element to mechanical influences.

Do not operate the heaters when they are stacked on top of each other.

The installation should be carried out when the power is off.

#### Purpose of heaters

The ZEBRA heater is designed for basic and additional room heating. The heating system is designed for continuous autonomous operation.

#### Installing a floor film heater

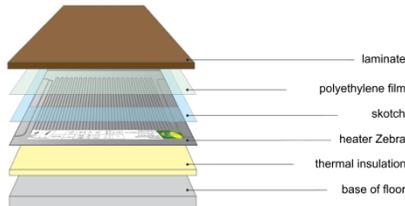
Installation of Zebra floor heating elements must be carried out in accordance with the instructions. Follow the recommendations for each heater.

It is strictly forbidden to install heaters under soft floor coverings (linoleum, carpet, etc.) !!!

Laying under the laminate (in accordance with the image).

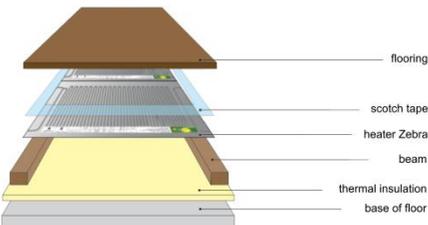
At the first stage of work it is necessary to install a 3 mm pillow. Fastening of heating elements is carried out by means of an aluminum adhesive tape to each element. Before installing the laminate, we recommend covering the mounted heaters with a layer of polyethylene film (nylon).

When installing under a laminate, we recommend that the electrical connection is with an insulated copper conductor with a cross-section of 1.5 mm<sup>2</sup> !!!



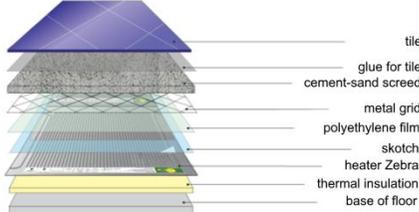
Installation under the curved floor (according to the shown image).

It is necessary to apply a layer of insulating material 20 mm thick under the beam-logs. The distance between the wooden beams should be 500 mm. Otherwise, the heaters may be damaged.



Installation for ceramic tiles (in accordance with the illustrated illustration).

Under the heaters it is necessary to apply a layer of heat-insulating material with a thickness of 20 mm. The heating elements are arranged in accordance with the illustrated figure.



#### General description



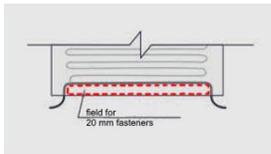
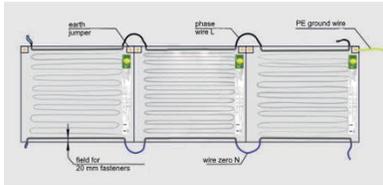
In front of you is a box with an innovative infra-red heater of the Zebra modular type.



Remove the heaters from the box.



Each module, 600mm \* 500mm in size, is combined with the next, polymer base, into a single tape of 50 individual matrices designed for 220 Volt operation. All modules in the tape are connected by parallel connection with trunk, phase (black) and zero (blue) wires in a single circuit. If desired, the modules can be grounded at the location indicated here.

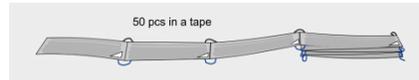


Do not make the hole too close to the main conductor to avoid damaging it.

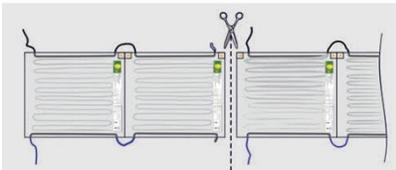
#### Preparation of heaters

The maximum length of one strip is 6 meters or ten modules. **IMPORTANT !!!** Production of more than 10 modules or 6 meters is **NOT** allowed !!!! Since the main conductor built into the heater is not designed for such a load !!!

To use heaters, you need to cut them according to the room size for the locations indicated in the project. To do this, first place a strip of the necessary length on the table.



Suppose you need to trim a strip of two modules. Using scissors, carefully cut out the connection between the two radiator modules.



**ATTENTION!!!**  
The heater has two sides: working (front) and reverse (rear).  
**IMPORTANT !!!** Only the work side is marked with the Zebra logo.

The heater must be installed with a working (front) side to the room. If it is installed on the contrary, the system will not work or will work extremely inefficiently. Incorrect installation can turn off the system!

#### Electrical Connections

Isolation of the rear end of the module can be done in two ways - using a shrink sleeve or using a silicone gun.

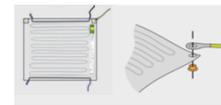


Using a shrink sleeve - cut a piece 1.5 cm long and place it on the end of the wire.  
Then warm up the gun to hot air at a temperature of + 350 ° C.

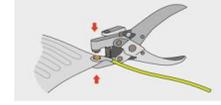


The second way: warm up glutinous gun with glue rod for gluing of plastics. Apply a small amount of glue on dead end of the highway and give to harden it.

The next step is to install a ground wire.



Make a hole in the indicated grounding area and insert a special pin to secure the cable shoe with a cable.

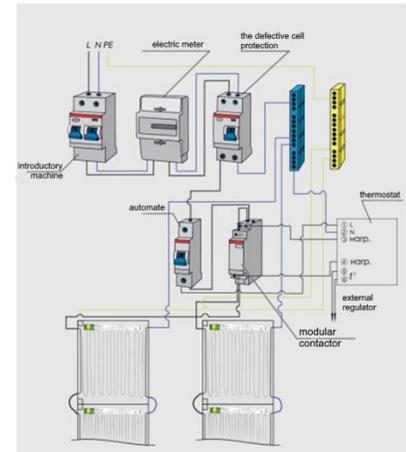


Tighten with a screwdriver to ensure a reliable contact.



The result is a reliable connection.

#### Wiring diagram



Elements used in the scheme:

1. Main automatic fuse
2. Electricity meter
3. Defective current protection (the protective device protects against short circuits, overloads, fires, etc.)
4. Modular contactor (modular contactor mounted between the thermostat and the heaters and performs the function enable / disable the system)
5. Automatic fuse
6. Thermostat (responsible for maintaining the set temperature, controls the modular contactor)
7. External thermostat  
**IMPORTANT !!!** The control panel is a complex device, the production of which requires special skills and high requirements for reliability and safety!

#### ATTENTION!!!

Installation, connection, testing and commissioning must be carried out by qualified personnel with a qualified team who have read this manual in advance. Inspect each heating element for damage.  
Measure the grid voltage with a voltmeter. Make sure that it matches the voltage on the heater label - 220 volts. Before installation, the surface must be cleaned of sharp protrusions and objects.

Do not allow children to play with thermostats.

The manufacturer does not control the installation of the automation and operation directly. He is not responsible for the security of the installation and operation of the system.

Commissioning

Commissioning of the heating system is only possible after the installation scheme has been checked.

Keep technical documentation and invoice for life.

#### Storage and transport

Storage of the product must be carried out in its original packaging in enclosed spaces. Keep away from moisture and direct sunlight.

Transportation is carried out using closed vehicles.

Removal of the product from the package is only allowed if it was at least one day in a heated room, taking care not to damage the power wires.

#### Guarantee

The warranty period for the innovative modular infrared heater Zebra is 25 years from the date of sale.

Shelf life - from the date of installation no less than 25 years. The warranty extends from the time of installation, provided that the installation is installed and connected in accordance with the instructions and safety requirements. The manufacturer is not responsible for heaters that do not work because of reckless or deliberate acts on the part of the user or a third party.

The warranty does not apply to heaters that have been dismantled and reinstalled.