



**HP50-ION POWER UNIT**





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## 1. Introduction

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This manual applies to the range of HP50-ION 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.

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## 2. Safety

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### 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.

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### 3. Use

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The high voltage power supply unit HP50-ION serves as high voltage supplies for the Fraser Static Eliminators for at least 5,5 kVAC. A different use or interventions / changes are not permitted.



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### 4. Checking on Delivered Equipment

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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.

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## 5. Installation instructions

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The unit is being mounted to a wall using the holes in the mounting brackets.

The installation area has to be dry and easily accessible.

The power supply unit is not certified for use in potential explosive areas!

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## 6. Installation of cables

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The high voltage cable is shielded and can be laid parallel to other cables. Do not lay the cable over sharp edges and maintain a minimal bending radius of 30mm on fixed laying and 100mm on moving cables.

Moving cables have to be fixed so there is no movement at the connector.

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## 7. Electrical connection

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Warning: Follow the respective regulations for electrical installations and let only qualified personnel carry out the work.



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### 7.1. Power supply

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The power supply units are supplied with a 2m IEC Lead. Connect the unit following the respective regulations and mind the input voltage specified on the name plate.

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## 7.2. Earthing and protective conductor connection

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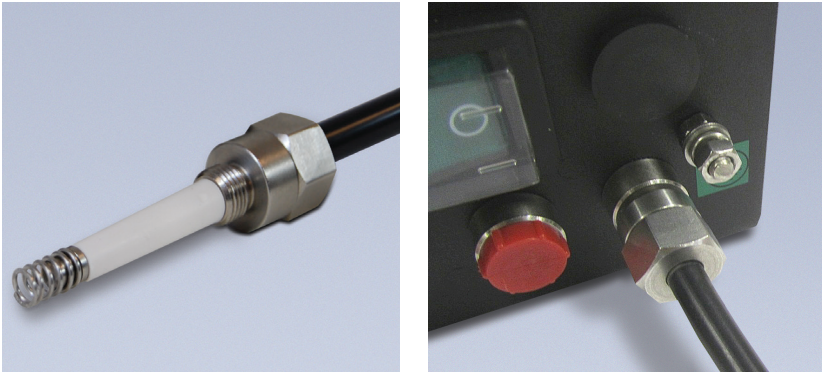
The unit has to be connected to the protective conductor of the system line. Additionally the earthing terminal has to be connected to the equipotential of the installation area, e.g. by connecting it to the machine frame. The cross section of the cable has to be at least 1.5 mm<sup>2</sup>.

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## 7.3. Connecting the electrodes

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Remove the red protective cap of one electrode terminal and plug in the electrode cable. Screw the plug in place by rotating the front part of the plug. Make sure the cable itself does not rotate.



**Warning:** Before connecting or removing an electrode make sure the power supply unit is turned off and the supply voltage to the unit is interrupted!



Moving cables should be fixed so there is no movement at the connector. Be sure not to overload the Power Unit. Do not exceed a maximum of 30 metres of cable and bar length combined per unit! This is the maximum across all 4 outputs and not per output.

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## 7.4. Interface signals

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Units with electrode monitoring provide the following signals on the 5-pin terminal:

Standard		Special Configuration - S03	
Pin	Signal	Pin	Signal
1	Input + 24 V DC	1	Input + 24 V DC
2	Operation	2	Operation
3	Contamination Pre-Warning	3	Ground (0 V)
4	Fault	4	Fault
5	Contamination Alert	5	Contamination Alert

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## 8. Operation

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After installation and electrical connection the power supply unit is turned on by using the I/O switch.

The green control light signals the electrode is being supplied with high voltage.

Follow also the operating manual of the electrode!



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### 8.1. Calibrating the power supply (optional)

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Units with electrode monitoring function have to be calibrated on the first start-up. Press the button 'cal' on the front panel of the power unit and turn it on simultaneously.

The calibration takes about 30 seconds and is indicated by cycling LEDs. Calibration should only be used with clean electrodes and there should be no high electrostatic charged material around.

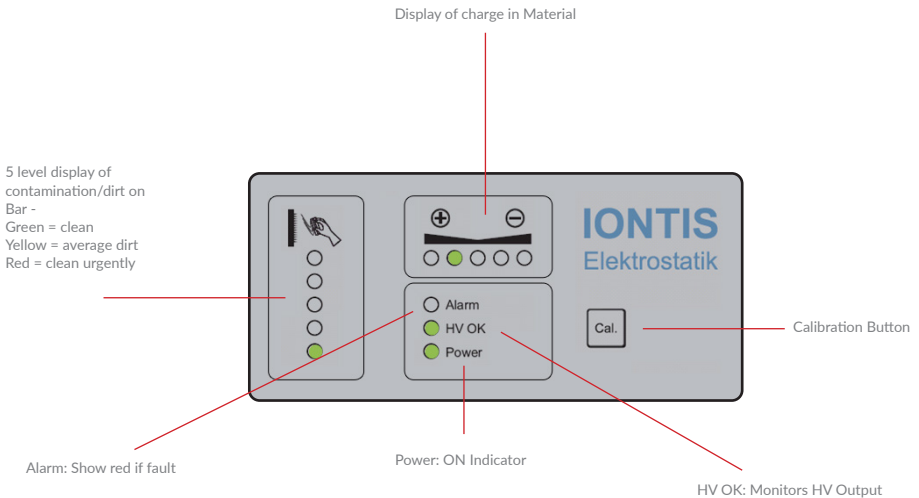
The sampled data is being saved permanently, a new calibration is only necessary when the electrode configuration has changed, e.g. when additional electrodes have been fitted.

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### 8.2. Monitoring the power supply (optional)

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On the front panel of devices with electrode monitoring you find the following information:



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## 9. Maintenance

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The power supply does not require any special maintenance. The Device has to be checked on correct function and earthing regularly.

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## 10. Troubleshooting

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Warning: Follow the respective regulations for electrical installations and let only qualified personnel carry out the work!

Any maintenance on the device may only be done with interrupted supply voltage!

If the green Power-LED does not illuminate although the device is turned on and the supply voltage connected, a fuse might be faulty.

Check the installation and the connected cables on faults or defects correct any of them and then replace the fuse. Specifications on the value are to be found on the name plate of the power supply unit.

If the Problem continues to appear, disconnect all electrodes from the device while it is turned off and reconnect them one at a time, until the fault can be allocated to the supply unit or an electrode and replace the faulty component.

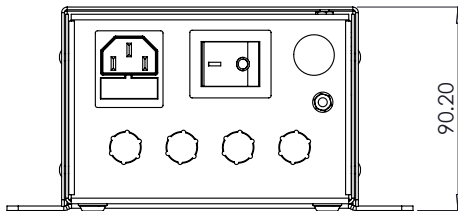
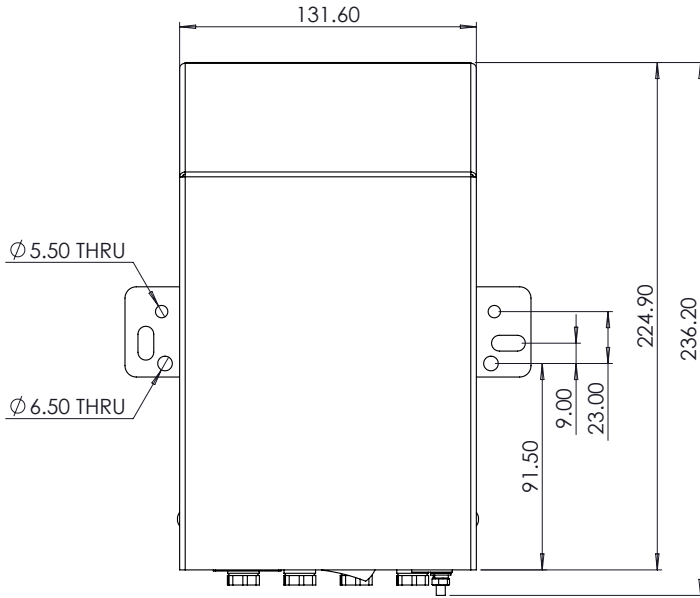
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## 11. Specifications

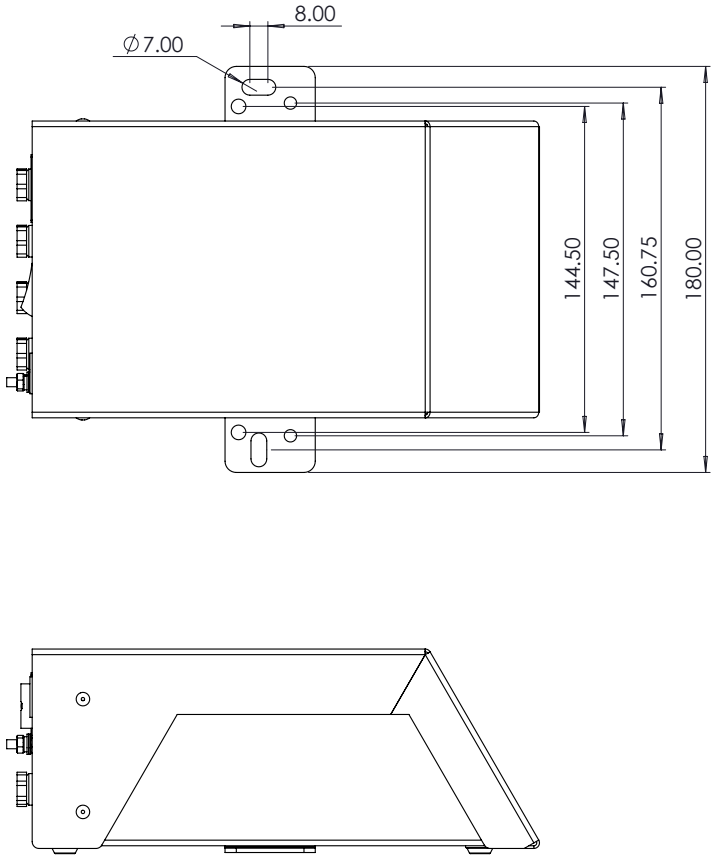
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<b>Supply voltage:</b>	115V or 230V, 50Hz or 60Hz
<b>Power consumption:</b>	40VA Maximum
<b>Output voltage:</b>	5.0 – 5.5kV AC
<b>Output current:</b>	Max. 5.0mA at 5kV
<b>Ambient temperature:</b>	0...50°C
<b>Ambient humidity:</b>	< 80% R.H. (no condensation)
<b>High voltage terminals:</b>	4, threaded
<b>Enclosure:</b>	Sheet steel with wall mount, IP54
<b>Dimensions:</b>	225 x 180 x 90 mm
<b>Weight:</b>	1.9 kg
<b>Display:</b>	LEDs for 5-level monitoring of electrode pollution 5-level monitoring of material's charge Power High voltage Fault
<b>Interface:</b>	Open-Collector Output for - Operation - Contamination premonition - Contamination alert - Failure Max: 30 VDC, max. 0.1 A

## 12. Dimensions



12. Dimensions



For more information about static and to view the full range  
of our products, please visit [www.fraser-antistatic.com](http://www.fraser-antistatic.com)



Scotts Business Park, Bampton, Devon, GB, EX16 9DN  
T + 44 (0) 1398 331114 F + 44 (0) 1398 331411  
E [sales@fraser-antistatic.co.uk](mailto:sales@fraser-antistatic.co.uk) W [www.fraser-antistatic.com](http://www.fraser-antistatic.com)