

Model 3920

180 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

12V / 12,5A

24V / 7,5A

36V / 5A

48V / 3,75A

Notes:

Desktop unit

Exchangeable DC plugs

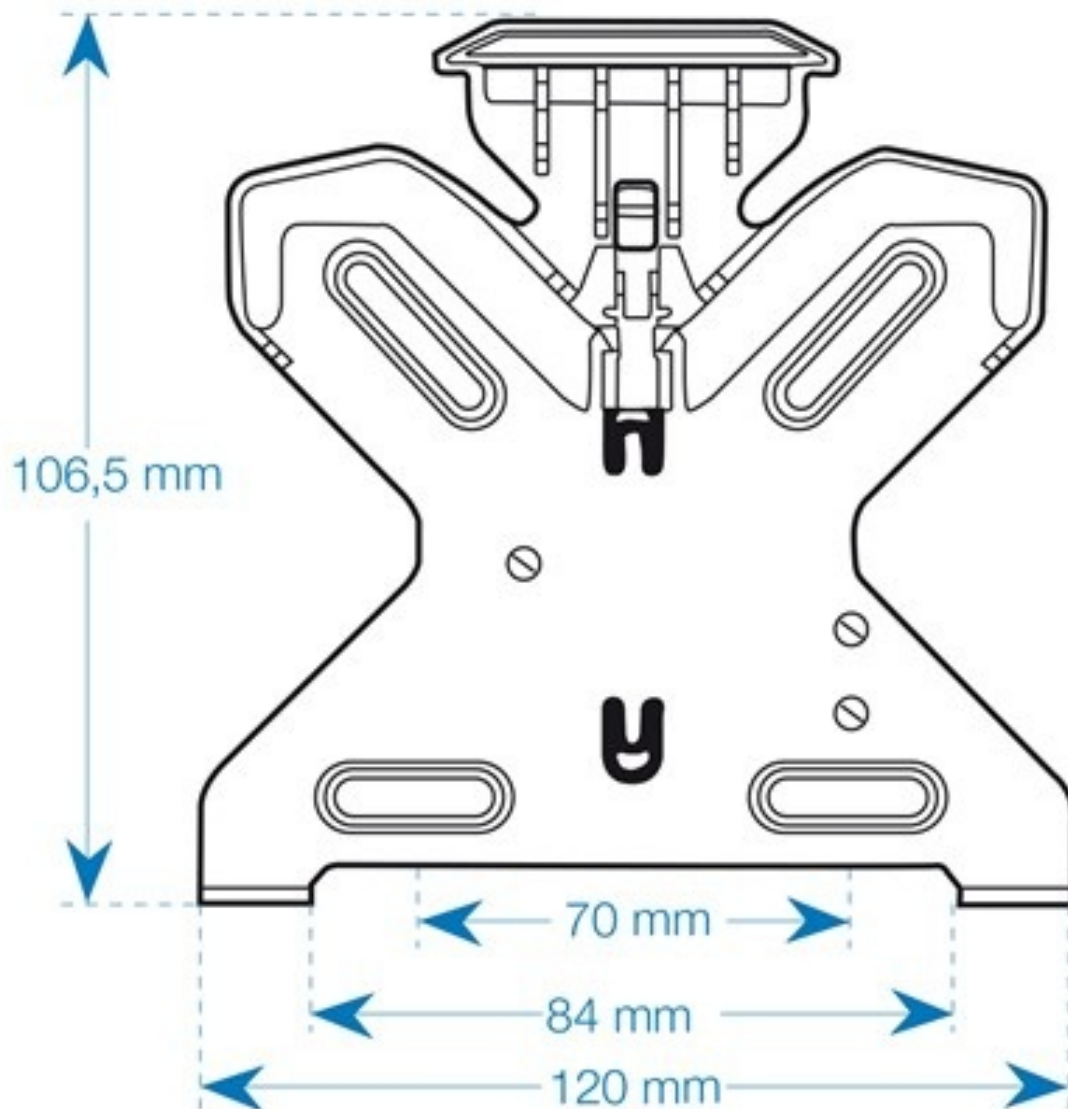
Order plugs and mains cord separately

SPECIFICATIONS FOR TYPE 3920:	12V	24V	36V	48V
Input voltage:	90 - 264VAC	90 - 264VAC	90 - 264VAC	90 - 264VAC
Line frequency:	47 - 63Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz
Output voltage:	12V ± 2.5%	24V ± 2.5%	36V ± 2.5%	48V ± 2.5%
Max output power:	150W	180W	180W	180W
Min. output current:	0A	0A	0A	0A
Max. output current:	12.5A	7.5A	5A	3.75A
Load regulation (0 - 100% load. Measured on pcb):	< 1%	< 1%	< 1%	< 1%
Mains regulation: (Mains variation: 90 - 264V, 100% load)	< 0,5%	< 0,5%	< 0,5%	< 0,5%
Ripple & Noise: (at 20MHz bandwidth)	< 150mV p-p	< 150mV p-p	< 200mV p-p	< 200mV p-p
Efficiency (at 100% load, 230V) approx.:	90%	91%	91%	91%
Standby power:	<0.15W	<0.15W	<0.15W	<0.15W
	<0.15W	<0.15W	<0.15W	<0.15W
Average efficiency at 100%,75%, 50% and 25% load	>89%	>89%	>89%	>89%
	>89%	>89%	>89%	>89%
Efficiency level VI:	Yes	Yes	Yes	Yes
Switch frequency approx.:	100kHz	100kHz	100kHz	100kHz
Overshoot (90 - 10% load variation):	< 350mV	< 350mV	< 350mV	< 350mV
Undershoot (10 - 90% load variation): Measured on pcb	< 350mV	< 350mV	< 350mV	< 350mV
Hold up time:	>15ms	>15ms	>15ms	>15ms
Temperature range:	*Operating: *With derating: *Storage:	-20 to +40°C +60°C -25 to +85°C		
Derating:	4W/°C over 40°C			
Safety:	EN/ IEC 60601-1 ed. 3.1, EN / IEC 62368-1			
Insulation class :	Class II or Class I			
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 and IP44			
Input terminal	2-pins IEC320 C8 connector / 3-pins IEC320 C14 connector / 3-pins fixed cord			
Output terminals:	Cord with/without plug. Exchangeable plugs available.			
Dimensions:	203.5 x 87 x 43.5 mm			
Weight:	915g.			

Standard cordsets

Output	Part no.	Type	AWG	Length (M)	Notes
12V	131616	Open ends	14	0.75	EMI core OD: 5.6mmØ
24V	131581		16		EMI core, UL1185
36V	131514	Female conn.	18	1.2	coax w. EMI core, UL1185
48V	131514		18		coax w. EMI core, UL1185

Mounting bracket, part no. 172002



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 MASCOT (may also carry additional customer name, logo or trade mark)														
Type(s)/ Model(s)/UDI-DI:	3920 (may also carry additional customer model name) models: 3920-12, 3920-24, 3920-36 & 3920-48														
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:	<p>Input: max. 2.5 A, 100 - 240 VAC, 50 - 60 Hz, Class I or II</p> <p>Output:</p> <table border="0"> <tr><td>model 3920-12:</td><td>12.0 - 14.9 VDC, max. 150 W</td></tr> <tr><td>model 3920-18:</td><td>15.0 - 20.9 VDC, max. 180 W</td></tr> <tr><td>model 3920-24:</td><td>21.0 - 26.9 VDC, max. 180 W</td></tr> <tr><td>model 3920-30:</td><td>27.0 - 23.9 VDC, max. 180 W</td></tr> <tr><td>model 3920-36:</td><td>33.0 - 38.9 VDC, max. 180 W</td></tr> <tr><td>model 3920-42:</td><td>39.0 - 44.9 VDC, max. 180 W</td></tr> <tr><td>model 3920-48:</td><td>45.0 - 50.0 VDC, max. 180 W</td></tr> </table> <p>NOTES: The output voltage is fixed within the range indicated. The products may be delivered with 2-pins IEC 60320/C8 connector or 3-pins IEC 60320/C14 connector for detachable mains cord sets or with a 2- or 3-wire non-detachable mains cord.</p>	model 3920-12:	12.0 - 14.9 VDC, max. 150 W	model 3920-18:	15.0 - 20.9 VDC, max. 180 W	model 3920-24:	21.0 - 26.9 VDC, max. 180 W	model 3920-30:	27.0 - 23.9 VDC, max. 180 W	model 3920-36:	33.0 - 38.9 VDC, max. 180 W	model 3920-42:	39.0 - 44.9 VDC, max. 180 W	model 3920-48:	45.0 - 50.0 VDC, max. 180 W
model 3920-12:	12.0 - 14.9 VDC, max. 150 W														
model 3920-18:	15.0 - 20.9 VDC, max. 180 W														
model 3920-24:	21.0 - 26.9 VDC, max. 180 W														
model 3920-30:	27.0 - 23.9 VDC, max. 180 W														
model 3920-36:	33.0 - 38.9 VDC, max. 180 W														
model 3920-42:	39.0 - 44.9 VDC, max. 180 W														
model 3920-48:	45.0 - 50.0 VDC, max. 180 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

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 and IEC 62368-1:2018 + /COR1:2020, Ed 3.0)	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)	Emission-residential, comm. & light-industrial environment, Edition 2.1
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)
--	---

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 Metrocert, 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.

Fredrikstad, Norway

Place of issue

2021-08-19

Date of issue

Signed on behalf of Mascot Electronics AS


Finn-Erik Wailin, Compliance Manager

Name, function, signature