

C B T E S T R E P O R T

12309598 001

for

MFP (Multi Function Printer)  
5500i, 4500i, 3500i

Kyocera Mita Corporation



This documentation consists of **200** pages (excluding this cover page).





Test Report issued under the responsibility of:



<b>TEST REPORT</b>	
<b>IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006</b>	
<b>Information technology equipment – Safety –</b>	
<b>Part 1: General requirements</b>	
<b>Report Reference No.</b> .....	12309598 001
<b>Date of issue</b> .....	2011.03.28
<b>Total number of pages</b> .....	200
<b>CB/CCA Testing Laboratory</b> .....	TÜV Rheinland Japan Ltd. Osaka Laboratory
<b>Address</b> .....	Wakasugi Center Bldg., Honkan 16F, 9-1, Higashi Tenma 2-chome, Kita-ku, Osaka-shi, 530-0044, Japan
<b>Applicant's name</b> .....	Kyocera Mita Corporation
<b>Address</b> .....	1-2-28, Tamatsukuri, Chuo-ku, Osaka, 540-8585, Japan
<b>Manufacturer's name</b> .....	(same as Applicant)
<b>Address</b> .....	(same as Applicant)
<b>Factory's name</b> .....	1. Kyocera Mita Office Equipment (Dongguan) Co., Ltd.
<b>Address</b> .....	Kyocera Industrial Park 3 Fangzheng East Rd, New City Zone, Shilong, Dongguan, Guangdong, P.R. China
	2. Art Precision Technology Ltd.
	Block A-F, H, I & J Art Precision Industrial Park Song Bai Road, Bai Mang, Shi Yan, Shenzhen, P.R. China
	3. Panasonic System Networks Co., Ltd.
	1471 Murata-machi, Tosu-shi, Saga, 841-8501 Japan
<b>Test specification:</b>	
<b>Standard</b> .....	<input checked="" type="checkbox"/> IEC 60950-1:2005 (2nd Edition) and/or <input checked="" type="checkbox"/> EN 60950-1:2006
<b>Test procedure</b> .....	CB-scheme / TMP Procedure
<b>Non-standard test method</b> .....	N/A



**Test Report Form No.**.....: IECEN60950\_1C

Test Report Form(s) Originator .....: SGS Fimko Ltd

Master TRF .....: Dated 2007-06

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**This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA**

**Test item description** .....: MFP (Multi Function Printer)

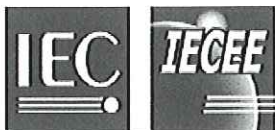
Trade Mark .....: KYOCERA (on the products)

Manufacturer .....: (same as Applicant)

Model/Type reference .....: 5500i, 4500i, 3500i

Ratings .....: 1) AC220-240V, 50/60Hz, 7.2A  
2) AC120V, 60Hz, 12.0A





IEC/EN 60950-1

**Testing procedure and testing location:****CB/CCA Testing Laboratory .....** TÜV Rheinland Japan Ltd. Osaka Laboratory**Address.....** Wakasugi Center Bldg., Honkan 16F, 9-1, Higashi Tenma  
2-chome, Kita-ku, Osaka-shi, 530-0044, Japan

TÜV Rheinland Japan Ltd., Yokohama Laboratory

4-25-2 Kita-Yamata, Tsuzuki-ku, Yokohama 224-0021, Japan

Tested by (name + signature)..... : (see below)

Approved by (+ signature)..... : (see below)

☒ Testing procedure: TMP

Tested by (name + signature)..... : Shinji Onishi

Approved by (+ signature)..... : Takahiro Izumi

Testing location/ address..... : (Same as Applicant)



**Summary of testing:**
**Test sample(s):**

The manufacturer declared that the samples submitted for evaluation were representative of the products from each factory.

**Serial No.:** Production sample without serial number

If not stated otherwise, tests were conducted on the model 5500i including optional accessories described in "Options" to represent the other similar models.

(see General product information)

For the test cl. 6.2.2.1 this test report is based on the test data from the CB test report 12309283 001.

**Tests performed (name of test and test clause):**

(see below)

**Testing location:**

(see "Testing procedure and testing location" on the previous page)

Testing		Applicable (Yes/No)	Comments
Clause	Test description		
1.6.2	Input current	Yes	
2.1.1.5	Energy hazards	Yes	
2.1.1.7	Discharge of capacitors in equipment	Yes	
2.1.1.8	Energy hazards – d.c. mains supply	No	
2.2.2	SELV/Voltage measurement under normal condition	Yes	
2.2.3	SELV/Voltage measurement under fault conditions	Yes	
2.3.5	Operating voltages generated externally	No	
2.4.2	Limited current circuits	Yes	
2.5	Limited power sources	Yes	
2.6.3.4	Resistance of earthing conductors and their terminations	Yes	
2.9.2	Humidity conditioning	Yes	
2.10	Creepage and Clearances, Distance through Insulation	Yes	
2.10.2.2/ 2.10.2.3	Determination of working voltage	Yes	
2.10.5	Solid insulation	Yes	
2.10.7	Enclosed and sealed parts	No	
3.2.6	Cord anchorages and strain relief	No	
4.1	Stability	Yes	
4.2	Mechanical strength	Yes	



## IEC/EN 60950-1

4.3.6	Direct plug-in equipment	No	
4.3.13	Radiation	Yes	(see IEC/EN 60825-1 report)
4.5.2	Maximum Temperatures	Yes	
4.5.5	Resistance to abnormal heat	Yes	
5.1	Touch current and protective conductor current	Yes	
5.2	Electric strength	Yes	
5.3	Abnormal operating and fault conditions	Yes	
6.1.2	Separation of the telecommunication network from earth	Yes	
6.2	Protection of equipment users from overvoltages on telecom. Networks	Yes	
6.3	Protection of the telecommunication wiring system from overheating	No	
7.2	Protection of equipment users from overvoltages on cable distribution system	No	
7.3	Insulation between primary and cable distribution system	No	
Annex A	Resistance to heat and fire	No	
Annex B	Locked-rotor overload test	Yes	
Annex C	Overload test	Yes	See table 5.3
Annex G	Determining minimum clearances	No	
Annex H	Ionizing radiation	No	
Annex K	Thermal controls	No	
Annex M	Criteria for telephone ringing signals	No	
Annex Q	Voltage dependent resistors (VDRs)	No	
Annex U	Insulated wire for use without interleaved insulation	No	
Annex Y	Ultraviolet light conditioning test	No	



Additionally evaluated Test specifications (see appended test report).

EN 60950-1:2006 + A11:2009  
IEC 60825-1:2007  
EN 60825-1:2007  
UL 60950-1:2007  
CAN/CSA C22.2 No. 60950-1-07

**Summary of compliance with National Differences:**

EU Group Differences, EU Special National Conditions, EU A-Deviations  
CA, CH, DE, DK, ES, FI, GB, IE, KR, NO, SE, US.

Explanation of used codes: AT=Austria, AU=Australia, CA=Canada, CH=Switzerland, DE=Germany, DK=Denmark, ES=Spain, FI=Finland, FR=France, GB=United Kingdom, IE=Ireland, IT=Italy, KR=Korea, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SI=Slovenia, US=United States of America.

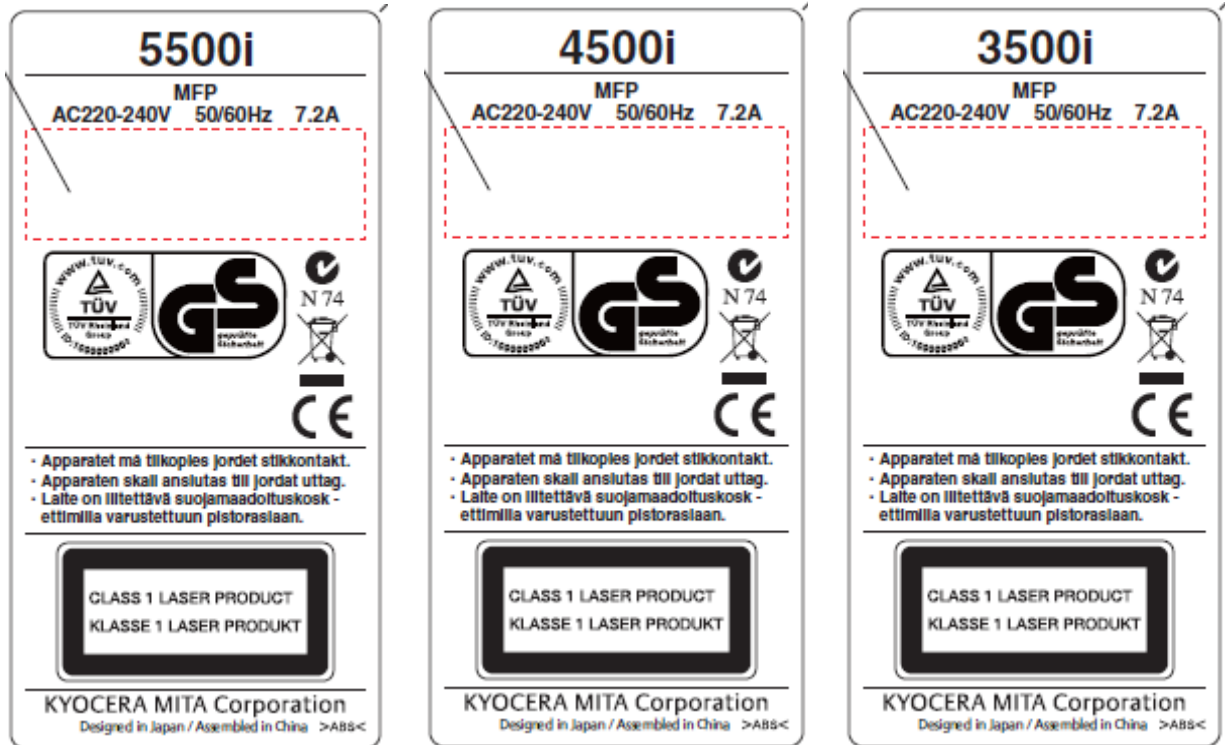
For National Differences see corresponding Attachment.



Copy of marking plate:

Copy of marking label:

For EU, main unit





Copy of marking plate:

For both EU and North America, optional accessories

**DP-770** DOCUMENT FEEDER  
DC5V DC24V

TÜV Rheinland  
of North America, Inc. US

VEI N 74

FC CE

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. This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<

**DP-771** DOCUMENT FEEDER  
DC5V DC24V

TÜV Rheinland  
of North America, Inc. US

VEI N 74

FC CE

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. This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<

**JS-731** JOB SEPARATOR  
DC5V DC24V

TÜV Rheinland  
of North America, Inc. US

VEI N 74

FC CE

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. This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<

**AK-730** ATTACHMENT KIT  
DC5V DC24V

TÜV Rheinland  
of North America, Inc. US

VEI N 74






FC CE






This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. 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.






KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<








## Copy of marking plate:

<b>DF-790</b>	FINISHER DC5V DC24V	    
<p>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. This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p>		
KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<		

<b>DF-770</b>	FINISHER DC5V DC24V	    
<p>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. This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p>		
KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<		

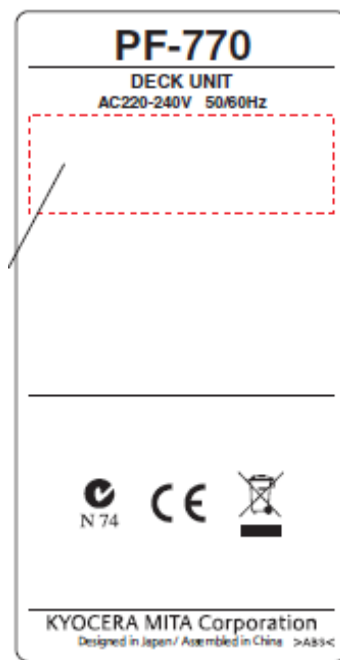
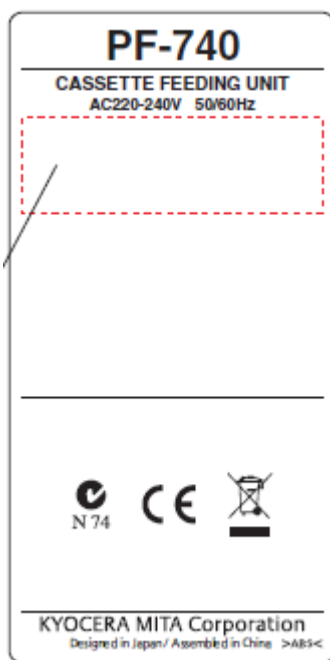
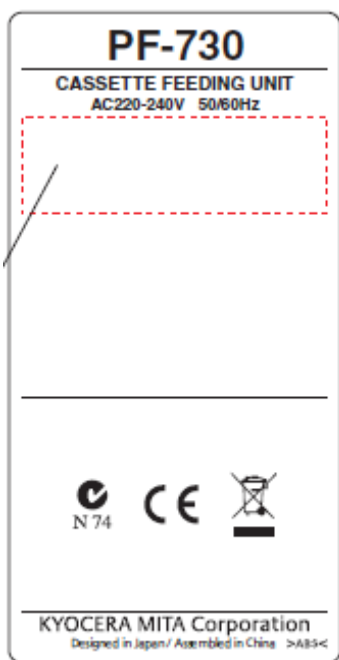
<b>MT-730</b>	MULTI TRAY UNIT DC5V DC24V	    
<p>This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p>		
KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<		

<b>BF-730</b>	BOOKLET FOLDER DC5V DC24V	    
<p>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. This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p>		
KYOCERA MITA Corporation 京セラミタ株式会社 Designed in Japan / Assembled in China >ABS<		



**Copy of marking plate:**







For EU, optional accessories





### Copy of marking plate:

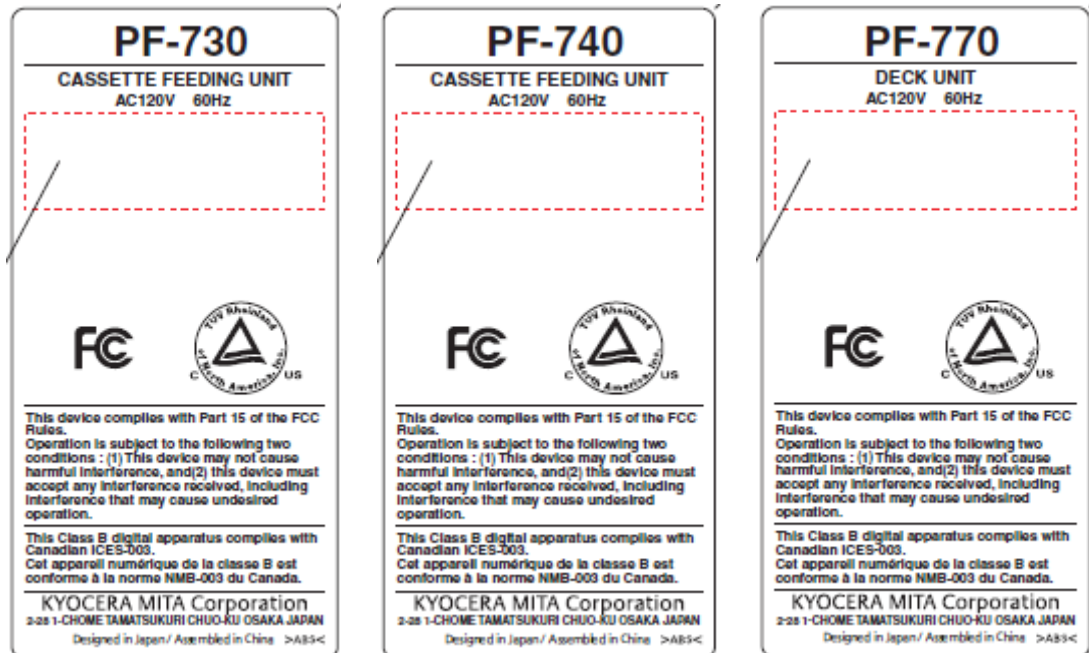
For North America, main unit

<p style="text-align: center;"><b>5500i</b></p> <p style="text-align: center;">MFP AC120V 60Hz 12.0A</p> <div style="border: 1px dashed red; height: 100px; width: 200px; margin: 10px auto;"></div> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Contains FCC ID : E522K3A0512 Contains IC : 1059B-2K3A0512</p> <p>This device complies with Part 15 of the FCC Rules and RSS-Gen of IC 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.</p> <p>This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p> <p>Complies with FDA radiation performance standards, 21 CFR Subchapter J.</p> <p><b>KYOCERA MITA Corporation</b> 2-28 1-CHOMETAMATSUKURI CHUO-KU OSAKA JAPAN Designed in Japan / Assembled in China &gt;ABS&lt;</p>	<p style="text-align: center;"><b>4500i</b></p> <p style="text-align: center;">MFP AC120V 60Hz 12.0A</p> <div style="border: 1px dashed red; height: 100px; width: 200px; margin: 10px auto;"></div> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Contains FCC ID : E522K3A0512 Contains IC : 1059B-2K3A0512</p> <p>This device complies with Part 15 of the FCC Rules and RSS-Gen of IC 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.</p> <p>This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p> <p>Complies with FDA radiation performance standards, 21 CFR Subchapter J.</p> <p><b>KYOCERA MITA Corporation</b> 2-28 1-CHOMETAMATSUKURI CHUO-KU OSAKA JAPAN Designed in Japan / Assembled in China &gt;ABS&lt;</p>	<p style="text-align: center;"><b>3500i</b></p> <p style="text-align: center;">MFP AC120V 60Hz 12.0A</p> <div style="border: 1px dashed red; height: 100px; width: 200px; margin: 10px auto;"></div> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Contains FCC ID : E522K3A0512 Contains IC : 1059B-2K3A0512</p> <p>This device complies with Part 15 of the FCC Rules and RSS-Gen of IC 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.</p> <p>This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.</p> <p>Complies with FDA radiation performance standards, 21 CFR Subchapter J.</p> <p><b>KYOCERA MITA Corporation</b> 2-28 1-CHOMETAMATSUKURI CHUO-KU OSAKA JAPAN Designed in Japan / Assembled in China &gt;ABS&lt;</p>
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### Copy of marking plate:

For North America, optional accessories







### Copy of marking plate:

Copy of warnings in the main unit:

For both EU and North America, Fixing Unit

	<b>CAUTION</b> EXTREMELY HOT SURFACE Avoid contact.	<b>VORSICHT</b> SEHR HEISSE OBERFLÄCHE	<b>ATTENTION</b> SURFACE TRÈS CHAUDE	<b>CAUTELA</b> SUPERFICIE EXTREMAMENTE CALDA Evitare il contatto.	<b>PRECAUCION</b> SUPERFICIE SUMAMENTE CALIENTE	<b>ВНИМАНИЕ</b> Поверхность очень горячая. Не дотрагиваться.	<b>VOORZICHTIG</b> EXTREEM HEET. Vermijd ieder contact met dit onderdeel.	<b>CAUIDADO</b> SUPERFICIE ALTAMENTE QUENTE. Evite contato.	<b>注意</b> 表面灼熱。 避免接觸。	<b>注意</b> 表面灼熱。 避免觸碰。	<b>고온주의</b> 손이 닿지 않도록 주의하십시오.	<b>注意</b> 高温部に手を触れ ないでください。 火傷の原因となります。	
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For both EU and North America, Cassette Heater

	<b>CAUTION</b> EXTREMELY HOT SURFACE Avoid contact.	<b>CAUIDADO</b> SUPERFICIE ALTAMENTE QUENTE. Evite contato.	<b>CAUTELA</b> SUPERFICIE EXTREMAMENTE CALDA. Evitare il contatto.	<b>VOORZICHTIG</b> EXTREEM HEET. Vermijd ieder contact met dit onderdeel.	<b>注意</b> 表面灼熱。 避免接觸。	<b>注意</b> 表面灼熱。 避免觸碰。	<b>고온주의</b>
	<b>VORSICHT</b> SEHR HEISSE OBERFLÄCHE	<b>PRECAUCION</b> SUPERFICIE SUMAMENTE CALIENTE	<b>ВНИМАНИЕ</b> Поверхность очень горячая. Не дотрагиваться.	<b>ATTENTION</b> SURFACE TRÈS CHAUDE	<b>注意</b> 高温部に手を触れないでください。 火傷の原因となります。		

For Power outlet

For EU

For North America

**OUTPUT**  
AC220 - 240V  
50/60Hz, 0.2A

**OUTPUT**  
AC120V 60Hz  
0.3A

Copy of warnings to service persons in the main unit for both EU and North America:

<b>DANGER</b>	• CLASS 3B LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
<b>ATTENTION</b>	• CLASSE 3B RAYONNEMENT LASER EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
<b>VORSICHT</b>	• KLASSE 3B LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
<b>ATTENZIONE</b>	• CLASSE 3B RADIAZIONE LASER IN CASO DI APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO.
<b>PRECAUCION</b>	• CLASSE 3B RADIACIONE LASER CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO.
<b>VARO!</b>	• AVATTAESSA OLET ALTTIINA LUOKAN 3B LASERSÄTELYLLE. ÄLÄ KATSO SÄTEESEEN.
	警告・该产品为3B类激光产品，打开盖子后会有激光辐射， 请避免光束照射。 警告・該產品為3B類激光產品，打開蓋子後會有激光輻射， 請避免光束照射。 위험・CLASS 3B 가시 레이저광선을 직접 보지마십시오. 警告・ここを開くとクラス3Bレーザー光がでます。 ビームを直接見たり、触れないでください。



**Test item particulars** ..... :

Equipment mobility ..... : ☐ movable ☐ hand-held ☐ transportable  
☒ stationary ☐ for building-in ☐ direct plug-in

Connection to the mains..... : ☒ pluggable equipment ☐ permanent connection  
☒ detachable power supply cord  
☐ non-detachable power supply cord  
☐ not directly connected to the mains

Operating condition ..... : ☒ continuous  
☐ rated operating / resting time:

Access location ..... : ☒ operator accessible  
☐ restricted access location

Over voltage category (OVC) ..... : ☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV  
☐ other:

Mains supply tolerance (%) or absolute mains supply values ..... :  $\pm 10\%$

Tested for IT power systems ..... : ☒ Yes ☐ No

IT testing, phase-phase voltage (V) ..... : 230V

Class of equipment ..... : ☒ Class I ☐ Class II ☐ Class III  
☐ Not classified

Considered current rating (A) ..... : 16A (for Europe), 20A (for Canada and USA)

Pollution degree (PD) ..... : ☐ PD 1 ☒ PD 2 ☐ PD 3

IP protection class ..... : Not rated, indoor use only

Altitude during operation (m) ..... : Up to 2500

Altitude of test laboratory (m) ..... : < 1000

Mass of equipment (kg) ..... : Approx. 81kg without optional accessories

**Possible test case verdicts:**

- test case does not apply to the test object ..... : N/A

- test object does meet the requirement..... : P (Pass)

- test object does not meet the requirement..... : F (Fail)

**Testing** ..... :

Date of receipt of test item ..... : 2010.10.15 for cl. 4.3.13.5, 2010.08.03 for cl. 6.2.2.1  
N/A for TMP

Date(s) of performance of tests ..... : 2010.10.20 – 2010.10.22 for cl. 4.3.13.5,  
2010.09.07 for cl. 6.2.2.1.  
2011.01.13 – 2011.03.22 for TMP  
Refer to Summary of testing.



**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.

**Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.**

Throughout this report a point is used as the decimal separator.

**General product information:****1) Application details / Description of the product:**

The product tested is a multi functional machine including color printer, copier, scanner, and facsimile for use in a general office environment.

Max. specified ambient temperature (°C)..... : 32.5°C

Supply connection ..... : Appliance inlet and detachable power cord set

Laser classification ..... : Class 1

Non-approved building-in type switching power supplies in main unit were tested as part of the overall configuration of the equipment.

5V outputs for USB connectors (Controller BOX, Operation Unit) were tested and complied with Limited Power Sources.



## 2) Differences between the models:

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

Model Item	5500i	4500i	3500i
Speed (sheet/min)	55	45	35
SWPS	Type ETX1KC836EE or ETX1KC836AE		
HV Unit	Type EUK9MQB26H	Type EUK9MQB27H	
Heater PWB	Type 2LH0106 or 2LH0105		

See appended table 1.5.1 including differences of motors and clutches in sec for details.

The following table shows differences in rating.

Rating Item	AC220-240V, 50/60Hz, 7.2A	AC120V, 60Hz, 12.0A
SWPS	Type ETX1KC836EE	Type ETX1KC836AE
Heater PWB	Type 2LH0106	Type 2LH0105
Cassette Heater	Rated 240V ac	Rated 120V ac
Thermal Fuse of Cassette Heater	Two provided	One provided



### 3) Options:

The following optional accessories were considered during relevant tests.

Document Feeder, Model DP-770, supplied by SELV

Document Feeder, Model DP-771, supplied by SELV

Job Separator, Model JS-730 (no electrical and electronic components)

Job Separator, Model JS-731, supplied by SELV

Attachment Kit for Document Finisher, Model AK-730, supplied by SELV

Finisher, Model DF-790, supplied by SELV

Finisher, Model DF-770, supplied by SELV

Multi Tray Unit, Model MT-730 for Finisher Model DF-790, supplied by SELV

Punch Unit, Model PH-7X (X: A, B, C or D) , supplied by SELV

Booklet Folder, Model BF-730 for Finisher Model DF-790, supplied by SELV

Cassette Feeding Unit, Model PF-730, supplied by AC220-240V, 50/60Hz or AC120V, 60Hz \*; SELV

Cassette Feeding Unit, Model PF-740, supplied by AC220-240V, 50/60Hz or AC120V, 60Hz \*; SELV

Deck Unit, Model PF-770, supplied by AC220-240V, 50/60Hz or AC120V, 60Hz \*; SELV

Fax Kit, Model Fax System (V), supplied by SELV; TNV circuits

\*: AC220-240V when used with the main unit supplied by AC220-240V

AC120V when used with the main unit supplied by AC120V

Difference between DP-770 and DP-771 is shown in the following table. For components used in them see appended table 1.5.1 for details.

Item	Model	DP-770	DP-771
Feeding to read both side of paper		Two actions	One action

Difference between JS-730 and JS-731 is shown in the following table. For components used in them see appended table 1.5.1 for details.

Item	Model	JS-730	JS-731
Paper exit		Recess of the main unit	Outside the main unit



Difference between DF-790 and DF-770 is shown in the following table. For components used in them see appended table 1.5.1 for details.

Item	Model	DF-790	DF-770
Paper capacity (sheet)		4000	1000

Differences between PF-730, PF-740 and PF-770 are shown in the following table. For components used in them see appended table 1.5.1 for details.

Item	Model	PF-730	PF-740	PF-770
Paper capacity		500 sheets/shelf x 2	1500 sheets/line x 2	3000 sheets
Installation		Under the main unit		Right side of the main unit



#### 4) Insulation system:

- Secondary circuits are separated from primary by double/reinforced insulation.
- Primary circuits are separated from earth by at least basic insulation.
- All output / interface voltages are at SELV level.
- Secondary circuits are conductively connected to earth.
- High voltage is generated from SELV circuits, see cl. 2.2.4.
- Internal metal chassis and relevant accessible metal parts are reliably connected to protective bonding.
- TNV circuits are separated from primary by double/reinforced insulation.
- TNV circuits are separated from secondary circuits by basic insulation.

#### 4.1) Sub-units (PCB's, ... )

With pri – sec separation ..... : SWPS, Fixing Unit, Heater PWB, Current Detection PWB in main unit

With pri – parts only ..... : (none)

HV-unit(s) ..... : High Voltage PWB (see appended table 1.5.1)

#### 4.2) Pri - sec components, which are not part of the above mentioned sub-units:

(none)

#### 4.3) Non certified pri-components directly mounted to chassis:

(certified components were only checked for correct-application (see 1.5.1))

Optional dehumidifying heaters (Cassette Heater) in the main unit and PF-730, PF-740, PF-770. The heaters have reinforced insulation themselves and covered by aluminum fixed to chassis.

#### Attachments included in this Test Report:

- Measurement Section
- National Differences
- IEC/EN 60825-1 test report.

#### Attachments separated from this Test Report:

- Photo Documentation

#### Abbreviations that may be used throughout this test report:

PE/PB	: protective earth/protective bonding	Pri .....	: primary
CB	: circuit breaker	sec .....	: secondary
(SW)PS	: (switching) power supply	gnd .....	: ground
HV	: high voltage	I/O .....	: input/output
PCB	: printed circuit (wiring) board	ii .....	: installation instruction
TIW	: triple insulated wire		
B/I	: built-in application (compliance shall be guarantee in host equipment)		
F/B/S/R	: Functional/Basic/Supplementary/Reinforced Insulation		



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Components, which are certified for IEC and/or national standards, are used correctly within their ratings. Fuses outside the IEC 60127 scope were tested according to this standard (3 times tested)	P
1.5.3	Thermal controls	Certified components used; correct application confirmed.	P
1.5.4	Transformers	(see Annex C)	P
1.5.5	Interconnecting cables	Interconnection cable connected to PF-770, connecting main unit for 220-240V ac or 120V ac is approved one. The other Interconnecting cable affixed to PF-770, connecting the unit is only for SELV.	P
1.5.6	Capacitors bridging insulation	Type X2 capacitors used between lines, type Y1 or Y2 capacitors used between line and earth, double or reinforced insulation bridged between primary and secondary by Y1 capacitors comply with IEC 60384-14. (see appended table 1.5.1)	P
1.5.7	Resistors bridging insulation	See below	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Only resistors bridging functional insulations.	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	No such components.	N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No such components.	N/A
1.5.8	Components in equipment for IT power systems	Line to PE components are rated for line to line voltage.	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9	Surge suppressors	See below.	P
1.5.9.1	General	Only approved VDRs used in primary.	P
1.5.9.2	Protection of VDRs	Fuses (F001 in SWPS ETX1KC836EE, F002 in SWPS ETX1KC836AE, F1 in Heater PWB) are installed in series.	P
1.5.9.3	Bridging of functional insulation by a VDR		P
1.5.9.4	Bridging of basic insulation by a VDR	No such VDRs.	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR	No such VDRs.	P

1.6	Power interface		P
1.6.1	AC power distribution systems	TN, TN-S, IT (considered for Norway)	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	N/A
1.6.4	Neutral conductor	Neutral insulated from earth and body like as line conductor. Components between neutral and earth are rated the same as for line to earth.	P

1.7	Marking and instructions		P
1.7.1	Power rating	See below.	P
	Rated voltage(s) or voltage range(s) (V) .....	1) AC220-240V 2) AC120V	P
	Symbol for nature of supply, for d.c. only .....	AC supply.	N/A
	Rated frequency or rated frequency range (Hz) ...	1) 50/60Hz 2) 60Hz	P
	Rated current (mA or A) .....	1) 7.2A 2) 12.0A	P
	Manufacturer's name or trade-mark or identification mark .....	KYOCERA (on the products)	P
	Model identification or type reference .....	5500i, 4500i, 3500i	P
	Symbol for Class II equipment only .....	Class I equipment.	N/A
	Other markings and symbols .....	(see copy of marking plate)	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2	Safety instructions and marking	See below.	P
	<p>Operating Instructions provided to the operator, containing necessary instructions and caution information.  English version checked. At least the safety relevant information is given in German or other applicable languages. Correct translation of safety relevant information for Germany confirmed.</p> <p>(In the following, relevant information may be given in an equivalent wording.)  <u>Disconnect Device</u> according 3.4.3 described in the manual (pluggable equipment):  "The socket outlet must be located close to the machine and be easily accessible."</p> <p>Dangerous levels of <u>ozone</u> not generated.  Instruction for installation in a well-ventilated room is given.</p> <p><u>Non-toxic toner</u> used. Proper disposal instructions provided (service manual).  "Caution hot"; high temperature warning on fuser unit, as it does not immediately cool down when accessed during paper jam removal.</p> <p><u>Laser label and warning label</u> is provided:  "CLASS 1 LASER PRODUCT" and other warning label. Refer to IEC/EN 60825-1 report.</p>		—
1.7.2.1	General		P
1.7.2.2	Disconnect devices		P
1.7.2.3	Overcurrent protective device	Appliance inlet used.	N/A
1.7.2.4	IT power distribution systems	Considered for Norway. No special modification, no instruction required.	P
1.7.2.5	Operator access with a tool	Operator is not instructed to use any tool for access.	N/A
1.7.2.6	Ozone	See cl. 1.7.2.	P
1.7.3	Short duty cycles	Continuous operation.	N/A
1.7.4	Supply voltage adjustment .....	Single voltage range.	N/A
	Methods and means of adjustment; reference to installation instructions .....	--	—
1.7.5	Power outlets on the equipment .....	Only connected to PF-770, but marked anyway.	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....	<p>Fuses are clearly and adequately marked with fuse numbers and ratings.</p> <p>SWPS ETX1KC836EE:  F001: T8AH 250V  F003: T3.15AH 250V  F101: F5AH 250V  F201: F3.15AH 250V</p> <p>SWPS ETX1KC836AE:  F001: T15A 250V  F002: T10AH 250V  F003: T3.15AH 250V  F101: F10AH 250V  F201: F3.15AH 250V</p> <p>IH PWB 2LC0111:  YF1: AC250V T20A</p> <p>Heater PWB 2LH0106:  F1: AC250V T12A;  2LH0105:  F1: AC250V T20A</p> <p>“CAUTION  FOR CONTINUED  PROTECTION AGAINST RISK  OF FIRE, REPLACE ONLY  WITH SAME TYPE AND  RATINGS OF FUSE(S).”</p> <p>No user accessible fuse holder.</p>	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals .....	Approved appliance inlet used. PB terminals, connecting to the chassis, are marked with symbol IEC 60417, No. 5017.	P
1.7.7.2	Terminals for a.c. mains supply conductors	Appliance inlet used.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	No connection to DC mains.	N/A
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking .....	<p>Safety related switches and controls:</p> <p>Power Switches: Functions are obvious by positioning and markings (see 1.7.8.3)</p> <p>Other indicators/controls provided for functional reasons, not affecting safety.</p>	P
1.7.8.2	Colours .....	--	N/A



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8.3	Symbols according to IEC 60417 .....	Markings for power switch according to IEC 60417, No. 5007 "I" and 5009 (stand-by) for main unit.	P
1.7.8.4	Markings using figures .....	Not used.	N/A
1.7.9	Isolation of multiple power sources .....	Single supply.	N/A
1.7.10	Thermostats and other regulating devices .....	No such thermostats or the like.	N/A
1.7.11	Durability		P
1.7.12	Removable parts	Safety relevant markings are located on fixed installed parts.	P
1.7.13	Replaceable batteries .....	Lithium battery not replaceable by user. Warning statement provided in service instructions.	P
	Language(s) .....	English, German	—
1.7.14	Equipment for restricted access locations .....	Not intended for restricted access location.	N/A

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts	See below.	P
	Test by inspection .....	Operator cannot contact any hazardous bare parts or parts with only basic insulation to hazardous voltage.	P
	Test with test finger (Figure 2A) .....	No access to hazardous parts.	P
	Test with test pin (Figure 2B) .....	The test pin cannot touch hazardous bare parts through any openings in the enclosure.	P
	Test with test probe (Figure 2C) .....	Test probe cannot touch TNV circuits.	P
2.1.1.2	Battery compartments	No battery compartments.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	N/A
	Working voltage ( $V_{peak}$ or $V_{rms}$ ); minimum distance through insulation (mm)	--	—



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.4	Access to hazardous voltage circuit wiring	Not accessible to operator.	P
2.1.1.5	Energy hazards .....	No energy hazards in operator access area.	P
2.1.1.6	Manual controls	Not connected to and sufficiently separated from hazardous voltages.	P
2.1.1.7	Discharge of capacitors in equipment		P
	Measured voltage (V); time-constant (s) .....	(see appended table 2.1.1.7)	—
2.1.1.8	Energy hazards – d.c. mains supply	No connection to d.c. mains supply.	N/A
	a) Capacitor connected to the d.c. mains supply ..	--	N/A
	b) Internal battery connected to the d.c. mains supply .....	--	N/A
2.1.1.9	Audio amplifiers .....	No such parts.	N/A
2.1.2	Protection in service access areas	Bare parts carrying hazardous voltage or energy levels are located or guarded properly to avoid unintentional contact and bridging. No unexpected hazard. TNV circuits are sufficiently protected against bridging and/or accidental contact.	P
2.1.3	Protection in restricted access locations	Not intended to be installed in a restricted access location.	N/A
2.2	SELV circuits		P
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V) .....	Measured 31.0V max. (see appended table 2.2.2)	P
2.2.3	Voltages under fault conditions (V) .....	Limits of 71V peak and 120Vdc were not exceed, SELV limits not for longer than 0.2 seconds, (see appended table 2.2.3 and table 5.3)	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.2.4	Connection of SELV circuits to other circuits .....	<p>SELV not connected to primary.</p> <p>HV circuits complied with limited current circuits except for outputs M, Vslv of EUK9MQB26H, EUK9MQB27H.</p> <p>When those outputs were shorted to SELV side, SELV was not exceeded at the output connections of the circuits.</p> <p>Outputs of switching transformers were shorted to SELV sides, output voltages of SWPSs were not exceeded SELV limits. (measured with oscilloscope) (see appended table 2.2.3 and table 5.3)</p>	P

2.3	TNV circuits		P
2.3.1	Limits	<p>Continuous voltages, combination of AC and DC values, are such that :</p> $\frac{U_{ac}}{71} + \frac{U_{dc}}{120} \leq 1$	P
	Type of TNV circuits .....	TNV-3	—
2.3.2	Separation from other circuits and from accessible parts		P
2.3.2.1	General requirements	<p>Separation between SELV and TNV-3 circuit.</p> <p>(see appended table 2.10.3/.4)</p>	P
2.3.2.2	Protection by basic insulation	Electric strength test: 1500V, 60 sec.	P
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions .....	--	N/A
2.3.3	Separation from hazardous voltages	Insulation between primary and TNV is reinforced insulation.	P
	Insulation employed.....	a)	—



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.4	Connection of TNV circuits to other circuits	Not connected to other circuits.	N/A
	Insulation employed..... :	--	—
2.3.5	Test for operating voltages generated externally	Not applied.	N/A
2.4	Limited current circuits <i>Test performed for evaluation of cl. 1.5.6 and HV circuits.</i>		P
2.4.1	General requirements	See below.	P
2.4.2	Limit values	(see appended table 2.4.2)	P
	Frequency (Hz)..... :	--	—
	Measured current (mA)..... :	--	—
	Measured voltage (V) .....	--	—
	Measured circuit capacitance (nF or $\mu$ F)..... :	--	—
2.4.3	Connection of limited current circuits to other circuits	The limited current circuits are supplied from SELV circuits	P
2.5	Limited power sources <i>The following circuits were tested for limited power source: 5V outputs for USB connectors (Controller BOX, Operation Unit)</i>		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		N/A
	d) Overcurrent protective device limited output	Fuse: F2 on Main PWB for Controller BOX and Operation Unit	P
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A)	Fuse F2 on Main PWB, rated: 4A. The fuse has the characteristics required in remark 4 of table 2C.	—



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6	Provisions for earthing and bonding		P
	Protective Bonding wire is on one side hocked in and soldered to Protective Earth pin of appliance inlet or soldered to the pin and additionally secured by heat-shrinkable tubing, the other side has ring terminal (fixed by double crimping). Ring terminal fitted with toothed lock is secured to chassis by M4 screw.		—
2.6.1	Protective earthing	a) Accessible basic insulated conductive parts are reliably bonded to the protective earth terminal. f) Ground of SELV circuits was earthed to reduce touch current.	P
2.6.2	Functional earthing	Functional earthing either separated from hazardous voltages by double- or reinforced insulation or safely connected to PB.	P
2.6.3	Protective earthing and protective bonding conductors		P
2.6.3.1	General	2.6.1 a) metal parts: See below. 2.6.1 f) Ground of SELV: adequate construction for actual current.	P
2.6.3.2	Size of protective earthing conductors	(refers to table 3B, cl. 3.2.5)	P
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....	Rated 7.2A, 1.0mm <sup>2</sup> Rated 12.0A, 16 AWG	—
2.6.3.3	Size of protective bonding conductors	Table 3B for PB wires connected to Inlet and Outlet in main unit, PF-770. Tested per cl. 2.6.3.4 anyway.	P
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....	Rated 12.0A max., 16 AWG	—
	Protective current rating (A), cross-sectional area (mm <sup>2</sup> ), AWG .....	--	—
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
2.6.3.5	Colour of insulation .....	PE and PB conductors are green/yellow. Green/Yellow wire not used for other connections.	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4	Terminals	Appliance inlet.	P
2.6.4.1	General		P
2.6.4.2	Protective earthing and bonding terminals	Appliance inlet used.	P
	Rated current (A), type, nominal thread diameter (mm) ..... :	Rated 12.0A max., M4 screw used for PB terminals.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Appliance inlet used.	P
2.6.5	Integrity of protective earthing		P
2.6.5.1	Interconnection of equipment		P
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses in earthing conductors.	P
2.6.5.3	Disconnection of protective earth	Appliance inlet: It is not possible to disconnect earth without disconnecting mains.	P
2.6.5.4	Parts that can be removed by an operator	Plug and Appliance inlet: Earthing connected before and disconnected after hazardous voltage. No hazards expected on operator removable Fixing Unit.	P
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect earthing except for the removing of the earthed parts itself.	P
2.6.5.6	Corrosion resistance	All protective earth connections in compliance with Annex J. Specifically no direct Al – Cu contacts.	P
2.6.5.7	Screws for protective bonding	Thread cutting or space thread screwed connections not used for protective bonding connections.	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system	The protective earthing of the equipment does not rely on the telecommunication network.	N/A



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements	The built-in device fuse provides overcurrent protection. Pluggable equipment type A. Equipment relies on 16A rated fuse or circuit breaker of the building installation for short circuit and earth fault.	P
	Instructions when protection relies on building installation	Neither pluggable equipment type B nor permanent connection.	N/A
2.7.2	Faults not simulated in 5.3.7		P
2.7.3	Short-circuit backup protection	Pluggable equipment type A, the building installation is considered as providing short circuit protection. Additionally verification by short / abnormal tests	P
2.7.4	Number and location of protective devices .....	Overcurrent protections in primary phase by fuses F001, F003 in SWPS ETX1KC836EE and ETX1KC836AE; F1 in Heater PWB. Earth fault protection by fuse or circuit breaker in the building installation.	P
2.7.5	Protection by several devices	Only these fuses in phase or line.	N/A
2.7.6	Warning to service personnel .....	No unexpected hazard.	N/A



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.8	Safety interlocks		P
2.8.1	General principles	Safety interlocks are provided and prevent operator from access to hazardous moving parts and hazardous voltages.	P
	<p><u>Main Unit:</u>  Power (DC 24V) to the following parts is cut by Interlock Switch (Right Side) located in secondary when Right Cover opened.  HV Unit (Transfer), DU Feed Motor 1 and 2 for 5500i and 4500i, MPF Lift Motor, Resist Motor for 5500i and 4500i, Drum Motor, Fuser Motor, Feed Belt Motor, Feed Motor for 5500i and 4500i, Feed Motor for 3500i, Lift Motor, Middle Feed Motor for 5500i and 4500i, Right Eject Fan, MPF Feed Clutch, Primary Feed Clutch, Feed Assist Clutch for 5500i and 4500i, Vertical Feed Clutch, DU Feed Clutch 1 and 2 for 3500i, Resist Clutch for 3500i, Middle Feed Clutch for 3500i, Primary Feed Solenoid for 5500i and 4500i.</p> <p><u>Accessories:</u>  Power (DC 24V) to the all motors and solenoids of Document Feeder, model DP-770, cut by Interlock Switch located in secondary when the Top Cover of DP-770 opened.  Power (DC 24V) to the all motors and fans of Document Feeder, model DP-771, cut by Interlock Switch located in secondary when the PF Cover of DP-771 opened.  Power (DC 24V) to the all motors of Finisher, model DF-770, cut by Upper Interlock Switch, Front Interlock Switch located in secondary when the Top Open Cover, Front Open Cover of DF-770 opened respectively.  Power (DC 24V) to the All motors, solenoids and clutches, except for Eject Release Motor and Width Adjustment Motors, of Finisher, model DF-790, cut by Front Interlock Switch, Eject Manual Staple Interlock Switch located in secondary when the Front Upper Cover, Turn Guide of DF-790 opened respectively.  Power (DC 24V) to the all motors and solenoid of Booklet Folder, model BF-730, cut by each Interlock Switch located in secondary when the Eject Tray Base or Left Cover of BF-730 opened or when ejecting from DF-790.  Power (DC 24V) to the Feed Motor of Multi Tray Unit, model MT-730, cut by Interlock Switch located in secondary when the Right Cover of MT-730 opened.  Power (DC 24V) to the all motors and Solenoid of Punch Unit, model PH-7X, cut by one of the interlock switches of DF-770 and DF-790.</p>		—
2.8.2	Protection requirements	Hazardous voltages and energy levels are de-energized when interlock is activated, moving parts are stopped and/or slowed down to non hazardous speeds. No access to hazardous parts by test finger in interlocked areas.	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.8.3	Inadvertent reactivation	Inadvertent reactivation is not possible. Test finger can not override interlock system.	P
2.8.4	Fail-safe operation	Failure in interlock system will result in open circuit condition of the system, no hazard.	P
2.8.5	Moving parts	Relevant doors are provided with levers, directly activating the approved interlock switches. No intermediate mechanism involved.	N/A
2.8.6	Overriding	No such systems.	N/A
2.8.7	Switches and relays	Interlock Switches comply with IEC 61058-1. No relays related to interlock.	P
2.8.7.1	Contact gaps (mm) .....	Approved switches.	N/A
2.8.7.2	Overload test	Approved switches.	N/A
2.8.7.3	Endurance test	Approved switches.	N/A
2.8.7.4	Electric strength test	Not tested per 2.8.7.2 / 3.	N/A
2.8.8	Mechanical actuators	Adequate design of the actuator/switch mechanism, no overstress.	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 48h.	P
	Relative humidity (%), temperature (°C) .....	93%, 25°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
2.10.1	General		P
2.10.1.1	Frequency .....	Max. 51.2kHz.	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.1.2	Pollution degrees .....	Pollution degree 2.	P
2.10.1.3	Reduced values for functional insulation	5.3.4 a) not applied except for before fuse. (see appended table 2.10.3/4) 5.3.4 b) applied for the traces before fuse on Heater PWB. (see appended table 5.2)	P
2.10.1.4	Intervening unconnected conductive parts	No considered.	N/A
2.10.1.5	Insulation with varying dimensions	No applied.	N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such lamps used.	N/A
2.10.2	Determination of working voltage	The r.m.s. and the peak voltages were measured on all sources of the switching power supply.	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage	(see appended table 2.10.2)	P
2.10.2.3	Peak working voltage	(see appended table 2.10.2)	P
2.10.3	Clearances		P
2.10.3.1	General	Comply with 2.10.3.3/4, Annex G not applied.	P
2.10.3.2	Mains transient voltages	Not measured, normal transient levels considered.	P
	a) AC mains supply .....	2500V considered for the rating AC220-240V. 1500V considered for the rating AC120V.	P
	b) Earthed d.c. mains supplies .....	No direct connection to dc mains.	N/A
	c) Unearthed d.c. mains supplies .....	No direct connection to dc mains.	N/A
	d) Battery operation .....	No such batteries.	N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3/4)	P
2.10.3.4	Clearances in secondary circuits	(see appended table 2.10.3/4)	P
2.10.3.5	Clearances in circuits having starting pulses	No such lamps used.	N/A
2.10.3.6	Transients from a.c. mains supply .....	(see cl. 2.6.1 and 2.10.3.9)	P
2.10.3.7	Transients from d.c. mains supply .....	No connection to dc mains.	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....	1500V considered for TNV-3.	P



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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.9	Measurement of transient voltage levels	Not measured, normal transient levels considered.	N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply .....	--	N/A
	For a d.c. mains supply .....	--	N/A
	b) Transients from a telecommunication network ...	--	N/A
2.10.4	Creepage distances	(see appended table 2.10.3/.4)	P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index	See below.	P
	CTI tests .....	Material group IIIb is assumed to be used.	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3/.4)	P
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	No such insulations.	N/A
2.10.5.4	Semiconductor devices	Photo-couplers are approved components.	N/A
2.10.5.5.	Cemented joints	Not considered.	N/A
2.10.5.6	Thin sheet material – General	Provided for reinforced insulation within Transformers T101, T201 used in SWPSs ETX1KC836EE and ETX1KC836AE. Only for as functional or basic insulation within Transformer T2 used in Current Detection PWB.	P
2.10.5.7	Separable thin sheet material		P
	Number of layers (pcs) .....	2 layers for the reinforced insulation within Transformers T101, T201 used in SWPSs ETX1KC836EE and ETX1KC836AE. 1 or 2 layers for as the functional or basic insulation within Transformer T2 used in Current Detection PWB.	—
2.10.5.8	Non-separable thin sheet material	No such construction.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		P
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components	(see cl. 2.10.5.14)	P
2.10.5.12	Wire in wound components	Not considered.	N/A
	Working voltage .....	--	N/A
	a) Basic insulation not under stress .....	--	N/A
	b) Basic, supplementary, reinforced insulation .....	--	N/A
	c) Compliance with Annex U .....	--	N/A
	Two wires in contact inside wound component; angle between 45° and 90° .....	--	N/A
2.10.5.13	Wire with solvent-based enamel in wound components	Not considered.	N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components	Pri and sec windings in T2 used in Current Detection PWB are insulated by its bobbin.	P
	Working voltage .....	(see appended table 2.10.2.2)	P
	- Basic insulation not under stress .....	--	N/A
	- Supplementary, reinforced insulation .....	(see appended table 2.10.5)	P
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3/4)	P
2.10.6.2	Coated printed boards	Coating not tested.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	Not used to provide supplementary or double/reinforced insulation.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) .....	--	N/A
2.10.7	Component external terminations	No such components.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
2.10.8	Tests on coated printed boards and coated components	Coating not tested.	N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	PD1 not applied.	N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Sufficient cross sectional area of internal wiring. Internal wires are UL recognized wires.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heat sinks that could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	Internal secondary wires with basic isolation are routed so that they are not close to any live bare components. Wires are adequately fixed to prevent excessive strain or damage of the conductors' insulation.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage.	P
3.1.5	Beads and ceramic insulators	Ends of heater lamps. Adequately fixed, 10N applied, no hazard.	P



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Clause	Requirement + Test	Result - Remark	Verdict
3.1.6	Screws for electrical contact pressure	Relevant electrical and bonding connections engage at least two complete threads into metal. No screws of insulating material are used for electrical and earthing connections.	P
3.1.7	Insulating materials in electrical connections	Relevant current carrying and all protective earthing/bonding connections are metal to metal.	P
3.1.8	Self-tapping and spaced thread screws	Where safety is involved, thread cutting or space thread screws not used for current carrying electrical connections.	N/A
3.1.9	Termination of conductors	Conductors are suitable terminated, creepage and clearances maintained, second securing for soldered terminations provided.	P
	10 N pull test	10N applied to relevant conductors.	P
3.1.10	Sleeving on wiring	Relevant sleeving on primary and secondary wirings reliably kept in position.	P

3.2	Connection to a mains supply		P
3.2.1	Means of connection		P
3.2.1.1	Connection to an a.c. mains supply	Appliance inlet.	P
3.2.1.2	Connection to a d.c. mains supply	No connection to DC mains.	N/A
3.2.2	Multiple supply connections	Only one supply connection.	N/A
3.2.3	Permanently connected equipment	Not such equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm) ..... :	--	—
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320-1 and is located at the right side of the unit.  The power cord can be inserted without difficulties and does not support the unit.	P
3.2.5	Power supply cords		P



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Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	AC power supply cords	The power supply cord is provided with this unit.	P
	Type .....	(see appended table 1.5.1)	—
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....	Rated 7.2A, 1.0mm <sup>2</sup> Rated 12.0A, 16 AWG	—
3.2.5.2	DC power supply cords	No connection to dc main.	N/A
3.2.6	Cord anchorages and strain relief	Interconnecting cable of PF-770 tested.	P
	Mass of equipment (kg), pull (N) .....	100N	—
	Longitudinal displacement (mm) .....	0.7mm	—
3.2.7	Protection against mechanical damage	No sharp points or cutting edges that may damage the power supply cord.	P
3.2.8	Cord guards	(see above)	N/A
	Diameter or minor dimension D (mm); test mass (g) .....	--	—
	Radius of curvature of cord (mm) .....	--	—
3.2.9	Supply wiring space	Appliance inlet used.	N/A

3.3	Wiring terminals for connection of external conductors <i>No terminals. Appliance inlet and detachable power supply cord.</i>	N/A
-----	--	-----

3.4	Disconnection from the mains supply		P
3.4.1	General requirement	Disconnect devices are provided.	P
3.4.2	Disconnect devices	Plug or appliance coupler.	P
3.4.3	Permanently connected equipment	Pluggable equipment type A.	N/A
3.4.4	Parts which remain energized	No parts remain energized.	P
3.4.5	Switches in flexible cords	Not provided.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The plug and appliance coupler disconnect both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Single phase equipment.	N/A
3.4.8	Switches as disconnect devices	Switch not used as disconnect device.	N/A
3.4.9	Plugs as disconnect devices		P
3.4.10	Interconnected equipment	No such interconnection	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
3.4.11	Multiple power sources	Single supply connection.	N/A
3.5	Interconnection of equipment		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits .....	SELV to SELV. TNV-3 to TNV-3. Hazardous voltage to Hazardous voltage.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnections.	N/A
3.5.4	Data ports for additional equipment	Supplied from limited power source. (see appended table 2.5)	P
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	Stable mechanical construction, equipment does not overbalance when tilted to an angle of 10° from its normal upright position.	P
	Test force (N) .....	250N, 800N tested anyway.	P
4.2	Mechanical strength		P
4.2.1	General	Outer enclosure shows sufficient strength to withstand expected handling conditions.	P
4.2.2	Steady force test, 10 N	Applied to relevant parts, no hazard.	P
4.2.3	Steady force test, 30 N	30N applied to internal enclosure: Fuser Cover	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.2.4	Steady force test, 250 N	<p>250N applied to outer enclosure.</p> <p>Test points:</p> <p>Main unit:</p> <p>Operation B Cover Lid, ISU Front Cover, ISU Right Cover, Right Cover, Feed Low Cover, ISU Left Cover, ISU Left Sub Cover, DP Connector Lid, DP Connector Cover, Toner Filter Cover, Right Middle Cover, Right Front Cover, Right Middle R Cover, Right Lower F Cover, Right Lower R Cover, Tray Rear Cover, Exit Cover, Front B Cover, Front Upper A Cover, Operation A Cover, Operation B Cover, Operation Slide Cover, ISU Rear Cover, Left Cover, Front Upper Right Cover, Front Right Lower Cover, Side Feed Lid, Left Upper Cover, DU Cover, Top Tray Cover, Front A Cover, Right Upper Cover, MPF Upper Base, MPF Lower Base, Operation Handle</p> <p>JS-731:</p> <p>Exit A Tray</p> <p>JS-730:</p> <p>Inner Tray Cover</p> <p>DP-770:</p> <p>Front Cover, Rear Cover, Top Cover, Interface Cover, Base, Push SW Holder, Sponge B Mount</p> <p>DP-771:</p> <p>Front Cover, Rear Cover, Left Cover, Rear Bottom Cover, Lift Table, Interface Cover, Eject Tray, PF Cover, Upper Guide, Lower PF Guide, Base Table, Low Conveying Guide, Push SW Holder</p>	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		<p>DF-770: Top Cover, Top Open Cover, Front Cover, Front Open Cover, Rear Cover, Left Cover, Left Upper Cover, Rear Cover Lid, Interface Cover, Handle Cover, Left Cover, Left Upper Cover, Rear Cover Lid, Interface Cover, Handle Cover</p> <p>DF-790: Top Cover, Front Upper Cover, Front Middle Cover, Rear Upper Cover, Rear Lower Cover, Left Lower Cover, Top Rear Lid, Front Handle Cover, Front Lower Cover, Front Left Upper Cover, Interface Cover, Rear Cover Lid, Left Cover, Main Exit Cover, Eject Tray B Cover, Retaining Guide, Turn Guide</p> <p>BF-730: Eject Tray Base, Exit Open Cover, Left Cover, Front Saddle Cover, Rear Saddle Cover</p> <p>MT-730: Side Covers (Front and Rear), Top Cover, Right Cover, Rear Cover Lid</p> <p>AK-730: Eject Cover, Upper Front Cover, Front Right Cover, Left Cover, Left ISU Cover, Left Upper Cover, Front Cover</p>	



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		PF-730: Rear Cover, Left Cover, Right Cover, Feed Low Cover, Interface Cover, Connector Cover PF-740: Rear Cover, Left Cover, Right Cover, Feed Low Cover, Interface Cover, Connector Cover PF-770: Top Cover, Front Cover, Right Cover, Rear Cover, Left Wire Cover, Left Cover	
4.2.5	Impact test		P
	Fall test	Test points: Main unit: Operation B Cover Lid, Tray Rear Cover, Exit Cover, Operation A Cover, Operation B Cover, Operation Slide Cover, ISU Rear Cover, Front Upper Right Cover, Front Right Lower Cover, Side Feed Lid, Left Upper Cover, DU Cover, Top Tray Cover, Front A Cover, MPF Upper Base, MPF Lower Base, Operation Handle JS-731: Exit A Tray JS-730: Inner Tray Cover DP-770: Top Cover, Interface Cover, Base, Push SW Holder, Sponge B Mount DP-771: Front Cover, Rear Cover, Left Cover, Rear Bottom Cover, Lift Table, Interface Cover, Eject Tray, PF Cover, Upper Guide, Lower PF Guide, Base Table, Low Conveying Guide, Push SW Holder	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		DF-770: Top Cover, Top Open Cover DF-790: Top Cover, Top Rear Lid, Main Exit Cover, Eject Tray B Cover, Retaining Guide, Turn Guide BF-730: Eject Tray Base, Exit Open Cover, Left Cover, Front Saddle Cover, Rear Saddle Cover MT-730: Top Cover AK-730: Upper Front Cover, Left ISU Cover, Left Upper Cover	
	Swing test	Test points: Main unit: ISU Front Cover, ISU Right Cover, Right Cover, Feed Low Cover, ISU Left Cover, ISU Left Sub Cover, DP Connector Lid, DP Connector Cover, Toner Filter Cover, Right Middle Cover, Right Front Cover, Right Middle R Cover, Right Lower F Cover, Right Lower R Cover, Front B Cover, Front Upper A Cover, Left Cover, Right Upper Cover DP-770: Front Cover, Rear Cover DF-770: Front Cover, Front Open Cover, Rear Cover, Left Cover, Left Upper Cover, Rear Cover Lid, Interface Cover, Handle Cover	P



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		DF-790: Front Upper Cover, Front Middle Cover, Rear Upper Cover, Rear Lower Cover, Left Lower Cover, Front Handle Cover, Front Lower Cover, Front Left Upper Cover, Interface Cover, Rear Cover Lid, Left Cover MT-730: Side Covers (Front and Rear), Right Cover, Rear Cover Lid AK-730: Eject Cover, Front Right Cover, Left Cover, Front Cover PF-730: Rear Cover, Left Cover, Right Cover, Feed Low Cover, Interface Cover, Connector Cover PF-740: Rear Cover, Left Cover, Right Cover, Feed Low Cover, Interface Cover, Connector Cover PF-770: Top Cover, Front Cover, Right Cover, Rear Cover, Left Wire Cover, Left Cover	
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 70°C for enclosures, at 130°C for Fuser Cover, and cooling down to room temperature, no shrinkage, distortion or loosening of enclosure parts was noticeable on the unit.	P
4.2.8	Cathode ray tubes	No CRTs.	N/A
	Picture tube separately certified .....	--	N/A
4.2.9	High pressure lamps	No such lamps.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....	Not intended for wall or ceiling mounting.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.3	Design and construction		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded and smooth.	P
4.3.2	Handles and manual controls; force (N)..... :	15N (Main switch)	P
4.3.3	Adjustable controls	Full range circuit, no voltage adjustment necessary. Operational controls not likely to cause any hazard.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. Relevant screws provided with slit lock-washer.	P
4.3.5	Connection by plugs and sockets	In operator and service areas, mismatching prevented by incompatible form or location.	P
4.3.6	Direct plug-in equipment	Not direct plug-in.	N/A
	Torque .....	--	—
	Compliance with the relevant mains plug standard .....	--	N/A
4.3.7	Heating elements in earthed equipment	Each heater lamp protected by certified thermal cutouts in one phase and TRIAC in the other.	P
4.3.8	Batteries	Lithium battery (CR2032) circuits in Main PWB utilize a diode in series with a 1kΩ resistor.	P
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery	(see above)	P
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery	(see above)	P
4.3.9	Oil and grease	Insulation not in contact with oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Insulation not exposed to any possible paper dust or toner; separation by internal covers.	P
4.3.11	Containers for liquids or gases	No liquid contained.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.3.12	Flammable liquids .....	No flammable liquids used.	N/A
	Quantity of liquid (l) .....	--	N/A
	Flash point (°C) .....	--	N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General	Adequate construction confirmed.	P
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A
	Measured radiation (pA/kg) .....	--	—
	Measured high-voltage (kV) .....	--	—
	Measured focus voltage (kV) .....	--	—
	CRT markings .....	--	—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No ultraviolet (UV) radiation.	N/A
	Part, property, retention after test, flammability classification .....	--	N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....	--	N/A
4.3.13.5	Laser (including LEDs)	For laser see IEC/EN 60825-1 test report. Indicator LEDs below laser class 1 limits.	P
	Laser class .....	Class 1	—
4.3.13.6	Other types .....	--	N/A

4.4	Protection against hazardous moving parts		P
4.4.1	General	Access to hazardous moving parts prevented by construction.	P
4.4.2	Protection in operator access areas .....	Operator accessible moving parts represent no hazard, e.g. paper feeding / –exit areas. Hazardous moving parts are protected by interlock per cl.2.8.	P
4.4.3	Protection in restricted access locations .....	Not intended to be installed there.	N/A
4.4.4	Protection in service access areas	No unexpected hazard.	N/A



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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.5	—
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
4.6	Openings in enclosures		P
4.6.1	Top and side openings	No openings above parts with hazardous voltages. Side openings comply with the 5° angle projection. Requirements for fire enclosure considered. Accessories except for PF-730, PF-740, PF-770: No hazardous voltages, SELV only.	P
	Dimensions (mm) ..... :	(see appended table 4.6.1)	—
4.6.2	Bottoms of fire enclosures	Protection against emission of flame, molten metal, flaming or glowing particles or drops by constructions.	P
	Construction of the bottom, dimensions (mm) ..... :	No openings below parts requiring fire enclosure.	—
4.6.3	Doors or covers in fire enclosures	Doors and covers are interlocked per cl. 2.8.	P
4.6.4	Openings in transportable equipment	Not transportable equipment.	N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) ..... :	--	—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes	Not used.	N/A
	Conditioning temperature (°C), time (weeks) ..... :	--	—



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Clause	Requirement + Test	Result - Remark	Verdict
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Materials with the required flammability classes are used. Safety relevant components used within their specified rating. Electrical parts are not likely to ignite nearby materials. Temperatures see 4.5.1.	P
	Method 1, selection and application of components wiring and materials	(see appended table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests	Not considered.	N/A
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	Components with windings, wiring, semiconductor devices, resistors, capacitors and inductors are located inside a fire enclosure.	P
4.7.2.2	Parts not requiring a fire enclosure	The following parts are located outside a fire enclosure: Power supply cord sets.	P
4.7.3	Materials		P
4.7.3.1	General	Materials with the required flammability classes are used. For overheating of VDRs (Z001, N1) by fault conditions, the VDRs were mounted on PCBs with min. V-1 and other components / materials (SWPS ETX1KC836EE: C001; SWPS ETX1KC836AE: C001, F002; Heater PWB: F1, C1, RY1) within 13 mm from VDRs were min. V-1 Class Material or approved components.	P
4.7.3.2	Materials for fire enclosures	Metal enclosure. Plastic enclosures: 5VB (see appended table 1.5.1)	P
4.7.3.3	Materials for components and other parts outside fire enclosures	Decorative parts rated at least HB75 or HB40.	P



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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2, HF-2 or better. Small parts were mounted on min. V-1 PCB.	P
4.7.3.5	Materials for air filter assemblies	Ozone filter rated V-1 except for others which contribution to fuelling a fire not expected.	P
4.7.3.6	Materials used in high-voltage components	Transformers main materials of flammability V-1 or better (pr. bobbin, anode cap.) Potting resin: V-0.	P

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



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Clause	Requirement + Test	Result - Remark	Verdict
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	—
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

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	Motors locked, stepping motors excluded. Temperature limits of Annex B not exceeded. (see appended Annex B)	P
5.3.3	Transformers	Adequate protection against overload provided. (see appended Annex C)	P
5.3.4	Functional insulation .....	Short circuit tests. (see appended table 5.3)	P
5.3.5	Electromechanical components	Movement locked. Solenoids and clutches continuously energized. Stepping motors driver short or one winding continuously energized. (see appended table 5.3)	P
5.3.6	Audio amplifiers in ITE .....	No hazards expected.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.3.7	Simulation of faults	(see appended table 5.3)	P
5.3.8	Unattended equipment	Fault condition in temperature regulating circuit for heater lamps did not result in a hazard. (see appended table 5.3)	P
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests	No fire propagated beyond the equipment. No molten metal was emitted.	P
5.3.9.2	After the tests	Electric strength test primary to SELV passed.	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) .....	240V and 120V.	—
	Current in the test circuit (mA) .....	Measured leakage current with surge suppressors: 0.0mA	—
6.1.2.2	Exclusions .....	--	N/A

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



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Clause	Requirement + Test	Result - Remark	Verdict
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
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A) .....	Line is not used for power distribution.	—
	Current limiting method .....	--	—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS <i>No Cable Distribution Systems.</i>		N/A
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE <i>Not tested; flammability data were taken from available literature.</i>		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		P
B.1	General requirements		P
	Position .....	(see appended table 1.5.1)	—
	Manufacturer .....	(see appended table 1.5.1)	—
	Type .....	(see appended table 1.5.1)	—
	Rated values .....	(see appended table 1.5.1)	—
B.2	Test conditions	Motors were locked inside the equipment or in a bench test set-up. For stepping motors no test performed. (see appended table annex B)	P
B.3	Maximum temperatures	(see appended table annex B)	P
B.4	Running overload test	DC motors in secondary only.	N/A
B.5	Locked-rotor overload test	DC motors in secondary only.	N/A
	Test duration (days) .....	--	—
	Electric strength test: test voltage (V) .....	--	—
B.6	Running overload test for d.c. motors in secondary circuits	Running overload not likely. Electronically controlled.	N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) .....	--	N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		P
B.7.1	General	See below.	P
B.7.2	Test procedure	(see appended table annex B)	P
B.7.3	Alternative test procedure	(see appended table annex B)	P
B.7.4	Electric strength test; test voltage (V) .....	(motor located in SELV)	N/A
B.8	Test for motors with capacitors	(none)	N/A
B.9	Test for three-phase motors	(none)	N/A
B.10	Test for series motors	(none)	N/A
	Operating voltage (V) .....	--	—



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Clause	Requirement + Test	Result - Remark	Verdict
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position .....	Pri – sec transformers: T101, T201	—
	Manufacturer .....	(see appended table 1.5.1)	—
	Type .....	(see appended table 1.5.1)	—
	Rated values .....	(see appended table 1.5.1)	—
	Method of protection .....	--	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended table 2.10.5, 5.2)	P
	Protection from displacement of windings .....	Adequate construction; for further details, see appended table 2.10.3/4.	P
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument		P
D.2	Alternative measuring instrument	Not used.	N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13) <i>Thermocouples used.</i>		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G) <i>Measured accordingly.</i>		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES <i>Not used.</i>		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13) <i>No ionising radiation sources.</i>		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		P
	Metal(s) used .....	Mild steel/ Ni on steel.	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8) <i>Approved control used.</i>		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines	Tested at continuous copying and others.	P
L.6	Motor-operated files		N/A
L.7	Other business equipment		N/A
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1) <i>No ringing signals generated.</i>		N/A
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5) <i>Not used.</i>		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		P
	a) Preferred climatic categories .....	40/085/56	P
	b) Maximum continuous voltage .....	300V	P
	c) Pulse current .....	Tested accordingly	P



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Clause	Requirement + Test	Result - Remark	Verdict
R	Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES <i>Not applied.</i>		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3) <i>Not applied.</i>		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2) <i>Not applied.</i>		N/A
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4) <i>Not used.</i>		N/A
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1) <i>Considered.</i>		P
V.1	Introduction		P
V.2	TN power distribution systems		P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS <i>Not applied.</i>		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1) <i>Considered.</i>		P
X.1	Determination of maximum input current		P
X.2	Overload test procedure		P
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3) <i>No ultraviolet light sources.</i>		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2) <i>Considered.</i>		P





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Clause	Requirement + Test	Result - Remark	Verdict
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8) <i>Not applied.</i>		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—



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Clause	Requirement + Test				Result - Remark	Verdict																																																																								
EN 60950-1:2006 – CENELEC COMMON MODIFICATIONS																																																																														
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations					P																																																																								
General	Delete all the “country” notes in the reference document according to the following list: <table><tr><td>1.4.8</td><td>Note 2</td><td>1.5.1</td><td>Note 2 &amp; 3</td><td>1.5.7.1</td><td>Note</td></tr><tr><td>1.5.8</td><td>Note 2</td><td>1.5.9.4</td><td>Note</td><td>1.7.2.1</td><td>Note 4, 5 &amp; 6</td></tr><tr><td>2.2.3</td><td>Note</td><td>2.2.4</td><td>Note</td><td>2.3.2</td><td>Note</td></tr><tr><td>2.3.2.1</td><td>Note 2</td><td>2.3.4</td><td>Note 2</td><td>2.6.3.3</td><td>Note 2 &amp; 3</td></tr><tr><td>2.7.1</td><td>Note</td><td>2.10.3.2</td><td>Note 2</td><td>2.10.5.13</td><td>Note 3</td></tr><tr><td>3.2.1.1</td><td>Note</td><td>3.2.4</td><td>Note 3.</td><td>2.5.1</td><td>Note 2</td></tr><tr><td>4.3.6</td><td>Note 1 &amp; 2</td><td>4.7</td><td>Note 4</td><td>4.7.2.2</td><td>Note</td></tr><tr><td>4.7.3.1</td><td>Note 2</td><td>5.1.7.1</td><td>Note 3 &amp; 4</td><td>5.3.7</td><td>Note 1</td></tr><tr><td>6</td><td>Note 2 &amp; 5</td><td>6.1.2.1</td><td>Note 2</td><td>6.1.2.2</td><td>Note</td></tr><tr><td>6.2.2</td><td>Note 6.</td><td>2.2.1</td><td>Note 2</td><td>6.2.2.2</td><td>Note</td></tr><tr><td>7.1</td><td>Note 3</td><td>7.2</td><td>Note</td><td>7.3</td><td>Note 1 &amp; 2</td></tr><tr><td>G.2.1</td><td>Note 2</td><td>Annex H</td><td>Note 2</td><td></td><td></td></tr></table>					1.4.8	Note 2	1.5.1	Note 2 & 3	1.5.7.1	Note	1.5.8	Note 2	1.5.9.4	Note	1.7.2.1	Note 4, 5 & 6	2.2.3	Note	2.2.4	Note	2.3.2	Note	2.3.2.1	Note 2	2.3.4	Note 2	2.6.3.3	Note 2 & 3	2.7.1	Note	2.10.3.2	Note 2	2.10.5.13	Note 3	3.2.1.1	Note	3.2.4	Note 3.	2.5.1	Note 2	4.3.6	Note 1 & 2	4.7	Note 4	4.7.2.2	Note	4.7.3.1	Note 2	5.1.7.1	Note 3 & 4	5.3.7	Note 1	6	Note 2 & 5	6.1.2.1	Note 2	6.1.2.2	Note	6.2.2	Note 6.	2.2.1	Note 2	6.2.2.2	Note	7.1	Note 3	7.2	Note	7.3	Note 1 & 2	G.2.1	Note 2	Annex H	Note 2			P
1.4.8	Note 2	1.5.1	Note 2 & 3	1.5.7.1	Note																																																																									
1.5.8	Note 2	1.5.9.4	Note	1.7.2.1	Note 4, 5 & 6																																																																									
2.2.3	Note	2.2.4	Note	2.3.2	Note																																																																									
2.3.2.1	Note 2	2.3.4	Note 2	2.6.3.3	Note 2 & 3																																																																									
2.7.1	Note	2.10.3.2	Note 2	2.10.5.13	Note 3																																																																									
3.2.1.1	Note	3.2.4	Note 3.	2.5.1	Note 2																																																																									
4.3.6	Note 1 & 2	4.7	Note 4	4.7.2.2	Note																																																																									
4.7.3.1	Note 2	5.1.7.1	Note 3 & 4	5.3.7	Note 1																																																																									
6	Note 2 & 5	6.1.2.1	Note 2	6.1.2.2	Note																																																																									
6.2.2	Note 6.	2.2.1	Note 2	6.2.2.2	Note																																																																									
7.1	Note 3	7.2	Note	7.3	Note 1 & 2																																																																									
G.2.1	Note 2	Annex H	Note 2																																																																											
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure  The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones.  NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.					N/A																																																																								
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC					P																																																																								
1.7.2.1	Add the following NOTE: NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss					N/A																																																																								



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Clause	Requirement + Test	Result - Remark	Verdict												
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		P												
2.7.2	This subclause has been declared 'void'.		N/A												
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A												
3.2.5.1	<p>Replace "60245 IEC 53" by "H05 RR-F";</p> <p>"60227 IEC 52" by "H03 VV-F or H03 VVH2-F";</p> <p>"60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table border="1"> <tr> <td>  Up to and including 6</td><td></td><td>0,75<sup>a)</sup></td><td> </td></tr> <tr> <td>  Over 6 up to and including 10</td><td>(0,75)<sup>b)</sup></td><td>1,0</td><td> </td></tr> <tr> <td>  Over 10 up to and including 16</td><td>(1,0)<sup>c)</sup></td><td>1,5</td><td> </td></tr> </table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition<sup>a)</sup>.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6		0,75 <sup>a)</sup>		Over 6 up to and including 10	(0,75) <sup>b)</sup>	1,0		Over 10 up to and including 16	(1,0) <sup>c)</sup>	1,5			P
Up to and including 6		0,75 <sup>a)</sup>													
Over 6 up to and including 10	(0,75) <sup>b)</sup>	1,0													
Over 10 up to and including 16	(1,0) <sup>c)</sup>	1,5													
3.3.4	<p>In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:</p> <table border="1"> <tr> <td>  Over 10 up to and including 16</td><td>1,5 to 2,5</td><td>1,5 to 4</td><td> </td></tr> </table> <p>Delete the fifth line: conductor sizes for 13 to 16 A.</p>	Over 10 up to and including 16	1,5 to 2,5	1,5 to 4			N/A								
Over 10 up to and including 16	1,5 to 2,5	1,5 to 4													
4.3.13.6	<p>Add the following NOTE:</p> <p>NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.</p>		N/A												



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Clause	Requirement + Test	Result - Remark	Verdict
Annex H	<p>Replace the last paragraph of this annex by:</p> <p>At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 <math>\mu</math>Sv/h (0,1 mR/h) (see NOTE). Account is taken of the background level.</p> <p>Replace the notes as follows:</p> <p>NOTE These values appear in Directive 96/29/Euratom.</p> <p>Delete NOTE 2.</p>		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ZB	SPECIAL NATIONAL CONDITIONS	P
1.2.4.1	In <b>Denmark</b> , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	N/A
1.5.7.1	In <b>Finland, Norway and Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.	N/A
1.5.8	In <b>Norway</b> , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	P
1.5.9.4	In <b>Finland, Norway and Sweden</b> , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	N/A
1.7.2.1	<p>In <b>Finland, Norway and Sweden</b>, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>	P
1.7.5	In <b>Denmark</b> , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.	N/A
2.2.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	P
2.3.2	In <b>Finland, Norway and Sweden</b> there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	P



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Clause	Requirement + Test	Result - Remark	Verdict
2.3.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		P
2.6.3.3	In the <b>United Kingdom</b> , the current rating of the circuit shall be taken as 13 A, not 16 A.		P
2.7.1	In the <b>United Kingdom</b> , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
2.10.5.13	In <b>Finland, Norway and Sweden</b> , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	<p>In <b>Switzerland</b>, supply cords of portable electrical appliances having a rated current not exceeding 10 A shall be provided with a plug complying with IEC 60884-1(3.ed.) + am1, SEV 1011 and one of the following dimension sheets:</p> <ul style="list-style-type: none"> <li>- SEV 6533-2:2009 Plug type 11, L + N, 250V 10A</li> <li>- SEV 6534-2:2009 Plug type 12, L + N + PE, 250V 10A</li> <li>- SEV 6532-2:2009 Plug type 15, 3L + N + PE, 250/400V 10A</li> </ul> <p>Supply cords of portable electrical appliances having a rated current not exceeding 16 A shall be provided with a plug complying with IEC 60884-1(3.ed.) + am1, SEV 1011 and one of the following dimension sheets:</p> <ul style="list-style-type: none"> <li>- SEV 5933-2:2009 Plug type 21 L + N, 250 V, 16A</li> <li>- SEV 5934-2:2009 Plug type 23 L + N + PE, 250 V, 16A</li> <li>- SEV 5932-2:2009 Plug type 25 3L + N + PE, 250/400V 16A</li> </ul> <p>NOTE 16 A plugs are not often used in Swiss domestic installation system.</p>		N/A
3.2.1.1	<p>In <b>Denmark</b>, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>		N/A
3.2.1.1	<p>In <b>Spain</b>, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N/A





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Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In the <b>United Kingdom</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.  NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In <b>Ireland</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In <b>Switzerland</b> , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the <b>United Kingdom</b> , a power supply cord with conductor of 1,25 mm <sup>2</sup> is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the <b>United Kingdom</b> , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm <sup>2</sup> to 1,5 mm <sup>2</sup> nominal cross-sectional area.		N/A
4.3.6	In the <b>United Kingdom</b> , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
4.3.6	In <b>Ireland</b> , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A
5.1.7.1	In <b>Finland, Norway and Sweden</b> TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1	<p>In <b>Finland, Norway and Sweden</b>, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> <li>- two layers of thin sheet material, each of which shall pass the electric strength test below, or</li> <li>- one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li> </ul> <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> <li>- passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and</li> <li>- is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</li> </ul> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> <li>- the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1;</li> <li>- the additional testing shall be performed on all the test specimens as described in EN 132400;</li> <li>- the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.</li> </ul>		P
6.1.2.2	<p>In <b>Finland, Norway and Sweden</b>, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.</p>		N/A
7.2	<p>In <b>Finland, Norway and Sweden</b>, for requirements see 6.1.2.1 and 6.1.2.2 of this annex.</p> <p>The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.</p>		N/A
7.3	<p>In <b>Norway and Sweden</b>, there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.</p>		N/A
7.3	<p>In <b>Norway</b>, for installation conditions see EN 60728-11:2005.</p>		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
ZC	A-DEVIATIONS (informative)		P
1.5.1	<p><b>Sweden</b> (deleted by A11:2009 for EN 60950-1:2006)  <del>(Ordinance 1990:944)</del>  Add the following:  NOTE In Sweden, switches containing mercury are not permitted.</p>		N/A
1.5.1	<p><b>Switzerland</b> (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury)  Switches containing mercury such as thermostats, relays and level controllers are not allowed.</p>		N/A
1.7.2.1	<p><b>Denmark</b> (deleted by A11:2009 for EN 60950-1:2006)  <del>(Heavy Current Regulations)</del>  <del>Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text:</del>  <div style="text-align: center;"> Vigtigt!  Lederen med grøn/gul isolation  må kun tilsluttes en klemme mærket   eller   -eller- </div> <del>If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text:</del>  <del>"For tilslutning af de øvrige ledere, se medfølgende installationsvejledning."</del> </p>		N/A
1.7.2.1	<p><b>Germany</b> (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2).  If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market.  Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.</p>		P
1.7.5	<p><b>Denmark</b> (deleted by A11:2009 for EN 60950-1:2006)  <del>(Heavy Current Regulations)</del>  <del>With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107 2 D1, Standard Sheet DK 1 4a, CLASS II EQUIPMENT shall not be fitted with socket outlets for providing power to other equipment.</del></p>		N/A
1.7.13	<p><b>Switzerland</b> (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries)  Annex 2.15 of SR 814.81 applies for batteries containing cadmium and mercury.  Note: Ordinance relating to environmentally hazardous substances, SR 814.013 of 1986-06-09 is not longer in force and superseded by SR 814.81 of 2009-02-01 (ChemRRV).</p>		N/A





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Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<b>Denmark</b> (deleted by A11:2009 for EN 60950-1:2006) <del>(Heavy Current Regulations, Chapter 707, clause 707.4)</del> <del>TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted</del> <del>only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE</del> <del>EQUIPMENT TYPE B.</del>		N/A



IEC/EN 60950-1					
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 <sup>1.</sup>
Power Supply Cord for 220 - 240V	Harvest Electric Wire And Products Mfg. Co., Ltd.	Plug: HE-104 Cord: H05VV-F Connector: HP-3	250V, 16A 1.0 mm <sup>2</sup> x 3 250V, 10A	DIN VDE 0620-1 DIN VDE 0281-5 HD21.5 S3 IEC/EN60320-1 VDE 0625-1	VDE
Power Supply Cord for 120V	Voelx	Plug: PS204 Cord: SJT Connector: V1625	125V, 15A 16 AWG x 3 125V, 13A Max. 4.5m long, min. 1.5m long	UL817 UL62	UL
Appliance Inlet	Supercom Wire & Cable Co. Ltd. or Supercom Electronics Co., Ltd.	SC-8 Series	250Vac, 10A 250Vac, 15A max. (UL)	EN60320-1 IEC60320-1 UL498	VDE  UL(E152973)
<b>Switch</b>					
Main Switch	Panasonic Electric Works Co. Ltd.	AJ8R Series	10A(4), 250Vac, 10,000 Cycles (VDE) 16A, 125Vac, 10,000 Cycles (UL)	EN61058-1 IEC61058-1 UL1054	VDE UL(E35901)
Interlock Switch (Right Side)	Omron Corp.	D3V-16506-3C25 (10E)	250Vac/16(3)A, 50,000 Cycles (VDE) 250Vac/11A, 100,000 Cycles (UL)	EN61058-1 UL1054	VDE UL(E41515)
<b>Fixing Unit</b>					
Thermal Cutoff	Wako Electronics Co., Ltd.	CS-7TA-35	Two provided. 250Vac, 17A, 200°C	EN60730-2-9 UL60730	TUV UL(E50367)
Heater Lamp for 220 -240V	Ushio Inc.	QIRF 240-800/686 MKFR	240V, 800W/686W	-	Evaluated together with unit
Heater Lamp for 120V	Ushio Inc.	QIRF 120-735/630 MKFR	120V, 735W/630W	-	Evaluated together with unit
Lower Fuser Cover, Left Fuser Guide, Right Guide Cover, Right Fuser Cover	Kaneka Corp.	3401NX	V-0, Min.1.9mm thick	UL94	UL(E48854)
Lower Heat Guide	Kaneka Corp.	3401NX	V-0, Min.1.5mm thick	UL94	UL(E48854)
Right Fuser Guide	Asahi Kasei Chemicals Corp., Xyron Polymer	DG141	V-1, Min.1.9mm thick	UL94	UL(E82268)
Separator Mount	Asahi Kasei Chemicals Corp., Xyron Polymer	DG235	V-1, Min.1.4mm thick	UL94	UL(E82268)



IEC/EN 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 <sup>1.</sup>	
<b>SWPS</b>						
Switching Power Supply Unit for 220 - 240V	Panasonic Electronic Devices Co., Ltd.	ETX1KC836EE	Input: AC 220 - 240 V Output: 24V/14.2A, 12V/5.8A	-	Evaluated together with unit	
Switching Power Supply Unit for 120V	Panasonic Electronic Devices Co., Ltd.	ETX1KC836AE	Input: AC 100 - 127 V Output: 24V/14.2A, 12V/5.8A	-	Evaluated together with unit	
Surge Suppressor (Z001)	Nippon Chemi-Con Corp.	TNR14SE471K or TND14SE471K	300 Vac	IEC61051 UL1449	VDE UL(E323623)	
X - Capacitor (C001)	Okaya Electric Industries Co., Ltd.	LE-MX	310V/310(UL)V, 1.5uF X2	EN/IEC60384-14 UL1283	ENEC(SEMKO) UL(E78644)	
X - Capacitor (C002)	Panasonic Electronic Devices Japan Co., Ltd.	ECQUL	275/250(UL)V, 0.1uF X2	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E62674)	
X - Capacitor (C010)	Okaya Electric Industries Co., Ltd.	LE-MX	310V/250(UL)V, 1uF X2	EN/IEC60384-14 UL1414/ UL60384-14	ENEC(SEMKO) UL(E47474)	
Y -Capacitors (C004, C005, C007, C008)	TDK-EPC Corp.	CS	250V, 1000pF Y2	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37861)	
Y -Capacitors (C004, C005, C007, C008), Alternate	TDK-EPC Corp.	CD	250V, 1000pF Y1	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37861)	
Y -Capacitors (C004, C005, C007, C008), Alternate	Murata Mfg. Co., Ltd.	KH	300V/250V(VDE, UL), 1000pF Y2	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37921)	
Y -Capacitors (C004, C005, C007, C008), Alternate	Murata Mfg. Co., Ltd.	KX	300V/250V(VDE, UL), 1000pF Y1	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37921)	
Y -Capacitors (C031, C032)	TDK-EPC Corp.	CS	250V, 100pF Y2	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37861)	
Y -Capacitors (C031, C032), Alternate	TDK-EPC Corp.	CD	250V, 100pF Y1	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37861)	
Y -Capacitors (C031, C032), Alternate	Murata Mfg. Co., Ltd.	KH	300V/250V(VDE, UL), 100pF Y2	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37921)	
Y -Capacitors (C031, C032), Alternate	Murata Mfg. Co., Ltd.	KX	300V/250V(VDE, UL), 100pF Y1	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37921)	



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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 <sup>1</sup> .	
Bridge Capacitor (C214)	TDK-EPC Corp.	CD	250V, 470pF Y1	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37861)	
Bridge Capacitor (C214), Alternate	Murata Mfg. Co., Ltd.	KX	300V/250V(VDE, UL), 470pF Y1	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37921)	
Electrolytic Capacitor (C105, C108) for 220 - 240V	Various	Various	400V or 450V, 330uF	-	Evaluated together with unit	
Electrolytic Capacitor (C105, C108) for 120V	Various	Various	200V, 1800uF	-	Evaluated together with unit	
Inductor (L001, L002)	Sanwa Musen Co., Ltd.	AYS257027HY	7.2mH Class A	-	Evaluated together with unit	
Inductor (L003) for 220 - 240V	Tabuchi Electric Co., Ltd.	ETQR29C004T	3.8mH Class A	-	Evaluated together with unit	
Inductor (L011)	Panasonic Electronic Devices Co., Ltd.	ELF15N010A	5.3mH Class A	-	Evaluated together with unit	
Bridge Rectifier (D005)	Shindengen Electric Mfg. Co., Ltd.	D15XB60	600V, 15A	UL1557	UL(E142422)	
FET (Q101, Q102) for 220 - 240V	Various	Various	900V, 5A	-	Evaluated together with unit	
FET (Q101, Q102) for 120V	Various	Various	500V, 15A	-	Evaluated together with unit	
Triac (CR001)	Various	Various	Min. 600V, Min. 16A	-	Evaluated together with unit	
Photo Coupler (PC001)	Panasonic Electric Works Co., Ltd.	APT1211W	Creepage/ Isolation Thickness: Min. 8.0 mm/ Min. 0.4 mm	IEC/EN60950-1 IEC/EN60065 UL1577	VDE UL(E191218)	
Photo Coupler (PC101, PC103, PC201, PC202)	NEC Compound Semiconductor Devices Ltd. or Renesas Electronics Corp.	PS2581AL2	Creepage/ Isolation Thickness: Min. 8.0 mm/ Min. 0.4 mm	IEC/EN60950-1 IEC/EN60065 UL1577	SEMKO UL(E72422)	
Transformer (T101) for 220 - 240V	Panasonic Electronic Devices Co., Ltd.	ETB42AB1D8## ###:Suffix which are letters)	Class A	-	Evaluated together with unit	
Transformer (T101) for 120V	Panasonic Electronic Devices Co., Ltd.	ETB42AB1CG## ###:Suffix which are letters)	EN/IEC: Class E UL/CSA: Class B UL System Designation: SB	UL1446	UL(E45478)	
Transformer (T201) for 220 - 240V	Panasonic Electronic Devices Co., Ltd.	ETB35AA218## ###:Suffix which are letters)	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 <sup>1.</sup>	
Transformer (T201) for 120V	Panasonic Electronic Devices Co., Ltd.	ETB35AA1ZG## (##:Suffix which are letters)	EN/IEC: Class E UL/CSA: Class B UL System Designation: SB	UL1446	UL(E45478)	
Fuse (F001) for 220 - 240V	Littelfuse Inc.	215 series	250V, T8AH	EN60127-2 UL248-1/ UL248- 14	VDE UL(E10480)	
Fuse (F001) for 120V	SOC Corp.	TLC	250V, T15A	EN60127-2 IEC60127-2 UL248-1/ UL248- 14	SEMKO UL(E39265)	
Fuse (F002) for 120V	Littelfuse Inc.	215 series	250V, T10AH	EN60127-2 UL248-1/ UL248- 14	VDE UL(E10480)	
Fuse (F003)	Littelfuse Inc.	215 series	250V, T3.15AH	EN60127-2 UL248-1/ UL248- 14	VDE UL(E10480)	
Fuse (F101) for 220 - 240V	Littelfuse Inc.	216	250V, F5AH	EN60127-2 UL248-1/ UL248- 14	VDE UL(E10480)	
Fuse (F101) for 120V	Littelfuse Inc.	216	250V, F10AH	EN60127-2 UL248-1/ UL248- 14	VDE UL(E10480)	
Fuse (F201)	Littelfuse Inc.	216	250V, F3.15AH	EN60127-2 UL248-1/ UL248- 14	VDE UL(E10480)	
Relay (K002) for 220 - 240V	Panasonic Electric Works Co., Ltd.	LK series (LKP1aF-12V)	Contact: 250/277V, 10A Coil: 12 Vdc	EN61810-1 (TUV) EN61058-1 (SEMKO) UL508 UL60947	SEMKO/TUV UL(E43149)	
Relay (K002) for 120V	Panasonic Electric Works Co., Ltd.	ALE series (ALE1PB12)	Contact: 250/277V, 16A Coil: 12 Vdc	EN/IEC61810-1 UL508 UL60947	VDE UL(E43149)	
Printed Wiring Board	Various	Various	Min. V-1 , Min. 105°C	UL796	UL	
<b>High Voltage PWB</b>						
High Voltage Unit for Model 5500i	Panasonic Electronic Devices Co., Ltd.	EUK9MQB26H	Inputs: 24Vdc/ M: max. 0.65A, V: max. 0.5A, T: max. 0.3A Outputs: M: max. 3.3kVp-p, Vslv: max. 3.0kVp-p, Vmag: max. 6.0kVp-p, T: max. -8.0kV/4.5kV	-	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 <sup>1</sup> .	
High Voltage Unit for Model 5500i - Transformer (T701)	Panasonic Electronic Devices Co., Ltd.	ETB20DKB2	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 5500i - High Voltage Block (T601)	Panasonic Electronic Devices Co., Ltd	MS17CHTNW2	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 5500i - Transformer (T501)	Panasonic Electronic Devices Co., Ltd.	ETB16GKL1	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 5500i - Transformer (T201)	Panasonic Electronic Devices Co., Ltd.	ETB28RK4	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 5500i - Transformer (T202)	Panasonic Electronic Devices Co., Ltd.	ETB28RK3	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 5500i - Transformer (T102)	Panasonic Electronic Devices Co., Ltd.	ETB36AKA2	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 5500i - Transformer (T1, T2, T61)	Panasonic Electronic Devices Co.	ETB14JKA1	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 4500i and 3500i	Panasonic Electronic Devices Co., Ltd.	EUK9MQB27H	Inputs: 24Vdc/ M: max. 0.5A, V: max. 0.45A, T: max. 0.25 Outputs: M: max. 2.5kVp-p, Vslv: max. 4.0kVp-p, Vmag: max. 4.0kVp-p, T: max. -8.0kV/4.5kV	-	Evaluated together with unit	
High Voltage Unit for Model 4500i and 3500i - Transformer (T201, T401, T501)	Panasonic Electronic Devices Co., Ltd	ETB16GKL1	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 4500i and 3500i - Transformer (T101)	Panasonic Electronic Devices Co., Ltd	ETB28NK31	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 <sup>1.</sup>	
High Voltage Unit for Model 4500i and 3500i - Transformer (T301)	Panasonic Electronic Devices Co., Ltd	ETB36AKA1	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 4500i and 3500i - Transformer (T701)	Panasonic Electronic Devices Co., Ltd	ETB20DKB2	Class A	-	Evaluated together with unit	
High Voltage Unit for Model 4500i and 3500i - High Voltage Block (T601)	Panasonic Electronic Devices Co., Ltd	MS17CHTNW2	Class A	-	Evaluated together with unit	
Printed Wiring Board	Various	Various	Min. V-1 , Min. 105°C	UL796	UL	
<b>Heater PWB</b>						
Heater PWB for 220 - 240V	Kyocera Mita Corp.	2LH0106	Input: 220 - 240Vac, Output: 1486W	-	Evaluated together with unit	
Heater PWB for 120V	Kyocera Mita Corp.	2LH0105	Input: 100 - 120Vac, Output: 1365W	-	Evaluated together with unit	
Bleeding Resistors (R1, R2)	Various	Various	220 kohm, 1/4 W	-	Evaluated together with unit	
Varistor (N1)	Panasonic Corporation	V14471U (ERZV14471U)	300 Vac	IEC61051 CECC 42200/42201 UL1449	VDE UL(E321499)	
X-Capacitors (C1, C2)	Okaya Electric Industries Co., Ltd.	LE-MX	310V/310(UL)V, 1.0uF X2	EN/IEC60384-14 UL1283	ENEC(SEMKO) UL(E78644)	
Y-Capacitors (C3, C4)	Murata Mfg. Co., Ltd.	KH	300V/250V(VDE, UL), 2200pF Y2	EN/IEC60384-14 UL1414/ UL60384-14	VDE UL(E37921)	
Photo Coupler (NC1, NC2)	Panasonic Electric Works Co., Ltd.	APT1221	Creepage/ Isolation Thickness: Min. 8.0 mm/ Min. 0.4 mm	IEC/EN60950-1 IEC/EN60065 UL1577	VDE UL(E191218)	
Photo Coupler (PH1)	Toshiba Corp., Semiconductor Co., Discrete Semiconductor Div. or Toshiba Electronics Europe GmbH	TLP781	Creepage/ Isolation Thickness: Min. 8.0 mm/ Min. 0.4 mm	IEC/EN60950-1 IEC/EN60065 UL1577	BSI UL(E67349)	



IEC/EN 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 <sup>1</sup> .	
Inductor (L1)	Kami Electronics Ind. Co., Ltd.	LF-25N79RF	Class A	-	Evaluated together with unit	
Inductor (L2)	Toho Zinc Co., Ltd.	HKBS-14D140- 2510S	Class A	-	Evaluated together with unit	
Fuse (F1) for 220 - 240V	Hollyland Co., Ltd.	65TS(P)	125/250V, 12A	EN60127-2 UL248-1/248-14	TUV UL(E156471)	
Fuse (F1) for 120V	Hollyland Co., Ltd.	65TS(P)	125/250V, 20A	EN60127-2 UL248-1/248-14	TUV UL(E156471)	
Relay (RY1)	Panasonic Electric Works Co., Ltd.	ALE1PB24	Contact: 250/277V, 16A Coil: 24 Vdc	EN/IEC61810-1 UL508/60947	VDE UL(E43149)	
Triac (N2, N3)	Various	Various	Min. 600 V, Min. 16 A	-	Evaluated together with unit	
Printed Wiring Board	Various	Various	Min. V-1 , Min. 105°C	UL796	UL	
<b>Current Detection PWB (Optional)</b>						
Transformer (T2)	Kami Electronics Ind. Co., Ltd.	CT-24B59RF	Class A	-	Evaluated together with unit	
Printed Wiring Board	Various	Various	Min. V-1 , Min. 105°C	UL796	UL	
<b>Fan Motor, Motor, Clutch, Solenoid</b>						
LSU Fan	Nidec Corp.	D06R-24TH 04 (AX)	24Vdc, 0.11A max.	-	Evaluated together with unit	
Front Eject Fan	Nidec Corp.	D06F-24SH 03 (EX)	24Vdc, 0.192A max.	-	Evaluated together with unit	
Rear Eject Fan	Minebea Motor Manufacturing Corp.	2410RL-05W-S60- C01	24Vdc, 0.12A max.	-	Evaluated together with unit	
Right Eject Fan	Nidec Corp.	D06R-24TH 04 (AX)	Two provided. 24Vdc, 0.11A max.	-	Evaluated together with unit	
Container Fan	Nidec Corp.	D07F-24SS1 15B (EX)	24Vdc, 0.20A max.	-	Evaluated together with unit	
Heater PWB Fan	Nidec Corp.	D06F-24SH 12B (EX)	24Vdc, 0.198A max.	-	Evaluated together with unit	
Rear Fuser Fan	Nidec Corp.	D07F-24SS1 15B (EX)	24Vdc, 0.20A max.	-	Evaluated together with unit	
Toner Exhaust Fan	Nidec Corp.	D05F-24PH 17 (EX)	24Vdc, 0.12A max.	-	Evaluated together with unit	
LVU/HVU Fan	Nidec Corp.	D08K-24TU 49 (AX)	24Vdc, 0.143A max.	-	Evaluated together with unit	
Controller Fan	Nidec Corp.	D06R-12TM 01 (AX)	12Vdc, 0.16A max.	-	Evaluated together with unit	
Controller Fan, Alternate	Nidec Corp.	D06R-05TM 12H1 (EX)	5Vdc, 0.41A max.	-	Evaluated together with unit	
DLP Fan	Nidec Corp.	D07F-24SS1 09 (EX)	24Vdc, 0.20A max.	-	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 <sup>1</sup> .	
Drum/DLP Fan	Nidec Corp.	D06F-24SH 03 (EX)	Two provided. 24Vdc, 0.192A max.	-	Evaluated together with unit	
Fuser Motor	Nidec Corp.	42M069F251	24Vdc, 1.1A max. Brushless Motor	-	Evaluated together with unit	
Resist Motor for Model 4500i and 5500i	Oki Micro Engineering Co., Ltd.	KCL42SCK560 x (Suffix x: One letter from A to Z)	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
Feed Motor for Model 4500i and 5500i	Nidec Corp.	48M069F271	24Vdc, 2.2A max. Brushless Motor	-	Evaluated together with unit	
Feed Motor for Model 3500i	Nidec Corp.	48M069F261	24Vdc, 1.6A max. Brushless Motor	-	Evaluated together with unit	
Middle Feed Motor for Model 4500i and 5500i	Nidec Servo Corp.	KV4239-T3B005	Stepper type 24Vdc, 1.1A	-	Evaluated together with unit	
Feed Belt Motor	Nidec Corp.	42M069F251	24Vdc, 1.1A max. Brushless Motor	-	Evaluated together with unit	
MPF Lift Motor	Mabuchi Motor Co., Ltd.	RK-370CA-081050	24Vdc, 110mA max.	-	Evaluated together with unit	
DLP Motor	Nidec Corp.	48M069F261	24Vdc, 1.6A max. Brushless Motor	-	Evaluated together with unit	
Container Motor	Mabuchi Motor Co., Ltd.	RS-360SH-12420	24Vdc, 340mA max.	-	Evaluated together with unit	
Drum Motor	Nidec Corp.	48M069G020	24Vdc, 1.6A max. Brushless Motor	-	Evaluated together with unit	
Scanner Motor	Shinano Kenshi Co., Ltd.	302K917050 or SHP-42D0021	Stepper type 24Vdc, 0.8A max.	-	Evaluated together with unit	
Lift Motor	Daiken Co.	302K34403	Two provided. 24Vdc, 150mA max.	-	Evaluated together with unit	
DU Feed Motor 1 for Model 4500i and 5500i	Oki Micro Engineering Co., Ltd.	KCL42SCK560 x (Suffix x: One letter from A to Z)	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
DU Feed Motor 2 for Model 4500i and 5500i	Oki Micro Engineering Co., Ltd.	KCL42SCK560 x (Suffix x: One letter from A to Z)	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
Polygon Motor	Nidec Copal Electronics Corp.	PT22ERG- KDB200-445-SD	24Vdc, 1.0A max.	-	Evaluated together with unit	
Eject Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK560A	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
Middle Hopper Motor	Mabuchi Motor Co., Ltd.	RK-370CA-11670	24Vdc, 130mA max.	-	Evaluated together with unit	
Inner Motor	Mabuchi Motor Co., Ltd.	RS-360SH-09600	24Vdc, 230mA max.	-	Evaluated together with unit	
Resist Clutch for Model 3500i	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	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 <sup>1.</sup>	
Middle Feed Clutch for Model 3500i	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
Primary Feed Clutch	Daiken Co., Ltd.	MCA-50T	Two provided. 24Vdc, 0.104A	-	Evaluated together with unit	
Feed Assist Clutch for Model 4500i and 5500i	Daiken Co., Ltd.	MCA-50T	Two provided. 24Vdc, 0.104A	-	Evaluated together with unit	
Vertical Feed Clutch	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
MPF Feed Clutch	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
DU Feed Clutch 1 for Model 3500i	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
DU Feed Clutch 2 for Model 3500i	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
ID Sensor CL Solenoid	TDS Co., Ltd.	TDS-08G	24Vdc, 1.15A	-	Evaluated together with unit	
Primary Feed Solenoid for Model 4500i and 5500i	TDS Co., Ltd.	TDS-08A	Two provided 24Vdc, 1A max.	-	Evaluated together with unit	
Eject Junction Solenoid	TDS Co., Ltd.	TDS-08A	24Vdc, 400mA max.	-	Evaluated together with unit	
<b>Laser Scanner Unit</b>						
Laser Scanner Unit	Kyocera Mita Corp.	LK-6705 or LK6705	24Vdc, 5Vdc, Class 1, containing the following laser diode.	EN/IEC60825-1	Evaluated together with unit	
Laser Scanner Unit - Laser Diode	Opnext Japan, Inc.	HL67040GN	Class 3B, Wavelength: 670nm, Output Power: 18mW	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302H74508	240V, 16W	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	Two provided. 250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302H74509	120V, 15W	-	Evaluated together with unit	
Cassette Heater for 120V (Optional) - Thermal Fuse (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	



IEC/EN 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 <sup>1.</sup>	
Ozone Filter	Toyobo Co., Ltd. AC Div.	DPB/EFNA-60NH	Two provided. V-1/HF-1, Min. 15mm thick	UL 94	UL(E132751)	
Lithium Battery (BAT1) on Main PWB	Various	CR2032	3 V; max. 10mA reverse charging current. Protected by a diode and a 1 kohm resistor.	UL1642	UL	
Fuse (F2) on Main PWB for USB connector	Skygate Co., Ltd.	1206FA (1206FA- T)	48Vdc, 4A	UL248-1/ UL248- 14	UL(E195833)	
Solid-State Overcurrent Protector (U23) on Main PWB for USB Connector	Micrel Inc.	MIC2026	2.7-5.5Vdc, Cont. Current: 0.5A, Prot. Current: 1.25A	UL1459/ UL497A/ UL60950	UL(E179633)	
Hard Disk Drive	Western Digital Technologies, Inc. or equivalent	WD1600BUDT- 63DPZY0 or equivalent	0.55A max.	EN 60950-1 UL 60950-1	TUV UL(E101559)	
Enclosure Rear Upper Cover, Rear Lower Cover	Various	Various	Steel, min. 0.6 mm thick.	-	Evaluated together with unit	
Enclosure FAX DIM Lid, KMAS Lid, PF Connector Cover	Various	Various	Steel, min. 0.8 mm thick.	-	Evaluated together with unit	
Enclosure Option Lids, Coin Vendor Lid	Various	Various	Steel, min. 1.0 mm thick.	-	Evaluated together with unit	
Enclosure Operation B Cover Lid	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 1.8 mm thick	UL94	UL(E98529)	
Enclosure ISU Front Cover, ISU Right Cover, Right Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 1.9 mm thick	UL94	UL(E98529)	
Enclosure Feed Low Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 1.95 mm thick	UL94	UL(E98529)	



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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 <sup>1.</sup>	
Enclosure ISU Left Cover, ISU Left Sub Cover, DP Connector Lid, DP Connector Cover, Toner Filter Cover, Right Middle Cover, Right Front Cover, Right Middle R Cover, Right Lower F Cover, Right Lower R Cover, Tray Rear Cover, Exit Cover, Front B Cover, Front Upper A Cover, Operation A Cover, Operation B Cover, Operation Slide Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Enclosure ISU Rear Cover, Left Cover, Front Upper Right Cover, Front Right Lower Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.2 mm thick	UL94	UL(E98529)	
Enclosure Side Feed Lid	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.35 mm thick	UL94	UL(E98529)	
Enclosure Left Upper Cover, DU Cover, Top Tray Cover, Front A Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	
Enclosure Right Upper Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.6 mm thick	UL94	UL(E98529)	
Enclosure MPF Upper Base, MPF Lower Base	Teijin Chemicals Ltd., Research & Development Div.	DN-7730M	5VB, Min. 2.2 mm thick	UL94	UL(E98529)	
Enclosure Operation Handle	Bayer Material Science L L C	FR3006 HF	5VB, Min. 2.15 mm thick	UL94	UL(E33640)	



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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 <sup>1.</sup>	
ISU Rear Ozone Filter Covers, Controller Lid, Left Filter Cover, Left Rear Filter Lid, Left Front Filter Lid, DU Filter Lids, Handle Cover, Main SW Cover, Feed Low Cover Handle, Right Cover Handle, MPF Tray A, MPF Tray B, MPF Tray C, MPF Tray D, MPF Lift Base, Cursor Cover, MPF Cursor F, MPF Cursor R, Paper Stopper, ISU Bottom Cover, Emblem, Front Upper B Cover, Clip Case, Clip Case Holder, Operation Panel, Cassettes	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Job Separator, Model JS-731 (Option)</b>						
Conveying Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK560A	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
JS Junction Solenoid	TDS Co., Ltd.	TDS-07A	24Vdc, 204mA max.	-	Evaluated together with unit	
Tray A, Tray B, Tray C, Tray D	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Job Separator, Model JS-730 (Option)</b>						
Enclosure Inner Tray Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	
Inner Tray	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.85 mm thick	UL94	UL(E98529)	



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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 <sup>1.</sup>	
<b>Document Feeder, Model DP-770 (Option)</b>						
Feed Motor	Minebea Motor Manufacturing Corp.	17PM-J349-G2VS	Stepper type 24Vdc, 1.3A	-	Evaluated together with unit	
Lift Motor	Mitsumi Electric Co., Ltd.	M42SP-6TK	Stepper type 24Vdc, 0.4A	-	Evaluated together with unit	
Conveying Motor	Minebea Motor Manufacturing Corp.	17PM-J349-P1VS	Stepper type 24Vdc, 1.3A	-	Evaluated together with unit	
Reverse Motor	Minebea Motor Manufacturing Corp.	17PM-J349-G2VS	Stepper type 24Vdc, 1.3A	-	Evaluated together with unit	
Reverse - Press Solenoid	TDS Co., Ltd.	TDS-KN12E	24V dc, 0.7A	--	Evaluated together with unit	
Reverse - Junction Solenoid	TDS Co., Ltd.	TDS-08SL	24V dc, 462mA max.	--	Evaluated together with unit	
Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	
Enclosure Front Cover, Rear Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.2 mm thick	UL94	UL(E98529)	
Enclosure Top Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	
Enclosure Interface Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Enclosure Base	Sabic Innovative Plastic Japan L L C	C6600	5VB, Min. 2.7 mm thick	UL94	UL(E45587)	
Enclosure Push SW Holder, Sponge B Mount	Sabic Innovative Plastic Japan L L C	C6600	5VB, Min. 2.2 mm thick	UL94	UL(E45587)	



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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 <sup>1.</sup>	
Cursor Cover, Front Cursor, Rear Cursor, Original Table, Table Cover, Sub Table, Table Wire Cover, Loop Tray, PF Lift Guide, Lower PF Guide, Left PF Guide, Bottom Rear Cover, Bottom Right Cover, Bottom Left Cover, Reading Guide, Original Plate, DP Handle, PF Cover Handle, Rear Cover Lid, Original Eject Stopper	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Document Feeder, Model DP-771 (Option)</b>						
Feed Motor	Nidec Servo Corp.	KV4239-N3B002	Stepper type 24Vdc, 0.95A	-	Evaluated together with unit	
Lift Motor	Minebea Motor Manufacturing Corp.	PM35L-048-MIL4	Stepper type 24Vdc, 700mA (Peak)	-	Evaluated together with unit	
Conveying Motor	Nidec Servo Corp.	KV4239-N3B002	Stepper type 24Vdc, 0.95A	-	Evaluated together with unit	
Resist Motor	Shinano Kenshi Co., Ltd.	STP-42H1004	Stepper type 24Vdc, 1.28A	-	Evaluated together with unit	
Resist Motor, Alternate	Nidec Servo Corp.	KV4239-N3B002A	Stepper type 24Vdc, 0.95A	-	Evaluated together with unit	
Eject Motor	Shinano Kenshi Co., Ltd.	STP-42H1004	Stepper type 24Vdc, 1.28A	-	Evaluated together with unit	
CIS Fan	Nidec Corp.	D04X-24TH 52 (V)	24Vdc, 0.088A max.	-	Evaluated together with unit	
Motor Fan (Optional)	Nidec Corp.	D04R-24TM 19 (EX)	24Vdc, 0.08A max.	-	Evaluated together with unit	
Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	



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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 <sup>1.</sup>	
Enclosure Front Cover, Rear Cover, Left Cover, Rear Bottom Cover, Lift Table, Interface Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Enclosure Eject Tray, PF Cover, Upper Guide, Lower PF Guide	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	
Enclosure Base Table	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.5 mm thick	UL94	UL(E98529)	
Enclosure Low Conveying Guide	Bayer Material Science L L C	FR3006 HF	5VB, Min. 2.0 mm thick	UL94	UL(E33640)	
Enclosure Push SW Holder	Sabic Innovative Plastic Japan L L C	C6600	5VB, Min. 2.2 mm thick	UL94	UL(E45587)	
Right Bottom Cover, Rear Cover Lid, Sub Table, Table Cover, Rear Table Cover, Front Cursor, Rear Cursor, Cursor Cover, Slide Tray, Reading Guide, Reading Pulley, Right Reading Guide, Left Reading Guides, Front Cover Handle, PF Cover Handle, Original Plate	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	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 <sup>1.</sup>	
<b>Finisher, Model DF-770 (Option)</b>						
Carry Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Staple Motor	Fuji Micro Co., Ltd.	FM-116K-7PA CF	24Vdc, 1.09A	--	Evaluated together with unit	
Stapler Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Middle Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Eject Release Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Eject Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Tray Motor	Mabuchi Motor Co., Ltd.	RS-385PH-16140	24V, 420mA	--	Evaluated together with unit	
Width Adjustment Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Knock Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Top Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	
Front Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	
Enclosure Top Cover, Top Open Cover, Front Cover, Front Open Cover, Rear Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	



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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 <sup>1.</sup>	
Enclosure Left Cover, Left Upper Cover, Rear Cover Lid, Interface Cover, Handle Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Main Tray, Slide Main Tray, Paper Stopper, Bottom Cover, Foot Covers	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Finisher, Model DF-790 (Option)</b>						
Front Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	
Eject Manual Staple Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	
Carry Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Shelter Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Staple Motor	Fuji Micro Co., Ltd.	FM-116K-7PA CF	24Vdc, 1.09A	--	Evaluated together with unit	
Stapler Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Eject Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	--	Evaluated together with unit	
Eject Release Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Shift Release Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	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 <sup>1.</sup>	
Middle Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Tray Motor	Nidec Corp.	48M069G010	24V dc, 2.6A max.	--	Evaluated together with unit	
Width Adjustment Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Knock Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	-	Evaluated together with unit	
Shift Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Eject Clutch	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
Sub Tray Junction Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 400mA max.	--	Evaluated together with unit	
Drum Junction Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 400mA max.	--	Evaluated together with unit	
BF Junction Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 400mA max.	--	Evaluated together with unit	
Enclosure Top Cover, Front Upper Cover, Front Middle Cover, Rear Upper Cover, Rear Lower Cover, Left Lower Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	
Enclosure Top Rear Lid, Front Handle Cover, Front Lower Cover, Front Left Upper Cover, Interface Cover, Rear Cover Lid, Left Cover, Main Exit Cover, Eject Tray B Cover, Retaining Guide, Turn Guide	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Main Tray, Slide Main Tray, Slide Tray B, Top Front Lid	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	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 <sup>1.</sup>	
<b>Booklet Folder, Model BF-730 (Option) for Finisher Model DF-790</b>						
Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	Three provided 40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	
Adjustment Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Width Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Two provided Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Carry Motor	Oki Micro Engineering Co., Ltd.	KCL42SCK500C	Stepper type 24Vdc, 300mA	--	Evaluated together with unit	
Blade Motor	Nidec Corp.	48M069G010	24Vdc, 2.6A max. Brushless Motor	--	Evaluated together with unit	
Fold Motor	Nidec Corp.	48M069F052	24Vdc, 2.6A max. Brushless Motor	-	Evaluated together with unit	
Staple Motor	Fuji Micro Co., Ltd.	FM-116K-7PA CF	24Vdc, 1.09A	-	Evaluated together with unit	
Junction Solenoid	TDS Co., Ltd.	TDS-08A	24V dc, 400mA max.	--	Evaluated together with unit	
Enclosure Eject Tray Base	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	
Enclosure Exit Open Cover, Left Cover, Front Saddle Cover, Rear Saddle Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Stock Tray, Eject Arm Holder, Eject Holder Cover, Exit Cover Lid	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	



IEC/EN 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 <sup>1</sup> .	
<b>Multi Tray Unit, Model MT-730 (Option) for Finisher Model DF-790</b>						
Interlock Switch	Omron Corp.	D3V-16506-3C25 (10E)	40Vdc/5A, 30Vdc/10A 50,000 Cycles (VDE) 100,000 Cycles (UL)	EN61058-1 UL1054	ENEC/VDE UL(E41515)	
Feed Motor	Mitsumi Electronic Co., Ltd.	M49SP-2K	Stepper type 24Vdc, 0.8A (Peak)	--	Evaluated together with unit	
Enclosure Side Covers (Front and Rear), Top Cover	Bayer Material Science L L C	FR3000	5VB, Min. 2.0mm thick	UL94	UL(E33640)	
Enclosure Right Cover	Bayer Material Science L L C	FR3000	5VB, Min. 2.3mm thick	UL94	UL(E33640)	
Enclosure Rear Cover Lid	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Trays, Right Cover Handle, Front Cover Lid	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Punch Unit, Model PH-7X (X: A, B, C or D) (Option)</b>						
Punch Motor	Nisca Corp.	NA4056001C	24Vdc, 7.8A max.	-	Evaluated together with unit	
Punch Shift Motor	Oki Micro Engineering Co., Ltd.	KFL42LCB661A	Stepper type 24Vdc, 650mA	-	Evaluated together with unit	
Punch Solenoid	TDS Co., Ltd.	TDS-KN12SB	24Vdc, 1.2A max.	-	Evaluated together with unit	
PWB	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Attachment Kit for Document Finisher, Model AK-730 (Option)</b>						
Conveying Motor 1	Oki Micro Engineering Co., Ltd.	KCL42SCK560A	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
Conveying Motor 2	Oki Micro Engineering Co., Ltd.	KCL42SCK560A	Stepper type 24Vdc, 500mA	-	Evaluated together with unit	
Eject Junction Solenoid	TDS Co., Ltd.	TDS-08A	24Vdc, 400mA max.	-	Evaluated together with unit	
Enclosure Eject Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 1.85 mm thick	UL94	UL(E98529)	



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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 <sup>1.</sup>	
Enclosure Upper Front Cover, Front Right Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 1.9 mm thick	UL94	UL(E98529)	
Enclosure Left Cover, Left ISU Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Enclosure Left Upper Cover, Front Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.35 mm thick	UL94	UL(E98529)	
Left Junction Cover, Right Junction Cover, Lower Junction Cover, Upper Junction Cover, Top Junction Cover, Front Handle, Controller Cover	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Cassette Feeding Unit, Model PF-730 (Option)</b>						
Main Motor	Nidec Corp.	48M069F271	24Vdc, 2.2A max. Brushless Motor	-	Evaluated together with unit	
Lift Motor	Daiken Co., Ltd.	302K34403	Two provided 24Vdc, 150mA max.	-	Evaluated together with unit	
Feed Clutch	Daiken Co., Ltd.	MCA-50T	Two provided 24Vdc, 0.104A	-	Evaluated together with unit	
Conveying Clutch	Daiken Co., Ltd.	MCA-50T	Two provided 24Vdc, 0.104A	-	Evaluated together with unit	
Primary Feed Solenoid	TDS Co., Ltd.	TDS-08A	Two provided 24Vdc, 1A max.	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302H74508	240V, 16W	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	Two provided. 250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302H74509	120V, 15W	-	Evaluated together with unit	



IEC/EN 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 <sup>1.</sup>	
Cassette Heater for 120V (Optional) - Thermal Fuse (optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	
Enclosure Rear Cover, Left Cover, Right Cover, Feed Low Cover, Interface Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Enclosure Connector Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7500	5VB, Min. 2.2 mm thick	UL94	UL(E98529)	
Cassettes, Front Upper Cover, Front Lower Cover, Front Right Cover, Cord Cover, Feed Low Cover Handle	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Cassette Feeding Unit, Model PF-740 (Option)</b>						
Main Motor	Nidec Corp.	48M069F271	24Vdc, 2.2A max. Brushless Motor	-	Evaluated together with unit	
Lift Motor	Daiken Co., Ltd.	303NF4401	Two provided 24Vdc, 550mA max.	-	Evaluated together with unit	
Feed Clutch	Daiken Co., Ltd.	MCA-50T	Two provided 24Vdc, 0.104A	-	Evaluated together with unit	
Conveying Clutch	Daiken Co., Ltd.	MCA-50T	Two provided 24Vdc, 0.104A	-	Evaluated together with unit	
Upper Conveying Clutch	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
Primary Feed Solenoid	TDS Co., Ltd.	TDS-08A	Two provided 24Vdc, 1A max.	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302H74508	240V, 16W	-	Evaluated together with unit	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	Two provided. 250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302H74509	120V, 15W	-	Evaluated together with unit	



IEC/EN 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 <sup>1</sup> .	
Cassette Heater for 120V (Optional) - Thermal Fuse (optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	
Enclosure Rear Cover, Left Cover, Right Cover, Feed Low Cover, Interface Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.0 mm thick	UL94	UL(E98529)	
Enclosure Connector Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7500	5VB, Min. 2.2 mm thick	UL94	UL(E98529)	
Deck Cassettes, Front Right Cover, Cord Cover, Slider Mount Cover, Feed Low Cover Handle	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Deck Unit, Model PF-770 (Option)</b>						
Main Motor	Nidec Corp.	48M069F271	24Vdc, 2.2A max. Brushless Motor	-	Evaluated together with unit	
Lift Motor	Nisca Corp.	NA4056A11C	24Vdc, 2A max.	-	Evaluated together with unit	
Feed Clutch	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
Conveying Clutch	Daiken Co., Ltd.	MCA-50T	24Vdc, 0.104A	-	Evaluated together with unit	
Primary Feed Solenoid	TDS Co., Ltd.	TDS-08A	24Vdc, 1A max.	-	Evaluated together with unit	
Appliance Inlet	Rong Feng Industrial Co., Ltd.	SS-120 Series	250Vac, 10A (for 220 - 240V) 250Vac, 15A (for 120V)	EN60320-1 IEC60320-1 UL498	NEMKO UL(E102641)	
AC Outlet (Optional)	Rong Feng Industrial Co., Ltd.	SS-130 Series	250Vac, 10A (for 220 - 240V) 250Vac, 15A (for 120V)	EN60320-1/-2-2 IEC60320-1 UL498	VDE NEMKO UL(E95905)	
Power Supply Cord (Optional)	Hirakawa Hewtech Corp.	Plug: VM0301 Cord: SVT H05VV-F Connector: VM0303B	250V, 10A 1.0 mm <sup>2</sup> (17 AWG) x 3 250V, 10A	EN60799 HD21.5 S3 EN60320-1/-2-2 UL62, UL817	SEMKO UL (E35708)	
Cassette Heater for 220 - 240V (Optional)	Kurabe Industrial Co., Ltd.	302H74508	240V, 16W	-	Evaluated together with unit	



IEC/EN 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 <sup>1.</sup>	
Cassette Heater for 220 - 240V (Optional) - Thermal Fuses (Optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	Two provided. 250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	
Cassette Heater for 120V (Optional)	Kurabe Industrial Co., Ltd.	302H74509	120V, 15W	-	Evaluated together with unit	
Cassette Heater for 120V (Optional) - Thermal Fuse (optional)	Therm-O-Disc (Emerson Japan Ltd.)	E4A50167C	250V, 10A, 167°C	EN 60691 UL60691	VDE UL(E40667)	
Interconnecting Cable	Various	Various	Style 21119, AWG 26 x 9 + AWG 20 x 3, max. 3.05m long, VW-1; Style 3385, AWG 20 x 1 earthed wire	UL758	UL	
Enclosure Top Cover, Front Cover, Right Cover, Rear Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 2.4 mm thick	UL94	UL(E98529)	
Enclosure Left Wire Cover	Teijin Chemicals Ltd., Research & Development Div.	TN-7900	5VB, Min. 1.8 mm thick	UL94	UL(E98529)	
Enclosure Left Cover	Various	Various	Steel, Min. 0.8 mm thick	--	--	
Front Cover Handle, Attachment Knob, Pulley Covers, Switch Lever	Various	Various	Min. HB75	UL94	UL	
Printed Wiring Board	Various	Various	Min. V-1, min. 105°C	UL796	UL	
<b>Fax Kit, Model Fax System (V) (Option)</b>						
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 for 220 - 240V	Okaya Electric Industries Co., Ltd.	RA-501M-C6	500V	UL1449	UL (E322107)	
Hybrid IC (IC10) for 220 - 240V	NEC Tokin	THS-56F, THS-56 or THS-65	--	--	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 <sup>1</sup> .	
Optical Isolator (PC10)	Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div.	TLP620, TLP320,TLP627, TLP621, TLP629, TLP181 or TLP521	Isolation Voltage 5000V. (except TLP181/521) Isolation Voltage 3750V. (TLP181) Isolation Voltage 2500V. (TLP521)	IEC/EN 60950-1 (except TLP521)  UL 1577	BSI  UL(E67349) UL(E152349)	
Optical Isolator (PC10), Alternate	NEC Electronics Corp Compound Semiconductor Device Div. or Renesas Electronics Corp.	PS2501, PS2505, PS2532, PS2565 or PS2701	Isolation Voltage 5000V. (except PS2701) Isolation Voltage 3750V. (PS2701)	IEC/EN 60950-1 (PS2532, PS2565)  UL 1577	SEMKO  UL(E72422)	
Optical Isolator (PC11) for 120V	Toshiba Corp., Semiconductor Co. Discrete Semiconductor Div.	TLP620, TLP320,TLP627, TLP621, TLP629, TLP181 or TLP521	Isolation Voltage 5000V. (except TLP181/521) Isolation Voltage 3750V. (TLP181) Isolation Voltage 2500V. (TLP521)	IEC/EN 60950-1 (except TLP521)  UL 1577	BSI  UL(E67349) UL(E152349)	
Optical Isolator (PC11), Alternate for 120V	NEC Electronics Corp Compound Semiconductor Device Div. or Renesas Electronics Corp.	PS2501, PS2505, PS2532, PS2565 or PS2701	Isolation Voltage 5000V. (except PS2701) Isolation Voltage 3750V. (PS2701)	IEC/EN 60950-1 (PS2532, PS2565)  UL 1577	SEMKO  UL(E72422)	
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)	
Modular Jacks (JK10, JK11)	JST Mfg. Co., Ltd.	MJ-62J-RD	Type RJ-11	UL1863	UL(E174260)	
Connector (CN10)	Iriso 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, C265) (Optional)	Murata Mfg. Co., Ltd.	GF	250V, 10pF- 220pF, Y2 type	EN/IEC60384-14 UL60950-1	SEMKO UL(E316111)	
PWB	Various	Various	94V-1 or better	UL796	UL	



IEC/EN 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 <sup>1.</sup>	
<b>Printer NIC, Model IB-50 (Option)</b>						
Network PWB	Silex Technology Inc.	IB-50	Glass Epoxy Min. V-1	UL 94	UL	
Supplementary information:						
1. An asterisk indicates a mark that assures the agreed level of surveillance.						



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	I <sub>rated</sub> (A)	P (W)	Fuse #	I <sub>fuse</sub> (A)	Condition/status	
108V/60Hz	11.86	--	1151	F001/F002/ F003	11.86	M.N.L 1 / Copy mode	
120V/60Hz	10.59	12.0	1147	F001/F002/ F003	10.59	M.N.L 1 / Copy mode	
132V/60Hz	10.37	--	1181	F001/F002/ F003	10.37	M.N.L 1 / Copy mode	
198V/50Hz	6.05	--	1041	F001/F002/ F003	6.05	M.N.L 1 / Copy mode	
220V/50Hz	5.87	7.2	1081	F001/F002/ F003	5.87	M.N.L 1 / Copy mode	
240V/50Hz	5.22	7.2	1086	F001/F002/ F003	5.22	M.N.L 1 / Copy mode	
264V/50Hz	4.32	--	1047	F001/F002/ F003	4.32	M.N.L 1 / Copy mode	
198V/60Hz	6.00	--	1009	F001/F002/ F003	6.00	M.N.L 1 / Copy mode	
220V/60Hz	5.80	7.2	1075	F001/F002/ F003	5.80	M.N.L 1 / Copy mode	
240V/60Hz	5.43	7.2	1065	F001/F002/ F003	5.43	M.N.L 1 / Copy mode	
264V/60Hz	4.35	--	1045	F001/F002/ F003	4.35	M.N.L 1 / Copy mode	
Supplementary information: M.N.L 1: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)							

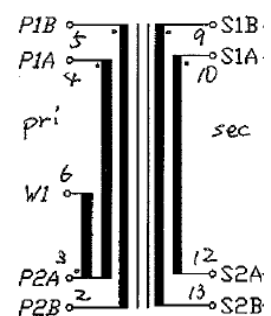


IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

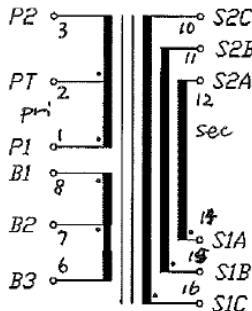
2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
<b>SWPS-PCB ETX1KC836EE (pri, gnd, sec)</b>							
Functional:							
Pri - pri (before fuse)	< 420	< 250	1.6	3.0	2.5	3.0	
Basic / supplementary:							
Pri – gnd (traces at C004, C005, C007, C008, C031, C032, C106)	< 420	< 250	2.2	3.0	2.5	3.0	
Pri – gnd (traces)	< 420	< 250	2.2	3.0	2.5	3.0	
Pri – gnd (chassis)	< 420	< 250	2.2	6.7	2.5	6.7	
Reinforced:							
Pri – sec (traces at T101)	627	258	5.0	15.6	5.2	15.6	
Pri – sec (traces at T201)	568	217	5.0	7.2	5.0 *	7.2	
Pri – sec (traces at PC001)	< 420	< 250	4.3	5.6	5.0	5.6	
Pri – sec (traces at PC101, PC103, PC201)	< 420	< 250	4.3	9.4	5.0	9.4	
Pri – sec (traces at PC202)	< 420	< 250	4.3	8.0	5.0	8.0	
Pri – sec (traces at C214)	< 420	< 250	4.3	7.5	5.0	7.5	
* Required creepage was 4.4mm, however, 5.0mm was taken from required clearance.							



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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)
<b>Transformer T101</b>						
Basic / supplementary:						
Pri – core <sup>1)</sup> (external)	--	--	--	6.8	--	7.7
Pri – core <sup>1)</sup> (internal)	--	--	--	5.8	--	5.8
Sec – core <sup>1)</sup> (external)	--	--	--	6.5	--	8.7
Sec – core <sup>1)</sup> (internal)	--	--	--	4.7	--	4.7
Reinforced:						
Pri – sec (internal)	627	258	5.0	7.0	5.2	7.0
Pri – sec (external)	627	258	5.0	13.3	5.2	16.4
	<p>Construction details of Transformer T101:  <sup>1)</sup> core is floating; no electric potential defined.  Concentric pri windings and sec windings on a bobbin.  Winding ends are internally fixed with tapes, they are soldered on pins.  End tape (2 layers) above outer sec winding.  Bobbin: Type CY9610, Panasonic Electric Works Co., Ltd, or  Type PM-9720, PM-9820, or PM-8390, Sumitomo Bakelite Co., Ltd. or  Type CP-J-8800, Hitachi Chemical Co., Ltd.; Phenole, V-0, min. 0.64mm thick</p>  <p>Distances from core to any pri- component:  dcl: min. 15.1mm, dcr: min. 15.1mm  Distances from core to any sec- component:  dcl: min. 10.5mm, dcr: min. 12.4mm</p>					



IEC/EN 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)
<b>Transformer T201</b>						
Basic / supplementary:						
Pri – core <sup>1)</sup> (external)	--	--	--	4.5	--	4.5
Pri – core <sup>1)</sup> (internal)	--	--	--	6.0	--	6.0
Sec – core <sup>1)</sup> (external)	--	--	--	5.5	--	5.5
Sec – core <sup>1)</sup> (internal)	--	--	--	6.2	--	6.2
Reinforced:						
Pri – sec (internal)	568	217	5.0	8.5	5.0 *	8.5
Pri – sec (external)	568	217	5.0	10.0	5.0 *	10.0
	<p>Construction details of Transformer T201: <sup>1)</sup> core is floating; no electric potential defined. Concentric pri windings and sec windings on a bobbin. Winding ends are internally fixed with tapes, they are soldered on pins. End tape (2 layers) above outer pri winding. Bobbin: Type CY9610, Panasonic Electric Works Co., Ltd, or Type PM-9720, PM-9820, or PM-8390, Sumitomo Bakelite Co., Ltd. or Type CP-J-8800, Hitachi Chemical Co., Ltd.; Phenole, V-0, min. 0.64mm thick</p>  <p>Distances from core to any pri- component: dcl: min. 6.0mm, dcr: min. 11.2mm Distances from core to any sec- component: dcl: min. 9.4mm, dcr: min. 20.8mm</p>					
	* Required creepage was 4.4mm, however, 5.0mm was taken from required clearance.					

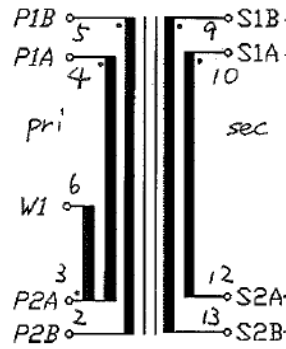


IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

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)
<b>SWPS-PCB ETX1KC836AE (pri, gnd, sec)</b>						
Functional:						
Pri - pri (before fuse)	< 210	< 125	0.6	3.0	1.5	3.0
Basic / supplementary:						
Pri – gnd (traces at C004, C005, C007, C008, C031, C032, C106)	< 210	< 125	1.1	3.0	1.5	3.0
Pri – gnd (traces)	< 210	< 125	1.1	3.0	1.5	3.0
Pri – gnd (chassis)	< 210	< 125	1.1	6.5	1.5	6.5
Reinforced:						
Pri – sec (traces at T101)	393	191	2.8	15.7	3.9	15.7
Pri – sec (traces at T201)	407	161	2.8	7.2	3.3	7.2
Pri – sec (traces at PC001)	< 210	< 125	2.2	5.6	3.0	5.6
Pri – sec (traces at PC101, PC103, PC201)	< 210	< 125	2.2	9.3	3.0	9.3
Pri – sec (traces at PC202)	< 210	< 125	2.2	8.2	3.0	8.2
Pri – sec (traces at C214)	< 210	< 125	2.2	7.4	3.0	7.4

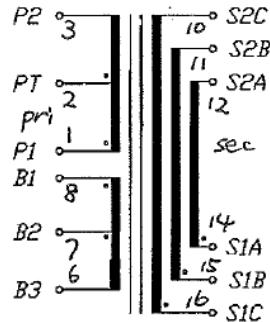


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Clause	Requirement + Test	Result - Remark	Verdict

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)
<b>Transformer T101</b>						
Basic / supplementary:						
Pri – core <sup>1)</sup> (external)	--	--	--	7.7	--	8.5
Pri – core <sup>1)</sup> (internal)	--	--	--	4.5	--	4.5
Sec – core <sup>1)</sup> (external)	--	--	--	7.0	--	8.5
Sec – core <sup>1)</sup> (internal)	--	--	--	3.3	--	3.3
Reinforced:						
Pri – sec (internal)	393	191	2.8	4.4	3.9	4.4
Pri – sec (external)	393	191	2.8	14.7	3.9	17.0
	<p>Construction details of Transformer T101:  <sup>1)</sup> core is floating; no electric potential defined.  Concentric pri windings and sec windings on a bobbin.  Winding ends are internally fixed with tapes, they are soldered on pins.  End tape (2 layers) above outer sec winding.  Bobbin: Type PM-9720, PM-9820, or PM-8390; Sumitomo Bakelite Co., Ltd.; Phenole, V-0, min. 0.64mm thick</p>  <p>Distances from core to any pri- component:  dcl: min. 15.1mm, dcr: min. 15.1mm  Distances from core to any sec- component:  dcl: min. 10.5mm, dcr: min. 12.4mm</p>					



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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)
<b>Transformer T201</b>						
Basic / supplementary:						
Pri – core <sup>1)</sup> (external)	--	--	--	5.1	--	5.1
Pri – core <sup>1)</sup> (internal)	--	--	--	5.9	--	5.9
Sec – core <sup>1)</sup> (external)	--	--	--	5.1	--	5.1
Sec – core <sup>1)</sup> (internal)	--	--	--	6.3	--	6.3
Reinforced:						
Pri – sec (internal)	407	161	2.8	8.4	3.3	8.4
Pri – sec (external)	407	161	2.8	10.2	3.3	10.2
<p>Construction details of Transformer T201:  <sup>1)</sup> core is floating; no electric potential defined.  Concentric pri windings and sec windings on a bobbin.  Winding ends are internally fixed with tapes, they are soldered on pins.  End tape (2 layers) above outer pri winding.  Bobbin: Type PM-9720, PM-9820, or PM-8390; Sumitomo Bakelite Co., Ltd.; Phenole, V-0, min. 0.64mm thick</p>  <p>Distances from core to any pri- component:  dcl: min. 6.0mm, dcr: min. 11.2mm  Distances from core to any sec- component:  dcl: min. 9.4mm, dcr: min. 20.8mm</p>						

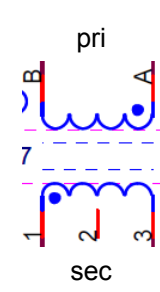


IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

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)	
<b>Current Detection-PCB (pri, gnd, sec)</b>							
Functional:							
--	--	--	--	--	--	--	--
Basic / supplementary:							
Pri – gnd (chassis)	< 420	< 250	2.2	22.8	2.5	33.6	
Reinforced:							
Pri – sec (traces at T2)	< 420	< 250	2.2	5.6	2.5	5.6	



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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)
<b>Transformer T2</b>						
Basic / supplementary:						
Pri – core <sup>1)</sup> (external)	--	--	--	7.2	--	7.2
Pri – core <sup>1)</sup> (internal)	--	--	--	5.6	--	5.6
Sec – core <sup>1)</sup> (external)	--	--	--	4.6	--	4.6
Sec – core <sup>1)</sup> (internal)	--	--	--	2.2	--	2.2
Reinforced:						
Pri (inner) – sec (pin)	< 420	< 250	2.2	7.4	2.5	7.4
Pri – sec (external)	< 420	< 250	2.2	11.8	2.5	11.8
	<p>Construction details of Transformer T2:  <sup>1)</sup> core is floating; no electric potential defined.  Concentric pri windings and sec winding separately on bobbins. Pri and sec windings are insulated by the pri bobbin.  Winding ends are internally fixed with tapes, they are soldered on pins.  End tape (2 layers) above outer pri winding.  Sec bobbin: Type PM-9820, Sumitomo Bakelite Co., Ltd.; Phenole, V-0, min. 0.6mm thick  Pri bobbin: Type FR200, Asahi Kasei Chemical Co., Ltd., or Type 2015SV or 2015SE, Ube Industries Ltd.; Polyamid, V-0, min. 0.6mm thick</p>  <p>Distances from core to any pri- component:  dcl: min. 3.6mm, dcr: min. 9.5mm  Distances from core to any sec- component:  dcl: min. 12.2mm, dcr: min. 14.3mm</p>					



IEC/EN 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)	
<b>Interlock system (PCB traces)</b>							
Basic:							
Before interlock switch – after interlock switch	DC 24	DC 24	1.1	1.3	1.1 *	1.3	
	* Required creepage was 0.5mm, however, 1.1mm was taken from required clearance.						
<b>Fixing Unit</b>							
Functional:							
--	--	--	--	--	--	--	
Basic / supplementary:							
Pri – gnd (chassis)	< 420	< 250	2.2	4.6	2.5	5.0	
Reinforced:							
a) Thermal Cutoff: pri – cap *)	--	--	--	4.6	--	5.0	
b) Thermal Cutoff cap – Heater Roller **)	--	--	--	0.6	--	0.6	
c) Thermistor **) (sec) – Heater Roller	--	--	--	0.0	--	0.0	
a)+b)+c)	< 420	< 250	4.3	5.2	5.0	5.2	
*) Cap of Thermal Cutoff is floating. **) Heater Roller is insulated by coating and Thermistor is contacted to Heater Roller through a thin film, but they are not considered as insulation.							



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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)	
<b>Heater PWB</b>							
Functional:							
--	--	--	--	--	--	--	--
Basic / supplementary:							
Pri – gnd (traces at C3, C4)	< 420	< 250	2.2	3.0	2.5	3.0	
Pri – gnd (traces at C25)	< 420	< 250	2.2	5.2	2.5	5.2	
Pri – gnd (traces)	< 420	< 250	2.2	3.0	2.5	3.0	
Pri – gnd (chassis)	< 420	< 250	2.2	3.0	2.5	3.0	
Reinforced:							
Pri – sec (traces)	< 420	< 250	4.3	5.2	5.0	5.2	
Pri – sec (traces at PH1, NC1, NC2)	< 420	< 250	4.3	5.3	5.0	5.3	
Pri – sec (traces at RY1)	< 420	< 250	4.3	5.3	5.0	5.3	



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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)
<b>Fax Kit, Model Fax System (V)</b>						
<b>NCU Board</b>						
Basic:						
TNV- SELV (traces at Relay RLY12)	120	71	1.1	2.4	1.5	2.4
TNV- SELV (traces at Relay RLY10)	120	71	1.1	2.7	1.5	2.7
TNV – gnd (traces at SA10)	120	71	1.1	2.1	1.5	2.1
TNV – gnd (traces at SA11)	120	71	1.1	2.6	1.5	2.6
TNV – gnd (traces at C12, C13)	120	71	1.1	2.8	1.5	2.8
TNV– SELV (traces at IC10 pins 2 - 3)	120	71	1.1	3.3	1.5	3.3
TNV – SELV (traces at CN10 pins 2 - 4)	120	71	1.1	2.5	1.5	2.5
TNV – SELV (traces at PC10, PC11)	120	71	1.1	2.6	1.5	2.6
<b>FCB Board</b>						
Basic:						
TNV – Chassis	120	71	1.1	3.8	1.5	3.8
TNV – SELV (traces at CN402 pin 2 – CN403 pin 1)	120	71	1.1	2.6	1.5	2.6
TNV - SELV (traces at C206, C207, C205, C265)	120	71	1.1	2.9	1.5	2.9
Supplementary information: Each required clearance has been multiplied by the altitude correction factor 1.07 for 2500m.						



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Clause	Requirement + Test	Result - Remark	Verdict

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U r.m.s. (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Basic:						
--		--	--	--	--	--
Supplementary:						
Tubing of primary wire of Cassette Heater		340	240	AC 3000V *	0.4	0.8
Reinforced:						
Transformer T101 of ETX1KC836AE		388	191	AC 3000V for 1 layer	2 layers	2 layers
Transformer T201 of ETX1KC836AE		356	149	AC 3000V for 1 layer	2 layers	2 layers
Transformer T101 of ETX1KC836EE		548	258	AC 3000V for 1 layer	2 layers	2 layers
Transformer T201 of ETX1KC836EE		412	165	AC 3000V for 1 layer	2 layers	2 layers
Transformer T2 of Current Detection PWB		340	240	AC 3000V for bobbin	0.4	0.6
Supplementary information: * Applied voltage was requested by the manufacturer.						



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Clause	Requirement + Test	Result - Remark	Verdict

4.3.8	TABLE: Batteries								N/A	
The tests of 4.3.8 are applicable only when appropriate battery data is not available										
Is it possible to install the battery in a reverse polarity position?										
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Max. current during normal condition										
Max. current during fault condition										
Test results:										Verdict
- Chemical leaks										
- Explosion of the battery										
- Emission of flame or expulsion of molten metal										
- Electric strength tests of equipment after completion of tests										
Supplementary information:										



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Clause	Requirement + Test					Result - Remark	Verdict
4.5	TABLE: Thermal requirements <i>See Tables on the ATTACHEMENT, Measurement Section.</i>						--
	Supply voltage (V) .....						—
	Ambient $T_{\min}$ (°C) .....						—
	Ambient $T_{\max}$ (°C) .....						—
Maximum measured temperature T of part/at::		T (°C)					Allowed $T_{\max}$ (°C)
Supplementary information:							
Temperature T of winding:		$t_1$ (°C)	$R_1$ (Ω)	$t_2$ (°C)	$R_2$ (Ω)	T (°C)	Allowed $T_{\max}$ (°C)
Supplementary information:							



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Clause	Requirement + Test	Result - Remark	Verdict

4.5.5	TABLE: Ball pressure test of thermoplastic parts		P
	Allowed impression diameter (mm) .....: ≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)
SWPS, Model ETX1KC836EE YC1, YC3 SWPS, Model ETX1KC836AE YC1, YC3 / PBT		125	1.5
SWPS, Model ETX1KC836EE YC4, YC5, YC6 SWPS, Model ETX1KC836AE YC4, YC5, YC6 / Nylon		125	1.5
SWPS, Model ETX1KC836EE L001, L002, L003 SWPS, Model ETX1KC836AE L001, L002 / PET		125	1.6
Heater PWB YC1 / PBT		125	1.4
Heater PWB YC3 / Polyamide		125	1.6
Heater PWB L1 / PBT		125	1.5
Heater PWB L2 / PBT		125	1.3
Supplementary information: None.			

4.7	Table: Resistance to fire					P
Part		Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
--		--	--	--	--	--
Supplementary information: See appended table 1.5.1 for details.						



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Clause	Requirement + Test	Result - Remark	Verdict

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
Functional:				
Heater PWB, Model 2LH0106 (Line – Neutral) *		AC	1500	No
Heater PWB, Model 2LH0105 (Line – Neutral) *		AC	1500	No
Basic / supplementary:				
Switching Power Supply Unit, Model ETX1KC836AE (primary - PE)		AC	1600	No
Switching Power Supply Unit, Model ETX1KC836EE (primary - PE)		AC	1950	No
Equipment Model 5500i for 120V (primary - PE)		AC	1600	No
Equipment Model 5500i for 220-240V (primary - PE)		AC	1950	No
Reinforced:				
Switching Power Supply Unit, Model ETX1KC836AE (primary - secondary)		AC	3000	No
Switching Power Supply Unit, Model ETX1KC836EE (primary - secondary)		AC	3000	No
Equipment Model 5500i for 120V (primary - secondary)		AC	3000	No
Equipment Model 5500i for 220-240V (primary - secondary)		AC	3000	No
Supplementary information: Test voltages applied for 1 min. each. *: F1, N1, C1, L1, R2 removed.				



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Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) .....				24 if not stated in each Observation	—
	Power source for EUT: Manufacturer, model/type, output rating .....				--	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Switching Power Supply Unit, Model ETX1KC836A E T101	24V output overload	120V/ 60Hz	7 h	--	--	Temp. of T101: 110°C Ambient temp.: 25°C. No hazard. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ETX1KC836A E T201	12V output overload	120V/ 60Hz	5.5 h	--	--	Temp. of T201: 73°C Ambient temp.: 25°C. No hazard. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ETX1KC836E E T101	24V output overload	240V/ 50Hz	4.5 h	--	--	Temp. of T101: 116°C No hazard. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ETX1KC836E E T201	12V output overload	240V/ 50Hz	3 h	--	--	Temp. of T201: 66°C No hazard. HV test: 3000Vac passed.
Switching Power Supply Unit, Model ETX1KC836A E Q101 D-S	Short	120V/ 60Hz	--	F101	5	24V output shut down immediately. F101 opened. Q102 damaged. No hazard. HV test: 3000Vac passed.



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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	
Switching Power Supply Unit, Model ETX1KC836A E C309	Short	120V/ 60Hz	10 min	--	--	24V output shut down. No hazard. HV test: 3000Vac passed.	
Switching Power Supply Unit, Model ETX1KC836A E C211	Open	120V/ 60Hz	10 min	--	--	24V output shut down. 12V output hiccupped. No hazard. HV test: 3000Vac passed.	
Switching Power Supply Unit, Model ETX1KC836A E D210	Short	120V/ 60Hz	10 min	--	--	All outputs hiccupped. No hazard. HV test: 3000Vac passed.	
Switching Power Supply Unit, Model ETX1KC836A E C412	Short	120V/ 60Hz	--	--	--	All outputs shut down immediately. No hazard. HV test: 3000Vac passed.	
Switching Power Supply Unit, Model ETX1KC836E Q101 D-S	Short	240V/ 50Hz	10 min	F101	10	F101 opened immediately. 24V output shut down. No hazard. HV test: 3000Vac, passed.	
Switching Power Supply Unit, Model ETX1KC836E C309	Short	240V/ 50Hz	10 min	--	--	24V output shut down. No hazard. HV test: 3000Vac passed.	



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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	
Switching Power Supply Unit, Model ETX1KC836E C211	Open	240V/ 50Hz	10 min	--	--	24V output shut down. 12V output hiccupped. No hazard. HV test: 3000Vac passed.	
Switching Power Supply Unit, Model ETX1KC836E D210	Short	240V/ 50Hz	10 min	--	--	24V output shut down. 12V output hiccupped. No hazard. HV test: 3000Vac passed.	
Switching Power Supply Unit, Model ETX1KC836E C412	Short	240V/ 50Hz	10 min	--	--	All outputs shut down. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0105 C2	Short	120V/ 60Hz	--	YF1	20	Output shut down immediately. YF1 opened. Tested three times. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0105 C10	Short	120V/ 60Hz	10 min	--	--	R19 opened. No hazard. Tested three times. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0105 R3	Short	120V/ 60Hz	10 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0105 R19	Short	120V/ 60Hz	10 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	



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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	
Heater PWB, Model 2LH0105 R19	Short	120V/ 60Hz	10 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0105 R23	Short	120V/ 60Hz	10 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0106 C2	Short	240V/ 50Hz	--	YF1	20	Output shut down immediately. YF1 opened. Tested three times. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0106 C10	Short	240V/ 50Hz	--	--	--	R19 opened. Tested three times. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0106 R3	Short	240V/ 50Hz	5 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0106 R19	Short	240V/ 50Hz	5 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0106 R19	Short	240V/ 50Hz	5 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	
Heater PWB, Model 2LH0106 R23	Short	240V/ 50Hz	5 min	--	--	Operated normally. No hazard. HV test: 3000Vac passed.	



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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	
High Voltage Unit, Main, Model EUK9MQB26 H C114	Short	24Vdc	10 min	--	--	Output M shut down immediately. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H C116	Open	24Vdc	10 min	--	--	Output shutdown immediately. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H R126	Short	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H R239	Open	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H R247	Short	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H C224	Short	24Vdc	10 min	--	--	Operated normally. No hazard.	



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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	
High Voltage Unit, Main, Model EUK9MQB26 H C227	Short	24Vdc	10 min	--	--	Output Vmag shut down immediately. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H Q603 C-E	Short	24Vdc	10 min	IP601	1.5	IP601 opened immediately. Q604 damaged. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H C609	Open	24Vdc	10 min	IP601	1.5	IP601 opened immediately. Q604 damaged. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H D603	Short	24Vdc	10 min	IP601	1.5	IP601 opened immediately. Q604 damaged. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H R519	Short	24Vdc	10 min	IP101	1.5	IP101 opened immediately. Q504 damaged. Tested three times. No hazard.	
High Voltage Unit, Main, Model EUK9MQB26 H C507	Open	24Vdc	10 min	--	--	Output Vrec shut down immediately. No hazard.	



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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	
High Voltage Unit, Main, Model EUK9MQB26 H ZD501	Short	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H D104	Short	24Vdc	10 min	IP101	1.5	IP101 opened immediately. Tested three times. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H Q106 C – E	Short	24Vdc	10 min	IP101	1.5	IP101 opened immediately. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H R151	Short	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H R327	Open	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H Q402 C – E	Short	24Vdc	10 min	--	--	Output Vmag increased. No hazard.	



IEC/EN 60950-1			
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	
High Voltage Unit, Main, Model EUK9MQB27 H ZD501	Short	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H C609	Short	24Vdc	10 min	--	--	Operated normally. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H Q604 C – E	Short	24Vdc	10 min	IP601	1.5	IP601 opened immediately. Tested three times. No hazard.	
High Voltage Unit, Main, Model EUK9MQB27 H C807	Open	24Vdc	10 min	--	--	Operated normally. No hazard.	
Resist Motor, DU Feed Motor 1, DU Feed Motor 2, Eject Motor, Conveying Motor (JS-731), Conveying Motor 1 (AK-730), Conveying Motor 2 (AK-730) Model KCL42SCK56 0	CE	24Vdc	10 min	--	--	Temp.: 136°C Motor winding opened. Ambient temp.: 23°C No hazard.	



IEC/EN 60950-1			
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	
Middle Feed Motor Model KV4239-T3B005	CE	24Vdc	10 min	--	--	Temp.: 75°C Motor winding opened. Ambient temp.: 23°C No hazard.	
Scanner Motor Model 302K917050	CE	24Vdc	10 min	--	--	Temp.: 69°C Motor winding opened. Ambient temp.: 23°C No hazard.	
Feed Motor (DP-770), Reverse Motor (DP-770) Model 17PM-J349-G2VS	CE	24Vdc	10 min	--	--	Temp.: 42°C Motor winding opened. Ambient temp.: 23°C No hazard.	
Lift Motor (DP-770) Model M42SP-6TK	CE	24Vdc	10 min	--	--	Temp.: 133°C Motor winding opened. Ambient temp.: 23°C No hazard.	
Conveying Motor (DP-770) Model 17PM-J349-P1VS	CE	24Vdc	10 min	--	--	Temp.: 42°C Motor winding opened. Ambient temp.: 23°C No hazard.	
Feed Motor (DP-771), Conveying Motor (DP-771) Model KV4239-N3B002	CE	24Vdc	10 min	--	--	Temp.: 78°C Motor winding opened. Ambient temp.: 23°C No hazard.	
Lift Motor (DP-771) Model PM35L-048-MIL4	CE	24Vdc	10 min	--	--	Temp.: 106°C Motor winding opened. Ambient temp.: 23°C No hazard.	



IEC/EN 60950-1			
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
Resist Motor (DP-771), Eject Motor (DP-771) Model STP-42H1004	CE	24Vdc	10 min	--	--	Temp.: 42°C Motor winding opened. Ambient temp.: 23°C No hazard.
Resist Motor (DP-771) Model KV4239-N3B002A	CE	24Vdc	10 min	--	--	Temp.: 78°C Motor winding opened. Ambient temp.: 23°C No hazard.



IEC/EN 60950-1			
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	
Carry Motor (DF-770), Middle Motor (DF-770), Eject Release Motor (DF-770), Width Adjustment Motor (DF-770), Knock Motor (DF-770), Carry Motor (DF-790), Shelter Motor (DF-790), Eject Release Motor (DF-790), Shift Release Motor (DF-790), Middle Motor (DF-790), Width Adjustment Motor (DF-790), Knock Motor (DF-790), Shift Motor (DF-790), Adjustment Motor (BF-730), Width Motor (BF-730), Carry Motor (BF-730) Model KCL42SCK50 0C	CE	24Vdc	10 min	--	--	Temp.: 112°C Motor winding opened. Ambient temp.: 23°C No hazard.	



IEC/EN 60950-1			
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	
Stapler Shift Motor (DF-770), Eject Motor (DF-770), Staple Shift Motor (DF-790), Eject Motor (DF-790), Punch Shift Motor (PH-7X) Model KFL42LCB66 1A	CE	24Vdc	10 min	--	--	Temp.: 84°C Motor winding opened. Ambient temp.: 23°C No hazard.	
Feed Motor (MT-730) Model M49SP-2K	CE	24Vdc	10 min	--	--	Temp.: 122°C Motor winding opened. No hazard.	



IEC/EN 60950-1			
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	
Resist Clutch, Middle Feed Clutch, Primary Feed Clutch, Feed Assist Clutch, Vertical Feed Clutch, MPF Feed Clutch, DU Feed Clutch 1, DU Feed Clutch 2, Eject Clutch (DF-790), Feed Clutch (PF-730), Conveying Clutch (PF-730), Feed Clutch (PF-740), Conveying Clutch (PF-740), Upper Conveying Clutch (PF-740), Feed Clutch (PF-770), Conveying Clutch (PF-770) Model MCA-50T	CE	24Vdc	2.5 h	--	--	Temp.: 90°C Temperature stabilized. Ambient temp.: 23°C No hazard.	
ID Sensor CL Solenoid Type TDS-08G	Plunger locked and CE	24Vdc	5 min	--	--	Temp.: 108°C Thermal Fuse opened in 2 min after locking and CE. Tested three times. No hazard.	



IEC/EN 60950-1			
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	
Primary Feed Solenoid, Eject Junction Solenoid, Sub Tray Junction Solenoid (DF-790), Drum Junction Solenoid (DF-790), BF Junction Solenoid (DF-790), Junction Solenoid (BF-730), Eject Junction Solenoid (AK-730), Primary Feed Solenoid (PF-730 / PF-740 / PF-770) Type TDS-08A	Plunger locked and CE	24Vdc	5 min	--	--	Temp.: 124°C Thermal Fuse opened in 3 min after locking and CE. Tested three times. No hazard.	
JS Junction Solenoid (JS-731) Type TDS-07A	Plunger locked and CE	24Vdc	3 h	--	--	Temp.: 92°C Temperature stabilized. No hazard.	
Reverse Press Solenoid (DF-770) Type TDS-KN12E	Plunger locked and CE	24Vdc	15 min	--	--	Temp.: 112°C Thermal Fuse opened in 9 min after locking and CE. Tested three times. No hazard.	
Reverse Junction Solenoid (DP-770) Type TDS-08SL	Plunger locked and CE	24Vdc	15 min	--	--	Temp.: 129°C Thermal Fuse opened in 13min after locking and CE. Tested three times. No hazard.	



IEC/EN 60950-1			
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	
Punch Solenoid Type TDS-KN12SB	Plunger locked and CE	24Vdc	5 min	--	--	Temp.: 103°C Thermal Fuse opened in 2 min after locking and CE. Tested three times. No hazard.	
Model 5500i Front Eject Fan, LVU/HVU Fan, Controller Fan, LSU Fan	Stalled fans	120V/ 60Hz	1 h	--	--	Temperature stabilized. Max temp. of SWPS T101 coil: 66°C. Ambient temp.: 26°C No hazard. HV test: 3000Vac passed.	
Model 5500i Drum/DLP Fan, DLP Fan, Rear Eject Fan, Toner Exhaust Fan	Stalled fans	120V/ 60Hz	2 h	--	--	Temperature stabilized. Max temp. of SWPS T101 coil: 42°C. Max temp. of Fuser Unit Primary Wire: 82°C. Ambient temp.: 26°C No hazard. HV test: 3000Vac passed.	
Model 5500i Container Fan, Heater PWB Fan, Rear Fuser Fan	Stalled fans	120V/ 60Hz	--	--	--	Machine was shut down immediately. No hazard. HV test: 3000Vac passed.	
Model 5500i Front Eject Fan, LVU/HVU Fan, Controller Fan, LSU Fan	Stalled fans	240V/ 50Hz	2 h	--	--	Temperature stabilized. Max temp. of SWPS T101 coil: 76°C. Ambient temp.: 25°C No hazard. HV test: 3000Vac passed.	
Model 5500i Drum/DLP Fan, DLP Fan, Rear Eject Fan, Toner Exhaust Fan	Stalled fans	240V/ 50Hz	2.5 h	--	--	Temperature stabilized. Max temp. of SWPS T101 coil: 48°C. Max temp. of Fuser Unit Primary Wire: 82°C. Ambient temp.: 25°C No hazard. HV test: 3000Vac passed.	



IEC/EN 60950-1							
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 5500i Container Fan, Heater PWB Fan, Rear Fuser Fan	Stalled fans	240V/ 50Hz	--	--	--	Machine shut down immediately. No hazard. HV test: 3000Vac passed.	
DP-771 CIS Fan, Motor Fan	Stalled fans	24Vdc	2 h	--	--	Temperature was stabilized. Max temp. of Feed Motor: 108°C. Ambient temp.: 25°C No hazard.	
Output connector for Cassette Feeding Unit Pin B1- B10	Overload	120V/ 60Hz	1 h	--	--	Overload current: 0.1A. Ambient temp.: 23°C No hazard.	
Output connector for Cassette Feeding Unit Pin A1	Overload	120V/ 60Hz	1 h	YF1	4	Overload current: 4.4A. Ambient temp.: 23°C No hazard.	
Model 5500i Heater thermal control	Disable	120V/ 60Hz	10 min	--	--	Thermal cutoff opened in 2 min after disabling. No hazard. HV test: 3000Vac passed.	
Model 5500i Heater thermal control	Disable	240V/ 50Hz	10 min	--	--	Thermal cutoff opened in 2 min after disabling. No hazard. HV test: 3000Vac passed.	
Ventilation openings closed	--	120V/ 60Hz	2 h	--	--	Copying. Temperature stabilized. Max. temp.: 91°C at Eject Motor. Max. temp. of T101: 40°C Max. temp. of T201: 43°C Ambient temp.: 25°C No hazards.	
Ventilation openings closed	--	240V/ 50Hz	3.5 h	--	--	Copying. Temperature stabilized. Max. temp.: 90°C at Eject Motor. Max. temp. of T101, T201: 46°C No hazards.	
Supplementary information: CE = Continuously Energized.							



**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	2010-07-08	2011-07-07
G14-C078	Temperature Recorder	4179	4179JA142	Yokogawa	2011-01-24	2012-01-23
G14-C089	AC Current Meter	2052-02	71BC00246	Yokogawa	2010-09-22	2011-09-21
G14-C094	Leakage current tester	228	348	Simpson	2010-06-23	2011-06-22
G14-C096	High Voltage probe	P6015A	B051259	Tektronix	2011-01-24	2012-01-23
G14-C097	Portable DC Ammeters & Voltmeters	201200	85AA1194	Yokogawa	2010-06-30	2011-06-29
G14-C099	Digital Multi Meter	(Fluke) 189	89410662	FLUKE	2010-08-12	2011-08-11
G14-C101	Temperature Recorder	437124	S5F703898	Yokogawa	2010-08-10	2011-08-09
G14-C102	Temperature Recorder	437124	S5F703899	Yokogawa	2010-08-10	2011-08-09
G14-C103	Steel Ball	TB-500	G14-C103	EXCEL	2010-09-17	2011-09-16
G14-C104	Steel Ball	TB-500	G14-C104	EXCEL	2010-09-17	2011-09-16
G14-C114	Temp. and Humidity Meter	NT3-D	50173024	Rotronic	2010-03-16	2011-03-15
G14-C117	Digital Force Gauge	Z2-500N	202869	IMADA	2010-10-22	2011-10-21
G14-C118	Stop Watch	SVAE101	756428	SEIKO S-YARD	2010-10-25	2011-10-24
G14-C122	Power Meter	253401	2534FA042	Yokogawa	2010-03-15	2011-03-14
G14-C123	Protractor	DS	---	Niigata Seiki	2010-05-21	2011-05-20
G14-C125	Dielectric Tester	TOS5051	BA002985	Kikusui	2010-07-01	2011-06-30
G14-C129	Digital Power Meter	760101	91K53574	Yokogawa	2010-06-21	2011-06-20
G14-C131	Vernier Caliper	GD-20B	10369	Mitsutoyo	2010-08-05	2011-08-04
G14-D001	Digital Oscilloscope	TDS3054B	B011872	Sony Tektronix	2010-05-12	2011-05-11

Supplementary information: The equipment was used with TMP.



Clause	Requirement + Test	Result - Remark	Verdict
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2.1.1.7	TABLE: Discharge test			P
Condition	$\tau$ calculated (s)	$\tau$ measured (s)	t u→ 0V (s)	Comments
AC132V, 60Hz				
Appliance inlet terminals Main SW OFF	---	292ms	1.4	Initial Voltage (peak) Vo: 187V After 1 sec: 8V
Appliance inlet terminals Main SW ON	---	132ms	0.5	Initial Voltage (peak) Vo: 185V After 1 sec: 0V
Appliance inlet terminals Main SW ON F001 opened	---	460ms	2	Initial Voltage (peak) Vo: 186V After 1 sec: 21V
Appliance inlet terminals Main SW ON F003 opened	---	516ms	2	Initial Voltage (peak) Vo: 183V After 1 sec: 16V
Appliance inlet terminals Main SW ON F001, F003 opened	---	464ms	2	Initial Voltage (peak) Vo: 184V After 1 sec: 22V
AC264V, 50Hz				
Appliance inlet terminals Main SW OFF	---	304ms	0.8	Initial Voltage (peak) Vo: 404V After 1 sec: 0V
Appliance inlet terminals Main SW ON	---	208ms	0.7	Initial Voltage (peak) Vo: 380V After 1 sec: 0V
Appliance inlet terminals Main SW ON F001 opened	---	428ms	2	Initial Voltage (peak) Vo: 368V After 1 sec: 40V
Appliance inlet terminals Main SW ON F003 opened	---	512ms	2	Initial Voltage (peak) Vo: 372V After 1 sec: 64V



Clause	Requirement + Test	Result - Remark	Verdict
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2.1.1.7	TABLE: Discharge test – continued.			P
Condition	$\tau$ calculated (s)	$\tau$ measured (s)	t u→ 0V (s)	Comments
Appliance inlet terminals Main SW ON F001, F003 opened	---	500ms	2	Initial Voltage (peak) Vo: 372V After 1 sec: 64V
Supplementary information: None.				

2.2.2	TABLE: SELV measurement (under normal conditions)				P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component	
		V peak	V d.c.		
132V, 60Hz					
Switching Power Supply Unit for, Model ETX1KC836AE T101	Cathode of D601 to Pin S1 (GND)	156	--	--	
Switching Power Supply Unit for, Model ETX1KC836AE T101	Output of L607 to Pin S1 (GND)	--	31.0	L607	
Switching Power Supply Unit for, Model ETX1KC836AE T201	Pin S1 to Pin S2 (GND)	45.2	--	--	
Switching Power Supply Unit for, Model ETX1KC836AE T201	Cathode of D402 to Pin S2 (GND)	--	16.1	D402	



Clause	Requirement + Test	Result - Remark	Verdict
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2.2.2	TABLE: SELV measurement (under normal conditions) – continued.				P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component	
264V, 50Hz					
Switching Power Supply Unit for, Model ETX1KC836EE T101	Cathode of D601 to Pin S1 (GND)	172	--	--	
Switching Power Supply Unit for, Model ETX1KC836EE T101	Output of L607 to Pin S1 (GND)	--	31.0	L607	
Switching Power Supply Unit for, Model ETX1KC836EE T201	Pin S1 to Pin S2 (GND)	61.6	--	--	
Switching Power Supply Unit for, Model ETX1KC836EE T201	Cathode of D402 to Pin S2 (GND)	--	18.0	D402	
24Vdc					
High Voltage Unit, Model EUK9MQB26H T102	Pin1 – Pin2	13.2	--	T102	
High Voltage Unit, Model EUK9MQB26H T201	Pin1 – Pin2	16.2	--	T201	
High Voltage Unit, Model EUK9MQB27H T101	Pin1- Pin2	12.4	--	T101	
High Voltage Unit, Model EUK9MQB27H T301	Pin1- Pin2	16.7	--	T301	
Supplementary information: None.					



Clause	Requirement + Test	Result - Remark	Verdict
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2.2.3	TABLE: SELV measurement (under fault conditions)		P
Location		Voltage (max.) (V)	Comments
132V, 60Hz			
Switching Power Supply Unit, Model ETX1KC836AE 24V output	28.8	Output shut down in 0.1 sec after shorting L607.	
Switching Power Supply Unit, Model ETX1KC836AE 12V output	15.3	Output shut down in 0.1 sec after shorting D402.	
264V, 50Hz			
Switching Power Supply Unit, Model ETX1KC836EE 24V output	28.8	Output shut down in 0.1 sec after shorting L607.	
Switching Power Supply Unit, Model ETX1KC836EE 12V output	15.7	Output shut down in 0.1 sec after shorting D402.	
24Vdc			
High Voltage Unit, Model EUK9MQB26H YC4 pin1 – YC4 pin2	24.5	Output shut down in 0.1 sec after shorting between the input and output of T102.	
High Voltage Unit, Model EUK9MQB26H YC3 pin1 – YC3 pin2	30.2	Output shut down in 0.1 sec after shorting between the input and output of T201.	
High Voltage Unit, Model EUK9MQB27H YC3 pin1 – YC3 pin2	27.8	Output shut down in 0.1 sec after shorting between the input and output of T101.	
High Voltage Unit, Model EUK9MQB27H YC4 pin1 – YC4 pin2	32.1	Output shut down in 0.1 sec after shorting between the input and output of T301.	
Supplementary information: None.			



Clause	Requirement + Test	Result - Remark	Verdict
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2.4.2	TABLE: Limited current circuit measurement					P
Location		Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
Switching Power Supply Unit, Model ETX1KC836AE (Input 120V)						
C214 (No fault)	209	0.020	--	0.7		
C214 (C211 shorted)	--	0.015	--	0.7		
Switching Power Supply Unit, Model ETX1KC836EE (Input 240V)						
C214 (No fault)	332	0.055	--	0.7		
C214 (C211 shorted)	--	0.020	--	0.7		
High Voltage Unit, Model EUK9MQB26H (Input 24Vdc)						
Output Vmag (No fault)	4.48k	0.15	--	0.7		
Output Vmag (R241 opened)	--	0.14	--	0.7		
Output T (No fault)	4.26k	0.12	--	0.7		
Output T (C609 opened)	--	0.11	--	0.7		
Output Vrec (No fault)	200Vdc	0.01	--	0.7		
Output Vrec (ZD501 shorted)	--	0.0	--	0.7		
High Voltage Unit, Model EUK9MQB27H (Input 24Vdc)						
Output Vmag (No fault)	4.22kVpk	0.13	--	0.7		
Output Vmag (R325 shorted)	--	0.13	--	0.7		
Output T (No fault)	4.28kVdc	0.12	--	0.7		
Output T (C609 opened)	--	0.10	--	0.7		
Supplementary information: None.						



Clause	Requirement + Test	Result - Remark	Verdict
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2.5	TABLE: Limited power source measurement		P
	Limits	Measured	Verdict
According to Table 2C for USB Connector 5V output (USB on Operation Unit)			
current (in A)	200	0.63	P
apparent power (in VA)	250	2.7	P
According to Table 2C for USB Connector 5V output (USB on Controller Box)			
current (in A)	200	0.65	P
apparent power (in VA)	250	2.8	P
Supplementary information: None.			

2.6.3.4	TABLE: Resistance of earthing measurement		P
Location	Voltage drop (V)	Comments	
Inlet earth to hinge of DP Unit, DP-770	1.10		
Inlet earth to hinge of DP Unit, DP-771	1.12		
Inlet earth to Front Bottom metal	0.44		
Inlet earth to Front Bottom metal of Paper Feed Unit, Model PF-730	0.50		
Inlet earth to Front Bottom metal of Paper Feed Unit, Model PF-740	0.52		
Inlet earth to Front Bottom metal of Paper Feed Unit, Model PF-770	0.86		
Supplementary information: Tested current 40A for 120 sec.			



Clause	Requirement + Test	Result - Remark	Verdict
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2.10.2	Table: Working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
120V, 60Hz				
Switching Power Supply Unit, Model ETX1KC836AE				
T101 P1 – S1 (PRI – EARTH)	142	307	16.4kHz	
T101 P1 – S2 (PRI - SEC)	191	388	16.5kHz	
T101 P2 – S1 (PRI – EARTH)	129	234	1.3kHz	
T101 P2 – S2 (PRI - SEC)	139	262	8.9kHz	
T101 W1 – S1 (PRI – EARTH)	169	393	16.5kHz	
T101 W1 – S2 (PRI – SEC)	133	262	2.6kHz	
T201 P1 – S1 (PRI – SEC)	149	356	2.5kHz	
T201 P1 – S2 (PRI – EARTH)	161	407	1.2kHz	
T201 P2 – S1 (PRI – SEC)	133	265	0.8kHz	
T201 P2 – S2 (PRI – EARTH)	130	231	1.2kHz	
T201 B1 – S1 (PRI – SEC)	81.5	208	0.9kHz	
T201 B1 – S2 (PRI – EARTH)	87.5	275	0.1kHz	
T201 B2 – S1 (PRI – SEC)	80.4	199	1.8kHz	
T201 B2 – S2 (PRI – EARTH)	82.4	218	7.9kHz	
T201 B3 – S1 (PRI – SEC)	85.7	216	0.1kHz	
T201 B3 – S2 (PRI – EARTH)	81.1	209	1.7kHz	
D209 Cathode – T201 S1 (PRI – SEC)	74.8	196	1.1kHz	
D209 Cathode – T201 S2 (PRI – EARTH)	69.8	176	8.5kHz	



Clause	Requirement + Test	Result - Remark	Verdict
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2.10.2	Table: Working voltage measurement – continued.			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
240V, 50Hz				
Switching Power Supply Unit, Model ETX1KC836EE				
T101 P1 – S1 (PRI – EARTH)	193	422	20.0kHz	
T101 P1 – S2 (PRI - SEC)	258	548	16.7kHz	
T101 P2 – S1 (PRI – EARTH)	110	259	0.2kHz	
T101 P2 – S2 (PRI - SEC)	118	271	0.2kHz	
T101 W1 – S1 (PRI – EARTH)	233	627	18.0kHz	
T101 W1 – S2 (PRI – SEC)	172	520	16.8kHz	
T201 P1 – S1 (PRI – SEC)	165	412	51.2kHz	
T201 P1 – S2 (PRI – EARTH)	217	568	50.5kHz	
T201 P2 – S1 (PRI – SEC)	128	372	0.6kHz	
T201 P2 – S2 (PRI – EARTH)	160	316	0.1kHz	
T201 B1 – S1 (PRI – SEC)	154	368	0.1kHz	
T201 B1 – S2 (PRI – EARTH)	80.6	252	3.3kHz	
T201 B2 – S1 (PRI – SEC)	138	320	0.1kHz	
T201 B2 – S2 (PRI – EARTH)	159	380	2.6kHz	
T201 B3 – S1 (PRI – SEC)	115	320	2.3kHz	
T201 B3 – S2 (PRI – EARTH)	142	332	0.1kHz	
D209 Cathode – T201 S1 (PRI – SEC)	97	308	25.5kHz	
D209 Cathode – T201 S2 (PRI – EARTH)	159	344	0.1kHz	
Supplementary information: None.				



Clause	Requirement + Test	Result - Remark	Verdict
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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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		A: 108V, 60Hz, standby		B: 132V, 60Hz, standby		
t <sub>amb1</sub> (°C):	A: --    B: --	t <sub>amb2</sub> (°C):		A: 26    B: 26		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		A T (°C)	B T (°C)	A T (°C)	B T (°C)	
SWPS T101 coil		45	47	51.5	53.5	105
SWPS T101 core		46	48	52.5	54.5	105
SWPS T201 coil		50	50	56.5	56.5	105
SWPS T201 core		47	47	53.5	53.5	105
SWPS L001 coil		33	32	39.5	38.5	90
SWPS L011 coil		29	29	35.5	35.5	90
SWPS L402 coil		46	46	52.5	52.5	90
SWPS L607 coil		48	49	54.5	55.5	90
SWPS D005 body		41	39	47.5	45.5	105
SWPS D401 body		53	54	59.5	60.5	105
SWPS D601 body		52	53	58.5	59.5	105
SWPS Q101 body		47	51	53.5	57.5	105
SWPS C105 body		34	34	40.5	40.5	105
SWPS K002 body		52	52	58.5	58.5	80
SWPS PC101 body		43	43	49.5	49.5	80
SWPS YC1 body		33	33	39.5	39.5	80
SWPS YC4 body		28	28	34.5	34.5	80
HVV T102 coil		32	32	38.5	38.5	90
HVV T201 coil		32	31	38.5	37.5	90
HVV T202 coil		32	32	38.5	38.5	90
HVV T501 coil		33	33	39.5	39.5	90



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	A T (°C)	B T (°C)	A T (°C)	B T (°C)	
HVU T601 body	31	31	37.5	37.5	90
HVU T701 coil	31	31	37.5	37.5	90
Heater PWB, L1 coil	30	29	36.5	35.5	90
Heater PWB, L2 coil	30	30	36.5	36.5	90
Heater PWB, RY1 body	33	33	39.5	39.5	80
Heater PWB, NC1 body	30	29	36.5	35.5	105
Heater PWB, YC1 body	30	30	36.5	36.5	80
Heater PWB, YC3 body	30	30	36.5	36.5	80
Inlet body	28	27	34.5	33.5	--
Fuser Unit Primary Wire	63	63	69.5	69.5	200
Fuser Unit Secondary Wire	54	54	60.5	60.5	150
Fuser Drawer	30	29	36.5	35.5	-- *
Fuser Cover	69	70	75.5	76.5	-- *
Plastic Enclosure (Rear Top cover)	30	29	36.5	35.5	95
Plastic Enclosure (Operation Panel)	52	52	58.5	58.5	95
Metal Enclosure	30	29	36.5	35.5	70
LSU Fan	29	29	35.5	35.5	100
Rear Eject Fan	39	38	45.5	44.5	100
Right Eject Fan	52	52	58.5	58.5	100
Heater PWB Fan	35	35	41.5	41.5	100
Rear Fuser Fan	35	35	41.5	41.5	100
Toner Exhaust Fan	32	32	38.5	38.5	100
LVU/HVU Fan	30	30	36.5	36.5	100
Controller Fan	33	32	39.5	38.5	100
Drum/DLP Fan (Front)	38	38	44.5	44.5	100
Drum/DLP Fan (Rear)	31	31	37.5	37.5	100
Front Eject Fan	55	54	61.5	60.5	100



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	A T (°C)	B T (°C)	A T (°C)	B T (°C)	
DLP Fan	34	33	40.5	39.5	100
Fuser Motor	35	35	41.5	41.5	100
Resist Motor (Model 5500i, 4500i)	33	32	39.5	38.5	100
Feed Motor (Model 5500i, 4500i)	34	34	40.5	40.5	100
Middle Feed Motor	31	30	37.5	36.5	100
Feed Belt Motor	38	37	44.5	43.5	100
MPF Lift Motor	28	27	34.5	33.5	100
DLP Motor	41	41	47.5	47.5	100
Container Motor	34	34	40.5	40.5	100
Drum Motor	36	36	42.5	42.5	100
Scanner Motor	34	33	40.5	39.5	100
Lift Motor	30	30	36.5	36.5	100
DU Feed Motor 1 (Model 5500i, 4500i)	43	43	49.5	49.5	100
DU Feed Motor 2 (Model 5500i, 4500i)	32	32	38.5	38.5	100
Polygon Motor	31	31	37.5	37.5	100
Eject Motor	59	59	65.5	65.5	100
Middle Hopper Motor	30	30	36.5	36.5	100
Primary Feed Clutch	31	31	37.5	37.5	90
Feed Assist Clutch	31	31	37.5	37.5	90
Vertical Feed Clutch	28	28	34.5	34.5	90
MPF Feed Clutch	30	29	36.5	35.5	90
ID Sensor CL Solenoid	35	34	41.5	40.5	90
Primary Feed Solenoid	27	27	33.5	33.5	90
Eject Solenoid	59	59	65.5	65.5	90
Container Fan	32	32	38.5	38.5	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)					
*: Unlikely unintentional contacted and provided suitable warning labels.					
Temperatures measured with winding resistance method: Not used.					



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		C: 108V, 60Hz, copying		D: 132V, 60Hz, copying		
t <sub>amb1</sub> (°C):	C: --    D: --	t <sub>amb2</sub> (°C):		C: 26    D: 26		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		C T (°C)	D T (°C)	C T (°C)	D T (°C)	
SWPS T101 coil		41	42	47.5	48.5	105
SWPS T101 core		41	43	47.5	49.5	105
SWPS T201 coil		43	43	49.5	49.5	105
SWPS T201 core		43	44	49.5	50.5	105
SWPS L001 coil		47	45	53.5	51.5	90
SWPS L011 coil		37	36	43.5	42.5	90
SWPS L402 coil		41	42	47.5	48.5	90
SWPS L607 coil		51	54	57.5	60.5	90
SWPS D005 body		52	50	58.5	56.5	105
SWPS D401 body		54	56	60.5	62.5	105
SWPS D601 body		60	62	66.5	68.5	105
SWPS Q101 body		46	50	52.5	56.5	105
SWPS C105 body		37	38	43.5	44.5	105
SWPS K002 body		49	49	55.5	55.5	80
SWPS PC101 body		39	40	45.5	46.5	80
SWPS YC1 body		42	42	48.5	48.5	80
SWPS YC4 body		35	35	41.5	41.5	80
HVV T102 coil		38	38	44.5	44.5	90
HVV T201 coil		42	42	48.5	48.5	90
HVV T202 coil		51	53	57.5	59.5	90
HVV T501 coil		39	39	45.5	45.5	90



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	C T (°C)	D T (°C)	C T (°C)	D T (°C)	
HVU T601 body	52	51	58.5	57.5	90
HVU T701 coil	45	44	51.5	50.5	90
Heater PWB, L1 coil	36	36	42.5	42.5	90
Heater PWB, L2 coil	38	38	44.5	44.5	90
Heater PWB, RY1 body	38	39	44.5	45.5	80
Heater PWB, NC1 body	37	37	43.5	43.5	105
Heater PWB, YC1 body	38	38	44.5	44.5	80
Heater PWB, YC3 body	38	38	44.5	44.5	80
Inlet body	36	36	42.5	42.5	--
Fuser Unit Primary Wire	62	61	68.5	67.5	200
Fuser Unit Secondary Wire	53	53	59.5	59.5	150
Fuser Drawer	36	36	42.5	42.5	-- *
Fuser Cover	62	65	68.5	71.5	-- *
Plastic Enclosure (Rear Top cover))	40	41	46.5	47.5	95
Plastic Enclosure (Operation Panel)	50	51	56.5	57.5	95
Metal Enclosure	38	38	44.5	44.5	70
LSU Fan	33	33	39.5	39.5	100
Rear Eject Fan	54	55	60.5	61.5	100
Right Eject Fan	41	41	47.5	47.5	100
Heater PWB Fan	45	45	51.5	51.5	100
Rear Fuser Fan	39	40	45.5	46.5	100
Toner Exhaust Fan	45	45	51.5	51.5	100
LVU/HVU Fan	39	39	45.5	45.5	100
Controller Fan	35	35	41.5	41.5	100
Drum/DLP Fan (Front)	52	51	58.5	57.5	100
Drum/DLP Fan (Rear)	37	37	43.5	43.5	100
Front Eject Fan	58	59	64.5	65.5	100



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	C T (°C)	D T (°C)	C T (°C)	D T (°C)	
DLP Fan	39	39	45.5	45.5	100
Fuser Motor	46	47	52.5	53.5	100
Resist Motor (Model 5500i, 4500i)	66	64	72.5	70.5	100
Feed Motor (Model 5500i, 4500i)	46	46	52.5	52.5	100
Middle Feed Motor	64	66	70.5	72.5	100
Feed Belt Motor	50	51	56.5	57.5	100
MPF Lift Motor	33	33	39.5	39.5	100
DLP Motor	47	47	53.5	53.5	100
Container Motor	37	37	43.5	43.5	100
Drum Motor	52	53	58.5	59.5	100
Scanner Motor	41	41	47.5	47.5	100
Lift Motor	36	37	42.5	43.5	100
DU Feed Motor 1 (Model 5500i, 4500i)	45	47	51.5	53.5	100
DU Feed Motor 2 (Model 5500i, 4500i)	58	61	64.5	67.5	100
Polygon Motor	41	41	47.5	47.5	100
Eject Motor	78	79	84.5	85.5	100
Middle Hopper Motor	37	37	43.5	43.5	100
Primary Feed Clutch	54	54	60.5	60.5	90
Feed Assist Clutch	69	69	75.5	75.5	90
Vertical Feed Clutch	38	38	44.5	44.5	90
MPF Feed Clutch	51	52	57.5	58.5	90
ID Sensor CL Solenoid	45	46	51.5	52.5	90
Primary Feed Solenoid	32	32	38.5	38.5	90
Eject Solenoid	76	77	82.5	83.5	90
Container Fan	58	59	64.5	65.5	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)					
*: Unlikely unintentional contacted and provided suitable warning labels.					
Temperatures measured with winding resistance method: Not used.					



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		C: 108V, 60Hz, copying		D: 132V, 60Hz, copying		
t <sub>amb1</sub> (°C):	C: --    D: --	t <sub>amb2</sub> (°C):		C: 23    D: 23		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		C T (°C)	D T (°C)	C T (°C)	D T (°C)	
Cassette Heater Body		62	77	71.5	86.5	-- *
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V) *: Unlikely unintentional contacted and provided suitable warning labels.						
Temperatures measured with winding resistance method: Not used.						

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		D: 132V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):	D: --	t <sub>amb2</sub> (°C):		D: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		D T (°C)	--	D T (°C)	--	
Controller Fan, Alternate		35	--	42.5	--	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P		
Temperatures were measured according cl. 1.4.5. Test in condition C 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.							
test voltage(s) (V):			C: 108V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):		C: --	t <sub>amb2</sub> (°C):		C: 25		
Temperature of part/at: (measured with thermocouples)			Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>	Allowed T <sub>max</sub> (°C)	
			C T (°C)	--			C T (°C)
Current Detection PWB T2 coil			42	--	49.5	--	90
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)							
Temperatures measured with winding resistance method: Not used.							



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P
Temperatures were measured according cl. 1.4.5. Test in condition 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.					
test voltage(s) (V):		D: 132V, 60Hz, copying		--	
t <sub>amb1</sub> (°C):	D: --	t <sub>amb2</sub> (°C):		D: 24	
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	D T (°C)	--	D T (°C)	--	
Feed Motor (DP-771)	78	--	86.5	--	100
Lift Motor (DP-771)	69	--	77.5	--	100
Conveying Motor (DP-771)	51	--	59.5	--	100
Resist Motor (DP-771)	56	--	64.5	--	100
Eject Motor (DP-771)	77	--	85.5	--	100
CIS Fan (DP-771)	45	--	53.5	--	100
Fan Motor (DP-771)	42	--	50.5	--	100
Plastic Cover (DP-771)	37	--	45.5	--	95
Adjustment Motor (BF-730)	37	--	45.5	--	100
Width Motor (BF-730)	36	--	44.5	--	100
Carry Motor (BF-730)	37	--	45.5	--	100
Blade Motor (BF-730)	30	--	38.5	--	100
Fold Motor (BF-730)	34	--	42.5	--	100
Staple Motor (BF-730)	30	--	38.5	--	100
Junction Solenoid (BF-730)	25	--	33.5	--	90
Plastic Enclosure (BF-730)	25	--	33.5	--	95
Resist Motor, Alternate (DP-771)	48	--	56.5	--	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)					
Temperatures measured with winding resistance method: Not used.					



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		D: 132V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):	D: --	t <sub>amb2</sub> (°C):		D: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		D T (°C)	--	D T (°C)	--	
Conveying Motor (JS-731)		73	--	80.5	--	100
JS Junction Solenoid (JS-731)		81	--	88.5	--	90
Conveying Motor (AK-730)		73	--	80.5	--	100
Eject Junction Solenoid (AK-730)		65	--	72.5	--	90
Plastic Enclosure (AK-730)		37	--	44.5	--	95
Carry Motor (DF-790)		57	--	64.5	--	100
Shelter Motor (DF-790)		38	--	45.5	--	100
Staple Motor (DF-790)		27	--	34.5	--	100
Stapler Shift Motor (DF-790)		38	--	45.5	--	100
Eject Motor (DF-790)		45	--	52.5	--	100
Eject Release Motor (DF-790)		53	--	60.5	--	100
Shift Release Motor (DF-790)		49	--	56.5	--	100
Middle Motor (DF-790)		68	--	75.5	--	100
Tray Motor (DF-790)		29	--	36.5	--	100
Width Adjustment Motor (DF-790)		31	--	38.5	--	100
Knock Motor (DF-790)		37	--	44.5	--	100
Shift Motor (DF-790)		53	--	60.5	--	100
Eject Clutch (DF-790)		68	--	75.5	--	90
Sub Tray Junction Solenoid (DF-790)		55	--	62.5	--	90
Drum Junction Solenoid (DF-790)		46	--	53.5	--	90
BF Junction Solenoid (DF-790)		29	--	36.5	--	90
Plastic Enclosure (DF-790)		29	--	36.5	--	95
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		D: 132V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):	D: --	t <sub>amb2</sub> (°C):		D: 23		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		D T (°C)	--	D T (°C)	--	
Feed Clutch (PF-740)		52	--	61.5	--	90
Conveying Clutch (PF-740)		31	--	40.5	--	90
Lift Motor (PF-740)		27	--	36.5	--	100
Main Motor (PF-740)		35	--	44.5	--	100
Primary Feed Solenoid (PF-740)		50	--	59.5	--	90
Upper Conveying Clutch (PF-740)		48	--	57.5	--	90
Feed Motor (MT-730)		76	--	85.5	--	100
Plastic Enclosure (MT-730)		32	--	41.5	--	95
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		D: 132V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):	D: --	t <sub>amb2</sub> (°C):		D: 22		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		D T (°C)	--	D T (°C)	--	
Main Motor (PF-770)		33	--	43.5	--	100
Lift Motor (PF-770)		25	--	35.5	--	100
Primary Feed Solenoid (PF-770)		48	--	58.5	--	90
Feed Clutch (PF-770)		57	--	67.5	--	90
Conveying Clutch (PF-770)		63	--	73.5	--	90
Plastic Enclosure (PF-770)		23	--	33.5	--	95
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition E 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		E: 132V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):	E: --	t <sub>amb2</sub> (°C):		E: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		E T (°C)	--	E T (°C)	--	
Feed Motor(DP-770)		61	--	68.5	--	100
Lift Motor(DP-770)		72	--	79.5	--	100
Conveying Motor(DP-770)		72	--	79.5	--	100
Reverse Motor(DP-770)		76	--	83.5	--	100
Reverse - Junction Solenoid(DP-770)		70	--	77.5	--	90
Plastic Enclosure(DP-770)		42	--	49.5	--	95
Reverse - Press Solenoid(DP-770)		63	--	70.5	--	90
Main Motor (PF-730)		36	--	43.5	--	100
Conveying Clutch (PF-730)		50	--	57.5	--	90
Feed Clutch (PF-730)		30	--	37.5	--	90
Lift Motor (PF-730)		28	--	35.5	--	100
Primary Feed Solenoid (PF-730)		54	--	61.5	--	90
Carry Motor (DF-770)		76	--	83.5	--	100
Staple Motor (DF-770)		33	--	40.5	--	100
Stapler Shift Motor (DF-770)		32	--	39.5	--	100
Middle Motor (DF-770)		80	--	87.5	--	100
Eject Release Motor (DF-770)		63	--	70.5	--	100
Eject Motor (DF-770)		82	--	89.5	--	100
Tray Motor (DF-770)		46	--	53.5	--	100
Width Adjustment Motor (DF-770)		44	--	51.5	--	100
Knock Motor (DF-770)		54	--	61.5	--	100
Plastic Enclosure (DF-770)		38	--	45.5	--	95



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at $T_{amb}$		Calculated temperature at $T_{ma}$		Allowed $T_{max}$ (°C)
	E T (°C)	--	E T (°C)	--	
Punch Motor (PH-7)	43	--	50.5	--	100
Punch Shift Motor (PH-7)	40	--	47.5	--	100
Supplementary information: Measured on model 5500i with DP-770, JS-731, PF-730, AK-730, DF-770, PF-770 and FAX System (V)					
Temperatures measured with winding resistance method: Not used.					

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		F: 132V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):	F: --	t <sub>amb2</sub> (°C):		F: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		F T (°C)	--	F T (°C)	--	
HVU T101 coil		35	--	43.5	--	90
HVU T201 coil		35	--	43.5	--	90
HVU T301 coil		41	--	49.5	--	90
HVU T401 coil		31	--	39.5	--	90
HVU T501 coil		30	--	38.5	--	90
HVU T601 body		33	--	41.5	--	90
HVU T701 coil		33	--	41.5	--	90
Feed Motor (3500i)		42	--	50.5	--	100
Resist Clutch (3500i)		30	--	38.5	--	90
DU Clutch 1 (3500i)		48	--	56.5	--	90
DU Clutch 2 (3500i)		55	--	63.5	--	90
Middle Feed Clutch (3500i)		60	--	68.5	--	90
Supplementary information: Measured on model 3500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		G: 198V, 60Hz, standby		H: 242V, 50Hz, standby		
t <sub>amb1</sub> (°C):		G: --    H: --		t <sub>amb2</sub> (°C):		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		G T (°C)	H T (°C)	G T (°C)	H T (°C)	
SWPS T101 coil		47	52	56.5	61.5	90
SWPS T101 core		46	51	55.5	60.5	90
SWPS T201 coil		46	48	55.5	57.5	90
SWPS T201 core		43	45	52.5	54.5	90
SWPS L001 coil		27	28	36.5	37.5	90
SWPS L003 coil		31	31	40.5	40.5	90
SWPS L011 coil		25	25	34.5	34.5	90
SWPS L402 coil		42	43	51.5	52.5	90
SWPS L607 coil		42	44	51.5	53.5	90
SWPS D005 body		32	32	41.5	41.5	105
SWPS D401 body		49	52	58.5	61.5	105
SWPS D601 body		49	52	58.5	61.5	105
SWPS Q101 body		59	71	68.5	80.5	105
SWPS C105 body		33	35	42.5	44.5	105
SWPS K002 body		53	54	62.5	63.5	80
SWPS PC101 body		30	30	39.5	39.5	80
SWPS YC1 body		27	28	36.5	37.5	80
SWPS YC4 body		24	25	33.5	34.5	80
HVU T102 coil		28	29	37.5	38.5	90
HVU T201 coil		28	29	37.5	38.5	90
HVU T202 coil		29	30	38.5	39.5	90
HVU T501 coil		30	31	39.5	40.5	90



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	G T (°C)	H T (°C)	G T (°C)	H T (°C)	
HVU T601 body	26	27	35.5	36.5	90
HVU T701 coil	26	27	35.5	36.5	90
Heater PWB, L1 coil	26	26	35.5	35.5	90
Heater PWB, L2 coil	26	27	35.5	36.5	90
Heater PWB, RY1 body	32	32	41.5	41.5	80
Heater PWB, NC1 body	27	27	36.5	36.5	105
Heater PWB, YC1 body	27	27	36.5	36.5	80
Heater PWB, YC3 body	27	27	36.5	36.5	80
Inlet body	24	24	33.5	33.5	--
Fuser Unit Primary Wire	62	62	71.5	71.5	200
Fuser Unit Secondary Wire	54	55	63.5	64.5	150
Fuser Drawer	27	27	36.5	36.5	-- *
Fuser Cover	83	82	92.5	91.5	-- *
LSU Fan	24	24	33.5	33.5	100
Rear Eject Fan	36	36	45.5	45.5	100
Right Eject Fan	43	44	52.5	53.5	100
Heater PWB Fan	31	31	40.5	40.5	100
Rear Fuser Fan	33	33	42.5	42.5	100
Toner Exhaust Fan	30	31	39.5	40.5	100
LVU/HVU Fan	26	27	35.5	36.5	100
Controller Fan	31	31	40.5	40.5	100
Drum/DLP Fan (Front)	24	24	33.5	33.5	100
Drum/DLP Fan (Rear)	24	25	33.5	34.5	100
Front Eject Fan	52	53	61.5	62.5	100
DLP Fan	25	26	34.5	35.5	100
Fuser Motor	32	32	41.5	41.5	100
Resist Motor (Model 5500i, 4500i)	30	31	39.5	40.5	100



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	G T (°C)	H T (°C)	G T (°C)	H T (°C)	
Feed Motor (Model 5500i, 4500i)	31	31	40.5	40.5	100
Middle Feed Motor	23	24	32.5	33.5	100
Feed Belt Motor	34	35	43.5	44.5	100
MPF Lift Motor	27	24	36.5	33.5	100
DLP Motor	40	40	49.5	49.5	100
Container Motor	31	32	40.5	41.5	100
Drum Motor	33	34	42.5	43.5	100
Scanner Motor	32	32	41.5	41.5	100
Lift Motor	25	25	34.5	34.5	100
DU Feed Motor 1 (Model 5500i, 4500i)	39	40	48.5	49.5	100
DU Feed Motor 2 (Model 5500i, 4500i)	26	27	35.5	36.5	100
Polygon Motor	27	28	36.5	37.5	100
Eject Motor	60	61	69.5	70.5	100
Middle Hopper Motor	24	25	33.5	34.5	100
Primary Feed Clutch	26	27	35.5	36.5	90
Feed Assist Clutch	27	28	36.5	37.5	90
Vertical Feed Clutch	24	24	33.5	33.5	90
MPF Feed Clutch	24	25	33.5	34.5	90
ID Sensor CL Solenoid	27	28	36.5	37.5	90
Primary Feed Solenoid	23	24	32.5	33.5	90
Eject Solenoid	60	61	69.5	70.5	90
Container Fan	30	30	39.5	39.5	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)					
*: Unlikely unintentional contacted and provided suitable warning labels.					
Temperatures measured with winding resistance method: Not used.					



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		I: 264V, 50Hz, standby		J: 198V, 60Hz, copying		
t <sub>amb1</sub> (°C):	I: --      J: --	t <sub>amb2</sub> (°C):		I: 24      J: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		I T (°C)	J T (°C)	I T (°C)	J T (°C)	
SWPS T101 coil		56	46	64.5	54.5	90
SWPS T101 core		54	39	62.5	47.5	90
SWPS T201 coil		49	43	57.5	51.5	90
SWPS T201 core		46	41	54.5	49.5	90
SWPS L001 coil		28	37	36.5	45.5	90
SWPS L003 coil		32	49	40.5	57.5	90
SWPS L011 coil		27	33	35.5	41.5	90
SWPS L402 coil		48	40	56.5	48.5	90
SWPS L607 coil		46	46	54.5	54.5	90
SWPS D005 body		33	40	41.5	48.5	105
SWPS D401 body		54	53	62.5	61.5	105
SWPS D601 body		54	62	62.5	70.5	105
SWPS Q101 body		80	44	88.5	52.5	105
SWPS C105 body		38	43	46.5	51.5	105
SWPS K002 body		54	48	62.5	56.5	80
SWPS PC101 body		32	35	40.5	43.5	80
SWPS YC1 body		29	35	37.5	43.5	80
SWPS YC4 body		25	32	33.5	40.5	80
HVU T102 coil		31	35	39.5	43.5	90
HVU T201 coil		30	39	38.5	47.5	90
HVU T202 coil		31	49	39.5	57.5	90
HVU T501 coil		32	37	40.5	45.5	90



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
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)	
HVU T601 body	29	49	37.5	57.5	90
HVU T701 coil	29	43	37.5	51.5	90
Heater PWB, L1 coil	27	32	35.5	40.5	90
Heater PWB, L2 coil	28	33	36.5	41.5	90
Heater PWB, RY1 body	33	37	41.5	45.5	80
Heater PWB, NC1 body	28	34	36.5	42.5	105
Heater PWB, YC1 body	28	34	36.5	42.5	80
Heater PWB, YC3 body	28	35	36.5	43.5	80
Inlet body	25	32	33.5	40.5	--
Fuser Unit Primary Wire	64	53	72.5	61.5	200
Fuser Unit Secondary Wire	56	49	64.5	57.5	150
Fuser Drawer	28	33	36.5	41.5	-- *
Fuser Cover	85	67	93.5	75.5	-- *
LSU Fan	24	31	32.5	39.5	100
Rear Eject Fan	36	52	44.5	60.5	100
Right Eject Fan	44	38	52.5	46.5	100
Heater PWB Fan	31	42	39.5	50.5	100
Rear Fuser Fan	33	37	41.5	45.5	100
Toner Exhaust Fan	31	42	39.5	50.5	100
LVU/HVU Fan	27	36	35.5	44.5	100
Controller Fan	31	32	39.5	40.5	100
Drum/DLP Fan (Front)	24	49	32.5	57.5	100
Drum/DLP Fan (Rear)	28	34	36.5	42.5	100
Front Eject Fan	53	56	61.5	64.5	100
DLP Fan	26	37	34.5	45.5	100
Fuser Motor	32	44	40.5	52.5	100



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	I T (°C)	J T (°C)	I T (°C)	J T (°C)	
Resist Motor (Model 5500i, 4500i)	31	54	39.5	62.5	100
Feed Motor (Model 5500i, 4500i)	31	43	39.5	51.5	100
Middle Feed Motor	24	62	32.5	70.5	100
Feed Belt Motor	35	48	43.5	56.5	100
MPF Lift Motor	25	30	33.5	38.5	100
DLP Motor	40	44	48.5	52.5	100
Container Motor	32	34	40.5	42.5	100
Drum Motor	34	49	42.5	57.5	100
Scanner Motor	32	38	40.5	46.5	100
Lift Motor	26	33	34.5	41.5	100
DU Feed Motor 1 (Model 5500i, 4500i)	40	44	48.5	52.5	100
DU Feed Motor 2 (Model 5500i, 4500i)	28	54	36.5	62.5	100
Polygon Motor	28	38	36.5	46.5	100
Eject Motor	61	73	69.5	81.5	100
Middle Hopper Motor	26	35	34.5	43.5	100
Primary Feed Clutch	28	50	36.5	58.5	90
Feed Assist Clutch	29	68	37.5	76.5	90
Vertical Feed Clutch	26	36	34.5	44.5	90
MPF Feed Clutch	26	48	34.5	56.5	90
ID Sensor CL Solenoid	30	44	38.5	52.5	90
Primary Feed Solenoid	24	29	32.5	37.5	90
Eject Solenoid	61	71	69.5	79.5	90
Container Fan	30	57	38.5	65.5	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)					
*: Unlikely unintentional contacted and provided suitable warning labels.					
Temperatures measured with winding resistance method: Not used.					



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition K and L 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		K: 242V, 50Hz, copying		L: 264V, 50Hz, copying		
t <sub>amb1</sub> (°C):	K: --    L: --	t <sub>amb2</sub> (°C):		K: 25    L: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		K T (°C)	L T (°C)	K T (°C)	L T (°C)	
SWPS T101 coil		46	49	53.5	56.5	90
SWPS T101 core		40	42	47.5	49.5	90
SWPS T201 coil		45	46	52.5	53.5	90
SWPS T201 core		43	44	50.5	51.5	90
SWPS L001 coil		37	38	44.5	45.5	90
SWPS L003 coil		45	46	52.5	53.5	90
SWPS L011 coil		34	35	41.5	42.5	90
SWPS L402 coil		41	43	48.5	50.5	90
SWPS L607 coil		47	50	54.5	57.5	90
SWPS D005 body		39	41	46.5	48.5	105
SWPS D401 body		54	57	61.5	64.5	105
SWPS D601 body		63	66	70.5	73.5	105
SWPS Q101 body		50	53	57.5	60.5	105
SWPS C105 body		45	48	52.5	55.5	105
SWPS K002 body		50	51	57.5	58.5	80
SWPS PC101 body		36	37	43.5	44.5	80
SWPS YC1 body		36	37	43.5	44.5	80
SWPS YC4 body		33	34	40.5	41.5	80
HVV T102 coil		36	37	43.5	44.5	90
HVV T201 coil		39	42	46.5	49.5	90
HVV T202 coil		47	52	54.5	59.5	90
HVV T501 coil		38	39	45.5	46.5	90



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	K T (°C)	L T (°C)	K T (°C)	L T (°C)	
HVU T601 body	50	50	57.5	57.5	90
HVU T701 coil	44	44	51.5	51.5	90
Heater PWB, L1 coil	33	33	40.5	40.5	90
Heater PWB, L2 coil	34	34	41.5	41.5	90
Heater PWB, RY1 body	38	38	45.5	45.5	80
Heater PWB, NC1 body	34	35	41.5	42.5	105
Heater PWB, YC1 body	35	35	42.5	42.5	80
Heater PWB, YC3 body	35	36	42.5	43.5	80
Inlet body	33	34	40.5	41.5	--
Fuser Unit Primary Wire	55	55	62.5	62.5	200
Fuser Unit Secondary Wire	51	51	58.5	58.5	150
Fuser Drawer	34	34	41.5	41.5	-- *
Fuser Cover	69	68	76.5	75.5	-- *
LSU Fan	32	32	39.5	39.5	100
Rear Eject Fan	53	55	60.5	62.5	100
Right Eject Fan	40	40	47.5	47.5	100
Heater PWB Fan	43	44	50.5	51.5	100
Rear Fuser Fan	38	39	45.5	46.5	100
Toner Exhaust Fan	43	44	50.5	51.5	100
LVU/HVU Fan	38	39	45.5	46.5	100
Controller Fan	34	34	41.5	41.5	100
Drum/DLP Fan (Front)	50	51	57.5	58.5	100
Drum/DLP Fan (Rear)	35	36	42.5	43.5	100
Front Eject Fan	57	58	64.5	65.5	100
DLP Fan	38	39	45.5	46.5	100
Fuser Motor	45	46	52.5	53.5	100



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P
Temperature of part/at: (measured with thermocouples)	Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
	K T (°C)	L T (°C)	K T (°C)	L T (°C)	
Resist Motor (Model 5500i, 4500i)	51	64	58.5	71.5	100
Feed Motor (Model 5500i, 4500i)	44	45	51.5	52.5	100
Middle Feed Motor	62	66	69.5	73.5	100
Feed Belt Motor	49	50	56.5	57.5	100
MPF Lift Motor	32	33	39.5	40.5	100
DLP Motor	46	46	53.5	53.5	100
Container Motor	36	37	43.5	44.5	100
Drum Motor	50	52	57.5	59.5	100
Scanner Motor	39	41	46.5	48.5	100
Lift Motor	34	35	41.5	42.5	100
DU Feed Motor 1 (Model 5500i, 4500i)	44	47	51.5	54.5	100
DU Feed Motor 2 (Model 5500i, 4500i)	50	60	57.5	67.5	100
Polygon Motor	39	40	46.5	47.5	100
Eject Motor	67	80	74.5	87.5	100
Middle Hopper Motor	35	36	42.5	43.5	100
Primary Feed Clutch	46	53	53.5	60.5	90
Feed Assist Clutch	67	69	74.5	76.5	90
Vertical Feed Clutch	37	38	44.5	45.5	90
MPF Feed Clutch	47	49	54.5	56.5	90
ID Sensor CL Solenoid	45	46	52.5	53.5	90
Primary Feed Solenoid	30	31	37.5	38.5	90
Eject Solenoid	67	78	74.5	85.5	90
Container Fan	58	59	65.5	66.5	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)					
*: Unlikely unintentional contacted and provided suitable warning labels.					
Temperatures measured with winding resistance method: Not used.					



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P		
Temperatures were measured according cl. 1.4.5. Test in condition J and K 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.							
test voltage(s) (V):			J: 198V, 60Hz, copying		K: 242V, 50Hz, copying		
t <sub>amb1</sub> (°C):		J: --    K: --	t <sub>amb2</sub> (°C):		J: 24    K: 24		
Temperature of part/at: (measured with thermocouples)			Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>	Allowed T <sub>max</sub> (°C)	
			J T (°C)	K T (°C)			
Cassette Heater Body			58	72	66.5	80.5	-- *
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V) *: Unlikely unintentional contacted and provided suitable warning labels.							
Temperatures measured with winding resistance method: Not used.							

4.5	TABLE: Temperature rise measurements					P	
Temperatures were measured according cl. 1.4.5. Test in condition L 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.							
test voltage(s) (V):			L: 264V, 50Hz, copying		--		
t <sub>amb1</sub> (°C):		L: --		t <sub>amb2</sub> (°C):		L: 24	
Temperature of part/at: (measured with thermocouples)			Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
			L T (°C)	--	L T (°C)	--	
Cassette Heater Body			82	--	90.5	--	-- *
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V) *: Unlikely unintentional contacted and provided suitable warning labels.							
Temperatures measured with winding resistance method: Not used.							



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition L 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):			L: 264V, 50Hz, copying		--	
t <sub>amb1</sub> (°C):		L: --	t <sub>amb2</sub> (°C):		L: 25	
Temperature of part/at: (measured with thermocouples)			Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>	Allowed T <sub>max</sub> (°C)
			L T (°C)	--		
Controller Fan, Alternate			35	--	42.5	--
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						

4.5	TABLE: Temperature rise measurements					P	
Temperatures were measured according cl. 1.4.5. Test in condition 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.							
test voltage(s) (V):			J: 198V, 60Hz, copying		--		
t <sub>amb1</sub> (°C):		J: --		t <sub>amb2</sub> (°C):		J: 23	
Temperature of part/at: (measured with thermocouples)			Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
			J T (°C)	--	J T (°C)	--	
Current Detection PWB T2 coil			36	--	45.5	--	90
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)							
Temperatures measured with winding resistance method: Not used.							



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition L 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		L: 264V, 50Hz, copying		--		
t <sub>amb1</sub> (°C):	L: --	t <sub>amb2</sub> (°C):		L: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		L T (°C)	--	L T (°C)	--	
Feed Motor (DP-771)		78	--	86.5	--	100
Lift Motor (DP-771)		69	--	77.5	--	100
Conveying Motor (DP-771)		51	--	59.5	--	100
Resist Motor (DP-771)		56	--	64.5	--	100
Eject Motor (DP-771)		77	--	85.5	--	100
CIS Fan (DP-771)		45	--	53.5	--	100
Fan Motor (DP-771)		42	--	50.5	--	100
Plastic Cover (DP-771)		37	--	45.5	--	95
Adjustment Motor (BF-730)		37	--	45.5	--	100
Width Motor (BF-730)		36	--	44.5	--	100
Carry Motor (BF-730)		37	--	45.5	--	100
Blade Motor (BF-730)		30	--	38.5	--	100
Fold Motor (BF-730)		34	--	42.5	--	100
Staple Motor (BF-730)		30	--	38.5	--	100
Junction Solenoid (BF-730)		25	--	33.5	--	90
Plastic Enclosure (BF-730)		25	--	33.5	--	95
Resist Motor, Alternate (DP-771)		48	--	45.5	--	100
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition L 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		L: 264V, 50Hz, copying		--		
t <sub>amb1</sub> (°C):	L: --		t <sub>amb2</sub> (°C):	L: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		L T (°C)	--	L T (°C)	--	
Conveying Motor (JS-731)		73	--	80.5	--	100
JS Junction Solenoid (JS-731)		81	--	88.5	--	90
Conveying Motor (AK-730)		73	--	80.5	--	100
Eject Junction Solenoid (AK-730)		65	--	72.5	--	90
Plastic Enclosure (AK-730)		37	--	44.5	--	95
Carry Motor (DF-790)		57	--	64.5	--	100
Shelter Motor (DF-790)		38	--	45.5	--	100
Staple Motor (DF-790)		27	--	34.5	--	100
Stapler Shift Motor (DF-790)		38	--	45.5	--	100
Eject Motor (DF-790)		45	--	52.5	--	100
Eject Release Motor (DF-790)		53	--	60.5	--	100
Shift Release Motor (DF-790)		49	--	56.5	--	100
Middle Motor (DF-790)		68	--	75.5	--	100
Tray Motor (DF-790)		29	--	36.5	--	100
Width Adjustment Motor (DF-790)		31	--	38.5	--	100
Knock Motor (DF-790)		37	--	44.5	--	100
Shift Motor (DF-790)		53	--	60.5	--	100
Eject Clutch (DF-790)		68	--	75.5	--	90
Sub Tray Junction Solenoid (DF-790)		55	--	62.5	--	90
Drum Junction Solenoid (DF-790)		46	--	53.5	--	90
BF Junction Solenoid (DF-790)		29	--	36.5	--	90
Plastic Enclosure (DF-790)		29	--	36.5	--	95
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition M 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		M: 264V, 50Hz, copying		--		
t <sub>amb1</sub> (°C):	M: --	t <sub>amb2</sub> (°C):		M: 23		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		M T (°C)	--	M T (°C)	--	
Feed Clutch (PF-740)		52	--	61.5	--	90
Conveying Clutch (PF-740)		31	--	40.5	--	90
Lift Motor (PF-740)		27	--	36.5	--	100
Main Motor (PF-740)		35	--	44.5	--	100
Primary Feed Solenoid (PF-740)		50	--	59.5	--	90
Upper Conveying Clutch (PF-740)		48	--	57.5	--	90
Feed Motor (MT-730)		76	--	85.5	--	100
Plastic Enclosure (MT-730)		32	--	41.5	--	95
Supplementary information: Measured on model 5500i with DP-770, JS-731, PF-730, AK-730, DF-770, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition L 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		L: 264V, 50Hz, copying		--		
t <sub>amb1</sub> (°C):	L: --	t <sub>amb2</sub> (°C):		L: 22		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		L T (°C)	--	L T (°C)	--	
Main Motor (PF-770)		33	--	43.5	--	100
Lift Motor (PF-770)		25	--	35.5	--	100
Primary Feed Solenoid (PF-770)		48	--	58.5	--	90
Feed Clutch (PF-770)		57	--	67.5	--	90
Conveying Clutch (PF-770)		63	--	73.5	--	90
Plastic Enclosure (PF-770)		23	--	33.5	--	95
Supplementary information: Measured on model 5500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition M 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		M: 264V, 50Hz, copying		--		
t <sub>amb1</sub> (°C):	M: --	t <sub>amb2</sub> (°C):		M: 25		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		M T (°C)	--	M T (°C)	--	
Feed Motor(DP-770)		61	--	68.5	--	100
Lift Motor(DP-770)		72	--	79.5	--	100
Conveying Motor(DP-770)		72	--	79.5	--	100
Reverse Motor(DP-770)		76	--	83.5	--	100
Reverse - Junction Solenoid(DP-770)		70	--	77.5	--	90
Plastic Enclosure(DP-770)		42	--	49.5	--	95
Reverse - Press Solenoid(DP-770)		63	--	70.5	--	90
Main Motor (PF-730)		36	--	43.5	--	100
Conveying Clutch (PF-730)		50	--	57.5	--	90
Feed Clutch (PF-730)		30	--	37.5	--	90
Lift Motor (PF-730)		28	--	35.5	--	100
Primary Feed Solenoid (PF-730)		54	--	61.5	--	90
Carry Motor (DF-770)		76	--	83.5	--	100
Staple Motor (DF-770)		33	--	40.5	--	100
Stapler Shift Motor (DF-770)		32	--	39.5	--	100
Middle Motor (DF-770)		80	--	87.5	--	100
Eject Release Motor (DF-770)		63	--	70.5	--	100
Eject Motor (DF-770)		82	--	89.5	--	100
Tray Motor (DF-770)		46	--	53.5	--	100
Width Adjustment Motor (DF-770)		44	--	51.5	--	100
Knock Motor (DF-770)		54	--	61.5	--	100
Plastic Enclosure (DF-770)		38	--	45.5	--	95



Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Temperature rise measurements – continued.				P	
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		M T (°C)	--	M T (°C)	--	
Punch Motor (PH-7)		43	--	50.5	--	100
Punch Shift Motor (PH-7)		40	--	47.5	--	100
Supplementary information: Measured on model 5500i with DP-770, JS-731, PF-730, AK-730, DF-770, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						

4.5	TABLE: Temperature rise measurements				P	
Temperatures were measured according cl. 1.4.5. Test in condition N 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 32.5°C(T <sub>ma</sub> ), as specified by the manufacturer.						
test voltage(s) (V):		N: 264V, 50Hz, copying		--		
t <sub>amb1</sub> (°C):	N: --	t <sub>amb2</sub> (°C):		N: 24		
Temperature of part/at: (measured with thermocouples)		Measured temperature at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)
		N T (°C)	--	N T (°C)	--	
HVU T101 coil		35	--	43.5	--	90
HVU T201 coil		35	--	43.5	--	90
HVU T301 coil		41	--	49.5	--	90
HVU T401 coil		31	--	39.5	--	90
HVU T501 coil		30	--	38.5	--	90
HVU T601 body		33	--	41.5	--	90
HVU T701 coil		33	--	41.5	--	90
Feed Motor (3500i)		42	--	50.5	--	100
Resist Clutch (3500i)		30	--	38.5	--	90
DU Clutch 1 (3500i)		48	--	56.5	--	90
DU Clutch 2 (3500i)		55	--	63.5	--	90
Middle Feed Clutch (3500i)		60	--	68.5	--	90
Supplementary information: Measured on model 3500i with DP-771, JS-731, PF-740, AK-730, DF-790, MT-730, PH-7A, BF-730, PF-770 and FAX System (V)						
Temperatures measured with winding resistance method: Not used.						



Clause	Requirement + Test	Result - Remark	Verdict
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4.6.1, 4.6.2	Table: Enclosure opening measurements		P
Location	Size (mm)	Comments	
Front A Cover on main unit	32.0 x 5.5 slot	Covering two areas of 137.1mm W x 14.9mm H	
Front B Cover on main unit	15.0 max. x 3.0 slot	Covering an area of 15.0mm W x 81.0mm H	
	13.0 x 9.5 slot	Covering an area of 13.0mm W x 75.0mm H	
Front Upper Right Cover on main unit	9.3 x 3.0 slot	Covering two areas of 9.3mm W x 26.8mm H	
		Covering two areas of 9.3mm W x 20.4mm H	
	12.8 x 3.0 slot	Covering two areas of 12.8mm W x 42.6mm H	
Front Right Lower Cover on main unit	16.8 x 3.0 slot	Covering an area of 16.8mm W x 15.0mm H	
Rear Upper Cover on main unit	8.0 max. x 3.0 slot	Covering an area of 61.0mm W x 45.0mm H	
		Covering two areas of 61.0mm W x 3.0mm H	
	3.5 max. slot	Covering an area of 48mm Φ	
Right Upper Cover on main unit	85.0 max. x 7.4 louver	Covering an area of 85.0mm W x 58.0mm H	
Right Middle R Cover on main unit	42.0 max. x 4.0 louver	Covering an area of 42.0mm W x 43.0mm H	
Right Cover on main unit	57.0 max. x 6.5 louver	Covering eight areas of 57.0mm max. W x 53.3mm max. H	
Right Lower R Cover on main unit	62.0 x 7.0 max. louver	Covering an area of 62.0mm W x 77.0mm H	
MPF Tray A on main unit	36.3 x 4.0 max. slot	Covering two areas of 36.3mm W x 32.0mm H	
Top Tray Cover on main unit	4.9 Φ hole	Covering an area of 104.7mm max. W x 28.7mm max. H	
Tray Rear Cover on main unit	4.9 Φ hole	Covering an area of 82.9 mm W x 72.7 mm H	
Left Cover on main unit	45.3 x 7.5 louver	Covering an area of 45.3 mm W x 30.5 mm H	
		Covering an area of 45.3 mm W x 42.2 mm H	
	82.3 x 7.5 louver	Covering an area of 82.3 mm W x 88.5 mm H	



Clause	Requirement + Test	Result - Remark	Verdict
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4.6.1, 4.6.2	Table: Enclosure opening measurements – continued.		P
Location	Size (mm)	Comments	
ISU Rear Ozone Filter Cover	40.2 x 2.0 slot	Covering an area of 46.5 mm W x 40.2 mm H	
	36.4 x 2.0 slot	Covering an area of 46.5 mm W x 36.4 mm H	
Left Rear Filter Lid, DUF Filter Lid	38.0 x 4 louver	Covering an area of 38.0mm W x 47.0mm H each	
Left Front Filter Lid	45.0 x 7.6 louver	Covering an area of 45.0mm W x 42.4mm H	
Left Filter Cover	25.5 x 3 slot	Covering two areas of 25.5mm W x 51.0mm H	
Rear Cover on DP-770	21.8 max. x 3.0 slot	Covering six areas of 21.8mm max. W x 26.9mm H	
Rear Cover on DP-771	27.7 x 6.0 louver	Covering an area of 27.7mm W x 61.5mm H	
Supplementary information: None.			



Clause	Requirement + Test	Result - Remark	Verdict
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5.1.6	TABLE: Touch current and protective conductor 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		
Earth terminal ("e" = open)	0.31	0.62	0.32	0.02	3.5	AC 132V, 60Hz
LAN Connector ("e" = close)	0.0	0.0	0.0	0.0	0.25	AC 132V, 60Hz
IB-50 LAN Connector ("e" = close)	0.0	0.0	0.0	0.0	0.25	AC 132V, 60Hz
FAX System (V) TNV Connector ("e" = close)	0.0	0.0	0.0	0.0	0.25	AC 132V, 60Hz
Earth terminal ("e" = open)	0.70	1.32	0.69	0.05	3.5	AC 264V, 50Hz
LAN Connector ("e" = close)	0.0	0.0	0.0	0.0	0.25	AC 264V, 50Hz
IB-50 LAN Connector ("e" = close)	0.0	0.0	0.0	0.0	0.25	AC 264V, 50Hz
FAX System (V) TNV Connector ("e" = close)	0.0	0.0	0.0	0.0	0.25	AC 264V, 50Hz
Supplementary information: None.						



Clause	Requirement + Test	Result - Remark	Verdict
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B	TABLE: MOTOR TESTS UNDER ABNORMAL CONDITIONS		P
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		--
B.7.2/.3	Test time (h):	7 (or see Comments)	--
Motor type / No.	Max. Temp. (°C)	Comments	
LSU Fan, Right Eject Fan Type D06R-24TH 04(AX)	58	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Front Eject Fan, Drum/DLP Fan Type D06F-24SH 03 (EX)	68	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Toner Exhaust Fan Type D05F-24PH-17 (EX)	71	Amb. temp.: 25°C. Cheesecloth did not ignite. No hazard.	
Rear Eject Fan Type 2410RL-05W-S60-C01	61	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Container Fan, Rear Fuser Fan Type D07F-24SS1 15B (EX)	78	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Heater PWB Fan Type D06F-24SH 12B (EX)	66	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
LVU/HVU Fan Type D08K-24TU 49 (AX)	48	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Controller Fan Type D06R-12TM 01 (EX)	48	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Controller Fan, Alternate Type D06R-05TM 12H1 (EX)	53	Amb. temp.: 25°C. Cheesecloth did not ignite. No hazard.	
DLP Fan Type D07F-24SS1 09 (EX)	72	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
CIS Fan (DP-771) Type D04X-24TH 52(V)	45	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Motor Fan (DP-771) Type D04R-24TM 19 (EX)	56	Amb. temp.: 25°C. Cheesecloth did not ignite. No hazard.	
Feed Motor for Model 3500i, DLP Motor Type 48M069F261	--	Sensing circuits provided with motor disconnected power to the motor in 1.07 sec. after locking. Test terminated in 10 min. No hazard.	
MPF Lift Motor Type RK-370CA-081050	--	Sensing circuits provided with motor disconnected power to the motor in 0.6sec. after locking. Test terminated in 10 min. No hazard.	



Clause	Requirement + Test	Result - Remark	Verdict
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B	TABLE: MOTOR TESTS UNDER ABNORMAL CONDITIONS – continued.		P
Motor type / No.	Max. Temp. (°C)	Comments	
Middle Hopper Motor Type RK-370CA-11670	148	Amb. temp.: 25°C. Cheesecloth did not ignite. No hazard.	
Middle Transfer Motor Type 48M069F201	--	Sensing circuits provided with motor disconnected power to the motor in 0.17 sec. after locking. Test terminated in 10 min. No hazard.	
Fuser Motor, Feed Belt Motor Type 42M069F251	--	Sensing circuits provided with motor disconnected power to the motor in 0.60 sec. after locking. Test terminated in 10 min. No hazard.	
Tray Motor (DF-770) Type RS-385PH-16140	--	Sensing circuits provided with motor disconnected power to the motor in 5.0 sec. after locking. Test terminated in 10 min. No hazard.	
Feed Motor for Model 5500i, 4500i, Main Motor (PF-730), Main Motor (PF-740), Main Motor (PF- 770) Type 48M069F271	--	Sensing circuits provided with motor disconnected power to the motor in 0.81 sec. after locking. Test terminated in 10 min. No hazard.	
Fold Motor (BF-730) Type 48M069F052	--	Sensing circuits provided with motor disconnected power to the motor in 1.07 sec. after locking. Test terminated in 10 min. No hazard.	
Container Motor Type RS-360SH-12420	--	Sensing circuits provided with motor disconnected power to the motor in 1.0 sec. after locking. Test terminated in 10 min. No hazard.	
Inner Motor Type RS-360SH-09600	--	Sensing circuits provided with motor disconnected power to the motor in 2.5 sec. after locking. Test terminated in 10 min. No hazard.	
Drum Motor Type 48M069G020	--	Sensing circuits provided with motor disconnected power to the motor in 0.97 sec. after locking. Test terminated in 10 min. No hazard.	
Lift Motor, Lift Motor (PF-730), Lift Motor (PF-740) Type 302K34403	95	Amb. temp.: 24°C. Cheesecloth did not ignite. No hazard.	
Lift Motor (PF-740) Type 3NF34401	--	Sensing circuits provided with motor disconnected power to the motor in 0.24 sec. after locking. Test terminated in 10 min. No hazard.	



Clause	Requirement + Test	Result - Remark	Verdict
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B	TABLE: MOTOR TESTS UNDER ABNORMAL CONDITIONS – continued.		P
Motor type / No.		Max. Temp. (°C)	Comments
Polygon Motor Type PT22ERG-KDB200-445-SD		--	Sensing circuits provided with motor disconnected power to the motor in 0.5 sec. after locking. Test terminated in 10 min. No hazard.
Staple Motor (DF-770), Staple Motor (DF-790), Staple Motor (BF-730) Type FM-116K-7PA CF		32	Amb. temp.: 25°C. Cheesecloth did not ignite. No hazard.
Tray Motor (DF-770) Type RS-385PH-16140		--	Sensing circuits provided with motor disconnected power to the motor in 5.0 sec. after locking. Test terminated in 10 min. No hazard.
Tray Motor (DF-790), Blade Motor (BF-730) Type 48M069G010		--	Sensing circuits provided with motor disconnected power to the motor in 1.0 sec. after locking. Test terminated in 10 min. No hazard.
Punch Motor (PH-7) Type NA4056O01C		--	Sensing circuits provided with motor disconnected power to the motor in 0.11 sec. after locking. Test terminated in 10 min. No hazard.
Lift Motor (PF-770) Type NA4056A11C		--	Sensing circuits provided with motor disconnected power to the motor in 0.25 sec. after locking. Test terminated in 10 min. No hazard.
Supplementary information: None.			



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict

### EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Differences according to.....: A11:2009 for EN 60950-1:2006

	CENELEC COMMON MODIFICATIONS (EN)	—
ZA	Normative references to international publications with their corresponding European publications	P

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N/A
1.2.13.14	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.7.2.1 and 7.3 of this annex.	Not connected to Cable Distribution Systems.	N/A
1.5.7.1	<b>Replace</b> the existing SNC by the following: In <b>Finland, Norway</b> and <b>Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	No such resistors.	N/A
1.7.2.1	<b>Add</b> as new SNC: In <b>Norway</b> and <b>Sweden</b> , the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be	Not connected to Cable Distribution Systems.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	<p>provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)."</p> <p>NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>"Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet."</p> <p>Translation to Swedish:</p> <p>"Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet."</p>		
1.7.5	<p><b>Add</b> the following paragraph to the existing SNC for <b>Denmark</b>:</p> <p>For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>	Class I equipment.	N/A
7.3	<p><b>Delete</b> the existing SNC for Norway and Sweden (based on NOTE 1 of IEC 60950-1:2005 + corr. 1).</p> <p><b>Add</b> as new SNC (based on future NOTE 3 of IEC 60950-1:200X):</p> <p>In <b>Norway</b> and <b>Sweden</b>, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>	Not connected to Cable Distribution Systems.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
1.5.1	<b>Sweden</b> <b>Delete</b> the A-deviation.		N/A
1.7.2.1	<b>Denmark</b> <b>Delete</b> the A-deviation.		N/A
1.7.5	<b>Denmark</b> <b>Delete</b> the A-deviation.		N/A
5.1.7.1	<b>Denmark</b> <b>Delete</b> the A-deviation.		N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
National Differences for <b>Canada (CA)</b> ; CSA C22.2 No. 60950-1:2 <sup>nd</sup> Edition			P
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Considered.	P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g. DP, CL2) specified in the CEC/NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.	Less than 3.0 m.	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single phase equipment.  The specified rated voltage is not exceeded the rating of the plug.	N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and "Class 2" or equivalent. Marking shall be located adjacent to the terminals and shall be visible during wiring.	No such terminals.	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	Not accessible and interchangeable fuses used for LPS.	P



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets, receptacles and medium-base or smaller lampholders if the supply branch circuit protection is not suitable.  Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require transformer overcurrent protection.	No standard supply outlets, no such construction.	N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	Considered.	P
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	Rating of Plug: 15A Rated current: max. 12.0A	P
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.	Not connected to d.c. mains.	N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment such as ATMs.	Not permanent connection.	N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5m unless shorter length used when intended for a special installation.  Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	Length of power supply cord: Between them.  Suitable type used.	P
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not such equipment.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.	No such terminals.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm <sup>2</sup> ).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No such motors.	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such disconnecting devices.	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No such systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No such liquids.	N/A
4.3.13.5	Equipment with lasers is required to meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.		P
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m <sup>3</sup> (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	No such systems.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m <sup>2</sup> (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	No such materials.	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.	No such radiation.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict

Other Differences - The following key national differences are based on requirements other than national regulatory requirements. The bi-national standard (CAN/CSA C22.2 No. 60950-1/UL 60950-1, Second Edition) referenced above should be consulted for further details on the national differences summarized below.

1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	(see appended table 1.5.1)	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.	Not connected to DC Mains.	N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V <sub>peak</sub> or 60 V <sub>d.c.</sub> , the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		P



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	No such constructions. Tested for b) at 40A. (see appended table 2.6.3.4)	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRTs.	N/A
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.	Not such equipment.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	Four handles to support the main unit. Tested with 3175.2N.	P
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	Max. touch current: 0.0mA	P
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded.  During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary	No such accessible parts.  (see appended table 5.3)	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	Min. AWG 26 cord provided.	P
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	Not such equipment.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
Annex NAF	Document (paper) shredders likely to be used in a home or home office (Pluggable Equipment Type A plug configuration) are required to comply with additional requirements, including markings/instructions, protection against inadvertent reactivation of a safety interlock, disconnection from the mains supply (via provision of an isolating switch), and protection against operator access (accessibility determined via new accessibility probe & probe/wedge).	Not such equipment.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	Korean National Differences		—
	Corresponding National Standard: K 60950-1		—
1.5.101	Addition: Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	No plugs provided. Suitable plug will be provided locally.	N/A
8	Addition: EMC The apparatus shall comply with the relevant CISPR standards.	See separate EMC test report.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
National Differences for <b>United States (US)</b> ; UL 60950-1:2 <sup>nd</sup> Edition			P
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Considered.	P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g. DP, CL2) specified in the NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.	Less than 3.0m.	P
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single phase equipment.  The specified rated voltage is not exceeded the rating of the plug.	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	Not accessible and interchangeable fuses used for LPS.	P
2.7.1	Suitable NEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets, receptacles and medium-base or smaller lampholders if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require transformer overcurrent protection.	No standard supply outlets, no such construction.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC.	Considered.	P
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	Rating of Plug: 15A Rated current: max. 12.0A	P
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.	Not connected to d.c. mains.	N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment such as ATMs.	Not permanent connection.	N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5m unless shorter length used when intended for a special installation.  Flexible power supply cords are required to be compatible with Article 400 of the NEC.	Length of power supply cord: Between them.  Suitable type used.	P
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not such equipment.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm <sup>2</sup> ).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S. wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No such motors.	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such disconnecting devices.	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No such systems.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No such liquids.	N/A
4.3.13.5	Equipment with lasers is required to meet the Code of Federal Regulations 21 CFR 1040.		P
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m <sup>3</sup> (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	No such systems.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m <sup>2</sup> (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	No such materials.	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Federal Regulations, 21 CFR 1020.	No such radiation.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict

Other Differences - The following key national differences are based on requirements other than national regulatory requirements. The bi-national standard (CAN/CSA C22.2 No. 60950-1/UL 60950-1, Second Edition) referenced above should be consulted for further details on the national differences summarized below.

1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	(see appended table 1.5.1)	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.	Not connected to DC Mains.	N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V <sub>peak</sub> or 60 V <sub>d.c.</sub> , the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		P



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	No such constructions. Tested for b) at 40A. (see appended table 2.6.3.4)	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRTs.	N/A
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.	Not such equipment.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	Four handles to support the main unit. Tested with 3175.2N.	P
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	Max. touch current: 0.0mA	P
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded.  During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary	No such accessible parts.  (see appended table 5.3)	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	Min. AWG 26 cord provided.	P
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	Not such equipment.	N/A



National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
Annex NAF	Document (paper) shredders likely to be used in a home or home office (Pluggable Equipment Type A plug configuration) are required to comply with additional requirements, including markings/instructions, protection against inadvertent reactivation of a safety interlock, disconnection from the mains supply (via provision of an isolating switch), and protection against operator access (accessibility determined via new accessibility probe & probe/wedge).		N/A



## TEST REPORT

### IEC 60825-1, 2<sup>nd</sup> Edition

### Part 1: Equipment classification and requirements

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**Test specification:**

**Standard** ..... : IEC 60825-1 : 2007 (2nd Edition)

**Test procedure** ..... : CB

**Non-standard test method** ..... : N/A

**Test Report Form No.** ..... : IEC60825\_1D

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**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.**

**Test item description** ..... : See IEC/EN 60950-1 test report.

**Trade Mark** ..... : See IEC/EN 60950-1 test report.

**Manufacturer** ..... : See IEC/EN 60950-1 test report.

**Model/Type reference** ..... : See IEC/EN 60950-1 test report.

**Ratings** ..... : See IEC/EN 60950-1 test report.



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**Copy of marking plate**

See IEC/EN 60950-1 test report.



**Summary of testing:**

Tested and evaluated in accordance with IEC/EN 60825-1 except for subclause 4.14.1 Non-optical hazards. For the subclause, compliance will be checked in the end equipment.

For measuring laser radiations from Laser Scan Unit, the Unit was controlled a testing jig supplied by the manufacturer.

**Tests performed (name of test and test clause):**

Clause 9  
Measurements of accessible emission level

**Testing location:**

(see page 3 of IEC/EN 60950-1 test report)

Additionally evaluated Test specifications.

EN 60825-1:2007

(see below)

**Summary of compliance with National Differences:**

Only Annex ZA of EN 60825-1 exists and was evaluated. No additional requirements.

See Appendix EU Group Differences (EN 60825-1:2007).

**Test item particulars:**

Classification of installation and use.....: See IEC/EN 60950-1 test report.

Supply Connection .....: See IEC/EN 60950-1 test report.

**Possible test case verdicts:**

- test case does not apply to the test object.....: N/A

- test object does meet the requirement.....: P (Pass)

- test object does not meet the requirement.....: F (Fail)

**Testing** .....

Date of receipt of test item .....: See IEC/EN 60950-1 test report.

Date (s) of performance of tests .....: See IEC/EN 60950-1 test report.

**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 point is used as the decimal separator.



**General product information:**

See IEC/EN 60950-1 test report.

For Laser Scanner Unit type LK-6705, LK6705:

The Unit has one laser diode, one polygon motor and mirror, one laser aperture. The length of laser pass between the polygon mirror and the aperture is 98mm.

The motor runs on 24V dc and the diode runs on 5V dc.

Number of facets on the mirror: 5

Polygon motor speed: 51209rpm, 41779rpm, 33806rpm, 26094rpm

Laser aperture dimensions: 69.5mm × 6.5mm

Laser scan angles for the aperture:

- Long sides of the aperture: +35.0/-35.0 degrees
- Short sides of the aperture: 0.0 degrees



IEC/EN 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict

<b>4</b>	<b>ENGINEERING SPECIFICATIONS</b>		<b>P</b>
4.1	General remarks		P
	Modification	Not modified product.	N/A
4.2	Protective housing		P
4.2.1	General		P
4.2.2	Service		P
4.2.3	Removable laser system	Not removable.	N/A
4.3	Access panels and safety interlocks		N/A
4.3.1	Access panels of protective housing	No access panels intended.	N/A
	Product Class .....	Class 1 laser product.	—
	Accessible emission during removal of access panel .....	--	N/A
	The removal of the panel gives access to laser radiation levels designated by "X" in the table		N/A
	Accessible emissions after removal .....	--	—
4.3.2	Deliberate override mechanism	No such mechanisms.	N/A
4.4	Remote interlock connector	Class 1 laser product.	N/A
4.5	Manual reset	Class 1 laser product.	N/A
4.6	Key control	Class 1 laser product.	N/A
4.7	Laser radiation emission warning		N/A
4.7.1	Class 3R ( $\lambda < 400$ nm; $\lambda > 700$ nm), 3B and 4	Class 1 laser product.	N/A
4.7.2	Audible or visible warning	Class 1 laser product.	N/A
4.7.3	Operational control and laser aperture		N/A
4.7.4	Laser emission distributed through more than one output		N/A
4.8	Beam stop or attenuation	Class 1 laser product.	N/A
4.9	Controls	Class 1 laser product.	N/A



IEC/EN 60825-1			
Clause	Requirement + Test	Result – Remark	Verdict
4.10	Viewing optics	Not provided.	N/A
	a) Human access to laser radiation in excess of Class 1M prevented when the shutter is opened or attenuation varied		N/A
	b) Opening of the shutter or variation of the attenuation prevented when exposure to laser radiation in excess of Class 1M is possible		N/A
4.11	Scanning safeguard	Not considered.	N/A
4.12	Walk-in access		N/A
	a) Means provided so that any person inside the housing can prevent activation of a Class 3B or 4 laser hazard	No Walk-in access provided.	N/A
	b) A warning device provides adequate warning of emission to any person within the housing		N/A
	c) Where “walk-in” access during operation is intended or reasonably foreseeable, emission of laser radiation that is equivalent to Class 3B or Class 4 while someone is present inside the enclosure of Class 1, Class 2 or Class 3R product shall be prevented by engineering means		N/A
4.13	Environmental conditions		P
	- climatic conditions		P
	- vibration and shock		P
4.14	Protection against other hazards		P
4.14.1	Non-optical hazards (product safety standard)	(see IEC/EN 60950-1 test report)	P
	- electrical hazards;		P
	- excessive temperature;		P
	- spread of fire from the equipment;		P
	- sound and ultrasonic;		N/A
	- harmful substances;		P
	- explosion;		N/A
4.14.2	Collateral radiation	No such concerns expected.	N/A



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Clause	Requirement + Test	Result – Remark	Verdict

<b>5</b>	<b>LABELLING</b>		<b>P</b>
5.1	General		P
	LASER PRODUCT CLASS .....	Class 1 laser product.	—
	Labelling location (Product / User instruction / Package)	On product and instructions.	P
	Warning label – Hazard symbol (Figure 1)		P
	Explanatory label (Figure 2)		P
5.2-5.6	Text on explanatory label .....	CLASS 1 LASER PRODUCT	P
5.7	Aperture label		N/A
5.8	Radiation output and standards information	For Class 1.	P
	Max output of laser radiation .....	--	—
	Pulse duration .....	--	—
	Emitted wavelength(s) .....	--	—
	The name and publication date of the standard.....	In instructions.	P
5.9	Labels for access panels		P
5.9.1 a) – f)	Warning wording used .....	Class 1 laser product. (3B was taking account of the maximum value in the specification of manufacturer and the following label was affixed anyway. DANGER CLASS 3B LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.)	P
5.9.2	Labels for safety interlocked panels		N/A
	Warning wording used .....	Class 1 laser product.	N/A
5.10	Warning for invisible laser radiation .....	No such radiation expected.	N/A
5.11	Warning for visible laser radiation .....	(see 5.9.1 a) – f))	N/A



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Clause	Requirement + Test	Result – Remark	Verdict

6	<b>OTHER INFORMATIONAL REQUIREMENTS</b>		<b>P</b>
6.1	Information for the user	Provided in the instructions of this product.	P
	a) adequate instructions for proper assembly, maintenance and safe use and description of the classification limitations, if appropriate	Provided.	P
	b) warning for Class 1M and 2M	Class 1 laser product.	N/A
	c) laser beam parameters for radiation above the AEL of Class 1	Class 1 laser product.	N/A
	• Wavelength .....	--	N/A
	• Beam divergence .....	--	N/A
	• Pulse duration .....	--	N/A
	• Maximum power or energy output .....	--	N/A
	d) embedded laser products and other incorporated laser products	No exposure to user expected.	N/A
	e) MPE and NOHD for Class 3B and Class 4 laser products For collimated beam Class 1M and 2M lasers the extended NOHD (ENOH)D	Class 1 laser product.	N/A
	f) information for the selection of eye protection		N/A
	g) reproduction of labels	Legible reproductions provided.	P
	h) location of laser apertures		N/A
	i) listing of controls, adjustment of procedures and warning statement		N/A
	j) information about laser energy source if not incorporated in the manual	Incorporated.	N/A
6.2	Purchasing and service information		P
	a) safety classification of each laser product stated in descriptive material	Stated.	P
	b) adequate instructions for servicing available	Provided in service instructions.	P



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Clause	Requirement + Test	Result – Remark	Verdict

<b>7</b>	<b>ADDITIONAL REQUIREMENTS FOR SPECIFIC LASER PRODUCTS</b>		<b>P</b>
7.1	Applicable other parts of the standard series IEC/EN 60825		P
	IEC 60825-2 (Safety of optical communication systems)		N/A
	IEC 60825-4 (Laser guards)		N/A
	IEC 60825-12 (Safety of free space optical communication systems used for transmission of information)		N/A
	Further information may be found in:		P
	IEC/TR 60825-3 (Guidance for laser displays and shows)	Not referred.	—
	IEC/TR 60825-5 (Manufacturer's checklist for IEC 60825-1)	Referred.	—
	IEC/TR 60825-8 (Guidelines for the safe use of laser beams on humans)	Not referred.	—
	IEC/TR 60825-9 (Compilation of maximum permissible exposure to incoherent optical radiation)	Referred.	—
	IEC/TR 60825-10 (Application guidelines and explanatory notes to IEC 60825-1)	Referred.	—
	IEC/TR 60825-13 (Measurements for classification of laser products)	Not referred.	—
	IEC/TR 60825-14 (A user's guide)	Referred.	—
	IEC 62471 (CIE S 009) (Photobiological safety of lamps and lamp system)	Not referred.	—
7.2	Medical laser products	Not such products.	N/A
	Class 3B and Class 4 medical laser products comply with IEC 60601-2-22		N/A
7.3	Laser processing machines	Not such products.	N/A
	Comply with IEC/ISO 11553-1		N/A
7.4	Electric toys	Not such products.	N/A
	Comply with IEC 62115		N/A
7.5	Consumer electronic products	IT equipment.	P
	Complying with IEC 60950 or IEC 60065	(see IEC/EN 60950-1 test report)	P



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Clause	Requirement + Test	Result – Remark	Verdict

<b>8</b>	<b>CLASSIFICATION</b>		<b>P</b>
8.2	Classification responsibilities		P
8.3	Classification rules		P
8.3a	Radiation of a single wavelength		P
8.3b	Radiation of multiple wavelengths	No such radiation.	N/A
	1) Laser product emission two or more wavelengths in spectral regions shown as additive in Table 2 ...:	--	N/A
	2) Laser product emission two or more wavelengths in spectral regions not shown as additive in Table 2 .....:	--	N/A
8.3c	Radiation from extended sources.....:	No such sources radiating from Laser Scanner Unit considered.	N/A
	Value of angular subtense $\alpha$ (mrad) .....:	--	N/A
8.3d	Non-uniform retinal image radiance profile, non-circular and multiple sources	No such sources considered.	N/A
8.3e	Time basis		P
	1) 0.25s		N/A
	2) 100s		P
	3) 30000s		N/A
8.3f	Repetitively pulsed or modulated lasers	Radiation from Laser Scanner Unit was considered as continuous output (CW) under the system configured.	N/A
	1) Exposure from any single pulse not exceeding the AEL for a single pulse		N/A
	2) Average power for a pulse train		N/A
	3a) Constant pulse energy and pulse duration		N/A
	3b) Varying pulse widths or varying pulse durations		N/A

<b>9</b>	<b>DETERMINATION OF ACCESSIBLE EMISSION LEVELS</b>		<b>P</b>
9.1	Tests		P
	Single fault eliminated		N/A
	Housing material withstanding degradation		N/A
	Fault detection		N/A



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Clause	Requirement + Test	Result – Remark	Verdict

9.2	Measurement conditions .....	See 9.3.2.	P
	Measured laser radiation .....	See table “Measured laser radiation, calculations and comparison with AEL limits”	P
9.3	Measurement geometry		P
9.3.1	General, evaluation scheme		—
	a) Simplified (default) method		P
	b) Increased AEL by parameter $C_6$		N/A
9.3.2	Default (simplified) evaluation		P
	Condition applied .....	3	P
	Aperture stop diameter (mm) .....	7	P
	Measurement distance (mm) .....	At the closest point on the outside of the aperture of Laser Scanner Unit and main unit.	P
9.3.3	Extended sources	No such sources considered.	N/A
	$C_6$ .....	--	N/A
9.3.3a	Aperture diameters		N/A
	Condition applied .....	--	N/A
	Aperture stop diameter (mm). ....	--	N/A
	Angular subtense of the apparent source $\alpha$ .....	--	N/A
9.3.3b	Angle of acceptance		N/A
	Condition applied .....	--	N/A
	1) Photochemical retinal limits.....	--	N/A
	Angle of acceptance .....	--	N/A
	2) All other retinal limits.....	--	N/A
	Angle of acceptance .....	--	N/A



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Clause	Requirement + Test	Result – Remark	Verdict

Measured laser radiation, calculations and comparison with AEL limits of type LK-6705, LK6705:

1. Classification, Laser Class: Class 1  
(3B for laser diode from the specification)

2. Calculation of AEL

Angular subtense:  $\alpha = 0$  mrad assumed

Accessible emission limits (AEL)

- Class 1:  $3.9 \times 10^{-4}$  [W]
- Class 3B: 0.5 [W]

3. Measurement results

3.1 Normal condition:

7.04 $\mu$ W at 51209rpm

7.02 $\mu$ W at 41779rpm

7.02 $\mu$ W at 33806rpm

7.13 $\mu$ W at 26094rpm

3.2 Fault condition

3.2.1 Polygon Motor locked:

226 $\mu$ W

4. Measurement results of outside the equipment (main unit) for leakage

4.1 Non-interlocking cover opened:

0.001mW

4.2 Cover opened and interlock defeated:

0.001mW



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Clause	Requirement + Test	Result – Remark	Verdict

Appendix	EU Group Differences (EN 60825-1:2007)	--								
Annex ZA	<p><b>NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS</b></p> <p>The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.</p> <p>NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.</p> <table><tr><td>--</td><td>IEC 60050-845: 1987</td></tr><tr><td>EN 60601-2-22: 1996 <sup>2)</sup></td><td>IEC 60601-2-22 <sup>1)</sup></td></tr><tr><td>EN 61010-1: 2001 <sup>3)</sup></td><td>IEC 61010-1 <sup>1)</sup></td></tr><tr><td>+ corr. June: 2002</td><td></td></tr></table>	--	IEC 60050-845: 1987	EN 60601-2-22: 1996 <sup>2)</sup>	IEC 60601-2-22 <sup>1)</sup>	EN 61010-1: 2001 <sup>3)</sup>	IEC 61010-1 <sup>1)</sup>	+ corr. June: 2002		P
--	IEC 60050-845: 1987									
EN 60601-2-22: 1996 <sup>2)</sup>	IEC 60601-2-22 <sup>1)</sup>									
EN 61010-1: 2001 <sup>3)</sup>	IEC 61010-1 <sup>1)</sup>									
+ corr. June: 2002										
	<p>1) Undated reference.</p> <p>2) Valid edition at date of issue. EN 60601-2-22:1996 will be superseded by EN 60601-1-2-22: 200X, which is based on IEC 60601-2-22:2007.</p> <p>3) Valid edition at date of issue.</p>									



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Clause	Requirement + Test	Result – Remark	Verdict

<b>Appended table</b>	<b>EQUIPMENT MANUFACTURE INFORMATION ( DATA SHEET ) ABOUT THE CONTAINING LASER COMPONENT/S</b>		--
	Manufacturer .....	Opnext Japan, Inc.	—
	Type designation .....	Type LK-6705, LK6705: HL67040GN	—
	Structure .....	AlGaInP	—
	Wavelength .....	670nm	—
	Output power (min. and max.) .....	18mW max.	—
	Radiation is		—
	Continuous .....	Continuous.	—
	Pulsed .....	--	—
	Pulse time .....	--	—
	Pulse repetition frequency .....	--	—
	Others .....	--	—

	<b>PIC UP UNIT</b>		--
	Manufacturer .....	--	—
	Type designation .....	--	—
	Others .....	--	—

	<b>TRANSMITTER/TRANSCIEVER UNIT</b>		--
	Manufacturer .....	--	—
	Type designation .....	--	—
	Others .....	--	—