Test Report issued under the responsibility of:

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TEST REPORT
IEC 60335-2-40
Safety of household and similar electrical appliances Part 2-40: Particular requirements for electrical heat pumps, air conditioners and dehumidifiers

Report Number ..... :	*15TR-K0229*
Date of issue ..... :	*2015-09-09*
Total number of pages ..... :	*166*
Applicant's name ..... :	*TOSHIBA CARRIER CORPORATION*
Address ..... :	*336 Tadehara, Fuji-shi, Shizuoka-ken, JAPAN*
Test specification:	
Standard ..... :	IEC 60335-2-40:2013 (Fifth Edition) in conjunction with IEC 60335-1:2010 (Fifth Edition)
Test procedure ..... :	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No. ..... :	IEC60335_2_40K
Test Report Form(s) Originator.... :	VDE
Master TRF ..... :	Dated 2014-06

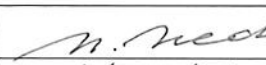
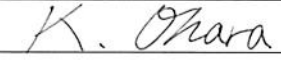
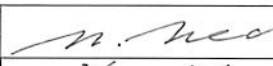
If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description	:	*Air Conditioner Outdoor Unit*
Trade Mark	:	*TOSHIBA*
Manufacturer	:	*Toshiba Carrier Air Conditioning (China) Co., Ltd.* *Building 1, No. 60, 21st Avenue, Baiyang Street, Hangzhou Economic and Technological Development Area, China*
Model/Type reference	:	*MCY-MHP0404HS8-E, MCY-MHP0504HS8-E, MCY-MHP0604HS8-E,* *MCY-MHP0404HS8J-E, MCY-MHP0504HS8J-E, MCY-MHP0604HS8J-E,* *MCY-MHP0404HS8-TR, MCY-MHP0504HS8-TR, MCY-MHP0604HS8-TR,* *MCY-MHP0404HS8J-TR, MCY-MHP0504HS8J-TR, MCY-MHP0604HS8J-TR,* *MCY-MHP0404HS8-A, MCY-MHP0504HS8-A, MCY-MHP0604HS8-A*
Ratings	:	*380-415V 3N ~, 50Hz, 12.5A, 8.5kW, Class I*

Testing procedure and testing location:		
☒ **CB Testing Laboratory:**	*Japan Electrical Safety and Environment Technology Laboratories, Kansai Laboratory - JET Kansai*	
Testing location/ address .....:	*4-1, KOUYOUCHOUNISHI, HIGASHINADA-KU, KOBE-SHI Hyogo-ken JAPAN*	
☐ **Associated CB Testing Laboratory:**		
Testing location/ address .....:		
Tested by (name + signature).....:	*Norihiro UEDA*	
Approved by (name + signature).....:	*Kazuo OHARA*	
☒ **Testing procedure: TMP/CTF Stage 1:**	*TOSHIBA CARRIER CORPORATION*	
Testing location/ address .....:	*336 Tadehara, Fuji-shi, Shizuoka, 416-8521 Japan*	
Tested by (name + signature).....:	*Norihiro UEDA*	
Approved by (name + signature).....:	*Kazuo OHARA*	
☐ **Testing procedure: WMT/CTF Stage 2:**		
Testing location/ address .....:		
Tested by (name + signature).....:		
Witnessed by (name + signature) .....:		
Approved by (name + signature).....:		
☐ **Testing procedure: SMT/CTF Stage 3 or 4:**		
Testing location/ address .....:		
Tested by (name + signature).....:		
Witnessed by (name + signature) .....:		
Approved by (name + signature).....:		
Supervised by (name + signature).....:		

List of Attachments (including a total number of pages in each attachment):

Following attachments included in this test report.
- Wiring diagram; total 2 pages
- Circuit diagram; total 6 pages
- Photograph; total 22 pages

Enclosed:
- Enclosure 1: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES; total 18 pages
- Enclosure 2: National differences of IEC 60335-1 for AUSTRALIA / NEW ZEALAND; total 3 pages

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
7. 14 Marking *10 Power Input and Current* *11 Heating* *13.2 Leakage current* *13.3 Electric strength* *17 Overload protection of transformers* *19.4 Abnormal operation* *19.7 Abnormal operation (Motor lock)* *19.8 Abnormal operation (One phase disconnect)* *19.101 Abnormal operation (Restricted air flow)* *19.103 Abnormal operation (+5K, -10K)* *19.11/19.11.2: Fault condition test* *19.14: Electric strength* *21 Mechanical strength, Annex EE: Pressure test* *25.15 Supply cord anchorage test* *27.5 Provision for earth* *28.1 Threaded part torque test* *29.1/29.2 Clearances and creepage distances* *31 Resistance to rusting (Salt mist)*	*TOSHIBA CARRIER CORPORATION* *336 Tadehara, Fuji-shi, Shizuoka, 416-8521 Japan*
15.2 Moisture resistance(IP) *15.2 Humidity (for EN)* *16.2 Leakage current* *16.3 Electric strength* *30 Resistance to heat and fire* *ANNEX N Tracking Test*	*Japan Electrical Safety and Environment Technology Laboratories,* *Kansai Laboratory - JET Kansai* *4-1, KOUYOUCHOUNISHI, HIGASHINADA-KU,* *KOBE-SHI Hyogo-ken JAPAN*

Summary of compliance with National Differences:

List of countries addressed

AUSTRALIA / NEW ZEALAND and EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

☐ **The product fulfils the requirements of _____ (insert standard number and edition and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable)**

Copy of marking plate: ***(Place of destination: Europe)***

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

CE
TOSHIBA AIR CONDITIONER
MODEL MCY-MHP0404HS8-E

	380-415V 3N~ 50 Hz 8.5 kW 12.5 A HFC-410A(R410A) 6.4 kg PS: H3.73 / L2.21 MPa (H37.3 / L22.1 bar) IPX4
COOLING CAPACITY	12.1 kW
AMP	4.8 - 4.4 A
WATT	2.82 kW
HEATING CAPACITY	12.5 kW
AMP	4.4 - 4.0 A
WATT	2.57 kW
NET WEIGHT	125 kg
SERIAL No.	587Z0001
DATE OF MANUFACTURE	2015.07

Contains fluorinated greenhouse gases covered by the Kyoto Protocol.

Name of the manufacturer Address, city, country	Toshiba Carrier Air Conditioning (China) Co., Ltd. Building 1, No.60, 21st Avenue, Baiyang Street, Hangzhou Economic and Technological Development Area, China
Name of the importer / Distributor in EU Address, city, country	Toshiba Carrier UK Ltd. Porsham Close, Belliver Industrial Estate, PLYMOUTH, Devon, PL6 7DB, United Kingdom

Toshiba Carrier Air Conditioning (China) Co., Ltd.
MADE IN CHINA

⚠ WARNING Do not use any refrigerant different from the one specified for complement or replacement.

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Copy of marking plate: ***(Place of destination: Turkey)***

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

CE
TOSHIBA KLİMA
MODEL MCY-MHP0404HS8-TR

380-415V 3N~ 50 Hz
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HFC-410A(R410A) 6.4 kg
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AMP	4.4 - 4.0 A
WATT	2.57 kW
NET AĞIRLIK	125 kg
SERİ NUMARASI	587Z0001
Üretim yılı	2015.07

İmalatçı : Toshiba Carrier Air Conditioning (China) Co., Ltd.
Adres : Building 3, No 60, 21st Avenue, Baiyang Street, Hangzhou Economic and Technological Development Area, China
İthalatçı : ALARKO CARRIER SANAYİ VE TİCARET A.Ş.
Adres : GOSB-GEBZE ORGANİZE SANAYİ BÖLGESİ SAHABETTİN BİLGİSU CAD 41480 GEBZE-KOCAELİ/TÜRKİYE

Kyoto protokolü tarafından kapsanan florlu sera gazı içerir.

Toshiba Carrier Air Conditioning (China) Co., Ltd.
MADE IN CHINA
ÜRETİM YERİ Çin

UYARI Belirtilen soğutucu akışkandan farklı bir soğutucu akışkan kullanmayınız.

CE
TOSHIBA KLİMA
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ÜRETİM YERİ Çin

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Copy of marking plate: ***(Place of destination: Australia)***

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

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AMP	4.8 - 4.4 A
WATT	2.82 kW
HEATING CAPACITY	12.5 kW
AMP	4.4 - 4.0 A
WATT	2.57 kW
NET WEIGHT	124 kg
SERIAL No.	587Z0001
DATE OF MANUFACTURE	2015.07

Contains fluorinated greenhouse gases covered by the Kyoto Protocol.

AS/NZS 4755
DRM1 ☑ DRM2 ☐ DRM3 ☐

Toshiba Carrier Air Conditioning (China) Co., Ltd.
MADE IN CHINA

WARNING Do not use any refrigerant different from the one specified for complement or replacement.

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Test item particulars.....:	
Classification of installation and use.....:	*Class I (Outdoor unit : IPX4)*
Supply Connection.....:	*Type Y attachment, permanent connection*
.....:	
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 .....:	*2015-05-19*
Date (s) of performance of tests .....:	*2015-06-09 to 2015-09-07*

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

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

The Product fulfils the requirements of ☐ IEC 62233:2005 (1. Edition)

☒ EN 62233:2008 (incl. Corr.1:2008)

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....:	☐ **Yes** ☒ **Not applicable**

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

Name and address of factory (ies).....:	*Toshiba Carrier Air Conditioning (China) Co., Ltd. Building 1, No. 60, 21st Avenue, Baiyang Street, Hangzhou Economic and Technological Development Area, China*

General product information:

This product is multi split type air conditioner outdoor unit intended to commercial use. It has three capacity type and two corrosion protect.

There are designed for Class I appliance, fixed appliance and permanent connection for power supply.

The power supply cord of outdoor unit information (Size, Type) stated in installation manual.

Refrigerant type: R410A

The Outdoor unit is accessible to the general public.
Outdoor unit is maintained by qualified service personal. (Specified in the Installation Manual.)

<Model differences>
The models MCY-MHP0404/0504/0604HS8-E and MCY-MHP0404/0504/0604HS8J-E are essentially same except for corrosion protect.

EU market models and Turkey market models are essentially same except for language of manual.

EU market models and Australia market models are essential same except for demand control P.C.B and Fan guard.

	Fan guard *Comply with Child finger(for EN deviation)*	*Demand control P.C.B.*
EU market models	*Yes*	--
Australia market models	--	*Provided.*

Demand control P.C.B.: for energy saving function.

For details, refer to following table.

<Model differences>

Model Name	Power supply	Rating		Cooling	Heating Capacity	Place of destination	Corrosion protect
		(kW)	(A)	(kW)	(kW)		
MCY-MHP0404HS8-E	3phase 50Hz 380-415V	8.5	12.5	12.1	12.5	Europe	Standard
MCY-MHP0504HS8-E	3phase 50Hz 380-415V	8.5	12.5	14.0	16.0	Europe	Standard
MCY-MHP0604HS8-E	3phase 50Hz 380-415V	8.5	12.5	15.5	18.0	Europe	Standard
MCY-MHP0404HS8J-E	3phase 50Hz 380-415V	8.5	12.5	12.1	12.5	Europe	Heavy
MCY-MHP0504HS8J-E	3phase 50Hz 380-415V	8.5	12.5	14.0	16.0	Europe	Heavy
MCY-MHP0604HS8J-E	3phase 50Hz 380-415V	8.5	12.5	15.5	18.0	Europe	Heavy
MCY-MHP0404HS8-TR	3phase 50Hz 380-415V	8.5	12.5	12.1	12.5	Turkey	Standard
MCY-MHP0504HS8-TR	3phase 50Hz 380-415V	8.5	12.5	14.0	16.0	Turkey	Standard
MCY-MHP0604HS8-TR	3phase 50Hz 380-415V	8.5	12.5	15.5	18.0	Turkey	Standard
MCY-MHP0404HS8J-TR	3phase 50Hz 380-415V	8.5	12.5	12.1	12.5	Turkey	Heavy
MCY-MHP0504HS8J-TR	3phase 50Hz 380-415V	8.5	12.5	14.0	16.0	Turkey	Heavy
MCY-MHP0604HS8J-TR	3phase 50Hz 380-415V	8.5	12.5	15.5	18.0	Turkey	Heavy

<Model differences>

Model Name	Power supply	Rating		Cooling	Heating Capacity	Place of destination	Corrosion protect
		(kW)	(A)	(kW)	(kW)		
MCY-MHP0404HS8-A	3phase 50Hz 380-415V	8.5	12.5	12.1	12.5	Australia	Standard
MCY-MHP0504HS8-A	3phase 50Hz 380-415V	8.5	12.5	14.0	16.0	Australia	Standard
MCY-MHP0604HS8-A	3phase 50Hz 380-415V	8.5	12.5	15.5	18.0	Australia	Standard

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		*P*
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.	*OK*	*P*
5.2	Tests of clause 21 carried out on separate samples. Tests of clauses 11, 19 and 21 require pressure measurements made at various points in refrigerating system (IEC 60335-2-40)	*OK*	*P*
	At least one additional specially prepared sample required for tests of annex FF (Leak simulation tests) (IEC 60335-2-40)	--	*N/A*
	Temperatures on refrigerant piping measured during test of clause 11 (IEC 60335-2-40)	--	*N/A*
5.6	Appropriate controls rendered inoperative during test (IEC 60335-2-40)	*Considered.*	*P*
5.7	Tests of clauses 10 and 11 carried out under most severe operating conditions within operating temperature range specified by manufacturer. Annex AA provide examples of such temperature conditions (IEC 60335-2-40)	*Tests are conducted by manufacturer specified temperature range.*	*P*
5.10	For split-package units, refrigerant lines installed in accordance with installation instructions (IEC 60335-2-40)	*OK*	*P*
	Length of pipe is between 5 m and 7,5 m. (IEC 60335-2-40)	*OK*	*P*
	Thermal insulation of refrigerant lines applied in accordance with installation instructions (IEC 60335-2-40)	*OK*	*P*
5.101	Motor-compressor subjected to relevant test of clause 19 of IEC 60335-2-34, unless (IEC 60335-2-40)	*See below.*	*N/A*
	motor-compressor comply with that standard (IEC 60335-2-40)	*Motor-compressor complies with standard IEC60332-2-40.*	*P*
5.102	Motor-compressors tested and comply with IEC 60335-2-34 need not additionally tested for clause 21 (IEC 60335-2-40)	--	*N/A*
6	CLASSIFICATION		*P*
6.1	Protection against electric shock: Class I, II, III (IEC 60335-2-40) ..... :	*Class I*	*P*
6.2	Protection against harmful ingress of water, IP degree in accordance with IEC 60529 (IEC 60335-2-40)		*P*
	- appliances or parts intended for outdoor use be at least IPX4 (IEC 60335-2-40);	*IPX4*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- appliances intended only for indoor use (excluding laundry rooms) be IPX0 (IEC 60335-2-40);	*The appliance is Outdoor unit.*	*N/A*
	- appliances intended to be used in laundry rooms be at least IPX1 (IEC 60335-2-40).	*As above.*	*N/A*
6.101	Degree of accessibility (accessible/not accessible to the general public) (IEC 60335-2-40)	*Accessible to the general public.*	*P*
7	MARKING AND INSTRUCTIONS		*P*
7.1	Rated voltage or voltage range (V)..... :	*380-415V*	*P*
	Symbol for nature of supply including number of phases, unless for single phase operation (IEC 60335-2-40)..... :	*3N~*	*P*
	Rated frequency (Hz)..... :	*50Hz*	*P*
	Rated power input (W), or ..... :	*8.5kW*	*P*
	Rated current (A) ..... :	*12.5A*	*P*
	Manufacturer's or responsible vendor's name, trademark or identification mark..... :	*Toshiba Carrier Air Conditioning (China) Co., Ltd.*	*P*
	Model or type reference..... :	*MCY-MHP0404HS8-E, MCY-MHP0504HS8-E, MCY-MHP0604HS8-E, MCY-MHP0404HS8J-E, MCY-MHP0504HS8J-E, MCY-MHP0604HS8J-E, MCY-MHP0404HS8-TR, MCY-MHP0504HS8-TR, MCY-MHP0604HS8-TR, MCY-MHP0404HS8J-TR, MCY-MHP0504HS8J-TR, MCY-MHP0604HS8J-TR, MCY-MHP0404HS8-A, MCY-MHP0504HS8-A, MCY-MHP0604HS8-A*	*P*
	Symbol IEC 60417-5172, for class II appliances	*Class I appliances*	*N/A*
	IP number, other than IPX0..... :	*IPX4*	*P*
	Symbol IEC 60417-5180, for class III appliances, unless	*Class I appliances*	*N/A*
	the appliance is operated by batteries only	--	*N/A*
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage	--	*N/A*
	Mass of refrigerant (IEC 60335-2-40)..... :	*6.4kg*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Refrigerant number in accordance with ANSI/ASHRAE 34 [ISO 817] ..... :	*R410A*	*P*
	Refrigerant identification (IEC 60335-2-40) ..... :	*R410A*	*P*
	Permissible excessive operating pressure for sanitary hot water heat pumps (IEC 60335-2-40). :	--	*N/A*
	Maximum operating pressure for heat exchanger for hydronic fan coil/air handling units (IEC 60335-2-40) ..... :	--	*N/A*
	Maximum operating pressure for the refrigerant circuit; if the permissible excessive operating pressure for the suction and discharge side differ, a separate indication is required; (IEC 60335-2-40) :	*PS: H 3.73/L2.21MPa*	*P*
	Symbol for degree of protection against ingress of water, other than IPX0 (IEC 60335-2-40) ..... :	*IPX4*	*P*
	Separate marking of appliances with all rated characteristics of supplementary heaters (IEC 60335-2-40) ..... :	--	*N/A*
	Marking of direction of fluid flow (IEC 60335-2-40)	*Direction of the fluid flow is evident in the design.*	*N/A*
	Flame symbol and instruction manual symbol of 7.6 visible when flammable refrigerant employed and following conditions exist (IEC 60335-2-40):		*N/A*
	- accessing parts expected to be subjected to maintenance or repair (IEC 60335-2-40);	--	*N/A*
	- observing appliance under sale or installed conditions (IEC 60335-2-40);	--	*N/A*
	- observing appliance packaging, if appliance charged with refrigerant (IEC 60335-2-40).	--	*N/A*
	If a flammable refrigerant is used, the symbols for "read operator's manual", "operator's manual; operating instructions" and "service indicator; read technical manual" (symbols ISO 7000-0790 (2004-01), ISO-7000-1641 (2004-01) and ISO 7000-1659 (2004-01)) shall be placed on the appliance in a location visible to the persons required to know the information. The perpendicular height shall be at least 10 mm. (IEC 60335-2-40)	--	*N/A*
	Additional warning symbol (flame symbol: W021 of ISO 7010) placed on nameplate of unit near declaration of refrigerant type and charge information. Perpendicular height be at least 10 mm, and symbol need not be in colour (IEC 60335-2-40)	--	*N/A*
	When installed, the marking should be visible after removing a detachable part (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Following warning also applied to appliance when flammable refrigerant employed. WARNING Appliance shall be installed, operated and stored in a room with a floor area larger than 'X' m^2 (only applies to appliances that are not fixed appliances) (IEC 60335-2-40)	--	*N/A*
	Not fixed appliances, minimum room size X specified on appliance. X in marking determined in m^2 by procedure described in Clause GG.2 for unventilated areas and X in marking be 4 if refrigerant charge of appliance is less than m_1 (see GG.1.1) (IEC 60335-2-40)	--	*N/A*
	Maximum allowable pressure for low-pressure side and high-pressure side marked on product (IEC 60335-2-40)	--	*N/A*
	If not already visible when accessing service port and if service port provided, service port marked to identify type of refrigerant. If refrigerant is flammable, symbol B.3.2 of ISO 3864, be included, without specifying the colour (IEC 60335-2-40)	--	*N/A*
7.2	Warning for stationary appliances for multiple supply	--	*N/A*
	Warning placed in vicinity of terminal cover	--	*N/A*
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen	*380-415V*	*P*
	Different rated values marked with the values separated by an oblique stroke	--	*N/A*
7.4	Appliances adjustable for different rated voltages, the voltage setting is clearly discernible	*Not adjustable.*	*N/A*
	Requirement met if frequent changes are not required and the rated voltage to which the appliance is to be adjusted is determined from a wiring diagram	--	*N/A*
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless	--	*N/A*
	the power input is related to the arithmetic mean value of the rated voltage range	*OK*	*P*
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
7.6	Correct symbols used	*Relevant symbol from clause 7.6 used.*	*P*
	Flammable refrigerant, warning symbol W021 of ISO 7010, including colour and format, permanently placed on appliance. Perpendicular height of triangle containing "Caution, risk of fire"symbol be at least 30 mm (IEC 60335-2-40)	--	*N/A*
	Flammable refrigerant, symbol requiring reference to manual [ISO 7000-0790 (2004-01)], including colour and format, permanently placed on appliance (IEC 60335-2-40/A1 corr.1)	--	*N/A*
	Symbol for nature of supply placed next to rated voltage	*OK* *380-415V 3N~*	*P*
	Symbol for class II appliances placed unlikely to be confused with other marking	--	*N/A*
	Units of physical quantities and their symbols according to international standardized system	*OK*	*P*
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless	*Wiring diagram to the appliance easily accessibly provided.(Provided on back side of enclosure)*	*P*
	correct mode of connection is obvious	*OK*	*P*
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		*P*
	- marking of terminals exclusively for the neutral conductor (letter N)	*Marked near the Terminal block.*	*P*
	- marking of protective earthing terminals (symbol IEC 60417-5019)	*Symbol IEC 60417-5019 marked near the earthing terminals.*	*P*
	- marking not placed on removable parts	*OK*	*P*
7.9	Marking or placing of switches which may cause a hazard	*No main power switch provided. No other switches, which operation might cause a hazard, are used.*	*N/A*
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means .....:	*No switches.*	*N/A*
	This applies also to switches which are part of a control	--	*N/A*
	If figures are used, the off position indicated by the figure 0	--	*N/A*
	The figure 0 indicates only OFF position, unless no confusion with the OFF position	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
7.11	Indication for direction of adjustment of controls	*No such controls.*	*N/A*
7.12	Instructions for safe use provided	*Operation Manual and Installation Manual are provided.*	*P*
	Details concerning precautions during user maintenance	OK	*P*
	Appliances not accessible to general public, classification of clause 6.101 included (IEC 60335-2-40)	--	*N/A*
	Appliances using flammable refrigerants, an installation, service and operation manual, either separate or combined manuals, provided and include information given in annex DD (IEC 60335-2-40)	--	*N/A*
	The instructions state that:		*P*
	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction	*Stated in the Operation Manual.*	*P*
	- children being supervised not to play with the appliance	*Stated in the Operation Manual.*	*P*
	For a part of class III construction supplied from a detachable power supply unit, the instructions state that the appliance is only to be used with the unit provided	--	*N/A*
	Instructions for class III appliances state that it must only be supplied at SELV, unless	--	*N/A*
	it is a battery-operated appliance, the battery being charged outside the appliance	--	*N/A*
7.12.1	Sufficient details for installation supplied		*N/A*
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		*N/A*
	Sufficient details for installation or maintenance supplied (IEC 60335-2-40):		*P*
	- that the appliance shall be installed in accordance with national wiring regulations (IEC 60335-2-40);	*Stated in the Installation Manual.*	*P*
	- the dimensions of the space necessary for correct installation of the appliance including the minimum permissible distance to adjacent structures (IEC 60335-2-40);	*Stated in the Installation Manual.*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- for appliances with supplementary heaters, the minimum clearance from the appliance to combustible surfaces (IEC 60335-2-40);	--	*N/A*
	- a wiring diagram with a clear indication of the connections and wiring to external control devices and supply cord (IEC 60335-2-40);	*Stated Installation Manual.*	*P*
	- the range of external static pressures at which the appliance was tested (add-on heat pumps and appliances with supplementary heaters only) (IEC 60335-2-40);	--	N/A
	- the method of connection to the appliance to the electrical supply and interconnection of separate components (IEC 60335-2-40);	*Stated Installation Manual.*	*P*
	- indication of which parts of the appliance are suitable for outdoor use, if applicable (IEC 60335-2-40);	*Outdoor unit.*	*P*
	- details of type and rating of fuses , or rating of circuit breakers; (IEC 60335-2-40);	*Fuse(s) are clearly and adequately marked with fuse number and rating.* *No user accessible fuse holder.* *See table 24.1.*	*P*
	- details of supplementary heating elements that may be used in conjunction with the appliance, including fitting instructions either with the appliance or with the supplementary heater (IEC 60335-2-40);	--	*N/A*
	- maximum and minimum water or brine operating temperatures (IEC 60335-2-40);	--	*N/A*
	- maximum and minimum water or brine operating pressures (IEC 60335-2-40).	--	*N/A*
	Open storage tanks of heat pumps for water heating, accompanied by an instruction sheet which state that the vent shall not be obstructed (IEC 60335-2-40)	--	*N/A*
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules	*Information about the disconnection is given in the Installation manual.*	*P*
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected	*Parts in contact with power cord do not exceed 50K.*	*N/A*
7.12.4	Instructions for built-in appliances:		*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- dimensions of space	--	*N/A*
	- dimensions and position of supporting and fixing	--	*N/A*
	- minimum distances between parts and surrounding structure	--	*N/A*
	- minimum dimensions of ventilating openings and arrangement	--	*N/A*
	- connection to supply mains and interconnection of separate components	--	*N/A*
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless	--	*N/A*
	a switch complying with 24.3	--	*N/A*
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord	--	*N/A*
	Replacement cord instructions, type Y attachment	*Fixed wiring*	*N/A*
	Replacement cord instructions, type Z attachment	--	*N/A*
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard	--	*N/A*
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed	*Stated Installation Manual.*	*P*
7.12.8	Instructions for appliances connected to the water mains:		*N/A*
	- max. inlet water pressure (Pa)..... :	*No such water mains connection.*	*N/A*
	- min. inlet water pressure, if necessary (Pa) ..... :	--	*N/A*
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets	--	*N/A*
7.13	Instructions and other texts in an official language	*Operation Manual provided to the operator, containing necessary for instructions and caution information. Installation Manual provided to the installer, containing necessary for installation and caution information. Both manuals of English version were checked.*	*P*
7.14	Marking clearly legible and durable, rubbing test as specified	*Test performed for 15 seconds.*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
7.15	Markings on a main part	*Rating label located on side enclosure.*	*P*
	Marking clearly discernible from the outside, if necessary after removal of a cover	*As above.*	*P*
	For portable appliances, cover can be removed or opened without a tool	--	*N/A*
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation	*Rating label located on side enclosure.*	*P*
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions	*As above.*	*P*
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading	--	*N/A*
	Marking on panel allowed, provided panel in place for intended operation of appliance (IEC 60335-2-40)	--	*N/A*
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link	*Marked accordingly.*	*P*
7.101	Marking of fuses and overload protective devices, if replaceable (IEC 60335-2-40):		*P*
	- fuse rated current in amperes, type and rated voltage or (IEC 60335-2-40)	*Fuse(s) are clearly and adequately marked with fuse number and rating.* *No user accessible fuse holder.*	*P*
	- manufacturer and model of overload protective device (IEC 60335-2-40)	*Non-replaceable overload protective device.*	*N/A*
7.102	Marking for connection with aluminium wire, if necessary (IEC 60335-2-40)	--	*N/A*
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		*P*
8.1	Adequate protection against accidental contact with live parts	*OK*	*P*
8.1.1	Requirement applies for all positions, detachable parts removed	*Test finger and test pin applied to all openings of the equipment after it was installed as described in installation manual.* *No bare live parts are touchable with the test finger and test pin through openings in the enclosure.*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Lamps behind a detachable cover not removed, if conditions met	--	*N/A*
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap	--	*N/A*
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts	*OK*	*P*
	Use of test probe B of IEC 61032 through openings, with a force of 20 N: no contact with live parts	*OK*	*P*
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts	*OK*	*P*
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts	--	*N/A*
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements	*No visible glowing heating elements.*	*N/A*
8.1.4	Accessible part not considered live if:		*N/A*
	- safety extra-low a.c. voltage: peak value not exceeding 42,4 V	*No SELV circuits.*	*N/A*
	- safety extra-low d.c. voltage: not exceeding 42,4 V	--	*N/A*
	- or separated from live parts by protective impedance	--	*N/A*
	If protective impedance: d.c. current not exceeding 2 mA, and	--	*N/A*
	a.c. peak value not exceeding 0,7 mA	--	*N/A*
	- for peak values over 42,4 V up to and including 450 V, capacitance not exceeding 0,1 μF	--	*N/A*
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC	--	*N/A*
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ	--	*N/A*
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		*P*
	- built-in appliances	--	*N/A*
	- fixed appliances	*OK*	*P*
	- appliances delivered in separate units	*Separate indoor and outdoor.*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	As regards the products which have a dedicated installation panel or cover and which cannot be installed without them, compliance is checked according to 5.10 (after the installation as instructed in the installation manual). (IEC 60335-2-40)		*N/A*
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only	*Class I appliance, which contains internal areas judged as protection class II (Thermistor cover).*	*P*
	Only possible to touch parts separated from live parts by double or reinforced insulation	*OK*	*P*
9	STARTING OF MOTOR-OPERATED APPLIANCES		*N/A*
	Requirements and tests are specified in part 2 when necessary	*Not applicable in IEC60335-2-40.*	*N/A*
10	POWER INPUT AND CURRENT		*P*
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1. :	*(see appended table)*	*P*
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless	*OK*	*P*
	the rated power input is related to the arithmetic mean value	--	*N/A*
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2 ..... :	*(see appended table)*	*P*
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless	*OK*	*P*
	the rated current is related to the arithmetic mean value of the range	--	*N/A*
11	HEATING		*P*
11.1	No excessive temperatures in normal use (IEC 60335-2-40)	*OK*	*P*
	Compliance is checked by the tests of annex C, if (IEC 60335-2-40):		*N/A*
	- temperature of motor winding exceeds values shown in table 3 (IEC 60335-2-40)	--	*N/A*
	- there is doubt about classification of insulation system of the motor (IEC 60335-2-40)	--	*N/A*
11.2	Placing and mounting of appliance (IEC 60335-2-40):		*P*
	- clearances to adjacent surfaces (IEC 60335-2-40);	*OK*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- flow rates for liquid source or sink equipment be minimum, except for fan coils where flow rates and liquid temperatures be maximum (IEC 60335-2-40);	--	*N/A*
	- static pressures (IEC 60335-2-40);	--	*N/A*
	- means of adjusting the flow, flow for tests be minimum obtainable (IEC 60335-2-40);	--	*N/A*
	- adjustable limit controls set at maximum cut-out setting and minimum differential (IEC 60335-2-40).	*OK*	*P*
	Appliances with supplementary heaters, use test casing of clause 11.9 (IEC 60335-2-40)	--	*N/A*
11.2.1	Appliances with supplementary heaters, inlet duct connected to inlet air opening (IEC 60335-2-40)	--	*N/A*
	Appliance that includes or has provision for supplementary heater is fitted with a metal outlet duct in accordance with Figure 101a) or Figure 101b), depending on the direction of the airflow. (IEC 60335-2-40)	--	*N/A*
11.2.2	Ducted appliance without supplementary heaters, air outlet used (IEC 60335-2-40)	--	*N/A*
11.3	Temperature rise determine by thermocouples or resistance method (IEC 60335-2-40)	*OK*	*P*
11.4	Test performed at supply voltage between 0,94 and 1,06 times the rated voltage (IEC 60335-2-40)	*Tested 1.06 times and 0.94 times.*	*P*
	Heating elements energized at voltage which gives an electrical input of 1,15 times maximum rated power input (IEC 60335-2-40)	--	*N/A*
11.5	Test conducted in heating mode and cooling mode, if both exist (IEC 60335-2-40)	*Both modes conducted.*	*P*
	All supplementary heating elements operative simultaneously (IEC 60335-2-40)	--	*N/A*
11.6	Defrost test in most unfavourable conditions, if needed (IEC 60335-2-40)	--	*N/A*
11.7	Appliances operated continuously until steady conditions except for defrost tests (IEC 60335-2-40)	*OK*	*P*
11.8	Temperatures not exceeding values of table 3 (IEC 60335-2-40)	*(See appended tables)*	*P*
	Protective devices do not operate (IEC 60335-2-40)	*OK*	*P*
	Sealing compound not flowing out (IEC 60335-2-40)	*OK*	*P*
	Temperature of air in outlet duct not exceed 90 °C (IEC 60335-2-40)	*OK*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
11.9	Test casing and installation of appliances in accordance with manufacturer's instructions (IEC 60335-2-40)	*The appliances were installed according to manufacturer's specifications with minimum clearances as stated in the installation manual.*	*P*
	Glass fibre insulation for appliances without indication of minimum clearances according to manufacturer; thermocouple in contact with enclosure (IEC 60335-2-40)	--	*N/A*
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		*P*
13.1	Leakage current not excessive and electric strength adequate	*OK*	*P*
	Heating appliances operated at 1,15 times the rated power input (W) ..... :	--	*N/A*
	Motor-operated appliances and combined appliances supplied at 1,06 times the rated voltage (V) ..... :	*Tested 1.06 times.*	*P*
	Protective impedance and radio interference filters disconnected before carrying out the tests	--	*N/A*
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990	--	*N/A*
	For other appliances, a low impedance ammeter may be used	*OK-Class I appliance. Measured by figure 4 of IEC 60990.*	*P*
	Leakage current measurements..... : (IEC 60335-2-40)	*(see appended table)*	*P*
13.3	The appliance is disconnected from the supply	*OK*	*P*
	Electric strength tests according to table 4..... :	*(see appended table)*	*P*
	No breakdown during the tests	*OK*	*P*
14	TRANSIENT OVERVOLTAGES		*N/A*
	Appliances withstand the transient over-voltages to which they may be subjected	Clearances having a value not less than specified in table 16.	*N/A*
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6..... :	(see appended table)	*N/A*
	No flashover during the test, unless		*N/A*
	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited		*N/A*
15	MOISTURE RESISTANCE		*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
15.1	Enclosure provides degree of moisture protection against ingress of water (rain, overflow from drain pan or defrosting), tests of clause 15.2, 15.3, 11.6 and 16) (IEC 60335-2-40)	*OK*	*P*
	Motor-compressor not operated and detachable parts removed during tests of clause 15.2 and 15.3 (IEC 60335-2-40)	*OK*	*P*
15.2	Tests in accordance with IEC 60529 in appliances other than IPX0, as specified (IEC 60335-2-40)... :	*IPX4*	*P*
15.3	Drain pan filled to brim and subjected to continuous overflow and fan(s) switched on (IEC 60335-2-40)	*No live parts under the drain pan.*	*N/A*
15.101	Spillage test as specified (IEC 60335-2-40)	--	*N/A*
	After spillage completed, appliance withstand test of clause 16 (IEC 60335-2-40)	--	*N/A*
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		*P*
16.1	Leakage current not excessive and electric strength adequate	*OK*	*P*
	Protective impedance disconnected from live parts before carrying out the tests	--	*N/A*
	Tests carried out at room temperature and not connected to the supply	*OK*	*P*
16.2	Single-phase appliances: test voltage 1,06 times rated voltage (V) ..... :	--	*N/A*
	Three-phase appliances: test voltage 1,06 times rated voltage divided by √3 (V) ..... :	*415Vx1.06/√3*	*P*
	Leakage current measurements..... : (IEC 60335-2-40)	*(see appended table)*	*P*
	Limit values doubled if:		*P*
	- all controls have an off position in all poles, or	--	*N/A*
	- the appliance has no control other than a thermal cut-out, or	--	*N/A*
	- all thermostats, temperature limiters and energy regulators do not have an off position, or	--	*N/A*
	- the appliance has radio interference filters	*OK*	*P*
	With the radio interference filters disconnected, the leakage current do not exceed limits specified..... :	*(see appended table)*	*P*
16.3	Electric strength tests according to table 7..... :	*(see appended table)*	*P*
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified..... :	*(see appended table)*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	No breakdown during the tests	*OK*	*P*
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		*P*
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use .....:	*(see appended table)*	*P*
	Appliance supplied with 1,06 or 0,94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V).....:	*Applied 1.06 times. Basic insulation only.*	*P*
	Basic insulation is not short-circuited	*Applied anyway.*	*P*
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K	--	*N/A*
	Temperature of the winding not exceeding the value specified in table 8	--	*N/A*
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1	--	*N/A*
18	ENDURANCE		*N/A*
	Requirements and tests are specified in part 2 when necessary	*Not applicable of IEC60335-2-40.*	*N/A*
19	ABNORMAL OPERATION		*P*
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated.	*OK*	*P*
	Failure of transfer medium flow, or of any control device, does not result in a hazard (IEC 60335-2-40)	*OK*	*P*
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe (electric shock, fire or mechanical hazard, dangerous malfunction)	*OK*	*P*
	Appliances are subjected to the tests specified in 19.2 to 19.10, 19.101, 19.102 and 19.103, as applicable. (IEC 60335-2-40)	*OK*	*P*
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable	*OK*	*P*
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11	--	*N/A*
	Appliances incorporating voltage selector switches subjected to the test of 19.15	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or	*OK*	*P*
	until steady conditions are established	*OK*	*P*
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample	*OK*	*P*
19.2	Test of appliances with supplementary heaters (IEC 60335-2-40)	--	*N/A*
19.3	Test at temperature permitting continuous operation of the motor-compressor and electric heating elements at same time (IEC 60335-2-40)	--	*N/A*
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited	*(see appended table)*	*P*
	Test of appliance with any defect which expected during normal use (IEC 60335-2-40)	*OK*	*P*
19.5	Test of 19.4 repeated on class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath	*No such heaters.*	*N/A*
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath	--	*N/A*
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4	--	*N/A*
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions	*No PTC heating elements.*	*N/A*
	The working voltage of the PTC heating element is increased by 5 % and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1,5 times working voltage or until the PTC heating element ruptures (V)..... :	--	*N/A*
19.7	Test of appliance with motor rotors, other than motor-compressors and stationary circulation pumps in compliance with IEC 60335-2-51, operated for 15 days (360 h) or until protection device opens circuit (IEC 60335-2-40)	*OK*	*P*
	Insulation of motor windings (IEC 60335-2-40) .... :	*Class E*	*P*
	Temperature of enclosure does not exceed (°C) (IEC 60335-2-40)..... :	*See appended table 19.7*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Temperature of the windings does not exceed the values shown in the table 8; temperature (°C) (IEC 60335-2-40) ..... :	*As above.*	*P*
	Electric strength test as specified in 16.3, 72 h after the beginning of the test (IEC 60335-2-40)	*As above.*	*P*
	At the end, leakage current between windings and enclosure does not exceed 2 mA (IEC 60335-2-40)	*As above.*	*P*
	If the motor-compressor has not been type-tested against the requirements of IEC 60335-2-34, a sample is provided with the rotor locked and being filled with oil and refrigerant as intended. (IEC 60335-2-40)	*As above.*	*P*
	Sample is subjected to the tests specified in 19.101, 19.102, 19.103 and 19.105 of IEC 60335-2-34:2012, if applicable, and complies with the requirements in 19.104 of IEC 60335-2-34:2012. (IEC 60335-2-40)	*As above.*	*P*
19.8	Three phase motors other than motor compressors are operated under the conditions of Clause 11 at rated voltage or at the upper limit of the rated voltage range with one phase disconnected, until steady conditions are obtained or the protective device operates. (IEC 60335-2-40)	*Tested Fan motor.*	*P*
19.10	Series motor operated at 1,3 times rated voltage for 1 min (V) ..... :	--	*N/A*
	During the test, parts not being ejected from the appliance	--	*N/A*
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless	*OK*	*P*
	they comply with the conditions specified in 19.11.1	*OK*	*P*
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless	--	*N/A*
	restarting does not result in a hazard	--	*N/A*
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4	--	*N/A*
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out	*OK*	*P*
	During and after each test the following is checked:		—

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- the temperature of the windings do not exceed the values specified in table 8	*OK*	*P*
	- the appliance complies with the conditions specified in 19.13	*OK*	*P*
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4	--	*N/A*
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		—
	- the base material of the printed circuit board withstands the test of annex E	--	N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29	--	N/A
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		—
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified	--	*N/A*
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit	--	*N/A*
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		—
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29	*OK*	*P*
	b) open circuit at the terminals of any component	*OK*	*P*
	c) short circuit of capacitors, unless	*OK*	*P*
	they comply with IEC 60384-14	*OK*	*P*
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	*OK*	*P*
	This fault condition is not applied between the two circuits of an optocoupler	*OK*	*P*
	e) failure of triacs in the diode mode	--	*N/A*
	f) failure of microprocessors and integrated circuits	*OK*	*P*
	g) failure of an electronic power switching device	*OK*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made	--	*N/A*
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to g) of 19.11.2	--	*N/A*
19.11.4	The first paragraph of Part 1 in not applicable for stand-by mode if unintentional operation does not cause any hazards. (IEC 60335-2-40)	*Test of 19.11.4 are not applicable, because the most unfavourable condition has been evaluated according to other clause of 19.* *No switches.*	*N/A*
	Appliances having a device with an off position obtained by electronic disconnection, or	--	*N/A*
	a device that can be placed in the stand-by mode,	--	*N/A*
	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode.	--	*N/A*
	Appliances incorporating a protective electronic circuit are subjected to the tests of 19.11.4.1 to 19.11.4.7. (IEC 60335-2-40)	--	*N/A*
	Tests are carried out after the protective electronic circuit has operated during the relevant tests of Clause 19 except 19.2, 19.6, 19.11.3, 19.102 and 19.103. (IEC 60335-2-40)	--	*N/A*
	If the appliance incorporates more than one protective electronic circuit, each protective electronic circuit has to be tested individually with the appliance operated under normal operation at any temperature within the working range. (IEC 60335-2-40)	--	*N/A*
	Components protected by a protective electronic, if engineering judgement gives evidence that the test in the final application will not lead to a hazardous condition. (IEC 60335-2-40)	--	*N/A*
	Surge protective devices disconnected, unless	--	*N/A*
	they incorporate spark gaps	--	*N/A*
	For these tests, it may be necessary to provide specially prepared component samples, e.g. compressors with locked rotor. (IEC 60335-2-40)	--	*N/A*
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3	--	*N/A*
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified	--	*N/A*
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified	--	*N/A*
	Earthed heating elements in class I appliances disconnected	--	*N/A*
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3	--	*N/A*
19.11.4.6	Appliances having a rated current not exceeding 16 A are subjected to the class 3 voltage dips and interruptions in accordance with IEC 61000-4-11	--	*N/A*
	Appliances having a rated current exceeding 16 A are subjected to the class 3 voltage dips and interruptions in accordance with IEC 61000-4-34	--	*N/A*
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2	--	*N/A*
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation at any temperature within the working range. After 60 s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate. (IEC 60335-2-40)	--	*N/A*
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A)..... :	*OK*	*P*
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts	*OK*	*P*
	Temperature rises not exceeding the values shown in table 9 ..... :	*OK*	*P*
	Compliance with clause 8 not impaired	*OK*	*P*
	If the appliance can still be operated it complies with 20.2	*OK*	*P*
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		—

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- basic insulation (V) ..... :	*1250V*	*P*
	- supplementary insulation (V) ..... :	--	*N/A*
	- reinforced insulation (V)..... :	*3000V*	*P*
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage	--	*N/A*
	The appliance does not undergo a dangerous malfunction, and	--	*N/A*
	no failure of protective electronic circuits, if the appliance is still operable	--	*N/A*
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		—
	- do not become operational, or	--	*N/A*
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4	--	*N/A*
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		—
	- the lid or door does not move automatically to an open position when the interlock is released, and	--	*N/A*
	- the appliance does not start after the cycle in which the interlock was released	--	*N/A*
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited	*Approved relay used.*	*P*
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time	--	*N/A*
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited	--	*N/A*
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn	--	*N/A*
	Locking in the "on" position of the main contacts of a contact intended for switching on and off the heating element(s) in normal use is considered to be a fault condition, unless the appliance is provided with at least two sets of contacts connected in series. (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	This condition is, for example, achieved by providing two contactors operating independently of each other or by providing one contactor having two independent armatures operating two independent sets of main contacts. (IEC 60335-2-40)	--	*N/A*
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied	--	*N/A*
19.101	Test of appliance with heat transfer medium flow of the outdoor heat exchanger restricted or shut off when reaching steady conditions (IEC 60335-2-40)	*OK*	*P*
	Test of appliance with heat transfer flow of the indoor heat exchanger restricted or shut off when reaching steady conditions (IEC 60335-2-40)	--	*N/A*
	Disconnection of motor common to both the outdoor and the indoor heat exchangers when reaching steady conditions (IEC 60335-2-40)	--	*N/A*
19.102	Test of appliances using water as heat transfer medium (IEC 60335-2-40)	--	*N/A*
19.103	Test of air to air appliances at rated voltage or at the upper limit of the rated voltage range. Dry-bulb temperature is 5 K below values specified by manufacturer (IEC 60335-2-40)	*OK*	*P*
	Test with the dry-bulb temperature 10 K over the values specified by manufacturer (IEC 60335-2-40)	*OK*	*P*
19.104	All appliances provided with supplementary heaters and free air discharge subjected to specified test in each mode of operation (IEC 60335-2-40)	*No supplementary heaters.*	*N/A*
	During test temperature not exceed 150 °C but an overshoot of 25 °C is permitted during first hour (IEC 60335-2-40)	--	*N/A*
	Thermal protective devices are allowed to operate. (IEC 60335-2-40)	--	*N/A*
20	STABILITY AND MECHANICAL HAZARDS		*P*
20.1	Appliances having adequate stability	*Fixed by anchor bolt.* *Stated in installation manual.*	*P*
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn	--	*N/A*
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9	--	*N/A*
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury	*Protected by enclosures and enclosures are fixed by screws.*	*P*
	Protective enclosures, guards and similar parts are non-detachable, and	*OK*	*P*
	have adequate mechanical strength	*OK*	*P*
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts	--	*N/A*
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure	--	*N/A*
	Not possible to touch dangerous moving parts with the test probe described	*OK*	*P*
21	MECHANICAL STRENGTH		*P*
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		*P*
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J	*(see appended table)*	*P*
	The appliance shows no damage impairing compliance with this standard, and	*No damaged.*	*P*
	compliance with 8.1, 15.1 and clause 29 not impaired	*OK*	*P*
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3	--	*N/A*
	If necessary, repetition of groups of three blows on a new sample	--	*N/A*
	Safety requirements specified in annex EE apply. Pressure test in annex EE applies to parts other than pressure vessels (IEC 60335-2-40)	*OK*	*P*
	Safety requirements of ISO 14903 apply (IEC 60335-2-40)	*Relevant joint of ISO 14903 is not used internal refrigerant pipe.*	*N/A*
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements	*OK*	*P*
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm	*Thermistor holder thickness minimum 1mm.*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	The insulation is tested as specified, and does withstand the electric strength test of 16.3	*OK*	*P*
	Appliances using flammable refrigerants withstand the effects of vibration during transport. (IEC 60335-2-40)	--	*N/A*
	Appliance is tested in its final packaging for transport and shall withstand a random vibration test according to ASTM D4728-01. (IEC 60335-2-40)	--	*N/A*
	Compliance is checked as specified (IEC 60335-2-40)	--	*N/A*
22	CONSTRUCTION		*P*
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	*IPX4*	*N/A*
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		*P*
	- a supply cord fitted with a plug, or	--	*N/A*
	- a switch complying with 24.3, or	--	*N/A*
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or	*Stated in installation manual.*	*P*
	- an appliance inlet	--	*N/A*
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor	--	*N/A*
22.3	Appliance provided with pins: no undue strain on socket-outlets	*No such pins.*	*N/A*
	Applied torque not exceeding 0,25 Nm	--	*N/A*
	Pull force of 50 N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1 mm	--	*N/A*
	Each pin subjected to a torque of 0,4 Nm; the pins are not rotating, unless	--	*N/A*
	rotating does not impair compliance with this standard	--	*N/A*
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets	*No such construction.*	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding 0,1 μF, the appliance being disconnected from the supply at the instant of voltage peak	*Fixed appliances.*	*N/A*
	Voltage not exceeding 34 V (V) ..... :	--	*N/A*
22.6	Electrical insulation not affected by condensing water or leaking liquid	*OK*	*P*
	Electrical insulation of class II appliances not affected if a hose ruptures or seal leaks	--	*N/A*
	In case of doubt, test as described	--	*N/A*
	Electrical insulation not affected by snow penetration to appliance enclosure (IEC 60335-2-40)	*Outdoor has sufficient amount of drain holes to protect it from hazardous accumulation of snow/molten water.*	*P*
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices	*OK*	*P*
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use	*No wiring is accessible by the operator for cleaning.*	*P*
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless	*OK*	*P*
	the substance has adequate insulating properties	*OK*	*P*
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:	--	*N/A*
	- a non-self-resetting thermal cut-out is required by the standard, and	--	*N/A*
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it	--	*N/A*
	Non-self-resetting thermal motor protectors have a trip-free action, unless	--	*N/A*
	they are voltage maintained	--	*N/A*
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts	*Parts of the enclosure of the unit which removal would impair the moisture protection are only removable by a tool (service personnel).*	*P*
	Obvious locked position of snap-in devices used for fixing such parts	*No snap-in devices provided.*	*N/A*
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing	*As above.*	*N/A*
	Tests as described	*OK*	*P*
22.12	Handles, knobs etc. fixed in a reliable manner	*Grips on the outdoor are fixed properly, so that they will not work loose in normal use (transport/lifting).*	*P*
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible	--	*N/A*
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied	--	*N/A*
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	*OK*	*P*
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only	*For carrying handle, see appended table for clause 11.8.*	*N/A*
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance	*No sharp edges. Corners are well rounded.*	*P*
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance	*No hazard.*	*P*
22.15	Storage hooks and the like for flexible cords smooth and well rounded	--	*N/A*
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts	--	*N/A*
	Cord reel tested with 6000 operations, as specified	--	*N/A*
	Electric strength test of 16.3, voltage of 1000 V applied	--	*N/A*
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner	*Not applied.*	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
22.18	Current-carrying parts and other metal parts resistant to corrosion	*See sub-clause 27.4*	*P*
22.19	Driving belts not relied upon to provide the required level of insulation, unless	*No driving belts provided.*	*N/A*
	constructed to prevent inappropriate replacement	--	*N/A*
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless	*No thermal insulation employed in contact to live parts.*	*P*
	material used is non-corrosive, non-hygroscopic and non-combustible	*As above.*	*P*
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless	*No such materials used as insulator.*	*P*
	impregnated	*As above.*	*P*
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements	--	*N/A*
22.22	Appliances not containing asbestos	*No asbestos used.*	*P*
22.23	Oils containing polychlorinated biphenyl (PCB) not used	*Not used.*	*P*
22.24	Bare heating elements adequately supported to prevent contact with accessible metal parts nor give rise to a hazard in case of rupture or sagging (IEC 60335-2-40)	*No bare heating elements.*	*N/A*
	Bare heating elements not used with wood or wood composite enclosures. (IEC 60335-2-40)	--	*N/A*
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts	*No sagging heating conductors.*	*N/A*
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation	*No such construction.*	*N/A*
22.27	Parts connected by protective impedance separated by double or reinforced insulation	--	*N/A*
22.28	Metal parts of class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation	*Class I appliances.*	*N/A*
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation	*Class I appliance.*	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or	--	*N/A*
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete	*OK* *Constructed so that they cannot be replaced in an incorrect position.*	*P*
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear	*OK*	*P*
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose	*All relevant parts are adequately fixed. Appliance is designed that reducing of clearances and creepage distances is not possible due to parts, which could work loose.*	*P*
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29	*OK*	*P*
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2	--	*N/A*
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation	--	*N/A*
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation	--	*N/A*
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature	--	*N/A*
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts	*OK*	*P*
	Electrodes not used for heating liquids	--	*N/A*
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless	*Insulation of thermistor part considered 29.3.3 and 29.3.4 as reinforced insulation.*	*P*
	the reinforced insulation consists of at least 3 layers	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless	*Insulation of thermistor part considered 29.3.3 and 29.3.4 as reinforced insulation.*	*P*
	the reinforced insulation consists of at least 3 layers	--	*N/A*
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid	--	*N/A*
22.34	Shafts of operating knobs, handles, levers etc. not live, unless	*No conductive shafts of operating knobs, handles, levers in operator access area.*	*N/A*
	the shaft is not accessible when the part is removed	--	*N/A*
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation	*No such parts in operator access area.*	*N/A*
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation	--	*N/A*
	This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal	--	*N/A*
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation	--	*N/A*
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless	*No handles, which are continuously held. Handles on the outdoor unit are only for transport.*	*N/A*
	they are separated from live parts by double or reinforced insulation	--	*N/A*
22.37	Capacitors in class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless	*Class I appliance.*	*N/A*
	the capacitors comply with 22.42	--	*N/A*
22.38	Capacitors not connected between the contacts of a thermal cut-out	*OK*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.39	Lamp holders used only for the connection of lamps	*No lamp holders employed.*	*N/A*
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible	*Fixed appliances.*	*N/A*
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible	--	*N/A*
22.41	No components, other than lamps, containing mercury	*No components containing mercury*	*P*
22.42	Protective impedance consisting of at least two separate components	--	*N/A*
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited	--	*N/A*
	Resistors checked by the test of 14.1 a) in IEC 60065	--	*N/A*
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14	--	*N/A*
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur	--	*N/A*
22.44	Appliances not having an enclosure that is shaped or decorated like a toy	*Equipment is unlikely to be treated as a toy*	*P*
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure	--	*N/A*
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1	--	*N/A*
	If the protective electronic circuit software is a part of the normal operation control, inspection of software shall be limited to relevant source code of safety controls or related software controls. (IEC 60335-2-40)	--	*N/A*
	Alternative methods are used (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards	--	*N/A*
	These requirements are not applicable to software used for functional purpose or compliance with clause 11	--	*N/A*
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use	--	*N/A*
	No leakage from any part, including any inlet water hose	--	*N/A*
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water	--	*N/A*
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless	--	*N/A*
	the appliance switches off automatically or can operate continuously without hazard	--	*N/A*
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation	--	*N/A*
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode	--	*N/A*
	There is a visual indication showing that the appliance is adjusted for remote operation	--	*N/A*
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		*N/A*
	- continuously, or	--	*N/A*
	- automatically, or	--	*N/A*
	- remotely	--	*N/A*
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold	*No Socket-outlets.*	*N/A*
22.101	Appliances intended to be fixed, securely fixed (IEC 60335-2-40)	*Unit has to be fixed how it is described in Installation manual.*	*P*
22.102.1	At least two thermal cut-outs in appliances with supplementary heating elements for air (first one be self-resetting and other non-self-resetting thermal cut-out) (IEC 60335-2-40)	*No supplementary heaters employed.*	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.102.2	Appliances provided with supplementary heaters for water incorporate non-self-resetting thermal cut-out, providing all-pole disconnection that operates separately from water thermostats (IEC 60335-2-40)	*No supplementary heaters employed.*	*N/A*
	However, for appliances intended to be connected to fixed wiring, the neutral conductor need not be disconnected (IEC 60335-2-40)	--	*N/A*
22.102.3	Thermal cut-outs of capillary type open in event of leakage from capillary tube (IEC 60335-2-40)	--	*N/A*
22.103	Non-self-resetting cut-outs independent of other control devices (IEC 60335-2-40)	*OK*	*P*
22.104	Containers of sanitary hot water heat pumps withstand twice permissible operating pressure in closed containers (IEC 60335-2-40) or	*No water containers employed.*	*N/A*
	0,15 MPa in open containers (IEC 60335-2-40)	--	*N/A*
	without leakage or rupture (IEC 60335-2-40)	--	*N/A*
22.105	Air or vapour cushion in closed containers not exceeding 10 % (IEC 60335-2-40)	--	*N/A*
22.106	Pressure relief devices operating at 0,1 MPa over permissible operating pressure (IEC 60335-2-40)	--	*N/A*
22.107	Water outlet systems of open containers free from obstruction causing over-pressure (IEC 60335-2-40)	--	*N/A*
	Vented containers of sanitary hot water heat pumps always open to the atmosphere through appropriate aperture (IEC 60335-2-40)	--	*N/A*
22.108	Not vented open containers subjected to test in accordance with clause 22.104 to vacuum of 33 kPa for 15 min (IEC 60335-2-40)	--	*N/A*
	Container show no deformation which result in a hazard (IEC 60335-2-40)	--	*N/A*
22.109	Replacement of non-self-resetting thermal cut-outs does not damage other connections (IEC 60335-2-40)	--	*N/A*
22.110	Non-self-resetting thermal cut-outs operate without short-circuiting live parts of different potential and without causing contact between live parts and enclosure (IEC 60335-2-40)	--	*N/A*
	Test repeated five times without blowing 3 A fuse which connects appliance to earth (IEC 60335-2-40)	--	*N/A*
	Electric strength test as specified in clause 16.3 for supplementary heating elements (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.111	Manual resetting of thermostats not necessary after power supply interruption (IEC 60335-2-40)	--	*N/A*
22.112	Construction of refrigerating system comply with requirements of Section 3 of ISO 5149 (IEC 60335-2-40)	*OK*	*P*
22.113	Flammable refrigerant used, refrigerant tubing protected or enclosed to avoid mechanical damage (IEC 60335-2-40)	--	*N/A*
	Tubing protected to extent that it will not be handled or used for carrying during moving of product (IEC 60335-2-40)	--	*N/A*
	Tubing located within confines of cabinet considered to be protected from mechanical damage (IEC 60335-2-40)	--	*N/A*
22.114	Flammable refrigerant used, low temperature solder alloys, such as lead/tin alloys, not acceptable for pipe connections or any other refrigerant pressure containing purposes. (IEC 60335-2-40)	--	*N/A*
22.115	Total refrigerant mass (M) of all refrigerating systems within appliance employing flammable refrigerants, not exceed m_3 defined in annex GG (IEC 60335-2-40/A1)	--	*N/A*
22.116	Appliances using flammable refrigerants constructed that any leaked refrigerant not flow or stagnate so as to cause fire or explosion hazard in areas within appliance where electrical components, which could be a source of ignition and which could function under normal conditions or in event of leak, fitted (IEC 60335-2-40/A1)	--	*N/A*
	Separate components, such as thermostats, which charged with less than 0,5 g of flammable gas not considered to cause fire or explosion hazard in event of leakage of gas within component itself (IEC 60335-2-40/A1)	--	*N/A*
	All electrical components that could be a source of ignition and which could function under normal conditions or in the event of a leak, shall be located in an enclosure which satisfies the following: (IEC 60335-2-40):		*N/A*
	- comply with Clause 20 of IEC 60079-15:2010 for restricted breathing enclosures suitable for use with group IIA gases or the refrigerant used. (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- not be located in an area where a potentially flammable gas mixture will accumulate as demonstrated by the test of Annex FF. Electrical components not located in an area where a potentially flammable gas mixture will accumulate as demonstrated by the test of Annex FF are not considered an ignition source. (IEC 60335-2-40)	--	*N/A*
	Components and apparatus complying with Clause 8 to 19 of IEC 60079-15:2010, for group IIA gases or the refrigerant used or an applicable standard that makes electrical components suitable for use in Zone 2, 1 or 0 as defined IEC 60079-14 are not considered as a source of ignition. (IEC 60335-2-40)	--	*N/A*
22.117	Temperatures on surfaces that exposed to leakage of flammable refrigerants not exceed auto-ignition temperature of refrigerant reduced by 100 K; some typical values given in annex BB (IEC 60335-2-40/A1)	--	*N/A*
22.118	Flammable refrigerant used, all appliances charged with refrigerant at manufacturing location or charged on site as recommended by manufacturer (IEC 60335-2-40/A1)	--	*N/A*
	Part of appliance that charged on site, which requires brazing or welding in installation not shipped with flammable refrigerant charge. Joints made in installation between parts of refrigerating system, with at least one part charged, made in accordance with following (IEC 60335-2-40/A1):		*N/A*
	- A brazed, welded, or mechanical connection shall be made before opening the valves to permit refrigerant to flow between the refrigerating system parts. A vacuum valve shall be provided to evacuate the interconnecting pipe and/or any uncharged refrigerating system part (IEC 60335-2-40)	--	*N/A*
	- Mechanical connectors used indoors shall comply with ISO 14903. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated. (IEC 60335-2-40)	--	*N/A*
	- Refrigerant tubing shall be protected or enclosed to avoid damage (IEC 60335-2-40)	--	*N/A*
	Flexible refrigerant connectors (such as connecting lines between the indoor and outdoor unit) that may be displaced during normal operations shall be protected against mechanical damage (IEC 60335-2-40)	--	*N/A*
23	INTERNAL WIRING		*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
23.1	Wireways smooth and free from sharp edges	*Checked. All wire ways are sufficiently protected.*	*P*
	Wires protected against contact with burrs, cooling fins etc.	*No burrs. No sharp cooling fins within the path of wires.*	*N/A*
	Wire holes in metal well-rounded or provided with bushings	*OK*	*P*
	Wiring effectively prevented from coming into contact with moving parts	*Properly fixed.*	*P*
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges	*No beads or the like employed.*	*N/A*
	Beads inside flexible metal conduits contained within an insulating sleeve	*As above.*	*N/A*
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress	*No movable electrical wiring.*	*N/A*
	Flexible metallic tubes not causing damage to insulation of conductors	--	*N/A*
	Open-coil springs not used	--	*N/A*
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another	--	*N/A*
	No damage after 10 000 flexings for conductors flexed during normal use, or	--	*N/A*
	100 flexings for conductors flexed during user maintenance	--	*N/A*
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts	--	*N/A*
	Not more than 10 % of the strands of any conductor broken, and	--	*N/A*
	not more than 30 % for wiring supplying circuits that consume no more than 15 W	--	*N/A*
23.4	Bare internal wiring sufficiently rigid and fixed	*Internal wires are all insulated except for PCB tracks and PCB-mounted components. All these components are adequately fixed. The applied insulation complies with international standards.*	*P*
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use	*OK*	*P*

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Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or	*2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation*	*P*
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation	*OK – No breakdown.*	*P*
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or	--	*N/A*
	be such that it can only be removed by breaking or cutting	--	*N/A*
23.7	The colour combination green/yellow only used for earthing conductors	*Green/Yellow used only for earthing conductors.*	*P*
23.8	Aluminium wires not used for internal wiring	*Not used.*	*P*
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless	--	*N/A*
	the contact pressure is provided by spring terminals	--	*N/A*
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)	--	*N/A*
24	COMPONENTS		*P*
24.1	Components comply with safety requirements in relevant IEC standards	*Respective safety relevant components complying with international standards or equivalent national version.*	*P*
	List of components ..... :	*(see appended table)*	*P*
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9	*OK*	*P*
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9	*OK*	*P*
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard	--	*N/A*
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309	--	*N/A*
	Motor-compressors not tested according to IEC 60335-2-34 (not necessary to meet all requirements of IEC 60335-2-34) (IEC 60335-2-40)	*Motor-compressor meets requirements of this standard*	*P*
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14	*IEC60384-14 approved capacitor used.*	*P*
	If the capacitors have to be tested, they are tested according to annex F	--	*N/A*
24.1.2	Safety isolating transformers complying with IEC 61558-2-6	--	*N/A*
	If they have to be tested, they are tested according to annex G	--	*N/A*
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000	*No switches.*	*N/A*
	If they have to be tested, they are tested according to annex H	--	*N/A*
	If the switch operates a relay or contactor, the complete switching system is subjected to the test	--	*N/A*
	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested	--	*N/A*
24.1.4	Automatic controls complying with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		*P*
	- thermostats: 10 000	--	*N/A*
	- temperature limiters: 1 000	--	*N/A*
	- self-resetting thermal cut-outs: 300	--	*N/A*
	- voltage maintained non-self-resetting thermal cut-outs: 1 000	--	*N/A*
	- other non-self-resetting thermal cut-outs: 30	--	*N/A*
	- timers: 3 000	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- energy regulators:..... 10 000	--	*N/A*
	- thermostats which control motor-compressor (IEC 60335-2-40):..... 100 000	--	*N/A*
	- motor-compressor starting relays (IEC 60335-2-40):..... 100 000	--	*N/A*
	- automatic thermal motor-protectors for hermetic and semi-hermetic type motor-compressors (not less than number of operations during locked rotor test) (IEC 60335-2-40):..... min 2000	--	*N/A*
	- manual reset thermal motor-protectors for hermetic and semi-hermetic type motor-compressors (IEC/EN 60335-2-40):..... 50	*For motor compressor protection. (see appended table 19.7)*	*P*
	- other automatic thermal motor-protectors (IEC 60335-2-40):..... 2000	--	*N/A*
	- other manual reset thermal motor-protectors (IEC 60335-2-40):..... 30	--	*N/A*
	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited	--	*N/A*
	Thermal motor protectors are tested in combination with their motor under the conditions specified in annex D	--	*N/A*
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7	--	*N/A*
24.1.5	Appliance couplers complying with IEC 60320-1	--	*N/A*
	However, for appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3	--	*N/A*
	Interconnection couplers complying with IEC 60320-2-2	--	*N/A*
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable	--	*N/A*
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151	--	*N/A*
24.1.8	The relevant standard for thermal links is IEC 60691	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of clause 19	--	*N/A*
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance	*Approved type used.*	*P*
	They are also tested in accordance with clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance .....:	--	*N/A*
24.2	Appliances not fitted with:		*P*
	- switches or automatic controls in flexible cords	*Not used.*	*P*
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance	*Not used.*	*P*
	- thermal cut-outs that can be reset by soldering, unless	*Not used.*	*P*
	the solder has a melding point of at least 230 °C	--	*N/A*
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions	*Stated in Installation Manual.*	*N/A*
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1	*No plugs and socket-outlets for interconnection cords.*	*N/A*
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly	--	*N/A*
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load	--	*N/A*
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V	--	*N/A*
	In addition, the motors comply with the requirements of annex I	--	*N/A*
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770	--	*N/A*
	They are supplied with the appliance	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set	--	*N/A*
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure	--	*N/A*
	One or more of the following conditions are to be met:		*N/A*
	- the capacitors are of class P2 according to IEC 60252-1	--	*N/A*
	- the capacitors are housed within a metallic or ceramic enclosure	--	*N/A*
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm	--	*N/A*
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of annex E	--	*N/A*
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10	--	*N/A*
24.101	Replaceable parts of thermal control devices identified by marking (IEC 60335-2-40)	--	*N/A*
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		*P*
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		*N/A*
	- supply cord fitted with a plug,	*Permanent connection*	*N/A*
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or	--	*N/A*
	- pins for insertion into socket-outlets	--	*N/A*
	Supply cord fitted with plug provided, if (IEC 60335-2-40):		*N/A*
	- appliance only for indoor use (IEC 60335-2-40),	--	*N/A*
	- marked with rating of 25 A or less and (IEC 60335-2-40)	--	*N/A*
	- complies with code requirements of country where it will be used (IEC 60335-2-40).	--	*N/A*
	Appliance inlet not allowed (IEC 60335-2-40)	*OK – Not used.*	*P*
25.2	Appliance not provided with more than one means of connection to the supply mains	*Single supply*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown	*No multiple supplies.*	*N/A*
25.3	Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains:		*P*
	- a set of terminals allowing the connection of a flexible cord	--	*N/A*
	- a fitted supply cord	--	*N/A*
	- a set of supply leads accommodated in a suitable compartment	--	*N/A*
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support	*OK*	*P*
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support	*OK*	*P*
	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support	*OK*	*P*
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm) ..... :	*OK – Rated current 12.5A, Opening: Approx110 x 100mm*	*P*
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29	*OK*	*P*
25.5	Method for assembling the supply cord to the appliance:		*N/A*
	- type X attachment	--	*N/A*
	- type Y attachment	*Fixed wiring.*	*N/A*
	- type Z attachment, if allowed in relevant part 2	--	*N/A*
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment	--	*N/A*
25.6	Plugs fitted with only one flexible cord	--	*N/A*
25.7	Supply cords, other than for class III appliances, being one of the following types:		*P*
	- rubber sheathed (at least 60245 IEC 53)	--	*N/A*
	- polychloroprene sheathed (at least 60245 IEC 57)	*Specified in the Installation Manual.(60245 IEC 66) (more Heavy duty rubber type)*	*P*
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 88)	--	*N/A*
	- polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11		*N/A*
	- light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg	--	*N/A*
	- ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances	--	*N/A*
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		*N/A*
	- heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg	--	*N/A*
	- heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances	--	*N/A*
	Supply cords for class III appliances adequately insulated	--	*N/A*
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts	--	*N/A*
	Supply cords for outdoor use not lighter than polychloroprene sheathed flexible cord (60245 IEC 57) (IEC 60335-2-40)	*Specified in the Installation Manual.(60245 IEC 66)*	*P*
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm^2)..... :	*Specified in the Installation Manual. Rated current: 12.5A Cross-sectional area: 2.5mm^2*	*P*
25.9	Supply cords not in contact with sharp points or edges	*OK*	*P*
25.10	Supply cord of class I appliances have a green/yellow core for earthing	*OK*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless	*No soldering used.*	*P*
	the contact pressure is provided by spring terminals	*As above.*	*N/A*
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure	*No moulding used.*	*N/A*
25.13	Inlet openings so constructed as to prevent damage to the supply cord	*OK*	*P*
	If the enclosure at the inlet opening is not of insulating material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided	*This requirement is not applicable, since this cord has installed to be protected safety by qualified service personnel.*	*N/A*
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is	--	*N/A*
	class 0, or	--	*N/A*
	a class III appliance not containing live parts	--	*N/A*
25.14	Supply cords moved while in operation adequately protected against excessive flexing	--	*N/A*
	Flexing test, as described:		*N/A*
	- applied force (N) ..... :	--	*N/A*
	- number of flexings ..... :	--	*N/A*
	The test does not result in:		*N/A*
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current	--	*N/A*
	- breakage of more than 10 % of the strands of any conductor	--	*N/A*
	- separation of the conductor from its terminal	--	*N/A*
	- loosening of any cord guard	--	*N/A*
	- damage to the cord or the cord guard	--	*N/A*
	- broken strands piercing the insulation and becoming accessible	--	*N/A*
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage	*Cord anchorage provided.*	*P*
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged	*OK*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm)..... :	*Tested. (100N, 0.35Nm)*	*P*
	Cord not damaged and max. 2 mm displacement of the cord	*No displacement.*	*P*
25.16	Cord anchorages for type X attachments constructed and located so that:		*N/A*
	- replacement of the cord is easily possible	--	*N/A*
	- it is clear how the relief from strain and the prevention of twisting are obtained	--	*N/A*
	- they are suitable for different types of supply cord	--	*N/A*
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless	--	*N/A*
	they are separated from accessible metal parts by supplementary insulation	--	*N/A*
	- the cord is not clamped by a metal screw which bears directly on the cord	--	*N/A*
	- at least one part of the cord anchorage securely fixed to the appliance, unless	--	*N/A*
	it is part of a specially prepared cord	--	*N/A*
	- screws which have to be operated when replacing the cord do not fix any other component, unless	--	*N/A*
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool	--	*N/A*
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood	--	*N/A*
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless	--	*N/A*
	failure of the insulation of the cord does not make accessible metal parts live	--	*N/A*
	- for class II appliances they are of insulating material, or	--	*N/A*
	if of metal, they are insulated from accessible metal parts by supplementary insulation	--	*N/A*
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals	--	*N/A*
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	*Fixed wiring.*	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
25.18	Cord anchorages only accessible with the aid of a tool, or	*Tool is required.*	*P*
	Constructed so that the cord can only be fitted with the aid of a tool	--	*N/A*
25.19	Type X attachment, glands not used as cord anchorage in portable appliances	--	*N/A*
	Tying the cord into a knot or tying the cord with string not used	--	*N/A*
25.20	The insulated conductors of the supply cord for type Y and Z attachment additionally insulated from accessible metal parts	--	*N/A*
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		*P*
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover	*Connections of interconnection cables can be performed easily. There is enough space to permit checking and an easy introduction of the power cable.*	*P*
	- so there is no risk of damage to the conductors or their insulation when fitting the cover	*As above.*	*P*
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts	--	*N/A*
	2 N test to the conductor for portable appliances; no contact with accessible metal parts	--	*N/A*
25.22	Appliance inlets:		*N/A*
	- live parts not accessible during insertion or removal	--	*N/A*
	Requirement not applicable to appliance inlets complying with IEC 60320-1	--	*N/A*
	- connector can be inserted without difficulty	--	*N/A*
	- the appliance is not supported by the connector	--	*N/A*
	- not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless	--	*N/A*
	the supply cord is unlikely to touch such metal parts	--	*N/A*
25.23	Interconnection cords comply with the requirements for the supply cord, except that:	*Interconnection cord is specified in installation manual.*	*P*
	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11	*As above.*	*P*

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Clause	Requirement + Test	Result - Remark	Verdict
	- the thickness of the insulation may be reduced	*As above.*	*P*
	If necessary, electric strength test of 16.3	--	*N/A*
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected	*Interconnection cord not considered being detachable (screwdriver is necessary).*	*N/A*
25.25	Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet.	--	*N/A*
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083	--	*N/A*
26	TERMINALS FOR EXTERNAL CONDUCTORS		*P*
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors	*Terminal block used.*	*P*
	Terminals only accessible after removal of a non-detachable cover, except	*Tool is required.*	*P*
	for class III appliances that do not contain live parts	--	*N/A*
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection	*Tool is required.*	*P*
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless	*Terminal block used.*	*P*
	the connections are soldered	--	*N/A*
	Screws and nuts not used to fix any other component, except	*OK*	*P*
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors	--	*N/A*
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless	--	*N/A*
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor	*OK*	*P*
	Terminals fixed so that when the clamping means is tightened or loosened:		*P*
	- the terminal does not become loose	*OK*	*P*
	- internal wiring is not subjected to stress	*OK*	*P*
	- neither clearances nor creepage distances are reduced below the values in clause 29	*OK*	*P*
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm)..... :	*Diameter of thread: 6.0mm* *Screw category: II* *Torque: 1.2Nm*	*P*
	No deep or sharp indentations of the conductors	*OK*	*P*
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and	*OK*	*P*
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened	*OK*	*P*
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard	--	*N/A*
	Stranded conductor test, 8 mm insulation removed	--	*N/A*
	No contact between live parts and accessible metal parts and,	--	*N/A*
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only	--	*N/A*
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm^2)..... :	*OK* *Rated current: 12.5A* *nominal cross-sectional area: 2.5mm^2*	*P*
	If a specially prepared cord is used, terminals need only be suitable for that cord	--	*N/A*
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other	*OK*	*P*
26.9	Terminals of the pillar type constructed and located as specified	--	*N/A*
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless	--	*N/A*
	conductors ends fitted with means suitable for screw terminals	--	*N/A*
	Pull test of 5 N to the connection	--	*N/A*
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	*Not used.*	*N/A*
	For class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		*N/A*
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		*N/A*
27	PROVISION FOR EARTHING		*P*
27.1	Accessible metal parts of class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet	*All conductive and accessible metal parts, which could become live in the event of an insulation fault, are reliably earthed, using only metal to metal connections.*	*P*
	Earthing terminals and earthing contacts not connected to the neutral terminal	*OK*	*P*
	Class 0, II and III appliances have no provision for earthing	*Class I appliances.*	*N/A*
	Safety extra-low voltage circuits not earthed, unless	--	*N/A*
	protective extra-low voltage circuits	--	*N/A*
27.2	Clamping means of earthing terminals adequately secured against accidental loosening	*Spring washer is used for screw of earthing terminal.*	*P*
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2,5 to 6 mm², and	*OK*	*P*
	do not provide earthing continuity between different parts of the appliance, and	*OK*	*P*
	conductors cannot be loosened without the aid of a tool	*OK*	*P*

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Clause	Requirement + Test	Result - Remark	Verdict
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part	--	*N/A*
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage	*Stated in Installation Manual.*	*P*
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal	*All parts have adequate protection against corrosion.*	*P*
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion	*OK*	*P*
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm	*OK*	*P*
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure	*OK*	*P*
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion	--	*N/A*
27.5	Low resistance of connection between earthing terminal and earthed metal parts	*OK*	*P*
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance	--	*N/A*
	Resistance not exceeding 0,1 □ at the specified low-resistance test (□).....:	*Earth Screw — Front cabinet upper left edge fixing screws: 0.02 Ω*	*P*
	If the ground continuity between system components meets the minimum values specified in 27.5, it is considered to meet the requirements without dedicated grounding conductors. (IEC 60335-2-40)	*OK*	*P*
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.	--	*N/A*
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit	--	*N/A*
28	SCREWS AND CONNECTIONS		*P*

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Clause	Requirement + Test	Result - Remark	Verdict
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses	*OK*	*P*
	Screws not of soft metal liable to creep, such as zinc or aluminium	*OK*	*P*
	Diameter of screws of insulating material min. 3 mm	*Screws of insulating material not provided.*	*N/A*
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity	*OK*	*P*
	Screws used for electrical connections or connections providing earthing continuity screwed into metal	*OK*	*P*
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation	--	*N/A*
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation	--	*N/A*
	For screws and nuts; torque-test as specified in table 14 ..... :	*OK* *(see appended table)*	*P*
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless	*Contact pressure not transmitted through insulating material.*	*P*
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material	*As above.*	*N/A*
	This requirement does not apply to electrical connections in circuits of appliances for which:		*P*
	- 30.2.2 is applicable and that carry a current not exceeding 0,5 A	*OK*	*P*
	- 30.2.3 is applicable and that carry a current not exceeding 0,2 A	*OK*	*P*
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together	*OK*	*P*
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread	*OK*	*P*

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Clause	Requirement + Test	Result - Remark	Verdict
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer	*OK*	*P*
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		*P*
	- in normal use,	*OK*	*P*
	- during user maintenance,	--	*N/A*
	- when replacing a supply cord having a type X attachment, or	--	*N/A*
	- during installation	--	*N/A*
	At least two screws being used for each connection providing earthing continuity, unless	*OK*	*P*
	the screw forms a thread having a length of at least half the diameter of the screw	*OK*	*P*
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity	*For each mechanical connection, which is part of the protective earthing circuit, either two independent screws are applied.*	*P*
	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or	*OK*	*P*
	if an alternative earthing circuit is provided	*OK*	*P*
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion	--	*N/A*
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		*P*
	Clearances, creepage distances and solid insulation withstand electrical stress	*OK*	*P*
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies.....:	--	*N/A*
	The microenvironment is pollution degree 1 under type 1 protection	--	*N/A*
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3	--	*N/A*
	These values apply to functional, basic, supplementary and reinforced insulation.....:	--	*N/A*
	For motor-compressor not complying with IEC 60335-2-34, additions and modifications as specified (IEC 60335-2-40)	*OK*	*P*

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Clause	Requirement + Test	Result - Remark	Verdict
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless .....:	*(see appended table)*	*P*
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14	--	*N/A*
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500 V and above are increased by 0,5 mm and the impulse voltage test is not applicable	--	*N/A*
	Impulse voltage test is not applicable:		*P*
	- when the microenvironment is pollution degree 3, or	--	*N/A*
	- for basic insulation of class 0 and class 01 appliances	--	*N/A*
	Appliances are in overvoltage category II	*OK*	*P*
	A force of 2 N is applied to bare conductors, other than heating elements	*OK*	*P*
	A force of 30 N is applied to accessible surfaces	*OK*	*P*
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage	*OK*	*P*
	The values of table 16 or the impulse voltage test of clause 14 are applicable.....:	*(see appended table)*	*P*
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1	--	*N/A*
	Lacquered conductors of windings considered to be bare conductors	*OK*	*P*
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16 .....:	*(see appended table)*	*N/A*
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage.....:	*(see appended table)*	*N/A*
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation	--	*N/A*
29.1.4	Clearances for functional insulation are the largest values determined from:		*P*
	- table 16 based on the rated impulse voltage.....:	*(see appended table)*	*P*

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Clause	Requirement + Test	Result - Remark	Verdict
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz	*Less than above values.*	*P*
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz	*See above.*	*P*
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless	--	*N/A*
	the microenvironment is pollution degree 3, or	--	*N/A*
	the distances can be affected by wear, distortion, movement of the parts or during assembly	--	*N/A*
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited	*Tested by clause 19.11.2.*	*P*
	Lacquered conductors of windings considered to be bare conductors	*OK*	*P*
	However, clearances at crossover points are not measured	*OK*	*P*
	Clearance between surfaces of PTC heating elements may be reduced to 1mm	--	*N/A*
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		*N/A*
	- table 16 based on the rated impulse voltage..... :	--	*N/A*
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz	--	*N/A*
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz	--	*N/A*
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation	--	*N/A*
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation	--	*N/A*
	If clearances for basic insulation are selected from clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage	--	*N/A*
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15	*OK* *Considered secondary circuits.*	*P*
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree ..... :	*(see appended table)*	*P*
	Pollution degree 2 applies, unless	*OK*	*P*
	- precautions taken to protect the insulation; pollution degree 1	--	*N/A*
	- insulation subjected to conductive pollution; pollution degree 3	--	*N/A*
	A force of 2 N is applied to bare conductors, other than heating elements	*Considered.*	*P*
	A force of 30 N is applied to accessible surfaces	*Considered.*	*P*
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system	*Considered.*	*P*
	Insulation located in airflow, pollution degree 3 unless (IEC 60335-2-40)	--	*N/A*
	insulation enclosed or located so that unlikely to be exposed to pollution due to normal use (IEC 60335-2-40)	--	*N/A*
29.2.1	Creepage distances of basic insulation not less than specified in table 17 ..... :	*(see appended table)*	*P*
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17 ..... :	*Less than above values.*	*P*
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 ..... :	*Considered.*	*P*
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or..... :	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	Table 2 of IEC 60664-4, as applicable .....:	--	*N/A*
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or.....:	--	*N/A*
	Table 2 of IEC 60664-4, as applicable .....:	--	*N/A*
29.2.4	Creepage distances of functional insulation not less than specified in table 18.....:	*(see appended table)*	*P*
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18.....:	*Less than above values.*	*P*
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited	*Tested by clause 19.11.2.*	*P*
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses	*OK*	*P*
	Compliance checked:		*P*
	- by measurement, in accordance with 29.3.1, or	*OK*	*P*
	- by an electric strength test in accordance with 29.3.2, or	--	*N/A*
	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and	--	*N/A*
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or	--	*N/A*
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz	--	*N/A*
29.3.1	Supplementary insulation have a thickness of at least 1 mm	*Thermistor enclosed by Thermistor cover. Themistor cover thickness minimum 1mm.*	*P*
	Reinforced insulation have a thickness of at least 2 mm	--	*N/A*
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation	--	*N/A*
	Supplementary insulation consist of at least 2 layers	--	*N/A*
	Reinforced insulation consist of at least 3 layers	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by	*Evaluated for cl.22.33.*	*P*
	the electric strength test of 16.3	*OK*	*P*
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out	*OK*	*P*
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19 ..... :	*Thickness of thermistor insulation: 0.6mm*	*P*
30	RESISTANCE TO HEAT AND FIRE		*P*
30.1	External parts of non-metallic material,	*OK*	*P*
	parts supporting live parts, and	*OK*	*P*
	parts of thermoplastic material providing supplementary or reinforced insulation	--	*N/A*
	sufficiently resistant to heat	*OK*	*P*
	Ball-pressure test according to IEC 60695-10-2	*OK*	*P*
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C) ..... :	*(see appended table)*	*P*
	Parts supporting live parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C) ..... :	*(see appended table)*	*P*
	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C) ..... :	*(see appended table)*	*P*
30.2	Parts of non-metallic material resistant to ignition and spread of fire	*OK*	*P*
	This requirement does not apply to:		*P*
	parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or	*OK*	*P*
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance	*OK*	*P*
	Compliance checked by the test of 30.2.1, and in addition:	*OK*	*P*
	- for attended appliances, 30.2.2 applies	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	- for unattended appliances, 30.2.3 applies	*OK*	*P*
	For appliances for remote operation, 30.2.3 applies	--	*N/A*
	For base material of printed circuit boards, 30.2.4 applies	*PCB classified as V-0.*	*P*
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C	*OK*	*P*
	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or	--	*N/A*
	the material is classified at least HB40 according to IEC 60695-11-10	--	*N/A*
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF	--	*N/A*
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2	*OK*	*P*
	The tests are not applicable to conditions as specified.....:	--	*N/A*
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and	*OK*	*P*
	parts of non-metallic material, other than small parts, within a distance of 3 mm,	*OK*	*P*
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C	*OK*	*P*
	Glow-wire applied to an interposed shielding material, if relevant	--	*N/A*
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C	--	*N/A*
30.2.3.2	Parts of non-metallic material supporting connections, and	*OK*	*P*
	parts of non-metallic material within a distance of 3 mm,	*OK*	*P*
	subjected to glow-wire test of IEC 60695-2-11	*OK*	*P*
	The test severity is:		*P*
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation	*OK*	*P*
	- 650 °C, for other connections	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	Glow-wire applied to an interposed shielding material, if relevant	--	*N/A*
	However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications:		*N/A*
	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:	--	*N/A*
	- 775 °C, for connections carrying a current exceeding 0,2 A during normal operation	--	*N/A*
	- 675 °C, for other connections	--	*N/A*
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:	--	*N/A*
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation	--	*N/A*
	- 650 °C, for other connections	--	*N/A*
	The glow-wire test is also not carried out on small parts. These parts are to:		*N/A*
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or	--	*N/A*
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or	--	*N/A*
	- comply with the needle-flame test of annex E, or	--	*N/A*
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10	--	*N/A*
	The consequential needle-flame test of annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		*N/A*
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or	--	*N/A*
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or	--	*N/A*
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or	--	*N/A*
	- small parts for which the needle-flame test of annex E was applied, or	--	*N/A*
	- small parts for which a material classification of V-0 or V-1 was applied	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		*N/A*
	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or	--	*N/A*
	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or	--	*N/A*
	- parts shielded by a flame barrier that meets the needle-flame test of annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10	--	*N/A*
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of annex E	--	*N/A*
	Test not applicable to conditions as specified ..... :	*PCB classified as V-0.*	*P*
31	RESISTANCE TO RUSTING		*P*
	Relevant ferrous parts adequately protected against rusting	*OK*	*P*
	Tests specified in part 2 when necessary	*OK*	*P*
	Salt mist test of IEC 60068-2-52, severity 2 (IEC 60335-2-40)	*OK*	*P*
	Before test, coatings are scratched by means of a harden steel pin as specified (IEC 60335-2-40)	*OK*	*P*
	Five scratches made at least 5 mm apart and at least 5 mm from the edges (IEC 60335-2-40)	*OK*	*P*
	Appliance not deteriorated to such an extent that compliance with clause 8 and 27 is impaired (IEC 60335-2-40)	*OK*	*P*
	Coating not be broken and not loosened from the metal surface (IEC 60335-2-40)	*OK*	*P*
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		—
	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use	*OK*	*P*
	Compliance is checked by the limits or tests specified in part 2, if relevant	--	*N/A*
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		*N/A*
	Description of routine tests to be carried out by the manufacturer	*Noted.*	*N/A*
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES		*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance	--	*N/A*
	This annex does not apply to battery chargers	--	*N/A*
3.1.9	Appliance operated under the following conditions:		*N/A*
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2	--	*N/A*
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate	--	*N/A*
	- f possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2	--	*N/A*
	- if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed	--	*N/A*
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable	--	*N/A*
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances	--	*N/A*
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals	--	*N/A*
	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006	--	*N/A*
7.6	Symbols 60417-5005 and IEC 60417-5006	--	*N/A*
7.12	The instructions give information regarding charging	--	*N/A*
	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information	--	*N/A*
	Details about how to remove batteries containing materials hazardous to the environment given	--	*N/A*
7.15	Markings placed on the part of the appliance connected to the supply mains	--	*N/A*
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	If the appliance can be operated without batteries, double or reinforced insulation required	--	*N/A*
11.7	The battery is charged for the period stated in the instructions or 24 h ..... :	--	*N/A*
19.1	Appliances subjected to tests of 19.B.101, 19.B.102 and 19.B.103	--	*N/A*
19.10	Not applicable	--	*N/A*
19.B.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged	--	*N/A*
19.B.102	For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged,	--	*N/A*
19.B.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction	--	*N/A*
21.B.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength	--	*N/A*
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being:		*N/A*
	- 100, if the mass of the part does not exceed 250 g (g) ..... :	--	*N/A*
	- 50, if the mass of the part exceeds 250 g ..... :	--	*N/A*
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met	--	*N/A*
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible	--	*N/A*
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts	--	*N/A*
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies	--	*N/A*
	For other parts, 30.2.2 applies	--	*N/A*
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		*N/A*
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding	--	*N/A*
	Test conditions as specified	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		*N/A*
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		*N/A*
7	Severities		*N/A*
	The duration of application of the test flame is 30 s ± 1 s	--	*N/A*
9	Test procedure		*N/A*
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1	--	*N/A*
9.2	The first paragraph does not apply	--	*N/A*
	If possible, the flame is applied at least 10 mm from a corner	--	*N/A*
9.3	The test is carried out on one specimen	--	*N/A*
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test	--	*N/A*
11	Evaluation of test results		*N/A*
	The duration of burning not exceeding 30 s	--	*N/A*
	However, for printed circuit boards, the duration of burning not exceeding 15 s	--	*N/A*
F	ANNEX F (NORMATIVE) CAPACITORS		*N/A*
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		*N/A*
1.5	Terms and definitions		*N/A*
1.5.3	Class X capacitors tested according to subclass X2	*Approved capacitor used between Line to Line and Line to GND.*	*N/A*
1.5.4	This subclause is applicable	--	*N/A*
1.6	Marking		*N/A*
	Items a) and b) are applicable	--	*N/A*
3.4	Approval testing		*N/A*
3.4.3.2	Table 3 is applicable as described	--	*N/A*
4.1	Visual examination and check of dimensions		*N/A*
	This subclause is applicable	--	*N/A*
4.2	Electrical tests		*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.1	This subclause is applicable	--	*N/A*
4.2.5	This subclause is applicable	--	*N/A*
4.2.5.2	Only table 11 is applicable	--	*N/A*
	Values for test A apply	--	*N/A*
	However, for capacitors in heating appliances the values for test B or C apply	--	*N/A*
4.12	Damp heat, steady state		*N/A*
	This subclause is applicable	--	*N/A*
	Only insulation resistance and voltage proof are checked	--	*N/A*
4.13	Impulse voltage		*N/A*
	This subclause is applicable	--	*N/A*
4.14	Endurance		*N/A*
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable	--	*N/A*
4.14.7	Only insulation resistance and voltage proof are checked	--	*N/A*
	No visible damage	--	*N/A*
4.17	Passive flammability test		*N/A*
	This subclause is applicable	--	*N/A*
4.18	Active flammability test		*N/A*
	This subclause is applicable	--	*N/A*
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		*N/A*
	The following modifications to this standard are applicable for safety isolating transformers:		*N/A*
7	Marking and instructions		*N/A*
7.1	Transformers for specific use marked with:		*N/A*
	- name, trademark or identification mark of the manufacturer or responsible vendor.....:	--	*N/A*
	- model or type reference.....:	--	*N/A*
17	Overload protection of transformers and associated circuits		*N/A*
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1	--	*N/A*
22	Construction		*N/A*
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
29	Clearances, creepage distances and solid insulation		*N/A*
29.1, 29.2, 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply	--	*N/A*
	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances	--	*N/A*
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed	--	*N/A*
	For safety isolating transformers subjected to periodic voltages with a frequency exceeding 30 kHz, the clearances, creepage distances and solid insulation values specified in IEC 60664-4 are applicable, if greater than the values specified in items 2a, 2c and 3 in table 13 of IEC 61558-1	--	*N/A*
H	ANNEX H (NORMATIVE) SWITCHES		*N/A*
	Switches comply with the following clauses of IEC 61058-1, as modified below:		*N/A*
	The tests of IEC 61058-1 carried out under the conditions occurring in the appliance	--	*N/A*
	Before being tested, switches are operated 20 times without load	--	*N/A*
8	Marking and documentation		*N/A*
	Switches are not required to be marked	--	*N/A*
	However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference	--	*N/A*
13	Mechanism		*N/A*
	The tests may be carried out on a separate sample	--	*N/A*
15	Insulation resistance and dielectric strength		*N/A*
15.1	Not applicable	--	*N/A*
15.2	Not applicable	--	*N/A*
15.3	Applicable for full disconnection and micro-disconnection	--	*N/A*
17	Endurance		*N/A*
	Compliance is checked on three separate appliances or switches	--	*N/A*
	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335.....:	--	*N/A*
	Switches for operation under no load and which can be operated only by a tool, and	--	*N/A*
	switches operated by hand that are interlocked so that they cannot be operated under load,	--	*N/A*
	are not subjected to the tests	--	*N/A*
	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation	--	*N/A*
	Subclauses 17.2.2 and 17.2.5.2 not applicable	--	*N/A*
	The ambient temperature during the test is that occurring in the appliance during the test of clause 11 in IEC 60335-1	--	*N/A*
	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K) .....:	--	*N/A*
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		*N/A*
	This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24	--	*N/A*
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		*N/A*
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		*N/A*
5.7	Conditioning of the test specimens		*N/A*
	When production samples are used, three samples of the printed circuit board are tested	--	*N/A*
5.7.1	Cold		*N/A*
	The test is carried out at -25 °C	--	*N/A*
5.7.3	Rapid change of temperature		*N/A*
	Severity 1 is specified	--	*N/A*
5.9	Additional tests		*N/A*
	This subclause is not applicable	--	*N/A*
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		*P*
	The information on overvoltage categories is extracted from IEC 60664-1	*OK*	*P*

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Clause	Requirement + Test	Result - Remark	Verdict
	Overvoltage category is a numeral defining a transient overvoltage condition	*OK*	*P*
	Equipment of overvoltage category IV is for use at the origin of the installation	--	*N/A*
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements	--	*N/A*
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation	*OK*	*P*
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies	--	*N/A*
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level	--	*N/A*
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		*P*
	Information for the determination of clearances and creepage distances	*OK*	*P*
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		*P*
	The information on pollution degrees is extracted from IEC 60664-1	*OK*	*P*
	Pollution		*P*
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment	*OK*	*P*
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar	*OK*	*P*
	Minimum clearances specified where pollution may be present in the microenvironment	*OK*	*P*
	Degrees of pollution in the microenvironment		*P*
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		*P*
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected	*Considered.*	*P*
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected	--	*N/A*
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow	--	*N/A*
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		*P*
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		*P*
7	Test apparatus		*P*
7.3	Test solutions		*P*
	Test solution A is used	*Coincided.*	*P*
10	Determination of proof tracking index (PTI)		*P*
10.1	Procedure		*P*
	The proof voltage is 100 V, 175 V, 400 V or 600 V ..... :	*175V (tested for PWB)*	*P*
	The test is carried out on five specimens	*OK*	*P*
	In case of doubt, additional test with proof voltage reduced by 25 V, the number of drops increased to 100	--	*N/A*
10.2	Report		*N/A*
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V	--	*N/A*
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF clause 30		*P*
	Description of tests for determination of resistance to heat and fire	*OK*	*P*
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		*N/A*
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a warm damp equable climate and that are marked WDaE		*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a warm damp equable climate and that are marked WDaE, if liable to be connected to a supply mains that excludes the protective earthing conductor		*N/A*
5.7	The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C	--	*N/A*
7.1	The appliance marked with the letters WDaE	--	*N/A*
7.12	The instructions state that the appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA	--	*N/A*
	The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries	--	*N/A*
11.8	The values of Table 3 are reduced by 15 K	--	*N/A*
13.2	The leakage current for class I appliances not exceeding 0,5 mA	--	*N/A*
15.3	The value of t is 37 °C	--	*N/A*
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):	--	*N/A*
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3	--	*N/A*
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		*P*
	Description of tests for appliances incorporating electronic circuits		*P*
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		*N/A*
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex	--	*N/A*
R.1	Programmable electronic circuits using software		*N/A*
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 constructed so that the software does not impair compliance with the requirements of this standard	--	*N/A*
R.2	Requirements for the architecture		*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety-related segments of the software	--	*N/A*
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:		*N/A*
	- single channel with periodic self-test and monitoring	--	*N/A*
	- dual channel (homogenous) with comparison	--	*N/A*
	- dual channel (diverse) with comparison	--	*N/A*
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures:		*N/A*
	- single channel with functional test	--	*N/A*
	- single channel with periodic self-test	--	*N/A*
	- dual channel without comparison	--	*N/A*
R.2.2	Measures to control faults/errors		*N/A*
R.2.2.1	When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area	--	*N/A*
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison	--	*N/A*
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths	--	*N/A*
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
R.2.2.5	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, detection of a fault/error occur before compliance with clause 19 is impaired	--	*N/A*
R.2.2.6	The software is referenced to relevant parts of the operating sequence and the associated hardware functions	--	*N/A*
R.2.2.7	Labels used for memory locations are unique	--	*N/A*
R.2.2.8	The software is protected from user alteration of safety-related segments and data	--	*N/A*
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 is impaired	--	*N/A*
R.3	Measures to avoid errors		*N/A*
R.3.1	General		*N/A*
	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the following measures to avoid systematic fault in the software are applied		*N/A*
	Software that incorporates measures used to control the fault/error conditions specified in table R.2 is inherently acceptable for software required to control the fault/error conditions specified in table R.1	--	*N/A*
R.3.2	Specification		*N/A*
R.3.2.1	Software safety requirements:	*Software Id:*	*N/A*
	The specification of the software safety requirements includes the descriptions listed	--	*N/A*
R.3.2.2	Software architecture		*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict
R.3.2.2.1	The specification of the software architecture includes the aspects listed - techniques and measures to control software faults/errors (refer to R.2.2); - interactions between hardware and software; - partitioning into modules and their allocation to the specified safety functions; - hierarchy and call structure of the modules (control flow); - interrupt handling; - data flow and restrictions on data access; - architecture and storage of data; - time-based dependencies of sequences and data	*Document ref. No:*	*N/A*
R.3.2.2.2	The architecture specification is validated against the specification of the software safety requirements by static analysis	--	*N/A*
R.3.2.3	Module design and coding		*N/A*
R.3.2.3.1	Based on the architecture design, software is suitably refined into modules	--	*N/A*
	Software module design and coding is implemented in a way that is traceable to the software architecture and requirements	--	*N/A*
R.3.2.3.2	Software code is structured	--	*N/A*
R.3.2.3.3	Coded software is validated against the module specification by static analysis	--	*N/A*
	The module specification is validated against the architecture specification by static analysis	--	*N/A*
R.3.3.3	Software validation		*N/A*
	The software is validated with reference to the requirements of the software safety requirements specification	--	*N/A*
	Compliance is checked by simulation of:		*N/A*
	- input signals present during normal operation	--	*N/A*
	- anticipated occurrences	--	*N/A*
	- undesired conditions requiring system action	--	*N/A*

TABLE R.1 [e] – GENERAL FAULT/ERROR CONDITIONS

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Component [a]	Fault/error	Acceptable measures [b, c]	Definitions	Document reference for applied measure	Document reference for applied test	Ver-di ct
1 CPU				--	--	*N/A*
1.1 Registers	Stuck at	Functional test, or	H.2.16.5			
		periodic self-test using either:	H.2.16.6			
		- static memory test, or	H.2.19.6			
		- word protection with single bit redundancy	H.2.19.8.2			
1.2 VOID				--	--	*N/A*
1.3 Programme counter	Stuck at	Functional test, or	H.2.16.5	--	--	*N/A*
		Periodic self-test, or	H.2.16.6			
		Independent time-slot monitoring, or	H.2.18.10.4			
		Logical monitoring of the programme sequence	H.2.18.10.2			
2 Interrupt handling and execution	No interrupt or too frequent interrupt	Functional test, or	H.2.16.5	--	--	*N/A*
		time-slot monitoring	H.2.18.10.4			
3 Clock	Wrong frequency (for quartz synchroniz ed clock: harmonics/ sub-harmo nics only)	Frequency monitoring, or	H.2.18.10.1	--	--	*N/A*
		time slot monitoring	H.2.18.10.4			
4. Memory				--	--	*N/A*
4.1 Invariable memory	All single bit faults	Periodic modified checksum, or	H.2.19.3.1			
		multiple checksum, or	H.2.19.3.2			
		word protection with single bit redundancy	H.2.19.8.2			
4.2 Variable memory	DC fault	Periodic static memory test, or	H.2.19.6	--	--	*N/A*
		word protection with single bit redundancy	H.2.19.8.2			

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Clause	Requirement + Test	Result - Remark	Verdict

4.3 Addressing (relevant to variable and invariable memory)	Stuck at	Word protection with single bit redundancy including the address	H.2.19.8.2	--	--	*N/A*
5 Internal data path	Stuck at	Word protection with single bit redundancy	H.2.19.8.2	--	--	*N/A*
5.1 VOID				--	--	*N/A*
5.2 Addressing	Wrong address	Word protection with single bit redundancy including the address	H.2.19.8.2	--	--	*N/A*
6 External communication	Hamming distance 3	Word protection with multi-bit redundancy, or	H.2.19.8.1	--	--	*N/A*
		CRC – single work, or	H.2.19.4.1			
		Transfer redundancy, or	H.2.18.2.2			
		Protocol test	H.2.18.14			
6.1 VOID				--	--	*N/A*
6.2 VOID				--	--	*N/A*
6.3 Timing	Wrong point in time	Time-slot monitoring, or	H.2.18.10.4	--	--	*N/A*
		scheduled transmission	H.2.18.18			
		Time-slot and logical monitoring, or	H.2.18.10.3			
		comparison of redundant communication channels by either:				
		- reciprocal comparison	H.2.18.15			
		- independent hardware comparator	H.2.18.3			
	Wrong sequence	Logical monitoring, or	H.2.18.10.2			
		time-slot monitoring, or	H.2.18.10.4			
		Scheduled transmission	H.2.18.18			
7 Input/output periphery	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13	--	--	*N/A*
7.1 VOID				--	--	*N/A*

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Clause	Requirement + Test	Result - Remark	Verdict

7.2 Analog I/O 7.2.1 A/D and D/A-converter	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13	--	--	*N/A*
7.2.2 Analog multiplexer	Wrong addressing	Plausibility check	H.2.18.13	--	--	*N/A*
8 VOID				--	--	*N/A*
9 Custom chips [d] e.g. ASIC, GAL, gate array	Any output outside the static and dynamic functional specification	Periodic self-test	H.2.16.6	--	--	*N/A*
NOTE A Stuck-at fault model denotes a fault model representing an open circuit or a non-varying signal level. A DC fault model denotes a stuck-at fault model incorporating short circuit between signal lines.						
[a] For fault/error assessment, some components are divided into their sub-functions. [b] For each sub-function in the table, the Table R.2 measure will cover the software fault/error. [c] Where more than one measure is given for a sub-function, these are alternatives. [d] To be divided as necessary by the manufacturer into sub-functions. [e] Table R.1 is applied according to the requirements of R.1 to R.2.2.9 inclusive.						

AA	**ANNEX AA (INFORMATIVE) (IEC 60335-2-40)** **EXAMPLES FOR OPERATING TEMPERATURES OF THE APPLIANCE**	*P*

BB	**ANNEX BB (NORMATIVE) (IEC 60335-2-40)** **SELECTED INFORMATION ABOUT REFRIGERANTS**	*N/A*

CC	**ANNEX CC (INFORMATIVE) (IEC 60335-2-40)** **TRANSPORTATION, MARKING AND STORAGE FOR UNITS THAT EMPLOY FLAMMABLE REFRIGERANTS**		*N/A*
CC.1	Transport of equipment containing flammable refrigerants (IEC 60335-2-40)	--	*N/A*
CC.2	Marking of equipment using signs (IEC 60335-2-40)	--	*N/A*
CC.3	Disposal of equipment using flammable refrigerants (IEC 60335-2-40)	--	*N/A*
CC.4	Storage of equipment/appliances (IEC 60335-2-40)	--	*N/A*
CC.5	Storage of packed (unsold) equipment (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
DD	**ANNEX DD (NORMATIVE) (IEC 60335-2-40) INSTRUCTION MANUAL FOR SERVICING REFRIGERANT CONTAINING APPLIANCES**		*N/A*
DD.1	Symbols (IEC 60335-2-40)	--	*N/A*
DD.2.	Information in manual (IEC 60335-2-40)	--	*N/A*
DD.2.1	General (IEC 60335-2-40)	--	*N/A*
DD.2.2	Unventilated areas (IEC 60335-2-40)	--	*N/A*
DD.2.3	Qualification of workers (IEC 60335-2-40)	--	*N/A*
DD.3	Information on servicing (IEC 60335-2-40)	--	*N/A*
DD3.1	Checks to the area (IEC 60335-2-40)	--	*N/A*
DD.3.2	Work procedure (IEC 60335-2-40)	--	*N/A*
DD.3.3	General work area (IEC 60335-2-40)	--	*N/A*
DD.3.4	Checking for presence of refrigerant (IEC 60335-2-40)	--	*N/A*
DD.3.5	Presence of fire extinguisher (IEC 60335-2-40)	--	*N/A*
DD.3.6	No ignition sources (IEC 60335-2-40)	--	*N/A*
DD.3.7	Ventilated area (IEC 60335-2-40)	--	*N/A*
DD.3.8	Checks to the refrigeration equipment (IEC 60335-2-40)	--	*N/A*
DD.3.9	Checks to electrical devices (IEC 60335-2-40)	--	*N/A*
DD.4	Repairs to sealed components (IEC 60335-2-40)	--	*N/A*
DD.5	Repair to intrinsically safe components (IEC 60335-2-40)	--	*N/A*
DD.6	Cabling (IEC 60335-2-40)	--	*N/A*
DD.7	Detection of flammable refrigerants (IEC 60335-2-40)	--	*N/A*
DD.8	Leak detection methods (IEC 60335-2-40)	--	*N/A*
DD.9	Removal and evacuation (IEC 60335-2-40)	--	*N/A*
DD.10	Charging procedures (IEC 60335-2-40)	--	*N/A*
DD.11	Decommissioning (IEC 60335-2-40)	--	*N/A*
DD.12	Labelling (IEC 60335-2-40)	--	*N/A*
DD.13	Recovery (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
EE	**ANNEX EE (NORMATIVE) (IEC 60335-2-40) PRESSURE TESTS**		***P***
EE.1	General (IEC 60335-2-40)	*Tested by the water pressure, connecting water pressure pump. Test pressure: 11.19MPa.*	*P*
EE.2	Pressure test value determined under testing carried out in clause 11 (IEC 60335-2-40)	*Maximum pressure in test of clause 11: 3.73 MPa*	*P*
EE.3	Pressure test value determined under testing carried out in clause 19 (IEC 60335-2-40)	*Maximum pressure in test of clause 19: 3.73 MPa*	*P*
EE.4	Pressure test value determined under testing carried out under standstill conditions (IEC 60335-2-40)	*Pressure when stopped: 2.70 MPa*	*P*
EE.5	Fatigue test option for Clauses EE.1 and EE.4.1 (IEC 60335-2-40)	*OK*	*P*
FF	**ANNEX FF (NORMATIVE) (IEC/EN 60335-2-40) LEAK SIMULATION TESTS**		***N/A***
FF.1	General (IEC 60335-2-40)	--	*N/A*
FF.2	Test methods (IEC 60335-2-40)	--	*N/A*
GG	**ANNEX GG (NORMATIVE) (IEC/EN 60335-2-40) CHARGE LIMITS, VENTILATION REQUIREMENTS AND REQUIREMENTS FOR SECONDARY CIRCUITS**		***N/A***
GG.1	General (IEC 60335-2-40)	--	*N/A*
GG.2	Requirements for charge limits in unventilated areas (IEC 60335-2-40)	--	*N/A*
GG.3	Requirements for charge limits in areas with mechanical ventilation areas (IEC 60335-2-40)	--	*N/A*
GG.4	Requirements for mechanical ventilation within the appliance enclosure (IEC 60335-2-40)	--	*N/A*
GG.5	Requirements for mechanical ventilation for rooms complying with ISO 5149 (IEC 60335-2-40)	--	*N/A*
GG.6	Requirements for refrigeration systems employing secondary heat exchangers (IEC 60335-2-40)	--	*N/A*
GG.7	Additional testing (IEC 60335-2-40)	--	*N/A*
GG.8	Non-fixed factory sealed single package units with a charge amount of $m_1 < M \leq 2 \times m_1$ (IEC 60335-2-40)	--	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	Δ P	Required Δ P	Remark
MCY-MHP0604HS8-E					
380V/50Hz	*8500*	*6406*	*-24.6%*	*+15%*	--
415V/50Hz	*8500*	*6439*	*-24.2%*	*+15%*	--
MCY-MHP0504HS8-E					
380V/50Hz	*8500*	*5257*	*-38.2%*	*+15%*	--
415V/50Hz	*8500*	*5252*	*-38.2%*	*+15%*	--
MCY-MHP0404HS8-E					
380V/50Hz	*8500*	*4318*	*-49.2%*	*+15%*	--
415V/50Hz	*8500*	*4347*	*-48.9%*	*+15%*	--
Supplementary information: *Cooling mode.*					

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	Δ P	Required Δ P	Remark
MCY-MHP0604HS8-E					
380V/50Hz	*8500*	*6458*	*-24.0%*	*+15%*	--
415V/50Hz	*8500*	*6471*	*-23.9%*	*+15%*	--
MCY-MHP0504HS8-E					
380V/50Hz	*8500*	*6426*	*-24.4%*	*+15%*	--
415V/50Hz	*8500*	*6431*	*-24.3%*	*+15%*	--
MCY-MHP0404HS8-E					
380V/50Hz	*8500*	*6387*	*-24.9%*	*+15%*	--
415V/50Hz	*8500*	*6437*	*-24.3%*	*+15%*	--
Supplementary information: *Heating mode.*					

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

10.2	TABLE: Current deviation				P
Current deviation of/at:	I rated (A)	I measured (A)	Δ I	Required Δ I	Remark
MCY-MHP0604HS8-E					
380V/50Hz/ L1	*12.5*	*10.2*	*-18.5%*	*+15%*	--
380V/50Hz/ L2	*12.5*	*10.8*	*-13.9%*	*+15%*	--
380V/50Hz/ L3	*12.5*	*10.2*	*-18.7%*	*+15%*	--
415V/50Hz/ L1	*12.5*	*9.4*	*-24.6%*	*+15%*	--
415V/50Hz/ L2	*12.5*	*10.0*	*-19.8%*	*+15%*	--
415V/50Hz/ L3	*12.5*	*9.4*	*-24.5%*	*+15%*	--
MCY-MHP0504HS8-E					
380V/50Hz/ L1	*12.5*	*8.4*	*-33.0%*	*+15%*	--
380V/50Hz/ L2	*12.5*	*8.8*	*-29.9%*	*+15%*	--
380V/50Hz/ L3	*12.5*	*8.3*	*-33.6%*	*+15%*	--
415V/50Hz/ L1	*12.5*	*7.7*	*-38.5%*	*+15%*	--
415V/50Hz/ L2	*12.5*	*8.2*	*-34.3%*	*+15%*	--
415V/50Hz/ L3	*12.5*	*7.7*	*-38.5%*	*+15%*	--
MCY-MHP0404HS8-E					
380V/50Hz/ L1	*12.5*	*6.9*	*-44.4%*	*+15%*	--
380V/50Hz/ L2	*12.5*	*7.5*	*-40.4%*	*+15%*	--
380V/50Hz/ L3	*12.5*	*6.9*	*-44.6%*	*+15%*	--
415V/50Hz/ L1	*12.5*	*6.5*	*-48.1%*	*+15%*	--
415V/50Hz/ L2	*12.5*	*6.9*	*-44.4%*	*+15%*	--
415V/50Hz/ L3	*12.5*	*6.5*	*-48.4%*	*+15%*	--
Supplementary information: *Cooling mode.*					

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Clause	Requirement + Test	Result - Remark	Verdict

10.2	TABLE: Current deviation				P
Current deviation of/at:	I rated (A)	I measured (A)	Δ I	Required Δ I	Remark
MCY-MHP0604HS8-E					
380V/50Hz/ L1	*12.5*	*10.2*	*-18.1%*	*+15%*	--
380V/50Hz/ L2	*12.5*	*10.9*	*-12.4%*	*+15%*	--
380V/50Hz/ L3	*12.5*	*10.2*	*-18.6%*	*+15%*	--
415V/50Hz/ L1	*12.5*	*9.4*	*-24.9%*	*+15%*	--
415V/50Hz/ L2	*12.5*	*10.1*	*-19.5%*	*+15%*	--
415V/50Hz/ L3	*12.5*	*9.3*	*-25.3%*	*+15%*	--
MCY-MHP0504HS8-E					
380V/50Hz/ L1	*12.5*	*10.5*	*-15.8%*	*+15%*	--
380V/50Hz/ L2	*12.5*	*11.3*	*-9.6%*	*+15%*	--
380V/50Hz/ L3	*12.5*	*10.5*	*-15.9%*	*+15%*	--
415V/50Hz/ L1	*12.5*	*9.3*	*-25.3%*	*+15%*	--
415V/50Hz/ L2	*12.5*	*10.0*	*-20.0%*	*+15%*	--
415V/50Hz/ L3	*12.5*	*9.2*	*-26.1%*	*+15%*	--
MCY-MHP0404HS8-E					
380V/50Hz/ L1	*12.5*	*10.0*	*-19.7%*	*+15%*	--
380V/50Hz/ L2	*12.5*	*10.8*	*-13.8%*	*+15%*	--
380V/50Hz/ L3	*12.5*	*10.0*	*-20.0%*	*+15%*	--
415V/50Hz/ L1	*12.5*	*9.2*	*-26.0%*	*+15%*	--
415V/50Hz/ L2	*12.5*	*9.9*	*-20.7%*	*+15%*	--
415V/50Hz/ L3	*12.5*	*9.2*	*-26.4%*	*+15%*	--
Supplementary information: *Heating mode.*					

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Clause	Requirement + Test	Result - Remark	Verdict

11.8	**TABLE: Heating test**		P
	Test voltage (V) ..... :	*440V 50Hz (+6%)*	—
	Ambient (°C) ..... :	*1)Cooling mode* *43/26 (DB/WB outdoor)* *32/23 (DB/WB indoor)* *2)Heating mode* *24/18(DB/WB outdoor)* *27/- (DB/WB indoor)*	—

Thermocouple locations	Max. temperature measured, T (°C)		Max. temperature limit, T (°C)
	1)	*2)*	
Outdoor unit: MCY-MHP0604HS8-E			
Compressor top	*87.0*	*82.5*	*150*
Compressor bottom	*87.5*	*81.0*	*150*
Compressor terminal cover	*70.0*	*55.5*	--
PMV coil outline	*46.0*	*35.0*	*105*
4way valve coil outline	*62.0*	*91.0*	*110*
2way valve coil outline(SV2)	*105.0*	*95.5*	*110*
2way valve coil outline(SV4)	*56.0*	*40.0*	*110*
2way valve coil outline(SV5)	*63.5*	*49.5*	*110*
Reactor CH-79 (Front side)	*65.5*	*46.0*	*160*
Reactor CH-79 (Rear side)	*56.5*	*33.5*	*160*
Fan motor upper outline	*62.0*	*16.0*	*105*
Fan motor upper bearing front side	*58.0*	*14.5*	*105*
Fan motor upper bearing Rear side	*58.0*	*14.0*	*105*
Fan motor lower outline	*60.5*	*16.0*	*105*
Fan motor lower bearing front side	*57.0*	*15.0*	*105*
Fan motor lower bearing Rear side	*56.5*	*14.5*	*105*
Cabinet top outline right side	*49.0*	*27.0*	--
Cabinet top outline left side	*49.0*	*21.5*	--
Right side cabinet handle front part	*46.0*	*25.0*	*85*
Right side cabinet handle rear part	*45.5*	*25.0*	*85*
Rear cabinet handle	*46.0*	*24.0*	*85*
Fan guard upper	*54.0*	*15.5*	--

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Clause	Requirement + Test	Result - Remark	Verdict

Fan guard lower	*53.0*	*15.0*	--
Suction temperature	*46.5*	*24.0*	--
Wood plate	*46.5*	*25.0*	*90*
Parts on PCB MCC-1639 Inter face P.C.B			
IC IC101	*57.5*	*49.0*	--
Line filter L400	*49.0*	*39.0*	*90*
Relay RY311	*53.5*	*46.5*	*105*
Relay RY312	*52.5*	*44.5*	*105*
Relay RY314	*52.0*	*43.5*	*105*
Relay RY317	*50.0*	*48.5*	*105*
Terminal block CN01	*47.0*	*37.5*	--
P.C.B Outline	*56.0*	*44.5*	*145*
P.C.B Ambient temperature	*48.5*	*38.0*	--
Parts on PCB MCC-1600 Noise Filter P.C.B			
Line filter L01	*53.5*	*43.0*	*105*
Line filter L02	*52.0*	*41.5*	*105*
Line filter L03	*52.0*	*41.0*	*105*
PTC thermistor TH06	*53.0*	*40.5*	--
Relay RY10	*73.0*	*61.0*	*105*
Connector CN22 outline	*47.5*	*35.5*	--
P.C.B Outline	*51.0*	*41.0*	*145*
P.C.B Ambient temperature	*50.0*	*39.0*	--
Parts on PCB MCC-1653 Demand P.C.B			
IC IC103	*58.5*	*43.5*	--
Diode DB100	*55.5*	*40.5*	--
Terminal block CN01	*55.0*	*39.5*	--
Line filter L101	*52.5*	*38.5*	*105*
P.C.B Outline	*52.5*	*38.5*	*145*
Transformer (TT-02)	*54.0*	*39.5*	*90*
Parts on PCB MCC-1664 COMP-IPDU P.C.B			
Diode DB01	*63.5*	*28.0*	--
IGBT Q201	*66.5*	*30.5*	--
Smoothing Capacitor C11	*57.5*	*42.0*	*85*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Smoothing Capacitor C12	*59.0*	*43.5*	*85*
Smoothing Capacitor C13	*58.5*	*43.0*	*85*
Smoothing Capacitor C14	*59.5*	*43.5*	*85*
Switching Transformer T101(SWT-93)	*59.0*	*44.0*	*105*
Line filter L01	*64.0*	*45.0*	*105*
Current Transformer T611	*59.0*	*39.5*	*90*
Fuse F01	*60.0*	*39.0*	--
Fuse F02	*59.0*	*36.0*	--
P.C.B Outline	*63.0*	*34.5*	*145*
P.C.B Ambient temperature	*52.5*	*38.0*	--
Parts on PCB MCC-1597 FAN-IPDU P.C.B			
Capacitor C510	*55.5*	*32.0*	*85*
Switching Transformer T510 (SWT-101)	*59.5*	*40.5*	*105*
IC IC750	*60.0*	*28.5*	--
IC IC701	*65.5*	*31.0*	--
P.C.B Outline	*61.5*	*36.0*	*145*
Indoor unit A:MMU-AP0272H (reference)			
Fan motor outline	*37.5*	*41.0*	--
Drain pump outline	*36.5*	*33.0*	--
E-box internal temperature	*34.0*	*34.5*	--
Suction temperature	*33.0*	*32.5*	--
Panel outline (E-box side)	*32.5*	*37.5*	--
Indoor unit B:MMU-AP0272H (reference)			
Fan motor outline	*37.5*	*37.5*	--
Drain pump outline	*34.0*	*30.5*	--
E-box internal temperature	*32.5*	*31.5*	--
Suction temperature	*32.5*	*31.0*	--
Panel outline (E-box side)	*30.5*	*33.0*	--
Supplementary information:			

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

11.8	**TABLE: Heating test, resistance method**		
	Test voltage (V) ..... :	*440V 50Hz (+6%)*	—
	Ambient, t1 (°C) ..... :	*Room temperature at the beginning of the test t_1 28.2°C*	—
	Ambient, t2 (°C) ..... :	*1)Cooling mode* *43/26 (DB/WB outdoor)* *32/23 (DB/WB indoor)* *2)Heating mode* *24/18(DB/WB outdoor)* *27/- (DB/WB indoor)*	—

Temperature rise of winding	R1 (Ω)	R2 (Ω)	T (°C)	Max. T (°C)	Insulation class
1)Cooling mode					
Outdoor unit : MCY-MHP0604HS8-E					
Compressor (black-white)	*0.887*	*1.084*	*86.6*	*140*	*E*
Compressor (red-black)	*0.880*	*1.069*	*84.6*	*140*	*E*
Compressor (red- white)	*0.883*	*1.098*	*92.2*	*140*	*E*
Fan motor upper (black-white)	*17.630*	*20.830*	*75.9*	*115*	*E*
Fan motor upper (red-black)	*17.584*	*20.250*	*68.0*	*115*	*E*
Fan motor upper (red- white)	*17.606*	*20.260*	*67.8*	*115*	*E*
Fan motor lower (black-white)	*17.665*	*20.230*	*66.4*	*115*	*E*
Fan motor lower(red-black)	*17.626*	*20.650*	*73.3*	*115*	*E*
Fan motor lower (red- white)	*17.591*	*20.470*	*71.2*	*115*	*E*
4way valve coil	*1758.6*	*1995.6*	*63.6*	*120*	*B*
2)Heating mode					
Outdoor unit : MCY-MHP0604HS8-E					
Compressor (black-white)	*0.887*	*1.075*	*83.9*	*140*	*E*
Compressor (red-black)	*0.880*	*1.089*	*90.7*	*140*	*E*
Compressor (red- white)	*0.883*	*1.045*	*76.4*	*140*	*E*
Fan motor upper (black-white)	*17.630*	*17.040*	*19.3*	*115*	*E*
Fan motor upper (red-black)	*17.584*	*17.320*	*24.3*	*115*	*E*
Fan motor upper (red- white)	*17.606*	*17.320*	*23.9*	*115*	*E*
Fan motor lower (black-white)	*17.665*	*17.030*	*18.8*	*115*	*E*
Fan motor lower(red-black)	*17.626*	*16.850*	*16.6*	*115*	*E*

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Clause	Requirement + Test	Result - Remark	Verdict

Fan motor lower (red- white)	*17.591*	*16.950*	*18.7*	*115*	*E*
4way valve coil	*1758.6*	*2270.4*	*104.7*	*120*	*B*
Supplementary information:					

11.8	**TABLE: Heating test**		P
	Test voltage (V) ..... :	*357V 50Hz (-6%)*	—
	Ambient (°C) ..... :	*1)Cooling mode* *43/26 (DB/WB outdoor)* *32/23 (DB/WB indoor)* *2)Heating mode* *24/18(DB/WB outdoor)* *27/- (DB/WB indoor)*	—

Thermocouple locations	Max. temperature measured, T (°C)		Max. temperature limit, T (°C)
	1)	*2)*	
Outdoor unit: MCY-MHP0604HS8-E			
Compressor top	*85.5*	*82.5*	*150*
Compressor bottom	*85.5*	*81.0*	*150*
Compressor terminal cover	*69.0*	*56.0*	*--*
PMV coil outline	*46.0*	*34.5*	*105*
4way valve coil outline	*61.0*	*73.5*	*110*
2way valve coil outline(SV2)	*90.0*	*80.5*	*110*
2way valve coil outline(SV4)	*55.0*	*39.5*	*110*
2way valve coil outline(SV5)	*62.5*	*48.5*	*110*
Reactor CH-79 (Front side)	*65.5*	*47.5*	*160*
Reactor CH-79 (Rear side)	*56.5*	*33.5*	*160*
Fan motor upper outline	*61.0*	*15.0*	*105*
Fan motor upper bearing front side	*57.5*	*14.0*	*105*
Fan motor upper bearing Rear side	*57.5*	*13.5*	*105*
Fan motor lower outline	*60.0*	*15.5*	*105*
Fan motor lower bearing front side	*56.5*	*14.5*	*105*
Fan motor lower bearing Rear side	*56.0*	*14.5*	*105*
Cabinet top outline right side	*49.0*	*27.0*	*--*
Cabinet top outline left side	*49.0*	*21.0*	*--*

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Clause	Requirement + Test	Result - Remark	Verdict

Right side cabinet handle front part	*46.0*	*25.0*	*85*
Right side cabinet handle rear part	*45.5*	*25.0*	*85*
Rear cabinet handle	*46.0*	*24.0*	*85*
Fan guard upper	*53.5*	*15.0*	*--*
Fan guard lower	*52.5*	*14.5*	*--*
Suction temperature	*46.5*	*24.0*	*--*
Wood plate	*46.0*	*25.0*	*90*
Parts on PCB MCC-1639 Inter face P.C.B			
IC IC101	*57.0*	*48.5*	*--*
Line filter L400	*48.5*	*38.5*	*90*
Relay RY311	*53.5*	*46.0*	*105*
Relay RY312	*51.5*	*43.5*	*105*
Relay RY314	*51.0*	*43.0*	*105*
Relay RY317	*50.0*	*48.5*	*105*
Terminal block CN01	*47.0*	*37.0*	*--*
P.C.B Outline	*54.0*	*43.5*	*145*
P.C.B Ambient temperature	*48.0*	*38.0*	*--*
Parts on PCB MCC-1600 Noise Filter P.C.B			
Line filter L01	*53.5*	*44.0*	*105*
Line filter L02	*51.0*	*41.0*	*105*
Line filter L03	*51.0*	*40.5*	*105*
PTC thermistor TH06	*52.0*	*39.5*	*--*
Relay RY10	*66.5*	*54.5*	*105*
Connector CN22 outline	*47.0*	*35.5*	*--*
P.C.B Outline	*51.0*	*41.5*	*145*
P.C.B Ambient temperature	*49.5*	*39.0*	*--*
Parts on PCB MCC-1653 Demand P.C.B			
IC IC103	*57.0*	*42.0*	*--*
Diode DB100	*54.5*	*39.5*	*--*
Terminal block CN01	*54.0*	*39.0*	*--*
Line filter L101	*51.5*	*38.0*	*105*
P.C.B Outline	*52.0*	*38.0*	*145*
Transformer (TT-02)	*52.0*	*37.5*	*90*

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Clause	Requirement + Test	Result - Remark	Verdict

Parts on PCB MCC-1664 COMP-IPDU P.C.B			
Diode DB01	*63.0*	*28.5*	--
IGBT Q201	*65.0*	*29.5*	--
Smoothing Capacitor C11	*56.5*	*41.0*	*85*
Smoothing Capacitor C12	*58.5*	*42.5*	*85*
Smoothing Capacitor C13	*57.5*	*41.5*	*85*
Smoothing Capacitor C14	*58.5*	*42.5*	*85*
Switching Transformer T101(SWT-93)	*58.5*	*43.5*	*105*
Line filter L01	*62.5*	*44.5*	*105*
Current Transformer T611	*58.0*	*39.0*	*90*
Fuse F01	*59.5*	*39.0*	--
Fuse F02	*58.5*	*36.0*	--
P.C.B Outline	*62.5*	*34.5*	*145*
P.C.B Ambient temperature	*52.0*	*37.5*	--
Parts on PCB MCC-1597 FAN-IPDU P.C.B			
Capacitor C510	*55.0*	*31.5*	*85*
Switching Transformer T510 (SWT-101)	*59.0*	*40.0*	*105*
IC IC750	*58.5*	*27.5*	--
IC IC701	*62.0*	*27.0*	--
P.C.B Outline	*58.0*	*32.5*	*145*
Indoor unit A:MMU-AP0272H (reference)			
Fan motor outline	*35.0*	*38.5*	--
Drain pump outline	*34.0*	*32.5*	--
E-box internal temperature	*32.5*	*33.0*	--
Suction temperature	*31.5*	*32.0*	--
Panel outline (E-box side)	*31.0*	*36.0*	--
Indoor unit B:MMU-AP0272H (reference)			
Fan motor outline	*37.0*	*35.5*	--
Drain pump outline	*34.0*	*30.0*	--
E-box internal temperature	*33.0*	*31.0*	--
Suction temperature	*32.5*	*30.0*	--
Panel outline (E-box side)	*31.0*	*32.5*	--
Supplementary information:			

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Clause	Requirement + Test	Result - Remark	Verdict

11.8	**TABLE: Heating test, resistance method**		
	Test voltage (V) ..... :	*357V 50Hz (-6%)*	—
	Ambient, t1 (°C) ..... :	*Room temperature at the beginning of the test t_1 28.2°C*	—
	Ambient, t2 (°C) ..... :	*1)Cooling mode 43/26 (DB/WB outdoor) 32/23 (DB/WB indoor)* *2)Heating mode 24/18(DB/WB outdoor) 27/- (DB/WB indoor)*	—

Temperature rise of winding	R1 (Ω)	R2 (Ω)	T (°C)	Max. T (°C)	Insulation class
1)Cooling mode					
Outdoor unit : MCY-MHP0604HS8-E					
Compressor (black-white)	*0.887*	*1.058*	*78.9*	*140*	*E*
Compressor (red-black)	*0.880*	*1.036*	*74.8*	*140*	*E*
Compressor (red- white)	*0.883*	*1.027*	*71.1*	*140*	*E*
Fan motor upper (black-white)	*17.630*	*20.200*	*66.5*	*115*	*E*
Fan motor upper (red-black)	*17.584*	*20.020*	*64.5*	*115*	*E*
Fan motor upper (red- white)	*17.606*	*20.120*	*65.7*	*115*	*E*
Fan motor lower (black-white)	*17.665*	*20.200*	*66.0*	*115*	*E*
Fan motor lower(red-black)	*17.626*	*20.110*	*65.2*	*115*	*E*
Fan motor lower (red- white)	*17.591*	*20.040*	*64.8*	*115*	*E*
4way valve coil	*1758.6*	*1987.0*	*62.3*	*120*	*B*
2)Heating mode					
Outdoor unit : MCY-MHP0604HS8-E					
Compressor (black-white)	*0.887*	*1.056*	*78.3*	*140*	*E*
Compressor (red-black)	*0.880*	*1.068*	*84.3*	*140*	*E*
Compressor (red- white)	*0.883*	*1.042*	*75.5*	*140*	*E*
Fan motor upper (black-white)	*17.630*	*16.930*	*17.8*	*115*	*E*
Fan motor upper (red-black)	*17.584*	*16.830*	*17.0*	*115*	*E*
Fan motor upper (red- white)	*17.606*	*16.890*	*17.6*	*115*	*E*
Fan motor lower (black-white)	*17.665*	*16.900*	*16.9*	*115*	*E*
Fan motor lower(red-black)	*17.626*	*16.820*	*16.1*	*115*	*E*

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Clause	Requirement + Test	Result - Remark	Verdict

Fan motor lower (red- white)	*17.591*	*16.890*	*17.8*	*115*	*E*
4way valve coil	*1758.6*	*2120.0*	*82.1*	*120*	*B*
Supplementary information:					

13.2	**TABLE: Leakage current**			*P*
	Heating appliances: 1,15 x rated input (W).....:	--		—
	Motor-operated and combined appliances: 1,06 x rated voltage (V).....:	*440V, 50Hz*		—
Leakage current between		I (mA)	Max. allowed I (mA)	
Outdoor unit: MCY-MHP0604HS8-E				
Indoor unit: MMU-AP0272H×2				
Cooling mode				
N to Earth (L1open)		*1.87*	*10*	
N to Earth (L2open)		*1.08*	*10*	
N to Earth (L3open)		*1.95*	*10*	
N to Earth (All close)		*1.26*	*10*	
N to fan guard (All close)		*0.01*	*0.25*	
Heating mode				
N to Earth (L1open)		*2.14*	*10*	
N to Earth (L2open)		*1.16*	*10*	
N to Earth (L3open)		*2.25*	*10*	
N to Earth (All close)		*1.42*	*10*	
N to fan guard (All close)		*0.01*	*0.25*	
Supplementary information:				

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Clause	Requirement + Test	Result - Remark	Verdict

13.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
Outdoor unit: MCY-MHP0604HS8-E ***Indoor unit: MMU-AP0272H×2***			
L1 –Earth		*1000*	*No*
L2 –Earth		*1000*	*No*
L3 –Earth		*1000*	*No*
N –Earth		*1000*	*No*
L1 –Fan guard		*3000*	*No*
L2 –Fan guard		*3000*	*No*
L3 –Fan guard		*3000*	*No*
N –Fan guard		*3000*	*No*
Pri - sec		*1000*	*No*
Sec – Thermistor cover		*1750*	*No*
Supplementary information:			

14	TABLE: Transient overvoltages				N/A
Clearance between:	Cl (mm)	Required Cl (mm)	Rated impulse voltage (V)	Impulse test voltage (V)	Flashover (Yes/No)
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

16.2	**TABLE: Leakage current**			*P*
	Single phase appliances: 1,06 x rated voltage (V) .....:	–		—
	Three phase appliances 1,06 x rated voltage divided by √3 (V).....:	*254V, 50Hz*		—
Leakage current between		I (mA)	Max. allowed I (mA)	
L1/ L2/L3/N to Earth		*9.28*	*10*	
L1/ L2/L3/N to Thermistor cover		*0.03*	*0.25*	
Supplementary information: *After IP test.*				

16.2	**TABLE: Leakage current**			*P*
	Single phase appliances: 1,06 x rated voltage (V) .....:	–		—
	Three phase appliances 1,06 x rated voltage divided by √3 (V).....:	*254V, 50Hz*		—
Leakage current between		I (mA)	Max. allowed I (mA)	
L1/ L2/L3/N to Earth		*9.30*	*10*	
L1/ L2/L3/N to Thermistor cover		*0.03*	*0.25*	
Supplementary information: *After Humidity test(for EN)*				

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Clause	Requirement + Test	Result - Remark	Verdict

16.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
L1/ L2/L3/N - Earth		*1250*	*No*
L1/ L2/L3/N - Thermistor cover		*3000*	*No*
Pri – sec		*1250*	*No*
Sec – Thermistor cover		*1750*	*No*
Supplementary information: *After IP test.*			

16.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
L1/ L2/L3/N - Earth		*1250*	*No*
L1/ L2/L3/N - Thermistor cover		*3000*	*No*
Pri – sec		*1250*	*No*
Sec – Thermistor cover		*1750*	*No*
Supplementary information: *After Humidity test(for EN)*			

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Clause	Requirement + Test	Result - Remark	Verdict

17	TABLE: Overload protection		P
Thermocouple locations		Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)
Transformer / Type: SWT-93, TDK Corporation			
Secondary pin 1-pin 2 short Test voltage 254.4V Ambient temperature 25.0°C		*37.5*	*125*
Transformer / Type: SWT-101, Tamura Corporation			
Secondary pin 1-pin 2 short Test voltage 254.4V Ambient temperature 25.0°C		*6.5*	*125*
Transformer / Type: TT-02, Tamura Corporation			
Secondary pin 1-pin 3 short (Thermal fuse opened) Test voltage 254.4V Ambient temperature 26.0°C		*101.0*	*125*
Supplementary information: *All transformers are provided only basic insulation.*			

17	TABLE: Overload protection, resistance method					N/A
	Test voltage (V) ..... :		--			—
	Ambient, t1 (°C) ..... :		--			—
	Ambient, t2 (°C) ..... :		--			—
Temperature of winding		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

19	**Abnormal operation conditions**		P
Operational characteristics	YES/NO	Operational conditions	
Are there electronic circuits to control the appliance operation?	*YES*	*Normal operation.*	
Are there "off" or "stand-by" position?	*NO*	--	
The unintended operation of the appliance results in dangerous malfunction?	*NO*	--	

Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result
19.2	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
19.3	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
19.4	*Disconnection of phase of supply*	*Temperature stabilized. No hazardous. (see table 19.4)*	*N/A*	*N/A*	*N/A*	*N/A*	*P*
19.5	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
19.6	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
19.7	*Fan motor and Compressor locked.*	*No hazardous. (See table 19.7)*	*N/A*	*N/A*	*N/A*	*N/A*	*P*
19.8	*One phase disconnect for Fan motor*	*No hazardous No abnormal temperature observed.*	*N/A*	*N/A*	*N/A*	*N/A*	*P*
19.9	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
19.10	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
19.11.2	*Open/Short, (components on PWB)*	*No hazardous. (see table 19.11.2)*	*N/A*	*N/A*	*N/A*	*N/A*	*P*
19.11.4.8	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
19.10X	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Supplementary information:							

19.4	**Abnormal operation conditions**	P
Failure description	Effect	Verdict
Disconnection of phase of supply (with compressor thermo short circuit)	*Temperature stabilized. Compressor surface temperature maximum 78.0℃*	*P*
Supplementary information:		

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Clause	Requirement + Test	Result - Remark	Verdict

19.7	**Abnormal operation conditions – locked rotor test other than motor-compressors and stationary circulation pumps in compliance with IEC 60335-2-51**					*P*
	Ambient, t1 (°C):			*23°C*		—
	Ambient, t2 (°C):			*23°C*		—
	Test voltage (V) :			*415V*		—
Temperature limit T of winding:		R_1 (Ω)	R_2 (Ω)	Measured T (°C)	Limit T (°C)	Insulation class
Fan motor upper (black-white)		*17.630*	*18.325*	*38.6*	*115*	*E*
Fan motor upper (red-black)		*17.584*	*18.284*	*38.7*	*115*	*E*
Fan motor upper (red- white)		*17.606*	*18.299*	*38.6*	*115*	*E*

19.7	**TABLE: electric strength measurements after 72 hours**	*P*
Test voltage applied between:	Test voltage (V)	Breakdown Yes / No
Fan motor Winding U・V・W phase to Earth	*1250*	*No*

19.7	**TABLE: leakage current measurements after 72 hours**		*P*
	A voltage equal to twice the rated voltage (V) :	*830V*	—
Leakage current I between :		I (mA)	Required I (mA)
Fan motor Winding U phase to Case		*0.11*	*2*
Fan motor Winding V phase to Case		*0.11*	*2*
Fan motor Winding W phase to Case		*0.11*	*2*

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Clause	Requirement + Test	Result - Remark	Verdict

19.7	**Abnormal operation conditions – Locked rotor test motor-compressor**		*P*
	Motor-compressor .....:	*RA422A3T-20MD*	
	Start device .....:	*Inverter type*	
	Protector .....:	*Hardware protection in inverter circuit*	
	Start capacitor .....:	*Inverter type*	
	Run capacitor.....:	*Inverter type*	
	Cooling; (static); (fan-m^3/h); (oil); .....:	*Ester OIL VG74*	
	Thermal motor-protection system .....:	*N/A*	

	Self-resetting				Manually reset
Rated voltage	Vn max (V)			Vn max (V)	Vn min (V)
	After 72 h	After 288 h	After 360 h	After 363 h	After 50 cycles
High-voltage test (see 16.3)	–	–	–	–	*1250/1min PASS*
Leakage current (mA) (see 16.2)	–	–	–	–	*0.11 2mA below PASS Test applied voltage :830V Measurement points :U V W-CASE*
Electric strength (see 13.3)	–	–	–	–	*1000V/1min PASS*
Room temperature (°C) (20 ± 5°C)	–	–	–	–	*23*
Number of cycles (≥ 2000 or 50)	–	–	–	–	*50*
Housing temperature (°C) (≤ 150°C)	–	–	–	–	*31.8*
supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

19.11.2	**Abnormal Operation**			P
Fault condition	Short circuit	Open circuit	Effect	Verdict
FAN IPDU BOARD MCC-1597				
C512	-	X	*Normal function. No hazardous.*	P
	X	-	*Power supply circuit not operated. No hazardous.*	P
C515		X	*Normal function. No hazardous.*	P
	X		*Power supply circuit not operated. No hazardous.*	P
C516		X	*Normal function. No hazardous.*	P
	X		*Power supply circuit not operated. No hazardous.*	P
D512		X	*Normal function. No hazardous.*	P
	X		*Normal function. No hazardous.*	P
IC511		X	*Power supply circuit not operated. No hazardous.*	P
	X		*Power supply circuit not operated. No hazardous.*	P
IC510 Pin1		X	*Power supply circuit not operated. No hazardous.*	P
Pin2		X	*Power supply circuit not operated. No hazardous.*	P
Pin4		X	*Power supply circuit not operated. No hazardous.*	P
Pin5-8		X	*Power supply circuit not operated. No hazardous.*	P
Pin1-2	X		*Power supply circuit not operated. No hazardous.*	P
Pin2-4	X		*IC510 not operated. No hazardous.*	P
T101 Pin1		X	*Power supply circuit not operated. No hazardous.*	P
Pin3		X	*Power supply circuit not operated. No hazardous.*	P
Pin7		X	*IC510 not operated. No hazardous.*	P
Pin8		X	*Power supply circuit not operated. No hazardous.*	P
Pin9		X	*Power supply circuit not operated. No hazardous.*	P
Pin10		X	*Power supply circuit not operated. No hazardous.*	P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Pin12		X	*Power supply circuit not operated. No hazardous.*	P
Pin13		X	*Power supply circuit not operated. No hazardous.*	P
Pin14		X	*IC510 not operated. No hazardous.*	P
Pin7-8	X		*Power supply circuit not operated. No hazardous.*	P
Pin8-9	X		*Power supply circuit not operated. No hazardous.*	P
Pin9-10	X		*Power supply circuit not operated. No hazardous.*	P
Pin12-13	X		*Power supply circuit not operated. No hazardous.*	P
Pin13-14	X		*Power supply circuit not operated. No hazardous.*	P
R501		X	*Normal function. No hazardous.*	P
	X		*F500 open. (Open current 2,75 times the rated current of the fuse-link) No hazardous.*	P
DB510 Pin1(+)		X	*Power supply circuit not operated. No hazardous.*	P
Pin2 ,3		X	*Power supply circuit not operated. No hazardous.*	P
Pin4(-)		X	*Power supply circuit not operated. No hazardous.*	P
Pin1-2,2-3,3-4	X		*F500 open. (Open current 2,75 times the rated current of the fuse-link),No hazardous.*	P
I/F P.C. BOARD MCC-1639				
D501		X	*Operate is stopped. No hazardous.*	P
	X		*Operate is stopped. No hazardous.*	P
IC504 Pin1,2,3,4		X	*Operate is stopped. No hazardous.*	P
Pin1-3	X		*Operate is stopped. No hazardous.*	P
Pin4-6		X	*Operate is stopped. No hazardous.*	P
R500	X		*Operate is stopped. No hazardous.*	P
		X	*Replacing F01 and F02 (6.3A) Current = 180A. No hazardous.*	P

IEC 60335-2-40				
Clause	Requirement + Test		Result - Remark	Verdict
COMPRESSOR IPDU BOARD MCC-1664				
C01		*X*	*Normal operation. No hazardous.*	*P*
	X		*F01 and F02 open. No hazardous.*	*P*
C11		*X*	*Normal operation. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
C12		*X*	*Normal operation. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
C13		*X*	*Normal operation. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
C14		*X*	*Normal operation. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
C241		*X*	*Normal operation. No hazardous.*	*P*
	X		*F01 and F02 open.(Open current 2,75 times the rated current of the fuse-link) No hazardous.*	*P*
C101		*X*	*Normal operation. No hazardous.*	*P*
	X		*Power supply circuit not operated. IC101 not operated. No hazardous.*	*P*
C102		*X*	*Unit not operated. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
C103		*X*	*Normal operation. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
C104		*X*	*Unit not operated. No hazardous.*	*P*
	X		*Normal operation. No hazardous.*	*P*
C105		*X*	*Normal operation. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
C106		*X*	*Normal operation. No hazardous.*	*P*
	X		*F101 open. (Open current 2,75 times the rated current of the fuse-link). No hazardous.*	*P*
C241		*X*	*Normal operation. No hazardous.*	*P*
	X		*F01 and F02 open.(Open current 2,75 times the rated current of the fuse-link). No hazardous.*	*P*
D101		*X*	*Normal operation. No hazardous.*	*P*
	X		*Normal operation. No hazardous.*	*P*
D102		*X*	*Unit not operated. No hazardous.*	*P*

IEC 60335-2-40				
Clause	Requirement + Test		Result - Remark	Verdict
	X		*Unit not operated. No hazardous.*	P
D103		X	*Unit not operated. No hazardous.*	P
	X		*Unit not operated. No hazardous.*	P
D241		X	*Normal operation. No hazardous.*	P
	X		*Normal operation. No hazardous.*	P
DB01 Pin1(+)		X	*Unit not operated. No hazardous.*	P
DB01 Pin2,3,4		X	*Unit not operated. No hazardous.*	P
DB01 Pin5(-)		X	*Unit not operated. No hazardous.*	P
DB01 Pin2-3,3-4	X		*F01 and F02 open.(Open current 2,75 times the rated current of the fuse-link) No hazardous.*	P
DB01 Pin1-5	X		*F01 and F02 open.(Open current 2,75 times the rated current of the fuse-link) No hazardous.*	P
IC101 Pin1		X	*Unit not operated. No hazardous.*	P
IC101 Pin2		X	*Unit not operated. No hazardous.*	P
IC101 Pin3		X	*Normal operation. No hazardous.*	P
IC101 Pin4		X	*Unit not operated. No hazardous.*	P
IC101 Pin5		X	*Unit not operated. No hazardous.*	P
IC101 Pin7		X	*Unit not operated. No hazardous.*	P
IC101 Pin8		X	*Unit not operated. No hazardous.*	P
IC101 Pin1-2	X		*Unit not operated. No hazardous.*	P
IC101 Pin2-3	X		*Unit not operated. No hazardous.*	P
IC101 Pin3-4	X		*Unit not operated. No hazardous.*	P
IC101 Pin5-7	X		*Normal operation. No hazardous.*	P
Q201 Pin34,35,36,37,38,39,40		X	*Operation is stopped. No hazardous.*	P
Q201 Pin3,9,14,15,21,22		X	*Operation is stopped. No hazardous.*	P
Q201 Pin23		X	*Operation is stopped. No hazardous.*	P
Q201 Pin24		X	*Operation is stopped. No hazardous.*	P
Q201 Pin26		X	*Normal operation. No hazardous.*	P
Q201 Pin1,7,13,27,28,29		X	*Operation is stopped. No hazardous.*	P
Q201 Pin4,6,10,12,16,18		X	*Operation is stopped. No hazardous.*	P
Q201 Pin19,25		X	*Normal operation. No hazardous.*	P
Q201 Pin1-3	X		*Operation is stopped. No hazardous.*	P

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Clause	Requirement + Test		Result - Remark	Verdict
Q201 Pin3-4	*X*		*Unit not operated. No hazardous.*	*P*
Q201 Pin4-6	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin6-7	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin7-9	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin9-10	*X*		*Unit not operated. No hazardous.*	*P*
Q201 Pin10-12	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin12-13	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin13-14	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin14-15	*X*		*Unit not operated. No hazardous.*	*P*
Q201 Pin15-16	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin16-18	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin18-19	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin19-21	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin21-22	*X*		*Unit not operated. No hazardous.*	*P*
Q201 Pin22-23	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin23-24	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin24-25	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin25-26	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin26-27	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin27-28	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin28-29	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin34-35	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin35-36	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin36-37	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin37-38	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin38-39	*X*		*Operation is stopped. No hazardous.*	*P*
Q201 Pin39-40	*X*		*Operation is stopped. No hazardous.*	*P*
T101 Pin1		*X*	*Unit not operated. No hazardous.*	*P*
T101 Pin2		*X*	*Normal operation. No hazardous.*	*P*
T101 Pin3		*X*	*Normal operation. No hazardous.*	*P*
T101 Pin4		*X*	*Normal operation. No hazardous.*	*P*

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Clause	Requirement + Test		Result - Remark	Verdict

T101 Pin5		*X*	*Normal operation. No hazardous.*	*P*
T101 Pin6		*X*	*Normal operation. No hazardous.*	*P*
T101 Pin7		*X*	*Normal operation. No hazardous.*	*P*
T101 Pin9		*X*	*Unit not operated. No hazardous.*	*P*
T101 Pin11		*X*	*Unit not operated. No hazardous.*	*P*
T101 Pin14		*X*	*Unit not operated. No hazardous.*	*P*
T101 Pin15		*X*	*Unit not operated. No hazardous.*	*P*
T101 Pin1-2	*X*		*Unit not operated. No hazardous.*	*P*
T101 Pin3-4	*X*		*Unit not operated. No hazardous.*	*P*
T101 Pin5-6	*X*		*Unit not operated. No hazardous.*	*P*
T101 Pin14-15	*X*		*Unit not operated. No hazardous.*	*P*
IC102 Pin4,6		*X*	*IC101 not operated. No hazardous.*	*P*
	X		*Unit not operated. No hazardous.*	*P*
R01		*X*	*Normal operation. No hazardous.*	*P*
	X		*F01 and F02 open.(Open current 2,75 times the rated current of the fuse-link). No hazardous.*	*P*
R101		*X*	*Unit not operated. No hazardous.*	*P*
	X		*IC101 not operated. No hazardous.*	*P*
R102		*X*	*Unit not operated. No hazardous.*	*P*
	X		*Normal operation. No hazardous.*	*P*
R103		*X*	*Unit not operated. No hazardous.*	*P*
	X		*Normal operation. No hazardous.*	*P*
R104		*X*	*Unit not operated. No hazardous.*	*P*
	X		*IC101 not operated. No hazardous.*	*P*
R204		*X*	*Operation is stopped. No hazardous.*	*P*
	X		*Normal operation. No hazardous.*	*P*

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19.13	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations		Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)
19.4 Wooden		*0*	*150*
19.7 Wooden		*1*	*150*
19.8 Wooden		*1*	*150*
19.101 Wooden		*1*	*150*
19.103 Wooden		*3*	*150*
Supplementary information:			

19.101-104	Abnormal operation conditions	P
Subclause	Effect	Verdict
19.101	*Outdoor Air inlet Closed.* *2way valve ON/OFF continuously. 2 way valve maximum temperature 84°C*	*P*
19.102	--	*N/A*
19.103	*Cooling: +10K, Heating: - 5K* *Temperature stabilized.*	*P*
19.104	--	*N/A*
Supplementary information:		

21.1	TABLE: Impact resistance			P
Impacts per surface		Surface tested	Impact energy (Nm)	Comments
Fan guard		*No damaged.*	*0.5J*	*No damaged.*
Thermistor cover		*No damaged.*	*0.5J*	*No damaged.*
Supplementary information:				

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Clause	Requirement + Test	Result - Remark	Verdict

24.1	TABLE: Critical components information				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1)]
Parts on PCB MCC-1639 Interface P.C.BOARD					
P.C.Board PW01	*Panasonic Industrial Devices Materials(Suzhou) co.,LTD*	*MCC-1639 (Type: S70-M)*	*Glass fiber Epoxy resin, UL94V-0, CTI=600*	*UL94*	*UL E164387*
<As alternate use>	*GUH CIRCUIT INDUSTRY (SUZHOU)Co.,Ltd.*	*MCC-1639 (Type:3AV0)*	*Glass fiber Epoxy resin, UL94V-0 CTI=600*	*UL94*	*UL E162032*
<As alternate use>	*APCB Electronics Co., Ltd*	*MCC-1639 (Type: THL-55)*	*Glass fiber Epoxy resin, UL94V-0, CTI=600*	*UL94*	*UL E139086*
<As alternate use>	*Shirai Electronics Industrial Co., Ltd*	*MCC-1639 (Type: DS6, Type: C3D)*	*Glass fiber Epoxy resin, UL94V-0, CTI=600*	*UL94*	*UL E328585 UL E49025*
Connector CN01	*HOPPY Industrial Co., Ltd.*	*HP-T4053-1-4PS2*	*1A/AC30V, PBT with glass, UL94V-0*	--	--
Connector CN317	*J.S.T Mfg Co.,Ltd*	*B2P3-VH-B-E (VH)*	*10A/AC250V, PBT with glass UL94V-0*	*IEC 61984*	*TUV R75122*
Connector CN304 CN311	*J.S.T Mfg Co.,Ltd*	*B2(7.92)B-VUKS-1 B2(7.92)B-VUSS-1*	*5A / AC250V, UL94V-0 PBT Polyester, Glass-filled*	*UL1977*	*UL E60389, CSA LR20812*
Connector CN312	*Tyco Electronics*	*3-176976-2 (176976)*	*12A / AC600V, UL94V-0, Nylon 66, Glass-filled*	*IEC 61984 EN 61984: 2001*	*TUV R9051079*
Connector CN314	*J.S.T Mfg Co.,Ltd*	*B04P-VL (VL)*	*20A/600V, Nylon66, UL94V-0*	*IEC 61984*	*TUV R9351103*
Connector CN400	*J.S.T Mfg Co.,Ltd*	*B02B-VYHSK-1 (VYH)*	*15A / AC300V, UL94V-0, PBT Polyester, Glass-filed*	*EN 61984*	*TUV R50036139*
SparkKiller CR304,CR317	*Okaya Electric Industries Co.,Ltd.*	*RE120033*	*AC250V 0.033μF+120Ω*	*IEC 60384-14 EN 60384-14*	*VDE 40024027*
Fuse F01,F02	*HOLLYLAND Co.,Ltd.*	*50T(P) 063HF (50T)*	*T6.3A 250VAC*	*IEC 60127-2*	*SEMKO 1414802*
<As alternate use>	*Nippon Seisen Cable Ltd.*	*FSL250V6.3A*	*T6.3A, 250VAC*	*IEC 60127 BS EN 60127-2*	*SEMKO 309117*
Photo Coupler IC502	*Toshiba Corporation*	*TLP185*	*BV 3750Vrms*	*EN 60747-5-5*	*VDE 40009347*
Relay RY304,RY311 RY312,RY314 RY317	*OMRON Corporation*	*G5NB-1A*	*3A,250VAC*	*IEC 61810-1 EN 61810-1 IEC 60255-23 EN 60255-23*	*VDE 137575*
<As alternate use>	*Daiichi Electric Co., Ltd.*	*EN1U*	*3.0A, 277VAC Insulation Class: E*	*EN 61810-1*	*TUV R50214738*
<As alternate use>	*Panasonic Corporation*	*ALDP*	*5.0A, 277VAC Insulation Class: E*	*EN 61810-1*	*VDE 40014384*
<As alternate Use>	*Daiichi Electric Co.,Ltd.*	*DQ1U*	*5A,250VAC Class E*	*IEC EN 61810-1*	*TUV R50041102*

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<As alternate use>	SHINMEI ELECTRIC CO., LTD	RPG	3.0A, 250VAC Insulation Class: E	EN 61810-1	TUV B10102381101 4
Parts on PCB MCC-1664 Comp-IPDU P.C.BOARD					
P.C.Board PW01	GUH CIRCUIT INDUSTRY (SUZHOU)Co.,Ltd.	MCC-1664 (Type: 3AV0)	Glass fiber Epoxy resin, UL94V-0 CTI=600	UL94	UL E162032
<As alternate use>	Panasonic Industrial Devices Materials(Suzhou) co.,LTD	MCC-1664 (Type: S70-M)	Glass fiber Epoxy resin, UL94V-0 CTI=600	UL94	UL E164387
<As alternate use>	APCB Electronics Co., Ltd	MCC-1664 (Type: THL-55)	Glass fiber Epoxy resin, UL94V-0 CTI=600	UL94	UL E139086
<As alternate use>	Shirai Electronics Industrial Co., Ltd	MCC-1664 (Type: DS6, Type: C3D)	Glass fiber Epoxy resin, UL94V-0 CTI=600	UL94	UL E328585 UL E49025
Smoothing Capacitor C11,C12, C13,C14,	Nichikon Corp.	LLQ2G331 KHUATF	330uF, 400V MAX: 85°C	--	--
<As alternate use>	Nippon Chemi-Con Corporation.	400LISN330M	330uF, 400V MAX: 85°C	--	--
<As alternate use>	Rubycon Corporation	400USC330KT9L N	330uF, 400V MAX: 85°C	--	--
Connector CN101	J.S.T. Mfg. Co., Ltd.	B2P3-VH	PBT with glass UL94V-0	IEC 61984	TUV R75122
Line Filter L01	Ueno Ltd	ADR25T-20R15T	AC600V, 20A, 0.15mH Insulation Class: E PBT, UL94V-0	--	--
Fuse F01,F02	Daitonagasawa Co.,Ltd.	GAC1 31.5A	31.5A, 500VAC	UL248-1 UL248-14	UL E46712
FUSE F101	SKYGATE Co., Ltd.	SCT3.15A	T3.15A/AC250V	EN60127-3	VDE 40024055
Photo Coupler IC102,IC851 IC852	Toshiba Corporation	TLP185	BV 3750Vrms	EN 60747-5-5	VDE 40009347
Varistor R01	Nippon Chemi-Con Corporation.	TNR14V911K	910V, 0.6W	CECC42000,42200,4 2201	VDE 118623
<As alternate use>	Nippon Chemi-Con Corporation.	TND14V-911KB00AAA0	910V, 0.6W	CECC42000,42200, 42201	VDE 118623
<As alternate use>	TDK-EPC corporation	S14K550E2	910V, 0.6W	IEC 61051	VDE 40027582
Switching Transformer T101	TDK-EPC Corporation	SWT-93	Bobbin: Phenol UL94V-0 Windings: UEW Insulation Class: E	--	--
Current Transformer T611	NEC Tokin Corporation	CT25U-VB-300T	Bobbin: PBT Windings: UEW Insulation Class: A	--	--
<As alternate use>	Nishimura Musen Co., Ltd	V30-Q195CT	Bobbin: PET Windings: UEW Insulation Class: E	--	--
Internal Wire P05-P06 P25-P26	Interchangeable	UL1015AWG14	600V,105°C, VW-1	UL1015	UL E150612

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Clause	Requirement + Test	Result - Remark	Verdict

Parts on PCB MCC-1597 FAN-IPDU P.C.BOARD					
P.C.Board PW01	Panasonic Industrial Devices Materials(Suzhou) co.,LTD	MCC-1597 (Type: S70-M)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E164387
<As alternate use>	GUH CIRCUIT INDUSTRY (SUZHOU)Co.,Ltd.	MCC-1597 (Type: 3AV0)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E162032
<As alternate use>	APCB Electronics Co., Ltd	MCC-1597 (Type: THL-55)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E139086
<As alternate use>	Shirai Electronics Industrial Co., Ltd	MCC-1597 (Type: DS6, Type C3D)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E328585 UL E49025
Smoothing Capacitor C510	Nippon Chemi-Con Corporation.	ECST401LIN501 KR50T	500μF/400V MAX:85 degree C	--	--
<As alternate use>	Nippon Chemi-Con Corporation.	400LISN500K35F	500μF/400V MAX:85 degree C	--	--
Connector CN502	J.S.T Mfg Co.,Ltd	B2P3-VH-B (VH)	PBT with glass UL94V-0	IEC 61984	TUV R75122
Connector CN700,CN750	Tyco Electronics	179846-1	10A Nylon66 UL94V-0	--	--
FUSE F500	Nippon Seisen Co.,Ltd.	GDT250V15A-A	AC250V, 15A	--	--
FUSE F510	SKYGATE Co., Ltd.	SCT3.15A	T3.15A/AC250V	EN60127-3	VDE 40024055
Photo Coupler IC511,IC535,IC536	Toshiba Corporation	TLP185	BV 3750Vrms	EN 60747-5-5	VDE 40009347
Varistor R501,R510	Nippon Chemi-Con Corporation.	TNR14V561K372	560V 0.6W	CECC42000, 42200,42201	VDE 118623
<As alternate use>	Nippon Chemi-Con Corporation.	TND14V-561KB00AAA0	560V, 0.6W	CECC42000,42200, 42201	VDE 118623
<As alternate use>	Walsin Technology Corporation	SR561K14D	0.6W,560V	IEC61051-1, 61051-2, 61051-2-2	VDE 40010090
<As alternate use>	TDK-EPC	S14K350E2	0.6W,560V	IEC61051-1, 61051-2, 61051-2-2	VDE 40027582
Switching Transformer T510	TAMURA CORPORATION	SWT-101	Bobbin: Phenol UL94V-0 Windings: UEW Insulation Class: E	--	--
Parts on PCB MCC-1600 Noise Filter P.C.BOARD					
P.C.Board PW01	Panasonic Industrial Devices Materials(Suzhou) co.,LTD	MCC-1600 (Type: S70-M)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E164387
<As alternate use>	GUH CIRCUIT INDUSTRY (SUZHOU)Co.,Ltd.	MCC-1600 (Type: 3AV0)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E162032
<As alternate use>	APCB Electronics Co., Ltd	MCC-1600 (Type: THL-55)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E139086
<As alternate use>	Shirai Electronics Industrial Co., Ltd	MCC-1600 (Type: DS6, Type C3D)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E328585 UL E49025
X Capacitor C01,C02,C03	Okaya Electric Industries Co.,Ltd.	LE225-MX-C (LE)	2.2μF,310VAC	IEC-60384-14	ENEC SE/0142-1

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X Capacitor C11,C12,C13, C17, C18, C19	Okaya Electric Industries Co.,Ltd.	LE105-MX-C (LE)	1.0μF,310VAC Class X2	IEC-60384-14	ENEC SE/0142-1
Y Capacitor C21,C22,C24, C25,C26,C27, C28,C34,C35,C37	Murata Mfg. Co., Ltd.	DE2F3KH103MB 3(KH)	10000pF, 250VAC MAX:85°C Class Y2	IEC EN 60384-14	VDE 40002796
<As alternate use>	Murata Mfg. Co., Ltd.	DE2F3KY103MB 3BM02F(KY)	10000pF, 250VAC MAX:85°C	IEC EN 60384-14	VDE 40006273
Connector CN22,CN23	J.S.T Mfg Co.,Ltd	B3P5-VH-R B2P3-VH-R	PBT with glass UL94V-0	IEC 61984	TUV R75122
FUSE F01,F02,F03	HOLLYLAND CO., LTD	50T(P) 063HF GF-001 C4	T6.3A, 250VAC	IEC 60127-2	SEMKO 1414802
<As alternate use>	NIPPON SEISEN Corp.	FSL250V6.3A	6.3A/AC250V	IEC/EN 60127-2	SEMKO 413683
Line Filter L01	NEC Tokin Corporation	SCF56-250-S2R4A032JH	25A,AC400V 3.2mH/1kHz	--	--
<As alternate use>	Hitachi Metals, Ltd	FM-Y25N312MYBPF	25A,AC400V 3.2mH/1kHz	--	--
Line Filter L02	Ueno Co., Ltd	ADR2516-0R6TB	AC250V, 15A, 0.6mH Insulation class: E PBT, UL94V-0	--	--
<As alternate use>	NEC Tokin Corporation	SC-15-S06J-	AC250V, 20A, 0.15mH Insulation class : E PBT,UL94V-0	--	--
Line Filter L03	Ueno Co., Ltd	ADR2520-R15TB	AC250V, 20A, 0.15mH Insulation class: E PBT, UL94V-0	--	--
<As alternate use>	NEC Tokin Corporation	SC-20-01J-A	AC250V, 20A, 0.15mH Insulation class : E PBT,UL94V-0	--	--
Varistor R01,R02,R03,R04	Nippon Chemi-Con Corporation.	TNR14V561K372	560V 0.6W	CECC42000,42200, 42201	VDE118623
<As alternate use>	Nippon Chemi-Con Corporation.	TND14V-561KB00AAA0	560V, 0.6W	CECC42000,42200, 42201	VDE 118623
<As alternate use>	Walsin Technology Corporation	SR561K14D	0.6W,560V	IEC61051-1,61051-2, 61051-2-2	VDE 40010090
<As alternate use>	TDK-EPC	S14K350E2	0.6W,560V	IEC61051-1,61051-2, 61051-2-2	VDE 40027582
Varistor R05	Nippon Chemi-Con Corporation.	TNR14V911K	910V, 0.6W	CECC42000,42200, 42201	VDE 118623
<As alternate use>	Nippon Chemi-Con Corporation.	TND14V-911KB00AAA0	910V, 0.6W	CECC42000,42200, 42201	VDE 118623
<As alternate use>	TDK-EPC corporation	S14K550E2	910V, 0.6W	IEC 61051	VDE 40027582
Relay RY01	OMRON Corporation	G4A-1A-PE	AC250V, 20A Insulation class: E	IEC/DIN EN 61810-1	VDE 107293
<As alternate use>	OMRON Corporation	G4A-1A-E	AC250V, 20A Insulation class: E	IEC/DIN EN 61810-1	VDE 107293
<As alternate use>	Daiichi Electric Co., Ltd.	DA1U (DI12D1-O)	AC250V, 20A Insulation class: E	EN 61810-1	TUV R9551668

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PTC Thermistor TH06	Shenzhen AMPRON Sensitive Components Co.,Ltd	MZ32-30RHAGD03EA	15 Ohm,276V	--	--
<As alternate use>	Nichicon Corporation	ZPM0RCH150B250	15 Ohm,276V	--	--
Surge Absober SG01	Okaya Electric Industries Co.,Ltd.	RA-302M-V7-Y (AB-1)	3.6kV	IEC60384-14	TUV J9551103
<As alternate use>	Mitsubishi Materials Corp.	DA38-362MT	3.6kV	EN60065 EN60950-1	TUV J9550875
Parts on PCB MCC-1653 Demand P.C.BOARD for MCY-MHP0404HS8-A, MCY-MHP0504HS8-A, MCY-MHP0604HS8-A					
P.C.Board PW01	Shin-Asahi Electric Ind. Co.,Ltd.	MCC-1653 (Type: TCM1A)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E171286
<As alternate use>	Panasonic Industrial Devices Materials(Suzhou) co.,LTD	MCC-1653 (Type: S70-M)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E164387
<As alternate use>	GUH CIRCUIT INDUSTRY (SUZHOU)Co.,Ltd.	MCC-1653 (Type: 3AV0)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E162032
<As alternate use>	APCB Electronics Co., Ltd	MCC-1653 (Type: THL-55)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E139086
<As alternate use>	Shirai Electronics Industrial Co., Ltd	MCC-1653 (Type: DS6, Type: C3D)	Glass fiber Epoxy resin, UL94V-0, CTI=600	UL94	UL E328585 UL E49025
Y Capacitor C104	Murata Mfg Co.,Ltd.	DE2E3KH472MB3B(KH)	4700pF, 250VAC Class Y2	IEC 60384-14	VDE 40002796
<As alternate use>	Murata Mfg Co.,Ltd.	DE2F3KY472MB02F(KY)	4700pF, 250VAC Class Y2	IEC60384-14	VDE 40006273
X Capacitor C105	Okaya Electric Industries Co.,Ltd	LE104-MX (LE)	0.1μF, 310VAC Class X2	IEC/EN 60384-14 GB/T14472-1998	Intertek Semko AB SE/0142-1M
<As alternate use>	Arcotronics	R46K(R.46)	0.1μF, 275VAC Class X2	IEC 60384-14	ENEC/IMQ V4413
Connector CN01	Nihon FTB Co., Ltd.	MI331A-4P	1A/AC30V,PBT UL94V-0	--	--
Connector CN100,CN101	J.S.T Mfg Co.,Ltd	B2P3-VH	PBT with glass UL94V-0	IEC 61984	TUV R75122
Fuse F100	NIPPON SEISEN Corp.	FJL250V3.15A	3.15A/AC250V	IEC/EN 60127-2	SEMKO 413683
<As alternate use>	SOC Corporation	ET3.15A	T3.15A, AC250V	IEC/ EN 60127-2	SEMKO 9746195, BS KM6592
<As alternate use>	SKYGATE Co., Ltd.	SCT	250AC,3.15A	EN60127-3	VDE 40024055
Line-Filter L101	NEC TOKIN Corp.	SS11V-R08125	12.5mH,0.8A, Class E	--	--
Photo Coupler IC102	Toshiba Corporation	TLP185	BV 3750Vrms	EN 60747-5-5	VDE 40009347
Varistor R105	Nippon Chemi-Con Corporation.	TNR14V561K372	560V 0.6W	CECC42000,42200, 42201	VDE 118623
<As alternate use>	Nippon Chemi-Con Corporation.	TND14V-561KB00AAA0	560V, 0.6W	CECC42000,42200, 42201	VDE 118623
<As alternate use>	Walsin Technology Corporation	SR561K14D	0.6W,560V	IEC61051-1,61051-2, 61051-2-2	VDE 40010090

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<As alternate use>	TDK-EPC	S14K350E2	0.6W,560V	IEC61051-1, 61051-2, 61051-2-2	VDE 40027582
Other Parts					
Terminal Block	Yueqing Jinlong Electronics Industrial	JXO-6004	AC600V/ 75A,4P Urea resin, UL94V-0, Thermosetting plastic	--	--
Power-Relay	Daiichi Electric Co.,Ltd.	EL2U	AC480V,20A, Insulation class : E	EN 61810-1	TUV R500023029
PTC Thermistor	Shenzhen AMPRON Sensitive Components Co.,Ltd	MZ32-101RMARD01E-A	AC500V,13A 100 Ohm,	--	--
<As alternate use>	Nichicon Corporation	ZPR0YCE101A500	AC500V,13A 100 Ohm,	--	--
Reactor	Tabuchi Electric Co., Ltd	CH-79	5.8mH, 16A, Insulation class H	--	--
<As alternate use>	Fujihen Co., Ltd	CH-79	5.8mH, 16A, Insulation class H	--	--
Reactor	Fujihen Co., Ltd	CH-68	18mH, 5A, Insulation class H	--	--
Internal Wire	Interchangeable	UL1015AWG14 UL1015AWG18	600V,105°C, VW-1	UL1015	UL E150612
Internal Wire	Interchangeable	UL3289AWG14	600V,150°C, VW-1	UL3289	UL E150612
Connector (Harness Parts)	J.S.T. Mfg. Co., Ltd.	VHR-3N VHR-5N-R VHR-7N-R	Nylon66, UL94V-0	IEC 61984	TUV R75122
Connector (Harness Parts)	J.S.T. Mfg. Co., Ltd.	VURP-03V-R	PBT (Glass), UL94V-0	UL1977	UL E60389
Connector (Harness Parts)	J.S.T. Mfg. Co., Ltd.	VYHP-02V	Nylon66, UL94V-0	IEC 61984	TUV R50036139
Connector (Harness Parts)	Tyco Electronics	179970-1	66Nylon Glass Filled UL94V-0	UL224	UL E28476
Connector (Harness Parts)	SHINAGAWA SHOKO CO., LTD.	PF-250U	6/6Nylon Glass Filled UL94V-0	UL224 (Category:YDTU2)	UL E55167 CSA LR83372
Transformer (MCY-MHP0404 HS8-A, MCY-MHP0504HS8-A, MCY-MHP0604 HS8-A models only)	Tamura Corporation	TT-02-2	Insulation class: A	--	--
Thermal Fuse in Transformer	TAMURA THERMAL DEVICE CORPORATION	T7F	145°C,250V,1A	IEC60691	VDE 40005277
Power peak cut control board Models: TCB-PCDM4E					
<Parts on PCB MCC-1212>					
Printed Circuit Board PW01	Toyo Kogyo Co., Ltd.	MCC-1212	Glass fiber epoxy resin, UL94V-0, CTI600	-	--

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Terminal	*Osada Co., Ltd.*	*OTB-125-M-M4 2P*	*AC250V, 24A PBT, UL94-V0*	-	--
Relay K100	*OMRON Corporation*	*G5NB-1A*	*3A, 250VAC*	*IEC 61810-1 EN 61810-1 IEC 60255-23 EN 60255-23*	*VDE 137575*
<As alternate use>	*Daiichi Electric Co., Ltd.*	*EN1U*	*3.0A, 277VAC Insulation Class: E*	*EN 61810-1*	*TUV R 50214738*
<As alternate use>	*Panasonic Corporation*	*ALDP*	*5.0A, 277VAC Insulation Class: E*	*EN 61810-1*	*VDE40014384*
<As alternate Use>	*Daiichi Electric Co.,Ltd.*	*DQ1U*	*5A,250VAC Insulation Class: E*	*IEC/EN 61810-1*	*TUV R50041102*
<As alternate use>	*SHINMEI ELECTRIC CO., LTD*	*RPG*	*3.0A, 250VAC Insulation Class: E*	*EN 61810-1*	*TUV B101023811 14*
Output control board Models: TCB-PCIN4, PCIN4E					
<Parts on PCB MCC-1613>					
Printed Circuit Board	*Kyouden Co., Ltd.*	*MCC-1613*	*Glass fiber epoxy resin, UL94V-0*	*UL746A*	*E134964 (TYP: K-3)*
Terminal	*Osada Co., Ltd.*	*OTB-125-B-6P-M4*	*AC250V, 24A PBT (Polybutylene terephthalate) UL94V0*	--	--
Relay K1, K2, K3	*OMRON Corporation*	*G5NB-1A*	*3A, 250VAC*	*IEC 61810-1 EN 61810-1 IEC 60255-23 EN 60255-23*	*VDE 137575*
<As alternate use>	*Daiichi Electric Co., Ltd.*	*EN1U*	*3.0A, 277VAC Insulation Class:E*	*EN 61810-1*	*TUV R 50214738*
<As alternate use>	*Panasonic Corporation*	*ALDP*	*5.0A, 277VAC Insulation Class:E*	*EN 61810-1*	*VDE40014384*
<As alternate use>	*Daiichi Electric Co.,Ltd.*	*DQ1U*	*5A,250VAC Insulation Class:E*	*IEC/EN 61810-1*	*TUV R50041102*
<As alternate use>	*SHINMEI ELECTRIC CO., LTD*	*RPG*	*3.0A, 250VAC Insulation Class: E*	*EN 61810-1*	*TUV B10102381101 4*
Other Parts					
Compressor CM	*TCFG Compressor (Thailand) Co.,Ltd*	*RA422A3T-20MD*	*4 poles DC380V, 3750W Insulation Class: E*	--	--
Fan motor for Outdoor unit FM1, FM2	*GUANGDONG WELLING MOTOR MANUFACTURING CO.,LTD*	*WDF-340-A100-1*	*DC280-340V 100W Insulation Class: E*	--	--
Connector of Fan motor CN700, CN750	*Tyco Electronics AMP K.K.*	*179938-1*	*66Nylon, UL94V-0*	*IEC 61984*	*TUV B04113917501 0*
Solenoid Coil 4way valve 20SF	*Saginomiya Seisakusyo*	*STF 50/60Hz AC220-240V*	*AC220-240V, UL94V-0 Insulation Class: B*	--	--

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Connector of Solenoid Coil 4way valve CN317	*JST Mfg. Co., Ltd.*	*VHR-3N*	*66Nylon, UL94V-0*	*IEC 61984*	*TUV R75122*
Solenoid Coil 2way valve SV2, SV4, SV5	*Zhejiang Sanhua Climate & Appliance Controls Group Co.,Ltd*	*FQ-G593 50Hz AC220-240V*	*AC220-240V, UL94V-0 Insulation Class: B*	--	--
Connector of Solenoid Coil 2way valve, SV2 CN311	*JST Mfg. Co., Ltd.*	*VURP-03V-S*	*66Nylon, UL94V-0*	--	--
Connector of Solenoid Coil 2way valve, SV4 CN312	*Tyco Electronics AMP K.K.*	*178125-2*	*66Nylon, UL94V-0*	*IEC 61984*	*TUV R9051079*
Connector of Solenoid Coil 2way valve, SV5 CN314	*JST Mfg. Co., Ltd.*	*VLP-04V-1 (VL)*	*66Nylon, UL94V-0*	*IEC 61984*	*TUV R9351103*
High-Pressure Switch P>	*Saginomiya Seisakusyo*	*ACB-4UB32W*	*ON-2.9MPa OFF-3.73MPa*	*DIN 32733 EN 12263*	*TUV CERT No. 01 202 931-B-02-0116-2*
Connector of High-Pressure Switch	*JST Mfg. Co., Ltd.*	*SVH-21T-P1.1*	*66Nylon, UL94V-0*	*IEC 61984*	*TUV R 9251676*
PMV Coil	*Zhejiang Sanhua Climate & Appliance Controls Group Co.,Ltd*	*PQ-M10012-000230*	*DC12V UL94V-0 Insulation Class: E*	--	--
Connector of PMV Coil CN300	*JST Mfg. Co., Ltd.*	*XNIRP-06V-1 (XNI)*	*PBT, UL94V-0*	*EN 61984*	*TUV J50148340*
Enclosure sheet metal	*Interchangeable*	*Interchangeable*	*Depth 0.7mm SGCC-Z08*	--	*Tested with the unit*

Supplementary information:

[1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

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28.1	TABLE: Threaded part torque test			P
Threaded part identification		Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Earth screw		*8*	*II*	*2.5*
Terminal block screw		*6*	*II*	*2.5*
Supplementary information:				

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29.1	**TABLE: Clearances**						P
	Overvoltage category.....:		II				—
		Type of insulation:					
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark	
330	0,2* / 0,5 / 0,8**	--	--	--	--	N/A	
500	0,2* / 0,5 / 0,8**	--	--	--	--	N/A	
800	0,2* / 0,5 / 0,8**	--	--	--	--	N/A	
1 500	0,5 / 0,8** / 1,0***	--	--	--	--	N/A	
2 500	1,5 / 2,0***	P (see following table)	--	--	P (see following table)	P	
4 000	3,0 / 3,5***	--	--	--	--	N/A	
6 000	5,5 / 6,0***	--	--	--	--	N/A	
8 000	8,0 / 8,5***	--	--	--	--	N/A	
10 000	11,0 / 11,5***	--	--	--	--	N/A	

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Supplementary information:
*) For tracks on printed circuit boards if pollution degree 1 and 2
**) For pollution degree 3
***) If the construction is affected by wear, distortion, movement of the parts or during assembly

Basic	*Functional*
MCC-1664: *Pri-gnd (chassis)=3.8mm* *Pri-sec (traces)=4.1mm* *PWB MCC-1597:* *Pri-gnd (chassis)=4.1mm* *Pri-sec (traces)=4.1mm* *Transformer T510: (Upeak=745V, Urms=141V)* *Pri-sec=3.0mm* *MCC-1639:* *Pri-gnd (chassis)=4.1mm* *Pri-sec (traces)=4.3mm* *MCC-1600:* *Pri-gnd (chassis)=4.1mm* *MCC-1653:* *Pri-gnd (chassis)=6.0mm* *Pri-sec (traces)=5.1mm* *Transformer TT-02: (Upeak=340V, Urms=240V)* *Pri-sec=8.0mm* *MCC-1212* *Pri-gnd(chassis)=6.0mm* *Pri-sec(traces)=4.1mm* *MCC-1613* *Pri-gnd(chassis)=6.0mm* *Pri-sec(traces)=4.1mm* *Compressor: winding-case 5.2mm* *Compressor terminal 3.2mm* *Fan motor: winding-case 2.5mm* *Reactor(CH-79-Z-SJ): Winding – core 5.7mm* *Reactor CH-68-FC): Winding – core 4.4mm*	*MCC-1664:* *Pri-pri (CN101 DC+- DC−)= 3.4mm* *Pri-pri (rectifier pin-pin)= 3.5mm* *PWB MCC-1597:* *Pri-pri (before fuse)= 4.2mm* *MCC-1639:* *Pri-pri (before fuse)=3.5mm* *MCC-1600:* *Pri-N (traces)=3.3mm* *Pri-Pri (traces)=5.5mm* *MCC-1653:* *Pri-pri (before fuse)= 4.9mm* *MCC-1212* *Pri-pri=3.3mm* *MCC-1613* *Pri-pri=3.3mm*

Remark:
Clearances was also considered with table F.7a of IEC60664-1 and clause 4 of IEC 60664-4.
Clearances of functional insulation less than above values were performed with short test by clause 19.11.2 a).

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V)	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			Verdict
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	B**	S**	R**	
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9		—	—	N/A
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—		—	N/A
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—		N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N/A
250	0,56	1,25	1,8	2,5 *(see following table)*	3,2	3,6	4,0	P	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	—		—	N/A
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0	—	—		N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V)	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			Verdict
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	B**	S**	R**	
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V)	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			Verdict
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	B**	S**	R**	
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V

**) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation

MCC-1664: *Pri-gnd (chassis)=4.5mm* *Pri-sec (traces)=4.1mm*	*MCC-1600:* *Pri-gnd (chassis)=4.1mm*
MCC-1597: *Pri-gnd (chassis)=4.7mm* *Pri-sec (traces)=4.1mm* *Transformer T510: (Upeak=745V, Urms=141V) Pri-sec=3.0mm*	*MCC-1653:* *Pri-gnd (chassis)=4.1mm* *Pri-sec (traces)=5.1mm* *Transformer TT-02: (Upeak=340V, Urms=240V) Pri-sec=8.0mm*
MCC-1639: *Pri-gnd (chassis)=11.5mm* *Pri-sec (traces)=4.3mm*	*Compressor: winding-case 6.7mm* *Compressor terminal 4.8mm* *Fan motor: winding-case 2.5mm* *Reactor(CH-79-Z-SJ): Winding – core 5.7mm* *Reactor CH-68-FC): winding – core 4.4mm*
MCC-1212 *Pri-gnd(chassis)=6.0mm* *Pri-sec(traces)=4.1mm*	*MCC-1613* *Pri-gnd(chassis)=6.0mm* *Pri-sec(traces)=4.1mm*

Remark:

Creepage was also considered with table 2 of IEC 60664-4.

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	Creepage distance (mm) Pollution degree							Verdict / Remark
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	*N/A*
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	*N/A*
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	*N/A*
250	0,42	1,0	1,4	2,0 *(see following table)*	2,5	2,8	3,2	*P*
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	*N/A*
500	1,0	2,0	2,8	4,0 *(see following table)*	5,0	5,6	6,3	*P*
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	*N/A*
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	*N/A*
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	*N/A*
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	*N/A*
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	*N/A*
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	*N/A*
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	*N/A*
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	*N/A*
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	*N/A*
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	*N/A*
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	*N/A*
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	*N/A*
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	*N/A*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V

Working voltage (V): 250

MCC-1664: *Pri-pri (CN101 DC +- DC −)= 3.4mm*	*MCC-1600:* *Pri-N(traces)=3.3mm*
MCC-1597: *Pri-pri (before fuse)= 4.2mm*	*MCC-1653:* *Pri-pri (before fuse)= 4.9mm*
MCC-1639: *Pri-pri (before fuse)=3.5mm*	*MCC-1212* *Pri-pri=3.3mm*
	MCC-1613 *Pri-pri=3.3mm*

Working voltage (V): 500

MCC-1664: *Pri-pri (rectifier pin-pin)= 5.5mm*	*MCC-1600:* *Pri-pri (traces)=5.5mm*

Creepage was also considered with table 2 of IEC60664-4 and table F.4 of IEC60664-1.
Creepage distances of functional insulation less than above values were performed with short test by clause 19.11.2 a).

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

30	**TABLE: Resistance to heat and fire**																			
Object/ part No.	Manufacturer/ trademark	Type/ model	Ball pressure test °C				Glow wire test (GWT) °C						Glow-wire flammability index (GWFI) °C				Glow- wire ignition temp. (GWIT) °C		Needle-flame test (NFT)	Verdict
			75	125	cl. 11 +40	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								te	ti	te	ti									
Terminal Block	*Yueqing Jinlong Electronics Industrial*	*JXO-6004*	-	-	-	-	-	-	-	OK No ignition	OK No ignition	*OK*	-	-	-	-	-	-	*N/A*	*P*
Connector	*J.S.T. Mfg. Co., Ltd.*	*VHR-7N-R*	-	*1.4*	-	-	-	-	-	*4*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*
Connector	*J.S.T. Mfg. Co., Ltd.*	*VHR-5N-R*	-	*1.4*	-	-	-	-	-	*16*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*
Connector	*J.S.T. Mfg. Co., Ltd.*	*VHR-3N*	-	*1.4*	-	-	-	-	-	*20*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*
Connector	*J.S.T. Mfg. Co., Ltd.*	*VURP-03V-R*	-	*1.2*	-	-	-	-	-	*22*	*11*	*OK*	-	-	-	-	-	-	**1*	*P*
Connector	*J.S.T. Mfg. Co., Ltd.*	*VYHP-02V*	-	*1.1*	-	-	-	-	-	*32*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*
Connector	*Tyco Electronics*	*178125-6*	-	*1.1*	-	-	-	-	-	*31*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*
Connector	*Tyco Electronics*	*179970-1*	-	*1.1*	-	-	-	-	-	*31*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*
Connector	*SHINAGAWA SHOKO CO., LTD.*	*PF-250U*	-	*1.1*	-	-	-	-	-	*21*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Posistor	*Shenzhen AMPRON Sensitive Components Co.,Ltd*	*MZ32-101RMA RD01E-A*	-	-	-	-	-	-	-	*OK No ignition*	*OK No ignition*	*OK*	-	-	-	-	-	-	*N/A*	*P*
<As alternate use>	*Nichicon Corporation*	*ZPR0YC E101A5 00*	-	-	-	-	-	-	-	*OK No ignition*	*OK No ignition*	*OK*	-	-	-	-	-	-	*N/A*	*P*
Bobbin of Transformer	*TAMURA CORPORATION*	*TT-02-2*	-	*0.8*	-	-	-	-	-	*9*	*1*	*OK*	-	-	-	-	-	-	**1*	*P*
Relay	*Daiichi Electric Co.,Ltd.*	*EL2U Bobbin*	-	*0.9*	-	-	-	-	-	*OK No ignition*	*OK No ignition*	*OK*	-	-	-	-	-	-	*N/A*	*P*
Relay	*Daiichi Electric Co.,Ltd.*	*EL2U Base*	-	*1.2*	-	-	-	-	-	*OK No ignition*	*OK No ignition*	*OK*	-	-	-	-	-	-	*N/A*	*P*
Relay	*Daiichi Electric Co.,Ltd.*	*EL2U Enclosure*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
Insulation paper of Reactor	*Tabuchi Electric Co., Ltd*	*CH-79*	-	-	-	-	-	-	-	*OK No ignition*	*OK No ignition*	*OK*	-	-	-	-	-	-	*N/A*	*P*
<As alternate use>	*Fujihen Co., Ltd*	*CH-79*	-	-	-	-	-	-	-	*OK No ignition*	*OK No ignition*	*OK*	-	-	-	-	-	-	*N/A*	*P*
Insulation paper of Reactor	*Fujihen Co., Ltd*	*CH-68*	-	-	-	-	-	-	-	*OK No ignition*	*OK No ignition*	*OK*	-	-	-	-	-	-	*N/A*	*P*
Tube	*IWASE Co.,Ltd*	*AH-6 AWG9/16*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
Compressor Terminal cover	*CAM PLAS (THAILAND) CO.,LTD.*	*1K5668 0010*	*0.8*	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*

IEC 60335-2-40																				
Clause	Requirement + Test	Result - Remark																		Verdict
2-way valve coil core	ZHEJIANG SANHUA CO., LTD	FQ-G593	-	-	-	-	-	-	-	OK No ignition	OK No ignition	OK	-	-	-	-	-	-	N/A	P
4-way valve coil core	SAGINOMIYA SEISAKUSHO, INC.	STF-H01AJ1 736A1	-	-	-	-	-	-	-	OK No ignition	OK No ignition	OK	-	-	-	-	-	-	N/A	P
Enclosure of Fan Motor	GUANGDONG WELLING MOTOR MANUFACTURING CO.,LTD	RDN-280-100-8D	-	-	-	-	-	-	-	OK No ignition	OK No ignition	OK	-	-	-	-	-	-	N/A	P
TO sensor holder	HANGZHOU DATEC PLASTIC CO.,LTD	DB0207 2001	1.4	-	-	-	OK No ignition	-	-	-	-	-	-	-	-	-	-	-	N/A	P
Fan Guard	HANGZHOU DATEC PLASTIC CO.,LTD	BB0207 0501	1.4	-	-	-	OK No ignition	-	-	-	-	-	-	-	-	-	-	-	N/A	P
Fan Guard	Zhuji Lanbo Plastic Co., Ltd	BB1127 0501	1.3	-	-	-	OK No ignition	-	-	-	-	-	-	-	-	-	-	-	N/A	P
Fan Blade	Guangdong Sunwill Precising Plastic Co., Ltd	PN501	0.7	-	-	-	OK No ignition	-	-	-	-	-	-	-	-	-	-	-	N/A	P
Switch cover	Zhuji Lanbo Plastic Co., Ltd	CB0431 4601	1.8	-	-	-	OK No ignition	-	-	-	-	-	-	-	-	-	-	-	N/A	P

IEC 60335-2-40																				
Clause	Requirement + Test	Result - Remark																		Verdict
SPACER	*KITAGAWA INDUSTRIES CO.,LTD*	*KGES-10*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
SPACER	*KITAGAWA INDUSTRIES CO.,LTD*	*EST-10*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
SPACER	*KITAGAWA INDUSTRIES CO.,LTD*	*NA310*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
SPACER	*KITAGAWA INDUSTRIES CO.,LTD*	*NB300*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
SPACER	*KITAGAWA INDUSTRIES CO..LTD*	*WLS-06-0*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
SPACER	*KITAGAWA INDUSTRIES CO..LTD*	*NA407*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
SPACER	*KITAGAWA INDUSTRIES CO..LTD*	*NB400*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*
Tube	*IWASE Co.,Ltd*	*AH-6 AWG9/16*	-	-	-	-	*OK No ignition*	-	-	-	-	-	-	-	-	-	-	-	*N/A*	*P*

Supplementary information:

[1] Parts of material classified at least HB40 or if relevant HBF
[2] Parts of material classified as V-0 or V-1
[3] Flame persisting longer than 2 s (= $t_e - t_i$) need only be reported for unattended appliances
[4] Surrounding parts subjected to the needle-flame test of annex E
[5] Base material classified as V-0 or if relevant VTM-0
[6] The GWIT pre-selection option, the 850 °C GWFI pre-selection option, and the 850 °C GWT are not applicable for attended appliances
**1: Above internal wiring is VW-1 and Above zone is metal.*

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Appendix EMF			*P*
	TEST: Evaluation of the magnetic fields		
Applied standards:	IEC 62233:2005, EN 62233:2008 (incl. Corr.1:2008)		
Method	Used method: 5.5.2 Time domain evaluation		—
Applied Limit	ICNIRP Guidelines		—
Identification of the appliance	Type of apparatus	*Air Conditioner Outdoor Unit*	
	Rated Voltage	*380-415V 3N ~, 12.5A, 8.5kW*	
	Rated Frequency	*50Hz*	
Parameters required prior to the test	Laboratory Ambient Temperature	25 °C ± 10 °C	
	Supply Voltage	(Rated Voltage ± 2 %) V	
	Supply Frequency	(Rated Frequency ± 2 %) Hz	
Parameters recorded during the test	Laboratory Ambient Temperature	*17°C(Heating mode)* *28°C(Cooling mode)*	
	Supply Voltage	*400VAC*	
	Supply Frequency	*50Hz*	
Operating Mode			

Method 5.5.2

Measuring Positions	Measuring Distance	Coupling Factor	Measurement Uncertainty
Each Enclosure	*30cm*	*0.18*	*1.9dB*

Frequency (kHz)	Limit (%)	Measured Maximum Value (%)
0,01 to 400	100	*0.760*

Supplementary information:

The measured maximum value in this table may be weighted with the coupling factor if applicable, and the measurement uncertainty is applied if the measured result is more than 75 % of the limit.

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date
11 19	***Measurement***	*MX100* *(S39500-TR3-011)*	*0 ~200°C*	*2015/6/8*	*2016/6*
	Measurement	*MX100* *(S39500-TR3-010)*	*0 ~200°C*	*2015/6/8*	*2016/6*
	Measurement	*MX100* *(S39500-TR3-009)*	*0 ~200°C*	*2015/6/4*	*2016/6*
	Measurement	*MX100* *(S39500-TR3-013)*	*0 ~200°C*	*2015/6/12*	*2016/6*
	Measurement	*MX100* *(S39500-TR3-008)*	*0 ~200°C*	*2015/6/4*	*2016/6*
	Measurement	*MX100* *(S39500-TR3-012)*	*0 ~200°C*	*2015/6/15*	*2016/6*
10 11	***Measurement***	*WT-500* *(S39500-DM3-003)*	*0 ~1000V* *0 ~40A*	*2015/5/8*	*2016/5*
13 19	***Measurement***	*WT-500* *(S39500-DM3-004)*	*0 ~1000V* *0 ~40A*	*2015/5/8*	*2016/5*
10 11	***Measurement***	*Stick Thermometer* *(S39500-T01-009)*	*0 ~50°C*	*2015/5/8*	*2016/5*
13 19	***Measurement***	*Stick Thermometer* *(S39500-T01-010)*	*0 ~50°C*	*2015/5/8*	*2016/5*
	Measurement	*Stick Thermometer* *(S39500-T01-011)*	*0 ~50°C*	*2015/5/8*	*2016/5*
	Measurement	*Stick Thermometer* *(S39500-T01-012)*	*0 ~50°C*	*2015/5/8*	*2016/5*
	Measurement	*Stick Thermometer* *(S39500-T01-013)*	*0 ~50°C*	*2015/5/8*	*2016/5*
	Measurement	*Stick Thermometer* *(S39500-T01-014)*	*0 ~50°C*	*2015/5/8*	*2016/5*

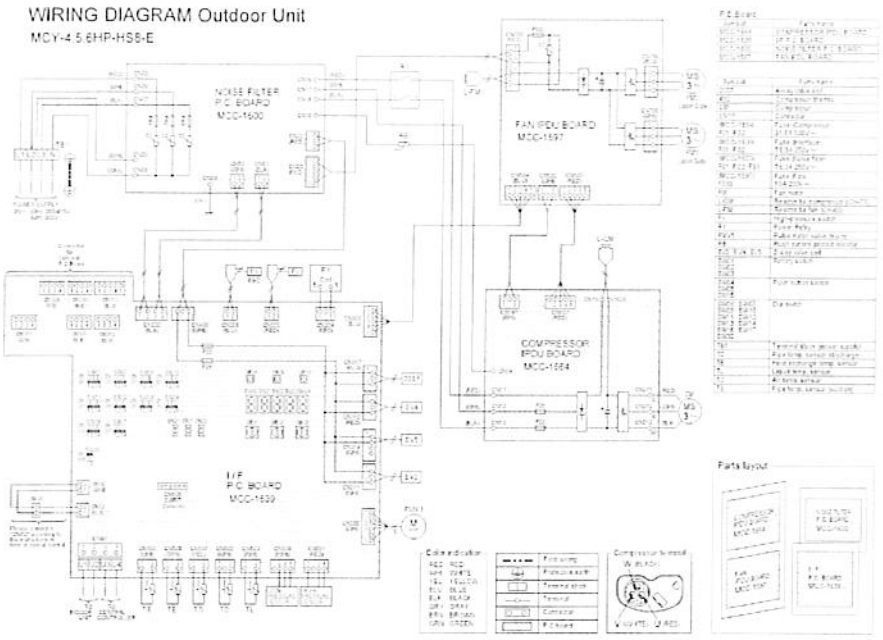
IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

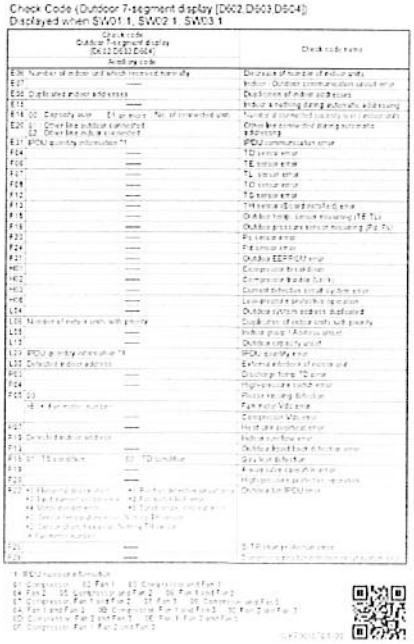
	Measurement	*Stick Thermometer (S39500-T01-015)*	*0～50°C*	*2015/5/8*	*2016/5*
	Measurement	*Stick Thermometer (S39500-T01-016)*	*0～50°C*	*2015/5/8*	*2016/5*
	Measurement	*Stick Thermometer (S39500-T01-017)*	*0～50°C*	*2015/5/8*	*2016/5*
11 19	**Measurement**	*Multi Meter (7710-DM2-605)*	*0～100Ω*	*2015/6/30*	*2016/6*
13 16	**Measurement**	*LEAK CURRENT-HITESTER (7720-ES2-001)*	*0.0001～25mA*	*2014/10/6*	*2015/10*
13 16 19 29	**Testing**	*ELECTRIC TESTER TOS8850 (7710-CHV-601)*	*0～3000V*	*2014/12/16*	*2015/12*
13 16 19 29	**Measurement**	*STOP WATCH (7710-H01-602)*	*0～1min*	*2015/6/23*	*2017/6*
25	**Testing**	*Tension Gage (7710-F01-601)*	*0-20000g*	*2015/6/25*	*2016/6*
27	**Measurement**	*EARTH TESTER (7710-ES2-601)*	*25A*	*2015/6/30*	*2016/6*
28	**Testing**	*TORQUE DRIVER (7720-Q01-001)*	*25N-m*	*2015/6/30*	*2016/6*

Attachment

Wiring Diagram

**** Turkey models are same as EU models.***

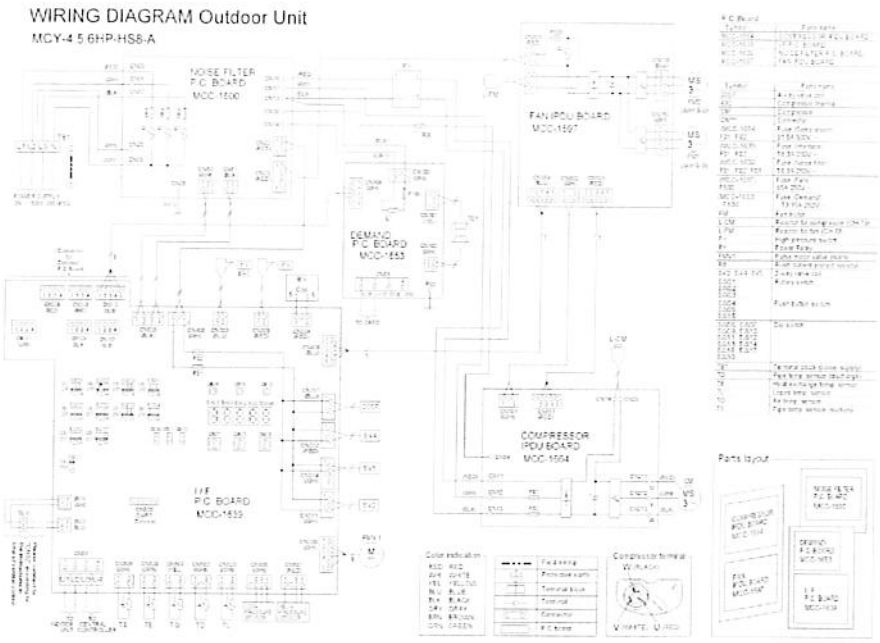




Attachment

Wiring Diagram

(Australia model)

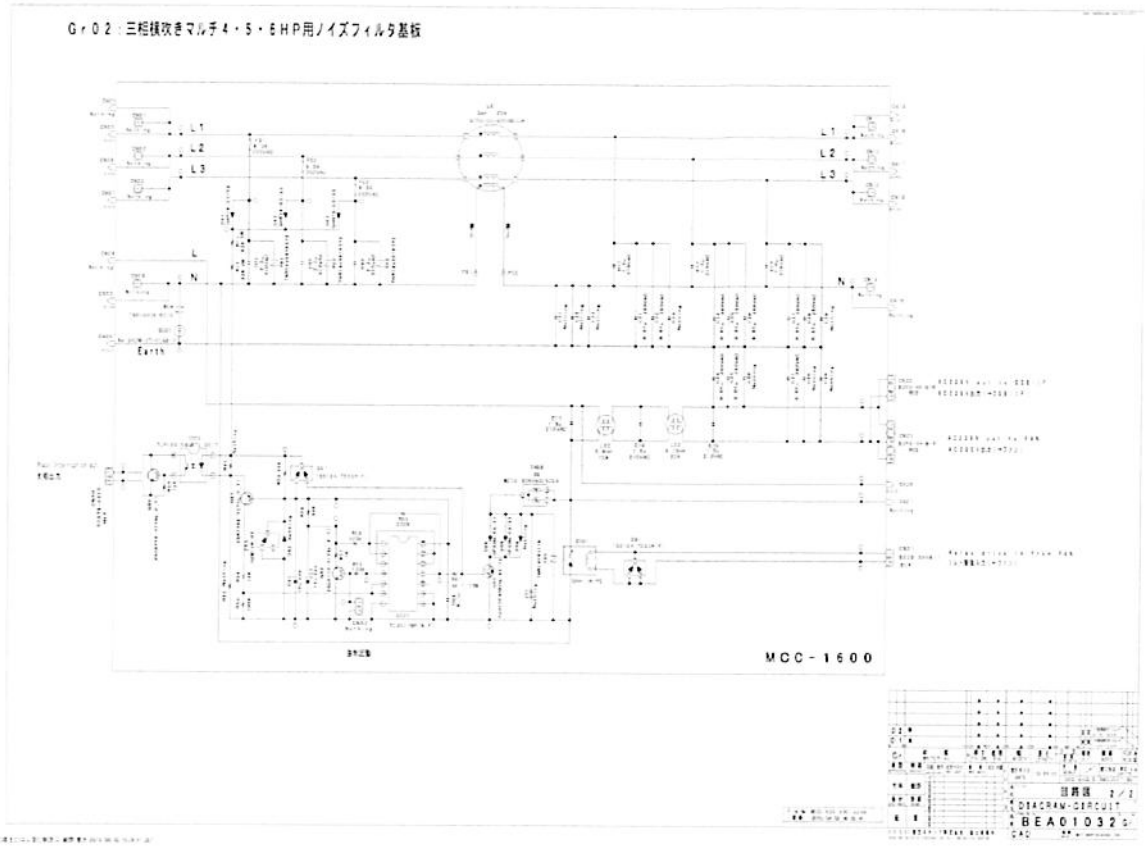


Explanation of Rotary Switch Function

Check Code (Outdoor 7-segment display [D602 D603 D604])
Displayed when SW01 1, SW02 1, SW03 1

Attachment

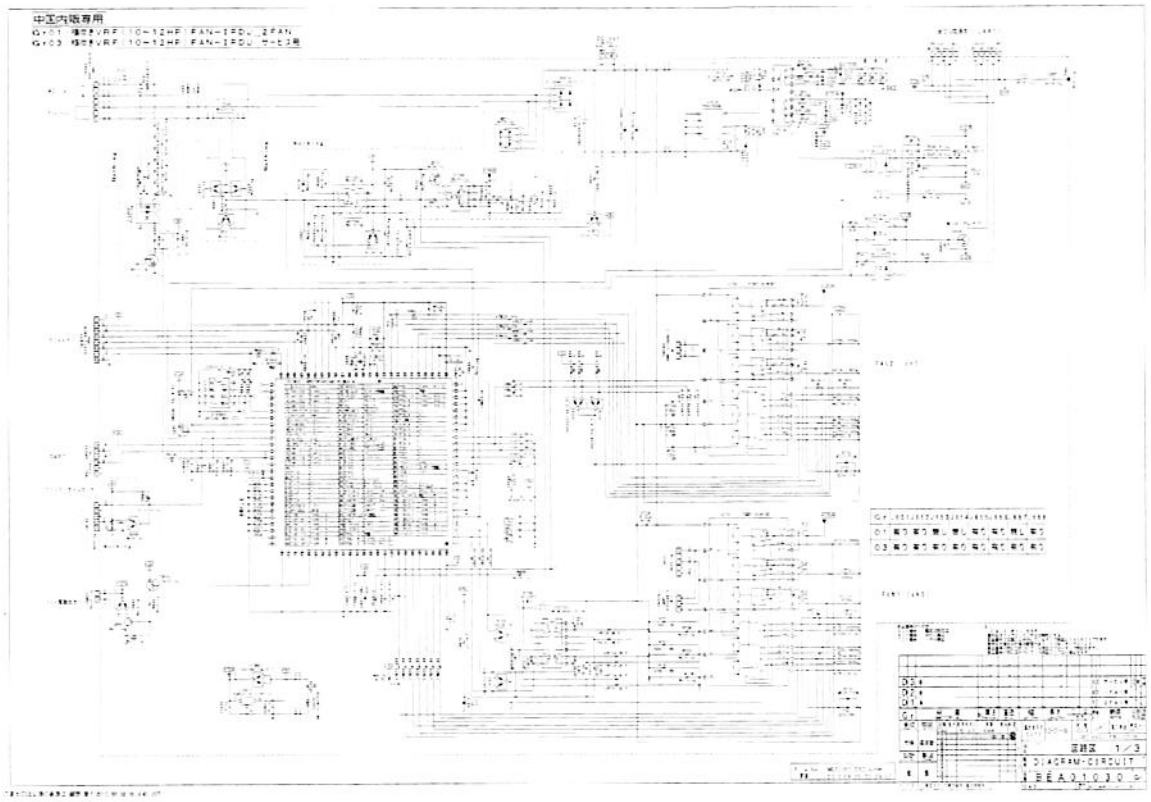
Circuit Diagram
NOISE FILTER P.C. BOARD MCC-1600



Attachment

Attachment

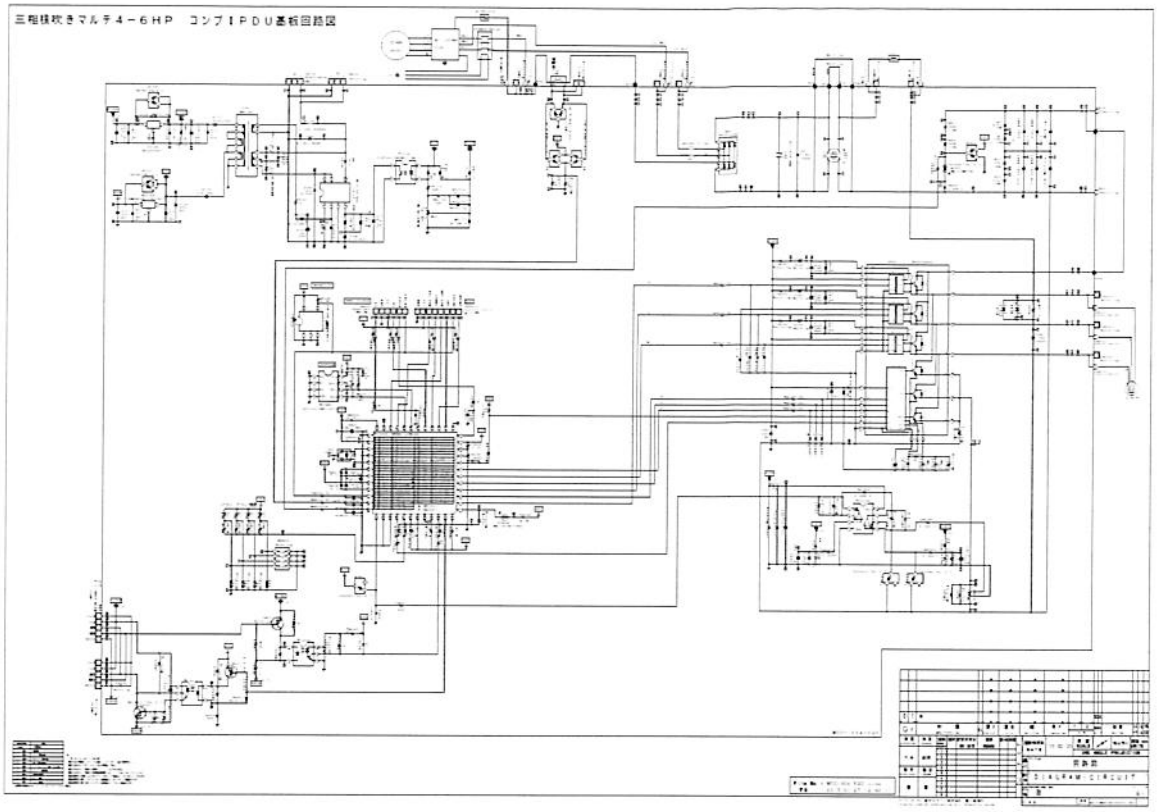
Circuit Diagram
FAN IPDU BOARD MCC-1597



Attachment

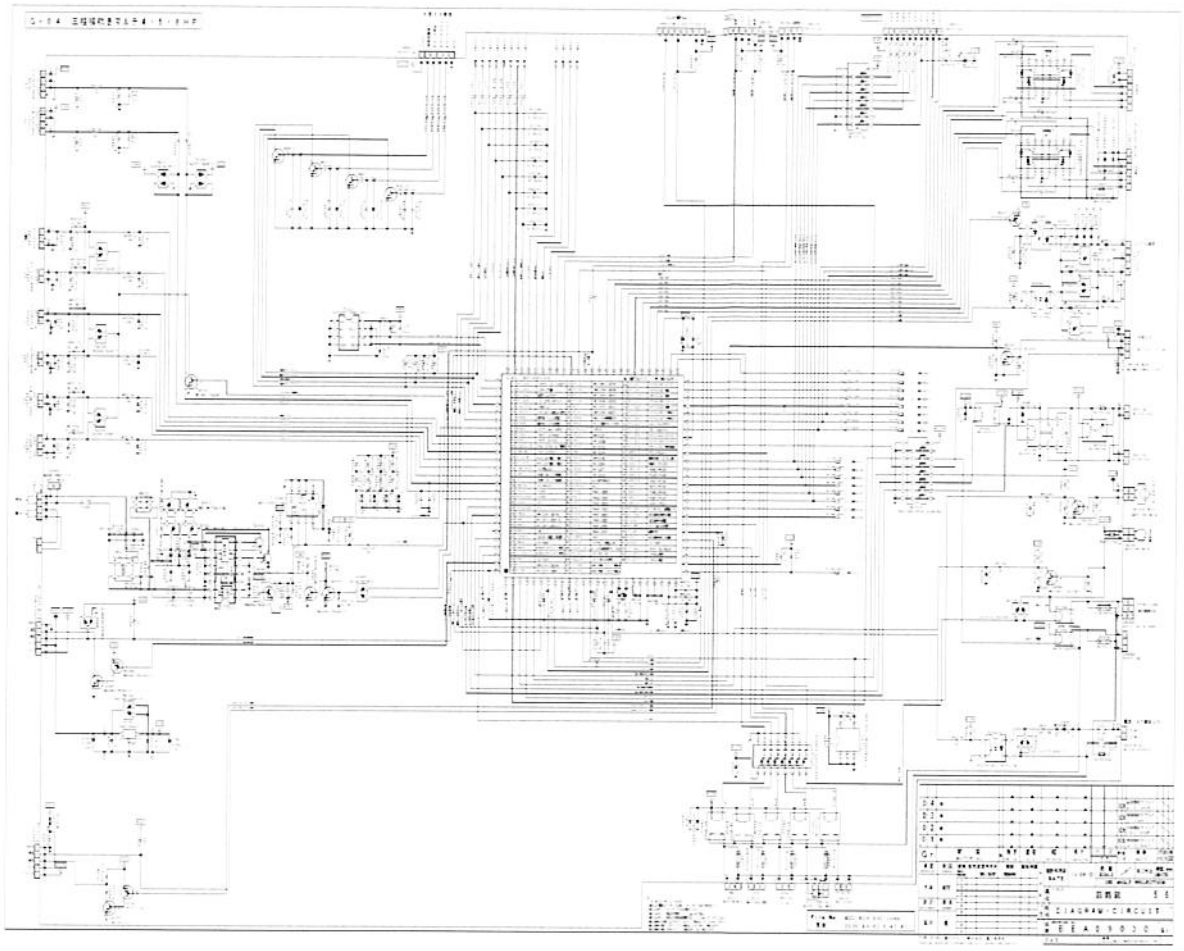
Attachment

Circuit Diagram
COMPRESSOR IPDU BOARD MCC-1664



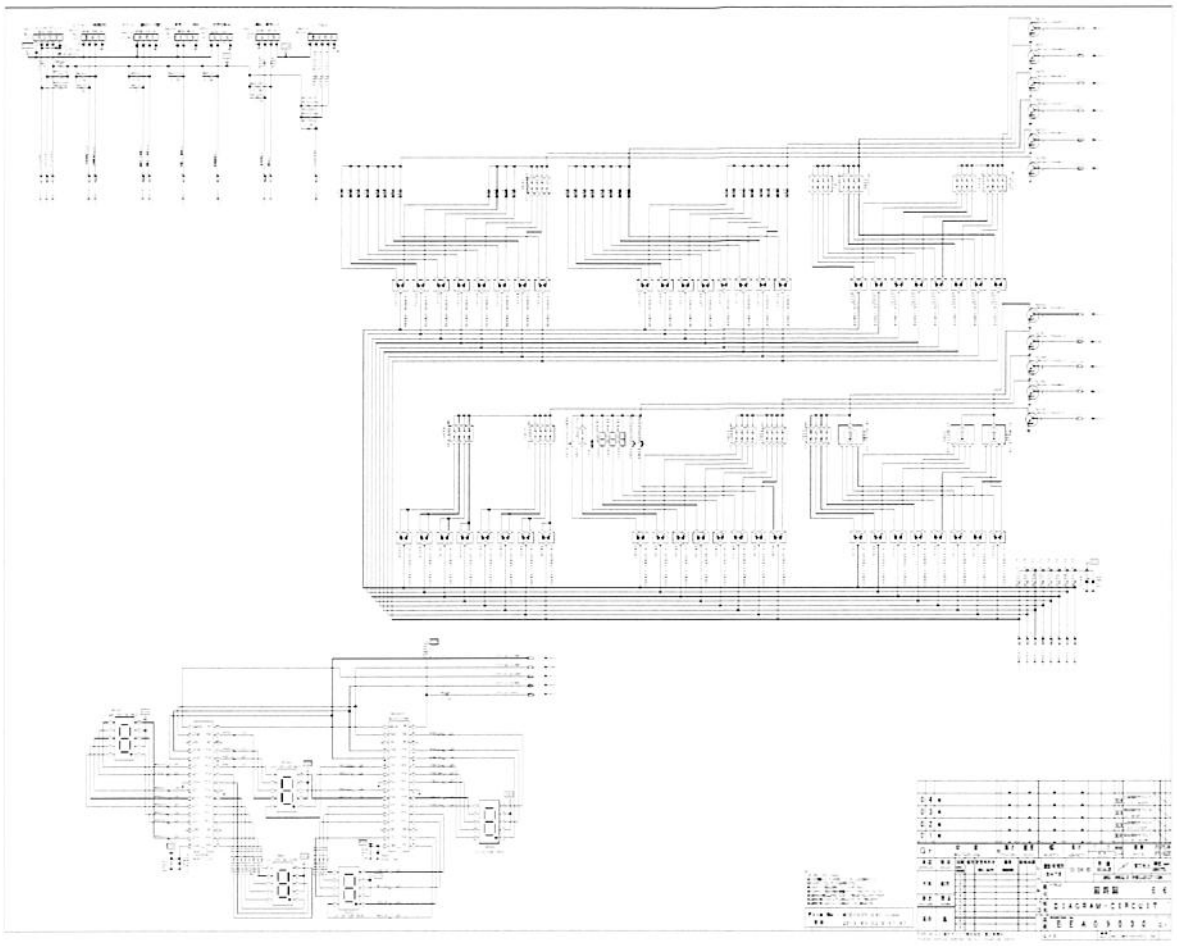
Attachment

Circuit Diagram
I/F P.C. BOARD MCC-1639 (No.1)



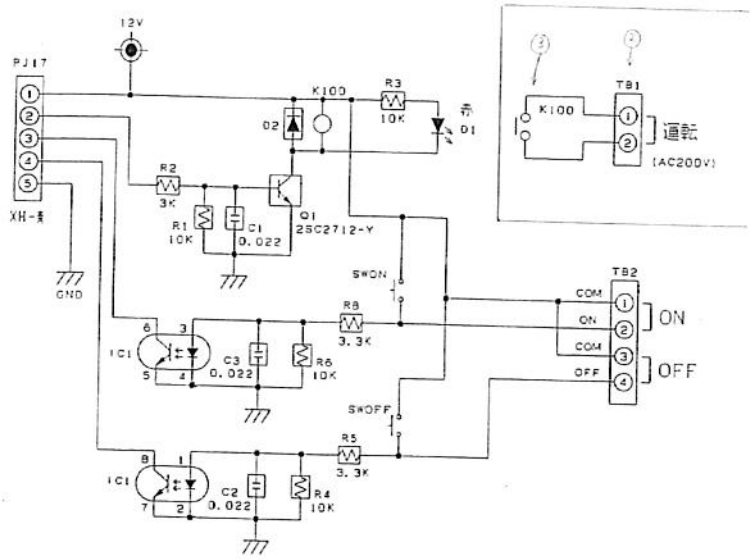
Attachment

Circuit Diagram
I/F P.C. BOARD MCC-1639 (No.2)



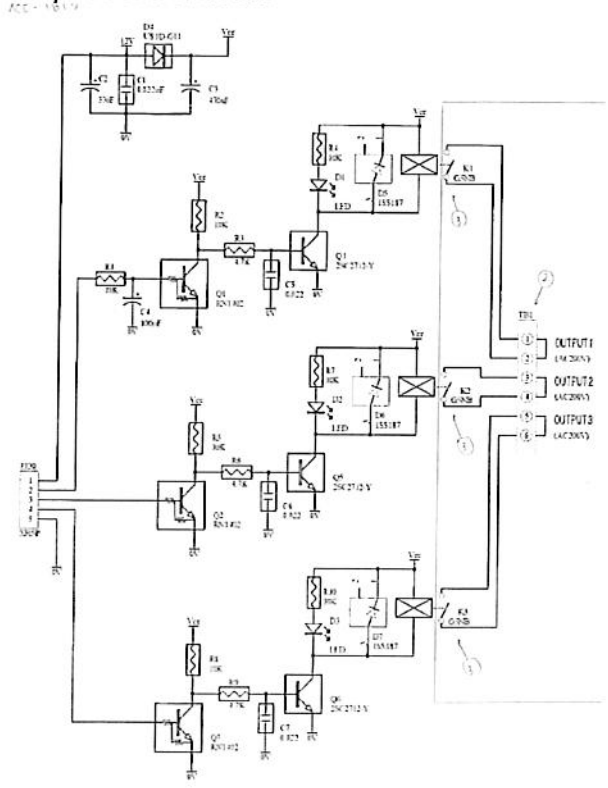
Attachment

Circuit Diagram
Power peak cut control board



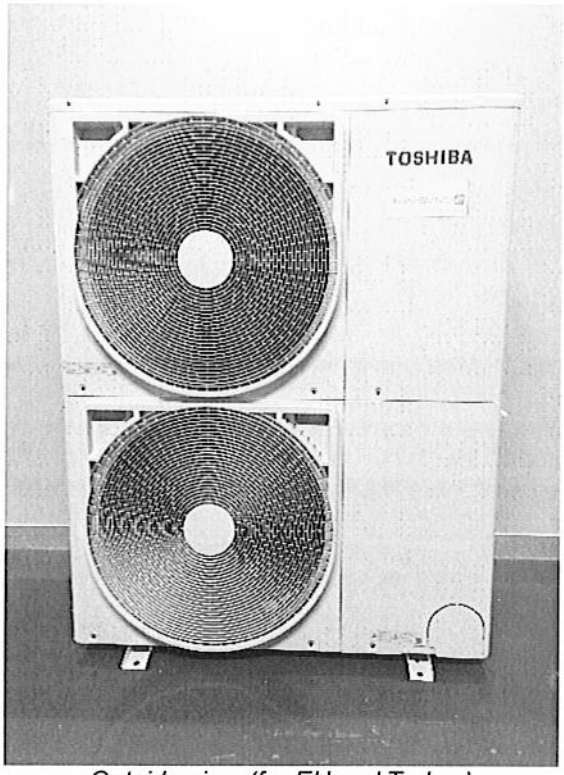
D1 :SEL1110R
D2 :1SS187
Q1 :2SC2712-Y
IC1 :TLP521-2(GR)
K100:G5N-1A

Output control board

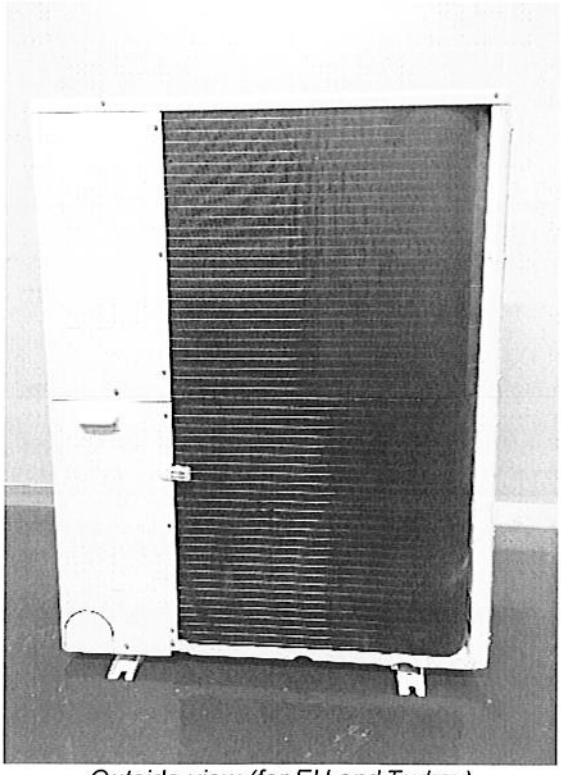


Attachment

Photos:

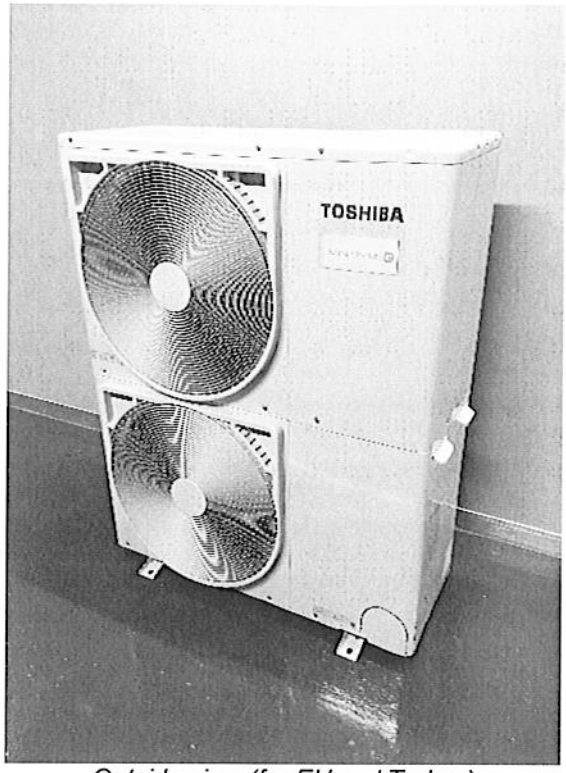


Outside view (for EU and Turkey)

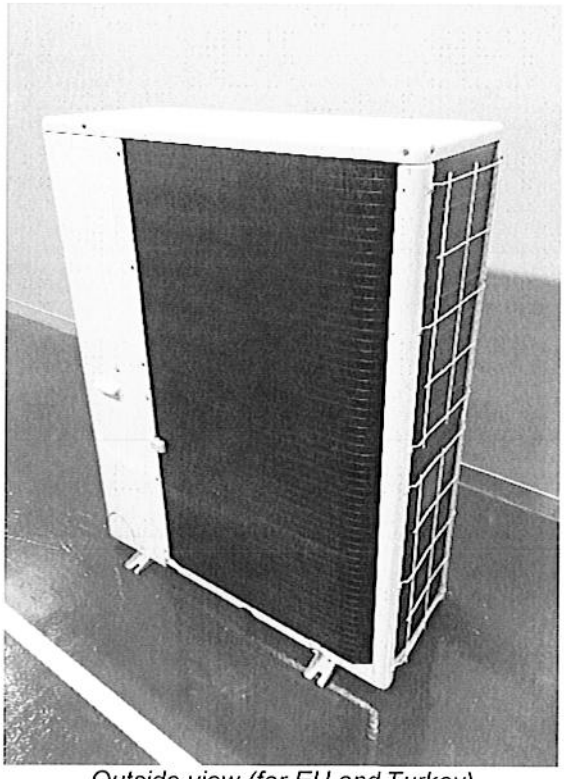


Outside view (for EU and Turkey)

Attachment

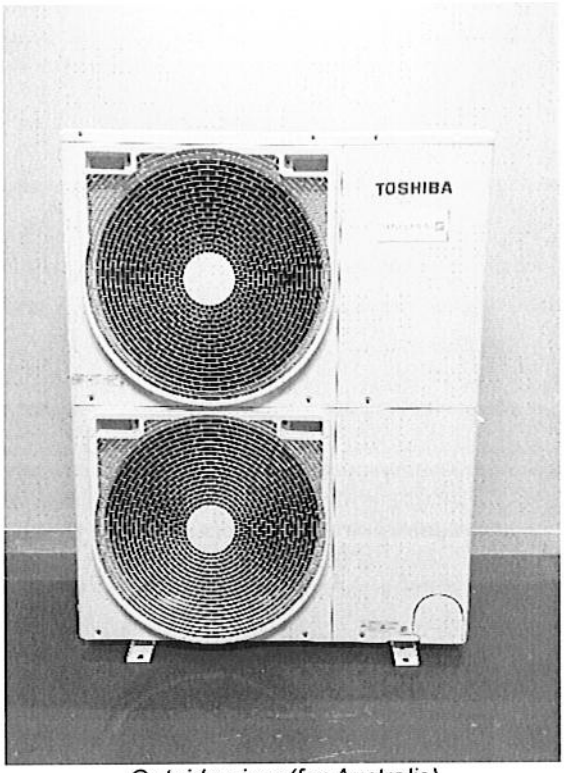


Outside view (for EU and Turkey)

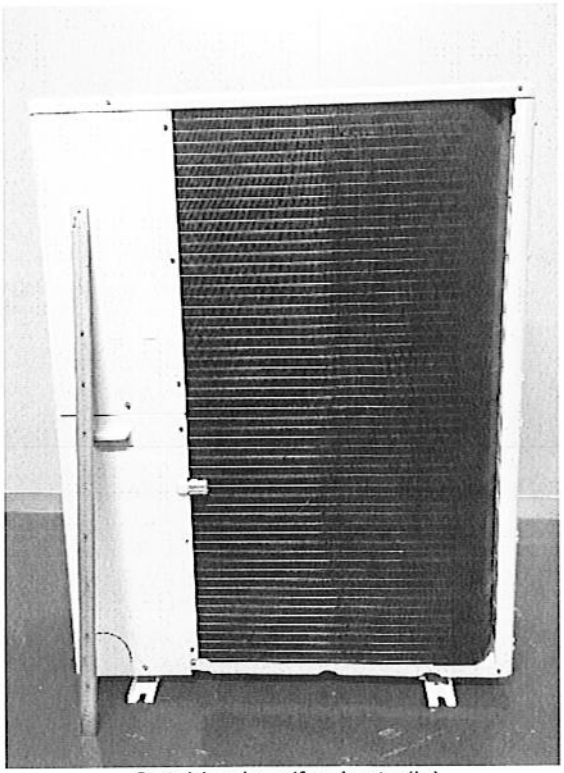


Outside view (for EU and Turkey)

Attachment

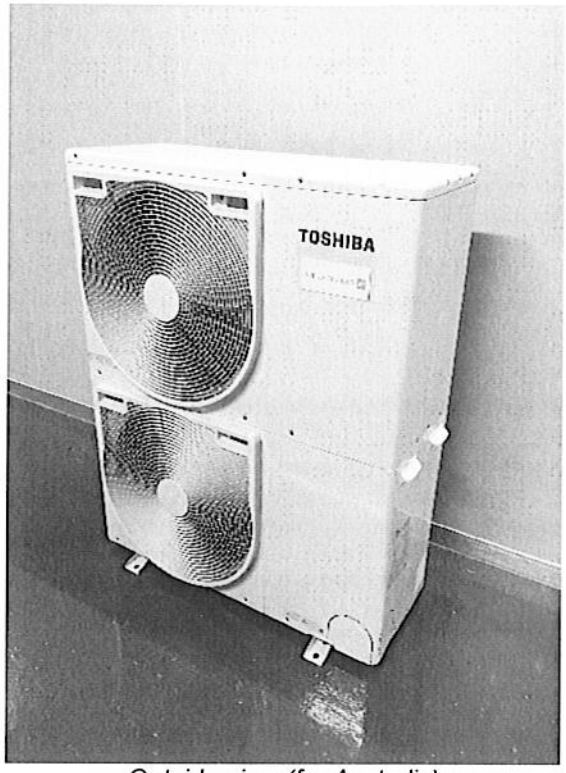


Outside view (for Australia)

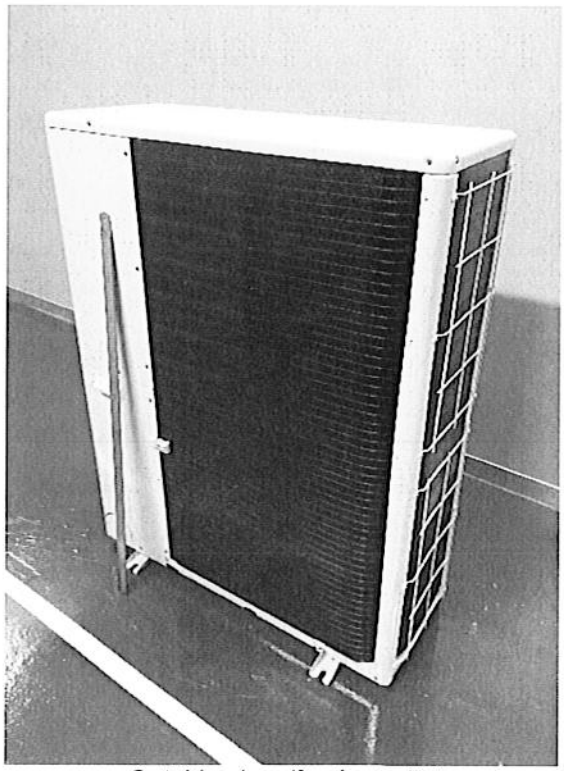


Outside view (for Australia)

Attachment

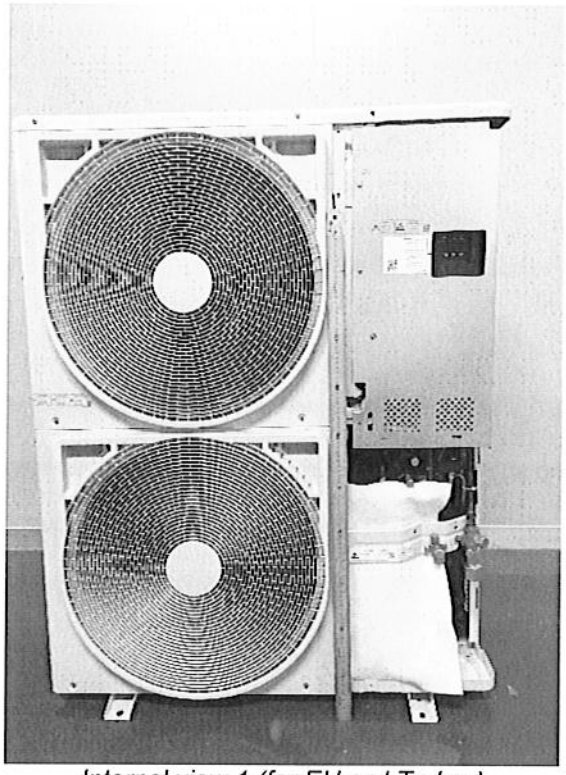


Outside view (for Australia)

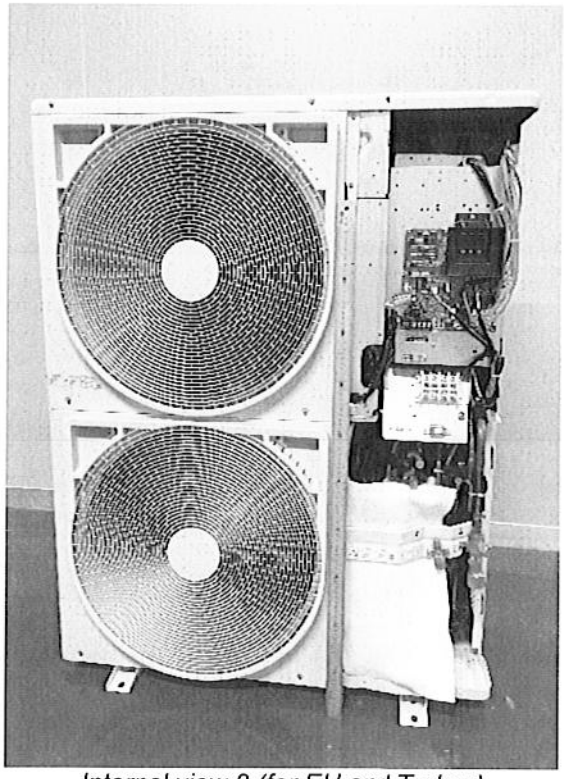


Outside view (for Australia)

Attachment

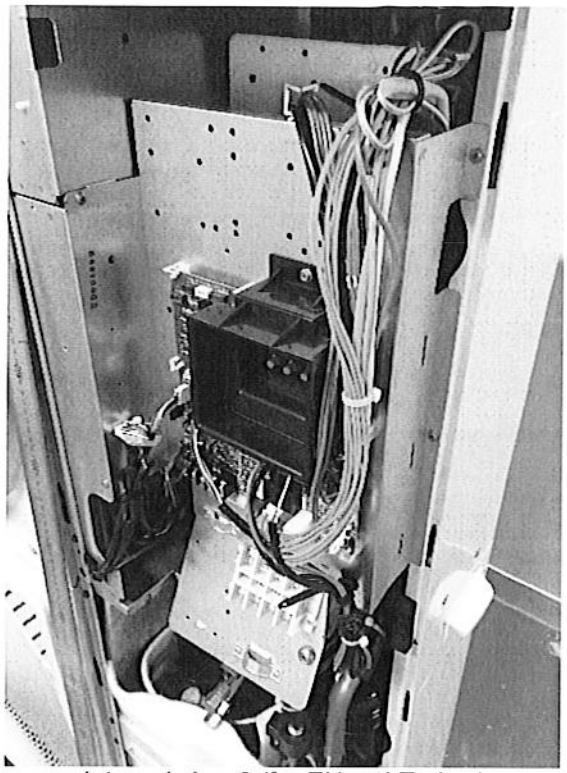


Internal view 1 (for EU and Turkey)

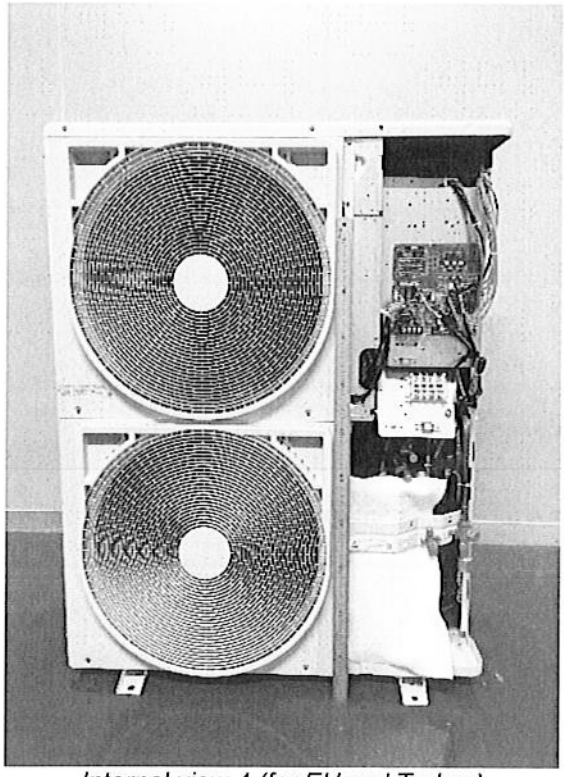


Internal view 2 (for EU and Turkey)

Attachment

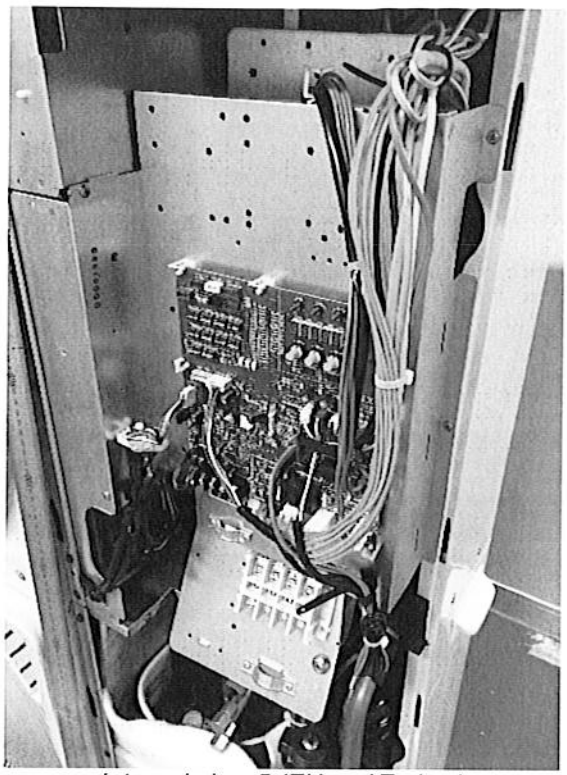


Internal view 3 (for EU and Turkey)

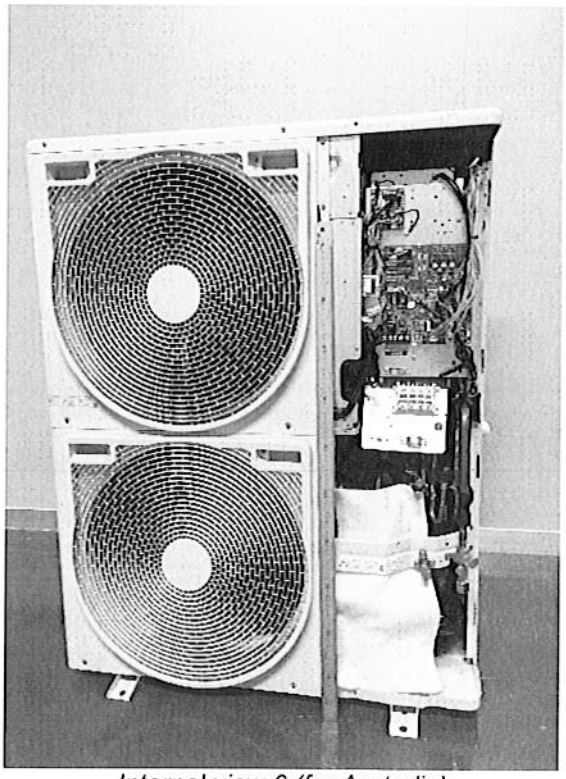


Internal view 4 (for EU and Turkey)

Attachment

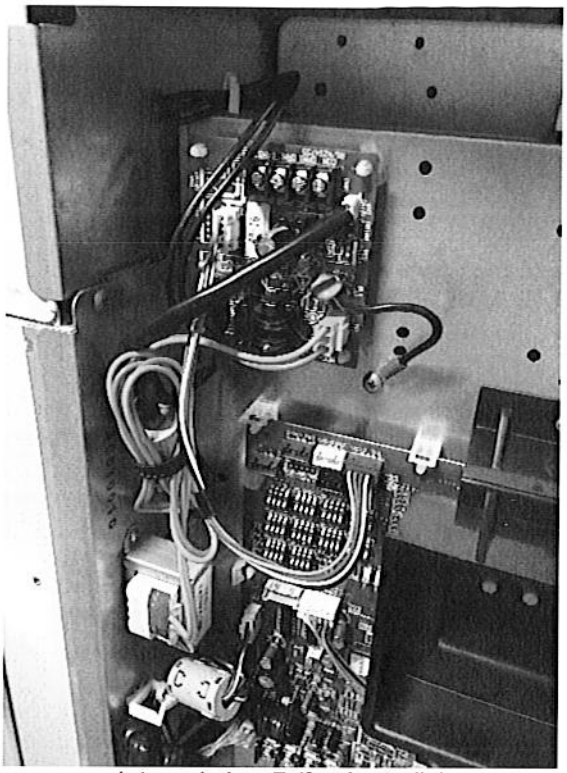


Internal view 5 (EU and Turkey)

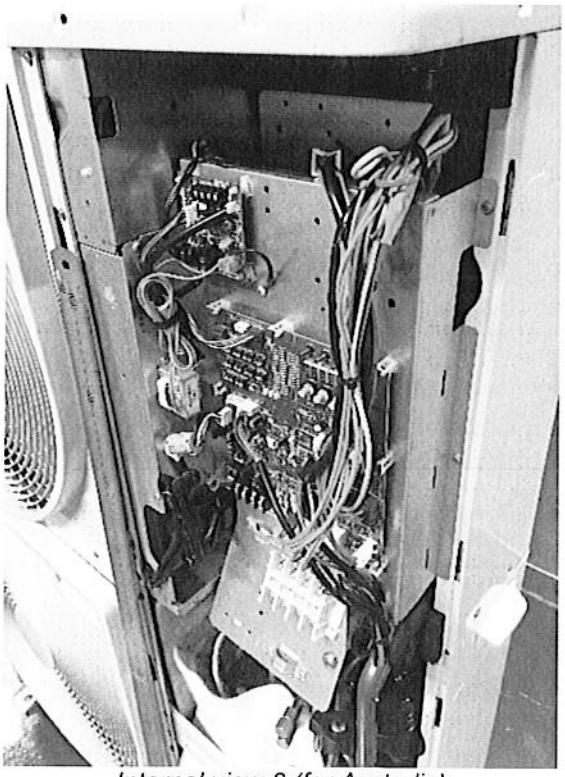


Internal view 6 (for Australia)

Attachment

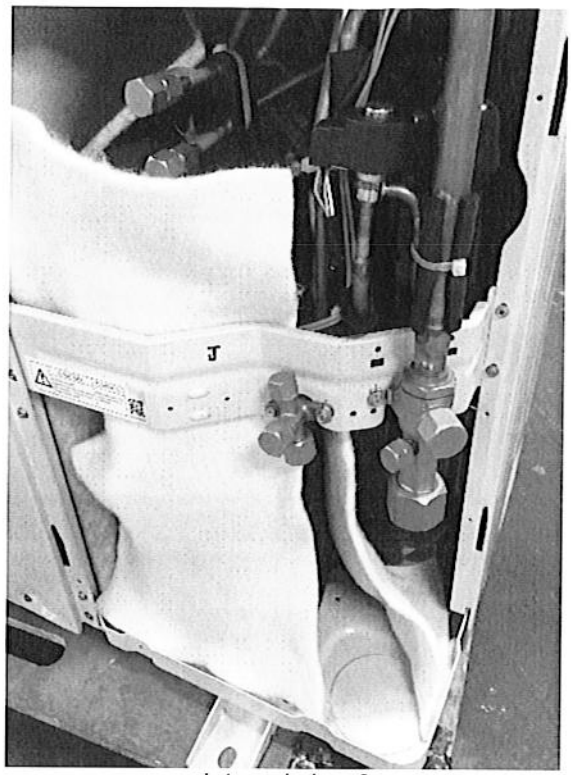


Internal view 7 (for Australia)



Internal view 8 (for Australia)

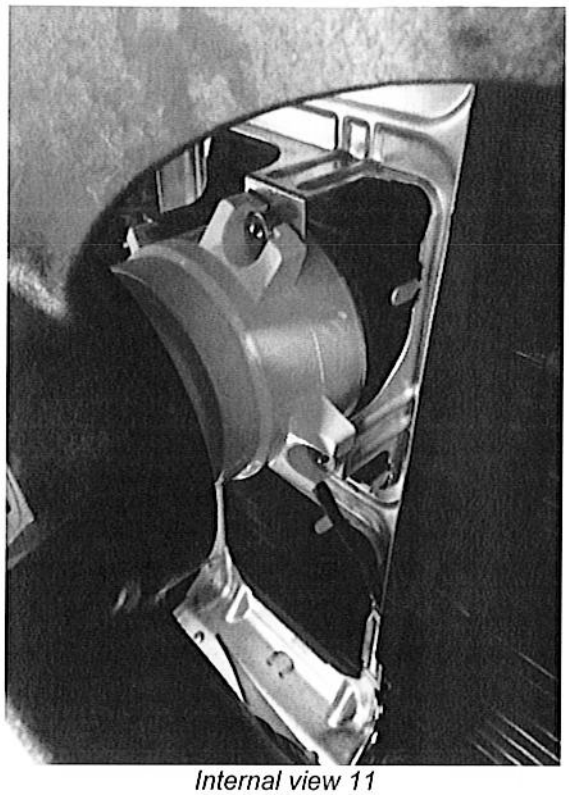
Attachment



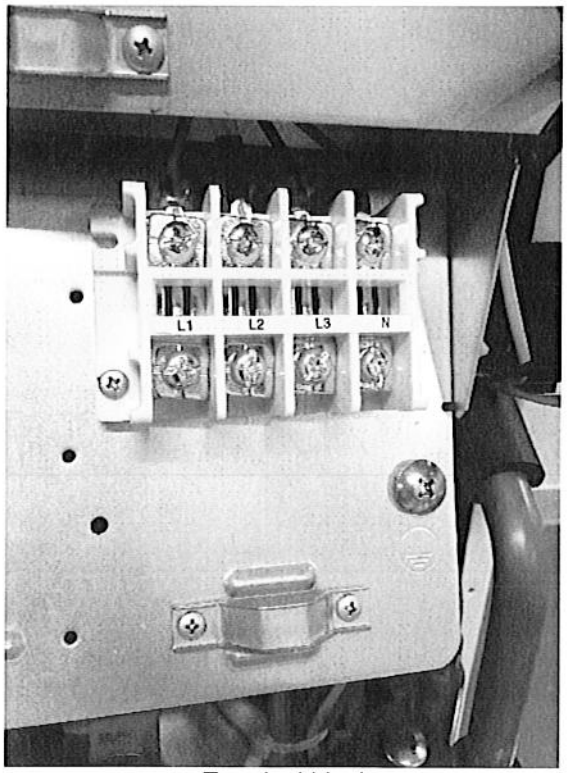
Internal view 9

Internal view 10

Attachment

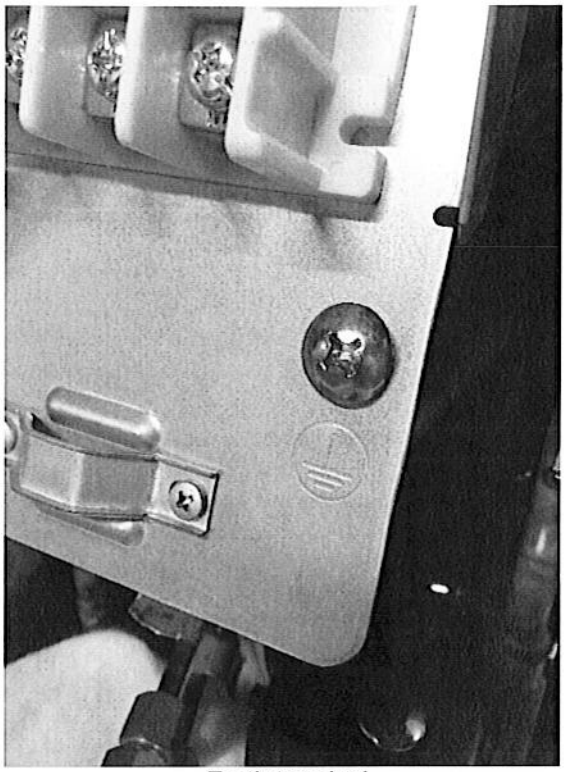


Internal view 11

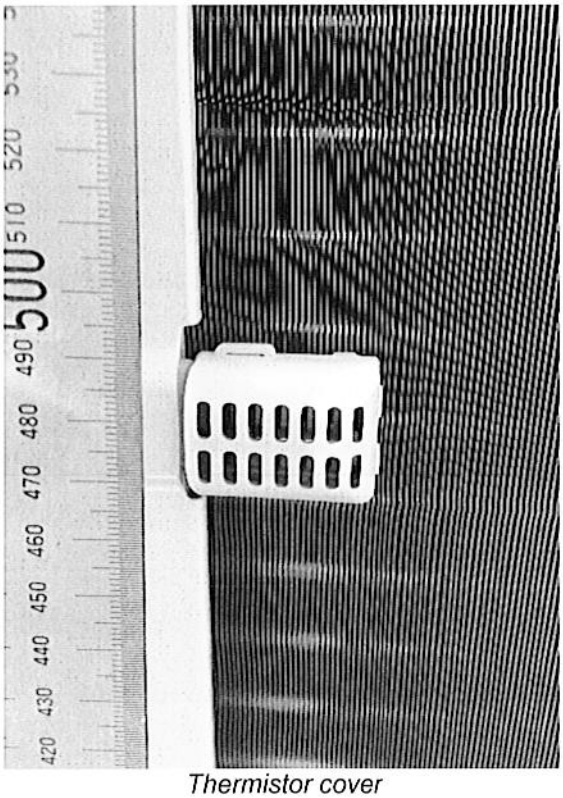


Terminal block

Attachment

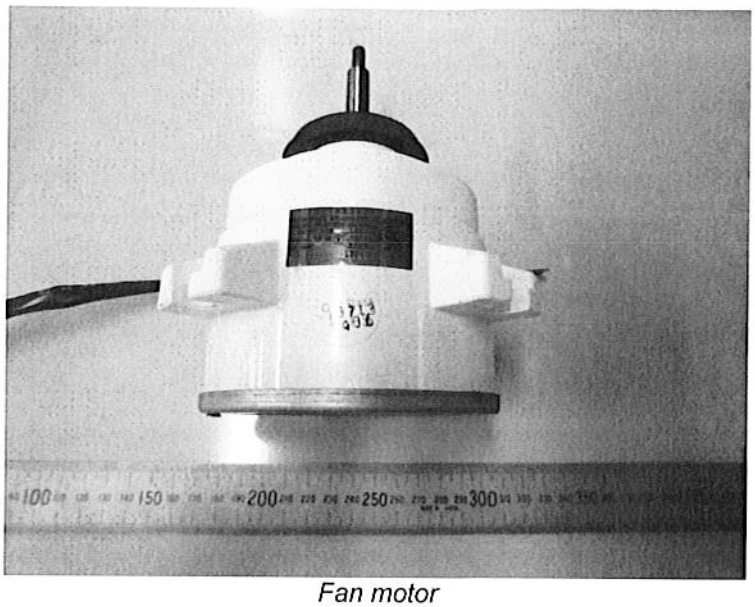


Earth terminal

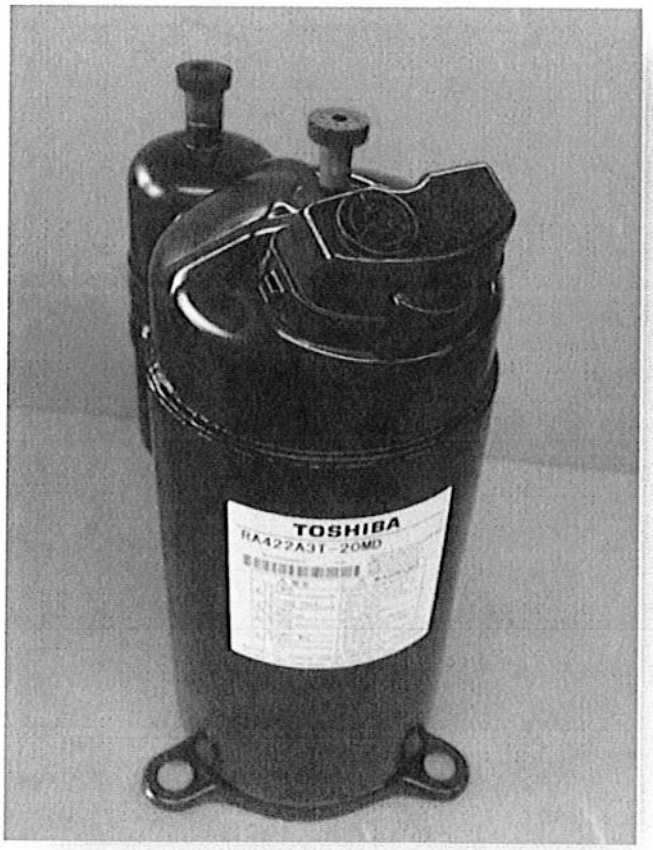


Thermistor cover

Attachment

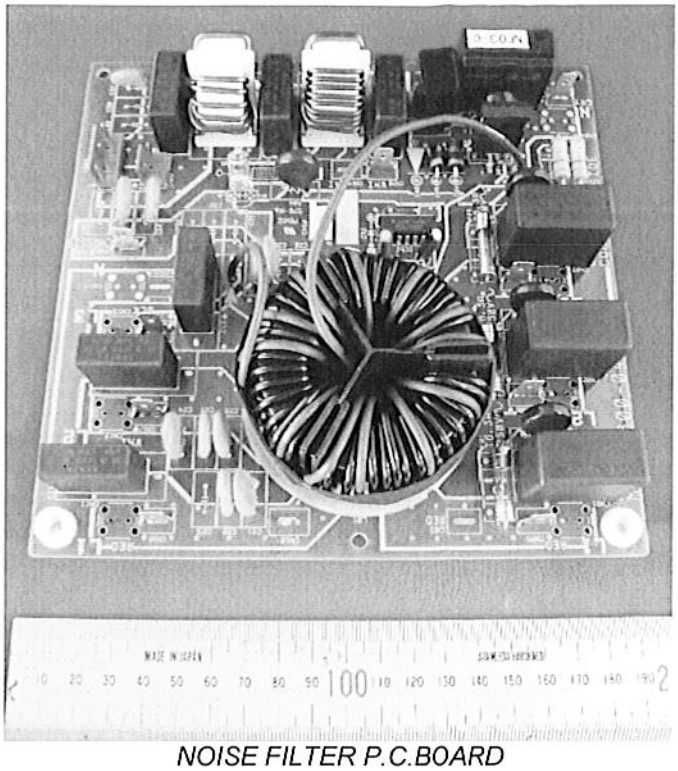


Fan motor

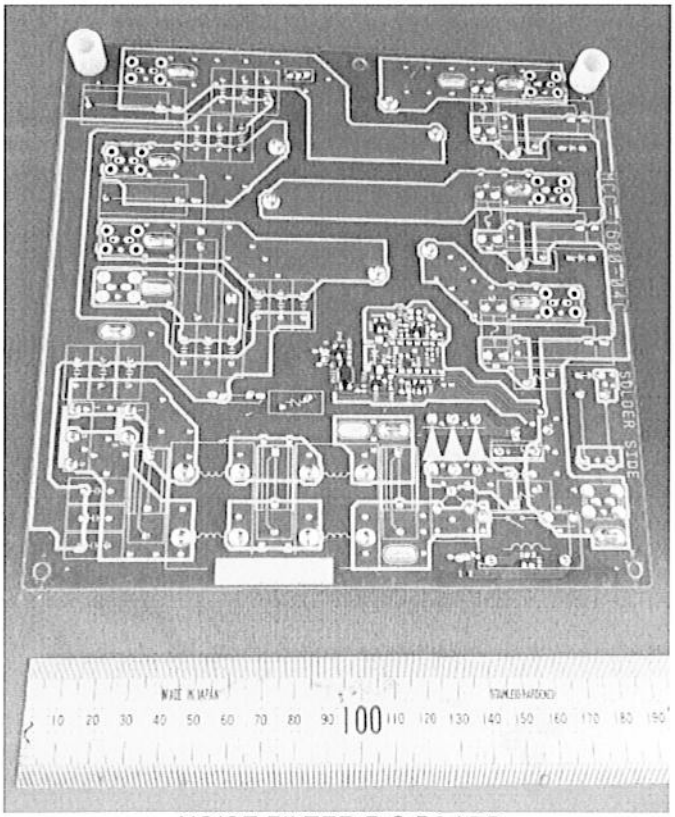


Compressor

Attachment

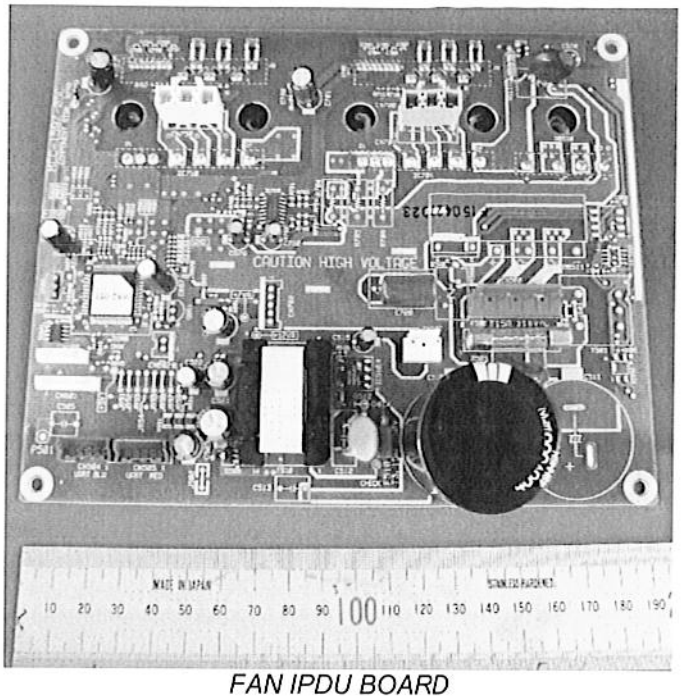


NOISE FILTER P.C.BOARD

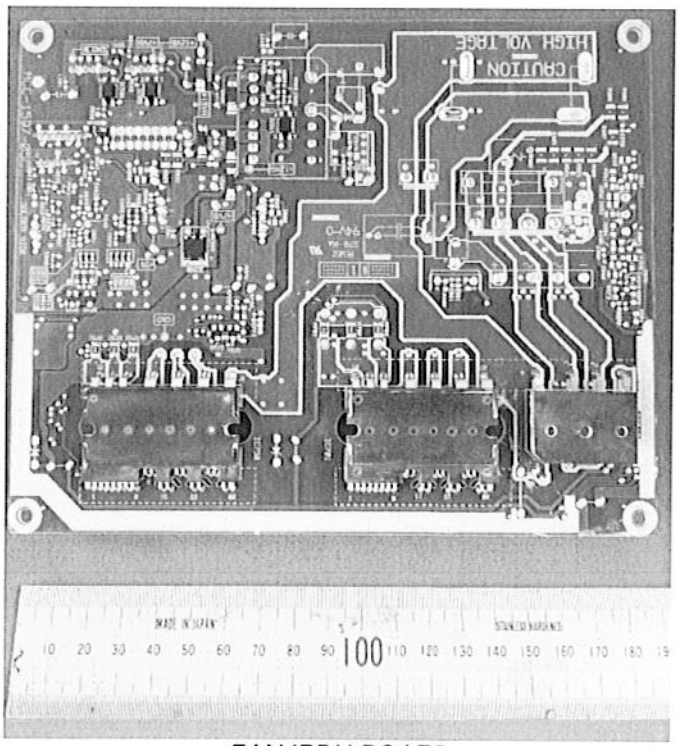


NOISE FILTER P.C.BOARD

Attachment

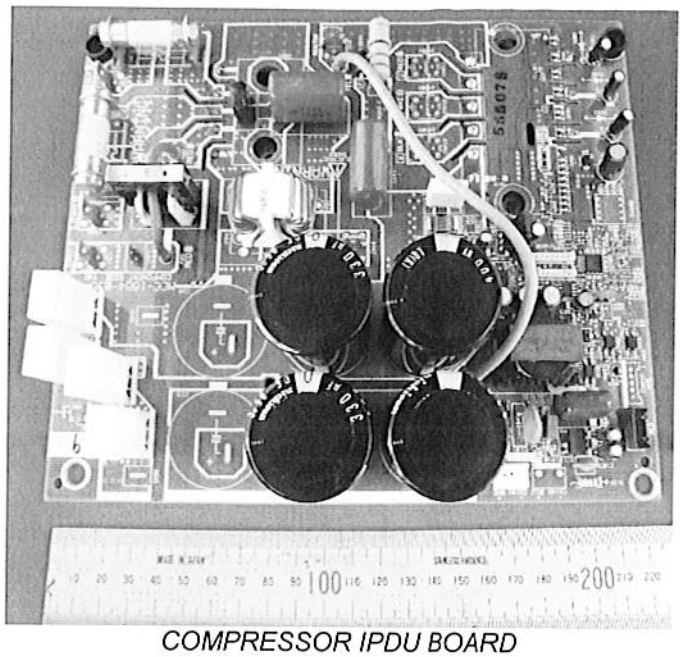


FAN IPDU BOARD

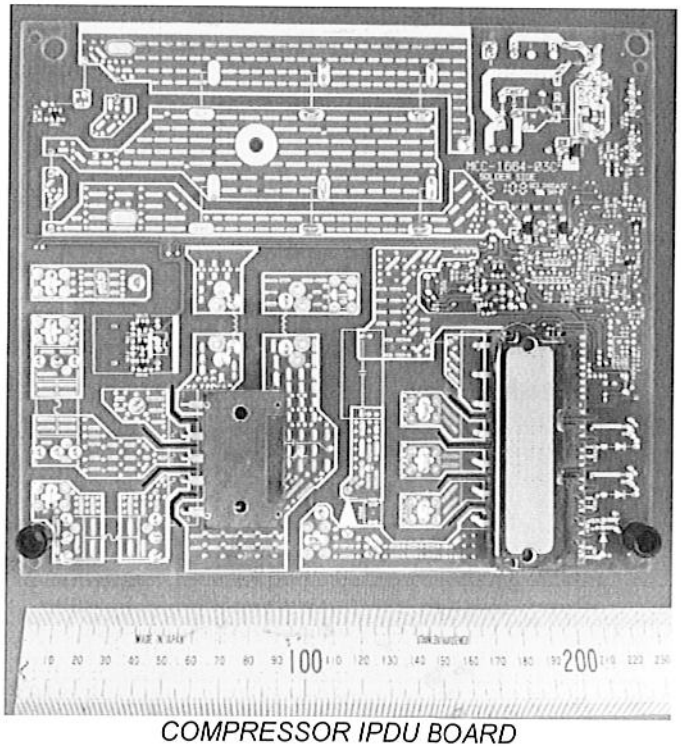


FAN IPDU BOARD

Attachment

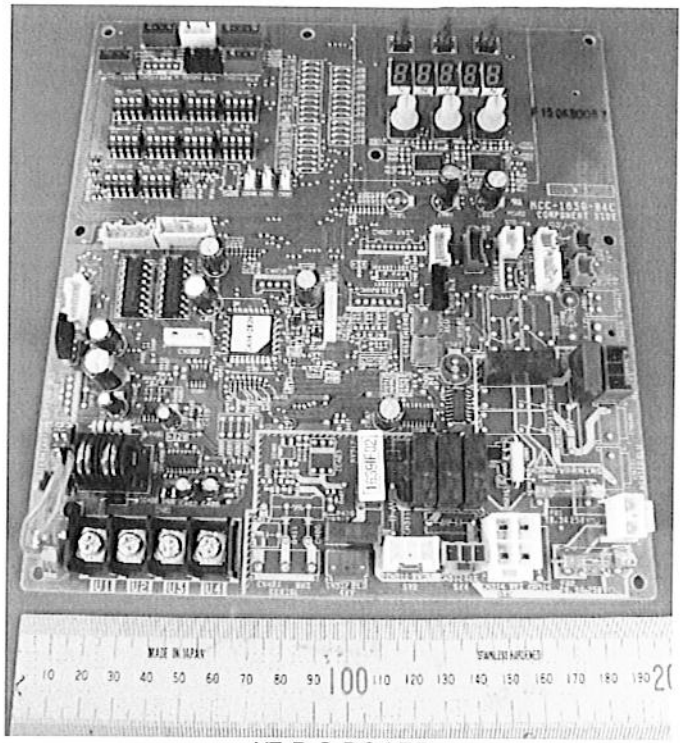


COMPRESSOR IPDU BOARD

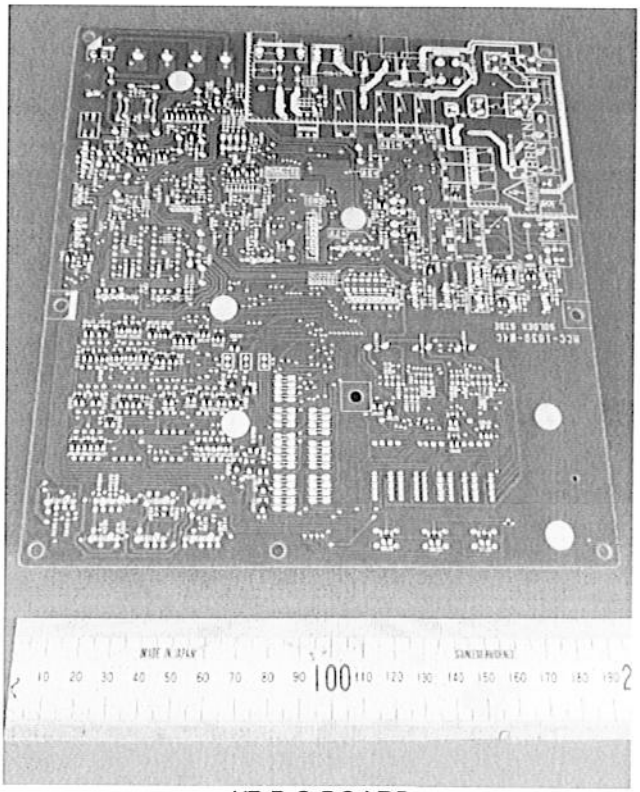


COMPRESSOR IPDU BOARD

Attachment

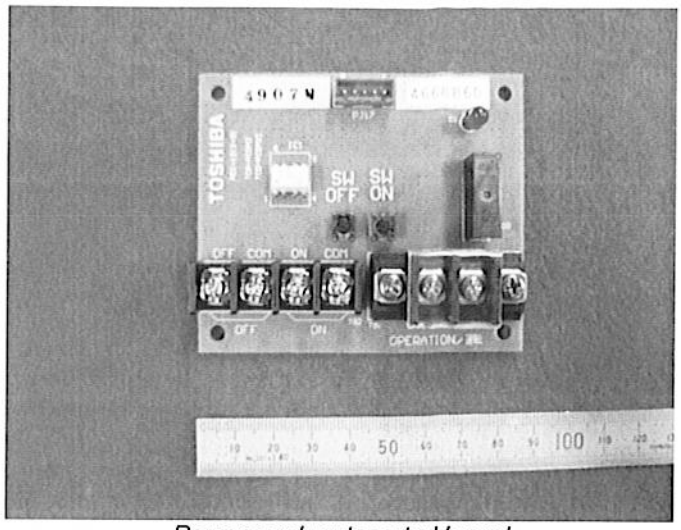


I/F P.C.BOARD

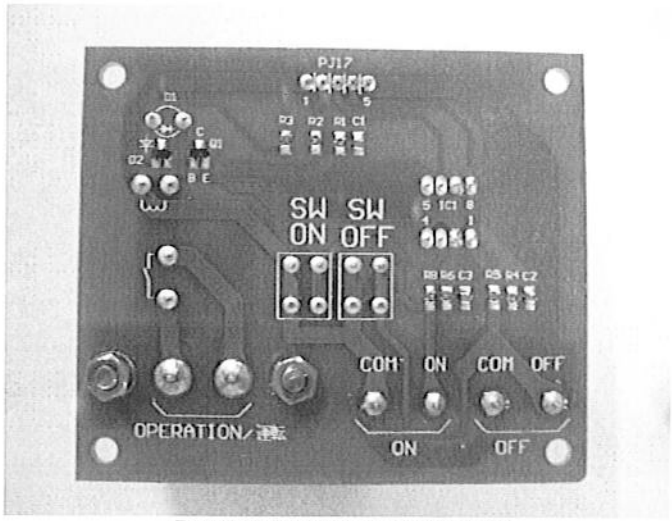


I/F P.C.BOARD

Attachment

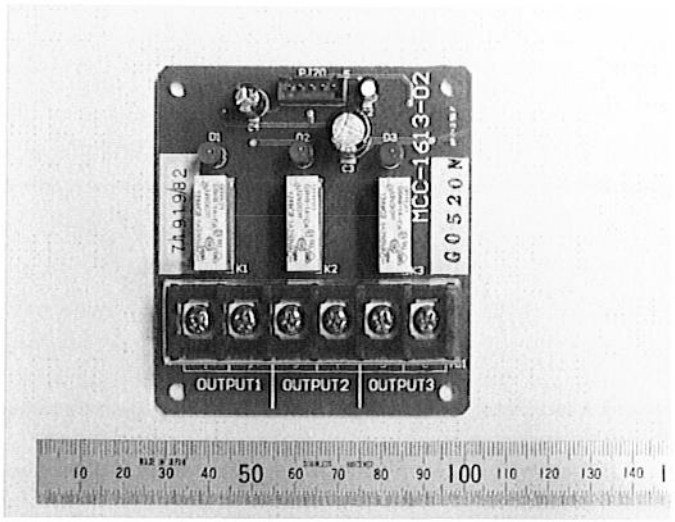


Power peak cut control board

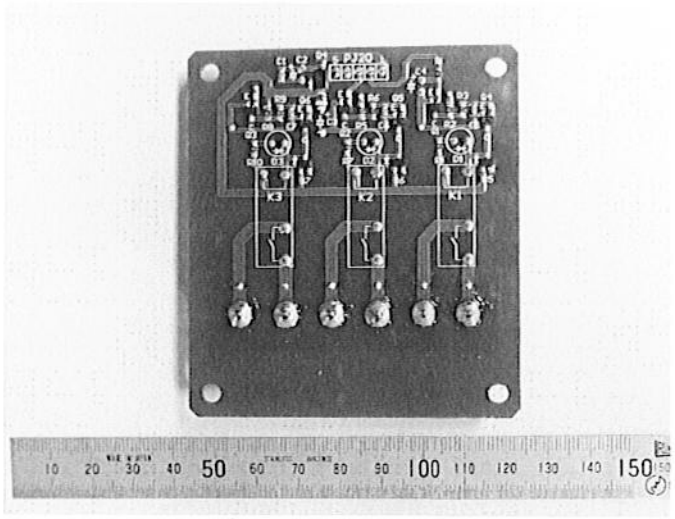


Power peak cut control board

Attachment

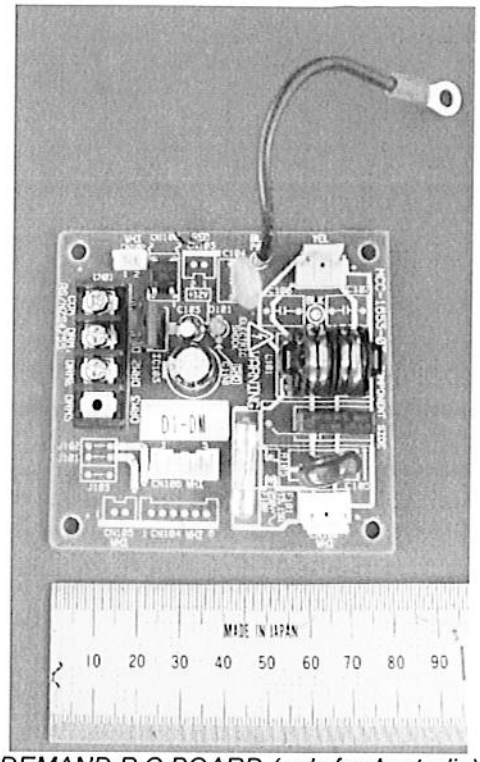


Output control board

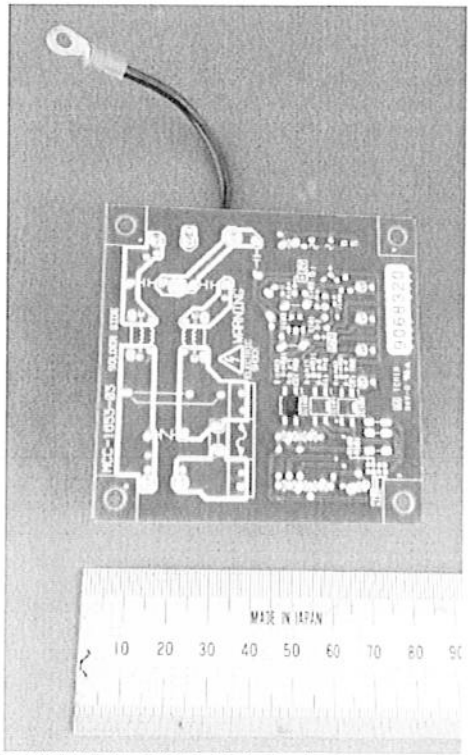


Output control board

Attachment

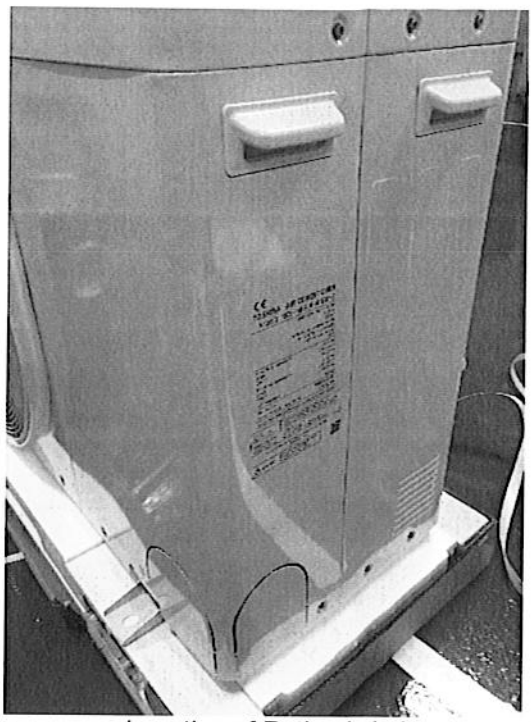


DEMAND P.C.BOARD (only for Australia)

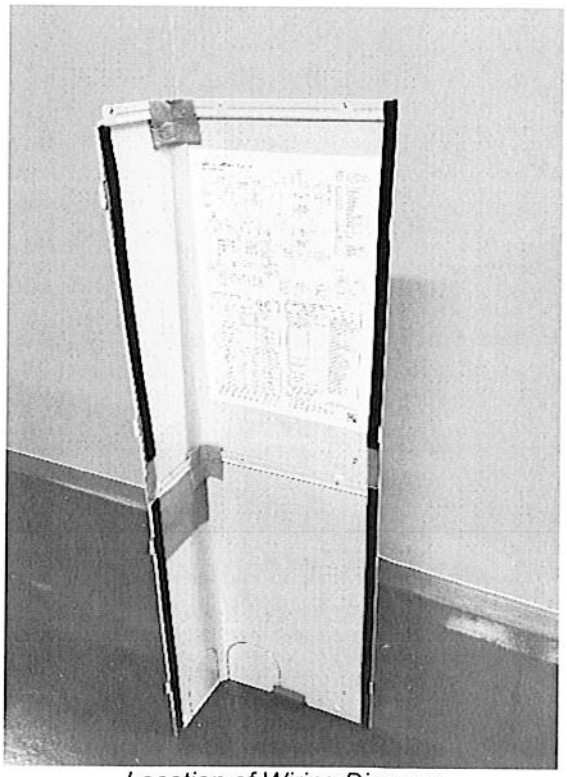


DEMAND P.C.BOARD (only for Australia)

Attachment

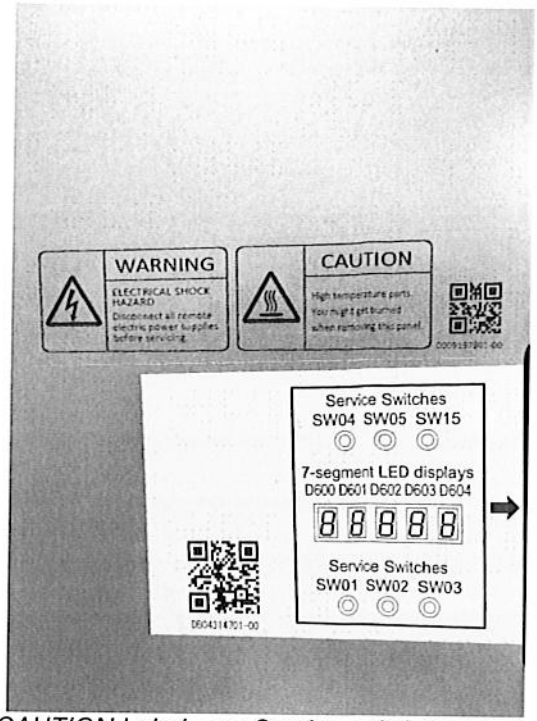


Location of Rating Label



Location of Wiring Diagram

Attachment



WARNING/CAUTION Label near Service switch (only EU and Turkey)

WARNING/CAUTION Label near Compressor

Attachment

Attachment

WARNING/CAUTION Label near Fan guard

--- End of Report ---

Enclosure 1

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

1. Applicant:	*TOSHIBA CARRIER CORPORATION*
2. Type of test object:	*Air Conditioner Outdoor Unit*
3. Model/type reference:	*MCY-MHP0404HS8-E, MCY-MHP0504HS8-E, MCY-MHP0604HS8-E, MCY-MHP0404HS8J-E, MCY-MHP0504HS8J-E, MCY-MHP0604HS8J-E, MCY-MHP0404HS8-TR, MCY-MHP0504HS8-TR, MCY-MHP0604HS8-TR, MCY-MHP0404HS8J-TR, MCY-MHP0504HS8J-TR, MCY-MHP0604HS8J-TR,*
4. Ratings:	*380-415V 3N ~, 50Hz, 12.5A, 8.5kW, Class I*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-2-40
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Part-2-40: Particular requirements for electrical heat pumps, air conditioners and dehumidifiers

Differences according to :		EN 60335-2-40:2003 (incl. Corr.:2006) + A11:2004 + A12:2005 + A1:2006 + A2:2009 + A13:2012 (incl. Corr.:2013) EN 60335-1:2012 (incl. Corr.:2014)
Attachment Form No.	:	EU_GD_IEC60335_2_40J
Attachment Originator	:	VDE
Master Attachment	:	2014-06

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

	CENELEC COMMON MODIFICATIONS		
6.1	Delete "class 0" and "class 01"	*Class I appliances.*	*P*
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered	--	*N/A*
	Multi-phase appliances to be connected to the supply mains: 400 V covered	*Rated Voltage: 380-415V*	*P*
7.10	Devices used to start/stop operational functions of the appliance distinguished from other manual devices by means of shape, size, surface texture, position, etc.	--	*N/A*
	An indication that the device has been operated is given by:		*N/A*
	- a tactile feedback, or	--	*N/A*
	- an audible and visual feedback	--	*N/A*
7.12	The instructions include the substance of the following:		*P*
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved	*Stated in Operation manual.*	*P*
	- children shall not play with the appliance	*Stated in Operation manual.*	*P*
	- cleaning and user maintenance shall not be made by children without supervision	*Stated in Operation manual.*	*P*
7.12.1	Installation instructions for appliances intended to be permanently connected to fixed wiring, and have leakage current exceed 10 mA, state that installation of residual current device (RCD) having rated residual operating current not exceeding 30 mA is advisable (EN 60335-2-40)	--	*N/A*
	For appliances not accessible to the general public and which are intended to be permanently connected to fixed wiring and which may have leakage currents exceeding 10 mA, the installation instructions shall specify the rating of the residual current device (RCD) to be installed (EN 60335-2-40/A12)	--	*N/A*
7.12.Z1	The specific instructions related to the safe operation of this appliance is collated together in the front section of the user instructions	--	*N/A*
	The height of the characters, measured on the capital letters, is at least 3 mm	--	*N/A*
	These instructions are also available in an alternative format, e.g. on a website	--	*N/A*
8.1.1	Also test probe 18 of EN 61032 is applied	*OK*	*P*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	The appliance being in every possible position, except that appliances normally used on the floor and having a mass exceeding 40 kg are not tilted. (EN 60335-1:2012/AC:2014)	*OK*	*P*
	The force on the probe in the straight position is increased to 10 N when probe 18 is used	*OK*	*P*
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and	*OK*	*P*
	parts intended to be removed for user maintenance are also not removed	*No user maintenance parts.*	*N/A*
8.2	Compliance is checked by applying the test probes of EN 61032	*OK*	*P*
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation	*OK*	*P*
11.8	Footnotes to "External enclosure of motor-operated appliances" to be taken into account	*OK*	*P*
13.2	Leakage current measurements (EN 60335-2-40)	*(See appended table)* *Refer to original Test report.*	*P*
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling	--	*N/A*
15.2	Drain pan filled to brim and subjected to continuous overflow and fan(s) switched on (EN 60335-2-40)	*OK*	*P*
16.2	Leakage current measurements (EN 60335-2-40)	*(See appended table)* *Refer to original test report.*	*P*
20.2	When using the test probe similar to test probe B with a circular stop face, the accessories and detachable covers are removed	--	*N/A*
	Test probe 18 applied with a force of 2,5 N on the appliance fully assembled	--	*N/A*
24.1	Components comply with the safety requirements specified in the relevant standards as far as they reasonably apply	*OK*	*P*
	The requirements of clause 29 of this standard apply between live parts of components and accessible parts of the appliance.	*OK*	*P*
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components	*OK*	*P*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Components that have not been previously tested or do not comply with the standard for the relevant component are tested according to the requirements of 30.2	*OK*	*P*
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the standard for the relevant component need not be retested provided that:		*N/A*
	- the severity specified in the component standard is not less than the severity specified in 30.2, and	--	*N/A*
	- the test report for the component states whether it complied with the standard for the relevant component with or without flame, flames not exceeding 2 s during the test are ignored	--	*N/A*
	Unless components have been previously tested and found to comply with the relevant standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9	--	*N/A*
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant standard for the component are necessary other than those specified in 24.1.1 to 24.1.9	--	*N/A*
	Components that have not been separately tested and found to comply with the relevant standard, and	--	*N/A*
	components that are not marked or not used in accordance with their marking,	--	*N/A*
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard	--	*N/A*
	Lamp holders and starter holders that have not been previously tested and found to comply with the relevant standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant standard under the conditions occurring in the appliance	--	*N/A*
	Where the relevant standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of clause 11 are used	--	*N/A*
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or	--	*N/A*
	with connectors and appliance inlets complying with the standard sheets of IEC 60320-1,	--	*N/A*
	if direct supply to these parts from the supply mains gives rise to a hazard	--	*N/A*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003	--	N/A
	Compliance with clause 8 of this standard is not impaired by connecting the appliance to a device covered by EN 41003	--	*N/A*
24.Z1	For motor running capacitors (IEC 60252-1 type P2) with a metallic enclosure having an overpressure fuse the flame testing of internal plastic parts supporting current carrying connections as required in 30.2.2 and 30.2.3.1 is not necessary	--	*N/A*
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC/TR 60083:		*N/A*
	- for class I appliances: standard sheet C2b, C3b or C4..... :	--	*N/A*
	- for class II appliances: standard sheet C5 or C6 ..... :	--	*N/A*
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors or when they are liable to be exposed to significant amount of ultraviolet radiation	--	*N/A*
	Halogen-free thermoplastic compound sheathed supply cords have properties at least those of:		*N/A*
	- halogen-free thermoplastic compound sheathed cords (H03Z1Z1H2-F or H03Z1Z1-F), for appliances having a mass not exceeding 3 kg	--	*N/A*
	- halogen-free thermoplastic compound sheathed cords (H05Z1Z1H2-F or H05Z1Z1-F), for other appliances	--	*N/A*
	Cross-linked halogen-free compound sheathed supply cords have properties at least those of cross-linked halogen-free compound sheathed cords (H07ZZ-F)	--	*N/A*
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position unless they are held in place near the terminals independently of the solder	--	*N/A*
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2	--	*N/A*
32	Compliance regarding electromagnetic fields is checked according to EN 62233	*OK*	*P*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
GG.2	Requirements for charge limits in unventilated areas (EN 60335-2-40/A1)	--	*N/A*
GG.Z1	Non-fixed factory sealed single package units with a charge amount of $m_1 < M \leq 2 \times m_1$ (EN 60335-2-40/A1)	--	*N/A*
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified	--	*N/A*
	The duration of the test is as specified in 19.7	--	*N/A*
ZA	**ANNEX ZA** (NORMATIVE) **SPECIAL NATIONAL CONDITIONS**		*P*
	Norway		*N/A*
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring	--	*N/A*
	Norway		*N/A*
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		*N/A*
	All CENELEC countries		
25.6 and 25.25	Information concerning National plug and socket-outlets is available from the CENELEC website. Normative national requirements concerning plug and socket-outlets are shown in the relevant National standard	*Fixed appliances.*	*N/A*
	Ireland and United Kingdom		*N/A*
25.8	In the table, the lines for 10 A and 16 A are replaced by:		*N/A*
	> 10 and ≤ 13 1,25 (1,0)[b](EN 60335-1:2012/AC:2014)	--	*N/A*
	> 13 and ≤ 16 1,5 (1,0)[b] (EN 60335-1:2012/AC:2014)	--	*N/A*
ZB	**ANNEX ZB** (INFORMATIVE) **A-DEVIATIONS**		*N/A*
	Ireland	--	*N/A*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances	*Fixed appliances.*	*N/A*
	United Kingdom	--	*N/A*
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes	*Fixed appliances.*	*N/A*
ZC	**ANNEX ZC** (NORMATIVE) **NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**		*P*
	A list of referenced documents in this standard	*OK*	*P*
ZD	**ANNEX ZD** (INFORMATIVE) **IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS**		*P*
	A table with IEC and CENELEC code designations for flexible cords	*Stated in installation manual.*	*P*
ZE	**ANNEX ZE** (NORMATIVE) **SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE**		*P*
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative ..... :	*Stated in rating label.*	*P*
	Model or type reference ..... :	*Stated in rating label.*	*P*
	Serial number, if any ..... :	*Stated in rating label.*	*P*
	Production year	*Stated in rating label.*	*P*
	Designation of the appliance ..... :	*Stated in rating label.*	*P*
7.12	Instructions provided with the appliance so that the appliance can be used safely	*OK*	*P*
	The instructions contain at least the following information:		*P*
	- the business name and full address of the manufacturer and, where applicable, his authorized representative	*Stated in operation manual.*	*P*
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number	*Ditto.*	*P*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers	*Ditto.*	*P*
	- the general description of the appliance, when needed due to the complexity of the appliance	*Ditto.*	*P*
	- specific precautions if required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving	*Ditto.*	*P*
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance	*Ditto.*	*P*
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance	*Ditto.*	*P*
	The words "Original instructions" appear on the language version(s) verified by the manufacturer or by the authorized representative	*Ditto.*	*P*
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence "Translation of the original instructions" appear in the relevant instructions delivered with the appliance	*Ditto.*	*P*
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand	*English manual provided.*	*P*
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures	*Stated in operation manual.*	*P*
	"This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons". (EN 60335-2-40/A13)	*Stated in operation manual.*	*P*
7.12.ZE1	If needed for specific appliances, the following information to be given:		*P*
	- on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts	*Maintained by Qualified Service person. Stated in operation manual.*	*P*
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance	*Ditto.*	*P*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	- on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided	*Ditto.*	*P*
	- on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance	*Ditto.*	*P*
	- on the specifications on the spare parts to be used, when these affect the health and safety of the operator	*Ditto.*	*P*
	- on airborne noise emissions, determined and declared in accordance with the Annex ZAB, which includes: (EN 60335-2-40/A13)		*P*
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A) .....; (EN 60335-2-40/A13)	*Sound pressure level less than 70dB*	*N/A*
	- where this level does not exceed 70 dB(A), no value needs to be given, but the instructions shall state that the A-weighted sound pressure level is below 70 dB. (EN 60335-2-40/A13)	*Sound pressure level stated on operation manual.*	*P*
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 µPa):	--	*N/A*
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A) .....:	*Sound pressure level less than 70dB*	*P*
7.12.ZE2	The instructions includes a warning to disconnect the appliance from its power source during service and when replacing parts	*The following label provided on unit. And proper information given in operation manual.* *WARNING ELECTRICAL SHOCK HAZARD"* *Disconnect all remote electric power supplies before servicing.*	*P*
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug has to be such that an operator can check from any of the points to which he has access that the plug remains removed	*Fixed appliance.*	*N/A*
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided	*Main disconnect device will be provided. Stated in installation manual.*	*P*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or	--	*N/A*
	a manual operation is required to restart it	--	*N/A*
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance	*OK*	*P*
20.2	Dangerous moving transmission parts safeguarded either by design or guards	*OK*	*P*
	When guards are used, they are fixed guards, interlocking movable guards or protective devices	*Fan guard fixed properly.*	*P*
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		*P*
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and	*Fan guard fixed properly.*	*P*
	- adjustable guards restricting access to those sections of the moving parts where access is necessary	--	*N/A*
	Interlocking movable guards used where frequent access is required	--	*N/A*
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance	*OK*	*P*
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability	--	*N/A*
	The distance between the seat and the control devices capable of being adapted to the operator	--	*N/A*
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function	--	*N/A*
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function	--	*N/A*
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation	--	*N/A*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure	--	*N/A*
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or	*Transportable handle provided.*	*P*
	so designed that they can be fitted with such attachments, or	--	*N/A*
	be shaped in such a way that standard lifting gear can easily be used	--	*N/A*
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely	*OK*	*P*
22.ZE.5	The fixing systems of fixed guards which prevent access to dangerous moving transmission parts only removable with the use of tools	--	*N/A*
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal	--	*N/A*
	Where possible, guards are incapable of remaining in place without their fixings	--	*N/A*
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative	*OK*	*P*
	Movable guards are interlocked	--	*N/A*
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed	--	*N/A*
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		*N/A*
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and	*All enclosure fixed by screws. Operator not accessible to moving parts.*	*N/A*
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased	--	*N/A*
	Interlocking movable guards remain attached to the appliance when open, and	--	*N/A*
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action	--	*N/A*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions	--	*N/A*
	The guard is opened at the extent needed to cause the interlocking to operate and is then closed. This operation is carried out for 5 000 cycles at a rate of 5 cycles per min. (EN 60335-2-40/A13/AC)	--	*N/A*
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time	--	*N/A*
	After these tests the interlock system is fit for further use	--	*N/A*
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		*N/A*
	- adjustable manually or automatically, depending on the type of work involved, and	*No such guards.*	*N/A*
	- readily adjustable without the use of tools	--	*N/A*
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart	*OK*	*P*
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred	--	*N/A*
22.ZE.9	Appliances fitted with means to isolate them from all energy sources	*Main disconnect device will be provided. Stated in installation manual.*	*P*
	Such isolators are clearly identified, and	--	*N/A*
	they are capable of being locked if reconnection endanger persons	--	*N/A*
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons	--	*N/A*
ZF	**ANNEX ZF** (INFORMATIVE) **CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD**		*P*
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive) ..... :	*OK*	*P*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
ZG	**ANNEX ZG** (NORMATIVE) **UV APPLIANCES**		*N/A*
	The following modifications to this standard apply to appliances having UV emitters	--	*N/A*
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109	--	*N/A*
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source	--	*N/A*
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant	--	*N/A*
ZZ	**ANNEX ZZ** (INFORMATIVE) **COVERAGE OF ESSENTIAL REQUIREMENTS OF EC DIRECTIVES**		*P*
	Description of the relation between this European standard and the LVD (Low Voltage Directive, 2006/95/EC) and the MD (Machinery Directive, 2006/42/EC)	*OK*	*P*
ZAA	**ANNEX ZAA (INFORMATIVE) (EN 60335-2-40/A11)** **THE RELEVENCE OF THE PRESSURE EQUIPMENT DIRECTIVE**		***N/A***
	Refrigerating systems having a pressure greater than 0,05 MPa are considered to be assemblies falling within the scope of the Pressure Equipment Directive, 97/23/EC. However, according to Article 1, item 3.6 of the directive, equipment classified no higher than category I and covered by the low voltage directive is excluded from its scope. (EN 60335-2-40/A11)	*Category I*	*N/A*
	According to guideline 1/39 of the directive, this exclusion applies to both components and assemblies (refrigerant circuits). This applies to appliances containing vessels (e.g. compressors, receivers) or piping with limits in accordance with the following (EN 60335-2-40/A11):	--	*N/A*
	Vessels (EN 60335-2-40/A11)		*N/A*
	- dangerous refrigerants (Annex II, Table 1) (EN 60335-2-40/A11):		*N/A*
	- volume not exceeding 1 l, or (EN 60335-2-40/A11)	--	*N/A*
	- pressure x volume not exceeding 5 MPa l (EN 60335-2-40/A11)	--	*N/A*
	- non-dangerous refrigerants (Annex II, Table 2) (EN 60335-2-40/A11):		*N/A*

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Clause	Requirement - Test	Result - Remark	Verdict
	- volume not exceeding 1 l, or (EN 60335-2-40/A11)	--	*N/A*
	- pressure x volume not exceeding 20 MPa l (EN 60335-2-40/A11)	--	*N/A*
	Piping (EN 60335-2-40/A11)		*N/A*
	- dangerous refrigerants (Annex II, Table 6) (EN 60335-2-40/A11):		*N/A*
	- numerical designation not exceeding 25, or (EN 60335-2-40/A11)	--	*N/A*
	- pressure not exceeding 1 MPa and numerical designation not exceeding 100, or (EN 60335-2-40/A11)	--	*N/A*
	- pressure exceeding 1 MPa and pressure x numerical designation not exceeding 100 MPa (EN 60335-2-40/A11).	--	*N/A*
	- non-dangerous refrigerants (Annex II, Table 7) (EN 60335-2-40/A11):		*N/A*
	- numerical designation not exceeding 100, or (EN 60335-2-40/A11)	--	*N/A*
	- pressure x numerical designation not exceeding 350 MPa (EN 60335-2-40/A11).	--	*N/A*
	For other components, the most onerous limit of the two applies (EN 60335-2-40/A11)	--	*N/A*
	The volume is the internal volume of the vessel and includes the volume of pipework up to the first connection. It excludes the volume of fixed internal parts (EN 60335-2-40/A11)	--	*N/A*
	The pressure is the maximum pressure the vessel or piping system is exposed to, as specified by the manufacturer of the appliance (EN 60335-2-40/A11)	--	*N/A*
	The numerical designation designates the size common to all components in the piping system (EN 60335-2-40/A11)	--	*N/A*
	If any component exceeds the limits given above, the appliance has to comply with the directive. The technical requirements are given in Annex I and the conformity assessment tables and procedures in Annexes II and III of the directive (EN 60335-2-40/A11)	--	*N/A*
	Commonly used dangerous refrigerants, identified as Group 1 in the directive, are listed in table ZAA.1 (EN 60335-2-40/A11)	--	*N/A*
	Commonly used non-dangerous refrigerants, identified as Group 2 in the directive, are listed in table ZAA.2 (EN 60335-2-40/A11)	--	*N/A*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
ZAB	**ANNEX ZAA (NORMATIVE) (EN 60335-2-40/A13) EMISSION OF ACOUSTICAL NOISE FROM APPLIANCES COVERED BY ANNEX ZE**		**P**
ZAB.1	Noise reduction is an integral part of the design process and achieved by particularly applying measures at source to control noise, see for example EN ISO 11688-1. (EN 60335-2-40/A13)	*Sound pressure level specified in the Installation Manual. Sound pressure level is below 70 dB. Further compliance has to be checked when apply national approval.*	*P*
	Success of the applied noise reduction measures is assessed on the basis of the actual noise emission values in relation to other machines of the same type with comparable non-acoustical technical data. (EN 60335-2-40/A13)	--	*N/A*
ZAB.2.1	A-weighted emission sound pressure level determined in accordance with EN 11203:2009, 6.2.3 d) with the surface S being the measurement surface used for the sound power level determination. (EN 60335-2-40/A13)	*See ZAB.1.*	*N/A*
	If the sound power level determination is based on a measurement method requiring a reverberant sound field, the surface S to define Q, shall be a parallelepiped measurement surface at a distance of 1 m from the reference box enclosing the source and assuming only one reflecting surface. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
ZAB.2.2	A-weighted sound power level determined in accordance with EN 12102 applying a measurement method of at least grade 2. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	If a grade 3 measurement method used for determining the A-weighted sound power level, the. reasons are explicitly mentioned (EN 60335-2-40/A13)	*Ditto.*	*N/A*
ZAB.2.3	Total measurement uncertainty is depending on the standard deviation of reproducibility σ_{R0} of the measurement method and the standard deviation σ_{omc} representing the instability of the operating and mounting conditions. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	σ_{R0} has an upper value for a grade 2 measurement method of about 1,5 dB, whereas σ_{omc} may have values between 0,5 dB for small variations of the sound power due on the mounting and operating conditions or 4 dB for very instable sources (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	Total measurement uncertainty for the A-weighted emission sound pressure level is of the same order as the one for the respective sound power level measurement. (EN 60335-2-40/A13)	*Ditto.*	*N/A*

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Clause	Requirement - Test	Result - Remark	Verdict
ZAB.2.4	Information to be recorded covers all the technical requirements of this noise test code. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	Any deviations from this noise test code or from the basic standards upon which it is based are to be recorded together with the technical justification for such deviations. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
ZAB.2.5	Information to be given in the test report includes : (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	- he data required by the manufacturer for inclusion in the noise declaration,. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	- the data required by the user to verify the declared values. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	Thus the following information shall be included .. : (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	- reference to the noise test code and the basic noise emission standards used; (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	- description of the installation and operation conditions used; (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	- location of the work station(s) and other specified positions; (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	- the noise emission values obtained (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	Test report states that all requirements of the noise test code have been fulfilled, or, if this is not the case, it shall identify any unfulfilled requirements. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	Deviations from the requirements stated and a technical justification for these deviations shall be given. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
ZAB.2.6	Noise emission declaration is made according to EN ISO 4871 (EN 60335-2-40/A13)	*Sound pressure level specified in the Installation Manual. Sound pressure level is below 70 dB. Further compliance has to be checked when apply national approval.*	*P*
	Emission sound pressure level L_{pA} is made as a dual number noise emission declaration, thus declaring the determined value for L_{pA} and the respective uncertainty K_{pA}. (EN 60335-2-40/A13)	*Ditto*	*N/A*
	Sound power level L_{WA} is declared as single number noise emission declaration declaring the sum of the measured sound power level and its uncertainty K_{WA}. (EN 60335-2-40/A13)	*Ditto.*	*N/A*

IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Noise declaration states that the noise emission values have been obtained according to this noise test code. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	Any deviations from this noise test code or from the basic standards upon which it is based are clearly indicated. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	Additional noise emission values are given in the declaration. (EN 60335-2-40/A13)	*Ditto.*	*N/A*
	If undertaken, verification of the noise emission values shall be conducted according to EN ISO 4871, using the same mounting and operating conditions as those used for the initial determination. (EN 60335-2-40/A13)	*Ditto.*	*N/A*

< End of the report>

Enclosure 2

National differences for AUSTRALIA / NEW ZEALAND

1. Applicant:	*TOSHIBA CARRIER CORPORATION*
2. Type of test object:	*Air Conditioner Outdoor Unit*
3. Model/type reference:	*MCY-MHP0404HS8-A, MCY-MHP0504HS8-A, MCY-MHP0604HS8-A*
4. Ratings:	*380-415V 3N ~, 50Hz, 12.5A, 8.5kW, Class I*

IEC60335_1R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-1 (AUSTRALIA / NEW ZEALAND) NATIONAL DIFFERENCES

(Household and Similar Electrical Appliance - Safety)

Differences according to.....: AS/NZS 60335.1:2011

Attachment Form No.....: AU_ND_IEC60335_1R

Attachment Originator .....: SAI Global

Master Attachment.....: Date (2012-10)

5	GENERAL CONDITIONS FOR THE TESTS		*P*
5.8.1	Test at a.c. 50Hz for a.c. only appliance	*Considered.*	*P*
	Test at a.c. 50Hz or d.c., whichever is the more unfavourable supply for a.c. and d.c. appliance	*Considered.*	*P*
5.201	For appliances, other than class III appliances, that are intended for connection to the supply mains and that are not marked with:	*OK*	*P*
	– a rated voltage of at least 240 V for single-phase appliances and at least 415 V for three-phase appliances, or	*Rating: 380-415V*	*P*
	– a rated voltage range that includes 240 V for single-phase appliances and 415 V for three-phase appliances,	*Ditto.*	*P*
	the rated voltage is equal to 240 V for single-phase appliances and 415 V for three phase appliances,	*Ditto.*	*P*
	and the upper limit of the rated voltage range is equal to 240 V for single-phase appliances and 415 V for three-phase appliances.	*Ditto.*	*P*
	In addition, the rated current or rated power input is equal to the calculated value corresponding to 240 V for single-phase appliances and 415 V for three-phase appliances as appropriate	*Ditto.*	*P*
6	CLASSIFICATION		*P*
6.1	Protection against electric shock: Class I, II, III..... .....:	*Class I appliances.*	*P*
7	MARKING AND INSTRUCTIONS		*P*
7.1	Appliances intended for connection to the supply mains, other than class III appliances, shall be marked with:	*OK*	*P*

IEC60335_1R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	– a rated voltage of at least: 230 V for single phase appliances; 400 V for polyphase appliances ; or	*Rating: 380-415V*	*P*
	– a rated voltage range that includes: 230 V for single phase appliances; 400 V for polyphase appliances.	*Ditto.*	*P*
7.13	Instructions and other texts in English	*English manual provided.*	*P*
22	CONSTRUCTION		*N/A*
22.3	Tests specification replaced by: A new sample of the appliance shall be subjected to and shall comply with the tests in 2.13.9.2 of AS/NZS 3112	--	*N/A*
22.201	Appliances having integral pins for insertion into socket outlets shall comply with the appropriate requirements of AS/NZS 3112.	--	*N/A*
	Compliance is checked as specified in Annex J of AS/NZS 3112	*Ditto.*	*N/A*
24	COMPONENTS		*N/A*
24.1.7	Telecommunication interface circuitry must comply with the Telecom Labelling Notice issued under the Telecommunications Act instead of IEC 62151	--	*N/A*
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		*N/A*
25.1	Plug complying with AS/NZS 3112	*Fixed appliances.*	*N/A*

< End of the report>