

A DRAFT OR A PHOTO OF THE HEATING CABLE WITH A SUPPLY CABLE AND ACCESSORIES

MATEC – ELECTRIC DE-ICING SYSTEMS

MANUAL INSTRUCTION

HEATING CABLE TYPE GPSY, USED UNDER DRIVEWAYS AND OTHER TRANSPORT ROUTES FOR STAIRS AND RAMPS



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REMARKS

- During installation it is required to follow instructions included in the Heating Cable Manual Instruction.
- Thermoregulator's installation must be done according to Thermoregulator Installation Manual.
- It is forbidden to mount the cable on pins, bolts, screws or other fixing elements that can damage the outer jacket of cables.
- The cable installation surface must be smooth with no sharp edges or sharp fixing elements.
- Heating unit cannot be mounted on non-uniform bases.
- The heating cables should be installed between the expansion joints, it means one heating cable module per one plate.
- The resistance heating cable should not be installed in places with permanent building.
- The heating cable resistance must be measured at least twice: before starting the installation works, after arranging the heating cable on the floor, and before covering it with the top floor layer.
- Installation of the heating cable in the ambient temperature below + 5°C is not advisable.
- Don't cut the heating cable or its connection with power supply cable. Only the supply cable can be shortened.
- The heating cable should not undergo excessive strain and should be protected against sharp device damage.
- Heating unit must be supplied by means of a device from TN-S electric circuit with RCD (residual current device) of nominal power supply lower than 30 mA. The installation should have surge protection.
- The heating cables must not come into contact, cross with each other or other cables - this could damage the insulation. The minimum distance between the heating cables must not be less than 6 cm.
- It is required to make a draft or add pictures of the arrangement of the heating cable, power supply cable and the connection place of the heating cable with power cable („cold wire”). The draft or pictures are an integral part of the as-built documentation.
- The device is not intended to be used by people (children) with limited physical, feeling or psychic ability or people without experience or without the device knowledge unless it is under supervision of a person responsible for safety or according to installation manual.
- Pay attention to children - they must not play with the device.
- The radius of heating cable bending shall not be less than 10 times of its diameter.
- The heating cable cannot be permanently immersed in any liquid.
- The heating cable must be used in accordance with manufacturer's specifications.
- The cable is not designed to be applied under asphalt surface.

DESCRIPTION

Heating cables type GPSY are used against icing for stairs and ramps. They are laid under the outdoor surfaces. These cables must not be applied under asphalt. They are strongly mounted to the surface by means of mounting clips. The cables should be installed with a temperature regulator equipped with sensors.

The GPSY heating cables are designed to operate outdoor at 230 V AC nominal voltage and 20 W/m. The heating cable with power supply cable is connected to 230 V AC by means of a temperature regulator.

- GPSY heating cable – the set includes:**
- one-sided power supply heating cable with power supply cable,
 - installation instruction with the Warranty Card.

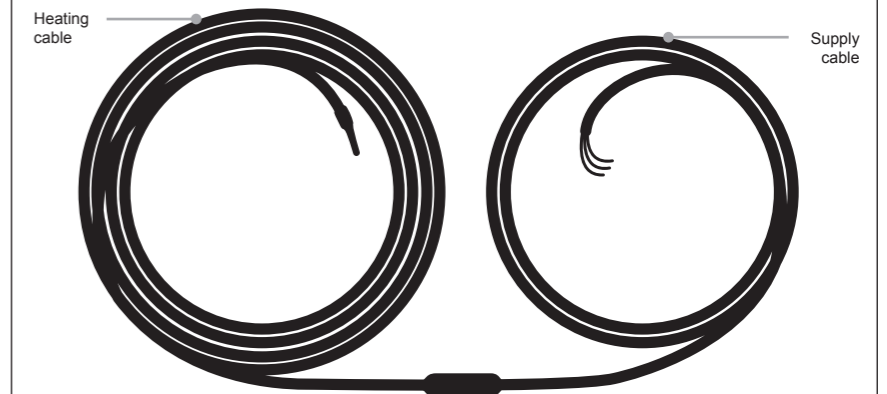


Fig. Heating cable with supply cable

A temperature regulator is an essential element used to control the GPSY heating cable temperature. It is used to connect the heating cable with the electric installation. It is important to choose a temperature regulator with regard to the heating cable power, its location place and with regard to the place of the measuring sensors. Depending on the function the heating system with a temperature regulator shall realise, the following sensors are applied: temperature sensors, ice and snow sensors, temperature and humidity sensors.

The connection of the heating cable with a temperature regulator should be done in accordance with a diagram described in the temperature regulator manual instruction.

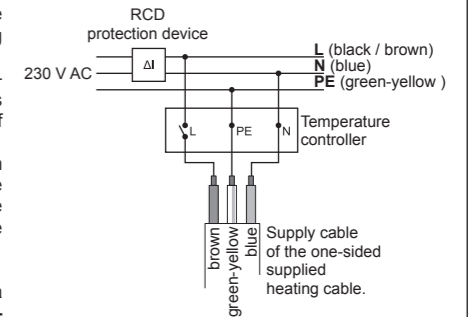


Fig. A connection diagram of a heating cable by means of a temperature regulator to the electrical installation

TECHNICAL DATA

Heating cable TYPE	GPSY 9,5 + 100 m long
Power supply voltage:	230 V AC / 50 Hz
Unit power:	20 W/m
Operating temperature:	80 °C
Supply type:	one-sided
Heating cable:	two-wire, shielded

The heating cable is ended with H05VV-F 3G1 power supply cable at one side

INSTALLATION

1. Before purchase, measure the surface the heating cable will be applied to.
2. Choose a heating cable of an appropriate length and expected heating power. The distance between successive runs of the heating cable must not be less than 6 cm.
3. Make a draft of the heating cable arrangement. Specify and mark the installation place with the temperature regulator, electric supply and sensors of the temperature regulator. A draft or pictures are an integral part of the as-built documentation.
4. Unpack particular elements and inspect visually of what you have received.
5. Check the heating cable resistance with the supply cable based on the value given on the label. Write it down in the Warranty Card.
6. Prepare the connection place of the heating cable and a temperature regulator to the electrical installation.
7. Prepare the protection corrugated pipes for the separate insertion of: a supply cable of the heating cable and a sensor's signalling cable.
8. Clean the floor of sharp and dangerous items.
9. Unfold the mounting tape type TMS-01 on the surface, where the heating cable will be arranged and attach it to the floor. The recommended distance between mounting clips of the heating cable should not be more than 25 cm. The radius of the heating cable bending shall not be less than 10 times of its diameter.
10. Place the heating cable on the previously prepared surface and grasp it by means of "inner clamps" of the mounting clip. The heating cable should be laid along the edges in a previously carved groove. This protects the cable from damage of the outer coating. Do not pull or stretch the wires in order to avoid damage of the cold „joint“ connection of the supply cable with the heating cable. In order to effectively de-ice it is recommended to place the heating cable not further than 3.5 cm from the outer edge of the groove. The heating cable must not be shortened.

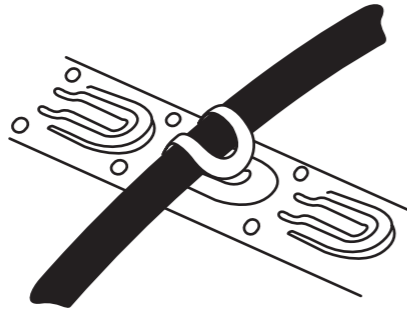


Fig. Mounting the heating cable in the mounting clips type TMS-01

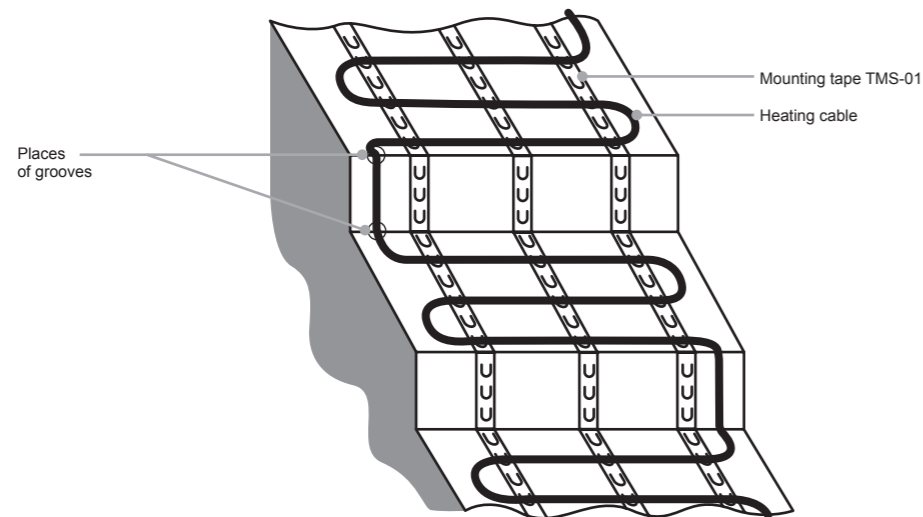


Fig. arranging of a heating cable on the stairs

11. After the heating cable has been laid, the supply cable must be connected to the electrical installation. The supply cable must be put through a protective corrugated pipe.
12. Carry out the second resistance measurement of the heating cable and supply cable. Write it down the results in the Warranty Card.
13. Place in a previously planned place the temperature regulator sensor, humidity sensor or ice and snow sensors in a protective corrugated pipe. If necessary, make a groove and insert the corrugated pipe.
14. On such a floor you can spread adhesive/concrete, put tiles or another form of floor covering. The heating cable, power supply cable and protection corrugated pipes should be completely covered with adhesive/concrete layer.
15. In the area of the heating cable it is forbidden to have a permanent building, to fix bolts, screws or other mounting elements that can damage the cable.

Connection of the heating cable to the electrical installation should be carried out by a qualified electrician staff with suitable authorisations. The installation should be in accordance with standards valid in a particular country.

The electrical installation, the GPSY heating cable is connected to with a supply cable, should be made in accordance with applicable national regulations.

OPERATION

Operation of the heating system is limited to switching on the temperature regulator and to adjust the required temperature.



UWAGA

The device is designed for single-phase installation and must be installed in accordance with standards valid in a particular country. The device should be connected according to the details included in this operating manual. Installation, connection and control should be carried out by a qualified electrician staff, who act in accordance with the service manual and the device functions. Before installation make sure the connection cables are not under voltage. Improper transport, storage, and use of the device influence its wrong functioning. It is not advisable to install the device in the following cases: if any device part is missing or the device is damaged or deformed. In case of improper functioning of the device contact the producer.



The symbol means selective collecting of electrical and electronic equipment. It is forbidden to put the used equipment together with other waste.

WARRANTY

ZAMEL Sp. z o.o. declares and assures that the electric heating systems MATEC (heating cables) manufactured and supplied by ZAMEL Sp. z o.o. are compliant with current standards in the Company and binding norms in Poland. The warranty includes all MATEC products under the condition of proper storage, transport, installation and operation according to binding norms. There is 2 year warranty for MATEC products and the warranty refers to defects made by the manufacturer itself.

GENERAL WARRANTY CONDITIONS AND CLAIM CONSIDERATION BY ZAMEL Sp. z o.o.

1. ZAMEL Sp. z o.o. assures warranty for MATEC products. There is 2 year warranty for the heating cables. Warranty time starts at the moment of product sell by ZAMEL Sp. z o.o. to the Purchaser. Be able to provide as a proof of purchase of the product an invoice by ZAMEL Sp. z o.o.
2. ZAMEL Sp. z o.o. shall process the claim at its own discretion.
3. The purchaser must inform about the claim which will be considered within 14 workdays only after proper claim notification. The PURCHASER shall lay any claims in writing to the Authorised Point or ZAMEL Sp. z o.o. only on presentation of an invoice (or its number and date of issue).
4. The properly filled Warranty Card should include the installation scheme or photo of the Heating Mat layout. The scheme must include:
 - Heating Mat layout with distances from walls and permanent units,
 - The position of the temperature regulator and power supply cables (with distances).
5. The claim consideration of a Purchaser is at the moment of a completely installed product. Then ZAMEL Sp. z o.o. makes inspection and necessary measurements in the product installation place. In case ZAMEL Sp. z o.o. is not the manufacturer of the claimed product or in case the claim is deemed void by ZAMEL Sp. z o.o., the Purchaser will bear all the costs connected with claim consideration.
6. When your Warranty is invoked, your damaged product will either be repaired or replaced free of charge to yourself by ZAMEL Sp. z o.o.
7. The manufacturer warranty is not valid in below cases:
 - damage caused by unauthorised modifications made by the PURCHASER or any third parties to the product
 - mechanical damage of the device
 - wrong power supply
 - electric installation which is not compliant with current IEE wiring regulations and installations
 - damage caused by incorrect product mounting - not according with MATEC Installation Manual.
8. In case of product claim by an indirect Purchaser of ZAMEL products, the Purchaser is obliged to present the claim to the Supplier (where the product was purchased).

CAUTION: The electrician is obliged to present and supply the user with as-built documents and a completely filled Warranty Card.

WARRANTY CARD

ZAMEL Sp. z o.o.

Installation place

Post code, city/town

Street, Home/Flat No

Telephone

Filled by the electrician

Electrician Name/Surname

Telephone

Nr of a Certified Electrician /
Expire date of a Certified Electrician

Installation date

Resistance measurement results of the complete Heating Mat:

After laying the heating cable
in the pre-planned place [Ω]:

After laying the heating cable
on the surface
and before connecting it
to the electrical installation [Ω]:

Signature / stamp

Place for the Heating cable label