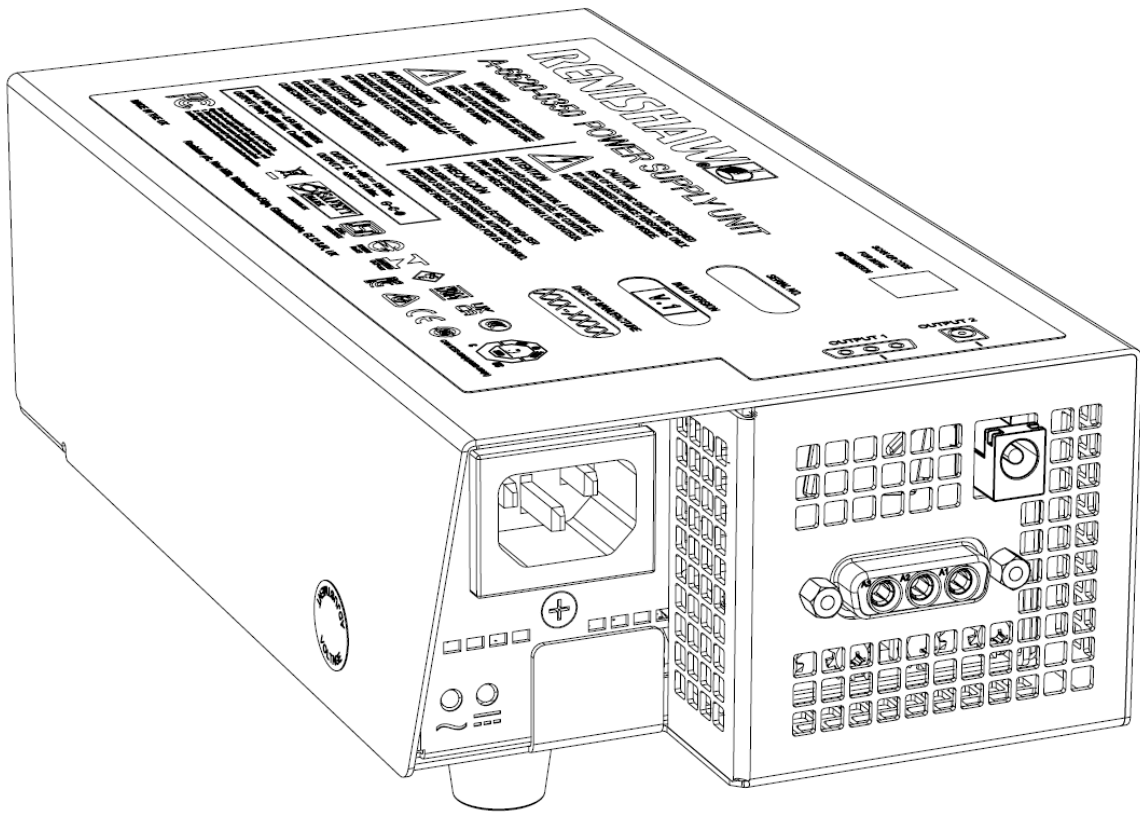


Power supply unit



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General information

Disclaimer

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Warranty

Equipment requiring attention under warranty must be returned to your equipment supplier.

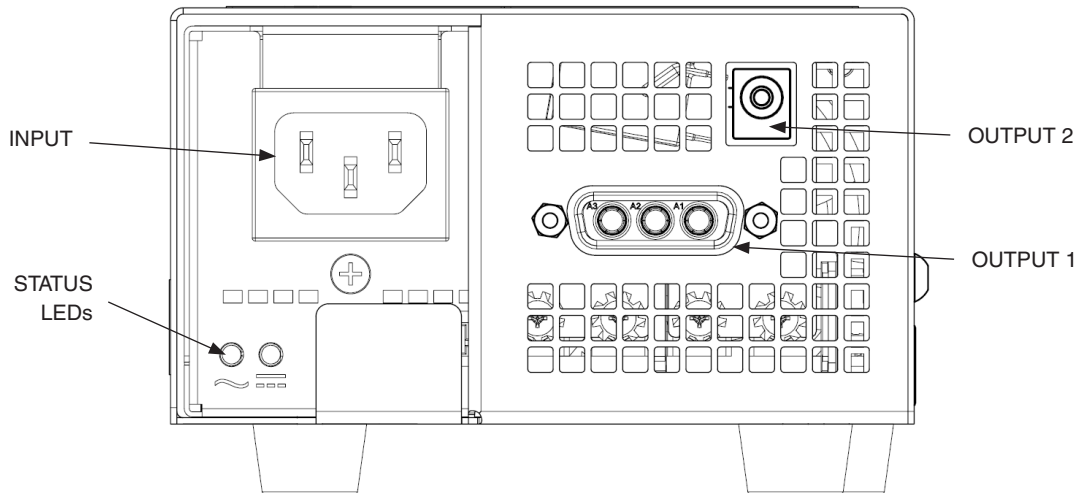
Unless otherwise specifically agreed in writing between you and Renishaw, if you purchased the equipment from a Renishaw company the warranty provisions contained in Renishaw's CONDITIONS OF SALE apply. You should consult these conditions in order to find out the details of your warranty but in summary the main exclusions from the warranty are if the equipment has been:

- neglected, mishandled or inappropriately used; or
- modified or altered in any way except with the prior written agreement of Renishaw.

If you purchased the equipment from any other supplier, you should contact them to find out what repairs are covered by their warranty.

Warnings

- W.1. Please refer to the safety information section of this document first.
 - W.2. Please note the orientation of the connectors.
 - W.3. Ensure all cables are connected prior to connecting to the mains.
-



Safety

Electrical safety

WARNINGS: Power input limits

INPUT: 100 V to 240 V AC, 8.5 A Max. 50/60 Hz

WARNINGS: Power output limits

OUTPUT 1: +48 V DC 13 A Max. Voltage range 38.4 to 57.6 V

OUTPUT 2: +24 V DC 5 A Max.

OUTPUT 1 and OUTPUT 2: Combined Power consumption Max. 600 W

The PSU must be connected to a supply incorporating a protective earth conductor via a three-core mains cable. The equipment is isolated from AC power by disconnection of the IEC mains connector. If any additional means of isolation is required, it must be specified and fitted by the machine manufacturer or the installer of the product. The isolator must be sited within easy reach of the operator and comply with EN 61010-1:2010/A1:2019 and any applicable national wiring regulations for the country of installation.

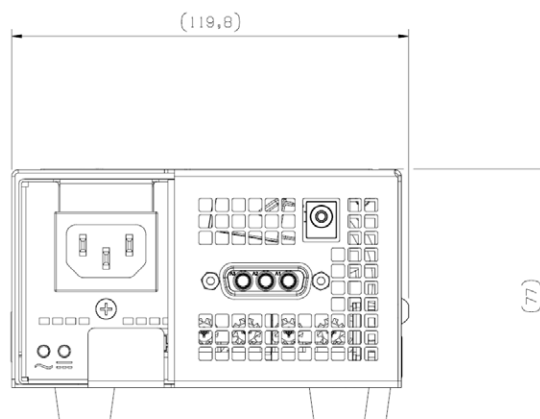
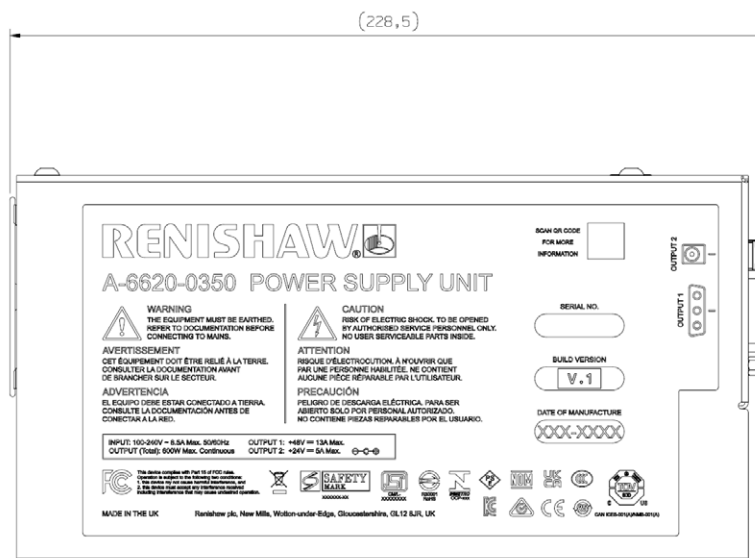
The IEC power cable is not provided with the product. Please source the IEC cable to the below specification which complies with your countries regulations. INPUT: 100-240 V ~ 8.5 A Max. 50/60 Hz.

Emergency situation information

In the case of fire, only use extinguishers that are suitable for electrical fires. There are no potential chemical leaks from the PSU.

Specifications

Indoor use	IPX0 IEC 60529 (indoor use only)
Operating temperature	+10 °C to +50 °C
Storage temperature	-25 °C to +70 °C
Humidity	10 to 90%, non-condensing
Fan noise	< 45 dBA, 80% load at 30 °C
Maximum altitude during operation	5000 m
Supply % tolerance	+10 % / -10 %
Over-voltage category (OV)	II
Pollution degree	2
Power input limits	INPUT: 100 V to 240 V AC, 8.5 A Max. 50/60 Hz
Power output limits	OUTPUT 1: +48 V DC 13 A Max. Voltage range 38.4 to 57.6 V OUTPUT 2: +24 V DC 5 A Max. OUTPUT 1 and OUTPUT 2: Combined Power consumption Max. 600 W



LED indicators

The DC_OK LED is green if the DC output is within specification and off when out of specification.

The AC_OK LED is green if the AC is within specification and off when out of specification.

Positioning

The PSU should be placed standing on the four rubber feet on the bottom of the unit. The PSU should be given a reasonable protection from liquid spillage.

The fan and vents for cooling the equipment must not be obstructed. The fan is located on the rear and vents located on the front of the PSU. Ensure that the PSU fan and vents are located at least 10 cm from any surface when free-standing or when used within the Equator-X controller cabinet. No other clearances required.

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. There are no other user-serviceable parts inside the PSU.

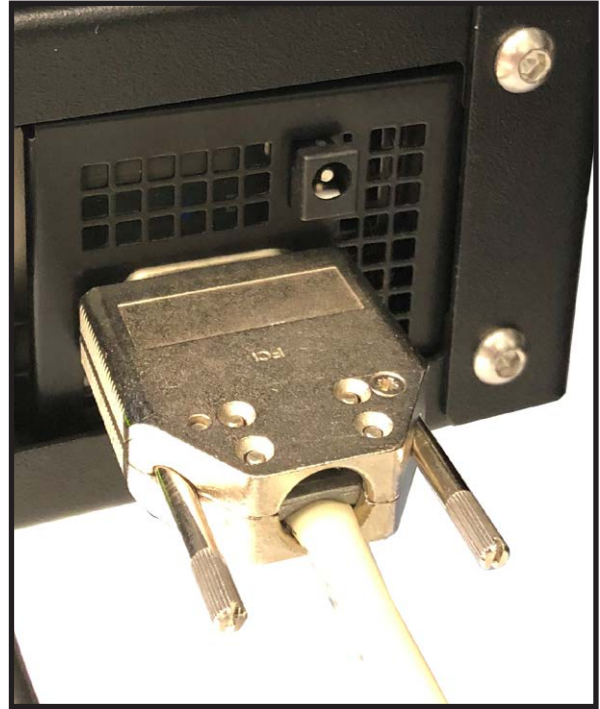
Cleaning should be carried out with a lint free cloth on outer surfaces only as the unit is not sealed against liquid.

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

Connecting the PSU to the Equator-X machine

Output connections

1. Connect the male end of the power supply cable to the OUTPUT 1 port on the rear of the PSU.



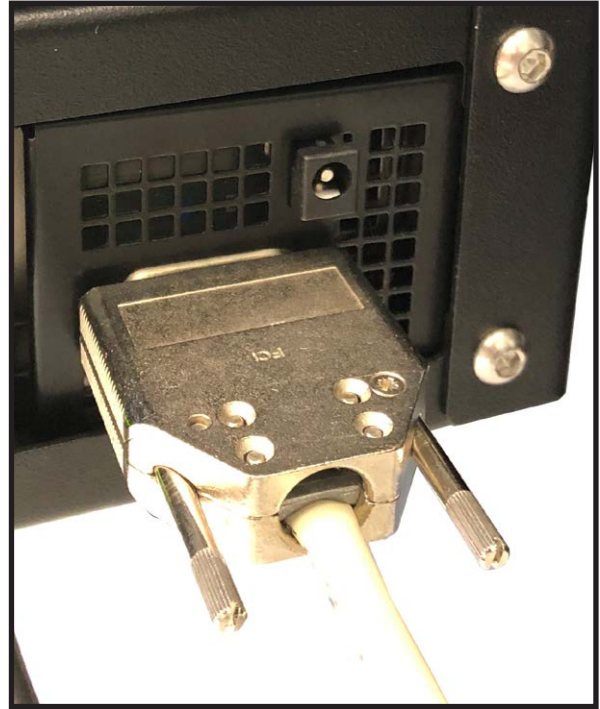
2. Connect the female end of the power supply cable to the DC POWER IN port located on the rear of the machine.



Connecting the PSU to the SPA3-2 amplifier

Output connections

1. Connect the male end of the power supply cable to the OUTPUT 1 port on the rear of the PSU.



2. Connect the other end of the power supply cable to the DC In port located on the rear of the SPA3-2.



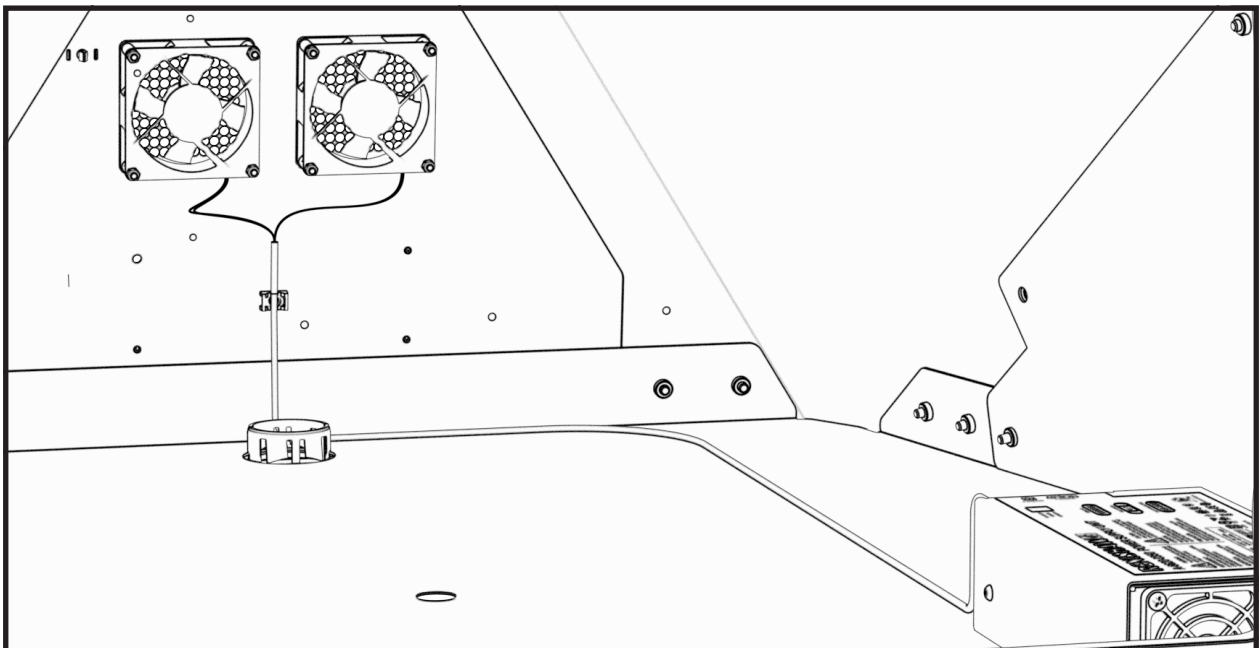
Connecting the PSU to an accessory

Output connections

1. Connect DC barrel jack end of an accessory cable (not included) to the OUTPUT 2 port on the rear of the PSU.



NOTE: If using this device to power the fans in the Equator-X base (A-6620-0070) then the fans have their own built in over-current protection. The 24 V power supply output has a 5 A fuse which will blow in the event of >5 A current drawn. The fan motor has inbuilt auto restart protection, so if the motor draws excessive amounts of current, it will shut off, preventing current flowing and causing damage to the circuit.



Connecting the PSU to power

Input connection

1. Connect an IEC cable (not included) to the INPUT port on the rear of the PSU.



2. Connect the other end of the IEC cable to the mains electricity supply.

Adjusting the PSU output voltage

1. To adjust the voltage, peel the label off the PSU to expose the voltage adjustment screw. Use a screwdriver to adjust the voltage. Clockwise = increase, counter-clockwise = decrease.



NOTES: The output voltage of this power supply unit can be adjusted between 38.4 and 57.6 V.

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

The PSU does not have a voltage readout. If adjustments to the voltage are required, it is the customers responsibility to check the output voltage before connecting it to their equipment.

Equator-X

- The voltage is set to 48 V from the factory. Equator-X users should not touch the voltage adjustment screw.


SPA3-2 amplifier


- For best performance, this should be set to match the maximum CMM motor voltage.

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