



User Instructions - Insulated PTC Heaters

Product Group: Insulated Heaters – HRP 400 - 600 V

1. Safety Information

This heater is a component for further installation in a ready mounted customer system and only intended for the use as such. It is necessary to ensure that safety aspects are realized by a proper installation and connection in the final application.

Warnings:

- Never perform any works on the heater while it is energized.
- The heater is designed with an additional insulation, but an additional protective earth connection is recommended.
- Do not touch the heater during operation, otherwise you could burn yourself.
- The heater will remain hot for several minutes after switching off; allow it to cool down before touching or removing it.
- Operation with insufficient air flow will reduce the functionality and service life.
- The applied heater identification shall not be removed or changed.
- 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. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

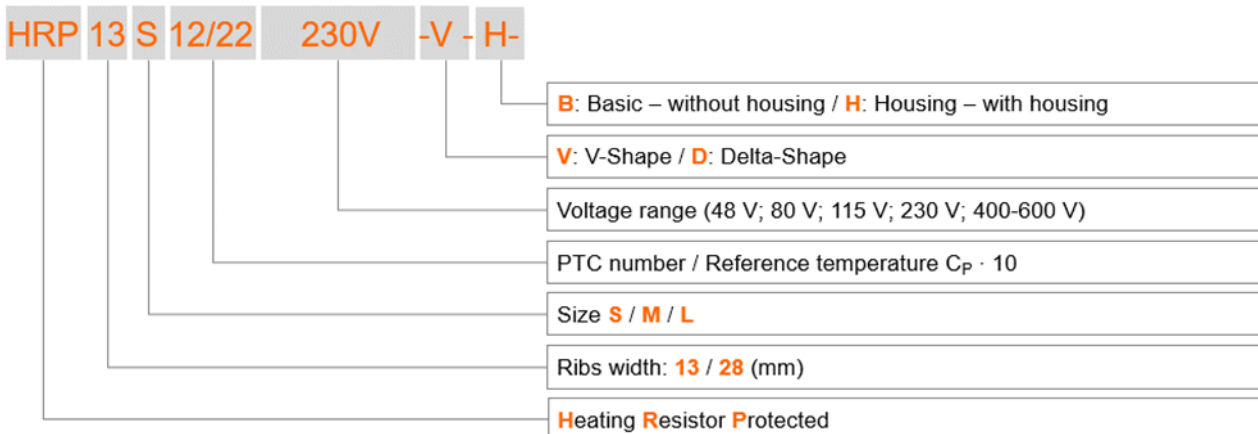
2. General

Design:

The insulated HRP heater is composed of several insulated PTC heating profiles, aluminium fins, as well as connecting profiles (optional) and end rails. These are mechanically connected to each other. Depending on the variant they can also come with a plastic end plate (PPS).

There are three standard sizes available (S, M, L). Detailed information can be found in the product specification.

Product Key:



Application:

The insulated HRP heater is intended to heat up moving air streams.

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3. Identification of the Product

These user instructions apply to different design variants of the product range; all of them however with identical basic design. For identification, all heaters are marked.

4. Modification of the Product

It is not admissible to modify the components in their basic structure or function.

Accessories:

The product can be equipped with various accessories (mounting slider, temperature limiter). For more information about the accessories, please see the product specification.

5. Connection

When connecting the heating circuits, the polarity of the circuits or voltage type does not need to be considered. The connection of the heating circuits in series is generally not permitted (only parallel connection).

The heater can be mounted via the plastic end plates (only variant: -H-) or via optionally available mounting sliders. Furthermore, customer-owned assembly solutions via the end rail are possible. In this case, please take a thermal expansion of the heater during operation into account. Detailed wiring and mounting instructions are included in the product specification.

6. Installation Instructions

- The installation shall be carried out by trained and qualified personnel only.
- Mounting of the heater shall only be done through the holes in the plastic end plates or other fixing elements (mounting slider). Existing holes shall not be manipulated, nor should additional holes be added. If customer-owned fixing solutions are used, the manufacturer of the heater can be asked for advice in case of doubt.
- For a proper heat transfer, the heater must be fully streamed with air. The minimum airflow is 30 m³/h.
- When connecting to a power supply, the national regulations and guidelines for accident prevention must be met.
- It is recommended to use a fuse in the electrical main supply line.
- During maintenance and assembly works, the component must be fully disconnected from the net. This shall happen according to relevant regulations.
- When connecting to the local power supply, please make sure that the mains voltage corresponds to the electrical information on the heater. The specified voltage shall not be exceeded.
- The safety temperature limiter (optional) shall be checked on its function when the heater is put into operation.
- Safety for the end user must be ensured by a safe and standard-conforming installation of the component.
- The connection cables shall not come into contact with the heater or be directed over it.
- The strands or connections correspond to the structure of an internal cabling.
- The heater shall not be installed close to flammable materials and adjacent parts shall be selected to withstand the maximum heater temperature of 230 °C (directly on the heater, in case of air flow failure).
- The heater is not suitable for use in aggressive, corrosive or explosive environments (e. g. salty marine air, coal dust containing air, sulphurous air).

7. Before Use

Storage:

The originally packed heating element can be stored under the following conditions:

- Ambient temperature: -40 to +65 °C
- Humidity: max. 95 % (non-condensing)

Unpacking:

- Check the box for damage
- Carefully remove the component from the box
- Check component for external damage
- Dispose of packing material according to local directives

Operating Conditions:

- Ambient temperature: -20 to +65 °C
- Humidity: max. 95 % (non-condensing)

8. Operation of the Product

When the heater is switched on for the first time, a slight smoke emission/smell could develop.

It is necessary to operate the heater in a dust-free environment or to use a suitable air filter.

Heating circuits must not be operated separately.

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9. Maintenance

This product is maintenance-free. A regular cleaning of the heater surface, as well as a visual check on possible damages is recommended. In case of malfunction, damage or failure of the heater, it shall be replaced completely.

10. Repair

This product cannot be repaired. In case of a defect, the entire component must be replaced.

11. Disposal if Not in Use or Defect

Disposal according to local legislation.

12. Product Conformity

This product can meet the following National/European regulations when properly installed:

- Low Voltage Directive
- EMC Directive

This Product complies with RoHS Directive

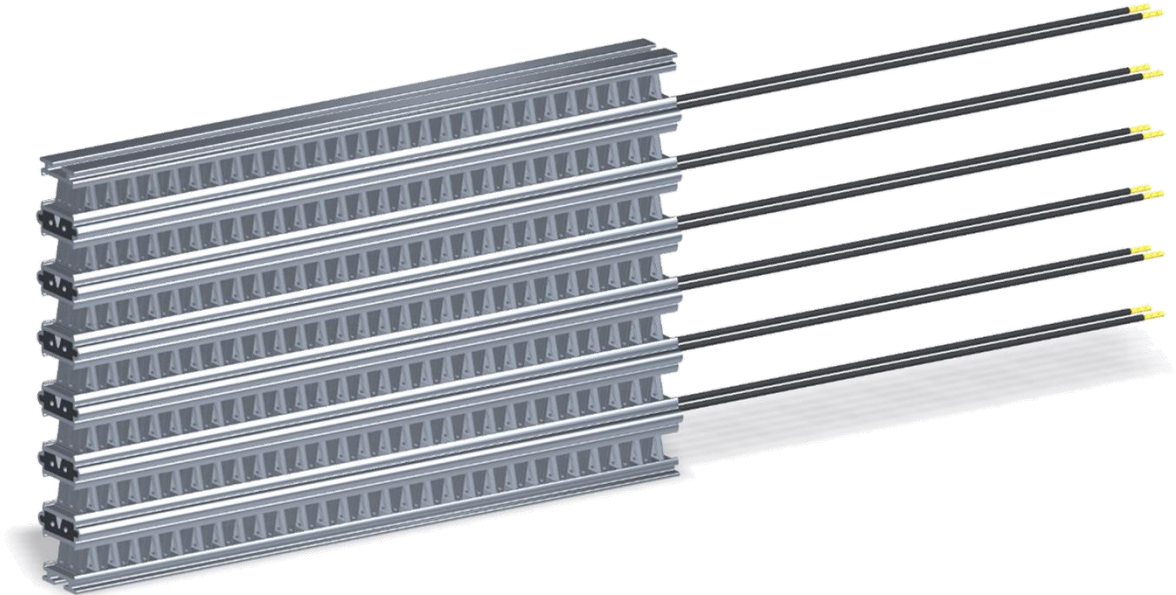
The information given does not release the customer from his own application tests.

Elementary component for which standard-compliant and safe operation in the end application must be ensured.

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**Heating Resistor Protected HRP
with nominal voltage 400-600V AC/DC
Maximum allowed voltage 900V**

The operation of this component above 600V must be verified in the customer application (end-use application).

In addition to validation, the installation must comply with relevant local regulations, technical directives and recognized standards.

**Heizregister isoliert HRP
mit Nennspannung 400-600V AC / DC
Maximal zulässige Spannung 900V**

Ein Betrieb dieses Bauelements über 600V muss in der Kundenanwendung (Endanwendung) verifiziert werden.

Neben der Validierung muss die Installation den einschlägigen örtlichen Vorschriften, technischen Richtlinien und anerkannten Normen entsprechen.

November 2020