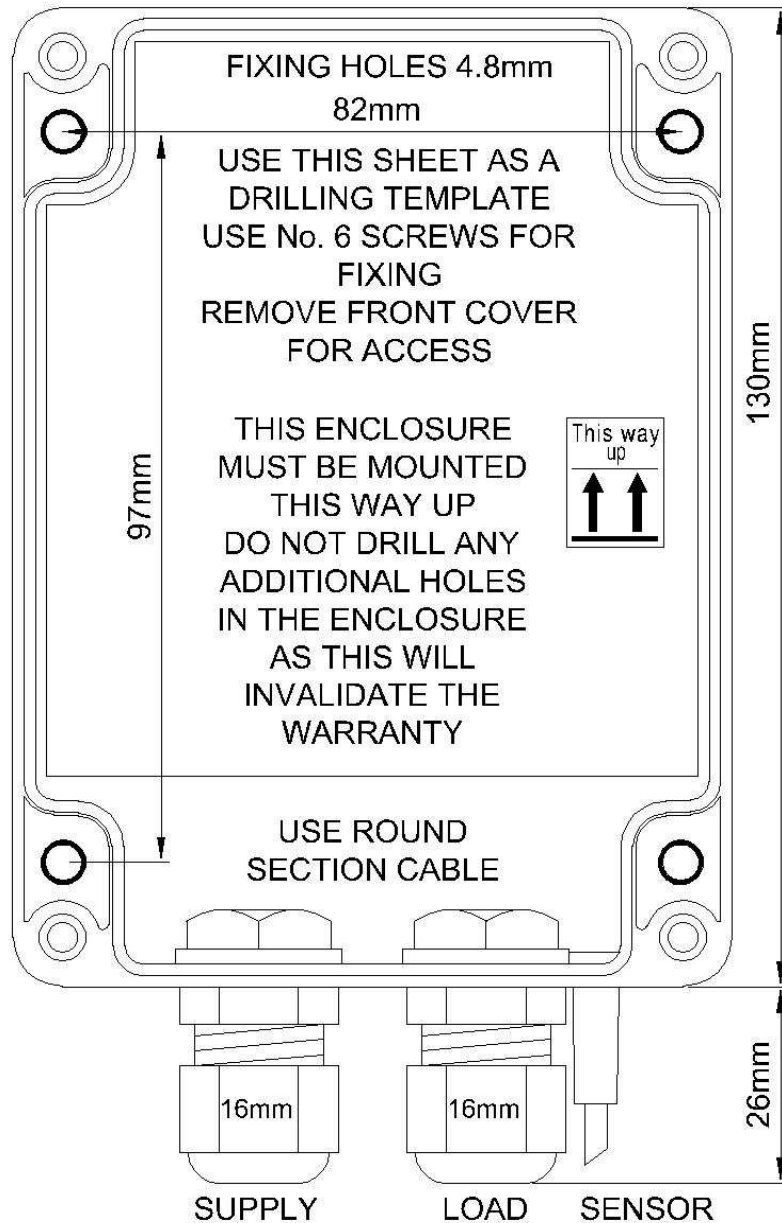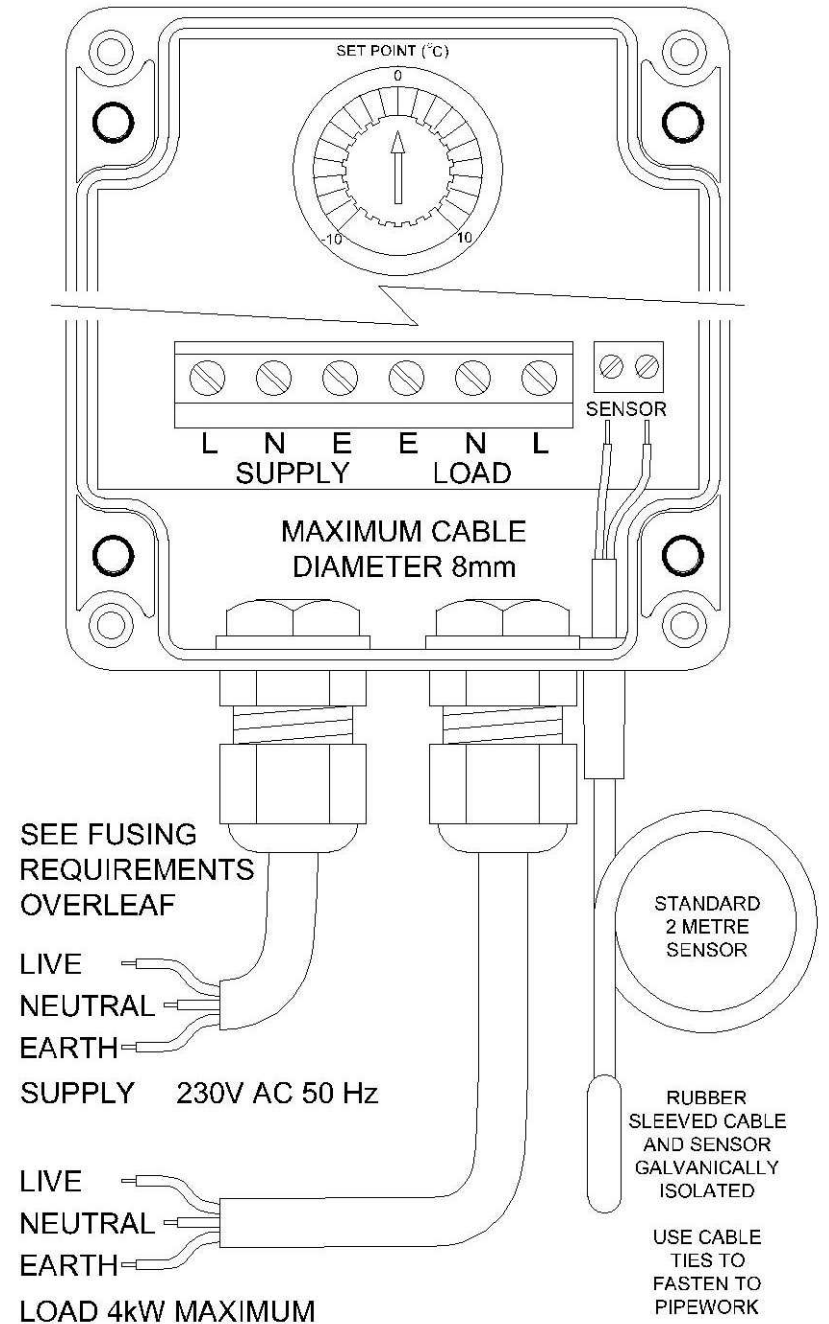## INSTALLATION MOUNTING

This is a fixing-hole template which may be used for securing the enclosure to the wall.
NOTE: If mounted in the vertical plane they MUST be as shown to ensure IP rating.

FIXING HOLES 4.8mm

82mm

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

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

This way up

97mm

130mm

USE ROUND
SECTION CABLE

26mm

16mm    16mm

SUPPLY    LOAD    SENSOR

## INSTALLATION WIRING

Diagram shows the wiring connections and cable entry – NOTE: the glands MUST be tightened to ensure the IP rating.  The 'set point' control dial is also shown.

SET POINT (°C)

0

-10    10

L    N    E    E    N    L    SENSOR
SUPPLY    LOAD

MAXIMUM CABLE
DIAMETER 8mm

SEE FUSING
REQUIREMENTS
OVERLEAF

LIVE
NEUTRAL
EARTH
SUPPLY    230V AC 50 Hz

STANDARD
2 METRE
SENSOR

LIVE
NEUTRAL
EARTH
LOAD 4kW MAXIMUM

RUBBER
SLEEVED CABLE
AND SENSOR
GALVANICALLY
ISOLATED

USE CABLE
TIES TO
FASTEN TO
PIPEWORK

## SPECIFICATIONS   *(all models unless otherwise stated)*

| | |
|---|---|
| Supply voltage | 230V AC +/- 10% |
| Supply frequency | 50Hz |
| Power switching capacity | 4kW Max. |
| Load current | 20A Max. |
| Temperature range | 0℃ to +20℃ OR 0℃ to +20℃ |
| Temperature accuracy | 1℃ |
| Current consumption | 15mA |
| Soft start duration | 1 second |
| Output & load fault detection | Only on FP4iR model |
| Power & status LED indicators | Only on FP4iR model |
| Supply terminal connections | 0.2 to 6mm² Rising clamp |
| Gland cable entry | 8mm Ø *(Note: cable MUST be round to ensure IP rating)* |
| Ambient operating temperature | -20˚C to +40˚C |
| Ingress protection (IP) rating | IP65 |
| Built in Sensor | Encapsulated 10kΩ NTC thermistor probe, 2m long |
| Sensor monitoring | FP4ER: open or short circuit - unit shuts down |
| | FP4iR: open or short circuit - unit shuts down and alarms |
| Sensor terminal connections | 0.1 to 1.5mm² Rising clamp |
| Sensor mounting | To secure to pipe etc., use appropriately sized nylon cable ties |

**Dimensions**

| | |
|---|---|
| Enclosure dimensions | 95(W) x130(L) x55((H) mm |
| Fixing hole & centre's | 4x4.8mm Ø holes on fixing centres 97(W) x82(L) mm |

### 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).

### CE MARKING

This product family carries a "CE marking" and are RoHS compliant.
For further information contact our sales desk.  (See the Declaration of Conformity).

### RECOMMENDATION

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

| CODE | IDENTITY | DESCRIPTION |
|---|---|---|
| X10255 | SRA | Safety requirements - addressing the Low Voltage Directive (LVD) including:-Thermal data/cooling; "Live" parts warning & Earth requirements; Fusing recommendations. |
| AP02/4 | COS | UAL Conditions of sale |

**NOTE:** It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.E. Wiring Regulations (BS7671) by suitably qualified/trained personnel.  The regulations contain important requirements regarding safety of electrical equipment.  (For International Standards refer to I.E.C. Directive I.E.C. 950).

### ORDER CODE:

**State part number:       ENVIROSTAT-FP4ER-230V** or **FP4iR-230V**
NOTE:  For alternative voltage requirements or alternative options please contact us directly.

CE

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## ENVIROSTAT 4kW FROST PROTECTION REVERSE-LOGIC CONTROLLER

**FP4ER/FP4iR**

**X20055**

UNITED AUTOMATION

### FEATURES & BENEFITS

o   Simple setup & installation
  o   Includes 2m long sensor
o   Soft start function (gradual switch-on)
o   Built in encapsulated sensor
o   Temperature range -10℃ to +10℃
o   Solid state reliability
o   Maintenance free
o   IP65 Ingress protection
o   Current capacity 20A Max.
o   FP4iR only
  o   Output & load fault detection
  o   Power & output LED indicators

**Alternative Options available**

o   Temperature range 0℃ to +20℃


Picture shows Model FP4iR

### PRODUCT OVERVIEW

The **ENVIROSTAT** FP4ER & FP4iR are electronic thermostats designed to give energy-efficient frost protection.
These reverse logic controllers are used in conjunction with fans, where they are required to be turned off when the ambient temperature approaches freezing point.
**FP4ER - Frost Protection 4kW** –simple temperature control functions.
**FP4iR - Frost Protection 4kW –** additional alarm features (*see above.*).

### 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 to fix the sensor to a pipe etc.

### OPERATION

On power up, when the ambient temperature is above the set point, the controller will soft start to full output and the bypass-relay will energise and the output LED will be lit (for FP4iR model only).
When the ambient temperature is equal to or greater than the set point temperature, the load output switches off and the output LED will be off (for FP4iR model only).

### ALARMS (For FP4iR model only)

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 unit can detect the following faults:
1)   Open-circuit/short-circuit temperature sensor.
2)   Open-circuit load.
3)   Short-circuit semi-conductor device or relay.
4)   Open-circuit semi-conductor device or relay.
In all above cases, the alarm LED will flash.
For the temperature sensor alarm the rate is approximately one tenth of a second and for the output/load alarm the rate is approximately half a second.