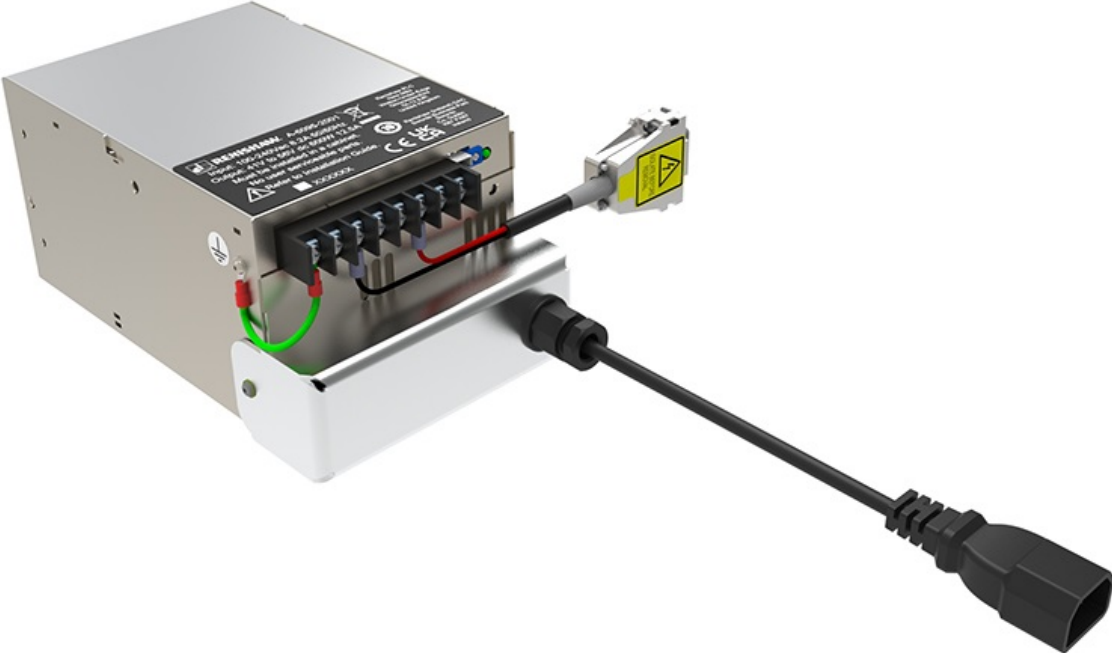


# SPA3-2 600 W PSU installation guide

www.renishaw.com

# SPA3-2 600 W PSU installation guide

Documentation part number: H-1000-5274-01-A



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# General information

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## WEEE



The use of this symbol on Renishaw products and / or accompanying documentation indicates that the product should not be mixed with general household waste upon disposal. It is the responsibility of the end user to dispose of this product at a designated collection point for waste electrical and electronic equipment (WEEE) to enable reuse or recycling. Correct disposal of this product will help to save valuable resources and prevent potential negative effects on the environment. For more information, please contact your local waste disposal service or Renishaw distributor.

## Warranty

Unless you and Renishaw have agreed and signed a separate written agreement, the equipment and/or software are sold subject to the Renishaw Standard Terms and Conditions supplied with such equipment and/or software, or available on request from your local Renishaw office.

Renishaw warrants its equipment and software for a limited period (as set out in the Standard Terms and Conditions), provided that they are installed and used exactly as defined in associated Renishaw documentation. You should consult these Standard Terms and Conditions to find out the full details of your warranty.

Equipment and/or software purchased by you from a third-party supplier is subject to separate terms and conditions supplied with such equipment and/or software. You should contact your third-party supplier for details.

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### Care of equipment

Renishaw probes and associated systems are precision tools used for obtaining precise measurements and must therefore be treated with care.

### Changes to Renishaw products

Renishaw reserves the right to improve, change or modify its hardware or software without incurring any obligations to make changes to Renishaw equipment previously sold.

### Company registration details

Renishaw plc. Registered in England and Wales. Company no: 1106260. Registered office: New Mills, Wotton-under-Edge, Gloucestershire, GL12 8JR, UK.

### Packaging

To aid end user recycling and disposal the materials used in the different components of the packaging are stated here:

Packaging component	Material	94/62/EC code	94/62/EC number
Outer box	Corrugated fibreboard	PAP	20
Packaging insert	Corrugated fibreboard	PAP	20
Packing foam	Polyurethane	PU	7
Bag	Low density Polyethylene	LDPE	4

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# Product compliance

## EU declaration of conformity

Contact Renishaw plc or visit [www.renishaw.com/EUCMM](http://www.renishaw.com/EUCMM) for the full EU declaration.

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## UK declaration of conformity

Contact Renishaw plc or visit [www.renishaw.com/UKCMM](http://www.renishaw.com/UKCMM) for the full UK declaration.

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## EMC conformity

This equipment must be installed and used in accordance with this installation guide. This product is intended for industrial use only and should not be used in a residential area or connected to a low voltage power supply network which supplies buildings used for residential purposes.

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## REACH regulation

Information required by Article 33(1) of Regulation (EC) No. 1907/2006 ("REACH") relating to products containing substances of very high concern (SVHCs) is available at:

[www.renishaw.com/REACH](http://www.renishaw.com/REACH)

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## China RoHS


Contact Renishaw plc or visit [www.renishaw.com/ChinaRoHSCMM](http://www.renishaw.com/ChinaRoHSCMM) for the full China RoHS tabulation.




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# Safety

 Where this symbol is displayed on the product the user must refer to the installation guide for information and safety advice.

If the equipment is used in a manner not specified by the manufacturer then the safety of the equipment may be impaired.

 **WARNING:** The PSU must be connected to a protective earth.

 **WARNING:** Do not remove output earth connection.

 **WARNING:** The system must be inspected and portable appliance tested (PAT) before the equipment is powered.

## Electrical ratings

### Input

Voltage range	100 V to 240 Vac $\pm$ 10%
Power consumption	8.2 A max.
Frequency range	50 Hz / 60 Hz

### Output

Voltage range	41 V to 56 Vdc
Power	600 W 12.5 A max

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# Environmental conditions

Indoor use	IP10 IEC 60529 (indoor use only)
Altitude	2000 m
Operating temperature	-20 °C to 60 °C
Storage temperature	-40 °C to 85 °C
Relative humidity	20 - 90% non condensing
Transient overvoltage	Category 2
Pollution degree	2



**WARNING:** The PSU must be installed in an equipment cabinet.



**WARNING:** This equipment must be connected to a protective earth and an appropriately rated external over current device (10 A max. 110 V ac, 5 A max. 240 V ac).

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# References and associated documents

It is recommended that the following documentation is referenced when installing the SPA3-2 600 W 48 V PSU:

### Renishaw documents

Title	Document number
<a href="#">Installation guide: SPA3-2</a>	H-1000-5364

### External documents

[Meanwell PSU installation guide](#)

National and international standards including the following may be applicable to the finished machine or installation: -

EN 292-2:1991 (Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications).

EN (IEC) 60204-1:1997 (Safety of machinery - Electrical equipment of machines - Part 1: General requirements).



**NOTE:** It is the responsibility of the OEM or installer to ensure that the finished installation complies with applicable national regulations for the country of installation.

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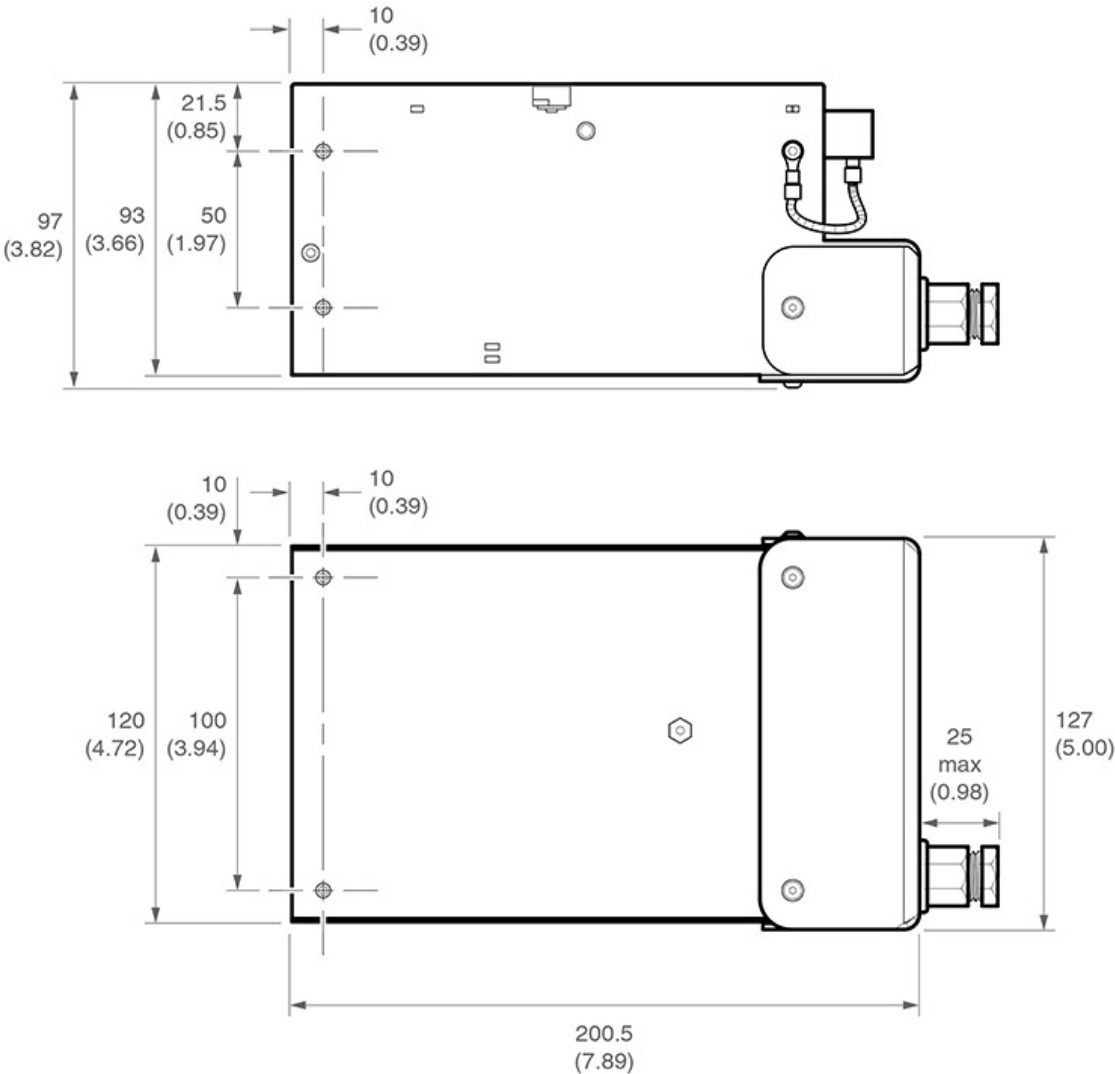
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## Introduction

Part number	A-6095-2001
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The SPA3-2 600 W 48 V PSU is intended to be used as part of an SPA3-2 servo power amplifier installation. It is intended to be used as an interim substitution to Renishaw A-5518-0025.

### Mechanical dimensions

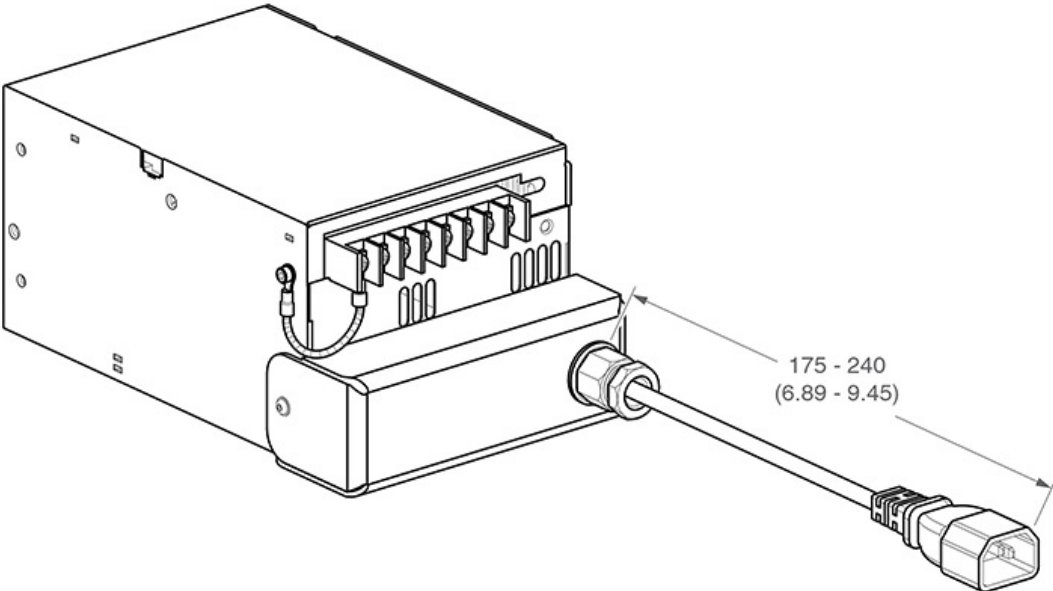


**WARNING:** Mounting screws: M3 × 4 mm max.



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**i** NOTE: Dimensions in mm (in).

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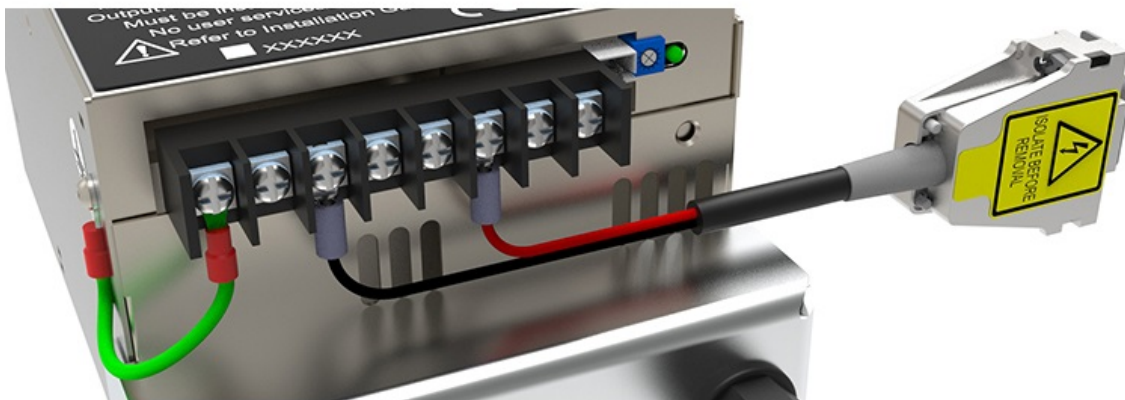
# Installation

The SPA3-2 600 W 48 V PSU must be installed with its label facing upper most inside an enclosure, such as a 19" rack cabinet along with SPA3-2 and UCC. Care must be taken to ensure ventilation holes are not obstructed and the PSU has adequate air flow.

The PSU must only be powered through the attached C14 power cord.


The output cable is to be attached to the terminals as shown below and torqued to 1 Nm.

**i** **NOTE:** As this PSU must be installed within a cabinet, it is the responsibility of the OEM / installer to ensure an easily accessible means of disconnection is provided.



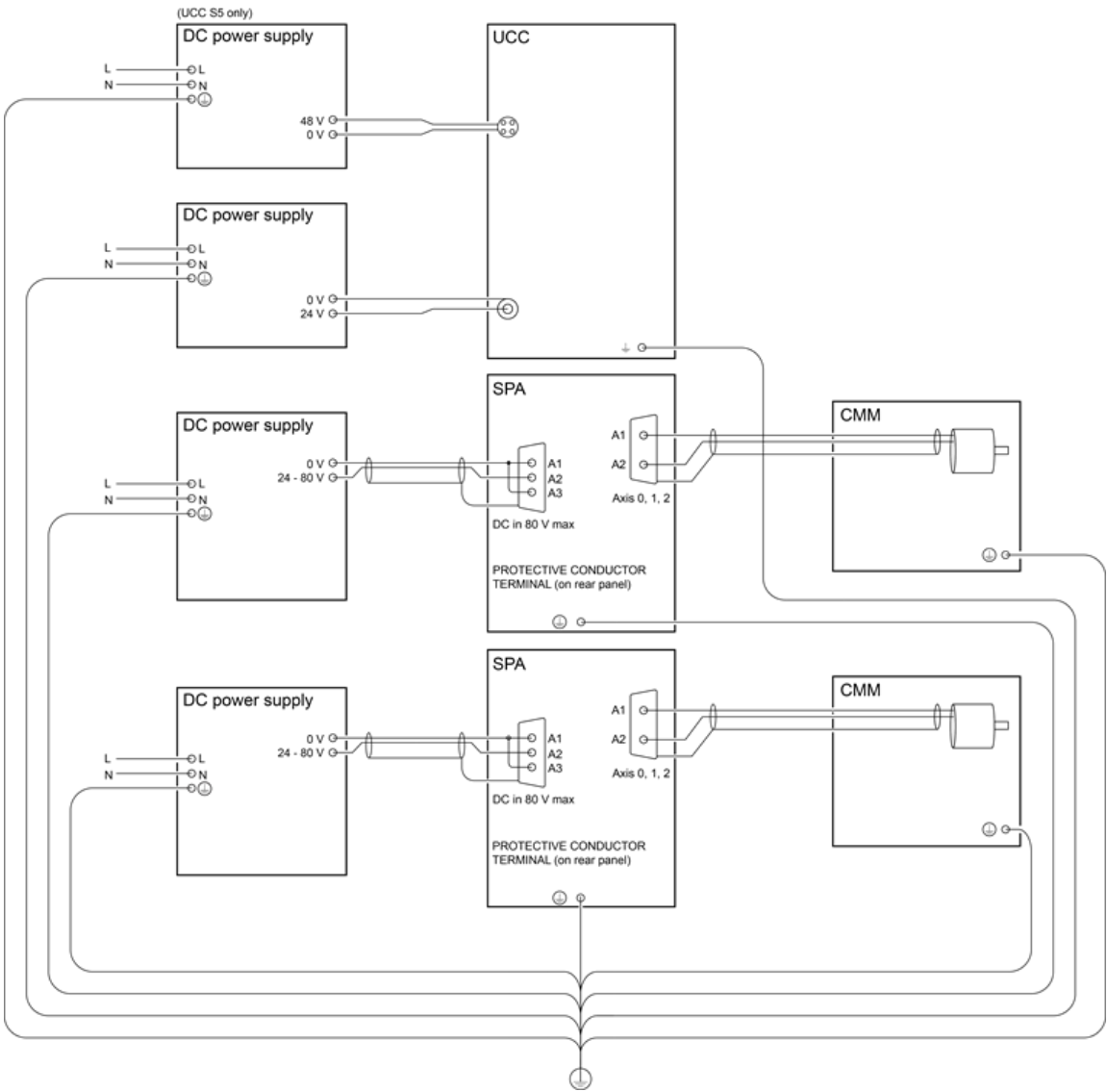
**!** **WARNING:** Output terminal cover must be re-fitted after termination.

**!** **WARNING:** Do not remove output earth connection marked with this label:



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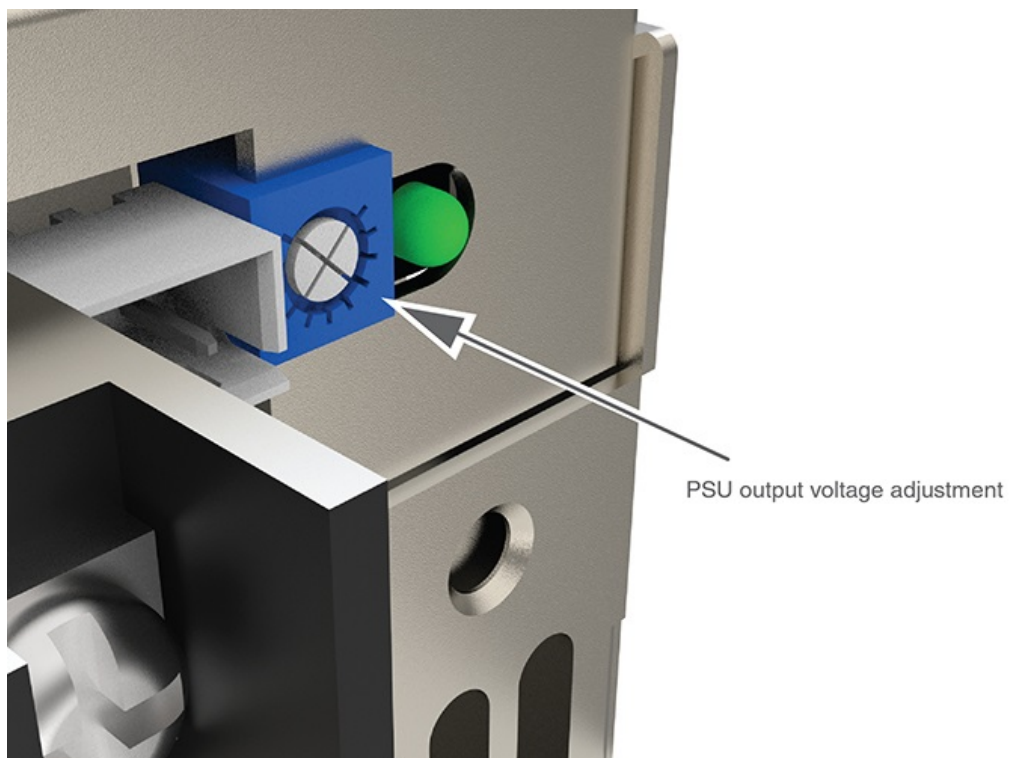


**WARNING:** The PSU must be connected to a protective earth.

The output voltage of this power supply can be adjusted between 41 V and 56 V, For best performance, this should be set to match the maximum CMM motor voltage.

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**i** **NOTE:** Do not use excessive force whilst adjusting the PSU output voltage control.

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# Troubleshooting

Fault description	Check	Correction
SPA3-2 is un-powered.	Green output LED is illuminated on the PSU.	Ensure 3W3 power connector is connected to SPA and jackscrews are tight. Ensure SPA3-2 power cable is connected to the correct output terminals of the PSU. Check SPA3-2 power cable polarity is correct.
PSU green LED is not lit.	Check mains power is present.	Remove mains power for 30 seconds and re-power.
PSU green LED not lit after power cycle.	-	Replace PSU
PSU fan is running fast.	Cabinet temperature.	Replace cabinet filters. Clear PSU fan ventilation holes. Relocate the cabinet.
PSU fan is stopped or noisy.	Green output LED is illuminated on the PSU.	Replace PSU.

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# Servicing and maintenance



**WARNING:** Hazardous voltages present.

Maintenance must only be carried out after the machine has been isolated from the electrical supply, compressed air supply or other energy sources in accordance with the machine manufacturer's instructions.

Periodically check that all mounting screws and electrical connectors are securely tightened.

Electrical safety checks should include inspecting the mains cable for damage and the safety of the connections.

The PSU and fan should be inspected for foreign object build up and, if necessary, the PSU replaced.

Cleaning should be carried out with a lint free cloth on outer surfaces only as the unit is not sealed against liquid.

There are no user serviceable parts inside the equipment.



**WARNING:** The system must be inspected and portable appliance tested (PAT) after any service or maintenance operation has been performed.

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