



# BIONIT LABS

TURNING DISABILITIES INTO NEW POSSIBILITIES

PRODUCT BROCHURE



## THUNDERCELL BATTERY



CONNECT

## CONTACT US



+39 0836 307525



info@bionitlabs.com



www.bionitlabs.com



Via Cracovia, 1 – 73010, Soleto (LE)



## THUNDERCELL BATTERY (PN EB02)



With a weight of only 76 g (2.68 oz), our external, interchangeable lithium-ion battery features a **950 mAh capacity** and it can be **fully charged in about 1 hour** - half the time needed by equivalent systems. The charging process is simple and immediate thanks to the **USB Type-C connector**.

The ThunderCell Battery is a **smart device** that sends relevant information to the Adam's Hand, such as the battery percentage, the instant cells temperature, the overall battery health and any operating problems. A **multi-function button** allows the users to switch the battery ON or OFF and provides them with acoustic and visual feedback.

Compared to the previous model, the new generation of our ThunderCell Battery - EB02 integrates four new features.

The **remote firmware updates** through our MyoLogic App ensure the most updated version of the device.

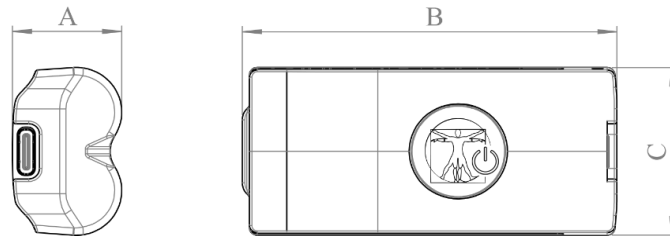
The **Inertial Measurement Unit (IMU)** allows the battery to track the position of the whole prosthetic system in the space, improving the calibration procedure and helping the users during the whole training process.

EB02 can also work as a **power bank**, so that it can recharge the battery of portable devices, such as the users' smartphones.



Finally, with the new EB02 version, users can also obtain useful information about the battery status thanks to **haptic feedback**.

**PRODUCT DIMENSIONS:**

DIM.	mm	inches
A	20	0,79
B	70	2,75
C	32	1,26








**COLOUR OPTIONS:**





PART NUMBER	COLOUR	
EB02-B	Black	
EB02-P	Beige	







**TECHNICAL DATA:**

Technology	2 Li-Ion Cells
Capacity	950 mAh
Input Voltage	5 V
Output Voltage	7.4 V
Max Input Current	2 A
Max Output Current	6 A
Charging time (fast-charge)	From 0% to 50% in 30 min. From 0% to 100% in about 70 min.
Charging connector	USB Type-C
Weight	76 g (2.68 oz)
Operating temperature (using the battery)	-20°C/-4°F to + 60°C/140°F
Operating temperature (charging the battery)	0°C/32°F to + 45°C/113°F
Storage and transport temperature	-5°C/23°F to + 35°C/95°F
Operating / storage / transport humidity	75% non-condensing
Degree of protection from liquids and solids (IEC 60529)	IP67
Service Life	2 years
Warranty	1 year

Button functionality	Pressure time	Acoustic feedback	Haptic Feedback (Vibration)	LED feedback	
Switching the battery ON	Long*	2 x Short	2 x Short	Green - Double blink	
Switching the battery OFF	Long*	1 x Long	1 x Long	Red - Stationary for approx. 1 s	
Checking the battery percentage (when the battery is switched ON or OFF)	Short*	1 x Short	-	Green - Stationary for approx. 3 s Battery percentage: 60% ÷ 100%	
			-	Yellow - Stationary for approx. 3 s Battery percentage: 20% ÷ 60 %	
			-	Red - Stationary for approx. 3 s Battery percentage: 5% ÷ 20 %	

\*Long: more than 1 s / Short: less than 1 s.

Battery operational status	Acoustic feedback	Haptic Feedback (Vibration)	LED feedback	
Battery ON and in use	-	-	Green – Blinking every 3 s Battery percentage: 60% ÷ 100%	
			Yellow – Blinking every 3 s Battery percentage: 20% ÷ 60 %	
			Red – Blinking every 3 s Battery percentage: 5% ÷ 20 %	
Battery percentage < 5%	2 x Short	-	Red – Double blink	

Fully discharged battery	1 x Long	-	Red - Stationary for approx. 1 s	
Generic Warning**	1 x Short	1 x Short	Red – Blinking x10	
Battery percentage during charging process	-		<20% Red - Blinking	
			20% ÷ 60 % Yellow - Blinking	
			60% ÷ 99% Green - Blinking	
			100% Green - Stationary	

\*\* E.g. overtemperature, short-circuit, etc. (for more information send an e-mail to [support@bionitlabs.com](mailto:support@bionitlabs.com)).

Please note:

- 1) the **ThunderCell Battery** turns off automatically if:
  - a **generic warning occurs** (in this case, the device notifies the user before switching off).
  - it is **removed from the Battery Receptacle** (ES01) installed into the prosthetic socket.
- 2) It is impossible to turn the ThunderCell Battery on:
  - when the device **battery is low**.
  - when it is not inserted in the **Battery Receptacle** (ES01) installed into the prosthetic socket.

## THUNDERCELL BATTERY ACCESSORIES

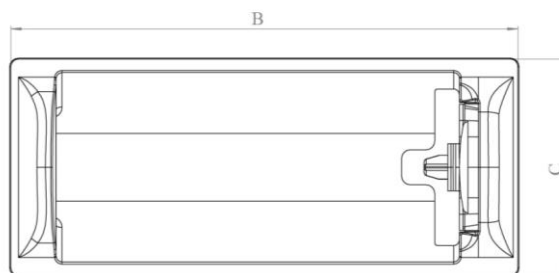
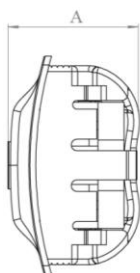
### THUNDERCELL BATTERY RECEPTACLE (PN ES01)





The **ThunderCell Battery Receptacle** has to be installed into the prosthetic socket in order to use our interchangeable **ThunderCell Battery**: simply by **lifting the lever**, the user can remove the battery and replace it with a fully charged one, ensuring **high autonomy to the whole prosthetic system**.

#### PRODUCT DIMENSIONS:

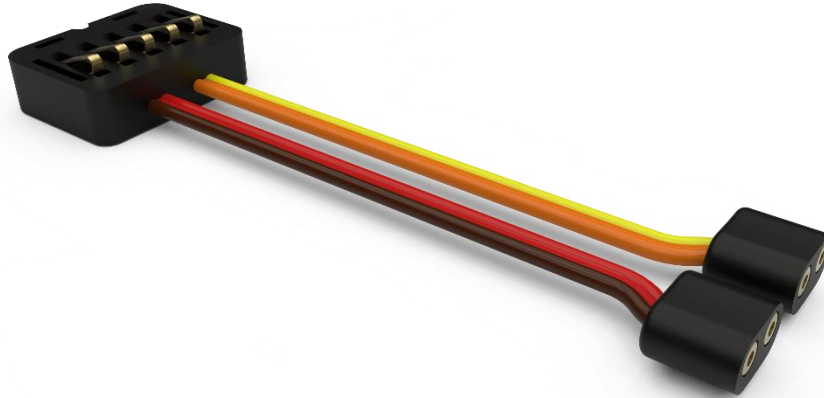
DIM.	mm	inches
A	22,5	0,88
B	87,5	3,45
C	37,5	1,48



#### COLOUR OPTIONS:

PART NUMBER	COLOUR	
ES01-B	Black	
ES01-P	Beige	

## THUNDERCELL BATTERY CABLE (PN TC01)



**ThunderCell Battery Cable** is available both in **20 cm (TC01-20)** and **60 cm (TC01-60)** lengths and it features **five contacts**, which allow the **ThunderCell Battery** to be connected with the prosthetic system and to communicate with the **Adam's Hand**, through a standard **6-band Quick Disconnect Wrist (QDW)**.

A standard 4-band QDW can also be used, but in this case the **ThunderCell Battery** will only be able to supply the prosthetic system, and not to communicate with the **Adam's Hand**.

The **Cable** can be purchased separately, and it can be detached from the **Battery Receptacle (ES01)** to replace it over time without replacing the **Receptacle**.

## THUNDERCELL BATTERY LAMINATION KIT (PN MKEB-01)



Our **ThunderCell Battery Lamination Kit** includes the **Battery Receptacle (ES01)** and the components needed to integrate the **Receptacle** into the prosthetic socket:

- **Lamination template (C99-011)**
- **Receptacle spacer (C99-012)**

## USB-C MEDICAL-GRADE CHARGER (PN BC01)





The charging process is simple and immediate thanks to the **USB Type-C connector** that allows the **ThunderCell Battery** to be charged **up to 50% in just 30 minutes** and to be fully charged up in **about 70 minutes**.

**TECHNICAL DATA:**

<b>Type</b>	Wall Plug-in
<b>Technology</b>	Regulated Switchmode AC-DC Power Supply AC Adaptor
<b>Nameplate rated input</b>	100-240V ~, 50-60 Hz, 0.6 A
<b>Output Power</b>	15.0 W
<b>Output Voltage</b>	5.0 V
<b>Output Current</b>	3.0 A
<b>Output connector</b>	USB Type-C
<b>Degree of protection from liquids and solids (IEC 60529)</b>	IP42
<b>Operating Temperature</b>	-20°C/-4°F to 40°C/104°F (full load)
<b>Storage Temperature</b>	-30°C/-22°F to 80°C/176°F
<b>Humidity</b>	0% to 95% relative humidity, non-condensing
<b>Service Life</b>	5 years

**COMPATIBILITY**

The **ThunderCell Battery** is compatible with **Ottobock's battery receptacle** (code 757Z185=1) and with **several myoelectric upper-limb prosthetic systems** available on the market.  
For more information, visit our [website](#) or send an email to [support@bionitlabs.com](mailto:support@bionitlabs.com).

#### **CE CONFORMITY AND FDA REGISTRATION**

The **ThunderCell Battery (EB02)** has currently entered the **CE marking** and **FDA registration** processes, in accordance with the **European Regulation for Medical Devices MDR 2017/745** and in compliance with IEC 60601-1, IEC 60601-1-2, and IEC 60601-1-11 standards.

#### **MANUFACTURER**



**BionIT Labs S.r.l.**  
Via Cracovia, 1  
73010 – Soleto (LE) - ITALY

#### **Certified Company**

