

Model 3540 LA

20 A max out • 198-264 VAC input

- 3-step charge control with current detection
- XLR output plug for wheelchairs and scooters available
- Input voltage 198-264 VAC (115V versions available)
- Fixed mains cable, 2-pin IEC 60320 available
- 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 (fixed cord vers. only)
 - 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](#)

Notes:

Desktop unit
Mounting bracket included
With NTC input on request
2MOOP standard, 2MOPP available (3540P)

*Blue*line



Available versions

12V / 20A

24V / 10A

48V / 5A

SPECIFICATIONS FOR TYPE 3540 Lead Acid Battery Charger

DATE 02.10.20

Specifications for MASCOT type 3540 LA Charger:	12V
Input voltage: / Line frequency:	198 - 264VAC / 50Hz
Max output power:	294W
Step 0 < 30min Step 0 > 30min Step 1 (until Vbat = 14.7V) Step 2 (until I charge < 2.4A or > 4h) Step 3 (until I charge > 18A) Charge timer (step 2): Safety timer: Restart charge current and voltage approx.:	2.4A when battery voltage <10.5V. 0A 20A when battery voltage >10.5V. 14.7V ± 0.1V and charge current is tapering. 13.7V ± 0.2V, supply current up to maximum 18A for possible parallel load. 4h 72h >18A or <13V in 10 sec.
Formation Charge:	Low current start-up of deeply discharged battery.
Float charge:	20A pulses at safe float voltage level for maximum topping of battery capacity.
Indication when "Battery not connected":	LED flashing Green (1s/1s)
Temperature compensation of charge voltage:	-3 to -4mV/°C pr. cell
Ripple:	< 100mVp-p
Efficiency (at 100% load, 230V) approx.:	91 %
Switch frequency approx.:	65kHz
Leakage current from battery with mains switched off:	< 140 uA @ 12V
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof Thermal protection Prevents sparking Charge timer: 4h Safety timer: 72h. Error Indication: Red (5 blinks) Charging of wrong lower voltage battery pack (e.g. 6V) will be limited to 2.4A and terminated after 30min. Indication: Red (4 blinks) Defect battery: Error Indication: Red (6 blinks) - Battery does not accept pulse current in float mode, and battery voltage drops below 10.5V after opening output relay. Charging battery >16.0V terminated immediately. Error Indication: LED is off
Temperature range:	Operating: ±25 to +40°C. Storage: ±25 to +65°C
Derating:	Charge current automatically reduced to approx.15A at 40°C
Safety:	EN 60601-1
Insulation class :	Double insulated (Class II)
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC
EMC standards:	EN 60601-1-2: 2015 (Edition 4)
Input terminal:	2 pin IEC60320 or mains cable
Output terminals:	Cord with Insulated battery clips and temp. sensor
Protection against ingress (IP-code):	IP44
Recommended battery capacity:	100 - 1000Ah.
Dimensions:	210 × 113 × 53 mm
Weight:	With mains cable: 1500g. With IEC60320: 1300g

SPECIFICATIONS FOR TYPE 3540 Lead Acid Battery Charger

DATE 02.10.20

Specifications for MASCOT type 3540 LA Charger:	24V
Input voltage: / Line frequency:	198 - 264VAC / 50Hz
Max output power:	294W
<u>Charge control:</u> Step 0 < 30min Step 0 > 30min Step 1 (until Vbat = 29.4V) Step 2 (until I charge <1.4A or >4h) Step 3 (until I charge >8.5A) Charge timer (step 2): Safety timer: Restart charge current and voltage approx.:	<u>Charge Indication:</u> Yellow Red (error-mode) Yellow Flashing yellow Green 4h 72h >8.5A or <26V in 10 sec.
Formation Charge:	Low current start-up of deeply discharged battery
Float charge:	10A pulses at safe float voltage level for maximum topping of battery capacity
Indication when "Battery not connected":	Green "PULSE" LED flashing Green (1s/1s)
Temperature compensation of charge voltage:	-3 to -4mV/°C pr. Cell When delivered with temp. sensor.
Ripple:	< 100mVp-p
Efficiency (at 100% load, 230V) approx.:	>92 %
Switch frequency approx.:	65kHz
Leakage current from battery with mains switched off:	< 130 µA @ 24V
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof Thermal protection Prevents sparking Charge timer: 4h Safety timer: 72h. Error Indication: Red (5 blinks) Charging of wrong lower voltage battery pack (e.g. 12V) will be limited to 1.4A and terminated after 30min. Indication: Red (4 blinks) Defect battery: Error Indication: Red (6 blinks) - Battery does not accept pulse current in float mode, and battery voltage drops below 21V after opening output relay. Charging battery >32.0V terminated immediately. Error Indication: LED is off
Temperature range:	Operating: ±25 to +40°C. Storage: ±25 to +65°C
Derating:	Charge current automatically reduced to approx. 7.5A at 40°C
Safety:	EN 60601-1
Insulation class:	Double insulated (Class II)
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC
EMC standards:	EN 60601-1-2: 2015 (Edition 4)
Input terminal:	2 pin IEC60320 or mains cable
Output terminals:	Cord with Insulated battery clips and temp. sensor or XLR plug
Protection against ingress (IP-code):	IP44
Recommended battery capacity:	50 - 500Ah
Dimensions:	210 × 113 × 53 mm
Weight approx.:	With mains cable 1400g. With IEC60320 1150g

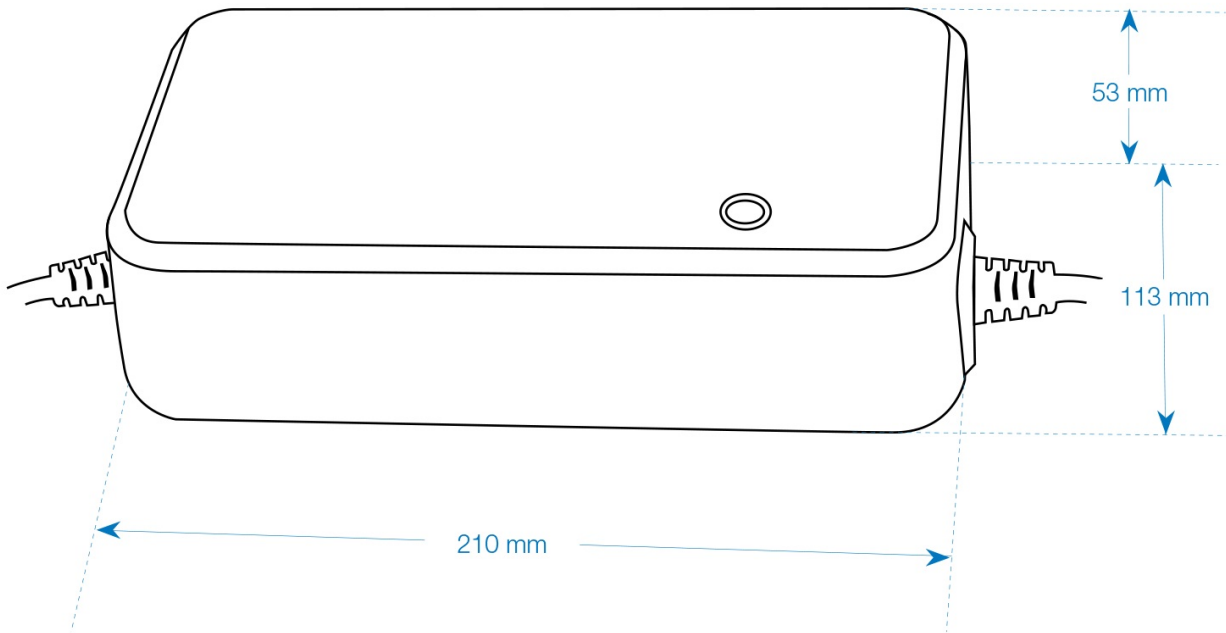
SPECIFICATIONS FOR TYPE 3540 Lead Acid Battery Charger

DATE 02.10.20

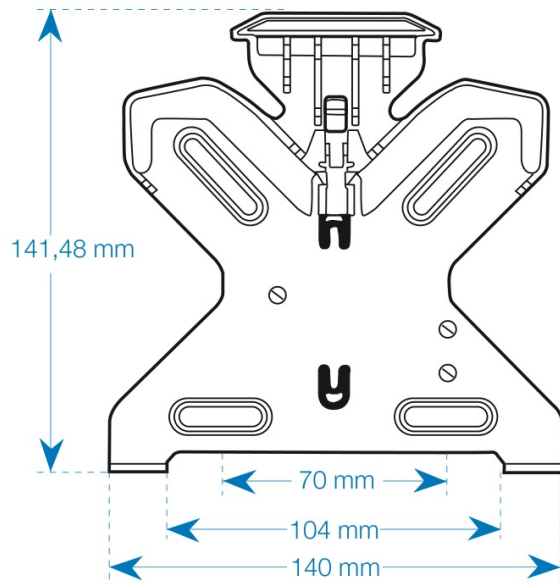
Specifications for MASCOT type 3540 LA Charger:	48V
Input voltage: / Line frequency:	198 - 264VAC / 50Hz
Max output power:	294W
<u>Charge control:</u> Step 0 < 30min Step 0 > 30min Step 1 (until Vbat = 58.8V) Step 2 (until I charge <0.7A or >4h) Step 3 (until I charge >3.5A) Charge timer (step 2): Safety timer: Restart charge current and voltage approx.:	<u>Charge Indication:</u> Yellow Red (error-mode) Yellow Flashing yellow Green 4h 72h >3.5A or <52V in 10 sec.
Formation Charge:	Low current start-up of deeply discharged battery
Float charge:	10A pulses at safe float voltage level for maximum topping of battery capacity
Indication when "Battery not connected":	Green "PULSE" LED flashing Green (1s/1s)
Temperature compensation of charge voltage:	-3 to -4mV/°C pr. Cell When delivered with temp. sensor.
Ripple:	< 100mVp-p
Efficiency (at 100% load, 230V) approx.:	>92 %
Switch frequency approx.:	65kHz
Leakage current from battery with mains switched off:	< 140 µA @ 48V
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof Thermal protection Prevents sparking Charge timer: 4h Safety timer: 72h. Error Indication: Red (5 blinks) Charging of wrong lower voltage battery pack (e.g. 36V) will be limited to 0.7A and terminated after 30min. Indication: Red (4 blinks) Defect battery: Error Indication: Red (6 blinks) Charging battery >63.5V terminated immediately. Error Indication: LED is off
Temperature range:	Operating: ±25 to +40°C. Storage: ±25 to +65°C
Derating:	Charge current automatically reduced to approx. 3.5A at 40°C
Safety:	EN 60601-1
Insulation class:	Double insulated (Class II)
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC
EMC standards:	EN 60601-1-2: 2015 (Edition 4)
Input terminal:	2 pin IEC60320 or mains cable
Output terminals:	Cord with Insulated battery clips and temp. sensor or XLR plug
Protection against ingress (IP-code):	IP44
Recommended battery capacity:	25 - 250Ah
Dimensions:	210 × 113 × 53 mm
Weight approx.:	With mains cable 1400g. With IEC60320 1150g

Standard output cordsets

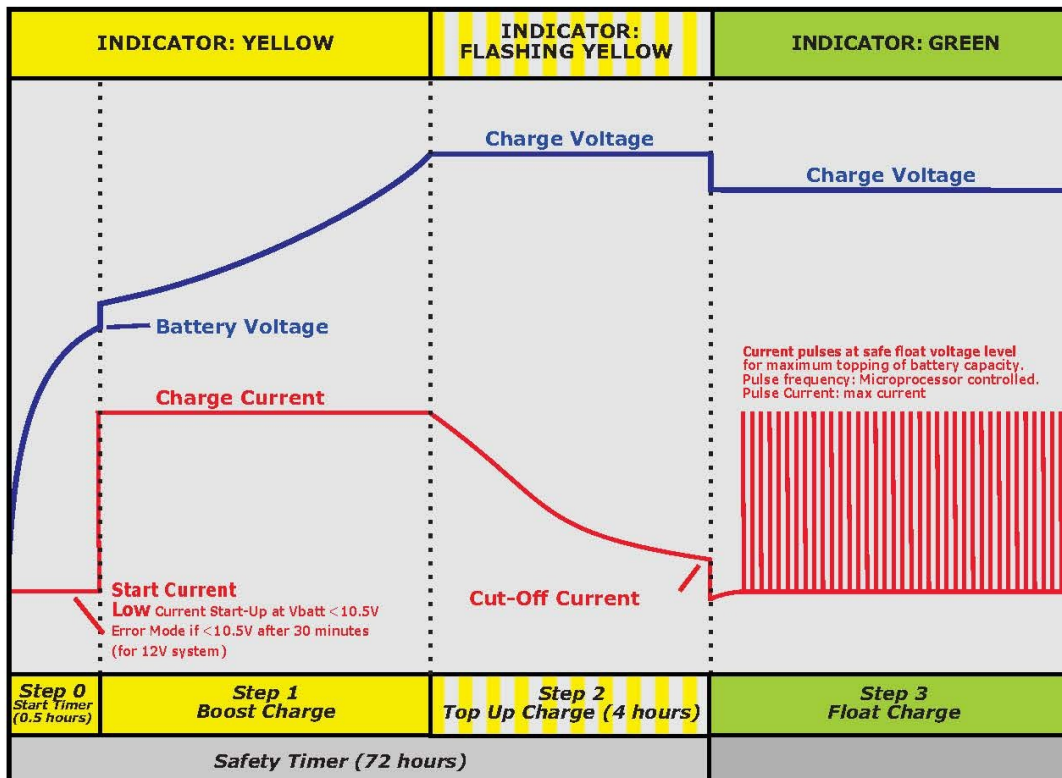
Type	Versions	Part no.	AWG	Length (M)	Notes
Battery clips	all	131598	14	0.8	Temp sense
XLR plug	24V	205810	13,5	1.5	UL 2468



Mounting bracket, part no. 205800



Charging characteristics and LED indication



STEP 1 - BOOST CHARGE

LED-indicator: YELLOW

The charger is in constant current mode (CC), charging with the maximum current until battery voltage reach Top-Up level.



STEP 2 - TOP-UP CHARGE

The charger is in constant voltage mode. The LED-indication will be FLASHING YELLOW during Top-up charge. The charger stays in this mode until the charge current decreases to its charge termination level or the Top-Up Charge Timer runs out. The battery is charged to its full capacity at the end of this step



STEP 3 - FLOAT CHARGE

The LED-indication on the charger is GREEN and the battery is fully charged.

The charger is in standby mode. The charge voltage is at standby level and the charger may remain connected to the battery. The charger will return to boost charge if the battery is used. A load larger than the cut-off current will initiate a new charge cycle.



BATTERY NOT CONNECTED

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!
- 4 red blinks: Charging of wrong lower voltage battery pack (e.g. 12V) will be limited to 1.4A and terminated after 30min
- 5 red blinks: Safety timer has run out. Check battery status or capacity.
- 6 red blinks: Defect battery
- LED off: Battery voltage is too high ($> 32V$). Check battery voltage.

We, the responsible manufacturer;

Company Name:	Mascot Electronics AS																																																																	
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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 for Li-Ion-, LiFePO ₄ -, Li-Titanate, Lead-Acid or NiMH/NiCd Batteries																																																																	
Brand(s):	and/or MASCOT (may also carry additional customer name, logo or trade mark)																																																																	
Type(s)/Model(s)/	3540																																																																	
UDI-DI:	(may also carry additional customer model name or part number)																																																																	
Batch / Serial No./	all CE- and/or UKCA- marked products produced from the date indicated below																																																																	
UDI-PI:	(for production date: see marking on the product)																																																																	
Description:	<p>Input: max. 2.4 A, 220 - 240 VAC, 50 Hz or max. 4.3 A, 110 - 120 VAC, 60 Hz</p> <p>Output for Lead-Acid Batteries:</p> <table border="0"> <tr> <td>6 V: 7.35 V ±10%, max. 20 A, max. 150 W</td> <td>24 V: 29.4 V ±10%, max. 10 A, max. 294 W</td> </tr> <tr> <td>12 V: 14.7 V ±10 %, max. 20 A, max. 294 W</td> <td>36 V: 44.1 V ±10%, max. 6.6 A, max. 294 W</td> </tr> <tr> <td>18 V: 22.2 V ±10%, max. 13.2 A, max. 294 W</td> <td>48 V: 58.8 V ±10%, max. 5.0 A, max. 294 W</td> </tr> </table> <p>Output for Li-Ion Batteries:</p> <table border="0"> <tr> <td>1 cell: 4.2 V ±10%, max. 20 A, max. 84 W</td> <td>8 cell: 33.6 V ±10%, max. 8.7 A, max. 294 W</td> </tr> <tr> <td>2 cell: 8.4 V ±10%, max. 20 A, max. 168 W</td> <td>9 cell: 37.8 V ±10%, max. 7.7 A, max. 294 W</td> </tr> <tr> <td>3 cell: 12.6 V ±10%, max. 20.0A, max. 294 W</td> <td>10 cell: 42.0 V ±10%, max. 7.0 A, max. 294 W</td> </tr> <tr> <td>4 cell: 16.8 V ±10%, max. 17.5 A, max. 294 W</td> <td>11 cell: 46.2 V ±10%, max. 6.3 A, max. 294 W</td> </tr> <tr> <td>5 cell: 21.0 V ±10%, max. 14 A, max. 294 W</td> <td>12 cell: 50.4 V ±10%, max. 5.8 A, max. 294 W</td> </tr> <tr> <td>6 cell: 25.2 V ±10%, max. 11.6 A, max. 294 W</td> <td>13 cell: 54.6 V ±10%, max. 5.3 A, max. 294 W</td> </tr> <tr> <td>7 cell: 29.4 V ±10%, max. 10 A, max. 294 W</td> <td>14 cell: 58.8 V ±10%, max. 5.0 A, max. 294 W</td> </tr> </table> <p>Output for LiFePO₄ Batteries:</p> <table border="0"> <tr> <td>1 cell: 3.65 V ±10%, max. 20 A, max. 75 W</td> <td>9 cell: 32.85 V ±10%, max. 9.0 A, max. 295 W</td> </tr> <tr> <td>2 cell: 7.30 V ±10%, max. 20 A, max. 150 W</td> <td>10 cell: 36.5 V ±10%, max. 8.0 A, max. 294 W</td> </tr> <tr> <td>3 cell: 10.95 V ±10%, max. 20 A, max. 220 W</td> <td>11 cell: 40.15 V ±10%, max. 7.3 A, max. 294 W</td> </tr> <tr> <td>4 cell: 14.60 V ±10%, max. 20 A, max. 294 W</td> <td>12 cell: 43.8 V ±10%, max. 6.7 A, max. 294 W</td> </tr> <tr> <td>5 cell: 18.25 V ±10%, max. 16 A, max. 294 W</td> <td>13 cell: 47.45 V ±10%, max. 6.1 A, max. 294 W</td> </tr> <tr> <td>6 cell: 21.9 V ±10%, max. 13.4 A, max. 294 W</td> <td>14 cell: 51.1 V ±10%, max. 5.5 A, max. 281 W</td> </tr> <tr> <td>7 cell: 25.55 V ±10%, max. 11.5 A, max. 294 W</td> <td>15 cell: 54.75 V ±10%, max. 5.2 A, max. 284 W</td> </tr> <tr> <td>8 cell: 29.20 V ±10%, max. 10 A, max. 294 W</td> <td>16 cell: 58.4 V ±10%, max. 5.0 A, max. 294 W</td> </tr> </table> <p>Output for Lithium Titanate Batteries:</p> <table border="0"> <tr> <td>1 cell: 2.85 V ±10%, max. 20 A, max. 60 W</td> <td>11 cell: 31.35 V ±10%, max. 9.3 A, max. 294 W</td> </tr> <tr> <td>2 cell: 5.7 V ±10%, max. 20 A, max. 115 W</td> <td>12 cell: 34.2 V ±10%, max. 8.5 A, max. 294 W</td> </tr> <tr> <td>3 cell: 8.55 V ±10%, max. 20 A, max. 171 W</td> <td>13 cell: 37.05 V ±10%, max. 7.9 A, max. 294 W</td> </tr> <tr> <td>4 cell: 11.4 V ±10%, max. 20 A, max. 230 W</td> <td>14 cell: 39.9 V ±10%, max. 7.3 A, max. 294 W</td> </tr> <tr> <td>5 cell: 14.25 V ±10%, max. 20 A, max. 285 W</td> <td>15 cell: 42.75 V ±10%, max. 6.8 A, max. 294 W</td> </tr> <tr> <td>6 cell: 17.1 V ±10%, max. 17 A, max. 294 W</td> <td>16 cell: 45.6 V ±10%, max. 6.4 A, max. 292 W</td> </tr> <tr> <td>7 cell: 19.95 V ±10%, max. 14.7 A, max. 294 W</td> <td>17 cell: 48.45 V ±10%, max. 5.5 A, max. 268 W</td> </tr> <tr> <td>8 cell: 22.8 V ±10%, max. 12.8 A, max. 294 W</td> <td>18 cell: 51.3 V ±10%, max. 5.5 A, max. 282 W</td> </tr> <tr> <td>9 cell: 25.65 V ±10%, max. 11.4 A, max. 294 W</td> <td>19 cell: 54.15 V ±10%, max. 5.2 A, max. 282 W</td> </tr> <tr> <td>10 cell: 28.5 V ±10%, max. 10.3 A, max. 294 W</td> <td>20 cell: 57.0 V ±10%, max. 5.0 A, max. 285 W</td> </tr> </table> <p>Output for NiMH/NiCd Batteries:</p> <table border="0"> <tr> <td>2 cell: max. 20 A, max. 3.60 V ±10%, max. 294 W</td> </tr> <tr> <td>3-6 cell: max. 20 A, max. 10.8 V ±10%, max. 294 W</td> </tr> <tr> <td>4-8 cell: max. 20 A, max. 14.4 V ±10%, max. 294 W</td> </tr> <tr> <td>5-10 cell: max. 16.3 A, max. 18.0 V ±10%, max. 294 W</td> </tr> <tr> <td>6-12 cell: max. 13.6 A, max. 21.6 V ±10%, max. 294 W</td> </tr> <tr> <td>10-20 cell: max. 8.1 A, max. 36.0 V ±10%, max. 294 W</td> </tr> <tr> <td>10-22 cell: max. 7.4 A, max. 39.6 V ±10%, max. 294 W</td> </tr> </table> <p>NOTE: "±10%" do not indicate the tolerance of the output voltage. "±10%" indicate that the product version is certified having an output voltage within this range.</p>			6 V: 7.35 V ±10%, max. 20 A, max. 150 W	24 V: 29.4 V ±10%, max. 10 A, max. 294 W	12 V: 14.7 V ±10 %, max. 20 A, max. 294 W	36 V: 44.1 V ±10%, max. 6.6 A, max. 294 W	18 V: 22.2 V ±10%, max. 13.2 A, max. 294 W	48 V: 58.8 V ±10%, max. 5.0 A, max. 294 W	1 cell: 4.2 V ±10%, max. 20 A, max. 84 W	8 cell: 33.6 V ±10%, max. 8.7 A, max. 294 W	2 cell: 8.4 V ±10%, max. 20 A, max. 168 W	9 cell: 37.8 V ±10%, max. 7.7 A, max. 294 W	3 cell: 12.6 V ±10%, max. 20.0A, max. 294 W	10 cell: 42.0 V ±10%, max. 7.0 A, max. 294 W	4 cell: 16.8 V ±10%, max. 17.5 A, max. 294 W	11 cell: 46.2 V ±10%, max. 6.3 A, max. 294 W	5 cell: 21.0 V ±10%, max. 14 A, max. 294 W	12 cell: 50.4 V ±10%, max. 5.8 A, max. 294 W	6 cell: 25.2 V ±10%, max. 11.6 A, max. 294 W	13 cell: 54.6 V ±10%, max. 5.3 A, max. 294 W	7 cell: 29.4 V ±10%, max. 10 A, max. 294 W	14 cell: 58.8 V ±10%, max. 5.0 A, max. 294 W	1 cell: 3.65 V ±10%, max. 20 A, max. 75 W	9 cell: 32.85 V ±10%, max. 9.0 A, max. 295 W	2 cell: 7.30 V ±10%, max. 20 A, max. 150 W	10 cell: 36.5 V ±10%, max. 8.0 A, max. 294 W	3 cell: 10.95 V ±10%, max. 20 A, max. 220 W	11 cell: 40.15 V ±10%, max. 7.3 A, max. 294 W	4 cell: 14.60 V ±10%, max. 20 A, max. 294 W	12 cell: 43.8 V ±10%, max. 6.7 A, max. 294 W	5 cell: 18.25 V ±10%, max. 16 A, max. 294 W	13 cell: 47.45 V ±10%, max. 6.1 A, max. 294 W	6 cell: 21.9 V ±10%, max. 13.4 A, max. 294 W	14 cell: 51.1 V ±10%, max. 5.5 A, max. 281 W	7 cell: 25.55 V ±10%, max. 11.5 A, max. 294 W	15 cell: 54.75 V ±10%, max. 5.2 A, max. 284 W	8 cell: 29.20 V ±10%, max. 10 A, max. 294 W	16 cell: 58.4 V ±10%, max. 5.0 A, max. 294 W	1 cell: 2.85 V ±10%, max. 20 A, max. 60 W	11 cell: 31.35 V ±10%, max. 9.3 A, max. 294 W	2 cell: 5.7 V ±10%, max. 20 A, max. 115 W	12 cell: 34.2 V ±10%, max. 8.5 A, max. 294 W	3 cell: 8.55 V ±10%, max. 20 A, max. 171 W	13 cell: 37.05 V ±10%, max. 7.9 A, max. 294 W	4 cell: 11.4 V ±10%, max. 20 A, max. 230 W	14 cell: 39.9 V ±10%, max. 7.3 A, max. 294 W	5 cell: 14.25 V ±10%, max. 20 A, max. 285 W	15 cell: 42.75 V ±10%, max. 6.8 A, max. 294 W	6 cell: 17.1 V ±10%, max. 17 A, max. 294 W	16 cell: 45.6 V ±10%, max. 6.4 A, max. 292 W	7 cell: 19.95 V ±10%, max. 14.7 A, max. 294 W	17 cell: 48.45 V ±10%, max. 5.5 A, max. 268 W	8 cell: 22.8 V ±10%, max. 12.8 A, max. 294 W	18 cell: 51.3 V ±10%, max. 5.5 A, max. 282 W	9 cell: 25.65 V ±10%, max. 11.4 A, max. 294 W	19 cell: 54.15 V ±10%, max. 5.2 A, max. 282 W	10 cell: 28.5 V ±10%, max. 10.3 A, max. 294 W	20 cell: 57.0 V ±10%, max. 5.0 A, max. 285 W	2 cell: max. 20 A, max. 3.60 V ±10%, max. 294 W	3-6 cell: max. 20 A, max. 10.8 V ±10%, max. 294 W	4-8 cell: max. 20 A, max. 14.4 V ±10%, max. 294 W	5-10 cell: max. 16.3 A, max. 18.0 V ±10%, max. 294 W	6-12 cell: max. 13.6 A, max. 21.6 V ±10%, max. 294 W	10-20 cell: max. 8.1 A, max. 36.0 V ±10%, max. 294 W	10-22 cell: max. 7.4 A, max. 39.6 V ±10%, max. 294 W
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4 cell: 11.4 V ±10%, max. 20 A, max. 230 W	14 cell: 39.9 V ±10%, max. 7.3 A, max. 294 W																																																																	
5 cell: 14.25 V ±10%, max. 20 A, max. 285 W	15 cell: 42.75 V ±10%, max. 6.8 A, max. 294 W																																																																	
6 cell: 17.1 V ±10%, max. 17 A, max. 294 W	16 cell: 45.6 V ±10%, max. 6.4 A, max. 292 W																																																																	
7 cell: 19.95 V ±10%, max. 14.7 A, max. 294 W	17 cell: 48.45 V ±10%, max. 5.5 A, max. 268 W																																																																	
8 cell: 22.8 V ±10%, max. 12.8 A, max. 294 W	18 cell: 51.3 V ±10%, max. 5.5 A, max. 282 W																																																																	
9 cell: 25.65 V ±10%, max. 11.4 A, max. 294 W	19 cell: 54.15 V ±10%, max. 5.2 A, max. 282 W																																																																	
10 cell: 28.5 V ±10%, max. 10.3 A, max. 294 W	20 cell: 57.0 V ±10%, max. 5.0 A, max. 285 W																																																																	
2 cell: max. 20 A, max. 3.60 V ±10%, max. 294 W																																																																		
3-6 cell: max. 20 A, max. 10.8 V ±10%, max. 294 W																																																																		
4-8 cell: max. 20 A, max. 14.4 V ±10%, max. 294 W																																																																		
5-10 cell: max. 16.3 A, max. 18.0 V ±10%, max. 294 W																																																																		
6-12 cell: max. 13.6 A, max. 21.6 V ±10%, max. 294 W																																																																		
10-20 cell: max. 8.1 A, max. 36.0 V ±10%, max. 294 W																																																																		
10-22 cell: max. 7.4 A, max. 39.6 V ±10%, max. 294 W																																																																		

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

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 26.05.2021 be repealed by "MDR" 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 product(s) described above are in conformity with the relevant U.K. legislation for UKCA-marking:

Electrical Equipment (Safety) Regulations 2016

Electromagnetic Compatibility (EMC) Regulations 2016

The Medical Devices (Amendment etc.) (EU Exit) Regulations 2020, Risk Class I Device

Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020

Draft Regulation, awaiting implementation

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

The following harmonised standards and technical specifications have been applied:

(International editions and comments indicated in brackets):

Electrical Safety (to MDR/MDD-Directives):

EN 60601-1	EN 60601-1:2006 + /AC:2010 +/A1:2013 (IEC 60601-1:2005 + /A1:2012)	Medical electrical equipment, Edition 3.1
EN 60601-1-11	EN 60601-1-11:2010 (IEC 60601-1-11:2010 +/COR1:2011, Ed.1.0) (also IEC 60601-1-11:2015 +/A1:2020, Ed.2.1, but not yet an EN-norm) NOTE: for products rated IPx1 or higher to standard EN 60529 only	Medical electrical equipment and systems used in the home healthcare environment, Edition 1.0

Electromagnetic Compatibility (to MDR/MDD-Directives):

EN 60601-1-2	EN 60601-1-2:2015 (IEC 60601-1-2:2014, Edition 4.0)	Medical equipment, EMC - Requirements and tests, Edition 4.0
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Electromagnetic Compatibility (to EMC-Directive):

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

Ecodesign to EU ERP-Directive:

Commission Regulation (EC) No 2019/1782	implementing Directive 2005/32/EC with regard to eco-design requirements for no-load condition electric power consumption and average active efficiency of external power supplies (Repealing Commission Regulation (EC) No 2019/1782 from 2020-04-01) (Note: not applicable to Battery Chargers, ref. Article 1.2 item c)
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Ecodesign for U.K.:

Draft Regulation only (awaiting implementation)	Draft "Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020" (Note: not applicable to Battery Chargers)
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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 or 10 CFR Appendix Z to Subpart B of Part 430, Uniform Test Method for Measuring the Energy Consumption of External Power Supplies, whichever applicable.
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

Restriction of the Use of certain Hazardous Substances (RoHS) for EU:

2015/863/EU "RoHS3"

EU Directive - Restriction on use of Hazardous Substances in EEE Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment

Restriction of the Use of certain Hazardous Substances for UK:

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

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 EU Medical Devices Directive, EU Medical Devices Regulation and the U.K. Medical Devices (Amendment etc.) (EU Exit) Regulations 2020.

The product(s) may be produced at production sites (for specific product: see "Made in"-marking on the product):

- 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) by:

- 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.

Fredrikstad, Norway

Place of issue

2021-03-02

Date of issue

Signed on behalf of Mascot Electronics AS


Finn-Erik Wailin, Compliance Manager

Name, function, signature