PO Box 177 • 1601 Fredrikstad NORWAY • sales@mascot.no • www.mascot.no

Model 3320

60 W max out • 90-264 VAC input

- Universal input voltage (90-264VAC)
- Fixed output voltages
- Short circuit proof
- ECO-design compliance:

  CoC Tier 2, DoE level VI, CEC, MEPS

- Approvals:

  - Medically certified
    Safety: EN 60601-1 ed. 3.1
    EMC: EN 60601-1-2 ed. 4
  - UL approved

- Custom specifications on request:

  output voltage, connectors, cords, logo print, housing/open frame/IP rating and certificates. For more information: custom design info sheet

Available versions

5V / 8A | 6V / 6,66A | 7,5V / 7A | 9V / 6A | 12V / 5A | 15V / 4A | 18V / 3,33A | 24V / 2,5A | 36V / 1,66A

Notes:
Plug-in/Desktop unit
Exchangeable AC and DC plugs
Order plugs and mains cord separately

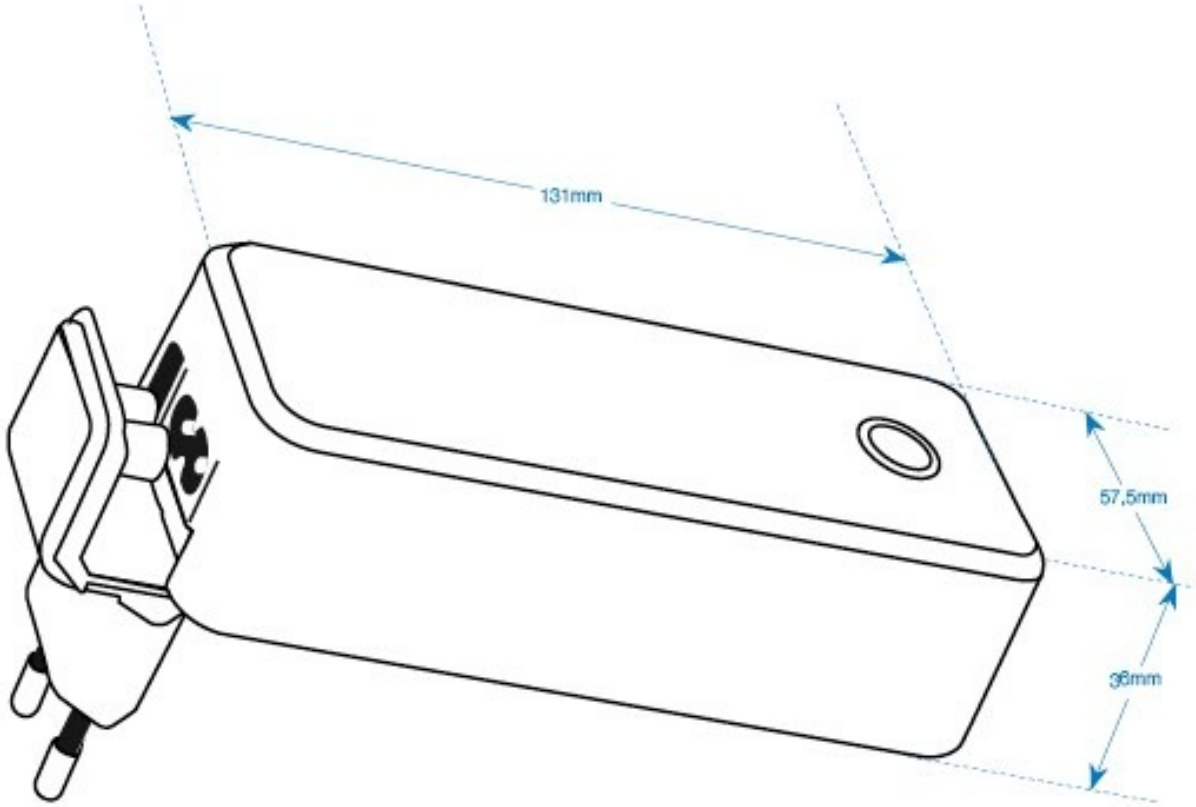
MASCOT POWER SUPPLIES **SPECIFICATIONS FOR TYPE 3320 Power Supply** PAGE 1 (1)
DATE 03.11.21

MASCOT TYPE 3320:		5V	6V	7.5V	9V	12V	15V	18V	24V	36V
Input voltage:		90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC
Line frequency:		47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz
Output voltage:		5V ± 3%	6V ± 3%	7.5V ± 3%	9V ± 3%	12V ± 3%	15V ± 3%	18V ± 3%	24V ± 3%	36V ± 3%
Max output power:		40W	40W	52.5W	54W	60W	60W	60W	60W	60W
Min. output current:		0A	0A	0A	0A	0A	0A	0A	0A	0A
Max. output current:		8A	6.66A	7A	6A	5A	4A	3.33A	2.5A	1.66A
Load regulation (0 - 100% load. Measured on pcb):		< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Mains regulation: (Mains variation: 90 - 264V, 100% load)		< 0,5%	< 0,5%	< 0,5%	< 0,5%	< 0,5%	< 0,5%	< 0,5%	< 0,5%	< 0,5%
Ripple & Noise: (at 20MHz bandwidth)		< 130mV p-p	< 130mV p-p	< 150mV p-p	< 130mV p-p	< 130mV p-p	< 130mV p-p	< 130mV p-p	< 130mV p-p	< 130mV p-p
Efficiency (at 100% load, 230V) approx.:		86%	87%	88%	89%	89%	90%	90%	90%	90%
Standby power:	Input voltage 230VAC	<0.075W	<0.075W	<0.15W	<0.15W	<0.15W	<0.15W	<0.15W	<0.15W	<0.15W
	Input voltage 115VAC	<0.075W	<0.075W	<0.15W	<0.15W	<0.15W	<0.15W	<0.15W	<0.15W	<0.15W
Average efficiency at 100%, 75% and 25% load	Input voltage 230VAC	>87.3%	>88.6%	>89%	>89%	>89%	>89%	>89%	>89%	>89%
	Input voltage 115VAC	>87.3%	>88.6%	>89%	>89%	>89%	>89%	>89%	>89%	>89%
Efficiency level VI:		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Switch frequency approx.:		65kHz	65kHz	65kHz	65kH	65kHz	65kH	65kH	65kHz	65kHz
Overshoot (90 - 10% load variation): Undershoot (10 - 90% load variation): Measured on pcb		< 200mV < 250mV	< 200mV < 250mV	< 200mV < 250m	< 200mV < 250mV	< 200mV < 250mV	< 200mV < 250mV	< 200mV < 250mV	< 200mV < 250mV	< 200mV < 250mV
Hold up time:		>6ms	>10ms	>10ms	>8ms	>10ms	>8ms	>10ms	>10ms	>10ms
Temperature range: *Operating: *With derating: *Storage:		-20 to +40ºC +60ºC -25 to +85ºC								
Derating:		1.5W/ºC over 40ºC								
Safety:		IEC 60601-1 3rd / IEC 62368-1								
Insulation class:		Class II								
Insulation voltage: Primary – secondary:		4000VAC / 5700VDC								
EMC standards:		EMC med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1								
IP-degree		IP4X								
Input terminal		2-pins IEC320 C8 connector								
Output terminals:		Cord with/without plug. Exchangeable plugs available.								
Dimensions:		131 × 57.5 × 36mm								
Weight:		300g.								

Standard output cordsets

Versions	Part no.	Type	AWG	Length (M)	Notes
5V * 6V * 7,5V * 9V	131616	Open ends	14	0.75	EMI core, OD: 5.6mmØ UL 1185
12V	131581	Female conn	16	1.2	EMI core, UL 1185
15V * 18V * 24V	131514	Female conn	18	1.2	Coax w. EMI core UL 1185

3320

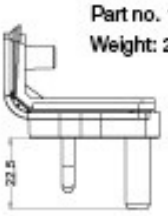


EXCHANGEABLE AC PLUG ADAPTERS

EU plug adapter
Part no. 127000
Weight: 20,9 g

US plug adapter
Part no. 127100
Weight: 13,4 g

UK plug adapter
Part no. 127200
Weight: 29,2 g



AUS plug adapter
Part no. 127300
Weight: 21,4 g

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:	**Power Supply Unit**
Brand(s):	**and/or** (may also carry additional customer name, logo or trade mark)
Type(s)/ Model(s)/UDI-DI:	**3320** (may also carry additional customer model name) **models: 3320-50, 3320-60, 3320-75, 3320-90, 3320-12, 3320-15, 3320-18, 3320-24 & 3320-36**
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. 1.35 A 100-120 V / 220-240 VAC 50-60 Hz, Class I or II** **Output: 3320-50: 5 VDC ± 3% max. 8 A / 40 W** **3320-60: 6 VDC ± 3% max. 6.66 A / 40 W** **3320-75: 7.5 VDC ± 3% max. 7 A / 40 W** **3320-90: 9 VDC ± 3% max. 6 A / 40 W** **3320-12: 12 VDC ± 3% max. 5 A / 40 W** **3320-15: 15 VDC ± 3% max. 4 A / 40 W** **3320-18: 18 VDC ± 3% max. 3.33 A / 40 W** **3320-24: 24 VDC ± 3% max. 2.5 A / 40 W** **3320-36: 36 VDC ± 3% max. 1.66 A / 40 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
(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 LVD-Directive):

EN 62368-1 **)*	EN 62368-1:2014 + /AC:2015 + /AC:2017 + /A11:2017 (IEC 62368-1:2014 + /COR1:2015 + /COR2:2015, Edition 2.0) (also *IEC 62368-1:2018 +/COR1:2020, Ed 3.0, not yet an EN-norm)*	A/V, IT & Comm., Edition 2.0

Electrical Safety and Electromagnetic Compatibility (to MDR-Regulation):

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 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, Edition 2.1)	Emission-residential, comm. & light-industrial environment, Edition 2.1
EN 55032 **)*	EN 55032:2015 + /A11:2020 (CISPR 32:2015 +/A1:2019, Edition 2.1)	Emission-Multimedia Equipment, Edition 2.1
EN 55025 **)*	EN 55035:2017 (CISPR 35:2016, Edition 1.0)	Immunity- 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*)

Ecodesign for U.S.A.:

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 Z to Subpart B of Part 430, Uniform Test Method for Measuring the Energy Consumption of External Power Supplies.
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).

**) used above denotes verified by the manufacturer only.*

The products are considered Risk Class I devices according to EU Medical Device Regulation (MDR) and the U.K. Medical Devices (Amendment etc.) (EU Exit) Regulations 2020.

The products provides two Means Of Patient Protection (2 MOPP) to standard IEC 60601-1.

EU & UK Declaration of Conformity

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, certified to standard EN 29001:2015 (ISO 9001:2015) by Metrosert, certificate ref. K-144**
- **Mascot Power Supplies (Ningbo) Co.,Ltd, No.128 Jinchuan Road, Zhenhai, Ningbo 315221, CHINA, certified to standard EN 29001:2015 (ISO 9001:2015) by 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	**2021-11-08**	**Finn-Erik Wallin, Compliance Manager**
Place of issue	Date of issue	Name, function, signature