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**Installation Guide** 

# Thin mats

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## Thin mats

## **Installation Guide**

#### 1 Introduction

Thin mats are floor heating elements, based on heating cables mounted with tape on self adhesive mesh for floor heating only.

#### Symbol description referring to product marking.





Direct floor heating

Installation in concrete

### 2 Safety instructions

Thin mats must always be installed according to local building regulations and wiring rules as well as the guidelines in this installation manual.

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved, by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- De-energize all power circuits before installation and service.
- The screen from each heating element must be connected to earth in accordance with local electricity regulations and connected via a residual current device (RCD).
- RCD trip rating is max. 30 mA.
- Thin mats must be connected via a switch providing all pole disconnection that can be locked in the off position.



Scan the QR code to get the full installation guide, warranty registration, product information, tips & tricks, etc. or go to **www.gb.manuals.devi.com**.

- The thin mat must be equipped with a correctly sized fuse or circuit breaker according to local regulations.
- Never exceed the maximum heat density (W/m) for the actual application.
- Thin mats are not to be interconnected.
- Thin mats must always be fully embedded with non-flammable material e.g. concrete, screed or tile glue by at least 5 mm. incl. tiles.
- Thin mats must always be controlled by a thermostat (DEVIreg<sup>™</sup> Touch, DEVIreg<sup>™</sup> 535 or DEVIreg<sup>™</sup> 530M) that limits the floor temperature to max. 35 °C.
- All thin mats in the same room must have the same heat density (W/m<sup>2</sup>) unless they are connected to separate floor sensors and thermostats.
- The enclosed label must be filled in and placed adjacent to the distribution board, describing location of the thin mat.

#### The presence of a thin mat must

- be made evident by affixing caution signs in the fuse box and in the distribution board or markings at the power connection fittings.
- be stated in any electrical documentation following the installation.

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## **Installation Guide**

#### 3 Installation guidelines

- It is not recommended to install thin mats at temperatures below -5°C.
- If walking on the elements is necessary during installation and carefully purring of screed, only use soft shoes.
- Be careful not to damage the thin mat with sharp tools, shovel, bucket etc.
- Minimum distance between heating cables; heating cable and conductive parts; heating cable and other heating sources such as hot water pipes and chimneys, must be at least 50 mm.
- Heating cables may not touch or cross themselves or other heating cables.
- Heating cable bending diameter must be at least 6 times cable diameter.
- The thin mats are not to be installed on irregular surfaces.
- The subfloor construction must be secure to avoid relative movement after installation.
- Prepare the installation site properly by removing sharp objects, dirt, etc.
- The thin mat must be fully embedded in screed (fine concrete).

- Do not lay thin mats under walls and fixed obstacles.
- Do not place objects that will cause a thermal block e.g. furniture, thick carpets, etc. Min. 6 cm air is required
- The flooring must not have a thermal insulation value of more than R < 0.18  $m^{2}$ K/W corresponding to 1.8 Tog.
- Keep thin mats clear of insulation material, other heating sources and expansion joints
- Position the thin mat so that it is at least half the C-C distance from obstacles.
- Thin mats must always be in good contact with the heat distributor (e.g. concrete)
- Always roll out thin mats with the heating cables facing up.
- Ensure not to crease the thin mat.
- If additional securing is required hot melt glue, double adhesive tape or tile glue can be used.
- When the thin mat reaches the area boundary, cut the liner/net and turn the mat before rolling it back. **Do not cut the heating cable**.
- The thin mat and especially the connection must be protected from stress and strain.

#### 4 Application overview

The thin mats listed below all comply with the EN/IEC 60335-1 standard + EN/IEC 60335-2-96.

- DEVIheat<sup>™</sup> 100S
- DEVIheat<sup>™</sup> 150S
- DEVIcomfort<sup>™</sup> 10T
- DEVIcomfort<sup>™</sup> 100T
- DEVIcomfort<sup>™</sup> 150T

- DEVImat<sup>™</sup> 70T
- DEVImat<sup>™</sup> 100T
- DEVImat<sup>™</sup> 150T
- DEVImat<sup>™</sup> 200T

# Regarding other types of applications please contact your local DEVI sales company.

5

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