



Digital Display Heating Mantle FM-DHM-A101

www.fison.com
info@fison.com

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1. Safety Measures

- When working, where the personal guard to avoid the risk from:
 - Splashing and evaporation of liquids
 - Release of toxic or combustible gases.
- Set up the instrument in a spacious area on a stable, clean, non-slip, dry and fireproof surface; do not operate the instrument in explosive atmospheres, with hazardous substances or underwater.
- Temperature must always be set to at least 25°C lower than the fire points of the media used.
- Beware of hazards due to:
 - Flammable material or media with a low boiling temperature
 - Overfilling of media
 - Unsafe container
- Process pathogenic materials only in closed vessels.
- Check the instruments and accessories beforehand for damage each time you use them. Do not use damaged components. Safe operation is only guaranteed with the accessories described in the “Accessories” chapter. Accessories must be securely attached to the device and cannot come off by themselves. Always disconnect the plug before fitting accessories.
- Ensure that the external temperature sensor is inserted in the media to a depth of at least 20mm.
- When using metal vessels, do not place the temperature sensors on the bottom of the vessel. Placing sensors on the vessel bottom can cause excessively high temperatures to be measured especially in media that have poor conductivity. The tip of the measuring sensor must be at least 5mm from the vessel bottom, 10mm is ideal.
- The instrument can only be disconnected from the main power supply by pulling out the mains plug or the connector plug.
- The voltage stated on the label must correspond to the main power supply.
- Ensure that the mains power supply cable does not touch the heating base plate. Do not cover the device.
- Keep away from a high magnetic field.

2. Introduction

Digital Display Heating Mantle FM-DHM-A101 is a PID-controlled benchtop unit having a capacity of 100 ml. Features a nichrome wire heating element suspended within high-quality aluminium silicate cotton fiber insulation. With adjustable sensor racks and stainless rods, it can acquire a maximum temperature of 450°C. Enhanced with unique ventilation slots our mantle can operate continuously without heating.

3. Features

- ✓ In-built digital display
- ✓ Powered with lights for heat and power indication
- ✓ PT-100 temperature sensor
- ✓ Capable of continuous work
- ✓ Cold-rolled steel body
- ✓ Anti-corrosive coating
- ✓ Unique ventilation slots

4. Specifications

Model No.	FM-DHM-A101
Capacity	100 ml
Surface Maximum Temperature	450°C
Heating Element	Nichrome Wire
Thermal Insulation	Aluminium silicate cotton fiber
Working Mode	Continuous
Power Consumption	100 W
Power Supply	AC 220 V, 50Hz
External Dimension (W × H)	220 × 165 mm
Packaging Dimension (W × D × H)	230 × 230 × 195 mm
Net Weight	2.5 kg
Gross Weight	2.8 kg

5. Applications

Our Digital Display Heating Mantle is used as a source for heating liquid samples across laboratories, industries and research institutes, petrochemical industries, agriculture, and environment protection institutions.

6. Operations

6.1 Prior to use

- Make sure the required operating voltage and power supply voltage match.
- Ensure the socket must be earthed reliably.
- Ensure the power is off.
- Plug in the power cable, ensure the power is on and begin initializing.
- Add the medium into the vessel with a stirring bar if with the magnetic stirrer function.
- Put the vessel on the work plate.
- Adjust the stirring speed and start stirring with the magnetic stirrer function.
- Observe the stirring bar and LCD if with digital function.
- Adjust the temperature and start heating.
- Observe the real temperature on LCD with the digital function.
- Stop the heating and stirring functions.

If these operations above are normal, the device is ready to operate.

6.2 Operation

- Place the equipment on the level worktable, then put the liquid container inside into the heating mantle.
- Install the Sensor Rack with Stainless Rods on the heating mantle back holder.
- Put the temperature sensor into the liquid.
- Press the **S** keyboard into the setting condition. Adjust the temperature by pressing the up and down keyboard.
- Press the **S** keyboard again to finish the temperature setting and then the equipment comes into working condition.

7. Maintenance

- Proper maintenance can keep instruments working in a good state and lengthen their lifetime.
- Be careful not to spray the cleanser into the instrument when cleaning.
- Unplug the power line when cleaning.
- Only use the cleanser that we advised as below:

Dyes	Isopropyl alcohol
Construction materials	Water containing ten side / Isopropyl alcohol
Cosmetics	water containing ten sides / Isopropyl alcohol
Foodstuffs	Water containing ten side
Fuels	Water containing ten side

8. Troubleshooting

Fault 1 Instruments can't be powered ON

- Check whether the power cable is plugged in.
- Check whether the fuse is broken or loose.

Fault 2 Temperature cannot reach a set point or stir can't be started when adjusting the control knob.

- Check whether the heating wire broke during transport.
- Check whether the controller broke during transport.

9. Accessories

S.no	Main Unit
1	Power cable
2	Stir bar



Fison Instruments Ltd

Email: info@fison.com | **Website:** www.fison.com