

Power Supply Unit

COGPSU-3350 - Technical Manual



REBEL

Powered by  AM Healthcare Group

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2.0 Introduction

The Power Supply Unit (COGPSU-3350), hereby known as the PSU is the unit that powers your terminal device. There is also a charging system that is accessible via the standard, USB-C connection.

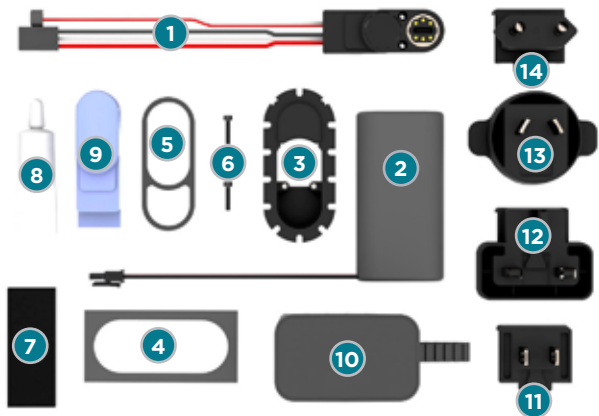
The Performance characteristics are:

- To charge the batteries and Power the endoprosthesis safely.

The predominant risk to health or safety of the user or other persons is:

- If the charge point or the batteries condition changes that can be deemed to be unsafe for the user (such as, but not limited to: overheating, explosion, battery swelling).
- If the functions stop working, this will not cause a risk to the user or other persons.
- As these characteristics are covered by Basic Safety (as per the requirements of IEC 60601-1), there is no essential Performance.

3.0 What's In The Box?



#	PART NO.	DESCRIPTION
1	B10-A021	CHARGE PORT
2	B10-A006	3350mAh BATTERY
3	B10-0052	MOUNTING BRACKET
4	B10-0058	CUTTING GUIDE
5	B10-0069	ARM SEAL
6	SSCF-M2-10	M2 CAP HEAD

7	B10-0059	BATTERY VELCRO
8	B10-0060	SILICONE ADHESIVE
9	B10-0110	CHARGE PORT BLANK
10	B10-0061	USB-C POWER SUPPLY
11	B10-0062	US ADAPTER
12	B10-0065	UK ADAPTER
13	B10-0063	AUS/NZ ADAPTER
14	B10-0064	EU ADAPTER

4.0 Fitting Instructions

TOOLS REQUIRED		
DREMEL OR SIMILAR MULTITOOL	SMALL ROUND NEEDLE FILE	CARVING/ENGRAVING BIT
DREMEL CUTTING WHEEL	SMALL FLAT NEEDLE FILE	PLUseries® 60s Adhesive
T6 TORX DRIVER		



Personal protective equipment must be worn at all times during the fabrication process.

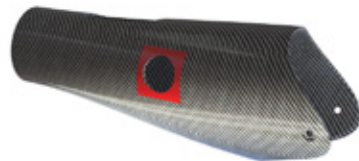


STEP 1.

STEP 2.



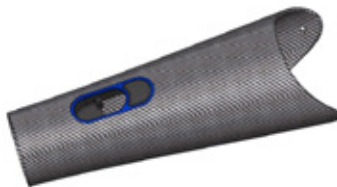
Apply the cutting template to the top side of the prosthetic socket.



Carefully cut along the red outline with a cutting disc. File down any sharp edges.

STEP 3.

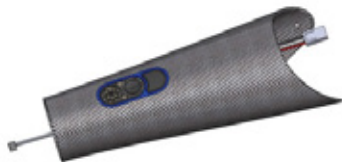
Offer the internal bracket to the inside of the aperture. Remove material from the wings if the housing is sitting too low in the arm.

STEP 4.

Use the seal to ensure the alignment is correct with the outer surface of the arm. Only bond the mounting bracket, not the seal at this stage. We would recommend bonding the lamination ring into the limb with +PLUSeries® 60 Second Adhesive at this point and allow to cure.

STEP 5.

Offer the internal bracket to the inside of the aperture. Remove material from the wings if the housing is sitting too low in the arm.

STEP 6.

Secure the Charge port with the 2x cap head bolts screws using the T6 Torx driver (0.3Nm). Bond the seal in place with the silicone glue, taking care not to get glue on the outside surface of the charge point or the arm.



Failure to sufficiently enclose the battery will pose a serious threat to user safety due to the risk of water ingress.

5.0 Safety Precautions



Please read the following safety precautions prior to fitting the Cogent Power Supply.

WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with a protective earth.

The Power Supply should only be fitted by a certified prosthetist, Designed to power MYO electric hands for people with uni/bilateral above wrist limb difference.

Please make sure the Power Supply is **OFF** before connecting/disconnecting the prosthetic device to avoid damage to the device.

This product is not designed to be disassembled or serviced. Cogent have the right to void the warranty of all products that have any type of modification or damage caused by any unauthorized or untrained personnel.

Any damage caused by intentional harm or neglect will not be covered under the warranty.

DO NOT attempt to use the prosthetic device while the batteries are charging. When the batteries are charging, the power will automatically turn off. If for any reason the power does not turn off while charging, using the prosthetic device can be potentially unsafe.

DO NOT use the Power Supply if there is any visible sign of damage to the Power Supply charger, Power Plug and/or Cables.

DO NOT expose the Power Supply to an open flame or submerge it in water. This could damage the screen and affect the battery's ability to hold charge.

DO NOT USE IN AREAS OF HIGH EMC DISCHARGE

Any drop in performance, any component getting hot, making new and unusual noises is evident, please remove immediately.

Clean with hot soapy water, **DO NOT** use any solvents or abrasives to clean the charge point as this might cause damage.

Individuals who are exposed to hazardous environments that contain flammable liquid or gas should NOT use this device when in those environments.

Ensure access to wall plug to enable easy isolation if required.

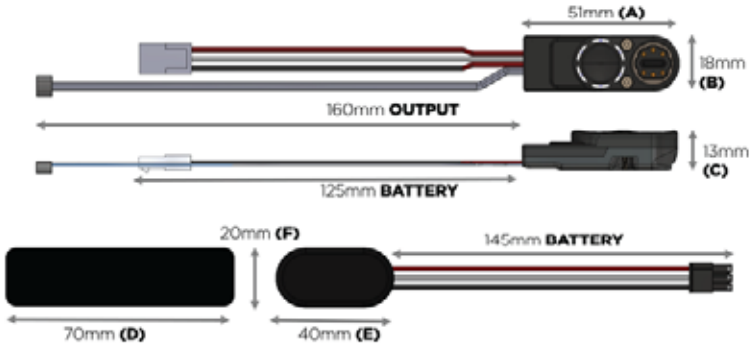
No known contraindications.

The designed service life of the Charge point is 5 years, Cells to be changed on an annual basis.

This product uses semiconductors that can be damaged by electrostatic discharge (ESD).

It is advised to disconnect the battery if the limb is unlikely to be used for some time or is being shipped, or stored.

6.0 System Specification



PART NUMBER	COGPSU/3350	
CAPACITY	3350mAh	
NOMINAL VOLTAGE	7.4V	
MAX. CURRENT DRAW	7A	
CHARGE PORT DIMENSIONS	51mm (A) x 18mm (B) x 13mm (C)	2" (A) x 0.7" (B) x 0.5" (C)
BATTERY DIMENSIONS	70mm (D) x 40mm (E) x 20mm (F)	2.7" (D) x 1.6" (E) x 0.8" (F)

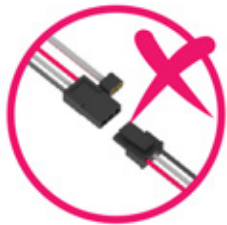
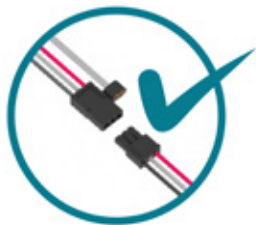
6.0 System Specification (continued)

SYSTEM WEIGHT	125grams	4.4oz
USB-C POWER SUPPLY	FRIWO Gerätebau GmbH - NEO006.0-I-X-05 P No.: 1960559	
Nominal Input Voltage	100-240V AC +/-10%	
Nominal Output Current:	1400mA	
Nominal Output Voltage:	5V DC +5% / -5%	
OPERATIONAL AND STORAGE HUMIDITY	Maximum 80% humidity, non-condensing	
CHARGE TEMP RANGE	-10°C to +45°C	14°F to 113°F
DISCHARGE TEMP RANGE	-20°C to +60°C	-4°F to +140°F
STORAGE TEMP RANGE	-20°C to +60°C	-4°F to +140°F
PRESSURE RANGE	700-1060 hPA	

7.0 User Instructions



Please ensure the battery is connected correctly to the Power Supply. There is only one orientation to connect the 3-way connector, all colours must line up and the square socket must line-up.



7.1 Turning the Limb Power On

Greater than 1 second hold turns on limb power.

6x purple will illuminate clockwise and then go blank.



7.2 Turning the Limb Power Off

Greater than 1 second hold turns off limb power.

6x purple will illuminate anticlockwise and then go blank.



7.3 Charging the Battery

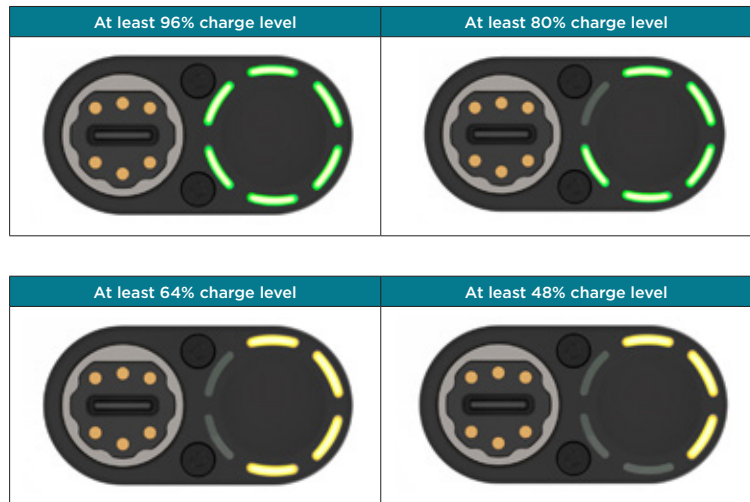
To charge the device connect the provided Mains AC USB-C connector or use the rightangle magnetic charger with a Mains AC USB-C power adapter.

If charging correctly, all 6x cyan will pulse slowly.

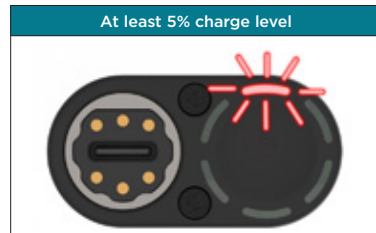


7.4 Charge Indication

QUICK PRESS (for less than 1.5 seconds) to view battery charge level for 2.5 secs, then will go out.



7.4 Charge Indication (continued)

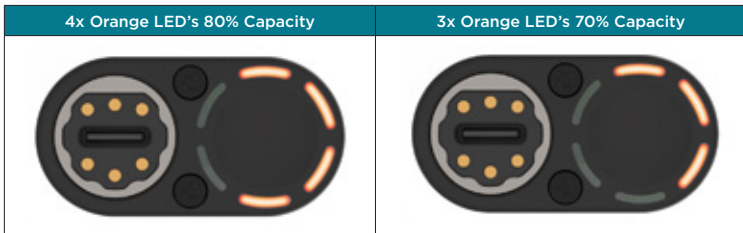
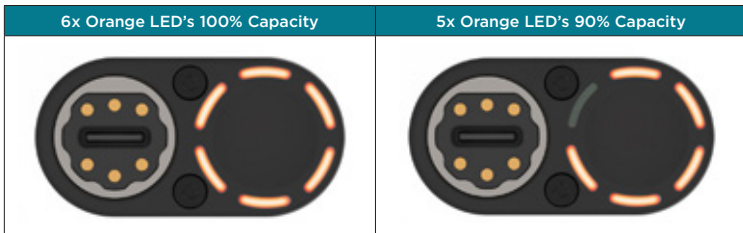


Lower LED will flash red when the battery is lower than 5%.
This doesn't require a button press.

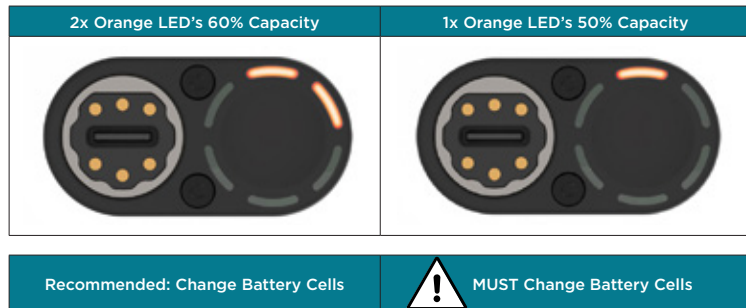
7.5 Battery Health Indication

2x QUICK PRESS (first within 1.5s and the second within 1.5s) enters the battery health indication display. This will appear for 2.5 secs, then will go out.

The following displays what to expect the battery level indication to be at various states.



7.5 Battery Health Indication (continued)



7.6 Full System Reset

To enable Full System Reset, you will need the Limb Power OFF and not charging.

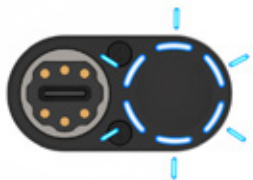
2x QUICK PRESS within a 1.5 second succession will skip through to the Full System Reset Indication.

6x Further presses within a 1.5 second succession illuminates the LED's in a clockwise direction one by one.

Final press it will flash aqua marine and flash blue twice. This confirms the system is complete reset.



A FULL RESET WILL BE REQUIRED IF THE BATTERY IS SWAPPED.



8.0 Battery Replacement

The Rebel Power Supply will support 300 charge and discharge cycles. After this, the time it takes to fully flatten the batteries will become shorter. Replacement cells are available for the Rebel Power Supply and we recommended the cells are swapped every 12 months.

8.1 Replacement Instructions

1. Completely deplete the old batteries until flat and the limb no longer moves.
2. Disassemble the limb and replace the cells - Only Use Rebel 3350 mAh Battery, Part Number **B10- A006**.
3. Reassemble the limb, connect the batteries to the USB-C charger, follow the instructions as provided on Section 4.0
4. Fully reset the system (instructions on page 9)
5. Allow system to fully charge.
6. If this initial charge or the full reset is not conducted properly it will negatively affect how the system calculates the remaining charge.
7. Check your local waste regulations to safely dispose of your old batteries.

9.0 Sales Demo Unit (COGSDU-3350)

The Sales Demo Unit, hereby known as the SDU, is a tower that is to be primarily used for sales purposes when demoing myoelectric terminal devices. It is comprised of the Power Supply Unit with included 3350mAh battery, Rebel EQD (Arm side) in addition with a switch pack control which acts as the electrode input.

The switchpack features open and close buttons which act as the electrode sites A & B. The sales representative can perform a half to full press, where the adjacent LED display indicates the resulting power applied to the terminal device. The Power Supply unit is to be operated on as already instructed. There is a master on/off switch at the base of the unit to cut off all power to the Unit.

The casing can be customised to suit your branding at a minimum order quantity. We also offer a polish service on the casing at an additional cost.

All enquiries are to be forwarded to: info@rebelbionics.com.



10.0 Warranty

All Rebel products are covered by a 24-month manufacturer's warranty included which takes effect from the date of fitting. Products are subject to be evaluated for warranty. Rebel is not responsible for normal wear, and/or damage caused by excessive force, and/or excessive usage beyond the technical design and/or beyond its reasonable means. Rebel warrants its products against defects in material and workmanship within the warranty period. Limitation in those instances where changes, alterations or modifications are made in materials at the request or instruction of the customer, the customer agrees not to claim or commence suit against Rebel based on any such disclaimed warranties.

Our obligation is limited only to the repair or replacement of defective parts within the warranty period or, at the sole discretion of Rebel, to refund the purchase price of a full refund, partial refund, or no refund, depending on the condition of the return.

Our commitment is limited only to the repair or replacement of defective parts within the warranty period. The original warranty period resumes when the defective part is replaced. Rebel has the right to void the warranty of all products that have any type of modifications or damage caused by any unauthorised or untrained personnel. Any form of abuse, neglect, and excessive damage that is caused by usage outside the intended design and technical specifications, and/or any modifications made towards Rebel products will null and void all warranties.

To the fullest extent permitted by law Rebel Bionics Ltd. and its affiliates, directors, officers, employees, partners, contractors, or agents will not be liable for any losses or damages whether direct, indirect, incidental, special, punitive, or consequential resulting from the use of the Rebel, irrespective of whether the Clinician or User has been advised or otherwise might have anticipated the possibility of such loss or damage.





Rebel Bionics Ltd. and its affiliates, directors, officers, employees, partners, contractors, or agents shall not be responsible for strikes, labour slowdowns, war, terrorism, riots, severe weather conditions, natural disasters, acts of God or any other forces beyond the reasonable control of Rebel which may result in direct, indirect, incidental, special, punitive, or consequential losses or damage.





11.0 Disposal

















Please check your local regulations prior to disposing any items to avoid having a detrimental impact on health and the environment.

12.0 Symbols used

Symbol	Title	Description	Standard	Ref. No. of symbol
	Manufacturer	Indicates the medical device manufacturer	ISO 15223-1	5.5.1
	Consult instructions for use	Indicates the need for the user to consult the instructions for use.	ISO 15223-1	5.4.3
	Keep Dry	Indicates medical device kept away from moisture	ISO 15223-1	5.3.4
	Temperature Limit	Indicates temperature the medical device can be exposed	ISO 15223-1	5.3.7

Symbol	Title	Description	Standard	Ref. No. of symbol
	Humidity limitation	Indicates the range of humidity to which the medical device can be safely exposed.	ISO 15223-1	5.3.8
	Type BF applied part	Indicates an electrical medical device that complies as Type B	IEC 60601-1 IEC 60601-1 IEC 60878 ISO 9687:2015	5334
	Caution: Federal (USA) law restricts this device to sale by or on the order of a physician	Device is prescription use only by a designated healthcare professional	None; this is symbol generated by the company	21 CFR 801
	Caution	Indicates the need for the user to consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device itself.	ISO 15223-1	5.4.4
		This product contains electrical and electronic components that may contain materials which, if disposed of with general waste, could be damaging to the environment. Residents of the European Union must follow specific disposal or recycling instructions for this product. Residents outside of the European Union must dispose of or recycle this product in accordance with local laws or regulations that apply.	IS EN 50419	Fig. 1

Symbol	Title	Description	Standard	Ref. No. of symbol
	Bluetooth*	Bluetooth* wireless or enabled technology	Trademarks of Bluetooth Special Interest Group (SIG)	N/A
	Follow instructions for use	Refer to instruction manual/booklet	IEC TR 60878	N/A
IP 22	Ingress Protection Level	Protection against solid foreign objects of 12.5 mm diameter and greater, and protection against vertically falling water drops when tilted up to 15 degrees.	IEC 60601-1	Table D.3, Symbol 2
	FCC Part 15	Electromagnetic interference from the device is under limits approved by the Federal Communications Commission.	Federal Communications Commission	N/A
	Complies with Australian Radio communications requirements.	Complies with Australian Radio communications requirements.	AS/NZS 4417.1	N/A
	CE Mark	For European Compliance	93/42/EEC Medical Devices Directive	Annex XXII
	Recycling	Battery is recyclable - follow local recycling & reclaiming procedures	ISO 7000	1135

Symbol	Title	Description	Standard	Ref. No. of symbol
	China RoHS Mark	China RoHS Mark I logo. Product does not contain toxic and hazardous substances or elements above the clip level in any material or application including those exempt from the requirements of the EU RoHS Directive.	SJ/T11364-2006	N/A
	Recycling under the Waste Disposal Act	Subject to recycling under the Waste Disposal Act.	Environmental Protection Administration, R.O.C. (Taiwan)	N/A
	Serial Number	Indicates a unique identifier used for identification and traceability purposes	ISO 7000 / IEC 60417	N/A
	Medical Device	Indicates the product is a medical device	ISO 15223-1	N/A
	Unique Device Identifier	A unique numeric code that identifies the labeler and the specific version of the device.	ISO 15223-1:2021	N/A
	European Union Representative	Indicates the authorized representative in the European Community/European Union.	ISO 15223-1:2016 Reference no 5.1.2	N/A
	Non Sterile	Indicates a medical device that has not been subjected to a sterilization process.	ISO 15223- 1:2016 Reference no. 5.2.7. (ISO 7000-2609)	N/A
	Single Patient - Multiple use	To indicate that the medical device may be used multiple times (multiple procedures) on a single patient	ISO/DIS 15223-1:2020(E) Ref no. 5.4.12. (ISO 7000-3706)	N/A

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

13.0 Declaration of Conformity

Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 concerning Medical Devices. The undersigned declares that the products described in this document meet the Council provisions that apply to them and the CE Mark may be affixed.

General Product Name	COGDAC/EL2
Legal Manufacturer	REBEL BIONICS LTD. Unit 5a, Balm Road Industrial Estate, Beza Street, Hunslet, Leeds, LS10 2BG
Manufacturers SRN	Not Yet Available
Basic UDI-DI	TBA
GMDN Code	63118
Variants	As per Appendix II (Available upon Request)
Intended Purpose	To be used exclusively for providing exoprosthetic fittings of the upper limbs.
MDR Classification	Class IIB [Rule 9]
Notified Body	N/A
CE Certificate	N/A
EC Authorised Representative	ADVENA LTD. Tower Business Centre, 2nd Flr. Tower Street, Swatar, BKR 4013 Malta
EC Authorised SRN	MT-AR-000000234
Medical Device Regulation Assessment Route	In conformity with Annexes II and III and have drawn up the DoC in accordance with Article 19 of the Medical Device Regulation.

Ted Varley,
Managing Director
2nd April 2024

Who is the natural and legal person with responsibility for the design, manufacture, packaging and labelling before the device is placed on the market under this manufacturer's name regardless of whether these operations are carried out by the manufacturer or on his behalf by a third party.

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