

CB TEST REPORT

12311166 003

for

MFP (Multi Function Printer)
ECOSYS M3040dn, ECOSYS M3540dn,
ECOSYS M3040idn, ECOSYS M3540idn
ECOSYS M3550idn, ECOSYS M3560idn

KYOCERA Document Solutions Inc.



This documentation consists of **70** pages (excluding this cover page).



Test Report issued under the responsibility of:



| | |
|--|--|
| TEST REPORT IEC 60950-1 Information technology equipment – Safety – Part 1: General requirements | |
| Report Number. | 12311166 003 |
| Date of issue | 2013-11-28 |
| Total number of pages | 70 |
| CB Testing Laboratory | TÜV Rheinland Japan Ltd. Osaka Laboratory |
| Address | Wakasugi Center Bldg., Honkan 16F, 2-9-1 Higashi Tenma, Kita-ku, 530-0044 Osaka, JAPAN |
| Applicant's name | KYOCERA Document Solutions Inc. |
| Address | 1-2-28, Tamatsukuri, Chuo-ku, Osaka-shi, Osaka, 540-8585 Japan |
| Manufacturer's name | (same as Applicant) |
| Address | (same as Applicant) |
| Test specification: | |
| Standard | IEC 60950-1:2005 (Second Edition) + Am 1:2009 |
| Test procedure | CB Scheme |
| Non-standard test method | N/A |
| Test Report Form No. | IEC60950_1C |
| Test Report Form(s) Originator | SGS Fimko Ltd |
| Master TRF | Dated 2012-08 |
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| If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed. | |
| This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02. | |

IEC 60950-1

Test item description : 1), 2) Laser Printer **3), 4) MFP (Multi Function Printer)**

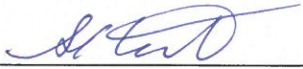

Trade Mark : KYOCERA (on the products)

Manufacturer..... : (Same as Applicant)

Model/Type reference..... : 1) FS-2100D, FS-2100DN,
ECOSYS FS-2100D, ECOSYS FS-2100DN
2) FS-4100DN, FS-4200DN, FS-4300DN
ECOSYS FS-4100DN, ECOSYS FS-4200DN,
ECOSYS FS-4300DN
**3) ECOSYS M3040dn, ECOSYS M3540dn,
ECOSYS M3040idn, ECOSYS M3540idn**
4) ECOSYS M3550idn, ECOSYS M3560idn

Ratings..... : 1) 220-240V~, 50/60Hz, 4.4A
120V~, 60Hz, 8.3A
110V~, 60Hz, 9.1A
2) 220-240V~, 50/60Hz, 5.2A
120V~, 60Hz, 9.7A
110V~, 60Hz, 10.6A
**3) 220-240V~, 50/60Hz, 4.4A
120V~, 60Hz, 8.4A
110V~, 60Hz, 9.2A**
**4) 220-240V~, 50/60Hz, 5.2A
120V~, 60Hz, 10.4A
110V~, 60Hz, 11.5A**

IEC 60950-1

| | | |
|--|----------------------------------|---|
| Testing procedure and testing location: | | |
| <input type="checkbox"/> | CB Testing Laboratory: | |
| Testing location/ address | | |
| <input type="checkbox"/> | Associated CB Laboratory: | |
| Testing location/ address | | |
| Tested by (name + signature) | | |
| Approved by (name + signature) | | |
| <input checked="" type="checkbox"/> | Testing procedure: TMP | |
| Testing location/ address | | KYOCERA Document Solutions Inc. 1-2-28, Tamatsukuri, Chuo-ku, Osaka-shi, Osaka, 540-8585 Japan |
| Tested by (name + signature) | | S. Hamamoto  |
| Approved by (name + signature) | | T. Ito  |
| <input type="checkbox"/> | Testing procedure: WMT | |
| Testing location/ address | | |
| Tested by (name + signature) | | |
| Approved by (name + signature) | | |
| <input type="checkbox"/> | Testing procedure: SMT | |
| Testing location/ address | | |
| Tested by (name + signature) | | |
| Approved by (name + signature) | | |
| <input type="checkbox"/> | Testing procedure: RMT | |
| Testing location/ address | | |
| Tested by (name + signature) | | |
| Approved by (name + signature) | | |

IEC 60950-1**Summary of testing:**

To confirm the continued compliance with the standard, the following test were performed:

Serial No.: Production sample with serial number : SPL3900004

See General product information

Additionally evaluated Test specifications (see original test report).

EN 60950-1:2006 + A11:2009 + A1:2010 + A12: 2011

IEC 60825-1:2007

EN 60825-1:2007

Summary of compliance with National Differences

EU Group Differences, EU Special National Conditions, EU A-Deviations,
CA, DK, FI, DE, KR, SI, SE, GB, US.

Explanation of used codes: CA=Canada, DK=Denmark, FI=Finland, DE=Germany, IL= Israel,
KR=Republic of Korea, SI=Slovenia, SE=Sweden, GB=United Kingdom, US=United States of America.

For National Differences see original test report.

IEC 60950-1

Copy of marking plate: The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

ECOSYS M3040dnMFP
220-240 V~ 50/60 Hz 4.4 A

Apparatet må tilkoples jordet stikkontakt.
Apparaten skall anslutas till jordat uttag.
Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT

>ABS<

KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan
Designed in Japan / Assembled in Vietnam

In Europe, Middle East, Africa and CIS distributed by
KYOCERA Document Solutions Europe B.V.
Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands

ECOSYS M3540dnMFP
220-240 V~ 50/60 Hz 4.4 A

Apparatet må tilkoples jordet stikkontakt.
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Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands

ECOSYS M3040idnMFP
220-240 V~ 50/60 Hz 4.4 A

Apparatet må tilkoples jordet stikkontakt.
Apparaten skall anslutas till jordat uttag.
Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

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Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands

IEC 60950-1

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ECOSYS M3540idn**MFP**
220-240 V~ 50/60 Hz 4,4 A

Apparatet må tilkoples jordet stikkontakt.

Apparaten skall anslutas till jordat uttag.

Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT

>ABS<

KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan
Designed in Japan / Assembled in VietnamIn Europe, Middle East, Africa and CIS distributed by
KYOCERA Document Solutions Europe B.V.
Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands**ECOSYS M3550idn****MFP**
220-240 V~ 50/60 Hz 5,2 A

Apparatet må tilkoples jordet stikkontakt.

Apparaten skall anslutas till jordat uttag.

Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

CLASS 1 LASER PRODUCT
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>ABS<

KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan
Designed in Japan / Assembled in VietnamIn Europe, Middle East, Africa and CIS distributed by
KYOCERA Document Solutions Europe B.V.
Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands**ECOSYS M3560idn****MFP**
220-240 V~ 50/60 Hz 5,2 A

Apparatet må tilkoples jordet stikkontakt.

Apparaten skall anslutas till jordat uttag.

Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT

>ABS<

KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan
Designed in Japan / Assembled in VietnamIn Europe, Middle East, Africa and CIS distributed by
KYOCERA Document Solutions Europe B.V.
Bloemlaan 4, 2132 NP, Hoofddorp The Netherlands

IEC 60950-1

Copy of marking plate: The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

ECOSYS M3040dn120 V~
60 Hz 8.4 A

Complies with FDA radiation performance standards, 21 CFR Subchapter J.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3B/NMB-3B

KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan

>ABS<
Designed in Japan / Assembled in Vietnam

ECOSYS M3540dn120 V~
60 Hz 8.4 A

Complies With Part 68, FCC Rules.

US:E52FA03B2NMK00 REN(USA):0.3B

CONNECTOR:USOC RJ-11C

IC:1059B-2NMK00 REN(CANADA):0.4

Complies with FDA radiation performance standards, 21 CFR Subchapter J.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3B/NMB-3B

KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan

>ABS<
Designed in Japan / Assembled in Vietnam

ECOSYS M3040idn120 V~
60 Hz 8.4 A

Complies with FDA radiation performance standards, 21 CFR Subchapter J.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3B/NMB-3B

KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan

>ABS<
Designed in Japan / Assembled in Vietnam

IEC 60950-1

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ECOSYS M3540idn120 V~
60 Hz 8.4 A

Complies With Part 68, FCC Rules.

US:E52FA03B2NMK00 REN(USA):0.3B

CONNECTOR:USOC RJ-11C

IC:1059B-2NMK00 REN(CANADA):0.4

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3B/NMB-3B



KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan

>ABS<
Designed in Japan / Assembled in Vietnam

ECOSYS M3550idn120 V~
60 Hz 10.4 A

Complies With Part 68, FCC Rules.

US:E52FA03B2NMK00 REN(USA):0.3B

CONNECTOR:USOC RJ-11C

IC:1059B-2NMK00 REN(CANADA):0.4

Complies with FDA radiation performance standards, 21 CFR Subchapter J.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3B/NMB-3B



KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan

>ABS<
Designed in Japan / Assembled in Vietnam

ECOSYS M3560idn120 V~
60 Hz 10.4 A

Complies With Part 68, FCC Rules.

US:E52FA03B2NMK00 REN(USA):0.3B

CONNECTOR:USOC RJ-11C

IC:1059B-2NMK00 REN(CANADA):0.4

Complies with FDA radiation performance standards, 21 CFR Subchapter J.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3B/NMB-3B



KYOCERA Document Solutions Inc.
2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan

>ABS<
Designed in Japan / Assembled in Vietnam

IEC 60950-1

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ECOSYS M3040dn 110 V~
60 Hz 9.2 A (KYOCERA 黑白多功能複合機)

設計開發:日本 製造國別:越南

KYOCERA Document Technology Vietnam Co., Ltd.
No.56A, 56B and 56C, VSIP Haiphong Township, Industrial and Service Park,
Thuy Nguyen District, Dinh Vu-Cat Hai Economic Zone, Haiphong, Vietnam

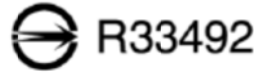
進口商(台灣分公司):

台灣京瓷辦公資訊系統股份有限公司

住址:104台北市中山區民權東路三段37號6樓

電話:02-2507-6709 服務專線:0800-055-828

功能規格和使用方法:請參考使用手冊



注意:維修及更換保險絲時,請務必將電源線拆下。 >ABS<

ECOSYS M3540dn 110 V~
60 Hz 9.2 A (KYOCERA 黑白多功能複合機)

設計開發:日本 製造國別:越南

KYOCERA Document Technology Vietnam Co., Ltd.
No.56A, 56B and 56C, VSIP Haiphong Township, Industrial and Service Park,
Thuy Nguyen District, Dinh Vu-Cat Hai Economic Zone, Haiphong, Vietnam

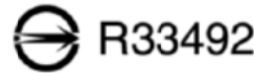
進口商(台灣分公司):

台灣京瓷辦公資訊系統股份有限公司

住址:104台北市中山區民權東路三段37號6樓

電話:02-2507-6709 服務專線:0800-055-828

功能規格和使用方法:請參考使用手冊



注意:維修及更換保險絲時,請務必將電源線拆下。 >ABS<

ECOSYS M3040idn 110 V~
60 Hz 9.2 A (KYOCERA 黑白多功能複合機)

設計開發:日本 製造國別:越南

KYOCERA Document Technology Vietnam Co., Ltd.
No.56A, 56B and 56C, VSIP Haiphong Township, Industrial and Service Park,
Thuy Nguyen District, Dinh Vu-Cat Hai Economic Zone, Haiphong, Vietnam

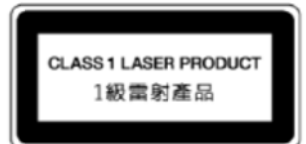
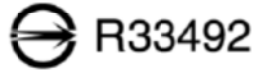
進口商(台灣分公司):

台灣京瓷辦公資訊系統股份有限公司

住址:104台北市中山區民權東路三段37號6樓

電話:02-2507-6709 服務專線:0800-055-828

功能規格和使用方法:請參考使用手冊



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IEC 60950-1

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ECOSYS M3540idn 110 V~
60 Hz 9.2 A (KYOCERA 黑白多功能複合機)

設計開發:日本 製造國別:越南

KYOCERA Document Technology Vietnam Co., Ltd.
No.56A, 56B and 56C, VSIP Haiphong Township, Industrial and Service Park,
Thuy Nguyen District, Dinh Vu-Cat Hai Economic Zone, Haiphong, Vietnam

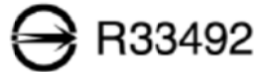
進口商(台灣分公司):

台灣京瓷辦公資訊系統股份有限公司

住址:104台北市中山區民權東路三段37號6樓

電話:02-2507-6709 服務專線:0800-055-828

功能規格和使用方法:請參考使用手冊



注意:維修及更換保險絲時,請務必將電源線拆下。 >ABS<

ECOSYS M3550idn 110 V~
60 Hz 11.5 A (KYOCERA 黑白多功能複合機)

設計開發:日本 製造國別:越南

KYOCERA Document Technology Vietnam Co., Ltd.
No.56A, 56B and 56C, VSIP Haiphong Township, Industrial and Service Park,
Thuy Nguyen District, Dinh Vu-Cat Hai Economic Zone, Haiphong, Vietnam

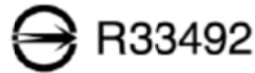
進口商(台灣分公司):

台灣京瓷辦公資訊系統股份有限公司

住址:104台北市中山區民權東路三段37號6樓

電話:02-2507-6709 服務專線:0800-055-828

功能規格和使用方法:請參考使用手冊



注意:維修及更換保險絲時,請務必將電源線拆下。 >ABS<

ECOSYS M3560idn 110 V~
60 Hz 11.5 A (KYOCERA 黑白多功能複合機)

設計開發:日本 製造國別:越南

KYOCERA Document Technology Vietnam Co., Ltd.
No.56A, 56B and 56C, VSIP Haiphong Township, Industrial and Service Park,
Thuy Nguyen District, Dinh Vu-Cat Hai Economic Zone, Haiphong, Vietnam

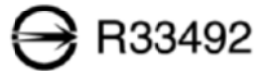
進口商(台灣分公司):

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住址:104台北市中山區民權東路三段37號6樓

電話:02-2507-6709 服務專線:0800-055-828

功能規格和使用方法:請參考使用手冊



注意:維修及更換保險絲時,請務必將電源線拆下。 >ABS<

IEC 60950-1

| | |
|---|--|
| Test item particulars | |
| Equipment mobility | <input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in |
| Connection to the mains | <input checked="" type="checkbox"/> pluggable equipment <input checked="" type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input checked="" type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains |
| Operating condition | <input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time: |
| Access location | <input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location |
| Over voltage category (OVC) | <input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other: |
| Mains supply tolerance (%) or absolute mains supply values | ±10% |
| Tested for IT power systems | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| IT testing, phase-phase voltage (V) | 230V |
| Class of equipment | <input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified |
| Considered current rating of protective device as part of the building installation (A) | 16A (for Europe) and 20A (for Canada and USA) |
| Pollution degree (PD) | <input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3 |
| IP protection class | Not rated, indoor use only |
| Altitude during operation (m) | Up to 3500 |
| Altitude of test laboratory (m) | < 1000 |
| Mass of equipment (kg) | Approx. 14.5kg for FS-2100D, FS-2100DN 15.5kg for FS-4100DN, FS-4200DN, FS-4300DN 22 kg for ECOSYS M3040dn, ECOSYS M3540dn, ECOSYS M3040idn, ECOSYS M3540idn 25kg for ECOSYS M3550idn, ECOSYS M3560idn |
| Possible test case verdicts: | |
| - test case does not apply to the test object | N/A (or N) |
| - test object does meet the requirement | P (Pass) |
| - test object does not meet the requirement | F (Fail) |
| Testing | |
| Date of receipt of test item | N/A |
| Date(s) of performance of tests | 2013-11-06 to 2013-11-12 |

IEC 60950-1

General remarks:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 6.2.5 of IEC 60950-1:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

- ☒ Yes
☐ Not applicable

When differences exist; they shall be identified in the General product information section.

- Name and address of factory (ies)** :
1. KYOCERA Document Technology (Dongguan) Co., Ltd.
 Kyocera Industrial Park
 3 Fangzheng East Rd, Shilong,
 Dongguan, Guangdong, P.R. China
 2. YiHe PLASTIC & ELECTRONIC PRODUCTS (SHENZHEN) CO., LTD.
EVA Industrial Garden, number 11 GuoTai Road, TangTou Community, ShiYan Town, BaoAn District, Shenzhen, P.R. China
 3. Kyocera Document Solutions Inc. Tamaki Plant
 704-19 Nojino, Tamaki-Cho, Watarai-Gun, Mie 519-0497, Japan
 4. Kyocera Document Solutions Inc. Hirakata Plant
 1-38-12 Tsuda-Kita-machi, Hirakata-shi, Osaka 573-0121, Japan
 5. KYOCERA Document Technology Vietnam Co., Ltd.
 No. 56A, 56B and 56C, VSIP Haiphong Township, Industrial and Service Park,
 Thuy Nguyen District, Dinh Vu-Cat Hai Economic Zone, Haiphong Vietnam

IEC 60950-1**Remark:****Change of Manufacturer:**

(not changed)

Change of Factory(ies):

Change of factory address for YiHe PLASTIC & ELECTRONIC PRODUCTS (SHENZHEN) CO., LTD.
see Description of change(s) item 10

History of amendments and modifications:

Ref. No. 12311166 001, dated 2012-09-19 (original test report)

Ref. No. 12311166 001, dated 2013-06-11 (modification)

IEC 60950-1

General product information:**Description of change(s):**

1. Addition of MFP (Multi Function Printer) models as follows
ECOSYS M3040dn, ECOSYS M3540dn, ECOSYS M3040idn, ECOSYS M3540idn, ECOSYS M3550idn, ECOSYS M3560idn, detail for Differences between the models page.
 2. Change of description for Heater Lamps, Switching Power Supply Units.
 3. Change of model groups as follows;
Printer Low Model : FS-2100D, FS-2100DN
Printer High Model : FS-4100DN, FS-4200DN, FS-4300DN
MFP Low Model : ECOSYS M3040dn, ECOSYS M3540dn, ECOSYS M3040idn, ECOSYS M3540idn
MFP High Model : ECOSYS M3550idn, ECOSYS M3560idn
 4. Addition of alternate manufacturer/trademark : Minebea Co., Ltd. for LSU Fan Motor, Alternate Center Fan Motor - Optional, Alternate Rear Fan Motor – Optional, Polygon Motor, Alternate Polygon Motors, FD Motor, Trans Motor for Paper Feeding Unit, Model PF-315+ (Option).
 5. Addition of Scanner Motor – Optional, Scanner LED – for MFP Models, Fuse (YF10) for L.P.S for MFP Models (on Engine PWB) for 24V of Feed Motor, Conveying Motor, Scanner Motor and Junction Motor, Fuse (YF13) for L.P.S for MFP Models except for ECOSYS M3040dn and ECOSYS M3540dn (on Engine PWB) for 5V of Panel PWB, Frame ISU Top - Optional, Frame ISU Bottom – Optional.
 6. Addition of FAX PWB for FAX PWB for ECOSYS M3540dn, ECOSYS M3540idn, ECOSYS M3550idn and ECOSYS M3560idn. (FAX PWB is already evaluated at TUV CBTR 12311405 001)
 7. Addition of DP Unit (Optional) for MFP models.
 8. Change of flammability class for Cover Right from Min.V-1 to 5V.
 9. "Various" changed to "interchangeable" in appended table 1.5.1.
 10. Change of the factory address of "YiHe PLASTIC & ELECTRONIC PRODUCTS (SHENZHEN) CO., LTD" as follows:
From EVA Industrial Garden, Tang Xing Road, Shi Yan Town, Bao An District, Shenzhen, 518108 P.R. China
To **EVA Industrial Garden, number 11 GuoTai Road, TangTou Community, ShiYan Town, BaoAn District, Shenzhen, P.R. China**
- For details, refer to the **bold letters and strikethrough** in appended table 1.5.1.

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| Change | Testing (Please use test data sheet) | | Comments |
|----------------|--------------------------------------|--|---------------------------------|
| | Clause | Test description | |
| 2,3,4,6,8,9,10 | - | - | No additional test is necessary |
| 1,5,7 | 1.6.2 | Input current | |
| | 2.5 | Limited power sources | |
| | 2.6.3.4 | Resistance of earthing conductors and their terminations | |
| | 2.9.2 | Humidity conditioning | |
| | 4.1 | Stability | |
| | 4.2.2/-3/-4 | Mechanical strength | |
| | 4.2.5 | Mechanical strength | |
| | 4.2.7 | Mechanical strength | |
| | 4.5.2 | Maximum Temperatures | |
| | 5.1 | Touch current and protective conductor current | |
| | 5.2 | Electric strength | |
| | 5.3 | Abnormal operating and fault conditions | |

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Differences between the models: for MFP model

The models of main units are essentially the same except for the items described in the following table.

| Model | MFP Low Model | | | | MFP High Model | |
|-----------------------------------|---|-------------------|--------------------|--------------------|--------------------|--------------------|
| Item | ECOSYS M3040dn | ECOSYS M3540dn | ECOSYS M3040idn | ECOSYS M3540idn | ECOSYS M3550idn | ECOSYS M3560idn |
| Rating | 220-240V : 4.4A | | | | 220-240V : 5.2A | |
| | 120V : 8.4A | | | | 120V : 10.4A | |
| | 110V : 9.2A | | | | 110V : 11.5A | |
| Printing Speed | 40ppm | | | | 50ppm | 60ppm |
| Ethernet Interface | Provided | | | | | |
| Switching Power Supply 220-240V | MPW3100X (X may be any number from 0 to 9 or alphabetical number) | | | | MPW3100 | |
| Switching Power Supply 110V, 120V | MPW3099X (X may be any number from 0 to 9 or alphabetical number) | | | | MPW3099 | |
| Heater Lamp | One provided | | | | Two provided | |
| FAX PWB | Not provided | Provided | Not provided | Provided | | |
| PF-320 (Paper Feeder Unit) | Optionally provided (Max. 4 units) | | | | | |
| PF-315+ (Paper Feeder Unit) | Not provided | | | | | |

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Differences between the models: for Pronter model

The models of main units are essentially the same except for the items described in the following table.

| Item | Printer Low Model | | Printer High Model | | |
|-----------------------------------|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | FS-2100D ECOSYS FS-2100D | FS-2100DN ECOSYS FS-2100DN | FS-4100DN ECOSYS FS-4100DN | FS-4200DN ECOSYS FS-4200DN | FS-4300DN ECOSYS FS-4300DN |
| Rating | 220-240V~ : 4.4A | 220-240V~ : 4.4A | 220-240V~ : 5.2A | 220-240V~ : 5.2A | 220-240V~ : 5.2A |
| | 120V~ : 8.3A | 120V~ : 8.3A | 120V~ : 9.7A | 120V~ : 9.7A | 120V~ : 9.7A |
| | 110V~ : 9.1A | 110V~ : 9.1A | 110V~ : 10.6A | 110V~ : 10.6A | 110V~ : 10.6A |
| Printing Speed | 40ppm | 40ppm | 45ppm | 50ppm | 60ppm |
| Ethernet Interface | Not provided | Provided | Provided | Provided | Provided |
| Switching Power Supply 220-240V | MPW3100X (X may be any number from 0 to 9 or alphabetical number) | | MPW3100 | | |
| Switching Power Supply 110V, 120V | MPW3099X (X may be any number from 0 to 9 or alphabetical number) | | MPW3099 | | |
| Heater Lamp | One provided | One provided | Two provided | Two provided | Two provided |
| PF-320 (Paper Feeder Unit) | Optionally provided (Max. 4 units) | Optionally provided (Max. 4 units) | Optionally provided (Max. 4 units) | Optionally provided (Max. 4 units) | Optionally provided (Max. 4 units) |
| PF-315+ (Paper Feeder Unit) | Optionally provided | Optionally provided | Optionally provided | Optionally provided | Optionally provided |
| PB-325 (Attachment Kit) | Optionally provided | Optionally provided | Optionally provided | Optionally provided | Optionally provided |

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|--------------------|--|---|----------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 1 | GENERAL | | P |
| 1.5 | Components | | P |
| 1.5.1 | General | | P |
| | Comply with IEC 60950-1 or relevant component standard | (see appended table 1.5.1) | P |
| 1.7 | Marking and instructions | | P |
| 1.7.1 | Power rating and identification markings | See below. | P |
| 1.7.1.1 | Power rating marking | 1) 220-240V~, 50/60Hz, 4.4A 120V~, 60Hz, 8.3A 110V~, 60Hz, 9.1A 2) 220-240V~, 50/60Hz, 5.2A 120V~, 60Hz, 9.7A 110V~, 60Hz, 10.6A 3) 220-240V~, 50/60Hz, 4.4A 120V~, 60Hz, 8.4A 110V~, 60Hz, 9.2A 4) 220-240V~, 50/60Hz, 5.2A 120V~, 60Hz, 10.4A 110V~, 60Hz, 11.5A | P |
| | Multiple mains supply connections.....: | Single mains supply connection. | N/A |
| | Rated voltage(s) or voltage range(s) (V).....: | See above | P |
| | Symbol for nature of supply, for d.c. only.....: | AC supply. | N/A |
| | Rated frequency or rated frequency range (Hz) | See above | P |
| | Rated current (mA or A) | See above | P |

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|-------------|--|--|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 1.7.1.2 | Identification markings | | P |
| | Manufacturer's name or trade-mark or identification mark | KYOCERA (on the products) | P |
| | Model identification or type reference | FS-2100D, FS-2100DN, FS-4100DN, FS-4200DN, FS-4300DN ECOSYS FS-2100D, ECOSYS FS-2100DN, ECOSYS FS-4100DN, ECOSYS FS-4200DN, ECOSYS FS-4300DN | P |

| | | | |
|------------|--|--------------------------|-----|
| 2 | PROTECTION FROM HAZARDS | | P |
| 2.5 | Limited power sources <i>The following circuits were tested for limited power source:</i> <i>24V output for Feed Motor, Conveying Motor, Scanner Motor and Junction</i> <i>5V output for Panel PWB for MFP and CCD PWB for MFP</i> <i>3.3V output for Panel PWB for MFP and CCD PWB for MFP</i> | | P |
| | a) Inherently limited output | | N/A |
| | b) Impedance limited output | | P |
| | c) Regulating network limited output under normal operating and single fault condition | | P |
| | d) Overcurrent protective device limited output | | N/A |
| | Max. output voltage (V), max. output current (A), max. apparent power (VA)..... : | (see appended table 2.5) | — |
| | Current rating of overcurrent protective device (A) : -- | | — |
| | Use of integrated circuit (IC) current limiters | | N/A |

| | | | |
|---------|---|------------------------------|---|
| 2.6.3.4 | Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) | (see appended table 2.6.3.4) | P |
|---------|---|------------------------------|---|

| | | | |
|------------|------------------------------------|--|---|
| 2.9 | Electrical insulation | | P |
| 2.9.1 | Properties of insulating materials | Natural rubber, asbestos or hygroscopic materials are not used. | P |
| 2.9.2 | Humidity conditioning | Humidity treatment conducted for 120h. Humidity conditioning was also conducted to Transformaer, Photo Coupler and their alternate components.. | P |

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|-------------|---|--|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | Relative humidity (%), temperature (°C) : | 93%, 40°C | — |
| 2.9.3 | Grade of insulation | Kind of insulation and working voltage considered. | P |
| 2.9.4 | Separation from hazardous voltages | | P |
| | Method(s) used : | Method 1: a, b Method 2 | — |

| | | | |
|-------------|--|--|----------|
| 2.10 | Clearances, creepage distances and distances through insulation | | P |
| 2.10.9 | Thermal cycling | Optical Isolator Alternate (PC10, PC11) for FAX PWB was certified. Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div. TLP620, TLP627, TLP621, TLP320, TLP629 | P |
| 2.10.10 | Test for Pollution Degree 1 environment and insulating compound | Not applied | N/A |
| 2.10.11 | Tests for semiconductor devices and cemented joints. | Optical Isolator Alternate (PC10, PC11) for FAX PWB was certified. Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div. TLP620, TLP627, TLP621, TLP320, TLP629 | P |

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|-------------|------------------------------|--|----------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 4 | PHYSICAL REQUIREMENTS | | P |
| 4.2 | Mechanical strength | | P |
| 4.2.1 | General | Outer enclosure shows sufficient strength to withstand expected handling conditions. | P |
| | Rack-mounted equipment. | Not rack-mounted. | N/A |
| 4.2.2 | Steady force test, 10 N | Applied to relevant parts, no hazard. | P |
| 4.2.3 | Steady force test, 30 N | 30 N applied to Frame Fuser | P |
| 4.2.4 | Steady force test, 250 N | 250N applied to outer enclosure. Test points: Cover Top, Cover Rear, Cover Right, Cover Left, Frame ISU Top , Frame ISU Bottom, Cover PF for DP Unit, Cover Front for DP Unit, Cover Rear for DP Unit, Base DP for DP Unit | P |
| 4.2.5 | Impact test | See below: | P |
| | Fall test | Test points: Cover Top, Cover Rear, Cover Right, Cover Left, Frame ISU Top , Frame ISU Bottom, Cover PF for DP Unit, Cover Front for DP Unit, Cover Rear for DP Unit, Base DP for DP Unit | P |
| | Swing test | | N/A |
| 4.2.6 | Drop test; height (mm) | Neither direct plug-in nor hand held. | N/A |
| 4.2.7 | Stress relief test | After 7h at 85°C for Cover Top, Cover Rear, Cover Right, Cover Left, Frame ISU Top , Frame ISU Bottom, Cover PF for DP Unit, Cover Front for DP Unit, Cover Rear for DP Unit, Base DP for DP Unit | P |

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|--------------------|--|----------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 4.5 | Thermal requirements | | P |
| 4.5.1 | General | | P |
| 4.5.2 | Temperature tests | (see appended table 4.5) | P |
| | Normal load condition per Annex L: | Method L.7 | — |
| 4.5.3 | Temperature limits for materials | (see appended table 4.5) | P |
| 4.5.4 | Touch temperature limits | (see appended table 4.5) | P |
| 4.5.5 | Resistance to abnormal heat: | (see appended table 4.5.5) | P |

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|-------------|---|---------------------------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 5 | ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS | | P |
| 5.1 | Touch current and protective conductor current | | P |
| 5.1.1 | General | Tested for TN system. | P |
| 5.1.2 | Configuration of equipment under test (EUT) | | P |
| 5.1.2.1 | Single connection to an a.c. mains supply | Single supply, independently tested. | P |
| 5.1.2.2 | Redundant multiple connections to an a.c. mains supply | Single-phase equipment. | N/A |
| 5.1.2.3 | Simultaneous multiple connections to an a.c. mains supply | | N/A |
| 5.1.3 | Test circuit | Per figure 5A. | P |
| 5.1.4 | Application of measuring instrument | Per Annex D. | P |
| 5.1.5 | Test procedure | | P |
| 5.1.6 | Test measurements | | P |
| | Supply voltage (V) | (see appended table 5.1) | — |
| | Measured touch current (mA) | (see appended table 5.1) | — |
| | Max. allowed touch current (mA) | (see appended table 5.1) | — |
| | Measured protective conductor current (mA) | (see appended table 5.1) | — |
| | Max. allowed protective conductor current (mA) ... | 3.5mA | — |
| 5.1.7 | Equipment with touch current exceeding 3,5 mA | Leakage current does not exceed 3.5mA | N/A |
| 5.1.7.1 | General | -- | N/A |
| 5.1.7.2 | Simultaneous multiple connections to the supply | Single supply equipment. | N/A |
| 5.1.8 | Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks | Per figure 5A. | P |
| 5.1.8.1 | Limitation of the touch current to a telecommunication network or to a cable distribution system | | P |
| | Supply voltage (V) | (see appended table 5.1) | — |
| | Measured touch current (mA) | (see appended table 5.1) | — |
| | Max. allowed touch current (mA) | 0.25mA | — |

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|--------------------|--|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 5.1.8.2 | Summation of touch currents from telecommunication networks | | N/A |
| | a) EUT with earthed telecommunication ports | -- | N/A |
| | b) EUT whose telecommunication ports have no reference to protective earth | | N/A |

| | | | |
|------------|--------------------------|--------------------------|----------|
| 5.2 | Electric strength | | P |
| 5.2.1 | General | (see appended table 5.2) | P |
| 5.2.2 | Test procedure | | P |

| | | | |
|----------|---|--|----------|
| 6 | CONNECTION TO TELECOMMUNICATION NETWORKS | | P |
| 6.1 | Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment | | P |
| 6.1.1 | Protection from hazardous voltages | | P |
| 6.1.2 | Separation of the telecommunication network from earth | | P |
| 6.1.2.1 | Requirements | Sufficient insulation provided. Operating voltage: DC 500V or DC 1000V. Limit: $U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ = 460V max for DC 500V or 560V max. for DC 1000V Tested with 1.5kV, surge suppressors SA10, SA11 removed. | P |
| | Supply voltage (V) | 120V, 240V | — |
| | Current in the test circuit (mA) | Measured leakage current with Varistor: 0mA | — |
| 6.1.2.2 | Exclusions | -- | N/A |

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|-------------|--|--|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 6.2 | Protection of equipment users from overvoltages on telecommunication networks | | P |
| 6.2.1 | Separation requirements | | P |
| 6.2.2 | Electric strength test procedure | See below. | P |
| 6.2.2.1 | Impulse test | Tested with 1.5kV on surge suppressors SA10, SA11 (RA-102M-C6 and RA-501M-C6) required by cl. 6.2.2.2. | P |
| 6.2.2.2 | Steady-state test | Operation Panel: 3.0kV SA10, SA11 removed for the followings. Enclosure (PE): 1.5kV I/O connectors: 1.5kV Voltages applied for were requested by the manufacturer. | P |
| 6.2.2.3 | Compliance criteria | No flashover or breakdown. | P |

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|-------------|--------------------|--|-----------------|--|---------|
| Clause | Requirement + Test | | Result - Remark | | Verdict |

| 1.5.1 | TABLE: List of critical components | | | | | P |
|--|---|--|---|------------------------------|--|----------|
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Power Supply Cord Set (for 220-240V) | Volex | Cord H05VV-F 3 X 0.75mm ² | 0.75 mm ² | DIN VDE 0281-5 | VDE | |
| | | Plug M2511X (X may be any number from 0 to 9 or alphabetical number or blank) | 250V ac, 16A | DIN VDE 0620-1 | VDE | |
| | | Connector V1625 | 250V ac, 10A | IEC/EN 60320-1 | VDE | |
| Power Supply Cord Set (for 120V) | Volex | Cord 3 X 16AWG UL SJT | 16AWG, 2500mm (+100mm, - 50mm) | UL62 | UL(E159216 or E156136) | |
| | | Plug PS204 | 125V ac, 15A | | | |
| | | Connector V1625 | 125V ac, 13A | | | |
| Power Supply Cord Set (for 110V) | Volex (Asia) Pte Ltd. | Cord VCTF 3 X 2.00 mm ² | 2.00 mm ² | CNS3199 | BSMI | |
| | | Plug TW15CS3 | 125V, 15A | CNS10917-2 | | |
| | | Connector V1625 | 125V, 15A | | | |
| Appliance Inlet | Rong Feng Industrial Co., Ltd. | SS-120 | 250V ac, 10A (for 220-240V, 110V) 250V ac, 15A (for 120V) | IEC / EN60320- 1 UL498 | VDE UL(E102641) | |
| Lithium Battery | Various Interchangeable | CR2032 | 3V, 220mAh | UL1642 | UL | |

| IEC 60950-1 | | | | | |
|---|---|---|---|---------------------------|--|
| Clause | Requirement + Test | | Result - Remark | | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Switch | | | | | |
| Main Switch - Optional | Alps Electric Co., Ltd. | SDDJE | 250V, 10(6)A | IEC / EN61058-1 UL1054 | VDE UL(E38433) |
| Interlock Switch | Omron | D3V-16506-3C25 (10E) | 250V ac/16(3)A, 50,000 Cycles (for 220-240V, 110V) 250V ac/11A, 100,000 Cycles (120V) | IEC/EN61058-1 UL1054 | VDE UL(E41515) |
| Fuser Unit | | | | | |
| Thermal Cutoff (PRI) | Wako Electronics Co., Ltd. | CS-7TA-35 | 250V ac, 202°C | IEC 60730 UL873 | TUV UL(E50367) |
| Frame Fuser | Kaneka Corp. | 3401NX or 3401NH | Min. V-1 | UL94 | UL(E48854) |
| Alternate Frame Fuser | E I Dupont De Nemours & Co., Inc. | RE19041 or RE19041A | Min. V-1 | UL94 | UL(E41938) |
| Heater Lamp for 220-240V ac, Printer Low Model and MFP Low Model | Ushio Inc. | QIRF 240-854 XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 240V, 854W | - | Evaluated together with unit |
| Heater Lamp for 220-240V ac, Printer High Model and MFP High Model | Ushio Inc. | QIRF 240-641/427 XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 240V, 641W/427W | - | Evaluated together with unit |

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|--------------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
|---|--|---|--------------------|----------|--|----------|
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Heater Lamp for 120V ac, Printer Low Model and MFP Low Model | Ushio Inc. | QIRF 120-800 XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 120V, 800W | - | Evaluated together with unit | |
| Heater Lamp for 120V ac, Printer High Model and MFP High Model | Ushio Inc. | QIRF 120- 600/400 XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 120V, 600W/400W | - | Evaluated together with unit | |
| Heater Lamp for 110V ac, Printer Low Model and MFP Low Model | Ushio Inc. | QIRF 110-800 XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 110V, 800W | - | Evaluated together with unit | |
| Heater Lamp for 110V ac, Printer High Model and MFP High Model | Ushio Inc. | QIRF 110- 600/400 XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 110V, 600W/400W | - | Evaluated together with unit | |

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|---|---|---|---|---|--|
| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| SWPS | | | | | |
| Switching Power Supply Unit for 220-240V ac, Printer Low Model and MFP Low Model | Murata Mfg. Co., Ltd. | MPW3100X (X may be any number from 0 to 9 or alphabetical number) | Input: 220-240V Output: 24V, 4.5A | --- | Evaluated together with unit |
| Diode (D1) | Shindengen Electric Mfg. Co., Ltd. | D3SBA60 | 600V, 4A | --- | Evaluated together with unit |
| X-Capacitor (C1) | Okaya Electric Industries Co., Ltd. | LE | 275V or 310V, 250V(UL), 0.22uF X2 type | IEC/EN 60384-14 UL1414 UL60384-14 | SEMKO UL(E47474) |
| X-Capacitor (C6) | Okaya Electric Industries Co., Ltd. | LE | 275V or 310V, 250V(UL), 0.1uF X2 type | IEC/EN 60384-14 UL1414 UL60384-14 | SEMKO UL(E47474) |
| Y-Capacitor (C4, C5) | Murata Mfg. Co., Ltd. | KH | 250V, 470pF Y2 type | IEC/EN 60384-14 UL1414 UL60384-14 | VDE UL(E37921) |
| Electrolytic Capacitor (C7) | Various Interchangeable | Various Interchangeable | 400V, Min.150uF | --- | Evaluated together with unit |
| Bridging Capacitor (C50) | Murata Mfg. Co., Ltd. | KX | 250V, 3300pF Y1 type | IEC/EN 60384-14 UL1414 UL60384-14 | VDE UL(E37921) |
| Fuse (F1) | Cooper Bussmann Inc. | S505 | 250V, T4AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E19180) |
| Alternate Fuse (F1) | Littelfuse Inc. | 215 | 250V, T4AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E10480) |
| Fuse (F51) | Cooper Bussmann Inc. | S505 | 250V, T10AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E19180) |
| Alternate Fuse (F51) | Littelfuse Inc. | 0215 | 250V, T10AH | IEC/EN 60127 UL248-1 UL248-14 | SEMKO UL(E10480) |

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|--------------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
|---|--|--|--|---|--|---|
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Surge Absorber (Z1) | Panasonic Corporation, Panasonic Corporation of North America or Matsushita Electric Ind. Co., Ltd. or Panasonic | V10471U or V14471U | 470V or Continuous voltage 300Vrms, pulse current 6000A | IEC 61051-1 IEC 61051-2 IEC 61051-2-2 UL1449 | VDE UL(E321499) | |
| Bleeding Resistor (R25, R26, R27) | Various Interchangeable | Various Interchangeable | 1/4W, 470kΩ | --- | Evaluated together with unit | |
| Inductor (L1) | Tokyo Parts Industrial Co., Ltd. | 1R3A163F24A | Class E, 16mH | --- | Evaluated together with unit | |
| Inductor (L2) | Tokyo Parts Industrial Co., Ltd. | 1R5A402F20A | Class E, 4mH | --- | Evaluated together with unit | |
| Inductor (L51) | Tamura Corporation | SKP-T16274 | Class E, 40uH | --- | Evaluated together with unit | |
| Triac (TRA31) | Various Interchangeable | Various Interchangeable | 600Vmin, 12Amin | --- | Evaluated together with unit | |

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|-------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| | | | | | | |
|--|--|--|--|---|--|---|
| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Photo Coupler (PC1, PC3, PC5) | NEC Corp. or Renesas Electronics Corporation | PS2581AL1 | Isolation Thickness: > 0.4 mm, Ext.cr. > 8mm, Int.cr. =thermal cycling tested(2.10.11), Isolation: min. AC 5000V | IEC/EN 60950-1 UL1577 | SEMKO UL(E72422) | |
| Alternate Photo Coupler (PC1, PC3, PC5) | Sharp Corp. Electronic Components Group. | 3SH21 | Isolation Thickness: > 0.4 mm, Ext.cr. > 8mm, Int.cr. =thermal cycling tested(2.10.11), Isolation: min. AC 5000V | IEC/EN 60950-1 UL1577 | SEMKO UL(E64380) | |
| Alternate Photo Coupler (PC1, PC3, PC5) | Toshiba Corporation Semiconductor Company | TLP363JF | Isolation Thickness: > 0.4 mm, Ext.cr. > 8mm, Int.cr. =thermal cycling tested(2.10.11), Isolation: min. AC 5000V | IEC 60747-5-2 EN 60747-5-2 UL1577 | TUV Rheinland UL (E67349) | |
| Transistor (Q1) | Various Interchangeable | Various Interchangeable | 500Vmin, 6Amin | --- | Evaluated together with unit | |
| Connector (YC1) | Japan Solderless Terminal Mfg. Co., Ltd. | VT | AC250V, Max.12A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) | |
| Connector (YC2) | Japan Solderless Terminal Mfg. Co., Ltd. | VH | AC400V, 7A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) | |

| IEC 60950-1 | | | |
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| Clause | Requirement + Test | Result - Remark | Verdict |

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| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Transformer (T1) | Murata Mfg. Co. Ltd. | 68Q1 | Class B | --- | Evaluated together with unit | |
| Relay (RL1) | Panasonic Electric Works Co., Ltd. or Matsushita Electric Works Co., Ltd. or Panasonic | LKP1aF-24V | Contact:250/277 V, 10A Coil:24 Vdc | IEC/EN 60255- 23 IEC/EN 61810-1 | VDE | |
| Alternate Relay (RL1) | Daiichi Electric Co., Ltd. | DG1U series | Contact:250V, 10A Coil:24Vdc | IEC/EN 61810-1 IEC/EN 61058-1 | TUV SEMKO | |
| PWB | Various Interchangeable | Various Interchangeable | Flam. Class V-1 or better | UL796 | UL | |
| Switching Power Supply Unit for 220-240V ac, Printer High Models and MFP High Model | Murata Mfg. Co., Ltd. | MPW3100 | Input: 220-240V Output: 24V, 6.5A | --- | Evaluated together with unit | |
| Diode (D1) | Shindengen Electric Mfg. Co., Ltd. | D3SBA60 | 600V, 4A | --- | Evaluated together with unit | |
| X-Capacitor (C1) | Okaya Electric Industries Co., Ltd. | LE | 275V or 310V, 250V(UL), 0.22uF X2 type | IEC/EN 60384- 14 UL1414 UL60384-14 | SEMKO UL(E47474) | |
| X-Capacitor (C6) | Okaya Electric Industries Co., Ltd. | LE | 275V or 310V, 250V(UL), 0.1uF X2 type | IEC/EN 60384- 14 UL1414 UL60384-14 | SEMKO UL(E47474) | |

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| Clause | Requirement + Test | Result - Remark | Verdict |

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| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Y-Capacitor (C4, C5) | Murata Mfg. Co., Ltd. | KH | 250V, 470pF Y2 type | IEC/EN 60384- 14 UL1414 UL60384-14 | VDE UL(E37921) | |
| Electrolytic Capacitor (C7) | Various Interchangeable | Various Interchangeable | 400V, Min.180uF | --- | Evaluated together with unit | |
| Bridging Capacitor (C50) | Murata Mfg. Co., Ltd. | KX | 250V, 3300pF Y1 type | IEC/EN 60384- 14 UL1414 UL60384-14 | VDE UL(E37921) | |
| Fuse (F1) | Cooper Bussmann Inc. | S505 | 250V,T4AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E19180) | |
| Alternate Fuse (F1) | Littelfuse Inc. | 215 | 250V,T4AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E10480) | |
| Fuse (F51) | Cooper Bussmann Inc. | S505 | 250V, T10AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E19180) | |
| Alternate Fuse (F51) | Littelfuse Inc. | 0215 | 250V, T10AH | IEC/EN 60127 UL248-1 UL248-14 | SEMKO UL(E10480) | |
| Surge Absorber (Z1) | Panasonic Corporation, Panasonic Corporation of North America or Matsushita Electric Ind. Co., Ltd. or Panasonic | V10471U or V14471U | 470V or Continuous voltage 300Vrms, pulse current 6000A | IEC 61051-1 IEC 61051-2 IEC 61051-2-2 UL1449 | VDE UL(E321499) | |
| Bleeding Resistor (R25, R26, R27) | Various Interchangeable | Various Interchangeable | 1/4W, 470kΩ | --- | Evaluated together with unit | |
| Inductor (L1) | Tokyo Parts Industrial Co., Ltd. | 2R0A452F24A | Class E, 4.5mH | --- | Evaluated together with unit | |
| Alternate Inductor (L1) | Tokyo Parts Industrial Co., Ltd. | 2R0A133F28YA | Class E, 13mH | --- | Evaluated together with unit | |

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| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Inductor (L2) | Tokyo Parts Industrial Co., Ltd. | 1R5A402F20A | Class E, 4mH | --- | Evaluated together with unit | |
| Inductor (L51) | Tamura Corporation | SKP-T16274 | Class E, 40uH | --- | Evaluated together with unit | |
| Triac (TRA31,TRA41) | Various Interchangeable | Various Interchangeable | 600Vmin, 12Amin | --- | Evaluated together with unit | |
| Photo Coupler (PC1, PC3, PC4, PC5) | NEC Corp. or Renesas Electronics Corporation | PS2581AL1 | Isolation Thickness: > 0.4 mm, Ext.cr. > 8mm, Int.cr. =thermal cycling tested(2.10.11), Isolation: min. AC 5000V | IEC/EN 60950-1 UL1577 | SEMKO UL(E72422) | |
| Alternate Photo Coupler (PC1, PC3, PC4, PC5) | Sharp Corp. Electronic Components Group. | 3SH21 | Isolation Thickness: > 0.4 mm, Ext.cr. > 8mm, Int.cr. =thermal cycling tested(2.10.11), Isolation: min. AC 5000V | IEC/EN 60950-1 UL1577 | SEMKO UL(E64380) | |
| Alternate Photo Coupler (PC1, PC3, PC4, PC5) | Toshiba Corporation Semiconductor Company | TLP363JF | Isolation Thickness: > 0.4 mm, Ext.cr. > 8mm, Int.cr. =thermal cycling tested(2.10.11), Isolation: min. AC 5000V | IEC 60747-5-2 EN 60747-5-2 UL1577 | TUV Rheinland UL(E67349) | |
| Transistor (Q1, Q2) | Various Interchangeable | Various Interchangeable | 500Vmin, 6Amin | --- | Evaluated together with unit | |

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| Clause | Requirement + Test | | Result - Remark | | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Connector (YC1) | Japan Solderless Terminal Mfg. Co., Ltd. | VT | AC250V, Max.12A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) |
| Connector (YC2) | Japan Solderless Terminal Mfg. Co., Ltd. | VH | AC400V, 7A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) |
| Transformer (T1) | Murata Mfg. Co. Ltd. | 2Q106 | Class B | --- | Evaluated together with unit |
| Relay (RL1) | Panasonic Electric Works Co., Ltd. or Matsushita Electric Works Co., Ltd. or Panasonic | LKP1aF-24V | Contact:250/277 V, 10A Coil:24 Vdc | IEC/EN 60255- 23 IEC/EN 61810-1 | VDE |
| Alternate Relay (RL1) | Daiichi Electric Co., Ltd. | DG1U series | Contact:250V, 10A Coil:24Vdc | IEC/EN 61810-1 IEC/EN 61058-1 | TUV SEMKO |
| PWB | Various Interchangeable | Various Interchangeable | Flam. Class V-1 or better | UL796 | UL |
| Switching Power Supply Unit for 110, 120V ac, Printer Low Model and MFP Low Model | Murata Mfg. Co., Ltd. | MPW3099X (X may be any number from 0 to 9 or alphabetical number) | Input: 110,120V Output: 24V, 4.5A | --- | Evaluated together with unit |
| Diode (D1) | Shindengen Electric Mfg. Co., Ltd. | D3SBA60 | 600V, 4A | --- | Evaluated together with unit |
| X-Capacitor (C1,C6) | Okaya Electric Industries Co., Ltd. | LE | 275V or 310V, 250V(UL), 0.33uF X2 type | IEC/EN 60384- 14 UL1414 UL60384-14 | SEMKO UL(E47474) |
| Y-Capacitor (C4, C5) | Murata Mfg. Co., Ltd. | KH | 250V, 2200pF Y2 type | IEC/EN 60384- 14 UL1414 UL60384-14 | VDE UL(E37921) |

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| Clause | Requirement + Test | Result - Remark | Verdict |

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| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Electrolytic Capacitor (C7) | Various Interchangeable | Various Interchangeable | 200V, Min.680uF | --- | Evaluated together with unit | |
| Bridging Capacitor (C50) | Murata Mfg. Co., Ltd. | KX | 250V, 3300pF Y1 type | IEC/EN 60384- 14 UL1414 UL60384-14 | VDE UL(E37921) | |
| Fuse (F1) | Cooper Bussmann Inc. | S505 | 250V,T6.3AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E19180) | |
| Alternate Fuse (F1) | Littelfuse Inc. | 215 | 250V,T6.3AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E10480) | |
| Fuse (F51) | Hollyland Co., Ltd. | 65TS | 250V, 15A | UL248-1 UL248-14 | UL(E156471) | |
| Surge Absorber (Z1) | Panasonic Corporation, Panasonic Corporation of North America or Matsushita Electric Ind. Co., Ltd. or Panasonic | V10471U or V14471U | 470V or Continuous voltage 300Vrms, pulse current 6000A | IEC 61051-1 IEC 61051-2 IEC 61051-2-2 UL1449 | VDE UL(E321499) | |
| Bleeding Resistor (R25, R26, R27) | Various Interchangeable | Various Interchangeable | 1/4W, 470kΩ | --- | Evaluated together with unit | |
| Inductor (L1, L2) | Tokyo Parts Industrial Co., Ltd. | 2R7A182F24A | Class A, 1.8mH | --- | Evaluated together with unit | |
| Inductor (L51) | Tamura Corp | SKP-T16413 | Class A, 35uH | --- | Evaluated together with unit | |
| Triac (TRA31) | Various Interchangeable | Various Interchangeable | 600Vmin, 12Amin | --- | Evaluated together with unit | |

| IEC 60950-1 | | | | | | |
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| Clause | Requirement + Test | | | Result - Remark | Verdict | |
| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Photo Coupler (PC1, PC3, PC5) | NEC Corp. or Renesas Electronics Corporation | PS2581AL1 | 5000V, Insulation thickness 0.4mm | IEC/EN 60950-1 UL1577 | SEMKO UL(E72422) | |
| Alternate Photo Coupler (PC1, PC3, PC5) | Sharp Corp. Electronic Components Group. | 3SH21 | 5000V, Insulation thickness 0.4mm | IEC/EN 60950-1 UL1577 | SEMKO UL(E64380) | |
| Alternate Photo Coupler (PC1, PC3, PC5) | Toshiba Corporation Semiconductor Company | TLP363JF | 5000V, Insulation thickness 0.4mm | IEC/EN 60950-1 UL1577 | TUV Rheinland UL(E67349) | |
| Transistor (Q1) | Various Interchangeable | Various Interchangeable | 500Vmin, 6Amin | --- | Evaluated together with unit | |
| Connector (YC1) | Japan Solderless Terminal Mfg. Co., Ltd. | VT | AC250V, Max.12A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) | |
| Connector (YC2) | Japan Solderless Terminal Mfg. Co., Ltd. | VH | AC400V,7A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) | |
| Transformer (T1) | Murata Mfg. Co. Ltd. | 67Q1 | Class B UL System Designation CM | --- | Evaluated together with unit | |
| Relay (RL1) | Panasonic Electric Works Co., Ltd. or Matsushita Electric Works Co., Ltd. or Panasonic | ALE1PB24 | Contact:250/277 V, 16A Coil:24 Vdc | UL508 UL60497 | UL(E43149) | |
| Alternate Relay (RL1) | Daiichi Electric Co., Ltd. | DH1U series | Contact:250V, 10A Coil:24Vdc | UL508 UL60947 | UL(E98688) | |
| PWB | Various Interchangeable | Various Interchangeable | Flam. Class V-1 or better | UL796 | UL | |

| IEC 60950-1 | | | |
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| Clause | Requirement + Test | Result - Remark | Verdict |

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| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Switching Power Supply Unit for 110,120V ac, Printer High Models and MFP High Models | Murata Mfg. Co., Ltd. | MPW3099 | Input: 110,120V Output: 24V, 6.5A | --- | Evaluated together with unit | |
| Diode (D1) | Shindengen Electric Mfg. Co., Ltd. | D3SBA60 | 600V, 4A | --- | Evaluated together with unit | |
| X-Capacitor (C1,C6) | Okaya Electric Industries Co., Ltd. | LE | 275V or 310V, 250V(UL), 0.33uF X2 type | IEC/EN 60384- 14 UL1414 UL60384-14 | SEMKO UL(E47474) | |
| Y-Capacitor (C4, C5) | Murata Mfg. Co., Ltd. | KH | 250V, 2200pF Y2 type | IEC/EN 60384- 14 UL1414 UL60384-14 | VDE UL(E37921) | |
| Electrolytic Capacitor (C7) | Various Interchangeable | Various Interchangeable | 200V, Min.1000uF | --- | Evaluated together with unit | |
| Bridging Capacitor (C50) | Murata Mfg. Co., Ltd. | KX | 250V, 3300pF Y1 type | IEC/EN 60384- 14 UL1414 UL60384-14 | VDE UL(E37921) | |
| Fuse (F1) | Cooper Bussmann Inc. | S505 | 250V,T6.3AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E19180) | |
| Alternate Fuse (F1) | Littelfuse Inc. | 215 | 250V,T6.3AH | IEC/EN 60127 UL248-1 UL248-14 | VDE UL(E10480) | |
| Fuse (F51) | Hollyland Co., Ltd. | 65TS | 250V, 15A | UL248-1 UL248-14 | UL(E156471) | |
| Surge Absorber (Z1) | Panasonic Corporation, Panasonic Corporation of North America or Matsushita Electric Ind. Co., Ltd. or Panasonic | V10471U or V14471U | 470V or Continuous voltage 300Vrms, pulse current 6000A | IEC 61051-1 IEC 61051-2 IEC 61051-2-2 UL1449 | VDE UL(E321499) | |

| IEC 60950-1 | | | |
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| Clause | Requirement + Test | Result - Remark | Verdict |

| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
|--|---|-----------------------------------|-----------------------------------|-----------------------|--|---|
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Bleeding Resistor (R25, R26, R27) | Various Interchangeable | Various Interchangeable | 1/4W, 470kΩ | --- | Evaluated together with unit | |
| Inductor (L1, L2) | Tokyo Parts Industrial Co., Ltd. | 3R5A382F28YA | Class A, 3.8mH | --- | Evaluated together with unit | |
| Inductor (L51) | Tamura Corporation | SKP-T16413 | Class A, 35uH | --- | Evaluated together with unit | |
| Triac (TRA31,TRA41) | Various Interchangeable | Various Interchangeable | 600Vmin, 12Amin | --- | Evaluated together with unit | |
| Photo Coupler (PC1, PC3, PC4, PC5) | NEC Corp. or Renesas Electronics Corporation | PS2581AL1 | 5000V, Insulation thickness 0.4mm | IEC/EN 60950-1 UL1577 | SEMKO UL(E72422) | |
| Alternate Photo Coupler (PC1, PC3, PC4, PC5) | Sharp Corp. Electronic Components Group. | 3SH21 | 5000V, Insulation thickness 0.4mm | IEC/EN 60950-1 UL1577 | SEMKO UL(E64380) | |
| Alternate Photo Coupler (PC1, PC3, PC4, PC5) | Toshiba Corporation Semiconductor Company | TLP363JF | 5000V, Insulation thickness 0.4mm | IEC/EN 60950-1 UL1577 | TUV Rheinland UL(E67349) | |
| Transistor (Q1, Q2) | Various Interchangeable | Various Interchangeable | 500Vmin, 6Amin | --- | Evaluated together with unit | |
| Connector (YC1) | Japan Solderless Terminal Mfg. Co., Ltd. | VT | AC250V, Max.12A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) | |
| Connector (YC2) | Japan Solderless Terminal Mfg. Co., Ltd. | VH | AC400V,7A | IEC/EN 61984 UL1977 | TUV Rheinland UL(E60389) | |
| Transformer (T1) | Murata Mfg. Co. Ltd. | 2Q107 | Class B UL System Designation CM | --- | Evaluated together with unit | |

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| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Relay (RL1) | Panasonic Electric Works Co., Ltd. or Matsushita Electric Works Co., Ltd. or Panasonic | ALE1PB24 | Contact:250/277 V, 16A Coil:24 Vdc | UL508 UL60497 | UL(E43149) |
| Alternate Relay (RL1) | Daiichi Electric Co., Ltd. | DH1U series | Contact:250V, 10A Coil:24Vdc | UL508 UL60947 | UL(E98688) |
| PWB | Various Interchangeable | Various Interchangeable | Flam. Class V-1 or better | UL796 | UL |

| IEC 60950-1 | | | | | |
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| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| High Voltage Unit | | | | | |
| High Voltage Unit | Murata Mfg. Co., Ltd. | MPH7462X (X may be any number from 0 to 9 or alphabetical number or blank) | Input: 24V dc Outputs: M : 1100V (p-p) B : 1.5kV (p-p) T : -2.4kV S : 2kV | - | Evaluated together with unit |
| High Voltage Unit - Transformer (B51) | Murata Mfg. Co., Ltd. | QU004 | Class A | - | Evaluated together with unit |
| High Voltage Unit - Transformer (B101) | Murata Mfg. Co., Ltd. | QM113 | Class A | - | Evaluated together with unit |
| High Voltage Unit - Transformer (B200) | Murata Mfg. Co., Ltd. | QU003 | Class A | - | Evaluated together with unit |
| High Voltage Unit - Transformer (B301) | Murata Mfg. Co., Ltd. | QW014 | Class A | - | Evaluated together with unit |
| High Voltage Unit - Transformer (B451) | Murata Mfg. Co., Ltd. | QJ002 | Class A | - | Evaluated together with unit |
| High Voltage Unit - Transformer (B501) | Murata Mfg. Co., Ltd. | QJ003 | Class A | - | Evaluated together with unit |
| High Voltage Unit – Fuse (F1) for L.P.S | Littelfuse Inc. | 491 | 125V, 1.5A | UL248-1 | UL(E10480) |
| High Voltage Unit - Alternate Fuse (F1) for L.P.S | Bussmann Div Copper (UK) Ltd. or Cooper Bussmann Inc. or Cooper Bussmann L L C | MCRF | 125V, 1.5A | UL248-1 | UL(E19180) |

| IEC 60950-1 | | | | | |
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| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Fan Motor, Motor, Clutch, Solenoid | | | | | |
| LVU Fan Motor - Optional | Nidec | D06R-24TH XX (AX) (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.09A, 0.50m ³ /min., Class E (Class A for UL) | - | Evaluated together with unit |
| LSU Fan Motor | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | 2410RL-05W- S60 | 24V dc, 0.12A, 0.75m ³ /min., Class E (Class A for UL) | - | Evaluated together with unit |
| DLP Fan Motor | Nidec | D08K-24TU XX(AX) (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.13Arms, 1.19m ³ /min., Class E (Class A for UL) | - | Evaluated together with unit |
| Center Fan Motor - Optional, Rear Fan Motor - Optional | Nidec | D05F-24PH XX (EX) (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.10Arms, 0.11m ³ /min., Class F (Class A for UL) | - | Evaluated together with unit |
| Alternate Center Fan Motor - Optional, Alternate Rear Fan Motor - Optional | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | BM5115-05W- B40-XXX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.10Arms, 0.08 m ³ / min., Class E (Class A for UL) | - | Evaluated together with unit |
| Main Motor, Drum Motor - Optional | Nidec | 48M069FXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 2.2A, Class A | - | Evaluated together with unit |

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| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Polygon Motor | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | MASQ6EF3LKX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.6Arms, Class E (Class A for UL) | - | Evaluated together with unit |
| Alternate Polygon Motor | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | MASQ6NF10LK X (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.65Arms, Class E (Class A for UL) | - | Evaluated together with unit |
| Alternate Polygon Motor | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | MASQ6NF8LKX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.65Arms, Class E (Class A for UL) | - | Evaluated together with unit |
| Toner Motor | Mabuchi Motor Co., Ltd. | RK-370CA- 11670 | 24V dc, 130mA, Class A | - | Evaluated together with unit |
| FD Motor | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | PM42M-048- XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | Stepper Type, 24V dc, 400mA, Class E (Class A for UL) | - | Evaluated together with unit |

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| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Lift Motor - Optional, Envelop Motor - Optional | Standard Motor Co., Ltd. | RC370-KT- 081000 | 24V dc, 110mA, Class A | - | Evaluated together with unit | |
| Alternate Lift Motor - Optional, Envelop Motor – Optional | Mabuchi Motor Co., Ltd. | RK-370CA- 081050 | 24Vdc, 110mA, CLASS A | - | Evaluated together with unit | |
| DLP Clutch, Mid Clutch - Optional, Feed Clutch, DU Clutch - Optional | Tenryu Marusawa Co., Ltd. | TMC-2T-XX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 0.083A, Class E (Class A for UL) | - | Evaluated together with unit | |
| Reg Clutch | Daiken or Sinfonia Microtec Co., Ltd. | MCA-50T | 24V dc, 0.104A, Class E (Class A for UL) | - | Evaluated together with unit | |
| Face U/D Solenoid - Optional | TDS | TDS-KN07A-XX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 1A, Class E (Class A for UL) | - | Evaluated together with unit | |
| MPF Solenoid | TDS | TDS-F06A-XX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 240mA, Class E (Class A for UL) | - | Evaluated together with unit | |
| Scanner Motor - Optional | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | PM42S-096- XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | Stepper Type, 24V dc, 600mA, Class E (Class A for UL) | - | Evaluated together with unit | |
| Scanner LED – for MFP Models | KYOCERA Document Solutions Inc. | 3V2NM0108 | 24Vdc max. Classified as Exempt Group | IEC/EN62471 | Evaluated together with unit | |

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| Clause | Requirement + Test | Result - Remark | Verdict |

| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
|---|--|---|---|-------------------------------------|--|----------|
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Laser Scanner Unit | | | | | | |
| Laser Diode | Opnext Japan, Inc. or Oclaro Japan Inc. | HL67040GNXX X (X may be any number from 0 to 9 or alphabetical number or blank) | Class 3B, Wavelength: 670nm, Output Power: 25mW | - | Evaluated together with unit | |
| Lid Scanner, Housing Scanner | Various Interchangeable | Various Interchangeable | Min. HB75 | UL94 | UL | |
| Fuses | | | | | | |
| Fuse (YF7) for L.P.S (on Engine PWB) for 24V of PF-320, PF-315+ Paper Feeder Option Unit | Skygate Co., Ltd. | SCT | 250V,T3.15A | IEC/EN 60127 UL248-1 UL248-14 | SEMKO UL(E195833) | |
| Fuse (YF8) for L.P.S (on Engine PWB) for 3.3V of PF- 320,PF-315+ Paper Feeder Option Unit | Skygate Co., Ltd. | 0603FT | 32V, 2A | UL248-1 | UL(E195833) | |
| Fuse (YF1) for L.P.S (on Engine PWB) for 24V of Polygon Motor and Connect-L PWB | Skygate Co., Ltd. | SCT | 250V,T3.15A | IEC/EN 60127 UL248-1 UL248-14 | SEMKO UL(E195833) | |
| Fuse (YF5) for L.P.S (on Engine PWB) for 5V of APC PWB and Panel PWB | Skygate Co., Ltd. | 0603FT | 32V, 2A | UL248-1 | UL(E195833) | |

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|--|--|------------|--------------------|--|--|
| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Fuse (YF6) for L.P.S (on Engine PWB) for 3.3V of Connect L PWB, Panel PWB, APC PWB and High Voltage Unit | Skygate Co., Ltd. | 0603FT | 32V, 2A | UL248-1 | UL(E195833) |
| Fuse (YF2) for L.P.S (on Engine PWB) for 24V of LSU Fan Motor and TH Connect PWB, Panel PWB | Skygate Co., Ltd. | SCT | 250V,T3.15A | IEC/EN 60127 UL248-1 UL248-14 | SEMKO UL(E195833) |
| Fuse (F1) for L.P.S (on Main PWB) for 5V of USB | Skygate Co., Ltd. | 1206FT | 32V, 4A | UL248-1 | UL(E195833) |
| Fuse (YF10) for L.P.S for MFP Models (on Engine PWB) for 24V of Feed Motor, Conveying Motor, Scanner Motor and Junction Motor | Skygate Co., Ltd. | SCT | 250V,T3.15A | IEC/EN 60127 UL248-1 UL248-14 | SEMKO UL(E195833) |
| Fuse (YF13) for L.P.S for MFP Models except for ECOSYS M3040dn and ECOSYS M3540dn (on Engine PWB) for 5V of Panel PWB | Skygate Co., Ltd. | SCT | 250V,T4A | IEC/EN 60127 UL248-1 UL248-14 | SEMKO UL(E195833) |

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|---|---|------------------------------|---|---------------------------|--|
| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| FAX PWB for ECOSYS M3540dn, ECOSYS M3540idn, ECOSYS M3550idn, ECOSYS M3560idn | | | | | |
| FAX UNIT | Panasonic System Networks Co., Ltd. or Panasonic Corporation. or Matsushita | DA-FG520 Series | --- | (IEC/EN 60950-1) | (Tested in unit) |
| NCU Board | -- | -- | Comprised of the following components: | -- | -- |
| Surge Absorbers (SA10, SA11) | Okaya Electric Industries Co., Ltd. | RA-102M-C6 | 1kV | UL1449 | UL (E322107) |
| Surge Absorbers (SA10, SA11), Alternate | Okaya Electric Industries Co., Ltd. | RA-501M-C6 | 500V | UL1449 | UL (E322107) |
| Surge Absorber (SA12) | Littelfuse/Tecc or | SIDACtor type, P3100SCLRP | Switching Voltage 350V | UL497B | UL (E133083) |
| Optical Isolator (PC10) | Cosmo Electronics Corporation | K3010 | Ext. cr.: ≥ 5 mm, Int. cr. ≥ 4 mm, Isolation voltage: min. AC 5000V | IEC/EN 60950-1 UL 1577 | VDE UL(E169586) |
| Optical Isolator (PC10) Alternate | Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div. | TLP620, TLP627, TLP621 | Ext. cr.: > 7 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V | IEC/EN 60950-1 UL 1577 | BSI UL(E67349) UL(E152349) |

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| Clause | Requirement + Test | Result - Remark | Verdict |

| | | | | | | |
|---|--|------------------------------|---|------------------------------|---|---|
| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ¹ . | |
| Optical Isolator (PC10) Alternate | Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div. | TLP320 or TLP629 | Ext. cr.: > 6.4 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V | IEC/EN 60950-1 UL 1577 | BSI UL(E67349) UL(E152349) | |
| Optical Isolator (PC11) | Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div. | TLP620, TLP627, TLP621 | Ext. cr.: > 7 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V | IEC/EN 60950-1 UL 1577 | BSI UL(E67349) UL(E152349) | |
| Optical Isolator (PC11) Alternate | Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div. | TLP320 or TLP629 | Ext. cr.: > 6.4 mm, Int. cr. = thermal cycling tested (2.10.11), Isolation voltage: min. AC 5000V | IEC/EN 60950-1 UL 1577 | BSI UL(E67349) UL(E152349) | |
| Capacitors (C12, C13) | Murata Mfg. Co., Ltd. | KY | 250V, 220pF- 680pF, Y2 type | IEC/EN60384- 14 UL1414 | SEMKO UL(E37921) | |
| Relay (RLY10) | Fujitsu Components | FTR-C2 | Contact: 30Vdc, 1.0A Coil: 5Vdc | IEC/EN60950-1 UL508 | BSI UL(E63615) | |
| Relay (RLY12) for 220 - 240V | Tyco Electronics | OUAZ | Contact: 24Vdc, 1.0A Coil: 5Vdc | IEC/EN61810-1 UL508 | TUV UL(E82292) | |
| Relay (RLY12) for 220 - 240V, Alternate | Xiamen Hongfa Electroacoustic Co., Ltd. | HFD41 or HFD41A | Contact: 30Vdc, 1.0A Coil: 5Vdc | UL508 | UL (E133481) | |

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| Clause | Requirement + Test | Result - Remark | Verdict |

| 1.5.1 | TABLE: List of critical components – continued. | | | | | P |
|---------------------------------------|---|--|---|---------------------------------|--|---|
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} | |
| Fuse (F11) for 220 - 240V | Littelfuse Inc. | 461 Series | 1.25A, 600V | UL248- 1/UL248-14 | UL(E10480) | |
| PTC Thermistor (POS10) for 120V | Murata Mfg. Co., Ltd. | PTGL06BB220 N***** (*: any alphanumeric) | Vmax: 250V, Imax: 0.6A, 22 ohms at 25°C | UL1434 | UL(E137188) | |
| Modular Jacks (JK10, JK11) | JST Mfg. Co., Ltd. | MJ-62J-RD | Type RJ-11 | UL1863 | UL(E174260) | |
| Connector (CN10) | Irigo Electronics Co., Ltd | IMSA-9210 Series | 250V, 3A | UL1977 | UL(E115889) | |
| FCB Board | -- | -- | Comprised of the following components: | -- | -- | |
| Capacitors (C206, C207) | Murata Mfg. Co., Ltd. | GF | 250V, 33pF, Y2 type | EN/IEC60384- 14 UL60950-1 | SEMKO UL(E316111) | |
| Capacitor (C205) (Optional) | Murata Mfg. Co., Ltd. | GF | 250V, 10pF- 220pF, Y2 type | EN/IEC60384- 14 UL60950-1 | SEMKO UL(E316111) | |
| PWB | Interchangeable | Interchangeable | 94V-1 or better | UL796 | UL | |

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|--|--|---|----------------|-----------------|--|
| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Enclosure | | | | | |
| Cover Top, Cover Left, Cover Rear | Ineos ABS (Thailand) Co., Ltd. or Styrolution (Thailand) Co., Ltd. or Elix Polymers SL or Styrolution Koeln GMBH | P2H-AT | Min. HB75 | UL94 | UL (E256400) or UL(E350602) or UL(E326278) |
| Cover Top, Cover Left, Cover Rear - Alternate | Styrolution GMBH | GP-22 or GP-35 | Min. HB75 | UL94 | UL (E108538) |
| Cover Top, Cover Left, Cover Rear - Alternate | Bayer Material Science | FR3006 HF | Min.HB | UL94 | UL(E41613) |
| Cover Top, Cover Left, Cover Rear - Alternate | Teijin Chemicals Ltd. Research & Development Div or Teijin Limited Resin and Plastic or Maveriq Partners Inc. or Teijin Chemicals Plastic Compounds Shanghai Ltd. | TN-7900 or TN-7500 or TX-5700 or TN-9500 or TN-7500ED | Min. HB | UL94 | UL(E98529) or UL(E358645) or UL(E244324) |
| Cover Top, Cover Left, Cover Rear - Alternate | Techno Polymer Hong Kong Co., Ltd. or Techno Polymer Co., Ltd. | JPH-150A or 330 | HB75 | UL94 | UL(E134768) or (E54297) |

| IEC 60950-1 | | | | | |
|--|--|---|----------------------------|-----------------|---|
| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| Cover Top, Cover Left, Cover Rear - Alternate | Formosa Chemicals & Fibre Corp Plastics Div | AF353 | Min.HB | UL94 | UL(E162823) |
| Cover Top, Cover Left, Cover Rear - Alternate | Sabic Innovative Plastic Japan L L C | C6600 | Min.HB | UL94 | UL(E45587) or UL(E207780) |
| Cover Right | Bayer Material Science AG | FR3006 HF | 5V | UL94 | UL(E41613) |
| Cover Right - Alternate | Teijin Chemicals Ltd. Research & Development Div or Teijin Limited Resin and Plastic or Maveriq Partners Inc. or Teijin Chemicals Plastic Compounds Shanghai Ltd. | TN-7900 or TN-9500 or TN-7500ED | 5V | UL94 | UL(E98529) or UL(E358645) or UL(E244324) |
| Cover Right - Alternate | Sabic Innovative Plastic Japan L L C | C6600 | 5V | UL94 | UL(E45587) or UL(E207780) |
| Frame Right, Frame Left | Various Interchangeable | Various Interchangeable | Steel, Min. 0.5mm thick | --- | --- |
| Frame ISU Top - Optional, Frame ISU Bottom - Optional | Ineos ABS (Thailand) Co., Ltd. or Styrolution (Thailand) Co., Ltd. or Elix Polymers SL or Styrolution Koeln GMBH | P2H-AT | Min. HB | UL94 | UL (E256400) or UL(E350602) or UL(E326278) |

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|---|--|---|--|----------|--|
| Clause | Requirement + Test | | Result - Remark | | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ^{1.} |
| DP Unit (Optional) | | | | | |
| Feed Motor, Conveying Motor | Nidec Servvo Corporation | KV4239-T3B006 | Stepper Type, 24V dc, 0.8A, Class E (Class A for UL) | - | Evaluated together with unit |
| Junction Motor | Minebea Motor Manufacturing Corporation or Minebea Co., Ltd. | PM35L-048- XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | Stepper Type, 24V dc, 700mA, Class E (Class A for UL) | - | Evaluated together with unit |
| Cover PF, Cover Front, Cover Rear, Base DP | Ineos ABS (Thailand) Co., Ltd. or Styrolution (Thailand) Co., Ltd. or Elix Polymers SL or Styrolution Koeln GMBH | P2H-AT | Min. HB | UL94 | UL (E256400) or UL(E350602) or UL(E326278) |

| IEC 60950-1 | | | | | |
|--|---|--|---|-----------------|---|
| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 1.5.1 | TABLE: List of critical components – continued. | | | | P |
| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity ¹ . |
| Paper Feeding Unit, Model PF-320 (Option) | | | | | |
| Trans Motor | Nidec Corporation | 48M069FXXX (X may be any number from 0 to 9 or alphabetical number or blank) | 24V dc, 1.6A, Class A | - | Evaluated together with unit |
| Lift Motor | Standard Motor Co., Ltd. | RC370-KT-081000 | 24V dc, 110mA, Class A | - | Evaluated together with unit |
| Lift Motor - Alternate | Mabuchi Motor Co., Ltd. | RK-370CA-081050 | 24Vdc, 110mA, CLASS A | - | Evaluated together with unit |
| Feed Clutch, Trans Clutch | Daiken or Sinfonia Microtec Co., Ltd. | MCA-50T | 24V dc, 0.104A, Class E (Class A for UL) | - | Evaluated together with unit |
| Frame Right, Frame Left, Frame Top | Various Interchangeable | Various Interchangeable | Min. HB75 | UL94 | UL |
| Paper Feeding Unit, Model PF-315+ (Option) | | | | | |
| Trans Motor | Minebea-Matsushita Motor Corporation or Minebea Co., Ltd. | PM55L-048-XXXX (X may be any number from 0 to 9 or alphabetical number or blank) | Stepper Type, 24V dc, 600mA, Class E (Class A for UL) | - | Evaluated together with unit |
| Lift Motor | Tsukasa Electric Co., Ltd. | TG-38B-LG-44-A486 | 24V dc, 270mA, Class A | - | Evaluated together with unit |
| Cover Side | Various Interchangeable | Various Interchangeable | Min. HB75 | UL94 | UL |
| Supplementary information: | | | | | |
| ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. | | | | | |

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|--|---|------------|-------|-----------------|-----------|---------------------|
| Clause | Requirement + Test | | | Result - Remark | | Verdict |
| 1.6.2 | TABLE: Electrical data (in normal conditions) | | | | | P |
| U (V) | I (A) | Irated (A) | P (W) | Fuse # | Ifuse (A) | Condition/status |
| 99V/60Hz | 10.0 | -- | 980 | F1/F51 | 1.7/8.7 | M.N.L 1 / Copy mode |
| 110V/60Hz | 10.3 | 11.5 | 1110 | F1/F51 | 1.7/9.0 | M.N.L 1 / Copy mode |
| 121V/60Hz | 10.5 | -- | 1250 | F1/F51 | 1.7/9.2 | M.N.L 1 / Copy mode |
| 99V/60Hz | 8.5 | -- | 825 | F1/F51 | 1.6/7.2 | M.N.L 2 / Copy mode |
| 110V/60Hz | 8.7 | 9.2 | 935 | F1/F51 | 1.6/7.5 | M.N.L 2 / Copy mode |
| 121V/60Hz | 8.9 | -- | 1060 | F1/F51 | 1.6/7.7 | M.N.L 2 / Copy mode |
| 108V/60Hz | 9.1 | -- | 970 | F1/F51 | 1.7/8.0 | M.N.L 1 / Copy mode |
| 120V/60Hz | 9.5 | 10.4 | 1110 | F1/F51 | 1.7/8.3 | M.N.L 1 / Copy mode |
| 132V/60Hz | 9.7 | -- | 1265 | F1/F51 | 1.7/8.4 | M.N.L 1 / Copy mode |
| 108V/60Hz | 7.5 | -- | 795 | F1/F51 | 1.6/6.4 | M.N.L 2 / Copy mode |
| 120V/60Hz | 7.8 | 8.4 | 920 | F1/F51 | 1.6/6.7 | M.N.L 2 / Copy mode |
| 132V/60Hz | 8.0 | -- | 1040 | F1/F51 | 1.6/7.1 | M.N.L 2 / Copy mode |
| 198V/50Hz | 4.7 | -- | 915 | F1/F51 | 1.2/4.0 | M.N.L 1 / Copy mode |
| 220V/50Hz | 4.9 | 5.2 | 1060 | F1/F51 | 1.2/4.2 | M.N.L 1 / Copy mode |
| 240V/50Hz | 5.1 | 5.2 | 1210 | F1/F51 | 1.2/4.4 | M.N.L 1 / Copy mode |
| 264V/50Hz | 5.3 | -- | 1375 | F1/F51 | 1.2/4.6 | M.N.L 1 / Copy mode |
| 198V/60Hz | 4.7 | -- | 910 | F1/F51 | 1.2/4.0 | M.N.L 1 / Copy mode |
| 220V/60Hz | 4.9 | 5.2 | 1060 | F1/F51 | 1.2/4.2 | M.N.L 1 / Copy mode |
| 240V/60Hz | 5.1 | 5.2 | 1200 | F1/F51 | 1.2/4.4 | M.N.L 1 / Copy mode |
| 264V/60Hz | 5.3 | -- | 1370 | F1/F51 | 1.2/4.6 | M.N.L 1 / Copy mode |
| 198V/50Hz | 3.9 | -- | 760 | F1/F51 | 1.1/3.3 | M.N.L 2 / Copy mode |
| 220V/50Hz | 4.0 | 4.4 | 865 | F1/F51 | 1.1/3.4 | M.N.L 2 / Copy mode |
| 240V/50Hz | 4.1 | 4.4 | 970 | F1/F51 | 1.1/3.6 | M.N.L 2 / Copy mode |
| 264V/50Hz | 4.3 | -- | 1120 | F1/F51 | 1.1/3.8 | M.N.L 2 / Copy mode |
| 198V/60Hz | 3.9 | -- | 755 | F1/F51 | 1.1/3.3 | M.N.L 2 / Copy mode |
| 220V/60Hz | 4.0 | 4.4 | 860 | F1/F51 | 1.1/3.4 | M.N.L 2 / Copy mode |
| 240V/60Hz | 4.1 | 4.4 | 970 | F1/F51 | 1.1/3.6 | M.N.L 2 / Copy mode |
| 264V/60Hz | 4.3 | -- | 1110 | F1/F51 | 1.1/3.8 | M.N.L 2 / Copy mode |
| Supplementary information: | | | | | | |
| M.N.L 1: Model ECOSYS M3560idn with PF-320×4 | | | | | | |
| M.N.L 2: Model ECOSYS M3540idn with PF-320×4 | | | | | | |

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| Clause | Requirement + Test | Result - Remark | Verdict |

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|--|------------------------------|-------|-------|-------|---|
| 2.5 | TABLE: limited power sources | | | | P |
| 24V output for Feed Motor, Conveying Motor, Scanner Motor and Junction Motor protected by Fuse YF10 on Engine PWB, 3.15A | | | | | |
| Measured Uoc (V) with all load circuits disconnected: -- | | | | | |
| | I _{sc} (A) | | VA | | |
| | Meas. | Limit | Meas. | Limit | |
| supply voltage:120V 60Hz | | | | | |
| According to Table 2C | 8.2 | 41.67 | 184.0 | 250 | |
| | | | | | |
| 5V output for Panel PWB for MFP protected by Fuse YF13 on Engine PWB, 4A | | | | | |
| Measured Uoc (V) with all load circuits disconnected: -- | | | | | |
| | I _{sc} (A) | | VA | | |
| | Meas. | Limit | Meas. | Limit | |
| supply voltage:120V 60Hz | | | | | |
| According to Table 2C | 7.7 | 200 | 29.0 | 250 | |
| | | | | | |
| 3.3V output for Panel PWB for MFP | | | | | |
| Measured Uoc (V) with all load circuits disconnected: -- | | | | | |
| | I _{sc} (A) | | VA | | |
| | Meas. | Limit | Meas. | Limit | |
| supply voltage:120V 60Hz | | | | | |
| According to Table 2B (normal condition) | 5.7 | 8 | 9.7 | 100 | |
| According to Table 2B (Fault condition : R2313 is shorted) | 6.0 | 8 | 10.0 | 100 | |

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| Clause | Requirement + Test | Result - Remark | Verdict |

| | | | | | |
|--|------------------------------|-------|-------|-------|---|
| 2.5 | TABLE: limited power sources | | | | P |
| 5V output for CCD PWB for MFP | | | | | |
| Measured Uoc (V) with all load circuits disconnected: | | -- | | | |
| | I _{sc} (A) | | VA | | |
| | Meas. | Limit | Meas. | Limit | |
| supply voltage:120V 60Hz | | | | | |
| According to Table 2B (normal condition) | 2.7 | 8 | 10.1 | 100 | |
| According to Table 2B (Fault condition : R2310 is shorted) | 2.7 | 8 | 10.1 | 100 | |
| | | | | | |
| 3.3V output for CCD PWB for MFP | | | | | |
| Measured Uoc (V) with all load circuits disconnected: | | -- | | | |
| | I _{sc} (A) | | VA | | |
| | Meas. | Limit | Meas. | Limit | |
| supply voltage:120V 60Hz | | | | | |
| According to Table 2B (normal condition) | 1.6 | 8 | 2.4 | 100 | |
| According to Table 2B (Fault condition : R2313 is shorted) | 1.6 | 8 | 2.5 | 100 | |

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|--|------------------------------|-----------------|-------|---------|
| Clause | Requirement + Test | Result - Remark | | Verdict |
| 2.5 | TABLE: limited power sources | | | P |
| 24V output for Feed Motor, Conveying Motor, Scanner Motor and Junction Motor protected by Fuse YF10 on Engine PWB, 3.15A | | | | |
| Measured Uoc (V) with all load circuits disconnected: -- | | | | |
| | I _{sc} (A) | | VA | |
| | Meas. | Limit | Meas. | Limit |
| supply voltage:240V 50Hz | | | | |
| According to Table 2C | 8.1 | 41.67 | 182.0 | 250 |
| | | | | |
| 5V output for Panel PWB for MFP protected by Fuse YF13 on Engine PWB, 4A | | | | |
| Measured Uoc (V) with all load circuits disconnected: -- | | | | |
| | I _{sc} (A) | | VA | |
| | Meas. | Limit | Meas. | Limit |
| supply voltage:240V 50Hz | | | | |
| According to Table 2C | 7.5 | 200 | 28.0 | 250 |
| | | | | |
| 3.3V output for Panel PWB for MFP | | | | |
| Measured Uoc (V) with all load circuits disconnected: -- | | | | |
| | I _{sc} (A) | | VA | |
| | Meas. | Limit | Meas. | Limit |
| supply voltage:240V 50Hz | | | | |
| According to Table 2B (normal condition) | 5.6 | 8 | 9.6 | 100 |
| According to Table 2B (Fault condition : R2313 is shorted) | 5.8 | 8 | 9.7 | 100 |

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|-------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| | | | | | |
|---|------------------------------|-------|-------|-------|-----|
| 2.5 | TABLE: limited power sources | | | | P |
| 5V output for CCD PWB for MFP | | | | | |
| Measured Uoc (V) with all load circuits disconnected: | | -- | | | |
| | I _{sc} (A) | | VA | | |
| | Meas. | Limit | Meas. | Limit | |
| supply voltage:240V 50Hz | | | | | |
| According to Table 2B (normal condition) | | 2.7 | 8 | 10.1 | 100 |
| According to Table 2B (Fault condition : R2310 is shorted) | | 2.7 | 8 | 10.1 | 100 |
| | | | | | |
| 3.3V output for CCD PWB for MFP | | | | | |
| Measured Uoc (V) with all load circuits disconnected: | | -- | | | |
| | I _{sc} (A) | | VA | | |
| | Meas. | Limit | Meas. | Limit | |
| supply voltage:240V 50Hz | | | | | |
| According to Table 2B (normal condition) | | 1.5 | 8 | 2.4 | 100 |
| According to Table 2B (Fault condition : R2313 is shorted) | | 1.5 | 8 | 2.5 | 100 |
| Supplementary information: 120V: measured model ECOSYS M3560idn with MPW3099 240V: measured model ECOSYS M3540idn with MPW3100L | | | | | |

| | | | |
|--|---|------------------|----------|
| 2.6.3.4 | TABLE: Resistance of earthing measurement | | P |
| Location | | Voltage drop (V) | Comments |
| Inlet earth to metal of rear side | | 0.48 | -- |
| Supplementary information: Tested current 40A for 120 sec. | | | |

| IEC 60950-1 | | | |
|-------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| | | | | | | | |
|---|--|--------------|------------------|---------|------------------|---------|----------|
| 2.10.3 and 2.10.4 | TABLE: Clearance and creepage distance measurements – continued | | | | | | P |
| Clearance (cl) and creepage distance (cr) at/of/between: | U peak (V) | U r.m.s. (V) | Required cl (mm) | cl (mm) | Required cr (mm) | cr (mm) | |
| Fax PWB | | | | | | | |
| NCU Board | | | | | | | |
| Basic: | | | | | | | |
| TNV-SELV (traces at Relay RLY12) | 120 | 71 | 1.3 | 2.5 | 1.5 | 2.5 | |
| TNV-SELV (traces at Relay RLY10) | 120 | 71 | 1.3 | 2.5 | 1.5 | 2.5 | |
| TNV-SELV (traces at Relay SA10) | 120 | 71 | 1.3 | 2.7 | 1.5 | 2.7 | |
| TNV-SELV (traces at Relay SA11) | 120 | 71 | 1.3 | 2.8 | 1.5 | 2.8 | |
| TNV-SELV (traces at C12, C13) | 120 | 71 | 1.3 | 2.8 | 1.5 | 2.8 | |
| TNV-SELV (traces at IC10 pin 2 - 3) | 120 | 71 | 1.3 | 3.1 | 1.5 | 3.1 | |
| TNV-SELV (traces at CN10 PIN 2 - 4) | 120 | 71 | 1.3 | 2.5 | 1.5 | 2.5 | |
| TNV-SELV (traces at PC10, PC11) | 120 | 71 | 1.3 | 2.6 | 1.5 | 2.6 | |
| TNV-Chassis (RLY12 - Chassis) | 120 | 71 | 1.3 | 4.0 | 1.5 | 4.0 | |
| FCB Board | | | | | | | |
| Basic: | | | | | | | |
| TNV-Chassis (CN402 - Chassis) | 120 | 71 | 1.3 | 5.0 | 1.5 | 5.0 | |
| TNV-SELV (trases at CN402 pin 1- CN403 pin 1) | 120 | 71 | 1.3 | 2.7 | 1.5 | 2.7 | |
| TNV-SELV (traces at C205,C206,C207) | 120 | 120 | 1.3 | 2.9 | 1.5 | 2.9 | |
| Supplementary information: Each required clearance has been multiplied by the altitude correction factor 1.215 for 3500m. | | | | | | | |

| IEC 60950-1 | | | |
|-------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| | | | | | | |
|---|--------------------------------------|--|-------------|---|-------------|-------------------------------|
| 4.5 | TABLE: Temperature rise measurements | | | | | P |
| Temperatures were measured according cl. 1.4.5. Test in condition A and B at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer. | | | | | | |
| test voltage(s) (V): | | A: 108V, 60Hz | | B: 132V, 60Hz | | |
| t _{amb1} (°C): | | A: -- B: -- | | t _{amb2} (°C): | | |
| Temperature of part/at: (measured with thermocouples) | | Measured temperature at T _{amb} | | Calculated temperature at T _{ma} | | Allowed T _{max} (°C) |
| | | A T (°C) | B T (°C) | A T (°C) | B T (°C) | |
| SWPS T1 coil | | 64 | 66 | 73 | 75 | 110 |
| SWPS T1 core | | 44 | 46 | 53 | 55 | 110 |
| SWPS L1 coil | | 47 | 45 | 56 | 54 | 90 |
| SWPS L2 coil | | 53 | 50 | 62 | 59 | 90 |
| SWPS L51 coil | | 59 | 59 | 68 | 68 | 90 |
| SWPS D1 body | | 62 | 58 | 71 | 67 | -- |
| SWPS D101 body | | 65 | 65 | 74 | 74 | -- |
| SWPS RLY1 body | | 48 | 48 | 57 | 57 | -- |
| SWPS C7 body | | 47 | 47 | 56 | 56 | -- |
| SWPS PC1 body | | 36 | 37 | 45 | 46 | -- |
| SWPS PC3 body | | 48 | 47 | 57 | 56 | -- |
| SWPS Z1 body | | 40 | 40 | 49 | 49 | -- |
| SWPS TRA31 body | | 76 | 70 | 85 | 79 | -- |
| SWPS YC1 body | | 39 | 40 | 48 | 49 | -- |
| SWPS YC2 body | | 42 | 42 | 51 | 51 | -- |
| Plastic Enclosure | | 58 | 64 | 67 | 73 | 95 |
| Metal Enclosure | | 44 | 44 | 53 | 53 | 70 |
| Scanner Motor | | 57 | 57 | 66 | 66 | 100 |
| DP Unit, Feed Motor | | 66 | 67 | 75 | 76 | 100 |
| DP Unit, Conveying Motor | | 82 | 83 | 91 | 92 | 100 |
| DP Unit, Junction Motor | | 66 | 67 | 75 | 76 | 100 |
| DP Unit, Plastic Enclosure | | 43 | 44 | 52 | 53 | 95 |
| FAX Unit, C12 | | 51 | 52 | 60 | 61 | -- |
| Supplementary information: Measured on Model ECOSYS M3560idn with PF-320 x 4 | | | | | | |
| Temperatures measured with winding resistance method: Not used. | | | | | | |

| IEC 60950-1 | | | | | | |
|---|---|--|-------------------------|---|----------------|-------------------------------|
| Clause | Requirement + Test | | Result - Remark | | Verdict | |
| 4.5 | TABLE: Temperature rise measurements – continued. | | | | P | |
| Temperatures were measured according cl. 1.4.5. Test in condition C and D at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer. | | | | | | |
| test voltage(s) (V): | | C: 198V, 50Hz | | D: 242V, 50Hz | | |
| t _{amb1} (°C): | | C: -- D: -- | t _{amb2} (°C): | | C: 26 D: 26 | |
| Temperature of part/at: (measured with thermocouples) | | Measured temperature at T _{amb} | | Calculated temperature at T _{ma} | | Allowed T _{max} (°C) |
| | | C T (°C) | D T (°C) | C T (°C) | D T (°C) | |
| SWPS T1 coil | | 63 | 64 | 72 | 73 | 110 |
| SWPS T1 core | | 44 | 44 | 53 | 53 | 110 |
| SWPS L1 coil | | 44 | 42 | 53 | 51 | 90 |
| SWPS L2 coil | | 59 | 54 | 68 | 63 | 90 |
| SWPS L51 coil | | 51 | 52 | 60 | 61 | 90 |
| SWPS D1 body | | 49 | 47 | 58 | 56 | -- |
| SWPS D101 body | | 57 | 58 | 66 | 67 | -- |
| SWPS RLY1 body | | 45 | 46 | 54 | 55 | -- |
| SWPS C7 body | | 43 | 43 | 52 | 52 | -- |
| SWPS PC1 body | | 35 | 36 | 44 | 45 | -- |
| SWPS PC3 body | | 43 | 42 | 52 | 51 | -- |
| SWPS Z1 body | | 37 | 37 | 46 | 46 | -- |
| SWPS TRA31 body | | 53 | 42 | 62 | 51 | -- |
| SWPS YC1 body | | 37 | 37 | 46 | 46 | -- |
| SWPS YC2 body | | 38 | 38 | 47 | 47 | -- |
| Plastic Enclosure | | 57 | 59 | 66 | 68 | 95 |
| Metal Enclosure | | 41 | 41 | 50 | 50 | 70 |
| Scanner Motor | | 55 | 55 | 64 | 64 | 100 |
| DP Unit, Feed Motor | | 64 | 66 | 73 | 75 | 100 |
| DP Unit, Conveying Motor | | 81 | 82 | 90 | 91 | 100 |
| DP Unit, Junction Motor | | 65 | 66 | 74 | 75 | 100 |
| DP Unit, Plastic Enclosure | | 43 | 43 | 52 | 52 | 95 |
| FAX Unit, C12 | | 50 | 50 | 59 | 59 | -- |
| Supplementary information: Measured on Model ECOSYS M3560idn with PF-320 x 4 | | | | | | |
| Temperatures measured with winding resistance method: Not used. | | | | | | |

| IEC 60950-1 | | | | | | |
|---|---|--|-------------------------|---|----------------|-------------------------------|
| Clause | Requirement + Test | | Result - Remark | | Verdict | |
| 4.5 | TABLE: Temperature rise measurements – continued. | | | | P | |
| Temperatures were measured according cl. 1.4.5. Test in condition E and F at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer. | | | | | | |
| test voltage(s) (V): | | E: 264V, 60Hz | | F: 108V, 60Hz | | |
| t _{amb1} (°C): | | E: -- F: -- | t _{amb2} (°C): | | E: 26 F: 25 | |
| Temperature of part/at: (measured with thermocouples) | | Measured temperature at T _{amb} | | Calculated temperature at T _{ma} | | Allowed T _{max} (°C) |
| | | E T (°C) | F T (°C) | E T (°C) | F T (°C) | |
| SWPS T1 coil | | 65 | 48 | 74 | 58 | 110 |
| SWPS T1 core | | 45 | 38 | 54 | 48 | 110 |
| SWPS L1 coil | | 42 | 42 | 51 | 52 | 90 |
| SWPS L2 coil | | 52 | 48 | 61 | 58 | 90 |
| SWPS L51 coil | | 52 | 48 | 61 | 58 | 90 |
| SWPS D1 body | | 46 | 55 | 55 | 65 | -- |
| SWPS D101 body | | 58 | 40 | 67 | 50 | -- |
| SWPS RLY1 body | | 46 | 38 | 55 | 48 | -- |
| SWPS C7 body | | 43 | 42 | 52 | 52 | -- |
| SWPS PC1 body | | 36 | 31 | 45 | 41 | -- |
| SWPS PC3 body | | 42 | 41 | 51 | 51 | -- |
| SWPS Z1 body | | 37 | 33 | 46 | 43 | -- |
| SWPS TRA31 body | | 51 | 57 | 60 | 67 | -- |
| SWPS YC1 body | | 37 | 33 | 46 | 43 | -- |
| SWPS YC2 body | | 39 | 36 | 48 | 46 | -- |
| Plastic Enclosure | | 60 | 57 | 69 | 67 | 95 |
| Metal Enclosure | | 41 | 43 | 50 | 53 | 70 |
| Scanner Motor | | 57 | 56 | 66 | 66 | 100 |
| DP Unit, Feed Motor | | 65 | 65 | 74 | 75 | 100 |
| DP Unit, Conveying Motor | | 80 | 81 | 89 | 91 | 100 |
| DP Unit, Junction Motor | | 65 | 65 | 74 | 75 | 100 |
| DP Unit, Plastic Enclosure | | 42 | 42 | 51 | 52 | 95 |
| FAX Unit, C12 | | 51 | 50 | 60 | 60 | -- |
| Supplementary information: E: Measured on Model ECOSYS M3560idn with PF-320 x 4, F: Measured on Model ECOSYS M3540idn with PF-320 x 4 | | | | | | |
| Temperatures measured with winding resistance method: Not used. | | | | | | |

| IEC 60950-1 | | | | | | |
|---|---|--|-------------------------|---|----------------|-------------------------------|
| Clause | Requirement + Test | | Result - Remark | | Verdict | |
| 4.5 | TABLE: Temperature rise measurements – continued. | | | | P | |
| Temperatures were measured according cl. 1.4.5. Test in condition G and H at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer. | | | | | | |
| test voltage(s) (V): | | G: 132V, 60Hz | | H: 198V, 50Hz | | |
| t _{amb1} (°C): | | G: -- H: -- | t _{amb2} (°C): | | G: 25 H: 27 | |
| Temperature of part/at: (measured with thermocouples) | | Measured temperature at T _{amb} | | Calculated temperature at T _{ma} | | Allowed T _{max} (°C) |
| | | G T (°C) | H T (°C) | G T (°C) | H T (°C) | |
| SWPS T1 coil | | 49 | 51 | 59 | 59 | 110 |
| SWPS T1 core | | 38 | 39 | 48 | 47 | 110 |
| SWPS L1 coil | | 41 | 41 | 51 | 49 | 90 |
| SWPS L2 coil | | 45 | 47 | 55 | 55 | 90 |
| SWPS L51 coil | | 49 | 45 | 59 | 53 | 90 |
| SWPS D1 body | | 50 | 43 | 60 | 51 | -- |
| SWPS D101 body | | 41 | 50 | 51 | 58 | -- |
| SWPS RLY1 body | | 38 | 47 | 48 | 55 | -- |
| SWPS C7 body | | 41 | 41 | 51 | 49 | -- |
| SWPS PC1 body | | 31 | 33 | 41 | 41 | -- |
| SWPS PC3 body | | 40 | 39 | 50 | 47 | -- |
| SWPS Z1 body | | 34 | 35 | 44 | 43 | -- |
| SWPS TRA31 body | | 54 | 55 | 64 | 63 | -- |
| SWPS YC1 body | | 44 | 34 | 54 | 42 | -- |
| SWPS YC2 body | | 36 | 37 | 46 | 45 | -- |
| Plastic Enclosure | | 63 | 58 | 73 | 66 | 95 |
| Metal Enclosure | | 43 | 42 | 53 | 50 | 70 |
| Scanner Motor | | 56 | 56 | 66 | 64 | 100 |
| DP Unit, Feed Motor | | 66 | 65 | 76 | 73 | 100 |
| DP Unit, Conveying Motor | | 82 | 82 | 92 | 90 | 100 |
| DP Unit, Junction Motor | | 66 | 66 | 76 | 74 | 100 |
| DP Unit, Plastic Enclosure | | 43 | 44 | 53 | 52 | 95 |
| FAX Unit, C12 | | 51 | 51 | 61 | 59 | -- |
| Supplementary information: Measured on Model ECOSYS M3540idn with PF-320 x 4 | | | | | | |
| Temperatures measured with winding resistance method: Not used. | | | | | | |

| IEC 60950-1 | | | | | | |
|---|---|--|-------------------------|---|----------------|-------------------------------|
| Clause | Requirement + Test | | Result - Remark | | Verdict | |
| 4.5 | TABLE: Temperature rise measurements – continued. | | | | P | |
| Temperatures were measured according cl. 1.4.5. Test in condition I and J at continuous normal operation as for power input measurements of table 1.6 resulted in highest temperature values. Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 35°C (T _{ma}), as specified by the manufacturer. | | | | | | |
| test voltage(s) (V): | | I: 242V, 50Hz | | J: 264V, 60Hz | | |
| t _{amb1} (°C): | | I: -- J: -- | t _{amb2} (°C): | | I: 27 J: 27 | |
| Temperature of part/at: (measured with thermocouples) | | Measured temperature at T _{amb} | | Calculated temperature at T _{ma} | | Allowed T _{max} (°C) |
| | | I T (°C) | J T (°C) | I T (°C) | J T (°C) | |
| SWPS T1 coil | | 49 | 49 | 57 | 57 | 110 |
| SWPS T1 core | | 35 | 35 | 43 | 43 | 110 |
| SWPS L1 coil | | 37 | 36 | 45 | 44 | 90 |
| SWPS L2 coil | | 42 | 41 | 50 | 49 | 90 |
| SWPS L51 coil | | 43 | 44 | 51 | 52 | 90 |
| SWPS D1 body | | 39 | 40 | 47 | 48 | -- |
| SWPS D101 body | | 48 | 49 | 56 | 57 | -- |
| SWPS RLY1 body | | 45 | 46 | 53 | 54 | -- |
| SWPS C7 body | | 37 | 38 | 45 | 46 | -- |
| SWPS PC1 body | | 30 | 31 | 38 | 39 | -- |
| SWPS PC3 body | | 36 | 36 | 44 | 44 | -- |
| SWPS Z1 body | | 32 | 32 | 40 | 40 | -- |
| SWPS TRA31 body | | 49 | 50 | 57 | 58 | -- |
| SWPS YC1 body | | 32 | 32 | 40 | 40 | -- |
| SWPS YC2 body | | 33 | 32 | 41 | 40 | -- |
| Plastic Enclosure | | 60 | 61 | 68 | 69 | 95 |
| Metal Enclosure | | 42 | 42 | 50 | 50 | 70 |
| Scanner Motor | | 56 | 58 | 64 | 66 | 100 |
| DP Unit, Feed Motor | | 67 | 66 | 75 | 74 | 100 |
| DP Unit, Conveying Motor | | 83 | 81 | 91 | 89 | 100 |
| DP Unit, Junction Motor | | 67 | 66 | 75 | 74 | 100 |
| DP Unit, Plastic Enclosure | | 44 | 43 | 52 | 51 | 95 |
| FAX Unit, C12 | | 51 | 52 | 59 | 60 | -- |
| Supplementary information: Measured on Model ECOSYS M3540idn with PF-320 x 4 | | | | | | |
| Temperatures measured with winding resistance method: Not used. | | | | | | |

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|--|---|---------------------------|----------------|----------------------------|-----------------|---------------|---------------|
| Clause | Requirement + Test | | | | Result - Remark | Verdict | |
| 5.1 | TABLE: touch current measurement | | | | | P | |
| | Test voltage (V) : (see Comments) | | | | — | | |
| Measurement location (Terminal A connected to...) | | Polarity (normal) [mA] | | Polarity (reverse) [mA] | | Limit (mA) | Comments |
| | | Switch: ON | Switch: OFF | Switch: ON | Switch: OFF | | |
| FAX PWB TNV Connector ("e" = close) | | 0 | 0 | 0 | 0 | 0.25 | AC 264V, 60Hz |
| FAX PWB TNV Connector ("e" = close) | | 0 | 0 | 0 | 0 | 0.25 | AC 132V, 60Hz |
| Supplementary information: None. | | | | | | | |

| | | | | |
|--|--|--|---------------------|-----------------------|
| 5.2 | TABLE: Electric strength tests, impulse tests and voltage surge tests | | | P |
| Test voltage applied between: | | Voltage shape (AC, DC, impulse, surge) | Test voltage (V) | Breakdown Yes / No |
| Basic/supplementary: | | | | |
| ECOSYS M3560idn for 220-240V (primary - PE) | | AC | 2100 | No |
| ECOSYS M3540idn for 220-240V (primary - PE) | | AC | 2020 | No |
| ECOSYS M3560idn for 120V (primary - PE) | | AC | 1500 | No |
| ECOSYS M3540idn for 120V (primary - PE) | | AC | 1500 | No |
| Optical Isolator (PC10,PC11) on FAX PWB (TNV – secondary) Cosmo Electronics Corporation, Type: K3010 | | AC | 1500 | No |
| Optical Isolator (PC10,PC11), Alternate on FAX PWB (TNV – secondary) Toshiba Corp., Type: TLP620, TLP627, TLP621 | | AC | 1500 | No |
| Optical Isolator (PC10,PC11), Alternate on FAX PWB (TNV – secondary) Toshiba Corp., Type: TLP320 or TLP629 | | AC | 1500 | No |
| Reinforced: | | | | |
| ECOSYS M3560idn for 220-240V (primary - secondary) | | AC | 3000 | No |
| ECOSYS M3540idn for 220-240V (primary - secondary) | | AC | 3000 | No |
| ECOSYS M3560idn for 120V (primary - secondary) | | AC | 3000 | No |
| ECOSYS M3540idn for 120V (primary - secondary) | | AC | 3000 | No |
| Supplementary information: None | | | | |

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|-------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| | | | | | | | |
|---|--|--------------------|-----------|--------|------------------|---|---|
| 5.3 | TABLE: Fault condition tests | | | | | | P |
| | Ambient temperature (°C): | | | | See below | | — |
| | Power source for EUT: Manufacturer, model/type, output rating: | | | | -- | | — |
| Component No. | Fault | Supply voltage (V) | Test time | Fuse # | Fuse current (A) | Observation | |
| Model ECOSYS M3560idn, ECOSYS M3550idn Fuser Unit thermal control. | Disable | 120V/ 60Hz | 10min | -- | -- | Thermal cutoff was opened after 2min. Ambient temp.: 23°C. No hazard. HV test: 3000Vac, Pass | |
| Model ECOSYS M3560idn, ECOSYS M3550idn Fuser Unit thermal control. | Disable | 240V/ 50Hz | 10min | -- | -- | Thermal cutoff was opened after 2min. Ambient temp.: 23°C. No hazard. HV test: 3000Vac, Pass | |
| Model ECOSYS M3540idn, ECOSYS M3540dn, ECOSYS M3040idn, ECOSYS M3040dn Fuser Unit thermal control. | Disable | 120V/ 60Hz | 10min | -- | -- | Thermal cutoff was opened after 2min. Ambient temp.: 23°C. No hazard. HV test: 3000Vac, Pass | |
| Model ECOSYS M3540idn, ECOSYS M3540dn, ECOSYS M3040idn, ECOSYS M3040dn Fuser Unit thermal control. | Disable | 240V/ 50Hz | 10min | -- | -- | Thermal cutoff was opened after 2min. Ambient temp.: 23°C. No hazard. HV test: 3000Vac, Pass | |

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|-------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 5.3 | TABLE: Fault condition tests – continued. | | | | | P |
|--|---|--------------------|-----------|--------|------------------|--|
| Component No. | Fault | Supply voltage (V) | Test time | Fuse # | Fuse current (A) | Observation |
| Model ECOSYS M3560idn, ECOSYS M3550idn LVU Fan | Stalled fans | 120V/ 60Hz | 2hours | -- | -- | Temperature was stabilized. Max temp. of SWPS T1 coil: 115°C. Ambient temp.: 26°C No hazard. HV test: 3000Vac, Pass |
| Model ECOSYS M3560idn, ECOSYS M3550idn LVU Fan | Stalled fans | 240V/ 60Hz | 2hours | -- | -- | Temperature was stabilized. Max temp. of SWPS T1 coil: 116 °C. Ambient temp.: 25°C No hazard. HV test: 3000Vac, Pass |
| Model ECOSYS M3540idn, ECOSYS M3540dn, ECOSYS M3040idn, ECOSYS M3040dn LVU Fan | Stalled fans | 120V/ 60Hz | 2hours | -- | -- | Temperature was stabilized. Max temp. of SWPS T1 coil: 90°C. Ambient temp.: 25°C No hazard. HV test: 3000Vac, Pass |
| Model ECOSYS M3540idn, ECOSYS M3540dn, ECOSYS M3040idn, ECOSYS M3040dn LVU Fan | Stalled fans | 240V/ 50Hz | 2hours | -- | -- | Temperature was stabilized. Max temp. of SWPS T1 coil: 94°C. Ambient temp.: 26°C No hazard. HV test: 3000Vac, Pass |
| Feed Motor, Conveying Motor Type KV4239-T3B006 | CE | 24Vdc | 10min | -- | -- | Temp.: 49°C, Motor winding was opened. Ambient temp.: 23°C No hazard. |

| IEC 60950-1 | | | | | | |
|--|---|--------------------|-----------|--------|------------------|---|
| Clause | Requirement + Test | | | | Result - Remark | |
| 5.3 | TABLE: Fault condition tests – continued. | | | | | P |
| Component No. | Fault | Supply voltage (V) | Test time | Fuse # | Fuse current (A) | Observation |
| Scanner Motor Type PM42S-096-MIM0 | CE | 24Vdc | 10min | -- | -- | Temp.: 125°C, Motor winding was opened. Ambient temp.: 25°C No hazard. |
| Junction Motor Type PM35L-048-MIM2 | CE | 24Vdc | 10min | -- | -- | Temp.: 140°C, Motor winding was opened. Ambient temp.: 23°C No hazard. |
| Ventilation openings closed ECOSYS M3560idn with PF-320 × 4 | -- | 120V/ 60Hz | 2.0h | -- | -- | Printing. Temperature stabilized. Max. temp.: 80°C at T1. Ambient temp.: 26°C No hazards. |
| Ventilation openings closed ECOSYS M3560idn with PF-320 × 4 | -- | 240V/ 50Hz | 2.0h | -- | -- | Printing.. Temperature stabilized. Max. temp.: 81°C at T1. Ambient temp.: 24°C No hazards. |
| Ventilation openings closed ECOSYS M3540idn with PF-320 × 4 | -- | 120V/ 60Hz | 2.0h | -- | -- | Printing. Temperature stabilized. Max. temp.: 67°C at T1. Ambient temp.: 25°C No hazards. |
| Ventilation openings closed ECOSYS M3560idn ECOSYS M3540idn with PF-320 × 4 | -- | 240V/ 50Hz | 2.0h | -- | -- | Printing.. Temperature stabilized. Max. temp.: 68°C at T1. Ambient temp.: 26°C No hazards. |
| Supplementary information: During the tests no fire or other hazard occurred. The insulation system could withstand the dielectric strength test after fault conditions. | | | | | | |

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|---------------------------------|---------------------------------------|---------------------|---|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 4.6.1, 4.6.2 | Table: Enclosure opening measurements | | P |
| Location | | Size (mm) | Comments |
| Cover Top | | 27.9 x 1.9 slot | Covering an area of 57.9mm W x 21.9mm H |
| | | 24.5 x 2.0 slot | Covering an area of 24.5mm W x 22.0mm H |
| Right Front Cover | | 21.5 x 3.0 slot | Covering an area of 21.5mm W x 55.0mm H |
| Right High Cover | | 20.5 x 3.0 slot | Covering an area of 20.5mm W x 55.0mm H |
| | | 27.5 max x 3.0 slot | Covering an area of 80.0mmW x 55.0mm H |
| Right Low Cover | | 26.0 max x 3.0 slot | Covering an area of 60.0mm W x 16.0mm H |
| | | 22.0 x 3.0 slot | Covering an area of 22.0mm W x 36.0mm H |
| Left High Cover | | 28.0 x 3.0 slot | Covering an area of 57.0mm W x 29.0mm H |
| | | 36.5 x 2.6 slot | Covering an area of 73.2mm W x 41.6mm H |
| Left Low Cover | | 36.3 max x 2.5 slot | Covering an area of 66.0mm W x 22.0mm H |
| Cover Rear for DP Unit | | 24.0 max x 3.5 slot | Covering an area of 82.0mm W x 24.0mm H |
| | | 16.5 max x 3.8 slot | Covering an area of 82.0mm W x 16.5mm H |
| Supplementary information: None | | | |

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|-------------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |

List of test equipment used:

| Management No. | Test Instrument Name | Type | Mechanical No. | Manufacturing | Calibration Date - Last | Calibration Date - Due |
|----------------|-----------------------------------|-------------|----------------|---------------|-------------------------|------------------------|
| G14-C077 | Temperature Recorder | 4179 | 4179JA141 | Yokogawa | 2013-08-20 | 2014-08-19 |
| G14-C089 | AC Current Meter | 2052-02 | 71BC00246 | Yokogawa | 2013-09-18 | 2014-09-17 |
| G14-C094 | Lekage current tester | 228 | 348 | Simpson | 2013-06-24 | 2014-06-23 |
| G14-C097 | Portable DC Ammeters & Voltmeters | 201200 | 85AA1194 | Yokogawa | 2013-06-24 | 2014-06-23 |
| G14-C099 | Digital Multi Meter | (Fluke) 189 | 89410662 | FLUKE | 2013-08-19 | 2014-08-18 |
| G14-C101 | Temperature Recorder | 437124 | S5F703898 | Yokogawa | 2013-08-20 | 2014-08-19 |
| G14-C102 | Temperature Recorder | 437124 | S5F703899 | Yokogawa | 2013-08-20 | 2014-08-19 |
| G14-C103 | Steel Ball | TB-500 | G14-C103 | EXCEL | 2013-09-10 | 2014-09-09 |
| G14-C113 | Steel Ruler 2m | No. 102H04J | G14-C113 | Shinwa | 2013-05-17 | 2014-05-16 |
| G14-C114 | Temp. and Humidity Meter | NT3-D | 50173024 | Rotronic | 2013-03-14 | 2014-03-13 |
| G14-C117 | Digital Force Gauge | Z2-500N | 202869 | IMADA | 2013-10-15 | 2014-10-14 |
| G14-C118 | Stop Watch | SVAE101 | 756428 | SEIKO S-YARD | 2013-10-18 | 2014-10-17 |
| G14-C122 | Power Meter | 253401 | 2534FA042 | Yokogawa | 2013-03-22 | 2014-03-21 |
| G14-C123 | Protractor | DS | --- | Niigata Seiki | 2013-05-21 | 2014-05-20 |
| G14-C125 | Dielectric Tester | TOS5051 | BA002985 | Kikusui | 2013-08-19 | 2014-08-18 |
| G14-C128 | Earth Continuity Tester | TOS6210 | MB005213 | Kikusui | 2013-01-18 | 2014-01-17 |
| TS-48 | Compressor | TMC-5-120 | D-670 | Japan T.M.C | 2013-09-12 | 2014-09-11 |
| TS-50 | Humidity Chamber | PR-3ST | 0 | TABAI | *1 | *1 |

*1: TS-50 was monitored with G14-G114.

Supplementary information: The equipment was used with TMP