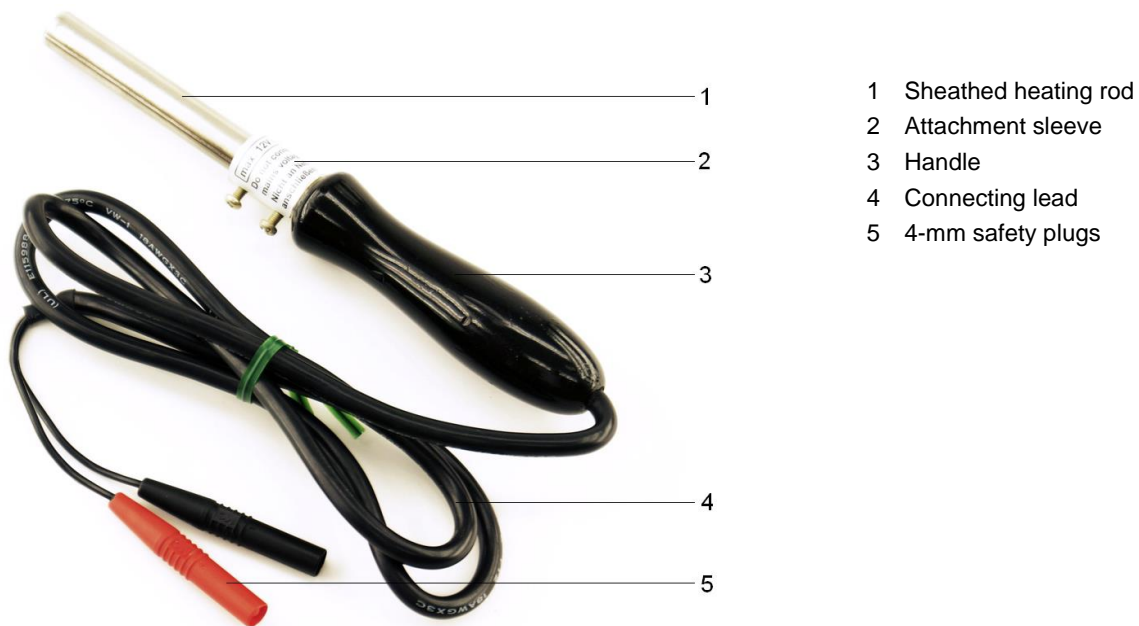


Heating Element, 12 V 1003258

Instruction manual

08/17 UD



- 1 Sheathed heating rod
- 2 Attachment sleeve
- 3 Handle
- 4 Connecting lead
- 5 4-mm safety plugs

1. Safety instructions

The heating element conforms to all safety regulations for electrical measuring, control, monitoring and laboratory equipment, as specified under DIN EN 61010, Section 1. It is intended for operation in a dry environment, suitable for the operation of electrical equipment and systems.

Safe operation of the equipment is guaranteed, provided it is used correctly. However, there is no guarantee of safety if the equipment is used in an improper or careless manner.

If it may be assumed for any reason that non-hazardous operation will not be possible (e.g. visible damage), the equipment should be switched off immediately and secured against any unintended use.

- Use this equipment in dry rooms only.



The equipment should only be connected to a suitable power supply. Do not plug the lead straight into the mains.

- To ensure safe operation of this equipment, use the recommended DC power supply to supply power.
- Do not pull on the connecting lead to the equipment. In particular, you must not pull the connecting lead out of the handle.
- Make sure that the heating rod is so firmly screwed onto the handle via the attachment sleeve that it cannot fall off.



The heating rod becomes hot during operation and there is a risk of burns.

- Do not touch the equipment during operation, or if necessary, touch only the handle.
- Do not use the equipment to heat liquids.
- Allow the equipment to cool when the experiment is finished.

2. Description

The heating element is for electrically heating the calorimeter cylinder from set 1003253.

The equipment consists of a sheathed heating rod which is attached to a handle via a connecting sleeve. It also has a connecting lead terminating in 4-mm safety sockets.

3. Technical data

Max. Operating voltage:	12 V
Max. power:	50 W (nominal)
Length of tube:	150 mm
Length of heating element:	70 mm
Electrical connection:	4 mm safety sockets
Length of lead:	95cm
Weight:	120 g approx.
Protection category:	IP20
Operating temperature:	0...150°C
Storage temperature:	-20...70°C
Relative humidity:	< 85% without condensation

4. Operation

- Connect the heating element to the power supply using the 4-mm safety plugs. Polarity is not important.
- In order to ensure good contact between the calorimeter cylinder and the heating element and prevent overheating of the heating element, thermal grease should always be used.
- Plug the power supply into the mains and turn it on. Set a voltage of 12 V. Make sure that the power supply can provide a current of approximately 4 A.
- After the experiment is finished, first turn down the voltage on the power supply, then unplug the 4-mm safety sockets at the end of the connecting lead from the power supply sockets.
- Allow the heating element to cool.

5. Additionally recommended equipment

- 1 Transformer with Rectifier 2/ 4/ 6/ 8/ 10/ 12/ 14 V, 5 A @230 V 1003558
- or
- 1 Transformer with Rectifier 2/ 4/ 6/ 8/ 10/ 12/ 14 V, 5 A @115 V 1003557
- 1 Set of 4 Calorimeter Cylinders 1003253

6. Storage, cleaning, disposal

- Keep the equipment in a clean, dry and dust-free place.
- Before cleaning the equipment, disconnect it from its power supply.
- Do not clean the unit with volatile solvents or abrasive cleaners.
- Use a soft, damp cloth to clean it.
- The packaging should be disposed of at local recycling points.
- Should you need to dispose of the equipment itself, never throw it away in normal domestic waste. If being used in private households it can be disposed of at the local public waste disposal authority.
- Comply with the applicable regulations for the disposal of electrical equipment.

