



HP50 POWER UNITS



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1. Introduction

This manual applies to the range of HP50 Power Units.

It is essential that you read and understand the complete manual before installing and using this equipment. This is important for safety and for warranty cover.

1.1 Explanation of Symbols

Warning!

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in serious personal injuries.



Caution!

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in damage to property.



Our Power Units are intended for use in industrial applications to eliminate static electricity.

It is very important that the user understands the nature of this equipment. Ensure the following warnings and information contained within this manual are read and understood to prevent injury or damage.

2. Safety

Warnings:

- Fraser static elimination equipment is designed only for neutralising surfaces with an electrostatic charge.
- Electrical installation must only be carried out by a qualified electrical engineer.
- Adequate installation earth / ground is required to ensure safe and proper operation.
- Disconnect the power supply before any installation or maintenance.
- There are no user serviceable parts inside the Power Units.
- Ensure the Bar and connecting cable are free from damage prior to installation and check periodically once in use.
- This equipment is not suitable for use in locations where children are likely to be present.

Any changes to the equipment without written consent of the manufacturer will nullify the warranty and CE approval.

3. Use

HP50 Power Units are designed for use with corresponding Fraser Static Control Equipment.



4. Checking on Delivered Equipment

The equipment leaves our factory in suitable protective packaging. Please check that it is undamaged when it arrives. If there is visible damage contact the Factory or one of our Distributors immediately, before carrying out any installation.

Check that the parts that which have been delivered are the same as you have ordered.

5. General Specification and Dimension

| Model | Number of Ports & Type of Connector | Output Voltage & Current | Input Voltage & Current | Input Frequency |
|----------|-------------------------------------|--------------------------|-----------------------------|---------------------------|
| HP50-2 | 2 HP | 5.5kV, 5mA | 115V, 0.4A 230V, 0.2A | 50/60Hz |
| HP50-4 | 4 HP | 5.5kV, 5mA | 115V, 0.4A 230V, 0.2A | 50/60Hz |
| HP50-F | 4 HP | 6kV, 5mA | 115V, 0.4A or 230V, 0.2A | 50Hz or 60Hz Not both. |
| HP50-Ion | 4 HP | 6kV, 5mA | 115V, 0.4A or 230V, 0.2A | 50Hz or 60Hz Not both. |

5. General Specification and Dimension

| Model | Max Temp & Humidity | Cable | Max Load in m of Bar & Cable | Fuse * |
|----------|---------------------|---------------|------------------------------|--------|
| HP50-2 | 50°, 70%rH | IEC Connector | 12m | No |
| HP50-4 | 50°, 70%rH | IEC Connector | 12m | Yes |
| HP50-F | 50°, 70%rH | IEC Connector | 30m | Yes |
| HP50-lon | 50°, 70%rH | IEC Connector | 30M | Yes |

*Fuses: 230V 50/60Hz 0.2A (INPUT) Fuse 0.4AT
 115V 50/60Hz 0.4A (INPUT) Fuse 0.8AT

Connectors:



5. General Specification and Dimensions



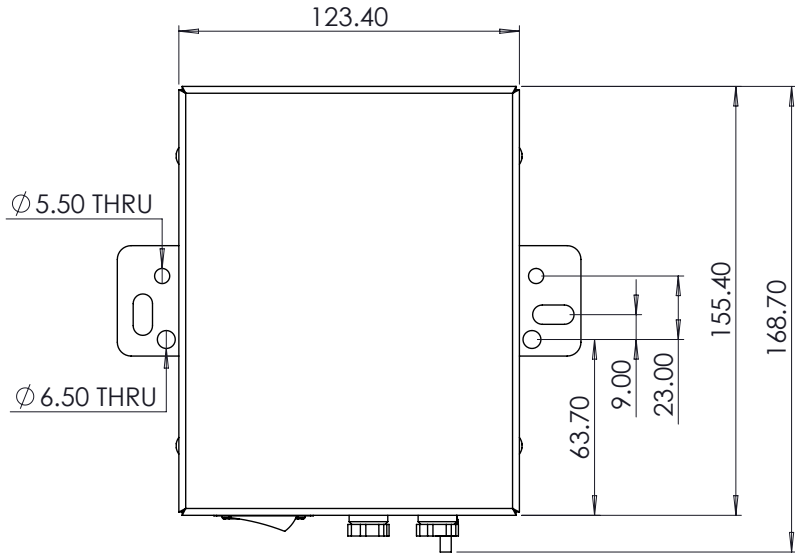
HP50-2



HP50-4 / HP50F

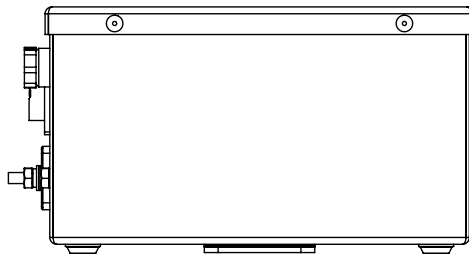
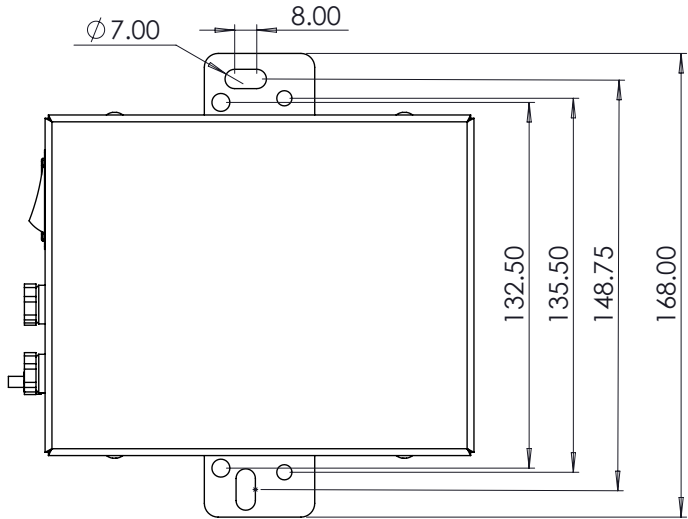
5. General Specification and Dimensions

HP50-2



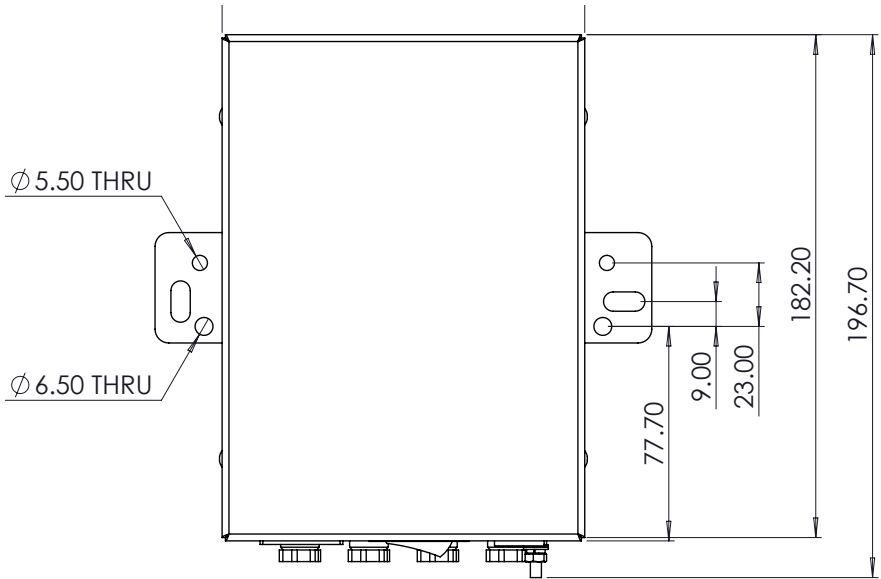
5. General Specification and Dimensions

HP50-2



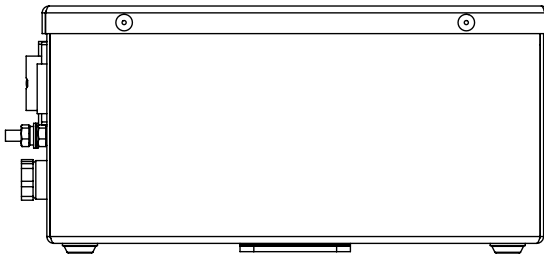
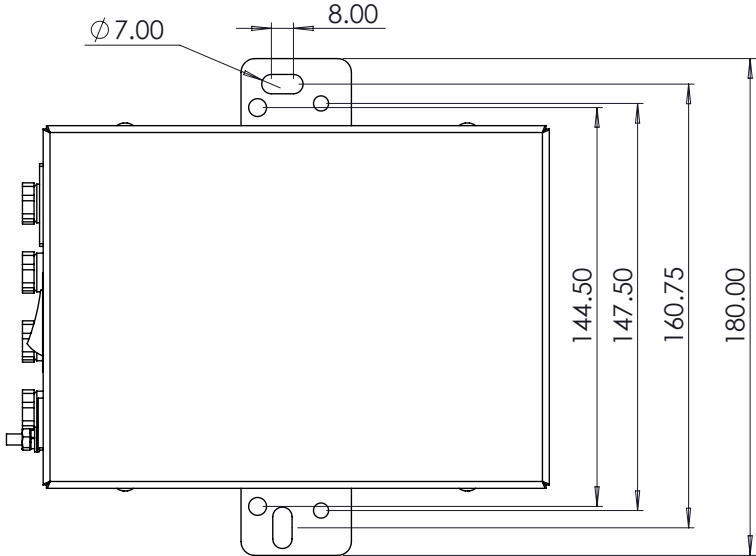
5. General Specification and Dimensions

HP50-4 & HP50-F



5. General Specification and Dimensions

HP50 & HP50-F



6. Positioning

The Power Unit should be positioned in a dry position where the cables will not be damaged.

The maximum ambient temperature is 50°C, maximum humidity is 70% rH.



7. Connecting to the Ionising Electrodes

Connecting to Power Unit

Turn Power Unit off before any installation or maintenance work.

Do not touch the white insulators - high voltage will track through any contamination on this insulator and could cause a breakdown.



HP50 Power Units:



HP Connector - keep white insulator clean.



Completely screw into one of ports.

- Turn the hexagon head finger tight.
- The spring contacts the internal HV source.
- The threaded stainless steel body connects to the earth through the port.
- Connect the earth terminal to an independent earth for additional protection.

8. Remote Function Monitor for Power Unit (Optional)

On every power unit the operational status is generally shown by the ON/OFF green switch. However this does not show that the high voltage is present.

The optional Remote Function Monitor (RFM) measures the high voltage output and indicates if there is a fault which results in no ionisation. The fault could be:

- a) in the mains supply
- b) a short in the bar or cable
- c) a fault in the power unit
- d) bars require cleaning

If there is a fault in the Bar the Power Unit will shut down for safety reasons - it is current limited to 5mA.

The electronic circuitry for the RFM is on a PCB mounted inside the power unit. It does not need any additional power source.

The connector on the power unit shown in the photo below will give a potential free signal which can go to a remote location such as an alarm or PLC on the machine.



Remote Function
Monitor Connector

The Remote Function Indicator is powered internally. The relay does not require an additional source of power, such as a 12V or 24V supply, which is required by competitive equipment.

8.1 Remote Function Indicator: Operation

Remote Indicator Electrical Specification

| | |
|---|------------|
| Circuit rating | 30V, 3A |
| Relay isolation rating (contacts to coil) | 4kV |
| Minimum switching load: | 5mA at 10V |

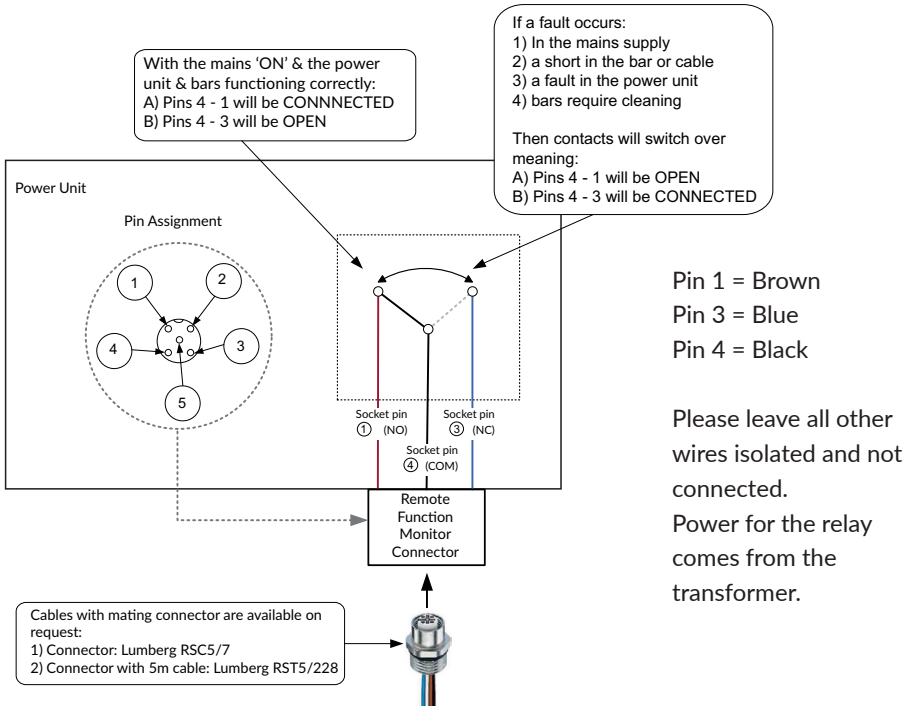
Cables with a connector for this socket are available upon request. There are two options:

1. Connector
2. Connector with 5m cable:

M12 5 Pin

Warning: do not connect the AC supply 115/230V to the Remote Function Indicator.

Please note that the power unit will be IP54 only in locked position with its proper counterparts.



9. Maintenance

Keep clean and dry. Please contact the factory or a Fraser distributor if there is a fault or query regarding Power Units.

10. Health & Safety

These products produce high voltage - installation and maintenance should be carried out only by qualified electrical engineers.



11. Certification and CE Declaration of Conformity

We declare that this equipment conforms to the following EU Directives:

Low Voltage Directive: 2014/35/EU.

EMC Directive: 2014/30/EU.

And is entitled to display the CE & UL Mark.

For further instructions and information, please contact the manufacturer.

12. Troubleshooting

| | |
|---|---|
| Illuminated Switch (not on all models) does not illuminate: | Check input voltage and fuse (if present). Check switch and replace if necessary. |
| No output Voltage | Disconnect electrodes one at a time and see if output voltage returns. (If there is a fault on one of the electrodes which draws more than 5mA of current the high voltage shuts down). If HV does not return then likely to be a fault in transformer - return to Fraser for inspection and repair. |

13. Spare Parts

Switches:

| | |
|--------------------------|----------------|
| For HP50-4/HP50-F/HP50-2 | Part No. 80632 |
| IEC Lead | Part No: 80619 |

For more information about static and to view the full range
of our products, please visit www.fraser-antistatic.com



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