



BIONIT LABS®

EN




TURNING DISABILITIES INTO NEW POSSIBILITIES



THUNDERCELL BATTERY

Mod. EB02-E

DATASHEET

COMMERCIAL NAME	ThunderCell Battery	
REF	EB02-E, con E = colour code	
INTENDED USE	Lithium-ion rechargeable battery power module for myoelectric prostheses.	
TECHNICAL FEATURES	COMPATIBILITY	
	Consult the chart on p. 3, containing the list of devices compatible with ThunderCell Battery.	
	PRODUCT DATA	
	Capacity	950 mAh
	Dimensions	(70 x 32 x 22) mm / (2.76 x 1.26 x 0.86) inch.
	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) 
	ELECTRICAL AND MECHANICAL FEATURES	
	Supply voltage	5 V
	Rated output current	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
OPERATING CONDITIONS		
Operating temperature (discharge phase)	from -20 °C/-4 °F to +60 °C/+140 °F	
Usage temperature (charging phase)	from 0 °C/ +32 °F to +45 °C/ +113 °F	
Storage and transport temperature	from -5 °C/+23 °F to +35 °C/+95 °F	
Relative humidity of storage and transport	≤ 75 %, non-condensing	
FUNCTIONALITY	FAST CHARGING	
	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).	
	POWER BANK	
	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.	
	VISUAL ALERTS	
	The on and off button integrates a polychromatic LED to indicate the battery charge status, the operating status, and the alarms in progress.	
	ACOUSTIC ALERTS	
4kHz frequency buzzer for signaling alarms or device status changes.		
HAPTIC ALERTS		
Vibration for signaling alarms or device status changes.		

	<p>SENSORS</p> <ul style="list-style-type: none"> • Internal temperature sensors • Data transmission via I2C bus • The Inertial Measurement Unit (IMU) integrated in ThunderCell Battery allows the device to have information on the spatial attitude (without measurement function) through acceleration and rotation sensors with 16-bit resolution; • Automatic protection against: <ul style="list-style-type: none"> - overtemperature: in the event of excessive ambient temperature inside the ThunderCell Battery, the circuit intervenes by switching off the device. This allows to interrupt the cause of the overheating and bring the temperature back to safe values. - overcurrents during charging: if, during the charging phase, the device measures an excess of current flow, the protection intervenes by blocking the flow to avoid more serious problems. - overcurrents during discharge and overvoltages: if, during the discharge phase, the device measures an excess of current flow, the protection intervenes by blocking the flow to avoid more serious problems. The voltage is also monitored during the discharge phase. If an excess voltage is detected, the protection intervenes by switching off the device. • "<i>auto shutdown</i>" in case of accidental release of ThunderCell Battery from the receptacle: this protection system intervenes by immediately switching off the device. This prevents voltage from appearing on the exposed Thundercell Battery connector when the device is not being used properly.
<p>TESTS</p>	<p>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.</p>
<p>TECHNICAL REGULATIONS</p>	<p>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</p>
<p>LABELLING</p>	<p>Labelling in accordance with UNI EN ISO 15223-1, IEC 60601-1; copy of the label is present in the Technical Manual and User Manual.</p>
<p>DISPOSAL INSTRUCTIONS</p>	<p>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".</p>

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	Receptacle 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	Digital Twin System Electric Hand	Tridigital myoelectric hand	8E38=7
Otto Bock HealthCare GmbH	DMC plus system electric hand	Tridigital myoelectric hand	8E38=6
Otto Bock HealthCare GmbH	Bebionic	Tridigital myoelectric hand	8E70=*
Otto Bock HealthCare GmbH	MyoBock® Electrode	Analog electrode	13E200=50 / =60
Otto Bock HealthCare GmbH	Suction Socket Electrode	Analog electrode	13E202=50 / =60
Össur®	Compact Electrode Kit	Analog electrode	PL091-XXX
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
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	VINCENTyoung3+	Multi-articulating prosthetic hand	-

Manufacturer's contacts

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