Model 3240 LA

8,5 A max out • 110/230 VAC input

- 3-step charge control with current detection as charge termination
- 110/230 AC input voltage
- 2-pin IEC 320 input connector
- Waterproof (IP67) version available
- With NTC input on request
- Approvals:
  - Medically certified EN 60601-1 3.1ed
  - 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

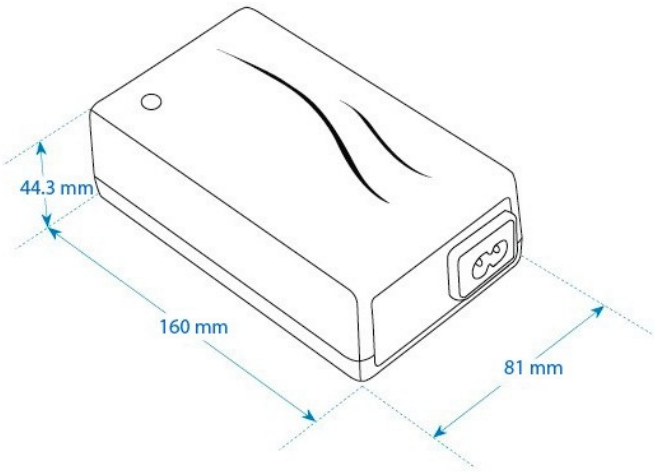
On request

6V / 8,5A | 12V / 7A | 24V / 3,5A | 36V / 2,3A | 48V / 1,7A

Notes:
Desktop unit
Battery clips, push-on terminals
Standard DC output cord:
Batteryclips + temp. sense, fuse holder, L 1.0m, 3.5mm
Red/Black, 16 AWG, UL 2569
Exchangeable DC plugs (from 24 to 48V versions)
Order plugs and mains cord separately

Specifications for MASCOT type 3240	**Lead Acid versions**				
	6V	**12V**	**24V**	**36V**	**48V**
Input voltage:	95-130Vac 198-264Vac	95-130Vac 198-264Vac	95-130Vac 198-264Vac	95-130Vac 198-264Vac	95-130Vac 198-264Vac
Line frequency:	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz
Max output power:	62W	103W	103W	101W	100W
Ripple:	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p	<100mV p-p
Efficiency (at 100% load, 230V) approx.:	>86%	>89%	>89%	>89%	>89%
Leakage current from battery with mains switched off:	<0.6mA	<0.6mA	<1mA	<1mA	<1mA
Recommended battery capacity:	42.5 – 80 Ah	35 – 80 Ah	17.5 – 40 Ah	11.5 – 25 Ah	8.5 – 20 Ah
Charge control: Charge indication:					
Step 1 Charge current: Orange	8.5A +0.1/-0.75A	7.0A +0./-0.7A	3.5A +0/-0.4A	2.3A +0/-0.3A	1.7A +0/-0.3A
Step 2 Charge voltage:	7.35V ±0.05V	14.7V ±0.15V	29.4V ±0.2V	44.1V ±0.2V	58.8V ±0.3V
- Charge current >: Orange	4.25A ±0.2A	3.5A ±0.2A	1.7A ±0.2A	1.1A ±0.2A	0.9A ±0.2A
- Charge current <: Yellow					
Step 3 Charge termination (2) <: Green	1.6A ±0.2A	1.6A ±0.2A	0.8A ±0.2A	0.5A ±0.2A	0.4A ±0.1A
Standby voltage:	6.85V ±0.05V	13.7V ±0.15V	27.4V ±0.30V	41.1V ±0.30V	54.8V ±0.30V
NTC input on request (10K):	0-45°C normal charge <0 or >45°C reduced charge (LED indication is yellow)				
Switch frequency approx.:	65kHz				
Protection:	Protected against reversed polarity and short circuit proof				
Temperature range:	Operating: ÷25 to +40ºC / Storage: ÷25 to +85ºC				
Safety:	EN 60601-1, EN 60335-2-29				
Insulation class:	Class II				
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC				
EMC standards:	Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1				
Mains connection:	2-pins IEC 60320/C8 connector. (Non-detachable mains cord on request)				
Output terminals:	Battery clips or DC connector.				
IP-Grade:	IP41 (IP67 on request).				
Dimensions:	160 × 81 × 44.3mm				
Weight:	590g (1090g IP67 version)				

Technical drawing



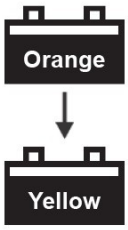
Charging method B

STEP 1 - BOOST CHARGE

To start a charge cycle, connect the charger to the mains.
The charger is in constant current mode, charging with the maximum current indicated on the charger, the LED-indication on the charger is ORANGE.

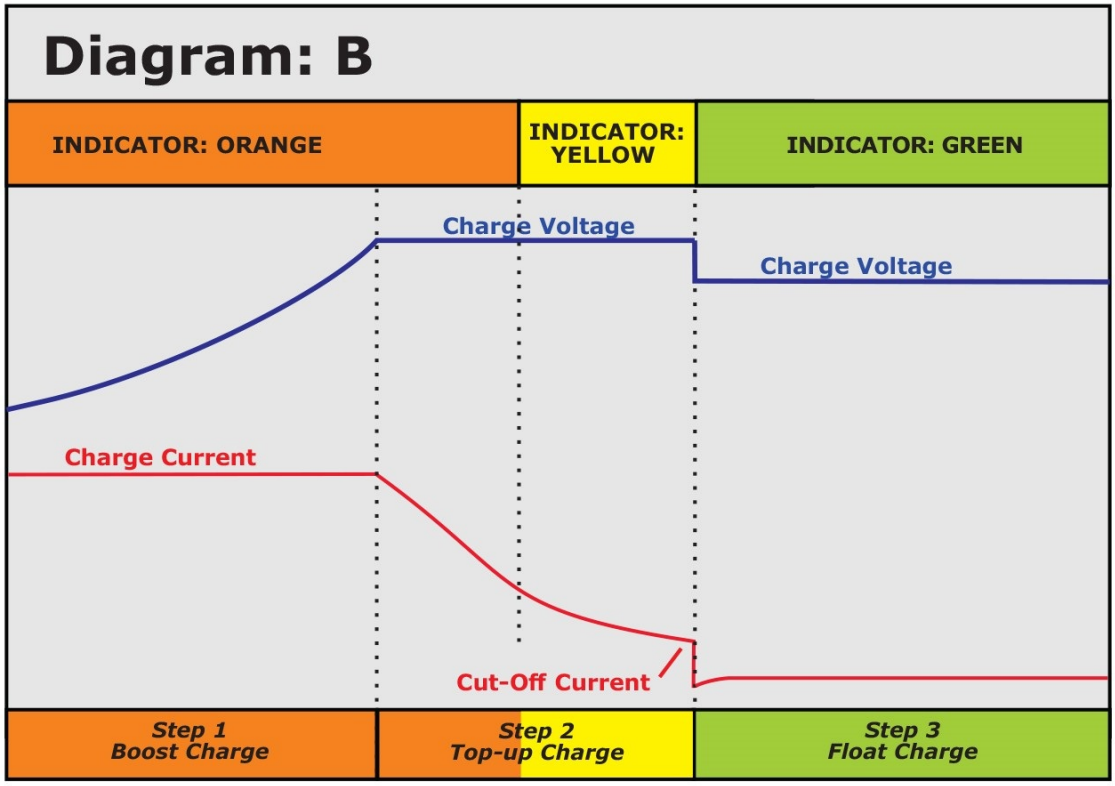
STEP 2 – TOP-UP CHARGE

The charger is in constant voltage mode, charging with a decreasing current until the current is below the charger's charge termination level (indicated on the charger). The LED-indication will turn to YELLOW during Top-up charge. The battery is typically 90-95% fully charged when the LED indicator changes to yellow. The charger stays in this mode until the charge current decreases to charge termination level. 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 charging if the battery is used.
A load larger than the cut-off current will initiate a new charge cycle.



EU & UK 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 for Li-Ion-, $LiFePO_4$- or Lead-Acid Batteries**
Brand(s):	**and/or** (may also carry additional customer name, logo or trade mark)
Type(s)/Model(s)/ UDI-DI:	**3240 (2MOOP protection to IEC 60601-1)** **3240P (2MOPP protection to IEC 60601-1)** **3240B (PCB only, for building-in, 2MOOP protection to IEC 60601-1)** **3240BP (PCB only, for building-in, 2MOPP protection to IEC 60601-1)** (may also carry additional customer model name or part number)
Batch / Serial No./ UDI-PI:	**all CE- and/or UKCA- marked products produced from the date indicated below** (for production date: see marking on the product)
Description:	**Input: max.2.1A 100-120V/220-2340VAC 50-60Hz, Class I or II** **Output:** **for Lead-Acid Batteries 6V to 48V (Ucharge = max.2.45V/cell):** **Charge current 8.5A - 1.7A (max.100W)** **for Li-Ion Batteries 1 to 16 cell (Ucharge = max.4.2V/cell):** **Charge current 8.5A - 1.5A (max.100W)** **for LiFePO4 Batteries 1 to 16 cell (Ucharge = max.3.65V/cell):** **Charge current 8.5A - 1.7A (max.100W)** NOTE: For compliance with standard EN 60601-1 output terminals >60VDC must be inaccessible to the operator.

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
(EU) 2017/745	**EU Regulation - Medical Devices Regulation (MDR)**, Risk Class I Device amending Directive 2001/83/EC, Regulations (EC) 178/2002 & (EC) 1223/2009 and repealing Directives 90/385/EEC & 93/42/EEC
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

EU & UK Declaration of Conformity

The following harmonised standards and technical specifications have been applied:

(International editions and comments indicated in brackets):

Electrical Safety (to EU LVD-Directive and UK Electrical Equipment Regulations 2016):

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)	IT-equipment (ITE), Edition 2.2 *(OBS! expired for CE-marking !!)*
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

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

Electromagnetic Compatibility (to EU EMC-Directive & UK Electromagnetic Compatibility Regulations 2016):

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 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

Ecodesign to EU ERP-Directive:

Commission Regulation (EC) No 2019/1782	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 (Repealing Commission Regulation (EC) No 2019/1782 from 2020-04-01) (*Note: not applicable to Battery Chargers, ref. Article 1.2 item c*))

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*)

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.

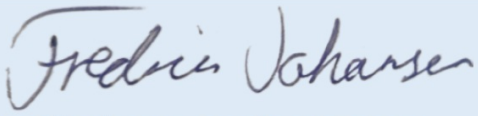
The product(s) may be produced at production sites (for specific product: see "Made in"-marking on the product):
- Mascot Baltic OÜ, Taevakivi 15, EE-13619 Tallinn, ESTONIA
- Mascot Power Supplies (Ningbo) Co.,Ltd, No.128 Jinchuan Road, Zhenhai, Ningbo 315221, CHINA

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.

EU & UK Declaration of Conformity

Signed on behalf of Mascot Electronics AS

Fredrikstad, Norway	2022-11-04	 **Fredrik Johansen, Compliance Manager**
Place of issue	Date of issue	Name, function, signature