ENVIROSTAT MP6i (Multi-Purpose)

6kW, 230V
Frost Protection Controllers

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KEY FEATURES:

- ✓ **Easy Setup & Installation:** User-friendly design simplifies installation.
- ✓ **Included 2m Sensor:** Built-in encapsulated 10kΩ NTC thermistor probe ensures accurate temperature monitoring.
- ✓ **Soft Start Function:** Gradual switch-on reduces inrush currents, extending component life.
- ✓ **Dual Temperature Ranges:** Adjustable from -10°C to 60°C and 60°C to 130°C for diverse applications.
- ✓ **Solid State Reliability:** Maintenance-free operation ensures long-term dependability.
- ✓ **IP65 Ingress Protection.**
- ✓ **High Current Capacity:** Handles up to 25A, supporting powerful heating systems.
- ✓ **Output & Load Fault Detection:** Immediate alerts for any operational issues.
- ✓ **BMS Alarm Integration:** Compatible with Building Management Systems, ensuring system-wide safety and control.

APPLICATIONS:

The MP6i is perfect for applications requiring reliable temperature control and frost protection, such as:

- ➢ Industrial pipework
- ➢ Infra-Red heating systems
- ➢ Commercial heating installations

The **Envirostat MP6i** is a versatile and energy-efficient electronic thermostat designed for frost protection and temperature regulation in various applications. Ideal for protecting pipework from freezing and ensuring optimal performance of heater tapes or Infra-Red (IR) quartz lamps, the MP6i offers robust, reliable temperature control.

The **Envirostat MP6i** is designed to offer superior frost protection where thermal insulation alone is insufficient. With its high power switching capacity of up to 6kW, this controller ensures that your pipes remain ice-free, reducing the risk of damage and maintaining the efficiency of heating systems.

Ideal for industrial and commercial applications, the MP6i features two temperature ranges, a robust soft start function, and comprehensive fault detection capabilities. Whether you need reliable frost protection or precise temperature control, the Envirostat MP6i delivers consistent performance.

TECHNICAL SPECIFICATIONS

(All models unless otherwise stated)

Supply voltage	230V ac +/- 10%
Supply frequency	50Hz
Power switching capacity	6kW max.
Load current	25A max.
Temperature range	-10-60°C and 60-130°C
Temperature accuracy	1°C
Current consumption	16mA
Soft start duration	1 second
Output and load fault detection	Only on FP6i model (see ALARMS section for details)
Power and status LED indicators	(see ALARMS section for details)
Supply terminal connections	0.2 to 6mm² rising clamp
Gland cable entry	10.5 & 8mm Ø *(Note: cable MUST be round to ensure IP rating)*
Ambient operating temperature	-20-40°C
Ingress protection (IP) rating	IP65
Built-in sensor	Encapsulated 10kΩ NTC thermistor probe, 2m long
Sensor monitoring Sensor terminal connections	For open or short circuit - unit shuts down and alarms 0.1 to 1.5mm² Rising clamp
Senor mounting	To secure to pipe etc., use appropriately sized nylon cable ties or metal strap
Building Management System (BMS)	Alarm relay normally energised when the system is 'healthy'
Dimensions	
Enclosure dimensions	120(W) x 120(L) x 65(H)
Fixing holes and centres	4 x 4.8mm Ø holes on fixing centres 110(W) x 90(L)mm

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Product Setup

Connect the mains supply and load to the controller using the appropriate round section cable. Position the sensor to measure the air temperature where required or use cable ties or metal strap (Jubilee- clip type) to fix the sensor to a pipe etc.

Operation

Set the Set Point Temperature using the main knob.

When the ambient temperature drops below the set point temperature, the load output soft-starts for 1 second before the main output relay energises, the output LED will be lit.

When the ambient temperature is equal to or greater than the set point temperature, the load output switches off and the status LED will be off.

Alarms:

The unit can detect an open-circuit or short-circuit temperature sensor. In addition to this, the unit tests the output immediately at power up and every four hours thereafter. The output will switch off momentarily during a test. Normal operation will resume once the test is complete. The Alarm relay is normally energised when the system is 'healthy'.

Faults that trigger the alarm LED to flash include:

1. Open-circuit or short-circuit temperature sensor.

2. Open-circuit load.

3. Short-circuit in the semiconductor device or relay.

4. Open-circuit in the semiconductor device or relay.

The alarm LED flashes at a rate of approximately one-tenth of a second for temperature sensor issues and half a second for output/load issues.

INSTALLATION

Mounting:

- Use the provided fixing-hole template to secure the enclosure to the wall.

- **Note:** For vertical installation, ensure the unit is mounted as shown to maintain the IP rating.
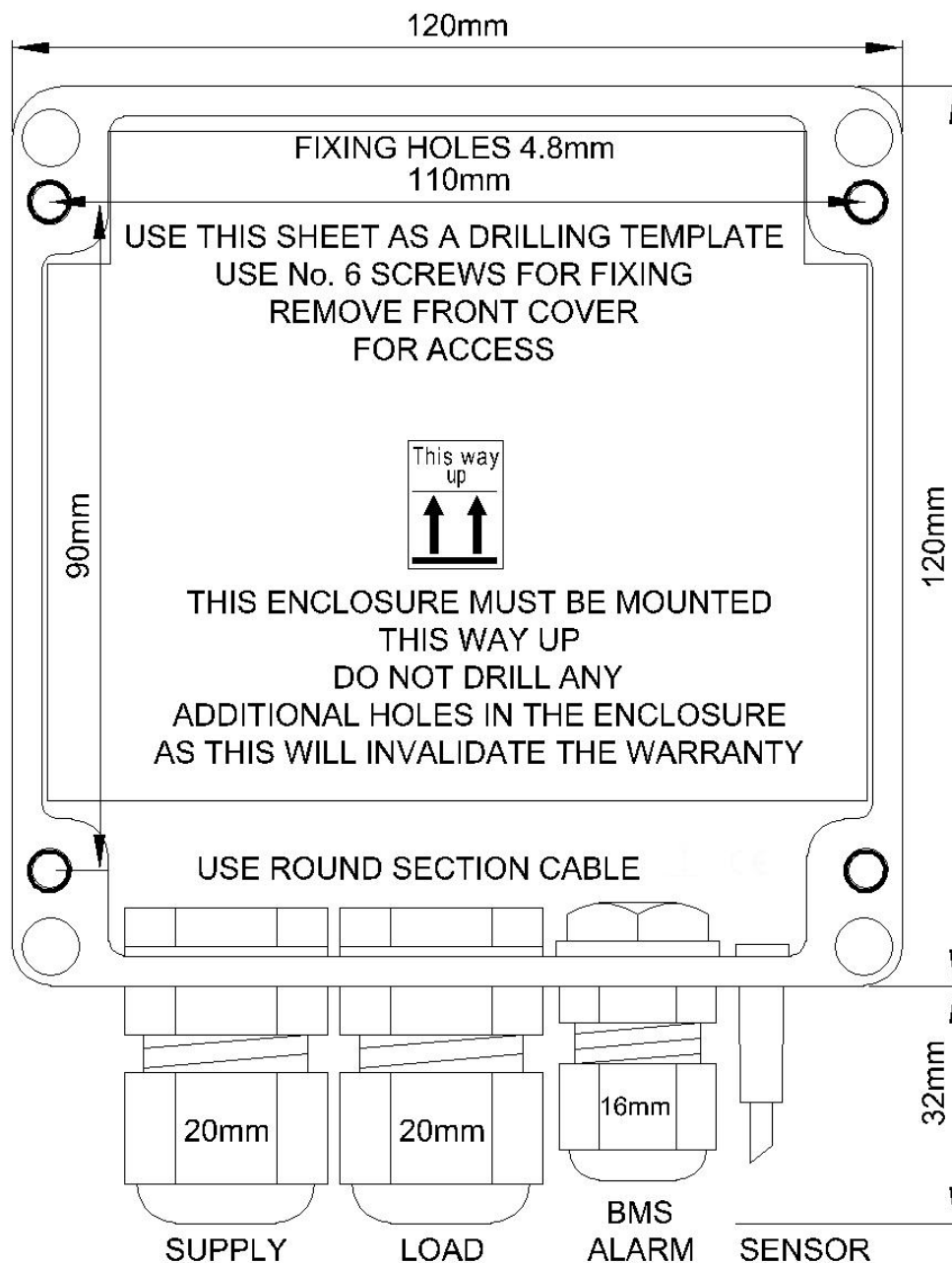

120mm

FIXING HOLES 4.8mm
110mm
USE THIS SHEET AS A DRILLING TEMPLATE
USE No. 6 SCREWS FOR FIXING
REMOVE FRONT COVER
FOR ACCESS

This way up

THIS ENCLOSURE MUST BE MOUNTED
THIS WAY UP
DO NOT DRILL ANY
ADDITIONAL HOLES IN THE ENCLOSURE
AS THIS WILL INVALIDATE THE WARRANTY

90mm 120mm

USE ROUND SECTION CABLE

32mm

20mm   20mm   16mm

SUPPLY   LOAD   BMS ALARM   SENSOR

Wiring:

Refer to the wiring diagram for connection details and cable entry points. Ensure all cable glands are properly tightened to maintain the IP rating. The control dial for setting the temperature is also illustrated in the wiring diagram.
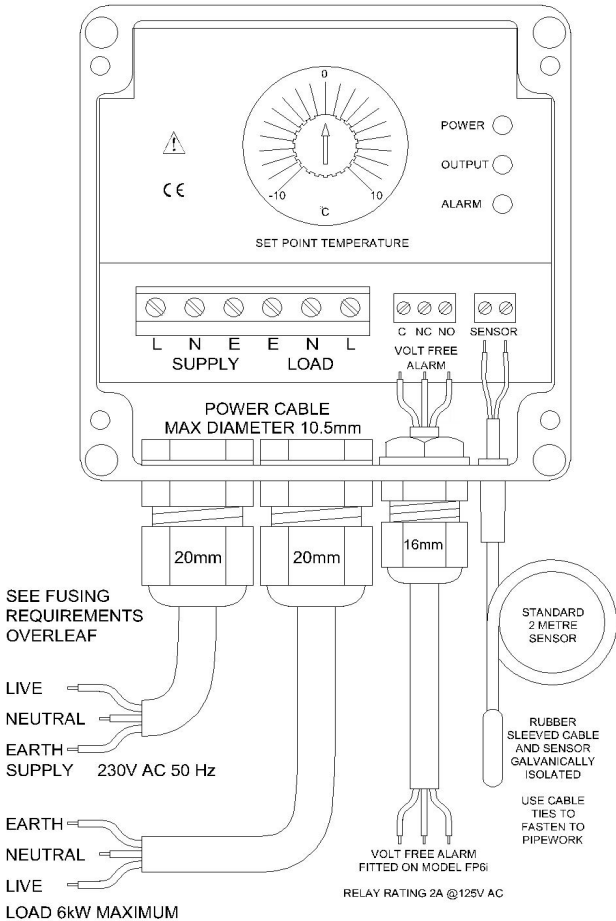
RECOMMENDATION
FUSING
It is recommended to use standard F-type quick-blow fuse or circuit breaker (MCB 'type 'B'- rated at 20A Max.) for 'in line' unit protection. (See the SRA Datasheet for further information).

DOCUMENTS
Other documents, which may be appropriate for your applications, are available on request.

Code	Identity	Description
X10255	SRA	Safety requirements: Addressing the Low Voltage Directive (LVD) including Thermal data/Cooling, Live parts warning, Earthing requirements & Fusing recommendations
P01.1	COS	UAL Conditions of Sale

NOTE: It is recommended that installation and maintenance of this equipment should be carried out by suitably qualified personnel, with reference to the current edition of the I.E.T. Wiring Regulations BS7671. The regulations contain important requirements regarding the safety of electrical equipment.

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A87353	Envirostat-MP6i (Sensor length) 6kW 230v - Frost Protection Controllers

Note: 110V model available on request. Other sensor lengths on request.