



**BIONIT LABS®**

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

TURNING DISABILITIES INTO NEW POSSIBILITIES



## THUNDERCELL BATTERY

Mod. EB02-E

**DATASHEET**

<b>COMMERCIAL NAME</b>	ThunderCell Battery	
<b>REF</b>	EB02-E, con E = colour code	
<b>INTENDED USE</b>	Lithium-ion rechargeable battery power module for myoelectric prostheses.	
<b>TECHNICAL FEATURES</b>	<b>COMPATIBILITY</b>	
	Consult the chart on p. 3, containing the list of devices compatible with ThunderCell Battery.	
	<b>PRODUCT DATA</b>	
	Capacity	950 mAh
	Dimensions	(70 x 32 x 22) mm / (2.76 x 1.26 x 0.86) inches
	Weight	76 g / 2.68 oz
	Expected lifetime	2 years
	Warranty	1 years (90% capacity)
	Available colours	black (E=B)  beige (E=P)  white (E=W) 
	<b>ELECTRICAL AND MECHANICAL FEATURES</b>	
	Supply voltage	5 V
	Rated output voltage	7.4 V
	Max. output voltage	2 A
	Max. output current	6 A
	Output connector	USB Type-C
	Recharge time	50% in approx. 30 min., 100% in approx. 70 min.
	Degree of protection against liquid and solid particles penetration (IEC 60529)	IP67
	<b>OPERATING CONDITIONS</b>	
Operating temperature (discharge phase)	from 0 °C/+ 32 °F to + 40 °C/+104 °F	
Usage temperature (charging phase)	from 0 °C/ +32 °F to + 40 °C/ +104 °F	
Storage and transport temperature	from -5 °C/+23 °F to +35 °C/+95 °F	
Relative humidity of use	30% ÷85 %	
Relative humidity of storage and transport	≤ 75 %, non-condensing	
<b>FUNCTIONALITY</b>	<b>FAST CHARGING</b>	
	The device is equipped with a wall charger manufactured by GlobTek Inc. (model "WR9QA3000USBC-CIMR6B", supplied by BionIT Labs under PN BC01) and a car charger manufactured by Ansmann AG (model "CC212", supplied by BionIT Labs® with PN BC02).	
	<b>POWER BANK</b>	
	The device can work in Power Bank mode. This mode allows the user to use ThunderCell Battery to power or charge other devices through the USB-C connector.	
	<b>VISUAL ALERTS</b>	
	The power button integrates a polychromatic LED to indicate the battery charge status, the health status, the operating status, and the current alarms.	
<b>ACOUSTIC ALERTS</b>		
4kHz frequency buzzer for signaling alarms or device status changes.		

	<p><b>HAPTIC ALERTS</b></p> <p>Vibration for signaling alarms or device status changes.</p> <p><b>SENSORS</b></p> <ul style="list-style-type: none"> <li>• Internal temperature sensors</li> <li>• Data transmission via I2C bus</li> <li>• The Inertial Measurement Unit (IMU) integrated in ThunderCell Battery allows the device to have information regarding its orientation in space (without measurement function) through acceleration and rotation sensors with 16-bit resolution.</li> <li>• Automatic protection against:           <ul style="list-style-type: none"> <li>- overtemperature: in the event of excessive temperature inside the ThunderCell Battery, the protection system automatically switches off the device. This allows to interrupt the cause of the overheating and bring the temperature back to safe values.</li> <li>- overcurrent and/or overvoltage during charging: if, during the charging phase, an excessive input current and/or voltage is detected, the protection system automatically stops the charge to avoid further issues.</li> <li>- Overcurrent and/or under- or overvoltage during operation: if, during operation, an overcurrent and/or under- or overvoltage are detected, the protection systems, which constantly monitors the output current and voltage, automatically switches off the device to avoid further problems.</li> </ul> </li> <li>• "auto shutdown": in case of accidental detaching of the ThunderCell Battery from the receptacle, the protection system immediately switches off the device, avoiding that it could remain switched on and in condition of providing power supply voltage.</li> </ul>
<b>TESTS</b>	Each medical device is tested before the shipment, in accordance with company procedures. The reference standards are affixed on the declaration of conformity attached to the device.
<b>TECHNICAL REGULATIONS</b>	IEC 60601-1, IEC 60601-1-2, IEC 60601-1-11, IEC 62304, IEC 62366 IEC 60529:1989/AMD2:2013/COR1:2019 IEC 60601-1-8:2006+AMD1:2012 IEC 62133-2:2017+AMD1 UN 38.3 ISO 22523 RED ETSI 300 328
<b>LABELLING</b>	Labelling in accordance with UNI EN ISO 15223-1, IEC 60601-1; copy of the label is available in the Installation, Maintenance and Operation Manual.
<b>DISPOSAL INSTRUCTIONS</b>	This medical device must be managed in accordance with art. 13 - Legislative Decree 25 July 2005, n. 151 "Implementation of directives 2002/95/CE, 2002/96/CE and 2003/108/CE, relating to the reduction of the use of dangerous substances in electrical and electronic equipment, as well as waste disposal".

Chart 1: Devices compatible with the ThunderCell Battery power module.

Manufacturer	Product	Type	Model / Part Number
BionIT Labs S.r.l.	Ricettacolo con cavo per ThunderCell Battery	Receptacle with cable for external battery	ER01-E-XX
BionIT Labs S.r.l.	Kit di laminazione ThunderCell Battery	Receptable assembly kit	MKEB01
BionIT Labs S.r.l.	Adam's Hand	Multi-articulating prosthetic hand	AH02-CDY-EE
BionIT Labs S.r.l.	Wave Electrode	Analog electrode	AE02-50 / AE02-60
Otto Bock HealthCare GmbH	Battery Receptacle	Receptacle and assembly kit	757Z185=1
Otto Bock HealthCare GmbH	System Electric Hand Digital Twin	Tridigital myoelectric hand	8E38=7
Otto Bock HealthCare GmbH	System Electric Hand DMC Plus	Tridigital myoelectric hand	8E38=6
Otto Bock HealthCare GmbH	MyoHand VariPlus Speed	Tridigital myoelectric hand	8E38=9
Otto Bock HealthCare GmbH	SensorHand Speed	Tridigital myoelectric hand	8E38=8
Otto Bock HealthCare GmbH	Bebionic	Tridigital myoelectric hand	8E70=*
Otto Bock HealthCare GmbH	MyoBock® Electrode	Analogue Electrode	13E200=50 / =60
Otto Bock HealthCare GmbH	Suction Socket Electrode	Analogue Electrode	13E202=50/=60
Otto Bock HealthCare GmbH	Electric Wrist Rotator	Pronosupination Unit	10S17
Otto Bock HealthCare GmbH	MyoRotronic	Pronosupination Unit control System	13E205
Otto Bock HealthCare GmbH	Coaxial plug (4 bands)	Wrist interface	9E169
Össur®	Compact Electrode Kit	Analog electrode	PL091-XXX
Össur®	4-way coaxial plug	Wrist Interface	PL091036
Össur®	i-Limb® Access	Multi-articulating prosthetic hand	TBX5004X / TBX5048X
Össur®	i-Limb® Ultra	Multi-articulating prosthetic hand	TBX5018X / TBX5048X
Össur®	i-Limb® Quantum	Multi-articulating prosthetic hand	TBX5014X
Össur®	i-Limb® Ultra - Revolution	Multi-articulating prosthetic hand	-
Steeper Group	Electrode	Analog electrode	ELEC50 / ELEC60
Steeper Group	Quick Disconnect Wrist Unit	Wrist Interface	QDAWA-40 / -45 / -50
Fillauer	Coaxial Plug (4 band)	Wrist Interface	1701009
TASKA™ Prosthetics	TASKA Hand	Multi-articulating prosthetic hand	-
COVVI Ltd.	Nexus Hand	Multi-articulating prosthetic hand	CVXXXQXXXXXXXX(+0000XX)
COVVI Ltd.	Electrode	Analog electrode	CEL-50 / CEL-60

Aether Biomedical	Zeus	Multi-articulating prosthetic hand	A1 - L /-R
Vincent Systems GmbH	VINCENTevolution3	Multi-articulating prosthetic hand	-
Vincent Systems GmbH	VINCENTevolution3+	Multi-articulating prosthetic hand	-
Vincent Systems GmbH	VINCENTevolution4	Multi-articulating prosthetic hand	-
Vincent Systems GmbH	VINCENYoung3+	Multi-articulating prosthetic hand	-
Fillauer	MC Standard Wrist Rotator	Active Wrist Rotator	5010045, 5010054, 5010055
Fillauer	MC Standard Wrist Rotator + Six bands coaxial plug	Active Wrist Rotator	5010045, 5010054, 5010055, 3010869
COAPT LLD	Coapt Gen2® Complete Control®**	Control System for upper limb prosthesis	-

## Manufacturer's contacts

For any information, request or complaint, please contact:



**BionIT Labs S.r.l.**  
Via Cracovia, 1  
73010 – Soleto (LE) – ITALY  
+39 0836 1946903  
[support@bionitlabs.com](mailto:support@bionitlabs.com)

### Certified Company





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+39 0836 1946903



[www.bionitlabs.com](http://www.bionitlabs.com)



[support@bionitlabs.com](mailto:support@bionitlabs.com)



Via Cracovia, 1  
73010 Soleto (LE) - Italia