

User Manual

Electric Heating Element

KTX 2

User Manual

Our products have been designed and manufactured in such a way to ensure that all quality, functionality and aesthetic requirements are met. We would like to congratulate you on the purchase of this great product and wish you a pleasant experience with it.

Electric radiator

Guide to safe installation and use.

1. Do not install the heater under an electrical socket point.
2. Your electric heater should be filled with a carefully measured amount of liquid. In the case of loss of heating medium, or in any other case which demands its supplementation, contact your supplier.
3. The device is not equipped with an external temperature controller*. Do not use the device in a small room if unsupervised disabled or incapacitated individuals are inside it. Only use the device if those individuals are under constant supervision.

*Does not apply to selected models. Ask your supplier for details.

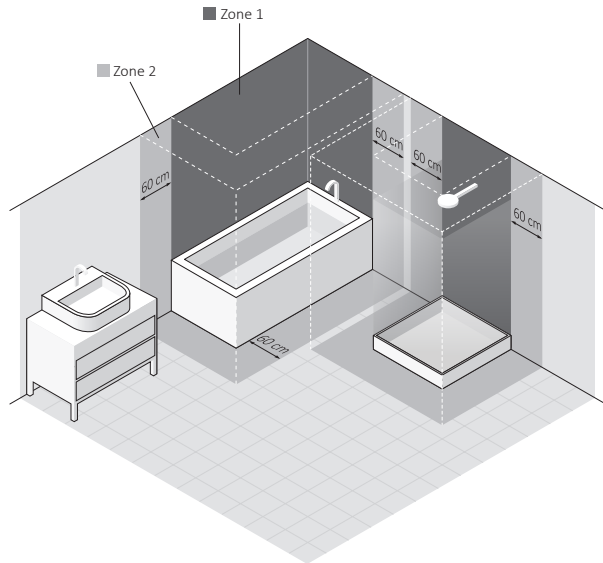
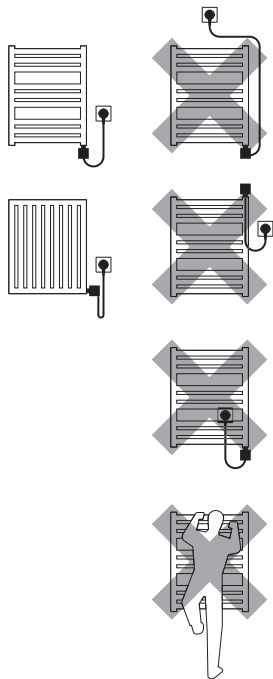
4. Electric heater is not a toy. Children under the age of 3 should not be allowed within close proximity of the device without the supervision of an adult.

Children aged 3 to 8 should only be allowed to operate the heater when it has been properly installed and connected. The child must be under adult supervision or have been trained to safely operate the device while understanding the risks.

5. Note: Some parts of the radiator can be very hot and can cause burns. Pay special attention to the presence of children or people with disabilities.
6. If the device is used as a clothes and towel dryer, ensure that the fabrics drying on it have only been washed in water, avoiding contact with any harsh chemicals.

7. To ensure the safety of very small children, install the electric dryer so that the lowest tube is at least 600 mm above the floor.
8. The device should only be installed by a qualified installer in accordance with the applicable regulations regarding safety and all other regulations.
9. All installations to which the device is connected should comply with regulations applicable in the country of installation and use.
10. Extension leads or electric plug adapters should not be used in order to supply power to the heater.
11. The electric installation to which the heater is connected should have the right current differential and overcurrent relay (R.C.D.) of 30 mA. With the permanent installation (cable connection without plug) it is also mandatory to have an omni-pole cut-out for disconnecting the device on all poles, by points of contact with the clearance of 3 mm.

12. The device version labelled PB or MS can be installed in bathrooms in zone 1, as defined by applicable law, subject to any additional regulations concerning electrical installations in wet areas. Other versions of the device can be installed in Zone 2 or beyond.
13. The device is recommended for use solely as described in the manual.
14. Ensure that the heater has been installed on a wall in accordance with its installation manual.
15. Please forward this instruction manual to the end user.



Electric Heating Element

Safety requirements — installation

1. Fitting and connection of the heating element should only be performed by a qualified installer.
2. Connect the unit to a sound electrical installation (see the ratings on the heater).
3. Switching on the heating element in the open air to test the device is permitted for a maximum of 3 seconds.
4. Never test a heating element that is already installed. Do not turn the heating element on in an empty radiator!
5. Ensure that the power cord does not touch the hot parts of the heating element or radiator.

6. Before installing or removing the device, make sure it is disconnected from the power source.
7. Do not open the device — any interference with internal components will invalidate the warranty.
8. The heating element's power output should not exceed the radiators power output for the parameters 75/65/20°C.
9. The pressure in the radiator must not exceed 1 MPa (10 bar). Ensure that an air cushion is preserved in electric radiators. In central heating systems, leave one valve open to prevent pressure build up due to the thermal expansion of the liquid.
10. The device is intended for home use only.
11. Fitting and Installation of the device must be carried out in accordance with all local regulations for electrical safety, including installa-

tion within permissible locations only. Observe bathroom electrical zone regulations.

Safety requirements — use

1. The heating element must be fully submerged in the heating liquid during its operation.
2. Regularly check the device for damage to ensure it is safe to use.
3. If the power cord is damaged the device should not be used. Unplug the device and contact the manufacturer or distributor.
4. Do not allow flooding into the heating element casing.
5. Do not use the heating element in heating systems where the water temperature exceeds 82°C.

6. The heating element and radiator can heat up to high temperatures. Please be cautious — avoid direct contact with the hot parts of the equipment.
7. Do not open the heating element casing.
8. When operating the heating element in a radiator connected to a central heating system, always leave one of the valves open.
9. Ensure that minors aged 8 and above or those with a physical or mental disability are supervised if operating the device.
10. The device is not a toy. Keep it out of the reach of children.
11. The device must be disconnected from the mains during cleaning and maintenance.
12. Cleaning of the equipment by children under 8 years of age is only permitted under appropriate supervision.

Intended use of device

The heating element is an electric device intended solely for installation in radiators (standalone or connected to the central heating system) to serve as space heaters, or clothes and towels dryer.

Heating element power output should be matched with radiator output for parameters of 75/65/20°C.

Technical information

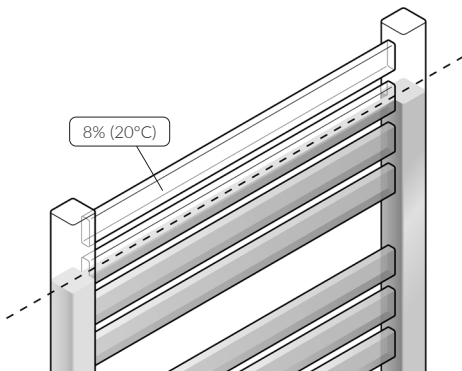
- Model markings**
- PW (Straight cable with plug)
 - PB (Straight cable without plug)*
 - SW (Spiral cable with plug)
 - MS (screw connection + on/off switch)*
- * Device intended to be connected permanently to the system*

Power supply	230 V / 50 Hz
Heat outputs available	120, 200, 300, 400, 600, 800, 1000 [W]
Insulation class	Class I
Towel rail connection thread	G 1/2"
Casing protection class [IP]	IPx4: KTX-1 (all versions), KTX-2...4 — only the MS version IPx5: KTX-2...4 (except the MS version)

Power output of heating rod [W]	120	200	300	400	600	800	1000
Length of heating rod: [mm]	325	285	310	345	375	485	575

Installation or removal

Detailed information demonstrating the different ways of installing or removing a radiator heating element is available from the manufacturer or importer (see footnotes at the end of the manual). Below we list some basic requirements and principles which must be followed to ensure long term, reliable operation of the product.



Before installation or first use:

1. Read the chapter *Safety requirements – Installation*.
2. Fit the heating element using the correct spanner (size  24).
3. The heating element must be installed at the bottom of the radiator, perpendicular to the radiator pipes, while preserving space for the proper circulation of the heating medium.
4. Use a suitable heating medium for filling the electric radiator, i.e. (water, special products based on water and glycol for use in central heating systems, or oil which complies with the requirements of the manufacturer of the radiator and heating element).
5. Do not switch the heating element on if it is not fully immersed in radiator heating medium (applies also to the first use)!
6. Make sure an adequate air cushion is present to protect against excessive pressure build up within the electric only radiator (or leave one of the radiator valves open in central heating system).
7. When filling the radiator with hot liquid insure that the liquid temperature does not exceed 60° C.

8. Follow the subsequent guidelines when connecting the electrical installation:
 - a. Brown wire — live connection to the circuit (L).
 - b. Blue wire — connect to neutral (N)
 - c. Yellow & green wire — earth connection (PE).
9. Before filling the radiator with heating medium, ensure that the heating element is fitted properly and that it is water tight.
10. In central heating installation radiator must be fitted with the valves enabling disconnection of the radiator from the rest of the system.
11. The temperature of the heating agent in the central heating system must not exceed 82°C!
12. For detailed installation hints — see the last pages of this manual.

Notes prior to removal:



1. Disconnect the device from electric circuit and ensure that the radiator has cooled down before you start disassembling the radiator.
2. Release the screw at the back of the controller casing.
3. Take off the controller from the heating element.

- 4a. In case of dual-fuel radiator, close the valves and empty the radiator.
- 4b. Be careful — electric only radiator filled with heating liquid may be very heavy. Ensure all necessary safety measures.
5. For disassembling the heating rod use a spanner no 24.

Product disposal



This product should not be disposed of as general waste but should be brought to the appropriate collection point for recycling of electric and electronic devices. This information is provided by the sign on the product, user manual and packaging. Information on the appropriate point for used devices can be provided by your local authority, product distributor or the store from where the product was purchased. Thank you for your effort towards protecting the environment.

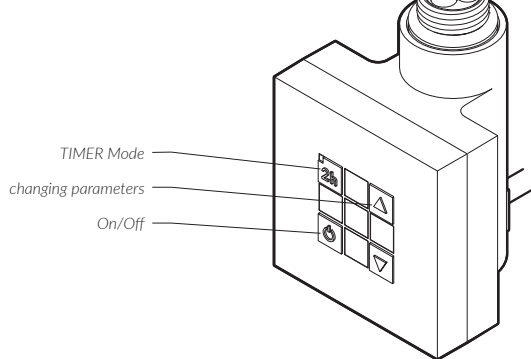
Maintenance

- Always disconnect the device from electricity before you start cleaning the radiator or heating element.
- Recurrently check level of the heating medium inside the radiator.
- Clean the item with a dry or damp cloth with a small amount of detergent without any solvents or abrasive agents.

Warranty terms & conditions

1. The subject of this warranty is a Terma electric heating element. The product name and characteristics are specified on the packaging.
2. By accepting the device on purchase, the Client confirms that the product is of full value. The Client should immediately inform the Seller of any discovered faults — otherwise it will be understood that the product was faultless at the time of purchase. This refers especially to any faults or damages of the control panel case.
3. The Warranty for period for the product is 24 months from the date of purchase, but no longer than 36 months from the date of production.
4. The proof of purchase (receipt, invoice, etc.) constitutes the basis for warranty claims. Lack of the proof of purchase allows the manufacturer to reject a warranty claim.
5. This warranty does not cover any faults that are due to:
 - incorrect (not in accordance with the manual) installation, use or disassembly,
 - incorrect use of the heating element (i.e. for any purpose that is not specified by the Manufacturer as intended for this type of product),
 - product being handled by unauthorized persons,
 - fault's or damages caused by the Client after having purchased and accepted the product.
6. The Central Heating installation should be fitted with lock-shield valves, enabling disassembly of the radiator or the heating element and its control head without the necessity of emptying the whole system of the heating agent. Any problems or expenses arising from the absence of lock-shield valves in your installation cannot be used as grounds for any claims against the Supplier or Manufacturer of the device.
7. The Manufacturer is obliged to remove any production fault within 14 working days of receipt of the faulty device at the Manufacturer's premises.
8. Should the repair be impossible, then the manufacturer is obliged to replace the faulty product with a new, full-value unit of identical parameters.
9. The attached User Manual is an integral element of the Warranty. Please read it carefully prior to the installation and use of the product.

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Heating element unit heats the radiator that it is installed in and precisely controls its temperature at the same time. The device has 5-step temperature regulation (buttons:  and ) within temperature range from 30-60 degrees Celsius.  button is used to turn the device on and off and to deactivate the TIMER Mode (if active).

Built in temperature sensor protects the user from getting burnt by limiting the maximum operating temperature to 60°C. Additionally, a thermal fuse, built into the heating rod, protects your radiator from critical overheating (the fuse can get damaged in temperatures higher than 82°C — this is especially important for heating elements installed in dual fuel radiators, connected to central heating system).

Construction of the heating element unit as well as physical characteristics of the heating agent cause that the bottom pipes (especially the two at the very bottom of the radiator) may have a lower temperature than the remaining parts of the radiator — this is a normal phenomenon.

Turning the device on does not mean that it uses the same maximum power for the whole time it is on. On turning the device on, it operates with the nominal power for a short period of time in order to heat up the radiator to the set temperature. After that, it turns itself on and off periodically, using only as much energy as it is required to maintain the set temperature of the radiator for current external conditions.



Setting 1



Setting 2



Setting 3



Setting 4



Setting 5

TIMER mode

TIMER Mode is activated by pressing the button  (yellow diode turns on).

1. TIMER Mode can be used to TURN OFF the device:
Press button  while the device is on — the device will turn off after 2 hours.
2. TIMER Mode can also be used to TURN the device ON:
Turn the device off using the button , press the button  — the device will turn on after 2 hours, with the same temperature it was set to prior to being turned off. If the required temperature is different to the one from before when the device was turned off, set the required temperature before turning the device off.

TIMER Mode can be turned off in at any time by pressing button.

ANTI-FREEZE function

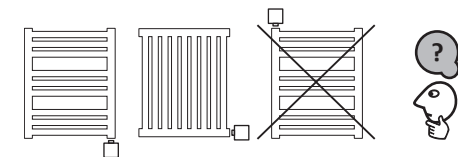
When the device is off or in the TIMER mode but still has a live feed, and the temperature inside the room falls down below 6°C the device will automatically turn on and start heating. This function will prevent the heating medium inside the radiator from freezing. Yellow diode is flashing until the temperature reaches 6°C.

Problem solving

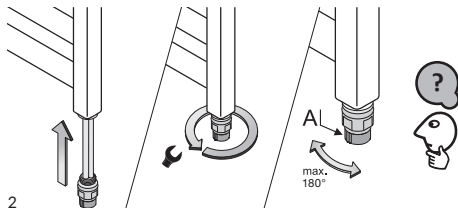
Problem	Possible cause	Solution
Device is connected, no diodes are on, heating element does not heat.	Device is not turned on.	Turn the device using  button.
	Connection problem.	Check the connection, plug and the socket.
Heating element does not heat, diodes are flashing alternately.	Device signals malfunction, temperature sensor is damaged.	Turn the device off, wait for the radiator to cool down and turn it back on.
Heating element does not heat, diodes indicate correct operation.	Thermal fuse is burnt or heating element is damaged.	Turn the device off and back on.
Heating element heats although the device has been turned off with the  button.	Electronics damage.	Disconnect the device from its electric supply, wait for the radiator to cool down and turn it back on.
If the problem persists, please contact your local Distributor.		

A Installation

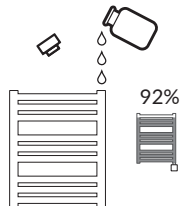
Electric only Radiator



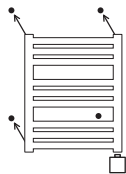
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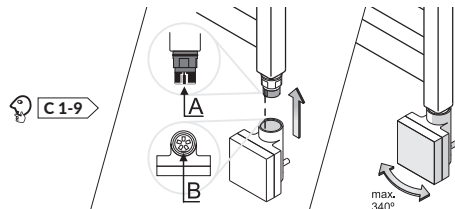
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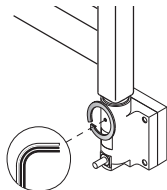
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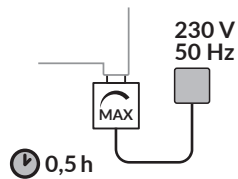
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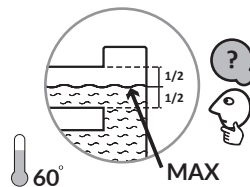
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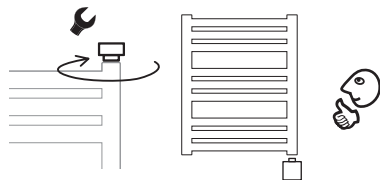
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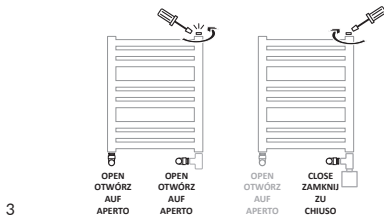
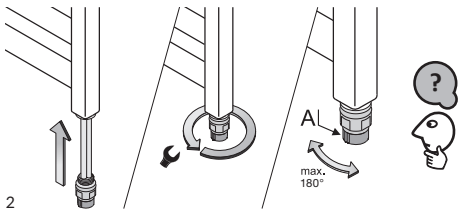
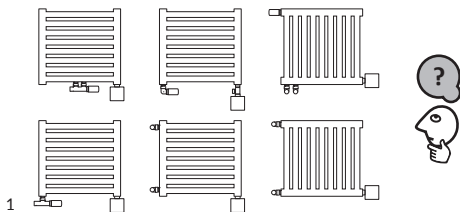
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B Installation

Dual Fuel Radiator

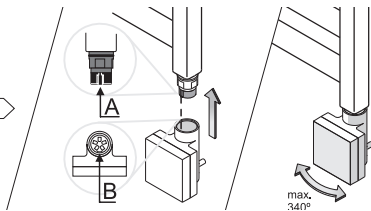


HINT: Do not turn on the heating element and your central heating at the same time.

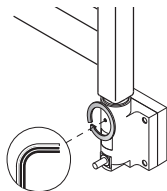


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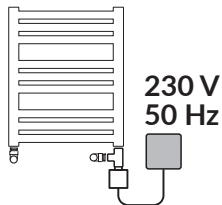
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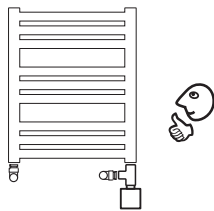
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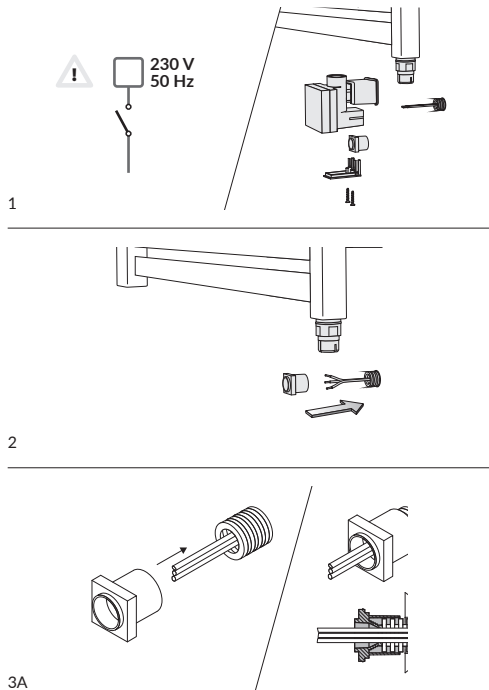


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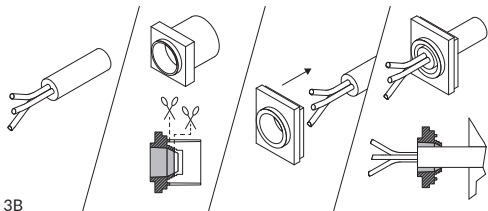


C Installation

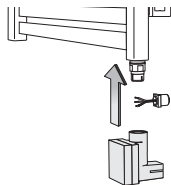
Installation of the MS version
of device (without the power supply
wire)



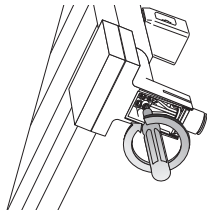
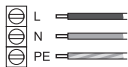
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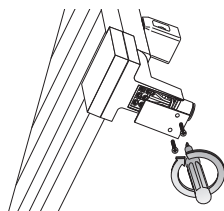
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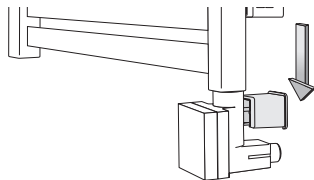
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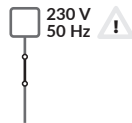
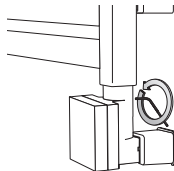
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