

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](#)

Notes:

Desktop

90-264V

2-pin IEC 60320

Exchangeable DC plugs

Order plugs and mains cord separately



Available versions

12V / 12,5A

24V / 7,5A

30V / 6A

36V / 5A

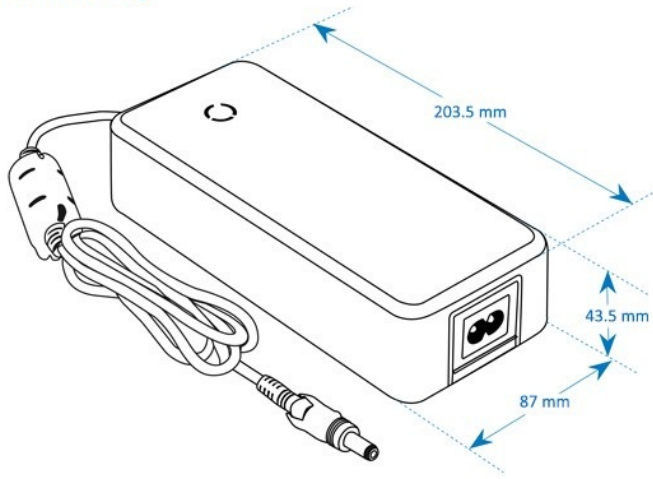
48V / 3,75A

| SPECIFICATIONS FOR TYPE 3920 : | | 12V | 24V | 30V | 36V | 48V |
|---|---|-------------|-------------|--|-------------|-------------|
| Input voltage: | | 90 - 264VAC | 90 - 264VAC | 90 - 264VAC | 90 - 264VAC | 90 - 264VAC |
| Line frequency: | | 47 - 63Hz | 47 - 63Hz | 47 - 63Hz | 47 - 63Hz | 47 - 63Hz |
| Output voltage: | | 12V ± 2.5% | 24V ± 2.5% | 30V ± 2.5% | 36V ± 2.5% | 48V ± 2.5% |
| Max output power: | | 150W | 180W | 180W | 180W | 180W |
| Min. output current: | | 0A | 0A | 0A | 0A | 0A |
| Max. output current: | | 12.5A | 7.5A | 6A | 5A | 3.75A |
| Load regulation (0 - 100% load. Measured on pcb): | | < 1% | < 1% | < 1% | < 1% | < 1% |
| Mains regulation: (Mains variation: 90 - 264V, 100% load) | | < 0,5% | < 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 | < 200mV p-p |
| Efficiency (at 100% load, 230V) approx.: | | 90% | 91% | 91% | 91% | 91% |
| Standby power: | <0.15W | <0.15W | <0.15W | <0.15W | <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% | >89% | >89% | >89% | >89% |
| Efficiency level VI: | | Yes | Yes | Yes | Yes | Yes |
| Switch frequency approx.: | | 100kHz | 100kHz | 100kHz | 100kHz | 100kHz |
| Overshoot (90 - 10% load variation): | | < 350mV | < 350mV | < 350mV | < 350mV | < 350mV |
| Undershoot (10 - 90% load variation): Measured on pcb | | < 350mV | < 350mV | < 350mV | < 350mV | < 350mV |
| Hold up time: | | >15ms | >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 |

Technical drawing




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: | Input: max. 2.5 A, 100 - 240 VAC, 50 - 60 Hz, Class I or II Output: <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;">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

A handwritten signature in blue ink, appearing to read 'Finn-Erik Wailin', written over a light blue background.

Finn-Erik Wailin, Compliance Manager

Name, function, signature