

Model 3743 LI

1,5 A max out • 90-264 VAC input

- 3-step charge control with current detection
- Universal input voltage
- Wake up and low current start-up of deeply discharged batteries
- Safety indication and protection: against reverse polarity, short circuit, charging battery packs with the wrong number of cells and safety timer run-out
- Approvals:

- Medically certified

Safety: EN 60601-1 ed. 3.1

Home healthcare EN 60601-1-11

EMC: EN 60601-1-2 ed. 4

- UL approved

- Custom specifications on request:

Charging parameters, connectors, cords, logo print, housing/open frame/IP rating and certificates. For more information: [custom design info sheet](#)



Available versions On request

- 1 cell / 1,5A 2 cell / 1,5A
- 3 cell / 1,2A 4 cell / 1,0A
- 5 cell / 0,8A 6 cell / 0,66A
- 7 cell / 0,56A 8 cell / 0,5A
- 9 cell / 0,45A 10 cell / 0,4A
- 11 cell / 0,37A 12 cell / 0,33A
- 13 cell / 0,3A 14 cell / 0,3A

Notes:

Plug-in/Desktop unit

Exchangeable AC and DC plugs available

Order plugs & mains cord separately

Std DC output cord: Female conn. L 1,8m, AWG 20, EMI core,

twin, UL 2468

Animation showing charge error indications:

<https://vimeo.com/679995332>

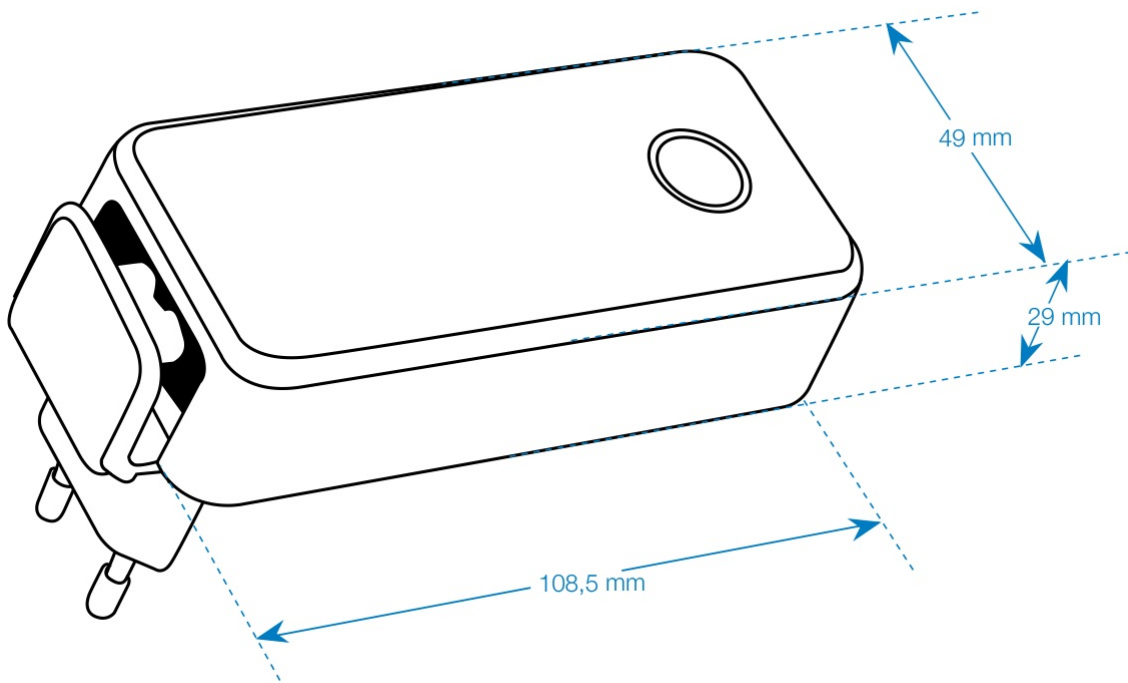
MASCOT type 3743 Li-Ion Chargers:	1-cell Li-Ion	2-cell Li-Ion	3-cell Li-Ion
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz
Max output power	6.3 W	12.6 W	15.1 W
Charge control:			
Step 0 < 10min	Yellow	CC 100mA ± 25mA, when battery voltage < 3V.	CC 100mA ± 25mA, when battery voltage < 6V.
Step 0 > 10min	Red (4 blinks)	0A / 0V	0A / 0V
Step 1 (Constant Current)	Yellow	CC 1.5A ± 0.1A, when 3V < Vbat < 4.2V.	CC 1.5A ± 0.1A, when 6V < Vbat < 8.4V.
Step 2 (Constant Voltage)	Flashing Yellow	CV 4.2V ± 0.05V, till I _{charge} < 100mA or max. 1h.	CV 8.4V ± 0.1V, till I _{charge} < 100mA or max. 1h.
Charge timer (step2, CV)		1h	1h
Safety timer (all steps)	Red (5 blinks)	72h	72h
Step 3 (Charge Completed)	Green	0A	0A
Restart voltage		4.1V	8.2V
Efficiency (at 100% load) approx.:	79 %	81 %	82 %
Average efficiency:	> 76 %	> 78 %	> 80 %
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W
Switch frequency approx.:	56kHz	56kHz	56kHz
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p
Rec. battery capacity:	1,5Ah (1C) to 10Ah (cut off current as EoC) or up to 60Ah (CV Timer as EoC)	1,5Ah (1C) to 10Ah (cut off current as EoC) or up to 60Ah (CV Timer as EoC)	1,2Ah (1C) to 10Ah (cut off current as EoC) or up to 48Ah (CV Timer as EoC)
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 - 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: +25 to +40°C. Storage: +25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥ 110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary - secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and -2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS) or mains cord with C7 connector.		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 × 49 × 29,3 mm		
Weight:	150g		

MASCOT type 3743 Li-Ion Chargers:	4-cell Li-Ion	5-cell Li-Ion	6-cell Li-Ion
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz
Max output power	16.8 W	16.8 W	16.8 W
Charge control:			
Step 0 < 10min	Yellow	CC 100mA ± 25mA, when battery voltage < 12V. 0A / 0V	CC 100mA ± 25mA, when battery voltage < 18V. 0A / 0V
Step 0 > 10min	Red (4 blinks)	CC 1A ± 0.1A, when 12V < Vbat < 16.8V.	CC 0.8A ± 0.1A, when 15V < Vbat < 21V.
Step 1 (Constant Current)	Yellow	CV 16.8V ± 0.1V, til I _{charge} < 100mA or max. 1h.	CV 21V ± 0.1V, til I _{charge} < 100mA or max. 1h.
Step 2 (Constant Voltage)	Flashing Yellow	1h	1h
Charge timer (step2, CV)		72h	72h
Safety timer (all steps)	Red (5 blinks)	0A	0A
Step 3 (Charge Completed)	Green	16.4V	20.5V
Restart voltage			24.6V
Efficiency (at 100% load) approx.:	83 %	83 %	84 %
Average efficiency:	> 80 %	> 80 %	> 80 %
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W
Switch frequency approx.:	56kHz	56kHz	56kHz
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p
Rec. battery capacity:	1Ah (1C) to 10Ah (cut off current as EoC) or up to 40Ah (CV Timer as EoC)	0,8Ah (1C) to 10Ah (cut off current as EoC) or up to 32Ah (CV Timer as EoC)	0,66Ah (1C) to 10Ah (cut off current as EoC) or up to 26,4Ah (CV Timer as EoC)
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: +25 to +40°C. Storage: +25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS) or mains cord with C7 connector.		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 × 49 × 29,3 mm		
Weight:	150g		

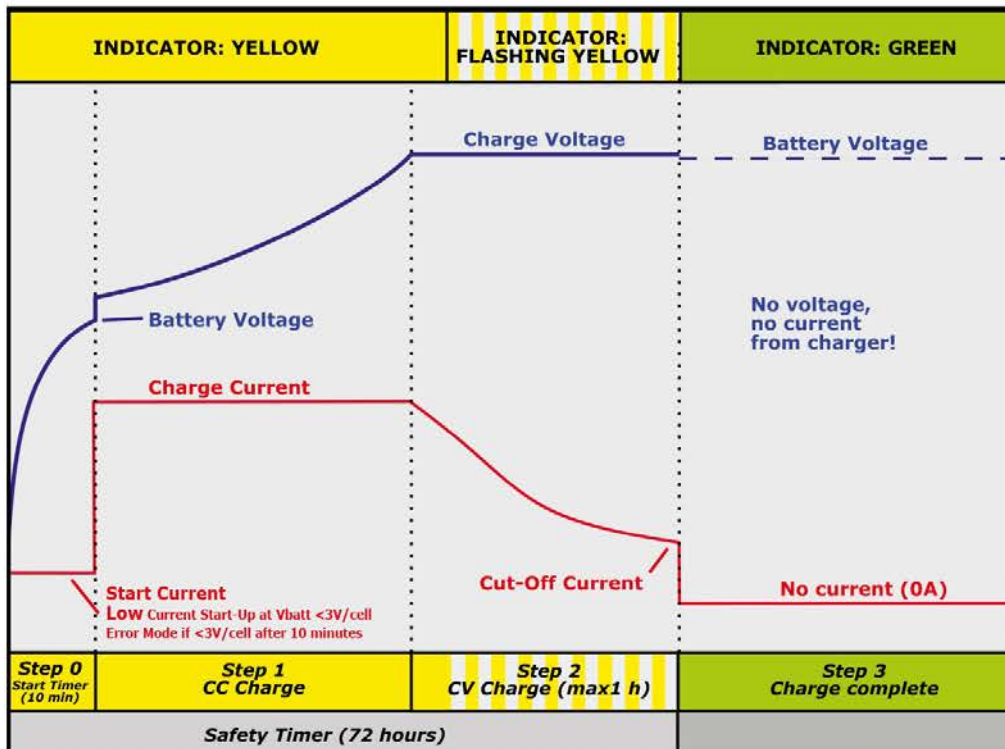
MASCOT type 3743 Li-Ion Chargers:	7-cell Li-Ion	8-cell Li-Ion	9-cell Li-Ion
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz
Max output power	16.5 W	16.8 W	17 W
Charge control:			
Step 0 < 10min	Yellow	CC 100mA ± 25mA, when battery voltage < 21V. 0A / 0V	CC 100mA ± 25mA, when battery voltage < 27V. 0A / 0V
Step 0 > 10min	Red (4 blinks)	CC 0.56A ± 0.1A, when 21V < Vbat < 29.4V.	CC 0.45A ± 0.1A, when 27V < Vbat < 37.8V.
Step 1 (Constant Current)	Yellow	CV 29.4V ± 0.1V, til I _{charge} < 100mA or max. 1h.	CV 37.8V ± 0.1V, til I _{charge} < 100mA or max. 1h.
Step 2 (Constant Voltage)	Flashing Yellow	1h	1h
Charge timer (step2, CV)		72h	72h
Safety timer (all steps)	Red (5 blinks)	0A	0A
Step 3 (Charge Completed)	Green	28.7V	36.9V
Restart voltage			
Efficiency (at 100% load) approx.:	84 %	84 %	84 %
Average efficiency:	> 80 %	> 80 %	> 80 %
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W
Switch frequency approx.:	56kHz	56kHz	56kHz
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p
Rec. battery capacity:	0,56Ah (1C) to 10Ah (cut off current as EoC) or up to 22,4Ah (CV Timer as EoC)	0,5Ah (1C) to 10Ah (cut off current as EoC) or up to 20Ah (CV Timer as EoC)	0,45Ah (1C) to 10Ah (cut off current as EoC) or up to 18Ah (CV Timer as EoC)
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: +25 to +40°C. Storage: +25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS) or mains cord with C7 connector.		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 × 49 × 29,3 mm		
Weight:	150g		

MASCOT type 3743 Li-Ion Chargers:	10-cell Li-Ion	11-cell Li-Ion	12-cell Li-Ion
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz
Max output power	16.8 W	17.1 W	16.6 W
Charge control:	Charge indication:		
Step 0 < 10min	Yellow	CC 100mA ± 25mA, when battery voltage < 30V. 0A / 0V	CC 100mA ± 25mA, when battery voltage < 33V. 0A / 0V
Step 0 > 10min	Red (4 blinks)	CC 0.4A ± 0.1A, when 30V < Vbat < 42V.	CC 0.37A ± 0.1A, when 33V < Vbat < 46.2V.
Step 1 (Constant Current)	Yellow	CV 42V ± 0.1V, til I _{charge} < 80mA or max. 1h.	CV 46.2V ± 0.1V, til I _{charge} < 80mA or max. 1h.
Step 2 (Constant Voltage)	Flashing Yellow	1h	1h
Charge timer (step2, CV)		72h	72h
Safety timer (all steps)	Red (5 blinks)	0A	0A
Step 3 (Charge Completed)	Green	41V	45.1V
Restart voltage			49.2V
Efficiency (at 100% load) approx.:	84 %	84 %	84 %
Average efficiency:	> 80 %	> 80 %	> 80 %
No load consumption	< 0,5 W	< 0,5 W	< 0,5 W
Switch frequency approx.:	56kHz	56kHz	56kHz
Ripple:	< 100mV p-p	< 100mV p-p	< 100mV p-p
Rec. battery capacity:	0,4Ah (1C) to 8Ah (cut off current as EoC) or up to 16Ah (CV Timer as EoC)	0,37Ah (1C) to 8Ah (cut off current as EoC) or up to 14,8Ah (CV Timer as EoC)	0,33Ah (1C) to 8Ah (cut off current as EoC) or up to 13,2Ah (CV Timer as EoC)
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: +25 to +40°C. Storage: +25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS) or mains cord with C7 connector.		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 × 49 × 29,3 mm		
Weight:	150g		

MASCOT type 3743 Li-Ion Chargers:	13-cell Li-Ion	14-cell Li-Ion	
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	90 - 264VAC / 47 - 63Hz	
Max output power	16.38 W	17.6 W	
Charge control:	Charge indication:		
Step 0 < 10min	Yellow	CC 80mA ± 25mA, when battery voltage < 39V. 0A / 0V	CC 80mA ± 25mA, when battery voltage < 42V. 0A / 0V
Step 0 > 10min	Red (4 blinks)	CC 0.3A ± 0.1A, when 39V < Vbat < 54.6V.	CC 0.3A ± 0.1A, when 42V < Vbat < 58.8V.
Step 1 (Constant Current)	Yellow	CV 54.6V ± 0.1V, til I _{charge} < 56mA or max. 1h.	CV 58.8V ± 0.1V, til I _{charge} < 56mA or max. 1h.
Step 2 (Constant Voltage)	Flashing Yellow	1h	1h
Charge timer (step2, CV)		72h	72h
Safety timer (all steps)	Red (5 blinks)	0A	0A
Step 3 (Charge Completed)	Green	53.3V	57.4V
Restart voltage			
Efficiency (at 100% load) approx.:	84 %	84 %	
Average efficiency:	> 80 %	> 80 %	
No load consumption	< 0,5 W	< 0,5 W	
Switch frequency approx.:	56kHz	56kHz	
Ripple:	< 100mV p-p	< 100mV p-p	
Rec. battery capacity:	0,3Ah (1C) to 5,6Ah (cut off current as EoC) or up to 12Ah (CV Timer as EoC)	0,3Ah (1C) to 5,6Ah (cut off current as EoC) or up to 12Ah (CV Timer as EoC)	
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.		
Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.		
Indication when "Battery not connected"	Flashing Green (1s/1s)		
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.		
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)		
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 10min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.		
Temperature range:	Operating: +25 to +40°C. Storage: +25 to +85°C		
Safety:	Medical EN 60601-1 / Home Healthcare EN 60601-1-11 (V _{NOM} ≥110VAC) / Battery Charger EN 60335-2-29		
Insulation class :	Class II		
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC		
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2		
Input terminal:	2-pins IEC 320 connector for exchangeable mains plug (EU, US, UK and AUS) or mains cord with C7 connector.		
Output terminals:	Cord with/without plug. Exchangeable plugs available.		
IP-Grade:	IP41		
Dimensions:	108,5 × 49 × 29,3 mm		
Weight:	150g		



Charging characteristics and LED indication *



* an animated video of this charging progress is available on our website

BATTERY NOT CONNECTED INDICATIONS

Battery not connected is indicated by FLASHING GREEN. In this mode charger will apply short pulses attempting to wake up deeply discharged batteries.

ERROR INDICATIONS

2 red blinks: Battery is connected to charger with wrong polarity!
 3 red blinks: Charger output is shorted. Check output cable connection!
 4 red blinks: Battery voltage is low. Check battery status or voltage.
 5 red blinks: Safety timer has run out. Check battery status or capacity.
 LED off: Battery voltage is too high. Check battery voltage.

WAIT MODE INDICATIONS

Yellow with 1 red blink: Battery temperature is too low ($< 0^{\circ}C$)
 Yellow with 2 red blink: Battery temperature is too high ($> 45^{\circ}C$)

EU Declaration of Conformity



We, the responsible manufacturer;

Company Name:	Mascot Electronics AS		
Postal Address:	P.O.Box 177, N-1601 Fredrikstad, NORWAY		
Visiting Address:	Mosseveien 109, N-1624 Gressvik, NORWAY		
Telephone:	(+47) 69 36 43 00	E-mail:	sales@mascot.com
		WEB:	www.mascot.com

declare that this Declaration is issued under our sole responsibility and belongs to the following product(s):

Product and intended purpose:	Battery Charger										
Brand(s):	and/or MASCOT (may also carry additional customer name, logo or trade mark)										
Type(s)/Model(s)/UDI-DI:	3743 (may also carry additional customer model name or part number)										
Batch / Serial No./ UDI-PI:	all CE-marked products										
Description:	<p>Input: max. 0.5 A, 100-240 VAC 50-60 Hz, Class II</p> <p>Output:</p> <table border="0"> <tr> <td>for Li-Ion Batteries 1 - 14 cell</td> <td>(U_{charge} = max. 4.2V/cell, I_{charge} = 1.5 A - 0.3 A)</td> </tr> <tr> <td>for LiFePO₄ Batteries 1 - 16 cell</td> <td>(U_{charge} = max. 3.65V/cell, I_{charge} = 1.5 A - 0.3 A)</td> </tr> <tr> <td>for LTO Batteries 1 - 20 cell</td> <td>(U_{charge} = max. 2.85V/cell, I_{charge} = 1.5 A - 0.3 A)</td> </tr> <tr> <td>for NiCd/NiMH Batteries 2 - 22 cell</td> <td>(U_{charge} = max. 1.5V/cell, I_{charge} = 1.3 A - 0.4 A)</td> </tr> <tr> <td>for Lead-Acid Batteries 6 - 48 V</td> <td>(U_{charge} = max. 2.45V/cell, I_{charge} = 1.5 A - 0.3 A)</td> </tr> </table> <p>NOTES: - For EN 60601-1 and EN 60950-1 compliance output voltages >60VDC may not be accessible or interconnected. - Versions with output voltage >42.4 VDC are not within the scope of standard EN 60335-2-29 Ed.4 (ref. Cl.10.101).</p>	for Li-Ion Batteries 1 - 14 cell	(U _{charge} = max. 4.2V/cell, I _{charge} = 1.5 A - 0.3 A)	for LiFePO ₄ Batteries 1 - 16 cell	(U _{charge} = max. 3.65V/cell, I _{charge} = 1.5 A - 0.3 A)	for LTO Batteries 1 - 20 cell	(U _{charge} = max. 2.85V/cell, I _{charge} = 1.5 A - 0.3 A)	for NiCd/NiMH Batteries 2 - 22 cell	(U _{charge} = max. 1.5V/cell, I _{charge} = 1.3 A - 0.4 A)	for Lead-Acid Batteries 6 - 48 V	(U _{charge} = max. 2.45V/cell, I _{charge} = 1.5 A - 0.3 A)
for Li-Ion Batteries 1 - 14 cell	(U _{charge} = max. 4.2V/cell, I _{charge} = 1.5 A - 0.3 A)										
for LiFePO ₄ Batteries 1 - 16 cell	(U _{charge} = max. 3.65V/cell, I _{charge} = 1.5 A - 0.3 A)										
for LTO Batteries 1 - 20 cell	(U _{charge} = max. 2.85V/cell, I _{charge} = 1.5 A - 0.3 A)										
for NiCd/NiMH Batteries 2 - 22 cell	(U _{charge} = max. 1.5V/cell, I _{charge} = 1.3 A - 0.4 A)										
for Lead-Acid Batteries 6 - 48 V	(U _{charge} = max. 2.45V/cell, I _{charge} = 1.5 A - 0.3 A)										

The product(s) described above are in conformity with the relevant European Union harmonisation legislation:

2014/35/EU	EU Directive - Safety of electrical equipment ("Low-Voltage Directive") (LVD) recast, repealing Directives 2006/95/EC & 73/23/EEC
2014/30/EU	EU Directive - Electromagnetic Compatibility (EMC) recast, repealing Directives 2004/108/EC & 89/336/EEC
93/42/EEC	EU Directive - General Medical Devices (MDD), Risk Class I Device will from 05.05.2020 be repealed by Regulation (EU) 2017/745
2009/125/EC	EU Directive - Energy Related Products, Ecodesign (ERP) recast, repealing Directive 2005/32/EC (EUP)
2015/863/EU	EU Directive - Restriction on use of Hazardous Substances in EEE ("RoHS3") recast, repealing Directives 2002/95/EC, 2008/35/EC & 2011/65/EU

The following harmonised standards and technical specifications have been applied:

(International editions and comments indicated in brackets)

Electrical Safety (to LVD- & MDD-Directives):

EN 60950-1	EN 60950-1:2006 + /A1:2010, + /A11:2009, + /AC:2011, + /A12:2011 + /A2:2013 (IEC 60950-1:2005 modified + /A1:2009 modified + /A2:2013 modified, Edition 2.2) (will from 20.06.2019 be replaced by standard EN 62368-1:2014 + /AC:2015, Edition 2.0 (IEC 62368-1:2014, Edition 2.0)	IT-equipment (ITE), Edition 2.2 A/V, ITE & COMM. Equipm.)
EN 60335-1	EN 60335-1:2012 + /AC:2014 + /A11:2014 (IEC 60335-1:2010 modified, Edition 5.0)(also IEC 60335-1:2010 modified + /A1:2013 + /A2:2016, Edition 5.2)	Household and similar appliances-General requirements, Edition 5.0
EN 60335-2-29	EN 60335-2-29:2004 + /A2:2010 (IEC 60335-2-29:2002 + /A1:2004 + /A2:2009, Edition 4.2) (also IEC 60335-2-29:2016, Edition 5.0)	Household and similar appliances-Requirements for battery chargers, Edition 4.2
EN 60601-1	EN 60601-1:2006 + /AC:2010 + /A1:2013 (IEC 60601-1:2005 + /A1:2012)	Medical electrical equipment, Edition 3.1

EU Declaration of Conformity



Electromagnetic Compatibility (to EMC- & MDD-Directives):

EN 61000-6-1	EN 61000-6-1:2007 (IEC 61000-6-1:2005, Edition 2.0) (also IEC 61000-6-1:2016, Edition 3.0, not yet an EN-norm)	Immunity-residential, comm. & light-industrial environment, Edition 2.0
EN 61000-6-3	EN 61000-6-3:2007 + /A1:2011 & /AC:2012 (IEC 61000-6-3:2007 + /A1:2010)	Emission-residential, comm. & light-industrial environment, Edition 2.1
EN 55014-1	EN 55014-1:2006 + /A1:2009 & /A2:2011 (CISPR 14-1:2005 + /A1:2008 & /A2:2011, Edition 5.2) (also CISPR 14-1:2016, Edition 6.0, but not yet an EN-norm)	Emission-household appliances, Edition 5.2
EN 55014-2	EN 55014-2:1997 + /AC:1997, /A1:2001, /A2:2008 (CISPR 14-2:1997 + /A1:2001 & /A2:2008, Edition 1.2) (also CISPR 14-2:2015, Edition 2.0, but not yet an EN-norm)	Immunity-household appliances, Edition 1.2
EN 55022	EN 55022:2010 + /AC:2011 (CISPR 22:2008 modified, Edition 6.0)(Note: CISPR 22 is now replaced by CISPR 32:2012)	Emission-IT-Equipment, Edition 6.0
EN 55024	EN 55024:2010 (CISPR 24:2010, Edition 2.0) (also CISPR 24:2010 + /Corr.1:2011 + /A1:2015, Edition 2.1, but not yet an EN-norm)	Immunity-IT-Equipment, Edition 2.0
EN 55032	EN 55032:2012 + /AC:2013 (CISPR 32:2012 + /Corr.1:2012 + /Corr.2:2012, Edition 1.0) (also CISPR 32:2015, Edition 2.0, but not yet an EN-norm)	Emission-Multimedia Equipment, Edition 1.0
EN 60601-1-2	EN 60601-1-2:2007 from 31/12/2018: EN 60601-1-2:2015 (IEC 60601-1-2:2007 modified, Edition 3.0)(Note: for IEC: Edition 3.0 is replaced by IEC 60601-1-2:2014, Edition 4.0)	Medical equipment, EMC - Requirements and tests, Edition 3.0 Medical equipment, EMC - Requirements and tests, Edition 4.0

Ecodesign (to ERP-Directive):

Commission Regulation (EC) No 278/2009	implementing Directive 2005/32/EC with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies (Note: not applicable to Battery Chargers, ref. Article 1.2 item c)
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Ecodesign for U.S.A. (Note: depends on battery used):

US Code of Federal Regulations (CFR) Also called "DoE compliance"	10 CFR Part 430 - Energy Conservation Program for Consumer Products, 10 CFR Part 430, Subpart B - Test Procedures, 10 CFR Appendix Y to Subpart B of Part 430, Uniform Test Method for Measuring the Energy Consumption of Battery Chargers
California Code of Regulations (CCR) Also called "CEC-400 compliance" referring to CEC-400-2017-002 "2016 Appliance Efficiency Regulations" issued by California Energy Commission	CCR Title 20 - Public Utilities and Energy, Division 2 - State Energy Resources Conservation and Development Commission, Chapter 4 - Energy Conservation, Article 4 - Appliance Efficiency Regulations, Sections 1601 to 1609

Additional Information:

Compliance with harmonised standards and technical specifications may have been verified by the manufacturer, by third party testing or by a Certification Body (NCB).

The products are considered Risk Class I devices according to the General Medical Devices Directive.

The product(s) may be produced at production sites (for specific product: see "Made in"-marking on the product):		
Mascot Electronics AS P.O.Box 177, N-1601 Fredrikstad, NORWAY	Mascot Baltic OÜ Taevakivi 15 EE-13619 Tallinn ESTONIA	Mascot Power Supplies (Ningbo) Co.,Ltd No.128 Jinchuan Road, Zhenhai Ningbo 315221 CHINA

The production sites are certified to standard EN 29001:2015 (ISO 9001:2015):		
Mascot Electronics AS: Kiwa Teknologisk Institutt certificate ref. 044	Mascot Baltic OÜ: Metrosert certificate ref. K-144	Mascot Power Supplies (Ningbo) Co.,Ltd: DNV-GL certificate ref. 179027-2015

The most recent issue of this Declaration is available at www.mascot.com.

Signed on behalf of Mascot Electronics AS		
Fredrikstad, Norway	2018-09-21	 Finn-Erik Wallin, Compliance Manager
Place of issue	Date of issue	Name, function, signature