

## Ref. Certif. No.

JPTUV-019321

#### IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

## CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Air conditioner indoor unit

Electra Consumer Products 21 Aminadav St., Tel-Aviv 67067, Israel

Electra Consumer Products 21 Aminadav St., Tel-Aviv 67067, Israel

AC 220-240V; 50Hz; 1) 43W; 2) 75W; Class I; IP20

1) K 25 DCI, K 35 DCI, K 35S DCI, 2) K 50 DCI

IEC 60335-2-40:1995+A1

16009337 001

Signature:

IEC 60335-1:1991+A1+A2

For model differences, refer to the test report.

See additional page(s)

Refrigerant: R410A

ELECTRA

Product Produit

Name and address of the applicant Nom et adresse du demandeur

Name and address of the manufacturer Nom et adresse du fabricant

Name and address of the factory Nom et adresse de l'usine

Rating and principal characteristics Valeurs nominales et caractéristiques principales

Trade mark (if any) Marque de fabrique (si elle existe)

Model/type Ref. Ref. de type

Additional information (if necessary) Information complémentaire (si nécessaire)

A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la

As shown in the Test Report Ref. No.which forms part of this Certificate

Comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce Certificat

This CB Test Certificate is issued by the National Certification Body Ce Certificat d'essai OC est établi par l'Organisme National de Certification



TÜV Rheinland Group

TÜV Rheinland Japan Ltd. German Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021 Japan Phone + 81 45 470-3888 Fax + 81 45 470-5221 Mail: info@jpn.tuv.com

Dipl. Ing. M. Slagla

0/061 CB 4.03

Date: 11.06.2007

Ref. Certif. No.



# PAGE 1 OF 1 Appendix to CB Certificate JPTUV-019321 Report Number: 16009337 001 Name and address of the manufacturer Electra Consumer Products 21 Aminadav St., Tel-Aviv 67067 Israel Name and address of the factory(ies) Electra Air-conditioning (Shenzhen) Co., Ltd. 2 WUHE AVENUE S., BANTIAN, BUJI Shenzhen, Guangdong, P.R. China Electra Consumer Products Ltd. Sapir 1, Rishon Lezion 75704 Israel Additional information (if necessary) Information complémentaire (si nécessaire) Martin / Date: 11.06.2007 Dipl. Ing/ M. Glagla

Date:

Signature:



## Ref. Certif. No.

JPTUV-019322

### IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

## CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product Produit	Air conditioner indoor unit
Name and address of the applicant Nom et adresse du demandeur	Electra Consumer Products 21 Aminadav St., Tel-Aviv 67067, Israel
Name and address of the manufacturer Nom et adresse du fabricant	Electra Consumer Products 21 Aminadav St., Tel-Aviv 67067, Israel
Name and address of the factory Nom et adresse de l'usine	See additional page(s)
Rating and principal characteristics Valeurs nominales et caractéristiques principales	AC 230V; 50Hz; 1) 43W; 2) 75W; Class I; IP20 Refrigerant: R410A
Trade mark (if any) Marque de fabrique (si elle existe)	VIESSMANN
Model/type Ref. Ref. de type	1) C 303 H, C 304 H, 2) C 305 H
Additional information (if necessary) Information complémentaire (si nécessaire)	For model differences, refer to the test report.
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60335-2-40:1995+A1 IEC 60335-1:1991+A1+A2
As shown in the Test Report Ref. No.which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce Certificat	16009337 001

This CB Test Certificate is issued by the National Certification Body Ce Certificat d'essai OC est établi par l'Organisme National de Certification



TÜV Rheinland Group

TÜV Rheinland Japan Ltd. German Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021 Japan Phone + 81 45 470-3888 Fax + 81 45 470-5221 Mail: info@jpn.tuv.com Web: www.tuv.com

Signature:

Martin Ma Dipl. Ing. M. Glagla

Date: 11.06.2007





# PAGE 1 OF 1 Appendix to CB Certificate JPTUV-019322 Report Number: 16009337 001 Name and address of the manufacturer Electra Consumer Products 21 Aminadav St., Tel-Aviv 67067 Israel Name and address of the factory(ies) Electra Air-conditioning (Shenzhen) Co., Ltd. 2 WUHE AVENUE S., BANTIAN, BUJI Shenzhen, Guangdong, P.R. China Electra Consumer Products Ltd. Sapir 1, Rishon Lezion 75704 Israel Additional information (if necessary) Information complémentaire (si nécessaire) Marhh M Dipl. Ing. M. Glagla Date: 11.06.2007

Date:

Signature:



Page 1 of 61

Report No:<16009337 001>.

# TEST REPORT

## IEC 60335-2-40

## Safety of household and similar electrical appliances Part 2: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers

Report Reference No	16009337 001
Compiled by (+ signature)	Queenie Luo Stone Shi
Approved by (+ signature)	Stone Shi
Contents	61 pages
Date of issue	2007.06.06
CB Testing laboratory Name	TÜV Rheinland (Guangdong) Ltd.
Address	43/F, Metro Plaza, 183 Tianhe Rd. North, Guangzhou 510620, P. R. China
Testing location/procedure	CBTL 🛛 SMT 🗌 TMP 🗌
Address	Unit C-101, No.11 Caipin Road, GZ Science City, Guangzhou 510663 P. R. China
Applicant's Name	ELECTRA CONSUMER PRODUCTS
Address	21 Aminadav St, Tel-Aviv, 67067 Israel
Test specification	
Standard:	IEC 60335-2-40:1995 + A1:2000 used in conjunction with IEC 60335-1:1991 + A1:1994 + A2:1999
Test procedure	СВ
Non-standard test method	N.A.
Test Report Form No.	IEC60335_2_40C
TRF originator	AENOR
Master TRF	Dated 2002-02
Copyright © 2002 IEC System for Co Geneva, Switzerland. All rights rese	onformity Testing and Certification of Electrical Equipment (IECEE), rved.
acknowledged as copyright owner and se	whole or in part for non-commercial purposes as long as the IECEE is purce of the material. IECEE takes no responsibility for and will not assume ler's interpretation of the reproduced material due to its placement and context.
Test item description:	Air Conditioner Indoor Unit
Trademark:	1) ELECTRA
	2) VIESSMANN
Model and/or type reference:	1) For ELECTRA :K 25 DCI, K 35 DCI, K 35S DCI, K 50 DCI, 2) For VIESSMANN :C 303 H, C 304 H, C 305 H
Manufacturer	
Factory	
Rating(s):	See page 4 1) K 25 DCI, K 35 DCI, K 35S DCI, K 50 DCI: AC 220-240V~ 50Hz 2) C 303 H, C 304 H, C 305 H: AC 230V 50Hz

Refrigerant: R410A, IP20

TÜV Rheinland (Guangdong) Ltd. Member of TÜV Rheinland Group



Electra Consumer Products

Date : 13.06.2007 Our ref. : QL ZJ Your ref.: 173027928

21 Aminadav St., Tel-Aviv 67067 Israel

#### Ref : CB Certificate Japan

Type of Equipment : Air conditioner indoor unit Model Designation : See Certificate Certificate No. : JPTUV-019322 Report No. : 16009337 001

Dear Ladies and Gentlemen,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services. Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body

Martin Dipl. Ing. 🕅. Glagla

CC: Electra Consumer Products

Enclosure

TÜV Rheinland(Guangdong)Ltd. 莱茵技术监督服务(广东)有限公司 43/F, Metro Plaza, 183 Tianhe Rd. North, Guangzhou 510620, China 中国广州天河北路 183 号 大都会广场 43 楼 邮政编码:510620 Tel :(8620)8755 0481 Fax:(8620)8755 1482 e - mail:info@gz.chn.tuv.com Internet:http://www.chn.tuv.com



聯(wa) 场机:291

## IT IS MANDATORY TO DECLARE THE DEVIATIONS OF MATERIALS AND/OR COMPONENTS USED IN THE PROTOTYPES.

IEC 强制要求生产厂声明使用的材料和/或部件与原机型的偏差。

DECLARATION FORM FOR PROTOTYPES

声明表

X

NO DEVIATION 无偏差

We herewith declare that the samples of our product / series (product Name and model No) 我方在此声明所提交测试的产品/系列(产品名称和型号)的样品(编号: CB报告号)

K 25 DCI, K 35 DCI, K 35S DCI, K 50 DCI, C 303 H, C 304 H, C 805 H Delivered for testing under file No.: ( CB Report No ) 16009337 001....

Are in all respects - materials, components, characteristics, manufacturing process, etc. representative for samples from series production. 在材料, 零部件, 特性, 生产流程等方面与批量生产的产品一致,

DEVIATION FROM SERIES PRODUCTION 与拗量生产的区别

We herewith declare that the samples of our product / series (product Name and model No) 我方在此声明所捉交测试的产品/系列(产品名称和型号)的样品(编号: CB 报告号) 

Delivered for testing under file No

Deviate in the following details - materials, components, characteristics, manufacturing process, etc. - from samples coming from series production. 在以下方面 - 材料,零部件,特性, 生产流程等与批量生产的不同

<u>Construction/结构</u>	Provisio	onal 临时的	Actue	山实际的
<u>Material 材料</u> <u>Component 受册件</u>	<u>Manufacturer</u> 生产厂	<u>Type and</u> charactoristics <u>炎菜和特性</u>	<u>Manufacturer</u> <u>律元产厂</u>	<u>Type and</u> <u>characteristics</u> <u> </u>
COMPANY (Mon 谷田 (公下) (名称) SIGNATURE (An)		<u>ni:</u> electra con	BUMER PRODUCTS	

wanter of the star full the 您否(把权人) PATE 26.02 2000 E9

SORIMASE

ATTACHED DOCUMENTS: 附件

<u>ITEM 1:</u> .....



www.tuv.com	Page 1 of 61	Report No:<16009337 001
	TEST REPORT	
	IEC 60335-2-40	
Safety of hous Part 2: Particular requirem	ehold and similar electric ents for electrical heat pu dehumidifiers	al appliances mps, air-conditioners and
Report Reference No	16009337 001	
Compiled by (+ signature)	Queenie Luo	Queenie Lus George GN.
Approved by (+ signature)	Stone Shi	Gtore W.
Contents	61 pages	
Date of issue	2007.06.06	
CB Testing laboratory Name	TÜV Rheinland (Guangdong) Li	td.
Address:	43/F, Metro Plaza, 183 Tianhe R China	d. North, Guangzhou 510620, P. R.
Testing location/procedure	CBTL 🛛 SMT	П ТМР П
Address	Unit C-101, No.11 Caipin Road, P. R. China	GZ Science City, Guangzhou 510663
Applicant's Name	ELECTRA CONSUMER PROD	UCTS
Address	21 Aminadav St, Tel-Aviv, 6706	7 Israel
Test specification		
Standard	IEC 60335-2-40:1995 + A1:2000 IEC 60335-1:1991 + A1:1994 +	
Test procedure	CB .	
Non-standard test method:	N.A.	
Test Report Form No.	IEC60335_2_40C	
TRF originator:	AENOR	
Master TRF:	Dated 2002-02	
Copyright © 2002 IEC System for Co Geneva, Switzerland. All rights rese		tion of Electrical Equipment (IECEE
This publication may be reproduced in acknowledged as copyright owner and s liability for damages resulting from the read	ource of the material. IECEE takes	no responsibility for and will not assum
Test item description	Air Conditioner Indoor Unit	
Trademark	1) ELECTRA	
	2) VIESSMANN	
Madel and/or type reference		
Model and/or type relevence	1) For ELECTRA :K 25 DCI, K 3 2) For VIESSMANN :C 303 H, C	
Manufacturer	2) For VIESSMANN :C 303 H, C Same as applicant	
	2) For VIESSMANN :C 303 H, C Same as applicant	
Manufacturer	2) For VIESSMANN :C 303 H, C Same as applicant See page 4	CI, K 50 DCI: AC 220-240V~ 50Hz
Manufacturer	<ul> <li>2) For VIESSMANN :C 303 H, C</li> <li>Same as applicant</li> <li>See page 4</li> <li>1) K 25 DCI, K 35 DCI, K 35S D</li> </ul>	CI, K 50 DCI: AC 220-240V~ 50Hz AC 230V 50Hz

.



ELECTRA	MODEL:K 25 DCI	
PROD NO.:	Fuse: 15A(G)*	Cooling capacity: 2500(1500-3800)W
TYPE:	COS <b>Φ</b> = 0.97	Heating capacity: 3400(1500-5000)W
220-240V ~ 50Hz	IP20 Rev. A	Dehumidification:1.0l/h
R410A:	Prated: 43W	PS:6.3MPa Ps: 0.8MPa
*is applied to single re	frigerant circuit only	Temp.Class: T 1 Weight: 22.7Kg
ELECTRA	MODEL:K 35 DCI	
PROD NO.:	Fuse: 15A(G)*	Cooling capacity: 3500(1500-4400)W
TYPE:	COS <b>Ф</b> = 0.97	Heating capacity: 4300(1500-5500)W
220-240V ~ 50Hz	IP20 Rev. A	Dehumidification:1.5l/h
R410A:	Prated: 43W	PS:6.3MPa Ps: 0.8MPa
is applied to single ref	frigerant circuit only	Temp.Class: T 1 Weight : 22.7Kg
ELECTRA	MODEL:K 35S DCI	
PROD NO.:	Fuse: 15A(G)*	Cooling capacity: 3500(1700-4800)W
TYPE:	COS <b>Φ</b> = 0.97	Heating capacity: 4500(1700-5800)W
220-240V ~ 50Hz	IP20 Rev. A	Dehumidification:1.5l/h
R410A:	Prated: 43W	PS:6.3MPa Ps: 0.8MPa
*is applied to single re	frigerant circuit only	Temp.Class: T 1 Weight : 24.4Kg
ELECTRA	MODEL:K 50 DCI	
PROD NO.:	Fuse: 20A(G)*	Cooling capacity: 5000(1350-6400)W
TYPE:	COSΦ=0.97	Heating capacity: 6300(1350-7500)W
220-240V ~ 50Hz	IP20 Rev. A	Dehumidification:2.0l/h
R410A:	Prated: 75W	PS:6.3MPa Ps: 0.8MPa
*is applied to single re	frigerant circuit only	Temp.Class: T 1 Weight : 28Kg
<u></u>		



v.tuv.com		Page 3 of 61	Report No:<16009337 0
by of marking plate and sum	mary of test results	(information/comments):	
M model:			
		1/N/PE 230V,50Hz	
		Power consumption:	43 W
		COSΦ	0.97
		IP20 Rev.A	
	VIESMANN	Fuse:	15A(aM)
		Cooling circuit HD	4.2 MPa
		Cooling circuit ND	0.8 MPa
	C 303 H		
		Temperature Class	T1
Viccomon Works ConhUSCo I	(0. D. OE107 Allendesi	Refrigerant	R410A
Viessmann Werke GmbH&Co K	IG D - JOTO/ Anendori		
Γ			
		1/N/PE 230V,50Hz	
		Power consumption:	43 W
		COSΦ	0.97
	VIESMANN	IP20 Rev.A	
	-Sweeter	Fuse:	15A(aM)
		Cooling circuit HD	4.2 MPa
		Cooling circuit ND	0.8 MPa
	C 304 H		
		Temperature Class	T1
Viessmann Werke GmbH&Co	KG D - 35107 Allendorf	Refrigerant	R410A
Tessman werke andraco	Ka D-30107 Allelluori		
		1/N/PE 230V,50Hz	
		Power consumption:	75 W
		COSΦ	0.97
		IP20 Rev.A	
		Fuse:	20A(aM)
	VIESMANN	Cooling circuit HD	4.2 MPa
		Cooling circuit ND	0.8 MPa
	C 305 H		
		Temperature Class	T1
		Refrigerant	R410A
Viessmann Werke GmbH&Co	KG D–35107 Allendorf		



www.tuv.com

Page 4 of 61

Report No:<16009337 001>.

Summary of testing

- 1. The test samples were prototype samples without serial numbers.
- 2. The constructions of alternate components (in table 24.1) were considered in this report.
- 3. Models K 35 DCI and K 50 DCI were performed all the tests to present other models. (see below matching table)

Indoor unit	Outdoor unit	Refrigerant	Discharged quantity
K 35 DCI	DCI 35 R410A	R410A	1200g
K 50 DCI	DCI 50 R410A	R410A	1500g

#### Test items particulars:

Serial Number:	Prototype samples without serial numbers.
Additional information:	N/A
:	
Test case verdicts	
Test case does not apply to the test object:	N(.A.)
Test item does meet the requirement:	P(ass)
Test item does not meet the requirement:	F(ail)
Testing	
Date of receipt of test item:	2007.03.01
Date(s) of performance of test	2007.03.01-2007.04.20
General remarks	

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.

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

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

Clause numbers between brackets refer to clauses in IEC 60335-1

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

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

Factory information:

Factory 1: Electra Air-Conditioning (Shenzhen) Co., Ltd.

Address: 2 Wuhe Avenue S., Bantian, Buji, Shenzhen, Guangdong, P. R.China

Factory 2: ELECTRA CONSUMER PRODUCTS LTD.

Address: Sapir 1, Rishon Lezion, 75704, Israel



www.tuv.cor	n
-------------	---

Report No:<16009337 001>.

### General product information:

- 1. The appliances are indoor unit only, the indoor unit is a ceiling mounted type air conditioner, which is usually not accessible except for maintenance purpose. It will be mounted on the wall at a height of min. 2,3 m above floor level;
- 2. The unit is supplied by an 3-cable power cord with plug.
- 3. The equipment is equipped with an infrared wireless battery powered remote control unit.

#### Model list:

No.	Model	Voltage	Power input(W)	Refrigerant	Brand name
1	K 25 DCI	220-240V	43	R410A	ELECTRA
2	K 35 DCI	220-240V	43	R410A	ELECTRA
3	K 35S DCI	220-240V	43	R410A	ELECTRA
4	K 50 DCI	220-240V	75	R410A	ELECTRA
5	C 303 H	230V	43	R410A	VIESSMANN
6	C 304 H	230V	43	R410A	VIESSMANN
7	C 305 H	230V	75	R410A	VIESSMANN

#### Model difference:

- 1. K 25 DCI, K 35 DCI, K 35S DCI and K 50 DCI are identical, except that:
  - The size of heating exchanger is different, by which, different cooling and heating capacity are achieved.
  - The transformers of K 50 DCI are GLP-060791 and 54X18(452827400); while for other models, the transformers are GLP-060792 and 54X18(452827401). See table 24.1 for details.
- Models C 303 H, C 304 H and C 305 H are identical to models K 25 DCI, K 35 DCI and K 50 DCI respectively, except for the brand name ,model name ,input voltage and high working pressure of the cooling system(see rating labels for details):
  - The brand name changed from ELECTRA to VIESSMANN.
  - The input voltage changed from 220-240V to 230V.
  - High working pressure changed from 6,3MPa to 4,2MPa
- 3. The input voltage of C 303 H, C 304 H and C 305 H is 230V~, which is covered by 220-240V~, so all test requirements can be covered by the models K 35 DCI and K 50 DCI



	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdi
4	GENERAL NOTES ON TESTS		Р
	Tests performed according to Cl. 4, e.g. nature of supply, sequence of testing, etc.		Р
4.6	Appropriate controls rendered inoperative during the test (IEC 60335-2-40:1995)		Р
4.101	Motor-compressors comply with IEC 60335-2-34 (IEC 60335-2-40:1995)	Indoor unit	N/A
	Motor-compressors subjected to the relevant test (IEC 60335-2-40:1995)		N/A
6	CLASSIFICATION		Р
6.1	Protection against electric shock: Class I, II, III	Class I	Р
6.2	Protection against harmful ingress of water, IP degree in accordance with IEC 529 (IEC 60335-2-40:1995)		Р
	Appliances for outdoor use (IEC 60335-2-40:1995)	Indoor unit	N/A
	Appliances for indoor use (IEC 60335-2-40:1995)	IP20	Р
	Appliances for laundry rooms (IEC 60335-2-40:1995)	Warning: "the appliance shall not be installed in the laundry" is stated on user manual.	N/A
6.101	Degree of accessibility (accessible/not accessible to the general public (IEC 60335-2-40:1995)	Accessible to general public, but intended to be technically maintained (except for air filter cleaning) only by qualified service personnel.	Ρ
7	MARKING		Р
7.1	Rated voltage or voltage range (V):	<ol> <li>AC220-240V for K 25 DCI, K 35 DCI, K 35S DCI, K 50 DCI</li> <li>AC230V for C 303 H,</li> </ol>	Ρ
	Symbol for nature of supply including number of phases, unless for single phase operation (IEC 60335-2-40:1995)	C 304 H and C 305 H	Р
	Rated frequency or frequency range (Hz):	50Hz	Р
	Rated input or rated current	See rating labels	Р
	Manufacturer's or responsible vendor's name, trademark or identification mark	1) ELECTRA 2) VIESSMANN	Р
	Model or type reference	See rating labels	Р
	Symbol for Class II	Class I	N/A
	Symbol for degree of protection against ingress of water, other than IPX0 (IEC 60335-2-40:1995)	IP20	Р



www.tuv.co	om Page 7 of 61	Report No:<16009337 00	
	IEC 60335-2-40	Γ	
Clause	Requirement + Test	Result - Remark	Verdict
	Mass of the refrigerant or of each refrigerant in a blend (except for azeotropic type (IEC 60335-2-40:1995)		N/A
	Refrigerant identification (IEC 60335-2-40:1995)	R410A	Р
	Permissible excessive operating pressure in pascals for sanitary hot water heat pumps (IEC 60335-2- 40:1995)		N/A
	Excessive operating pressure of the refrigerant circuit for suction and discharge, if they differ (IEC 60335-2-40:1995)	See rating labels	Р
	The maximum operating pressure for the heat exchanger (IEC 60335-2-40/A1:2000)	See rating labels	Р
	Separate marking of the appliances with all the rated characteristics of the supplementary heaters (IEC 60335-2-40:1995)	No supplementary heaters	N/A
	Marking of the direction of the fluid flow (IEC 60335-2- 40:1995)		N/A
7.2	Warning for stationary appliances	Single supply	N/A
	Warning placed in vicinity of terminal cover	Single supply	N/A
7.3	Range of rated values correctly marked	220-240V for K 25 DCI, K 35 DCI, K 35S DCI, K 50 DCI	Р
7.4	Voltage setting clearly discernible		N/A
7.5	Marking of rated input for each rated voltage	Single voltage supply range	N/A
	Marking for upper and lower limits of rated input		N/A
7.6	Correct symbols used		Р
7.7	Correct connection diagram, fixed to the appliance	Near the terminal	Р
7.8	Not for type Z attachment:		Р
	- marking of terminals for the neutral conductor (N)	Neutral conductor terminal marked with letter 'N'.	Р
	- marking of earthing terminals		Р
	- marking not placed on removable parts		Р
	- marking of terminal for single-pole protective device		N/A



www.tuv.co	om Page 8 of 61	Report No:<16009	337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
7.9	Marking or placing of switches which may cause a hazard	Symbols IEC 60417 No. 5008 "0" for OFF and No. 5007 "I" for ON. The symbol for ON/OFF (IEC 60417 No. 5009) is used on the remote control unit. No other switches, which operation might cause a hazard, are used.	Ρ
7.10	Indications of switches and regulating devices by use of figures, letters or other	See sub-clause 7.9. Functions of control buttons on remote control are explained by symbols on LCD panel and in words (English).	Ρ
	The figure 0 indicates only OFF position, unless no confusion with the OFF position	For remote controller	Ρ
7.11	Indication for direction of adjustment of controls		Р
7.12	Instructions for safe use provided	Stated in user manual.	Р
	Classification of 6.101 included, for appliances not accessible to general public (IEC 60335-2-40:1995)		N/A
7.12.1	Sufficient details for installation or maintenance supplied:		Р
	- national wiring regulations for installation (IEC 60335-2-40:1995)	Stated in user manual.	Р
	- dimensions of space for installation (IEC 60335-2- 40:1995)	Stated in user manual.	Р
	- wiring diagram (IEC 60335-2-40:1995)	Provided.	Р
	<ul> <li>range of external static pressures (only heat pumps and appliances with electric resistance heaters) (IEC 60335-2-40:1995)</li> </ul>	No static pressure required	N/A
	- minimum clearance from appliances with supplementary heaters to combustible surfaces (IEC 60335-2-40:1995)	No supplementary heaters	N/A
	- indication of suitable parts for outdoor use (IEC 60335-2-40:1995)	Indoor unit	N/A
	- method of connection to the electrical supply and interconnection of separate components (IEC 60335-2-40:1995)		Р
	- type and rated characteristics of fuses (IEC 60335-2- 40:1995)	3,15A T	Р
	- details of supplementary heating elements, including fitting instructions (IEC 60335-2-40:1995)		N/A



vww.tuv.co	5	Report No:<16009	3337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
	- maximum and minimum water or brine operating temperatures (IEC 60335-2-40:1995)		N/A
	- maximum and minimum water or brine operating pressures (IEC 60335-2-40:1995)		N/A
	<ul> <li>- indication of open water storage tanks (IEC 60335-2- 40:1995)</li> </ul>		N/A
7.12.2	Means for disconnection with contact separation at least 3 mm or instruction regarding means of disconnection in the fixed wiring (IEC 60335-1/A2:99)	Power cord with plug	N/A
7.12.3	Insulation in contact with parts exceeding 50 K; instruction		N/A
7.12.4	Information with regard to building-in:	Stated in the installation manual	Р
	- dimensions of space		Р
	- dimensions and position of support		Р
	- ventilation openings		Р
	- connection/interconnection plug accessible		Р
7.12.5	Replacement cord, type X attachment		N/A
	Replacement cord, type Y attachment		Р
	Replacement cord, type Z attachment		N/A
7.13	Instructions and other texts in official language	In English	Р
7.14	Marking easily legible and durable		Р
7.15	Marking on a main part		Р
	Marking clearly discernible from outside		Р
	Stationary appliance: name or trademark and model or type reference visible after installation		N/A
	Indication for switches and controls in vicinity of components; not on removable parts if misleading		N/A
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link	Current fuse rating marked on the PCB, near the fuse holder:3,15A T , AC250V	Р
7.101	Marking of fuses and overload protective devices, if replaceable (IEC 60335-2-40:1995):		Р
	- fuse rated current in amperes, type and rated voltage (IEC 60335-2-40:1995)	Current fuse rating marked on the PCB, near the fuse holder:3,15A T , AC250V	Р
	- manufacturer and model of the overload protective device (IEC 60335-2-40:1995)		N/A



www.tuv.co	DM Page 10 of 61	Report No:<1600	9337 001
	IEC 60335-2-40	l	[
Clause	Requirement + Test	Result - Remark	Verdic
7.102	Marking for connection with aluminium wire, if necessary (IEC 60335-2-40:1995)	The use of aluminium wires is not intended.	N/A
8	PROTECTION AGAINST ACCESSIBILITY TO LIVE PARTS		Р
8.1	Adequate protection against accidental contact with live parts		Р
8.1.1	All positions; detachable parts removed	Installation only by authorized service personnel.	Р
		Basic insulation is provided before installation is carried out.	
		Test finger and test pin applied to all openings of the appliance after equipment was installed as described in installation manual.	
		Insulation System:	
		- No bare live parts accessible through openings in the enclosure.	
		- Basic insulation provided between earthed metal electrical box and live parts inside	
		- Remote control unit is supplied by 3V battery.	
	Removal of lamps: protection against contact with live parts	No lamps	N/A
	Use of test finger: no contact with live parts		Р
8.1.2	Use of test pin: no contact with live parts	No bare live parts are accessible with the test pin.	N/A
	Test pin applied to openings in earthed metal enclosures having a coating such as enamel or lacquer (IEC 60335-1/A2:1999)		N/A
8.1.3	Use of test probe: no contact with live parts of visible glowing heating elements	No visible glowing heating elements used.	N/A
8.1.4	Accessible part not considered live if:		Р
	extra-low a.c. voltage: peak values not exceeding 42,4 V	No SELV circuits	N/A
	- extra-low d.c. voltage: not exceeding 42,4 V	Remote controller	Р



www.tuv.co	om Page 11 of 61	Report No:<1600	9337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
	- or separated from live parts by protective impedance, d.c. current not exceeding 2 mA		N/A
	- or separated from live parts by protective impedance, a.c. peak value not exceeding 0,7 mA		N/A
	- for peak value 42,4 V up to and including 450 V capacitance not exceeding 0,1 $\mu\text{F}$		N/A
	- for peak value 450 V up to and including 15 kV capacitance not exceeding 0,1 $\mu\text{F}$		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		Ρ
	- built-in appliances		Р
	- fixed appliances		Р
	- separate units		N/A
8.2	Class II appliances and constructions adequately protected against accidental contact with basic insulation and metal parts separated from live parts with only basic insulation	Neither bare live parts nor basic insulated live parts are touchable with the test finger through openings in the enclosure. The room temperature sensor has double insulation.	Ρ
		Internal basic insulation wires are well-fixed and supplementary insulation from accessible screw.	
10	POWER INPUT AND CURRENT		Р
10.1	Power input at rated voltage and normal operating temperature not deviating from rated input by more than shown in table; measured power input (W); rated input (W); deviation:	(see appended table)	Ρ
10.2	Current at normal operating temperature not deviating from rated current by more than shown in table; measured current at rated voltage under normal operation (A); rated current (A); deviation	Not marked on rating label	N/A
11	HEATING		Р
11.1	No excessive temperatures in normal use		Р
	Compliance is checked by the tests of Annex C, if (IEC 60335-2-40:1995):		N/A
	- temperature of motor winding exceeds values shown in Table 3 (IEC 60335-2-40:1995)		N/A
	- there is no doubt about the classification of the insulation system of the motor (IEC 60335-2-40:1995)	The insulation material used in the motors is UL approved.	Р



www.tuv.co	om Page 12 of 61 IEC 60335-2-40	Report No:<1600	
Clause	Requirement + Test	Result - Remark	Verdic
11.2	Placing and mounting of appliance (IEC 60335-2- 40:1995):		Р
	- clearances to adjacent surfaces (IEC 60335-2- 40:1995)		Р
	- static pressures, (IEC 60335-2-40:1995) except for fan coils where the flow rates and liquid temperatures, that shall be the maximum specified in the manufacturer's instruction (IEC 60335-2- 40:1995+A1:2000)		N/A
	- adjustable limit controls set at the maximum cut-out setting and the minimum differential (IEC 60335-2- 40:1995)		Ρ
	- flows (IEC 60335-2-40:1995)		N/A
	For appliances with supplementary heaters, use test casing of 11.9 (IEC 60335-2-40:1995)	No supplementary heaters	N/A
	For appliances with supplementary heaters, an inlet duct is connected to the inlet air opening (IEC 60335-2-40:1995)		N/A
	Air outlet duct if necessary (IEC 60335-2-40:1995)		N/A
11.3	Temperature rises determined by thermocouples or resistance method	The temperature rises of pump and fan motor were determined by resistance method, other components were determined by thermocouples	Ρ
11.4	Test performed at supply voltage between 0,94 and 1,06 times the rated voltage (IEC 60335-2-40:1995)	1,06X240=254V was considered to be the more unfavourable voltage.	Р
	Heating appliances operated under normal operation at 1,15 times rated power input	Not heating appliance	N/A
11.5	Test conducted in the heating mode and in the cooling mode, if both exist (IEC 60335-2-40:1995)	In cooling and heating mode	Р
	All the supplementary heating elements operative simultaneously (IEC 60335-2-40:1995)		N/A
11.6	Defrost test in the most unfavourable conditions, if needed (IEC 60335-2-40:1995)	Indoor unit	N/A
11.7	Appliances operated continuously until steady conditions except for defrost tests (IEC 60335-2-40:1995)	Until steady conditions	Р
11.8	Monitored temperatures not exceeding the values of Table 3 (IEC 60335-2-40:1995)	(see appended table)	Р
	Protective devices do not operate		Р
	Sealing compound not flowing out		Р

TRF No:I60335240C



www.tuv.co	om Page 13 of 61	Report No:<16	6009337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
	Temperature of the air in the outlet duct not exceeding 90 °C (IEC 60335-2-40:1995)		N/A
11.9	Test casing and installation of the rest of the appliances in accordance with the manufacturer's instructions (IEC 60335-2-40:1995)		Р
	Glass fibre insulation for appliances without indication of minimum clearances according to the manufacturer; thermocouple in contact with the enclosure (IEC 60335-2-40:1995)		N/A
13	LEAKAGE CURRENT		Р
13.1	Leakage current not excessive and electric strength adequate		Р
13.2	Leakage current measured by means of circuit described in Annex G (IEC 60335-2-40:1995)		Р
	Leakage current measurements	(see appended table)	Р
13.3	Electric strength test of insulation. See Note in Interpretation Sheet I-SH 02, August 1994	(see appended table)	Р
	No breakdown during the test		Р
15	MOISTURE RESISTANCE		Р
15.1	Enclosure provides the degree of moisture protection against the ingress of water (rain, overflow from the drain pan of defrosting, tests of 15.2, 15.3, 11.6 and Cl. 16) (IEC 60335-2-40:1995)		Р
	Motor-compressor not operated and detachable parts not removed during 15.2 and 15.3 (IEC 60335-2- 40/A1:2000)		N/A
	After test, water inside the enclosure has not reduced the creepage distances and clearances below the values of Cl. 29 (IEC 60335-2-40:1995)		Р
15.2	Tests in accordance with IEC 529 in appliances other than IPX0, as specified (IEC 60335-2-40:1995)	IP20	N/A
15.3	Spillage of liquid does not affect the electrical insulation (IEC 60335-2-40:1995)		N/A
15.4	Spillage test according to IEC 60335-2-40/A1:2000		Р
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		Р
16.1	No excessive leakage current and adequate insulation and electric strength (tests 16.2 and 16.3)		Р
16.2	Leakage current measurements (IEC 60335-2- 40:1995)	(see appended table)	Р



www.tuv.co	om Page 14 of 61	Report No:<1600	9337 001>
	IEC 60335-2-40	l	
Clause	Requirement + Test	Result - Remark	Verdict
16.3	Electric strength tests (values in table 5). See Note in Interpretation Sheet I-SH 02, August 1994	(see appended table)	Р
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		Р
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use		Р
	Appliance supplied with 1,06 or 0,94 times rated voltage and the most unfavourable short-circuit or overload likely to occur in normal use applied	(see appended table)	Р
	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 6		Р
	Except fail-safe transformer complying 15.5 of IEC 61558-1 (IEC 60335-1/A2:1999)	Not fail-safe transformer	N/A
19	ABNORMAL OPERATION		Р
19.1	The risk of fire or mechanical damage or electric shock under abnormal or careless operation obviated (tests 19.2-19.14) (IEC 60335-2-40:1995)		Р
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe (electric shock, fire or mechanical hazard, dangerous malfunction (test 19.11 and 19.12) (IEC 60335-2-40:1995)		Р
19.2	Test of appliance with motor rotors, other than motor- compressors, operated for 15 days (360 h) or until a protection device opens the circuit (IEC 60335-2- 40:1995)	(see appended table)	Р
	Insulation of motor windings (IEC 60335-2-40:1995)	(see appended table)	Р
	Temperature of enclosure does not exceed (°C) (IEC 60335-2-40:1995)	(see appended table)	Р
	Temperature of the windings does not exceed the values shown in the table; temperature (°C) (IEC 60335-2-40:1995):	(see appended table)	Р
	Electric strength test as specified in 16.3, 72 h after the beginning of the test (IEC 60335-2-40:1995)		Р
	A 30 mA residual current device does not open (IEC 60335-2-40:1995)		Р



www.tuv.co	om Page 15 of 61	Report No:<160	09337 001
	IEC 60335-2-40	Γ	
Clause	Requirement + Test	Result - Remark	Verdic
	At the end, the leakage current between the windings and the enclosure does not exceed 2 mA (IEC 60335- 2-40:1995)		Р
19.3	Motor-compressor complies with IEC 60335-2-34 (IEC 60335-2-40:1995):	Indoor unit	N/A
	Test of the motor-compressor with the rotor locked as specified in 19.3 of IEC 60335-2-34 (IEC 60335-2-40:1995)		N/A
19.4	Test of three-phase motors operated under the conditions of Cl. 11 with one phase disconnected until steady conditions (IEC 60335-2-40:1995)	Single phase	N/A
19.5	Test of appliance with heat transfer medium flow of the outdoor heat exchanger restricted or shut off when reaching steady conditions (IEC 60335-2- 40:1995)		N/A
	Test of appliance with heat transfer flow of the indoor heat exchanger restricted or shut off when reaching steady conditions (IEC 60335-2-40:1995)	Restricted the airflow inlet	Р
	Disconnection of the motor common to both the outdoor and the indoor heat exchangers when reaching steady conditions (IEC 60335-2-40:1995)		N/A
19.6	Test of appliances using water as heat transfer medium (IEC 60335-2-40:1995)		N/A
19.7	The test of air to air appliances at rated voltage or at the upper limit of the rated voltage range. The dry- bulb temperature is 5 K below the values specified by the manufacturer (IEC 60335-2-40:1995)		Р
	Test with the dry-bulb temperature 10 K over the values specified by the manufacturer (IEC 60335-2-40:1995)	42°C (indoor unit)	Р
19.8	Test of appliances with supplementary electric heaters (IEC 60335-2-40:1995)	No heating element	N/A
19.9	Test at a temperature permitting continuous operation of the motor-compressor and the electric heating elements at the same time (IEC 60335-2-40:1995)		N/A
19.10	Test of the appliance with any defect which may be expected during normal use (IEC 60335-2-40:1995)	Open circuiting and short- circuiting of motor capacitor performed, and no hazards occurred.	Р
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 they comply with the conditions specified in 19.11.1		Р



vww.tuv.co	om Page 16 of 61 IEC 60335-2-40	Report No:<16009	
Clause	Requirement + Test	Result - Remark	Verdic
	Windings temperature not exceeding values shown in Table 6 (IEC 60335-2-40:1995)		Р
	Appliance shall comply with the conditions of 19.14 (IEC 60335-2-40:1995)		Ρ
	Appliance withstands the test: a conductor becomes open circuited and three conditions are met (IEC 60335-2-40:1995)		N/A
19.11.1	Before applying the fault conditions a) to f) in 19.11.2, it is checked if circuits or parts of circuit meet both of the following conditions:		Ρ
	- 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 in 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 operated under conditions specified in Cl. 11, but supplied at rated voltage, the duration of the tests as specified:	(see appended table)	Ρ
	a) short circuit of creepage distances and clearances between live parts of different potential, if these distances are less than the values specified in 29.1, unless the relevant part is adequately encapsulated	The Cl/Cr distances are not less than the valves specified in 29.1.	N/A
	b) open circuit at the terminals of any component	Open terminals of capacitor (see appended table)	Ρ
	c) short circuit of capacitors, unless they comply with IEC 60384-14 or 14.2 of IEC 60065	(see appended table)	Ρ
	d) short circuit of any two terminals of an electronic component, other than integrated circuits. This fault condition is not applied between the circuits of an optocoupler	Short circuit output of transformer 54X18(452827400) and 54X18(452827401)	Ρ
	e) failure of triacs in the diode mode		N/A
	f) failure of an integrated circuit. In this case the possible hazardous situations of the appliance are assessed to ensure that safety does not rely on the correct functioning of such a component		N/A
	Short-circuit of low-power circuits (IEC 60335-2- 40:1995)		N/A
	The duration of the tests (IEC 60335-2-40:1995):		Р
	- as specified in 11.7 but only for one operating cycle (in case the fault cannot be recognised by user) IEC 60335-2-40:1995)		Ρ



www.tuv.co	om Page 17 of 61 IEC 60335-2-40	Report No:<16009	001 00
Clause	Requirement + Test	Result - Remark	Verdic
	- as specified in 19.2, if fault can be recognised by user (IEC 60335-2-40:1995)		Р
	- until steady conditions are established (IEC 60335-2- 40:1995)		Р
	Test ended if interruption of supply occurs within the appliance (IEC 60335-2-40:1995)		Р
	Fault condition f) applied to encapsulated or similar components (IEC 60335-2-40:1995)		N/A
	PTC's, NTC's and VDR's resistors not short-circuited if used as specified by manufacturer (IEC 60335-2-40:1995)		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 127, the test is repeated but with fuse-link replaced by an ammeter (IEC 60335-2-40:1995)	Fuse on the PCB broken when short circuit the output of the transformer 54X18(452827400) and 54X18(452827401)	Р
	Current $\leq$ 2,1 times rated current of fuse-link, circuit not adequately protected (fuse-link short-circuited) (IEC-335-2-40:95)		N/A
	Current $\ge$ 2,75 times rated current of fuse-link, circuit adequately protected (IEC 60335-2-40:1995)	The fuse broke at 13,9A, and the rated current of fuse-link is 3,15A.	Р
	Current $\ge$ 2,1 and I $\le$ 2,75 times rated current, fuse- link short-circuited and test carried out during specified time (IEC 60335-2-40:1995)		N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		Р
	Test for appliances with PTC heating elements (IEC 60335-2-40:1995)		N/A
19.14	No flames, molten metal, poisonous or ignitable gas or deformed enclosures (IEC 60335-2-40:1995)		Р
	Temperatures rise shall not exceed the values shown in Table 7 (IEC 60335-2-40:1995)	(see appended table)	Р
	The electric strength test, the test voltage being:		Р
	- basic insulation: 1000 V		Р
	- supplementary insulation: 2750 V		Р
	- reinforced insulation: 3750 V		Р
19.15	Appliance with supplementary heaters and free air discharge subjected to the additional tests of (IEC 60335-2-40/A1:2000)		N/A



vww.tuv.co	om Page 18 of 61	Report No:<160	09337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
	Appliance operated under conditions of clause 11 with temperature controls shorts-circuited and appliance covered as required (IEC 60335-2-40/A1:2000)		N/A
	During the test the temperature rise not exceed 150°C (IEC 60335-2-40/A1:2000)		N/A
20	STABILITY AND MECHANICAL HAZARDS		Р
20.1	Adequate stability	Built-in appliance	N/A
	Tilting test through an angle of 10 ° (appliance placed on an inclined plane/horizontal plane); appliance does not overturn		N/A
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15 $^\circ$		N/A
	Possible heating test in overturned position; temperature rise does not exceed values shown in Table 7		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		Р
	Protective enclosures, guards and similar parts are non-detachable		Р
	Adequate mechanical strength and fixing of protective enclosures		Р
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, if unexpectedly reclosed		Р
	Not possible to touch dangerous moving parts with test finger		Р
21	MECHANICAL STRENGTH		Р
	Appliance has adequate mechanical strength and is constructed as to withstand rough handling (safety requirements of ISO 5149 apply, IEC 60335-2- 40:1995)		P
	No damage after three blows applied to various parts of the enclosure, impact energy $0.5 \pm 0.04$ Nm	Three blows on the display panel	Р
	If necessary, supplementary or reinforced insulation subjected to the electric strength test of 16.3		Р
	If necessary, repetition of groups of three blows on a new sample		N/A
22	CONSTRUCTION		Р
22.1	Appliance marked with the first numeral of the IP system: relevant requirements of IEC 529 are fulfilled	IP20	Р



www.tuv.co		Report No:<1600	J9337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
22.2	Stationary appliance: means to provide all-pole disconnection from the supply provided, the following means being available:		Р
	- a supply cord fitted with a plug		Р
	- a switch complying with 24.3		N/A
	<ul> <li>a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided</li> </ul>		N/A
	- an appliance coupler		N/A
	Single-phase Class I appliance with heating elements, intended to be permanently connected to fixed wiring, incorporating single-pole switches or single-pole protective devices for the disconnection of the heating element(s): the switches/devices being connected in the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0,25 Nm		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A
22.5	No risk of electric shock when touching the pins of the plug	The test was performed ten times, and the highest measured value was 0.	Р
22.6	Electrical insulation not affected by condensing water or leaking liquid	Checked by clause 15	Р
	Electrical insulation of Class II appliances not affected in case of a hose rupture or seal leak	Class I appliance	N/A
	Electrical insulation not affected by snow penetration to the appliance enclosure (IEC 60335-2-40:1995)	Indoor unit	N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances provided with steam-producing devices	No over-pressure expected, which could lead to a hazardous situation.	N/A
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 which are likely to be cleaned in normal use	When replacing the filter, the construction prevent incorporated electrical connection to be accessible.	Р
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances		N/A
	Adequate insulating properties of oil or grease to which insulation is exposed		N/A



www.tuv.co	Page 20 of 61	Report No:<1600	9337 001
	IEC 60335-2-40	1	1
Clause	Requirement + Test	Result - Remark	Verdict
22.10	Location or protection of reset buttons of non-self- resetting controls is so that accidental resetting is unlikely	No non-self-resetting controls employed	N/A
22.11	Reliable fixing of non-detachable parts which provide the necessary degree of protection against electric shock, moisture or contact with moving parts		Р
	Obvious locked position of snap-in devices used for fixing such parts		N/A
	No deterioration of the fixing properties of snap-in devices used in parts which are likely to be removed during installation or servicing		N/A
	Tests		N/A
22.12	Handles, knobs etc. fixed in a reliable manner		N/A
	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 of which being so that an axial pull is unlikely to be applied		N/A
	Axial force 30 N applied to parts, the shape of which being so that an axial pull is likely to be applied		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operators hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		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.	Р
	No exposed pointed ends of self tapping screws etc., liable to be touched by the user in normal use or during user maintenance		Р
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, no undue wear of contacts	No automatic cord reels	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	No spacers	N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion under normal conditions of use		Р



www.tuv.co	om Page 21 of 61	Page 21 of 61 Report No:<160093		
IEC 60335-2-40				
Clause	Requirement + Test	Result - Remark	Verdict	
22.19	Driving belts not used as electrical insulation		N/A	
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless material used is non-corrosive, non-hygroscopic and non- combustible		N/A	
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material used as insulation, unless impregnated	No such materials used as insulation	N/A	
22.22	Asbestos not used in the construction of the appliance		Р	
	Asbestos is used, but the liberation of dust of impregnated asbestos or of asbestos fibres into the surrounding air adequately prevented		N/A	
22.23	Oils containing polychlorinated biphenyl (PCB) not used	No oils containing polychlorinated biphenyl (PCB)	Р	
22.24	Bare heating elements adequately supported to prevent contact with accessible metal parts in case of rupture or sagging (IEC 60335-2-40:1995)	No bare heating elements.	N/A	
	Bare heating elements only used with metal enclosures (wood or composite enclosures not allowed) (IEC 60335-2-40:1995)		N/A	
22.25	Sagging heating conductors cannot come into contact with accessible metal parts		N/A	
22.26	The insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation	No SELV circuits.	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 protection against electric shock is maintained after installation	Class I appliances	N/A	
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		Р	
	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		Р	



www.tuv.co	om Page 22 of 61	Report No:<16009	337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
22.31	Creepage distances and clearances over supplementary and reinforced insulation not reduced below values specified in 29.1 as a result of wear		Р
	Creepage distances and clearances over supplementary or reinforced insulation not reduced to less than 50% of values specified in 29.1 if wires, screws etc. becomes loose		Ρ
22.32	Supplementary and reinforced insulation designed or protected against deposition of dirt or dust		Ρ
	Ceramic material not tightly sintered, similar material or beads alone not used as supplementary or reinforced insulation		Ρ
	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 29.1		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
	See Note ("In case of doubt") (IEC 60335-1/A2:1999)		N/A
22.33	Conductive liquids which are or may become accessible in normal use are not in direct contact with live parts		Ρ
	Conductive liquids are not in direct contact with basic insulation or reinforced insulation in Class II constructions	Condensing water cannot become in contact with basic or reinforced insulation	Ρ
	Conductive liquids in contact with live parts, not in direct contact with reinforced insulation in class II construction (IEC 60335-1/A2:1999)		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless the shaft is not accessible when the part is removed		N/A
22.35	Handles, levers and knobs, held or actuated in normal use, not becoming live in the event of an insulation fault		N/A
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of an insulation fault, they 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 either reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A



www.tuv.co	om Page 23 of 61	Report No:<1600	9337 001	
IEC 60335-2-40				
Clause	Requirement + Test	Result - Remark	Verdict	
22.36	Handles continuously held in the hand in normal use are so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless 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, unless complying with 22.42	Class I appliance	N/A	
	Metal casings of capacitors in Class II appliances separated from accessible metal parts by supplementary insulation, unless complying with 22.42		N/A	
22.38	Capacitors not connected between the contacts of a thermal cut-out		Р	
22.39	Lamp holders only used for the connection of lamps	No lamp holder	N/A	
22.40	Motor-operated appliances and combined appliances, intended to be moved while in operation, are fitted with a switch to control the motor	Not intended to be moved while in operation	N/A	
22.41	Mercury switches mounted according to the requirement	Mercury switches not used	N/A	
22.42	Protective impedance consisting of at least two separate components	No protective impedance	N/A	
	Values specified in 8.1.4 not exceeded if any one of the components is short-circuited or open-circuited		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 shall not have an enclosure likely to be treated as a toy by children (IEC 60335-1/A2:1999 )		Р	
22.101	Appliances intended to be fixed, securely fixed (IEC 60335-2-40:1995)		Р	
22.102	Double thermal cut-out in appliances with supplementary heating elements (the first one shall be a self-resetting and the other a non-self-resetting thermal cut-out) (IEC 60335-2-40:1995)	No heating element	N/A	
	Thermal cut-outs of the capillary type open in the event of leakage of the capillary tube (IEC 60335-2-40:1995)		N/A	
	Thermal cut-outs comply with 24.3 (switches) (IEC 60335-2-40:1995)		N/A	
	Thermal cut-outs operating in CI. 19. shall be of the non-self-resetting type (IEC 60335-2-40:1995)		N/A	



www.tuv.co	om Page 24 of 61	Report No:<1600	9337 001
	IEC 60335-2-40	I	
Clause	Requirement + Test	Result - Remark	Verdict
22.103	Non-self-resetting cut-outs independent of other control devices (IEC 60335-2-40:1995)		N/A
22.104	Containers of sanitary hot water heat pumps withstand twice the permissible pressure in closed containers or 0,15 MPa in open containers, without leakage or rupture (IEC 60335-2-40:1995)		N/A
22.105	Air or vapour cushion in closed containers not exceeding the 10% (IEC 60335-2-40:1995)		N/A
22.106	Pressure relief devices operating at 0,1 MPa over the permissible pressure (IEC 60335-2-40:1995)		N/A
22.107	Water outlet systems of open containers free from obstructions causing over-pressure (IEC 60335-2-40:1995)		N/A
	Vented containers of sanitary hot water heat pumps always open to the atmosphere through appropriate aperture (IEC 60335-2-40:1995)		N/A
22.108	Not vented open containers are subjected to a test in accordance with 22.104 to a vacuum of 33 kPa for 15 min (IEC 60335-2-40:1995)		N/A
22.109	Replacement of non-self-resetting thermal cut-outs does not damage other connections (IEC 60335-2-40:1995)	The non-self resetting thermal cut-outs cannot be replaced.	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 the enclosure (IEC 60335-2-40:1995)		N/A
	Test repeated five times without blowing a 3 A fuse which connects the appliance to earth (IEC 60335-2-40:1995)		N/A
	Electric strength test as specified in 16.3 for supplementary heating elements (IEC 60335-2- 40:1995)		N/A
22.111	Manual resetting of thermostats not necessary after power supply interruption (IEC 60335-2-40:1995)		Р
23	INTERNAL WIRING		Р
23.1	Wireways smooth and free from sharp edges	No sharp edges in wireway	Р
	Wires protected against contact with burrs, cooling fins etc.		Р
	Wire holes in metal well rounded or provided with bushings		Р
	Wiring effectively prevented from coming into contact with moving parts		Р



www.tuv.co	om Page 25 of 61	Report No:<1600	9337 001		
	IEC 60335-2-40				
Clause	Requirement + Test	Result - Remark	Verdict		
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges or corners		N/A		
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A		
23.3	Electrical connections and internal conductors wiring movable relatively to each other not exposed to undue stress	Wires are fixed well and not movable during operation	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		N/A		
	Electric strength test, 1000 V between live parts and metal parts		N/A		
23.4	Bare internal wiring sufficiently rigid and fixed		Р		
23.5	The basic insulation of internal wiring withstanding the electrical stress likely to occur in normal use		Р		
	No breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		Р		
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by positive means	Sleeving of temperature sensor of the appliance is retained by positive means	Р		
23.7	Only the colour combination green/yellow used for earthing conductors		Р		
23.8	Aluminium wires not used for internal wiring	No used	Р		
23.9	No lead-tin soldering of stranded conductors where they are subject to contact pressure, unless	No soldering of stranded wires	Р		
	clamping means so constructed that there is no risk of bad contact due to cold flow of the solder		Р		
24	COMPONENTS		Р		
24.1	Components comply with safety requirements in relevant IEC standards		Р		
	Motor-compressors not tested according to IEC 60335-2-34 (not necessary to meet all requirements of IEC 60335-2-34) (IEC 60335-2-40:1995)		N/A		
24.1.1	Fixed capacitors for radio interference suppression, compliance with annex Q (IEC 60335-1/A2:1999)		Р		



www.tuv.co	om Page 26 of 61	Report No:<1600	9337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
	Small lampholders: compliance with requirements for E10 lampholders	No lamp holders	N/A
	Isolating transformers and safety isolating transformers: compliance with IEC 61558-2-6 or comply with annex R (IEC 60335-1/A2:1999)		N/A
	Appliance couplers for IPx0 appliances: compliance with IEC 60320	No appliance coupler	N/A
	Other appliance couplers: compliance with IEC 309		N/A
	Automatic controls: compliance with IEC 60730, unless tested with the appliance	Thermal cutouts are approved type.	Р
	Switches: compliance with IEC 61058-1, unless teste with the appliance (IEC 60335-1/A2:1999)	d	N/A
24.1.2	Automatic controls complying with IEC 60730: additional tests according to this standard and 11.3.5 to 11.3.8 and Cl. 17 of IEC 60730 as type 1 controls (see number of cycles of operation IEC 60335-2- 40:1995)		N/A
24.1.3	Switches tested under the conditions occurring in the appliance, comply with annex S (IEC 60335-1/A2:1999)		N/A
	Switch tested separately according to IEC 61058-1for 10 000 cycles of operation (IEC 60335-1/A2:1999)		N/A
	Switches for no-load-operation and operable only with the aid of a tool, are not subjected to the tests of clauses of IEC 61058-1 This applies also to switches operated by hand, and with interlock for no-load- operation (IEC 60335-1/A2:1999)		N/A
	Switches without this interlock subjected to the test of CI. 17.2.7 for 100 cycles of operation (IEC 60335-1/A2:1999)		N/A
24.1.4	Components marked with their operating characteristics are used in the appliance in accordance with these markings		Р
	Component which have to comply with other standard is tested separately, according to the relevant standard	1	Р
	Component used within the limits of its marking, tested in accordance with conditions occurring in the appliance		Р
	Component not marked, or not used in accordance with its marking, or no IEC standard exists, tested under the conditions occurring in the appliance		Р



www.tuv.com Page 27 of 61 Report No:<16009		9337 001>.		
		IEC 60335-2-40		
Clause	Requirement + Test		Result - Remark	Verdict

	Components not mentioned in table 3 tested as part of the appliance		Р
24.1.5	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	All samples measured at 264V and the highest value was listed: Indoor fan capacitor: 384V	Ρ
	Capacitors for which 30.2.3. is applicable and permanently connected in series with a motor shall be class P1 or P2 of IEC 60252 (IEC 60335-1/A2:1999)		Р
	List of components	(see appended table)	Р
24.2	No switches or automatic controls in flexible cords		Р
	No devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		N/A
	No thermal cut-outs which can be reset by soldering		Р
24.3	Switch intended for all-pole disconnection of stationary appliances is directly connected to the supply terminals, having a contact separation of at least 3 mm in each pole		N/A
24.4	Plugs and socket-outlets for heating elements and extra-low voltage circuits, not interchangeable with plugs and		N/A
	socket-outlets or with connectors and appliance inlets complying with IEC 60083, IEC 60906-1 or IEC 60320, respectively		N/A
24.5	Plugs and socket-outlets etc. for interconnection cords, not interchangeable with plugs and socket- outlets or connectors and appliance inlets complying with IEC 60083 and IEC 60906-1 or IEC 60320, respectively, if direct supply from the mains could give rise to a hazard		N/A
24.6	Motors connected to the supply mains and having inadequate basic insulation for the rated voltage of the appliance, comply with the requirements of Annex F		N/A
	The components are listed on an appended table		N/A
24.101	Replaceable parts of thermal control devices identified by marking (IEC 60335-2-40:1995)		Ρ
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		Ρ
25.1	For connection to the supply, a supply cord fitted with a plug may be provided, if (IEC 60335-2-40:1995):		Р



vww.tuv.co	5	Report No:<1	6009337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
	- the appliance is only for indoor use (IEC 60335-2- 40:1995)		Р
	- it is marked with a rating of 25 A or less (IEC 60335- 2-40:1995)		Р
	- it complies with the code requirements of the country where it will be used (IEC 60335-2-40:1995)	Stated in user manual	Р
	- pins for insertion into socket-outlets provided for connection to the supply (IEC 60335-2-40:1995)		N/A
	- appliance inlet not allowed (IEC 60335-2-40:1995)		N/A
25.2	Appliance not provided with more than one means of connection to the supply		Р
	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	Built-in appliance	N/A
25.3	Connection of supply wires for appliance intended to be permanently connected to fixed wiring possible after the appliance has been fixed to its support		N/A
	Appliance provided with a set of terminals for the connection of cables or fixed wiring, cross-sectional areas specified in 26.3		N/A
	Appliance provided with a set of terminals allowing the connection of a flexible cord		N/A
	Appliance provided with a set of supply leads accommodated in a suitable compartment		N/A
	Appliance provided with a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate type of cable or conduit		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 8		Р
	Introduction of conduit or cable does not affect the protection against electric shock or reduce creepage distances and clearances below values specified in 29.1		P
25.5	Method for assemble supply cord with the appliance:		Р
	- type X attachment		N/A
	- type Y attachment		Р
	- type Z attachment, if allowed in part 2		N/A
	Type X attachment: specially prepared cord		N/A



www.tuv.co	om Page 29 of 61	Report No:<160	09337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
	Type X attachment not used for flat twin tinsel cord		N/A
25.6	Plugs fitted with only one flexible cord		Р
25.7	Appliance supply cord not lighter than:		Р
	- braided cord (245 IEC 51)		N/A
	- ordinary tough rubber sheathed cord (245 IEC 53)		N/A
	- flat twin tinsel cord (227 IEC 41)		N/A
	- light polyvinyl chloride sheathed cord (227 IEC 52), appliance not exceeding 3 kg		N/A
	<ul> <li>ordinary polyvinyl chloride sheathed cord</li> <li>(227 IEC 53), appliance exceeding 3 kg</li> </ul>	H05VV-F for all models; H07VV-F for K 50 DCI and C 305H	Р
	Temperature rise of external metal parts exceeding 75 K, PVC cord not used		N/A
	PVC cord used: appliance so constructed that the supply cord is not likely to touch external metal parts in normal use		N/A
	PVC supply cord appropriate for higher temperatures, type Y or type Z attachment used		N/A
	Supply cords for outdoor use not lighter than polychloroprene sheathed flexible cord (design 245 IEC 57) (IEC 60335-2-40:1995)		N/A
25.8	Nominal cross-sectional area of supply cords according to table 9; rated current (A); cross-sectional area (mm <sup>2</sup> ):	For models K 50 DCI and C 305H : 2,5 mm <sup>2</sup> For other models: 1,5mm <sup>2</sup>	Р
25.9	Supply cord not in contact with sharp points or edges		Р
25.10	Green/yellow core for earthing purposes in Class I appliance		Р
25.11	Conductors of supply cords not consolidated by lead- tin soldering where they are subject to contact pressure, unless	No soldering used.	Р
	clamping means so constructed that there is no risk of bad contacts due to cold flow of the solder		N/A
25.12	Moulding the cord to part of the enclosure does not damage the insulation of the supply cord		N/A
25.13	Inlet opening provided with a bushing, or is so constructed, that there is no risk of damage to the supply cord when introduced	Inlet opening is well rounded	Р
25.13.1	Inlet bushing so shaped as to prevent damage to the supply cord		Р
	Inlet bushing not detachable		Р



www.tuv.co		Report No:<1600	09337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
25.13.2	At inlet openings, the insulation between the conductor of a supply cord and the enclosure of the appliance is consisting of the insulation of the conductor, and in addition:		Р
	<ul> <li>for Class 0 appliances: at least one separate insulation</li> </ul>		N/A
	<ul> <li>for other appliances: at least two separate insulations</li> </ul>		Р
	Only one separate insulation is required if the enclosure at the inlet opening is of insulating material		N/A
	The separate insulation consists of:		N/A
	- the sheath of a supply cord at least equivalent to that of a cord complying with IEC 227 or 245		Р
	- a lining or bushing of insulating material complying with the requirements of 29.2 for supplementary insulation		N/A
25.14	Supply cords adequately protected against excessive flexing	Appliance not moved while in operation	N/A
	Flexing test; applied force (N); number of flexings .:		N/A
	The test does not result in:		N/A
	- short circuit between the conductors		N/A
	<ul> <li>breakage of more than 10% of the strands of any conductor</li> </ul>		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	<ul> <li>damage, within the meaning of the standard, to the cord or the cord guard</li> </ul>		N/A
	<ul> <li>broken strands piercing the insulation and becoming accessible</li> </ul>		N/A
25.15	Conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorages		Р
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		Р
	Pull and torque test of supply cord, values shown in table 10: pull (N); torque (not on automatic cord reel) (Nm):	100N, 0,35Nm	Р
	Max. 2 mm displacement of the cord, and conductors not moved more than 1 mm in the terminals	Measurement :0,2mm for the power cord and terminal	Р



www.tuv.c	om Page 31 of 61	Report No:<	16009337 001
	IEC 60335-2-40	1	
Clause	Requirement + Test	Result - Remark	Verdict
	Creepage distances and clearances not reduced below values specified in 29.1		Р
25.16	Cord anchorages for type X attachments so constructed and located that:	Type Y attachment	N/A
	- replacement of the cord is easily possible		N/A
	<ul> <li>it is clear how the relief from strain and the prevention of twisting are obtained</li> </ul>		N/A
	- they are suitable for different types of cord		N/A
	<ul> <li>- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless separated from</li> </ul>		N/A
	- 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
	<ul> <li>at least one part of the cord anchorage securely fixed to the appliance, unless part of a specially prepared cord</li> </ul>		N/A
	<ul> <li>screws which have to be operated when replacing the cord do not fix any other component, if applicable</li> </ul>		N/A
	<ul> <li>- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood</li> </ul>		N/A
	- for Class 0, 0I and I appliances: they are of insulating material or are provided with an insulating lining, unless 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 if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
25.17	Adequate cord anchorages for type Y and Z attachment	Type Y attachment	Р
25.18	Cord anchorages only accessible with the aid of a tool,		Р
	or so constructed that the cord only can be fitted with the aid of a tool		Р
25.19	Type X attachment, glands not used as cord anchorage in portable appliances	Type Y attachment	N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	Conductors of the supply cord for type Y and Z attachment adequately additionally insulated	Type Y attachment	Р



www.tuv.co	om Page 32 of 61	Report No:<1600	9337 001
	IEC 60335-2-40		I
Clause	Requirement + Test	Result - Remark	Verdict
25.21	Space for supply cable for fixed wiring or supply cord for type X attachment constructed to permit checking of conductors with respect to correct positioning and connection before fitting any cover, no risk of damage, no contact with accessible metal parts if a conductor becomes loose, etc.		N/A
	For portable appliances, the uninsulated end of a conductor prevented from any contact with accessible metal parts, unless the end of the cord is such that the conductors are unlikely to slip free		N/A
25.22	Appliance inlet:		N/A
	- live parts not accessible during insertion or removal		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	<ul> <li>- is not for cold conditions if temp. rise of external metal parts exceeds 75 K, unless the supply cord is not likely to touch such metal parts</li> </ul>		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except as specified		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Accessible metal parts not live when detachable interconnection cords are disconnected		N/A
25.25	Interconnection cords not detachable without the aid of a tool		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		Р
26.1.1	Appliances with type X attachment and appliances for connection to fixed wiring provided with terminals in which connection is made by means of screws, nuts or equally effective devices	Terminal block used	Р
	Screws and nuts serve only to clamp supply conductors, except		Р
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
26.1.2	For type X attachment soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone	No soldering method used for external conductors	N/A
	Soldering alone used, barriers provided, creepage distances and clearances satisfactory if the conductor becomes free		N/A
	For type Y and Z attachment: soldered, welded, crimped and similar connections used		Р
BE No.16	0335240C	TRF originat	



www.tuv.co	om Page 33 of 61	Report No:<	16009337 001
	IEC 60335-2-40	Γ	
Clause	Requirement + Test	Result - Remark	Verdict
	For Class II appliances: the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	For Class II appliances: soldering, welding or crimping alone used, barriers provided, creepage distances and clearances satisfactory if the conductor becomes free		N/A
26.2	Terminals for type X attachment and for connection to fixed wiring suitable for connection of conductors with required cross-sectional area according to table 11; rated current (A); nominal cross-sectional area (mm <sup>2</sup> ):		N/A
	Terminals only suitable for a specially prepared cord		N/A
26.3	Terminals for the supply cord suitable for their purpose		Р
	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless conductors ends fitted with a device suitable for screw terminals		Р
	Pull test of 5 N to the connection		Р
26.4	Terminals for type X attachment and those for connection to fixed wiring so fixed that when tightening or loosening the clamping means:	Type Y attachment	N/A
	- the terminal does not loosen		N/A
	- internal wiring is not subjected to stress		N/A
	- creepage distances and clearances are not reduced below the values in 29.1		N/A
26.5	Terminals for type X attachment and for connection to fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure and without damaging the conductor		N/A
26.6	Terminals for type X attachment, no special preparation of conductors required, and so constructed and placed that conductors prevented from slipping out, except those with a specially prepared cord and those for connection to fixed wiring		N/A
26.7	Terminals of the pillar type constructed and located as specified		N/A
26.8	Terminals for the connection to fixed wiring located close to each other, including the earthing terminal		N/A
26.9	Terminals for type X attachment accessible after removal of a cover or part of the enclosure		N/A



www.tuv.co	om Page 34 of 61	Report No:<1600	9337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
26.10	Terminals not accessible without removal of a non- detachable part (IEC 60335-1/A2:1999)		Р
26.11	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection between live parts and accessible metal parts,		N/A
	and for Class II construction, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
27	PROVISION FOR EARTHING		Р
27.1	Accessible metal parts of Class 0I and I appliances, permanently and reliably connected to an earthing terminal	All conductive and accessible metal parts, which could become live in the event of an insulation fault, are reliable earthed, using only metal-to- metal connections.	P
	Earthing terminals not connected to neutral terminal		Р
	Class 0, II and III appliance have no provision for earthing	Class I	N/A
27.2	Terminals used for the connection of external equipotential bonding conductors allow connection of conductors of 2,5 to 6 mm <sup>2</sup> , and		N/A
	do not provide earthing continuity between different parts of the appliance		N/A
	Conductors cannot be loosened without the aid of a tool		N/A
	Clamping means adequately secured against accidental loosening	Spring washer used	Р
27.3	Earth connection "made before" and "separated after" current-carrying connections		N/A
	Current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage	Protected earthed wires longer than current-carrying conductors	Р
27.4	No risk of corrosion resulting from contact between metal of earthing terminal and other metal		Р
	Adequate resistance to corrosion of coated or uncoated parts providing earthing continuity, other than parts of a metal frame or enclosure		Р
	Parts of steel providing earthing continuity provided at the essential areas with an electroplated coating, thickness at least 5 $\mu$ m		Р



www.tuv.co	om Page 35 of 61	Report No:<16009	337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		Р
	In case of aluminium alloys precautions taken to avoid risk of corrosion	Aluminium alloys not applied.	N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		Р
	Resistance not exceeding 0,1 $\Omega$ at the specified low-resistance test	All of the samples performed the test. The maximum measured value is 0,077 $\Omega$	Р
27.6	Printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances or complying the requirements specified for other appliances (IEC 60335-1/A1:1999)	Printed conductors of PCB not used to provide earthing continuity	Ρ
28	SCREWS AND CONNECTIONS		Р
28.1	Fixings and electrical connections withstand mechanical stresses		Ρ
	Screws not of soft metal liable to creep, such as zinc or aluminium		Р
	Diameter of screws of insulating material min. 3 mm	No screws of insulating material	N/A
	Screws of insulating material not used for any electrical connection		Р
	Screws transmitting electrical or providing earthing continuity contact only screwing into metal (IEC 60335-1/A2:1999)		Ρ
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation	No screws of insulating material	Р
	Type X attachment, screws to be removed for replacement of supply cord, or for users maintenance, not of insulating material if their replacement by a metal screw can impair basic insulation		N/A
	Screws and nuts of the uses described subjected to to torque test as specified, applying torque as shown in table 12 (IEC 60335-1/A2:1999)	Earthing screw, screws of enclosure, and screws of terminal: 1,2Nm, 5 times.	Р
28.2	Contact pressure not transmitted through insulating material liable to shrink or distort, unless shrinkage or distortion compensated		Р
	The requirement is not applicable in circuits carrying current less than 0,5 A (IEC 60335-1/A2:1999)		Ρ



www.tuv.co	om Page 36 of 61	Report No:<16	009337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
28.3	Space-threaded (sheet metal) screws only used for the electrical connection if they clamp these parts directly in contact with each other(IEC 60335- 1/A2:1999)		N/A
	Thread-cutting (self-tapping) screws not used for electrical connections, unless generating a full form standard machine screw thread		Р
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer unless the thread is formed by a swaging action		N/A
	Use of thread-cutting and space-threaded screws for earthing continuity according to specification	At least two self-tapping screws used for earthing continuity.	Р
28.4	Screws for current-carrying mechanical connection or screws providing earthing continuity secured against loosening		Р
	Rivets for electrical connections and for earthing continuity subject to torsion secured against loosening (IEC 60335-1/A2:1999)	No rivet for electrical connection.	N/A
29	CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH INSULATION		Р
29.1	Creepage distances and clearances not less than specified in table 13	(see appended table)	Р
	Values increased by 4 mm in case of reinforced insulation when resonance voltage		N/A
	Creepage distances and clearances for circuits with voltages greater than 250 V r.m.s. (345 V peak) comply with table (IEC 60335-2-40:1995)		Р
	For motor-compressors with working voltages ≤ 250 V, 29.1 of IEC 60335-2-34 applies (IEC 60335-2-40:1995)		N/A
	Creepage distances and clearances for motor- compressors with working voltages > 250 V r.m.s. and ≤ 600 V r.m.s. not less than stated in Table 101 (IEC 60335-2-40:1995)		N/A
29.2	Distances through insulation not less than 1,0 mm for supplementary insulation, and 2,0 mm for reinforced insulation. Interpretation of this requirement: see Interpretation Sheet I-SH 02, August, 1994		Р
29.2.1	Supplementary insulation applied in thin sheet form, other than mica or similar scaly material, consists of at least two layers, each of the layers withstands the electric strength test of 16.3 for supplementary insulation	No such constructions.	N/A



www.tuv.co	Ŭ	Report No:<16009	3337 00
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
	Reinforced insulation applied in thin sheet form, other than mica or similar scaly material, consists of at least three layers, and any two of the layers together withstand the electric strength test of 16.3 for reinforced insulation	No such constructions.	N/A
29.2.2	Supplementary or reinforced insulation inaccessible and does not exceed the maximum permissible temperature values		N/A
	Supplementary or reinforced insulation, after conditioning as specified, withstands the electric strength test as specified in 16.3, both at the oven temperature and room temperature		N/A
30	RESISTANCE TO HEAT, FIRE AND TRACKING		Р
30.1	See Annex H		Р
	Relevant external parts of non-metallic material		Р
	Parts supporting live parts and parts providing supplementary or reinforced insulation sufficiently resistant to heat		Р
	Ball-pressure test with a force of 20 N, diameter of impression not exceeding 2 mm:	(see appended table)	Р
	External parts: at 75 °C	Display panel	Р
	Parts supporting live parts: at 125 °C	Terminal block, PCB, Transformer bobbin,plastic part support terminal of transformer, winding enclosure of pump	Ρ
	Parts providing supplementary or reinforced insulation: temperature (°C):		Р
30.2	Relevant parts of non-metallic material adequately resistant to ignition and spread of fire		Р
30.2.1	Possible burning test of relevant parts according to Annex J		N/A
	Glow-wire test of Annex K made at temperature 550 °C	Display panel	Р
30.2.3	Appliances operated while unattended, possible bad- connection test according to Annex L		N/A
	Glow-wire test of Annex K made at 750 °C	Terminal block, PCB, Transformer bobbin, plastic part support terminal of transformer, winding enclosure of pump	Ρ
	Possible needle-flame test according to Annex M		Р



www.tuv.co	om Page 38 of 61	Report No:<160	09337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
30.2.4	Parts of non-metallic material within a distance of 50 mm from parts not withstanding the tests of 30.2.2 or 30.2.3, subjected to the needle-flame test of Annex M		N/A
30.3	Relevant insulating material have adequate resistance to tracking	(see appended table)	Р
	Tracking test at 175 V according to Annex N	Terminal block, PCB, plastic part support terminal of transformer	Р
	Tracking test at 250 V according to Annex N		N/A
	No hazard other than fire, tracking test at 175 V according to Annex N, and in addition needle-flame test of surrounding parts according to Annex M		N/A
	Possible needle-flame test of non-metallic material		N/A
31	RESISTANCE TO RUSTING		Р
	Relevant ferrous parts adequately protected against rusting		Р
Α	ANNEX A, NORMATIVE REFERENCES		Р
	The annex contains a list of standards which are referred to, and thus become part of, this standard		Р
С	ANNEX C, AGEING TEST ON MOTORS		N/A
	Test carried out when doubt with regard to the classification of the insulating system of a motor winding		N/A
E	ANNEX E, MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		Р
	Methods of measuring creepage distances and clearances, specified in 29.1, indicated in 10 different cases		Р
G	ANNEX G, CIRCUIT FOR MEASURING LEAKAGE CURRENTS		Р
	A suitable circuit for measuring leakage currents is shown		Р
H	ANNEX H, SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		Р
J	ANNEX J, BURNING TEST		N/A
	The burning test is made in accordance with IEC 707, and method FH is used		N/A
	Category FH3 applies, the maximum burning rate being 40 mm/min		N/A



www.tuv.co	om Page 39 of 61	Page 39 of 61 Report No:<16009	
	IEC 60335-2-40	Γ	
Clause	Requirement + Test	Result - Remark	Verdict
К	ANNEX K, GLOW-WIRE TEST		Р
	The glow-wire test is made in accordance with IEC 695-2-1 (clause numbers between parentheses refer to IEC 695-2-1)		Р
(4)	Description of test apparatus: the last paragraph before the note is replaced		Р
(5)	Severities: the duration of application of the tip of the glow-wire to the specimen being $(30 \pm 1)$ s		Р
(10)	Observations and measurements: item c) does not apply		Р
L	ANNEX L, BAD-CONNECTION TEST WITH HEATERS		N/A
	The bad-connection test with heaters is made in accordance with IEC 695-2-3 (clause numbers between parentheses refer to IEC 695-2-3)		N/A
(3)	General description of the test: additions concerning crimped connections		N/A
(4)	Description of test apparatus: replacements of some of the test specifications and the first paragraph of the note		N/A
(6)	Severities: the duration of application of the test power being (30 ± 1) min		N/A
(8)	Test procedure: subclause 8.6 replaced		N/A
(11)	Information to be given in the relevant specification: item h), the first dashed paragraph, does not apply		N/A
М	ANNEX M, NEEDLE-FLAME TEST		Р
	The needle-flame test is made in accordance with IEC 695-2-2 (clause numbers between parentheses refer to IEC 695-2-2)	For the electric box	Р
(4)	Description of the apparatus: the sixth paragraph is replaced		Р
(5)	Severities: the duration of application of the test flame is $(30 \pm 1)$ s	The ignite time is 1,6s.	Р
(8)	Test procedure: some changes in the test specifications		Р
(10)	Evaluation of the test results: addition in the test specification		N/A
N	ANNEX N, PROOF TRACKING TEST		Р



www.tuv.co	om Page 40 of 61	Report No:-	<16009337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdic
	The proof tracking test is made in accordance with IEC 112 (clause numbers between parentheses refer to IEC 112)		Р
(3)	Test specimen: the last sentence of the first paragraph does not apply		Р
(5)	Test apparatus: some changes in the subclauses		Р
(6)	Procedure: adjustments of the test specifications		Р
Ρ	ANNEX P, SEVERITY OF DUTY CONDITIONS OF INSULATING MATERIAL WITH RESPECT TO THE RISK OF TRACKING		Р
	Recognition of different duty conditions with respect to the risk of tracking		Р
Q	ANNEX Q, CAPACITORS		N/A
	Section one – General		N/A
1.5	Terminology		N/A
1.5.3	Applicable		N/A
	Class X capacitors tested according to subclass X2		N/A
1.5.4	Applicable		N/A
1.6	Marking		N/A
	Items a) and b) are applicable		N/A
	Section three – Quality assessment procedures		N/A
3.4.3.2	Tests		N/A
	Table II is applicable as follows		N/A
	- Group 0: subclauses 4.1.,4.2.1 and 4.2.5		N/A
	- Group 1 A: subclause 4.1.1		N/A
	- Group 2: subclause 4.12		N/A
	- Group 3: subclause 4.13 and 4.14		N/A
	- Group 6: subclause 4.17		N/A
	- Group 7: subclause 4.18		N/A
	Section four – Test and measurement procedures		N/A
4.1	Visual examination and check the dimensions		N/A
4.2	Electrical tests		N/A
4.2.1	Applicable		N/A
4.2.5	Applicable		N/A
4.2.5.2	Only table IX is applicable		N/A



www.tuv.co	om Page 41 of 61 IEC 60335-2-40	Report No.	<16009337 001
Clause	Requirement + Test	Result - Remark	Verdict
		1	ł
4.12	Only insulation resistance and voltage proof are checked		N/A
4.13	Applicable		N/A
4.14	Applicable with subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7		N/A
4.14.7	Only insulation resistance and voltage proof are checked together with a visual examination to ensure that there is not visible damage		N/A
4.17	Applicable		N/A
4.18	Applicable		N/A
R	ANNEX R, SAFETY ISOLATING TRANSFORMER		N/A
	Safety isolation transformer tested with the appliance comply with this standard and the following requirements:		N/A
R.7	Marking and instruction		N/A
R.7.1	Transformer for specific use shall be marked with:		N/A
	- name, trade-mark or identification mark of the manufacturer or responsible vendor		N/A
	- model or type reference		N/A
R.17	Overload protection of transformers and associated circuits		N/A
	Fail-safe transformer shall comply with 15.5 of IEC 61558-1		N/A
R.22	Construction		N/A
	Subclauses 19.1. and 19.1.2. of IEC 61558-2-6 are applicable		N/A
R.29	Creepage distances, clearances and distances through insulation		N/A
	The distances specified in items 2 a, 2 b, and 3 in table 13 of IEC 61558-1 apply		N/A
S	ANNEX S – SWITCHES		N/A
	Switches tested with the appliance comply with this standard and with the following clauses of IEC 61058- 1:		N/A
	Test of EN 61058-1 carry out under the conditions occurring in the appliance		N/A
	Before the test, switches are operated 20 times without load		N/A
8	Marking and documentation		N/A



vww.tuv.co	om Page 42 of 61	Report No:	<16009337 001
	IEC 60335-2-40	1	
Clause	Requirement + Test	Result - Remark	Verdict
	Switches are not required to be marked, except that incorporated switches shall be marked		N/A
13	Mechanism		N/A
	This clause is applicable		N/A
15	Insulation resistance and dielectric strength		N/A
	15.1 and 15.2 not applicable		N/A
	15.3 is applicable for disconnection and micro- disconnection		N/A
17	Endurance		N/A
	Compliance is checked on three separate appliances or switches		N/A
	At the end of the tests, the temperature rise of terminals shall not have increased by more than 30 K above the temperature rise measured in clause 11		N/A
18	Clearances, creepage and distances through insulation		N/A
	Only applicable for live parts of different potential		N/A
	DIFFERENCES EXISTING IN SOME COUNTRIES (IEC 60335-1)		N/A
2.5.2	U.S.A.: safety extra-low voltage not exceeding 30 V (42,2 V peak)		N/A
2.8.5	AUSTRALIA, NEW ZEALAND: disconnection of supply not considered as a manual operation		N/A
3	AUSTRALIA: the d.c. component in appliance neutral is limited		N/A
4.7	CHINA, JAPAN AND U.S.A.: ambient testing temperature is 25 °C ± 10 °C		N/A
4.14	U.S.A.: accessible metal parts not liable to become energised do not need earthing; accessible non- metallic parts provide only basic insulation		N/A
6.1	AUSTRALIA, AUSTRIA, CZECH REPUBLIC, FINLAND, FRANCE, GERMANY, HUNGARY, IRELAND, ITALY, NETHERLANDS, NEW ZEALAND, POLAND, SINGAPORE, SWEDEN, UNITED KINGDOM AND YUGOSLAVIA: Class 0 and Class I appliances not allowed	,	N/A
6.2	U.S.A.: methods for protection against harmful ingress of water different from IEC 529		N/A
7.1	U.S.A.: IP number not required to be marked		N/A
7.6	U.S.A.: some of these symbols not used		N/A



www.tuv.co	om Page 43 of 61	Report No:<16009337 001
	IEC 60335-2-40	
Clause	Requirement + Test	Result - Remark Verdict
7.8	U.S.A.: additional methods for identifying earthing terminals for neutral conductors	N/A
7.12.2	AUSTRALIA, JAPAN, NEW ZEALAND AND U.S.A.: the 3 mm contact separation not applicable	N/A
7.14	U.S.A.: different tests used	N/A
8.1.1	U.S.A.: test not necessarily repeated with the 20 N force	N/A
	U.S.A.: protection against contact with live parts of the lamp cap not required	N/A
8.1.2	U.S.A.: test pin and test probe not used	N/A
8.1.3	U.S.A.: test pin and test probe not used	N/A
8.1.5	U.S.A.: built-in and fixed appliances and appliances in separate units not to be protected by at least basic insulation before installation	N/A
9	U.S.A.: motors required starting without blowing a quick-acting fuse	N/A
10.1	U.S.A.: positive limits of 5% for heating appliances and 10% for motor-operated appliances required; no negative deviations	N/A
10.2	U.S.A.: positive limits of 5% for heating appliances and 10% for motor-operated appliances required; no negative deviations	N/A
11.4	U.S.A.: heating appliances and heater circuits operated at rated power input or rated voltage (the more severe); the rest at rated voltage	N/A
11.5	U.S.A.: heating appliances and heater circuits operated at rated power input or rated voltage (the more severe); the rest at rated voltage	N/A
11.6	U.S.A.: heating appliances and heater circuits operated at rated power input or rated voltage (the more severe); the rest at rated voltage	N/A
11.8	U.S.A.: temperature rise limits different for certain materials (Table 3)	N/A
13.2	U.S.A.: test circuit and some leakage current limits different	N/A
13.3	U.S.A.: certain test voltages different	N/A
	U.S.A.: a 500 VA test transformer used	N/A
15.1.1	U.S.A.: IP system not used; tests different	N/A
15.1.2	U.S.A.: IP system not used; tests different	N/A



www.tuv.co		Report No:<	16009337 001
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
15.3	U.S.A.: relative humidity of (88 $\pm$ 2) % and temperature of 32 °C $\pm$ 2 °C during test		N/A
16.2	U.S.A.: test at nominal supply voltage; leakage current values different		N/A
16.3	U.S.A.: some test voltages and methods different		N/A
19.1	U.S.A.: circuit protection device permitted		N/A
19.2 19.4	U.S.A.: tests normally at nominal supply voltage or rated power input		N/A
19.13	U.S.A.: temperature rise limits of Table 7 not applicable		N/A
20.1	U.S.A.: stability test at 15 degrees not conducted; test in overturned position judged under abnormal test criteria		N/A
21	U.S.A.: impact force applied with a falling steel ball		N/A
22.1	U.S.A.: IP system not used; tests not the same as in IEC 529		N/A
22.2	FRANCE AND NORWAY: single-phase Class I appliances with heating elements not complying because of the supply system		N/A
	NORWAY: double-pole switches or protective devices required		N/A
	U.S.A.: set of terminals for connection of a flexible cord generally not permitted		N/A
	U.S.A.: disconnection of the neutral not necessary for all stationary appliances		N/A
	IRELAND AND UNITED KINGDOM.: plug not required in supply cord		N/A
22.6	U.S.A.: test not conducted		N/A
22.11	U.S.A.: different criteria for snap-on constructions required		N/A
22.12	U.S.A.: positive forms of securement required		N/A
22.14	U.S.A.: sharp edges testing device used to evaluate sharp edges		N/A
22.35	U.S.A.: double or reinforced insulation not required on metal parts		N/A
22.36	U.S.A.: double or reinforced insulation not required on metal parts		N/A
23.5	U.S.A.: different requirements for insulated internal wiring		N/A



www.tuv.co	om Page 45 of 61	Report No:<16009337 001
	IEC 60335-2-40	
Clause	Requirement + Test	Result - Remark Verdic
23.7	NEW ZEALAND AND U.S.A.: green wiring used instead of green/yellow wiring	N/A
	U.S.A.: requirement applies to accessible wiring during supply connections	N/A
24.1.3	U.S.A.: different number of cycles required; note 2 not applicable	N/A
	U.S.A.: note not applicable	N/A
24.3	U.S.A.: requirement for 3 mm contact separation not applicable	N/A
25.1	IRELAND AND UNITED KINGDOM: plug not required in supply cord	N/A
25.3	DENMARK, FINLAND, NETHERLANDS, NORWAY AND SWEDEN: set of supply leads not permitted	N/A
	U.S.A.: set of terminals for connection of a flexible cord generally not permitted	N/A
25.8	AUSTRALIA, NEW ZEALAND AND U.S.A.: different conductor cross-sectional areas	N/A
	AUSTRALIA, NEW ZEALAND: 0,5 mm <sup>2</sup> supply cords not allowed for Class I appliances	N/A
25.10	U.S.A.: green insulation also permitted	N/A
25.14.2	U.S.A.: only one separate insulation required	N/A
25.16	AUSTRALIA: fully removable cord anchorages allowed	N/A
	U.S.A.: pull of 35 lbs applied; torque test not used	N/A
26.2	U.S.A.: cross-sectional areas according to AWG	N/A
26.4	U.S.A.: tests only apply to terminals for connection to fixed wiring	N/A
26.5	U.S.A.: tests only apply to terminals for connection to fixed wiring	N/A
27.2	U.S.A.: different requirements for screwless terminals (IEC 685-2-1 not used)	N/A
28.1	U.S.A.: this type of tests not required	N/A
29.1	U.S.A.: different creepage distances and clearances may be applicable	N/A
30.1	U.S.A.: minimum value for ball-pressure test for parts retaining live parts is 95 °C or 40 K higher than Cl. 11 temperature rise; for enclosures, 75 °C is the minimum value or mould-stress test conducted at 10 K above Cl. 11 temperatures	N/A



www.tuv.co	Page 46 of 61	Report No:<16	009337 001>.
	IEC 60335-2-40		
Clause	Requirement + Test	Result - Remark	Verdict
30.2.1	U.S.A.: ignition test not used to assure a slow burning rate		N/A
30.2.4	AUSTRALIA: printed circuit boards at mains voltage shall be FV-0 or FV-1 or meet needle-flame test		N/A
B.7.12	SWEDEN AND SWITZERLAND: appliances with non-replaceable batteries with a content of mercury or cadmium exceeding 0,025% by weight adequately marked		N/A
B.21.101	U.S.A.: different requirement		N/A
F.1.1	U.S.A.: annex applies to motors with a working voltage $\leq$ 30 V		N/A
	DIFFERENCES EXISTING IN SOME COUNTRIES (IEC 60335-2-40)		N/A
3	AUSTRALIA: the D.C. component in appliance neutra is limited	1	N/A
6.1	JAPAN: Class 0I appliances allowed		N/A
11.8	SWEDEN: temperature of the wooden walls in test casing limited to 85 °C		N/A



www.tuv.com		Page 47 of 61	Report No:<16009337 001		
		IEC 60335-2-40			
Clause	Requirement + Test		Result - Remark	Verdict	

10	TABLE: input power and current							Р
	Operation mo	Operation mode: Cooling: 32/23(°C)						Р
		Heating: 27/-(°C)						
	Test voltage (	V):	):					_
Model	Rated cooling (W)	Rated heating (W)	Measured cooling (W)		Measured heating (W)	Deviation cooling (%)	Deviation heating (%)	Limit
K 35 DCI	43	43	47,4		47,4	10,2%	10,2%	20%
K 50 DCI	75	75	51,7		51,7	-31,1%	-31,1%	20%
Domork: th	a tast was norf	ormod with all o	ritica	Loompond	onte and highos	t valuo wae liet	od	

Remark: the test was performed with all critical components and highest value was listed.

11.8-1	TABLE: TEMPERATURE RIS	E MEASUREMENT	6		Р
K 35 DCI	t1 (°C)	:	25		
	t2 (°C)	Cooling: 32/23			
		Heating: 27/-			
	test voltage (V)	1,06x240=254,4V			
temperatur	e of part/at:	Cooling (°C)	Heating (°C)	required	T (°C)
Transformer enclosure(GLP-060792)		31,6	32,8	Materia	l test
Transformer enclosure (54X18(452827401))		31,8	32,8	Materia	l test

Remark 1 :The temperature rise of winding were tested in both cooling and heating modes and the highest values were listed.

Remark 2: The test performed on two appliances covered both alternate transformers.

11.8-2	TABLE: TEMPERATURE RIS	TABLE: TEMPERATURE RISE MEASUREMENTS				Р
K 50 DCI	t1 (°C)	:		25		
	t2 (°C)	:		Cooling: 32/23		
				Heating: 27/-		
	test voltage (V)	:		1,06x240=254,4V		
temperature	e of part/at:	Cooling (°C)		Heating (°C)	required	T (°C)
Power cord		39,6		27,7	7,7 75	
Fan motor c	ase	42,5		44,2 15		
Fan motor c	apacitor	15,7		47,9 T7		)
Pump enclosure(PSB-7A)		23,6		47,7 15		
Pump enclosure(PSB7)		50,6		47,7	150	)
Transforme	r enclosure(GLP-060791)	31,6		32,8	Materia	test



www.tuv.com		Page 48 of 61			R	Report No:<16009337 001>		
		IEC	60335-2-40					
Clause Requirement + Test					Result - Remar	k	Verdict	
Transformer enclosure (54X18(452827400))		;	31,8		32,8	Mater	ial test	
Step motor enclosure			49,0		21,5	1:	50	
Transformer bobbin (TX-C004)			52,5		55,9	Mater	ial test	
Transformer coil (TX-C004)			49,1		53,3	1'	10	
Terminal block			21,0		50,1	Mater	ial test	
PCB surface			18,5		50,0	Mater	ial test	
X2 capacitor			20,4		51,7	T1	00	
Varistor			20,6		52,3		T85	
Electric box		24,3			55,1 Mater		erial test	
Relay for fan motor		16,9			48,1 T		Г55	
Relay for pump		20,2			54,5 T		Г85	
Water pump wire		57,8			57,8 T <sup>2</sup>		05	
Test corner		31,5			28,0		0	
winding temperature	rise measu	urements:		25	25°C		Р	
K = 234,5 for copper	windings	·······		Ye	Yes			
K = 225 for aluminiur	n windings		· · · ·					
insulation class		:		Se	See below			
temperature of winding: R <sub>1</sub> (s		2)	R <sub>2</sub> (Ω)		T(°C)	required T (°C)	insulation class	
Fan motor (Main/Aux.) 145/ (YDK50-4C)		:04	178/248		84,1/81,0	120	В	
Pump(PSB-7A) 403		3	451		55,9	115	E	
Pump(PSB7)	365	5	412		58,4	115	Е	
Remark 1 :The temperature rise o values were listed.	of winding w	vere tes	ted in both c	ooliı	ng and heating	modes and the	highest	

Remark 2: The test performed on two appliances covered both alternate transformers.

Remark 3: Transfomer El41-1250500 is identical to TX-C004, except for the model name, so the test result can covered both models.



www.tuv.c	om Page 49 of 61	Report No:-	<16009337 001>.	
	IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict	
13.2 TABLE: LEAKAGE CURRENT MEASUREMENTS AT OPERATING TEMPERATURE				
	heating appliances: at 1,15 times rated input (W) .:	N/A		
	motor-operated and combined appliances: at	1,06X240=254,4		

leakage current I between:I (mA)required I (mA)L/N- enclosure (with aluminum foil)0,090,25L/N- earthed metal part0,843,5

Remark: Both the samples were tested and highest value was listed.

13.3	TABLE: ELECTRIC STRENGTH MEASUREMENTS AT OPERATING TEMPERATURE				
test voltage	applied between:	test voltage (V) breakd		down	
L/N- eartheo	l metal part	1000	No		
L/N - enclosure (with aluminum foil)		3750	No		
Remark: Both the samples were tested					

16.2 TABLE: LEAKAGE CURRENT MEASUREMENTS		Р		
	at 1,06 times rated voltage (V):	1,06X240=254,4		-
leakage cui	rent I between:	l (mA)	required	d I (mA)
L/N -earthe	ed metal part	0,98	3,	,5
L/N –enclos	sure (with aluminum foil)	0,08	0,2	25
	the first second second second second by the set of the second second second second second second second second	· ·	•	

Remark: Both the samples were tested and highest value was listed.

16.3 TABLE: ELECTRIC STRENGTH MEASUREMENTS			Р	
test voltage	applied between:	test voltage (V)	break	down
L/N –earthed metal part		1250	No	
L/N - enclos	ure (with aluminum foil)	3750	Ν	0
Remark: Bo	th the samples were tested.			

17-1	TABLE: OVERLOAD PROTECTION, TEMPERATU	JRE RISE MEASUREMENTS	Р
	at 1,06 or 0,94 times rated voltage (V)	1,06x240=254,4V	
	Ambient temperature(°C)	25	
	Test model	TX-C004	



www.tuv.con	n	Page 50 of 61	Report No:<1600	9337 001>.
		IEC 60335-2-40		
Clause	Requirement + Test		Result - Remark	Verdict

Test condition	Test condition: Short-circuit of secondary winding		
Thermal couples location:	Measured temperature (°C)	Limit temperature (°C)	Result
Primary Winding	105	225	Р
Secondary Winding	122	225	Р

Remark 1: 7 minutes later, the thermal link was operated.

Remark 2: Resistance method is not applicable due to severe complications are involved.

Remark 3: transfomer El41-1250500 is identical to TX-C004, except for the model name, so the test result can covered both models.

17-2	TABLE: OVERLOAD PROTEC	TION, TEMPERATU	<b>RE RISE</b>	MEASUREMENTS	Р
	at 1,06 or 0,94 times rated voltag	ge (V):	1,06x240=	=254,4V	
	Ambient temperature(°C)		25		
	Test model		GLP-0607	791	
	Test condition		Short-circ winding	uit of secondary	
Thermal co	ouples location:	Measured tempera	ture (°C)	Limit temperature (°C)	Result
Primary Wi	nding	149,6		225	Р
Secondary	Winding	163,1		225	Р
Remark 1:	1 minutes later, the thermal link v	vas operated.			

Remark 2: Resistance method is not applicable due to severe complications are involved.

17-3 TAB	BLE: OVERLOAD PROTECT	ION, TEMPERATU	IRE RISE	MEASUREMENTS	Р
at 1,	,06 or 0,94 times rated voltag	e (V):	1,06x240=	=254,4V	
Amb	pient temperature(°C)		25		
Test	Test model GLP-0607		792		
Test	Test condition: Short-circuit of secondary winding				
Thermal couples	location:	Measured tempera	ature (°C)	Limit temperature (°C)	Result
Primary Winding	J	102,5		225	Р
Secondary Wind	ling	111,0		225	Р
Remark 1: 28 seconds later, the thermal link was operated.					
Remark 2: Resis	stance method is not applical	ble due to severe c	omplicatio	ns are involved.	



www.tuv.co	m		Page 51 of 6	1	Report No:<16	009337 001>.
	-1		IEC 60335-2-4	0		
Clause	Requirem	ent + Test		Result - Rer	nark	Verdict
19.2	TABLE: LO	CK MOTOR TEST, T	EMPERATURE F	RISE MEASUREM	IENTS	Р
Abnormal c	onditions:	Lock motor rotor				-
Duration:		15 days				-
Test voltage: 240V					-	
T1(°C) 25						-
T2(°C)		25				-
Model		PSB7				-
Temperature of part/at (°C)			Temperature(°C	Required temperat		erature(°C)
Enclosure temperature			99 150		150	
Winding ter	nperature		128	165(impedance protect		e protected)
Result:						
Protective of	device opera	ted?			No	
If yes ,what	was the pro	tective device?				
How long w	as the opera	ation until protective d	evice operated?			
Deformatio	n of enclosu	re, which affect the co	mpliance of cl.8?		No	
Poisonous	or ignitable g	jas?			No	
Emit flames	s?				No	
Molten met	al?				No	
LEAKAGE	CURRENT I	MEASUREMENT				Р
at	2 times rate	ed voltage (V)	:	2x240=	480V	
leakage cur	rent I betwee	en:		l (mA)	require	ed I (mA)
L/N – enclo	osure			0,04	:	2,0

19.10	TABLE: fault condition tests		Р
	Ambient temperature (°C)	Cooling: 32/23(IU)	-
		Heating: 27/-(IU)	
	Test voltage (V)	240	-
	Fault condition	Test result	Hazard
SC fan moto	or capacitor (cooling)	The fan motor stopped, and 24 minutes later, the appliance stopped.	No
OC fan mot	or capacitor (cooling)	The fan operated slowly. The appliance worked normally with input increased	No
SC fan moto	or capacitor (heating)	The appliance stopped.	No
OC fan mot	or capacitor (heating)	The fan operated slowly. The appliance worked normally with input increased.	No



No

www.tuv.co	m	Page 52 of 61	Report No:<1600	9337 001>.
		IEC 60335-2-40		1
Clause	Requirement + Test		Result - Remark	Verdict
SC output (54X18(45)	of transformer 2827400))	Fuse on the PCB br current is 8,74A	oken in 30s, the maximum	No

Fuse on the PCB broken in 15s, the maximum

(54X18(452827401))	current is 13,9A
Remark 1: the "SC" means "short-circuited",	"OC" means " open-circuited"

SC output of transformer

Remark 2: the test was performed on both models with all alternate components.

19.14	TABLE: ABNORMAL OPERATION			Р
	t <sub>1</sub> (°C):	32/-°C(IU) (Clause: 19	9.5)	-
	t <sub>2</sub> (°C):	42/-°C (IU) (clause 19.7)		
	t <sub>3</sub> (°C):	32/23°C(IU) (clause 19	9.10)	-
temperatu	ire of part/at:	T (°C)	require	d⊤(°C)
Enclosure	(clause 19.5)	33,5	17	75
Supply co	rd (clause 19.5)	33,1	17	75
Test corne	er(clause 19.5)	32	17	75
Enclosure	(clause 19.7)	43,3	17	75
Supply co	rd (clause 19.7)	42,8	17	75
Test corne	er(clause 19.7)	41,4	17	75
Enclosure	(clause 19.10)	31,9	17	75
Supply co	rd (clause 19.10)	37,9	17	75
Test corne	er (clause 19.10)	31,2	17	75

Remark: all alternate components were considered, and the highest values were listed.

24.1 T <i>i</i>	BLE: COMPONE	NTS							
Remark 1: For thermal cut-outs, thermal links of fan motor and pump, which have been approved according to relevant IEC standards, the manufacturer, types and characters not listed in the CDF but should be in this scope authorized by original certification bodies.									
Remark 2: 'A1','A2','A3','A4','B1','B2','B3' denotes for models K 25 DCI, K 35 DCI, K 35S DCI, K 50 DCI, C 303 H, C 304 H, C 305 H respectively.									
Object/part No.	manufacturer/t emark	manufacturer/trad type/model emark		Standard	Mark(s) of conformity <sup>1</sup> )				
Built-in comp	onents with wind	lings: (motors, trans	sformers, magnetic	coils etc.)					
Fan motor	an motor Welling YDK50-4C		Main:145Ω±10% Aux.:202Ω±10% Class B	IEC 60335-2- 40	TUV R 50023104				
Step motor	Leili	28BYJ48	250Ω(25°C) 12V DC	IEC 60335-2- 40	Tested with appliance				



www.tuv.com			Page	53 of 61		Report No:<16009337 001>			
	1		IEC 603	335-2-40	1			[	
Clause	Requ	uirement + Tes	t		Result -	Remark		Verdict	
Alternate		Huayang	28BYJ48	250Ω(25°C 12V DC	2)	IEC 60335-2- 40	Tested appliar		
Transforme A1,A2,A3, E		Shenzhen sanma	54×18(452827401)	Input: N-1: 222Ω: N-2: 224Ω: N-3: 228Ω: N-4: 229Ω: N-5: 244Ω: N-6: 272Ω: (25°C) Output: M-M: 198 Ω Class B	±5% ±5% ±5% ±5% ±5%	IEC 60335-2- 40	Tested appliar		
Alternate		Green	GLP-060792	Input: N-1: 222Ω: N-2: 224Ω: N-3: 228Ω: N-4: 229Ω: N-5: 244Ω: N-6: 272Ω: (25°C) Output: M-M: 198Ω Class B	±5% ±5% ±5% ±5% ±5%	IEC 60335-2- 40	Tested appliar	-	
Transformer for Shenzhe A4,B3 sanma		Shenzhen sanma	54×18(452827400)	Input: N-1: 233Ω: N-2: 236Ω: N-3: 250Ω: N-4: 259Ω: N-5: 279Ω: N-6: 288Ω: (25°C) Output: M-M: 233Ω Class B	±5% ±5% ±5% ±5% ±5%	IEC 60335-2- 40	Tested with appliance		
Alternate Green		Green	GLP-060791	Input: N-1: 233Ω: N-2: 236Ω: N-3: 250Ω: N-4: 259Ω: N-5: 279Ω: N-6: 288Ω: (25°C) Output:	ut: : 233Ω±5% 2: 236Ω±5% 3: 250Ω±5% 4: 259Ω±5% 5: 279Ω±5% 5: 288Ω±5% °C) tput: M: 233Ω±5%		Tested appliar	-	
Transforme PCB	r on	Dazhong	TX-C004	Pri: 456Ω± Sec: 3Ω±5 Class B		IEC 60335-2- 40	Tested appliar		
Alternate		Dazhong	El41-1250500	Pri: 456Ω± Sec: 3Ω±5 Class B		IEC 60335-2- 40	Tested appliar		



www.tuv.com		Page	e 54 of 61	Report No	:<16009337 001>
1		IEC 60	0335-2-40		1
Clause Req	uirement + Tes	t	Result -	Remark	Verdict
Built-in compor etc.)	ents: (switche	s, thermostats, hea	ater, plugs, wires, caj	oacitors, socke	ets, RFI-filters
Plug	Optional	Optional	250V, 10-20A	IEC 60884	TUV ,VDE or similar
Power cord for A1,A2,A3,B1,B2	Optional	H05VV-F	3G1,5mm <sup>2</sup>	IEC 60227	TUV ,VDE or similar
Power cord for A4,B3	Optional	H05VV-F or H07VV-F	3G2,5mm <sup>2</sup>	IEC 60227	TUV ,VDE or similar
Terminal block	Yueqing Jinlong	JXO-P1-3	AC 600V, 4,0mm <sup>2</sup>	IEC 60335-1	Tested with appliance
Terminal block ir controller	SWITCHLAB	Т36	450VAC 4,0mm <sup>2</sup>	IEC 60335-1	Tested with appliance
Thermal link in transformer GLP-060791, GLP-060792	Aupo	A4-1A	AC250V, 2A ,130°C	IEC 60691	VDE 40005586
Alternate	Aupo	B4-1A	AC250V, 2A ,130°C	IEC 60691	VDE 40005586
Alternate	Xiamen Set	K4	AC250V, 2A ,130°C	IEC 60691	VDE 40017055
Thermal link in transformer TX-C004, El41-1250500	Dazhong	A2	AC250V, 2A ,125°C	IEC 60691	TUV R 50080032
Alternate	SET	КЗ	AC250V, 2A ,125°C	IEC 60691	VDE 40017055
Capacitor of fan motor (IU)	Haoye Capacitors	MKPS155	AC 450V, 1,5μF T 70°C	IEC 60252	TUV R 50035566
Safety compone	ents in controll	er			
Controller	EHK	DCI-STORM		IEC 60335-2- 40	Tested with appliance
Fuse in controlle	r Hollyland	50T	AC 250V, 3,15A	IEC 60127	VDE 139231
Internal wire	Optional	1007	12/14/16/20/22/24 AWG		UL
Internal wire	Optional	1015	12/14/16 AWG		UL
Terminal for motor wire	JST	ELR-06V ELP-06V	300V, 8,0A	IEC 61984	TUV R 00075052
motor wire	Optional	1007/1430/3266	20/22/24 AWG		UL
Bridge rectifier BR1	Rectron	MD5S	420V. 0,5A		UL E94233
Optocoupler U9,U12	· I OSHIBA I II P 621		$V_{CEO}$ =55V, CTR=50% IF=5mA $V_{CE}$ =5V $V_{ISO}$ =5000V T150	IEC 80747-12- 5	VDE 40009302



www.tuv.con	n	Page	Page 55 of 61				Report No:<16009337 001>.			
	1	IEC 603	35-2-40							
Clause	Requirement + Test			Result -	Remark		Verdict			
Varistor in controller	Centra	CNR 14D561K / 14D511K	AC350V, T	85	CECC42200	VDE 005943	6			
Alternate	Nippon Chemi-con	TNR 14V561K / 14V511K	AC350V, T	85	CECC42200	VDE 118623	}			
Alternate	JOYIN	JVR 14N561K / 14N511K	AC350V, T	85	CECC42200	VDE 005937	,			
Alternate	Thinking	TVR 14561 / 14511	AC350V, T	85	CECC42200	VDE 005944				
Alternate	Xianhua Advanced	FNR 14K561 / 14K511	AC350V, T	85	CECC42200	VDE 400082	242			
Alternate	Lien Shun	ZOV 14D561K / 14D511K	AC350V, T		CECC42200	VDE 400058	58			
Relay for fa motor	n NAIS Matsushita	ALD112	3A, 250VA DC12V,T 5	55	IEC 61810-1	VDE 400014	384			
Alternate	Hong Fa	JZC-43F	3A, 250VA DC12V,T 5	55	IEC 61810-1	VDE 400022	20			
Alternate	Omron	G5NB-1A	3/5A, 250∖ DC12V,T 5	55	IEC 61810-1	VDE 137575	6			
Relay for pu		JQ 1a-12V	10A ,250V DC12V,T 8		IEC 61810-1	VDE 400114	35			
Alternate	SONG CHUAN	892HN-1AC-C	7A ,250V DC12V,T 8	35	IEC 61810-1	TUV R 5000	6512			
Alternate	Matsushita	JQ1AP-12VDC	7A ,250V DC12V,T 8	35	IEC 61810-1	VDE 40011435				
Alternate	HongFa	JZC-33F	5A ,250V DC12V,T 8	35	IEC 61810-1	VDE 125661				
Alternate	HongFa	JZC-32F	5A ,250V DC12V,T 8		IEC 61810-1	VDE 400122	204			
Alternate	OMRON	G5Q-1A-12VDC	10A ,250V DC12V,T 8	35	IEC 61810-1	VDE 400094	67			
Alternate	HKE	HRS3H-S-DC12V-A	10A ,250V DC12V,T 8		IEC 61810-1	TUV R 5009	8412			
Alternate	Tyco Electronics EC K.K.	OJE-SH-112HM	250V, 10A DC12V,T 8		IEC 61810-1	VDE 400076	30			
Filter capac X2 (C46)	<sup>itor</sup> Tenta	MEX	275VAC, 0 T100	),1μF	IEC 60384-14	VDE 119119	)			
alternate	ISKRA Kondenzatorji	KNB1530	275VAC, 0 T 100	),1μF	IEC 60384-14	VDE 139447	,			
alternate	ISKRA Kondenzatorji	KNB1560	275VAC, 0 T110		IEC 60384-14	VDE 139106				
alternate	Carli	MPX	275VAC, 0 T100	),1μF	IEC 60384-14	VDE 400085	520			
alternate	Faratronic	MKP62	275VAC, 0 T100		IEC 60384-14	VDE 400003	58			
alternate	Faratronic	MKP61	275VAC, 0,1μF T100		IEC 60384-14	VDE 40007424				
alternate	Hsuan Tai	МСҮ	275VAC, 0 T100	),1μF	IEC 60384-14	VDE 125205	5			



www.tuv.com		Page		Report No:<16009337 001>.				
		IEC 603	335-2-40	I				
Clause	Requirement + Test			Result -	Remark		Verdict	
alternate	Evox Rifa	PHE840 M	275VAC, 0 T105	,1μF	IEC 60384-14	ENEC	519125	
alternate	Evox Rifa	PHE840 E	275VAC, 0 T105	,1μF	IEC 60384-14	ENEC	519040	
alternate	JingYu	CBBX2	275VAC, 0 T100	,1μF	IEC 60384-14	VDE 400065	514	
alternate	Ultra Tech Xiphi	HQX	275VAC, 0 T100	•	IEC 60384-14	VDE 400156	608	
Filter capacite X2 (C20)	Tenta	MEX	275VAC, 1 T100		IEC 60384-14	VDE 119119		
alternate	Kondenzatorji	KNB1530	275VAC, 1 T100		IEC 60384-14	VDE 139447	,	
alternate	ISKRA Kondenzatorji	KNB1560	275VAC, 1 T110		IEC 60384-14	VDE 139106	5	
alternate	Carli	MPX	275VAC, 1 T100		IEC 60384-14	VDE 400085	20	
alternate	Faratronic	MKP61 / MKP62	275VAC, 1 T100		IEC 60384-14	VDE 400003	58	
alternate	Hsuan Tai	МСҮ	275VAC, 1 T100		IEC 60384-14	VDE 12	25205	
alternate	Evox Rifa	PHE840 M	275VAC, 1 T105		IEC 60384-14	ENEC	519125	
alternate	Evox Rifa	PHE840 E	275VAC, 1 T105		IEC 60384-14		519040	
alternate	JingYu	CBBX2	275VAC, 1 T100		IEC 60384-14	VDE 400065	514	
alternate	Ultra Tech Xiphi	HQX	275VAC, 1 T100		IEC 60384-14	VDE 400156	608	
РСВ	Shengyi	S1155	94V0,130℃ layer			UL E10976	69	
Alternate	KingBroad	KB-5150 / 6150 / 7150	94V0,130℃ layer	C, double		UL E12399	95	
Alternate	JiangMen Benlida	FR-4 / BLD	94V0,130℃ layer			UL E20364	10	
Alternate	Strong Base	3CEM / S168	94V0,130℃ layer			UL E22873	31	
Alternate	YongSheng	YP21F01C	94V0,130°0 layer	C, double		UL E24850	)3	
Alternate	Kinwong	FR-4 (CP5)	94V0,130°0 layer			UL E24395		
Alternate	TAT Chun	TC-2B	94V0,130℃ layer	C, double		UL E13117		
Alternate	Jun Da	JD-A/B/C/D/E	94V0,130℃ layer	C, double		UL E17387		
Alternate	Shenzhen HengBaoShi	BF-5	94V0,130°0 layer	C, double		UL E20070		
Alternate	JiangMen Glory Faith	GF103/201	94V0,130°0 layer	C, double		UL E23037		
Alternate	Shenzhen BoMin Xing	BMX-01/ BMX -02	94V0,130°0 layer	C, double		UL E22625		



www.tuv.com			Page	57 of 61		Report No	o:<16009	337 001>.
			IEC 603	335-2-40				
Clause F	Requ	iirement + Tes	t			Verdict		
Pump		Sanhua	PSB-7A	220-240V 385Ω±5%(2 Class E		IEC 60335-1	TUV R 5006	1033
Alternate		Zhongbao	PSB7	220-240V 50/60Hz 333Ω±10%(20℃) Class E		IEC 60335-2- 40	Tested applian	
Terminal link PSB7	for	Aupo	P7	250V, 2A Temp:150 °C		IEC 60691	TUV R 50049926	
Connector for PSB7	-	JST	VHR-3N	250V 10A		IEC 61984	TUV R 0007	5122
Winding of PS	of PSB7 Chengdu South-west QZY/180 180°C				UL E17836	6		
Winding enclosure		Jiangyin Longshan	PBT10%,5310G				Tested applian	-
Thermal link f PSB-7A	for	Desheng	BR	250V,2A, Temp:140°	C	IEC 60691	VDE 132813	
Alternate		Changhong Tongli	KW-A1	250V,2A, Temp:140°	2	IEC 60691	VDE 400209	06

29.1 TABLE: CREEPAGE DIST MEASUREMENTS	ANCE	AND C	LEARA	NCE T	HROUG	GH INS	ULATIO	ON	Р
creepage (cr) and clearance (cl) distance (mm):	Clas applia	-		Other	ther appliances, U working				
		-	< 13	0 V	130-2	250 V	250-	240 V	
	cr	cl	cr	cl	cr	cl	cr	cl	
between live parts of different polarity:									
- if protected against deposition of dirt	1,0	1,0	1,0	1,0	2,0	2,0	2,0	2,0	Р
<ul> <li>if not protected against deposition of dirt</li> </ul>	2,0	1,5	2,0	1,5	3,0	2,5	4,0	3,0	Р
- if lacquered or enamelled windings	1,0	1,0	1,5	1,5	2,0	2,0	3,0	3,0	Р
Cl and Cr measured between :									
1. L and N on PCB, Cl = 3,0mm; Cr =	3,0mm	ו;							
2. L and N on the terminal block : Cl	= 3,0m	m; Cr =	=3,0mm	,					
3. Input of transformer: CI = 4,0 mm;	3. Input of transformer: Cl = 4,0 mm; min.Cr = 8,0mm;								
4. winding of pump: CI = 3,0mm; min.	Cr = 4,	0mm;							

The shortest value is considered.

between live parts and other metal parts over basic insulation:



www.tuv.cor	n	Page 58 of 61					Re	Report No:<16009337 001>.			
			IEC 60	335-2-4	0						
Clause	Requirement + Test				F	Result -	Remark	ζ.		Verdict	
- if protect	ed against deposition of dirt:									N/A	
if of ce and the like	eramic material or pure mica	1,0	1,0	1,0	1,0	2,5	2,5	-,-	-,-	N/A	
. if of ot	her material	1,5	1,0	1,5	1,0	3,0	2,5	-,-	-,-	N/A	
- if not pro dirt	tected against deposition of	2,0	1,5	2,0	1,5	4,0	3,0	-,-	-,-	Р	
<ul> <li>if the live</li> <li>enamelled v</li> </ul>	parts are lacquered or windings	1,0	1,0	1,5	1,5	2,0	2,0	-,-	-,-	Ρ	
<ul> <li>at the en heating eler</li> </ul>	d of tubular sheathed-type ments	-,-	-,-	1,0	1,0	1,0	1,0	-,-	-,-	N/A	
CI and Cr m	neasured between :										
1. L/N te	erminal and earthing termina	l on the	termin	al block	: CI =	5,0mm;	min. Cr	=8,0mm			
2. windin	ng of transformer and earthe	d metal	part: m	nin. Cl =	9,0mr	n; min.C	r = 20,0	mm;			
The shortes	st value is considered.										
between live	e parts and other metal parts	s over re	einforce	ed insula	ition						
- if the live enamelled v	parts are lacquered or windings	-,-	-,-	6,0	6,0	6,0	6,0	-,-	-,-	N/A	
- for other	live parts	-,-	-,-	8,0	8,0	8,0	8,0	-,-	-,-	Р	
	etal parts separated by ary insulation	-,-	-,-	4,0	4,0	4,0	4,0	-,-	-,-	Ρ	
mounting fa	e parts in recesses in the ice of the appliance and the which it is fixed	2,0	2,0	6,0	6,0	6,0	6,0	-,-	-,-	N/A	
Cl and Cr m	neasured between :								l		
	ngers and live parts through st value is considered.	the gap	o of end	losure	: CI =	20,0 mr	n; min.	Cr =50,0	mm;		
30.1	Table: Ball pressure test									Ρ	
Part	Tes	st tempe	erature	(°C)	Imp	pression	diamet	er(mm)	Lir	nit (mm)	
Enclosure			75				1,3			2,0	
Transformer bobbin (TX-C004)			125				1,3			2,0	
Transformer bobbin ( El41-1250500)			125			1,2				2,0	
Transforme			125			1,2				2,0	
Transforme (54X18(45)			125			1,2				2,0	

TRF No:I60335240C



www.tuv.com	Page 59 of 61	Report No:<1	Report No:<16009337 001>.		
	IEC 60335-2-40				
Clause Requirement + Test		Result - Remark	Verdict		
Transformer bobbin (GLP-060791)	125	1,7	2,0		
Transformer bobbin (GLP-060792)	125	1,7	2,0		
Transformer enclosure (54X18(452827400))	75	0,7	2,0		
Transformer enclosure (54X18(452827401))	75	0,7	2,0		
Transformer enclosure (GLP-060791)	75	1,5	2,0		
Transformer enclosure (GLP-060792)	75	1,5	2,0		
Plastic part support transformer terminal (54X18(452827400))	125	1,6	2,0		
Plastic part support transformer terminal (54X18(452827401))	125	1,6	2,0		
Plastic part support transformer terminal (GLP-060791)	125	1,0	2,0		
Plastic part support transformer terminal (GLP-060792)	125	1,0	2,0		
Terminal block (JXO-P1-3)	125	1,2	2,0		
Winding enclosure of pump (PSB-7)	125	1,5	2,0		
Electric box	75	1,6	2,0		
Terminal block (T36)	125	1,0	2,0		
	PCB material				
S1155	125	1,2	2,0		
KB-5150 / 6150 / 7150	125	0,9	2,0		
FR-4 / BLD	125	1,0	2,0		
3CEM / S168	125	1,1	2,0		
YP21F01C	125	1,0	2,0		
FR-4 (CP5)	125	0,8	2,0		
TC-2B	125	0,7	2,0		
JD-A/B/C/D/E	125	0,8	2,0		
BF-5	125	0,5	2,0		
GF103/201	125	0,9	2,0		
BMX-01 / BMX-02	125	0,9	2,0		



www.tuv.co	om				60 of 61		R	eport No:<1	6009337 001>		
				IEC 60	335-2-40						
Clause	Requireme	ent + Te	est			Resu	ult - Remarl	<	Verdict		
30.2	Table: res	istance	to heat	, fire and trackir	ng, glow-	wire test			Р		
		Track	ing		Glow-wire test(°C)						
		test (\	/)								
Part		175	250	Test		• •					
				temperature (°C)	Ti=	Te=	Max high of flame	Ignition of tissue paper	Other observatior		
Enclosure	e			550					Not burning		
Transforn (TX-C004	ner bobbin ŀ)			850					Not burning		
Transforn (El41-12	ner bobbin 50500)			850					Not burning		
	ner bobbin 52827400))			850	2,5s	31,9s	65mm	No			
	ner bobbin 52827400))			750					Not burning		
	ner bobbin 52827401))			850	2,5s	31,9s	65mm	No			
	ner bobbin 52827401))			750					Not burning		
Transform (GLP-060	ner bobbin )791)			850	0,7s	32,7s	40mm	No			
Transforn (GLP-060	ner bobbin )791)			750					Not burning		
Transforn (GLP-060	ner bobbin )792)			850	0,7s	32,7s	40mm	No			
(GLP-060	,			750					Not burning		
Transform enclosure (54X18(4				850	29,1s	36,7s	30mm	No			
Transform enclosure (54X18(4				750					Not burning		
Transforn enclosure	ner			850	29,1s	36,7s	30mm	No			
Transforn enclosure	ner			750					Not burning		
Transforn enclosure (GLP-060	ner			850	0,6s	47,3s	80mm	No			
Transforn enclosure	ner			750					Not burning		

TRF No:I60335240C



www.tuv.com		Page 61 of 61				Report No:<16009337 001>.		
			IEC 603	35-2-40	1			
Clause Require	ement + Te	st			Resu	ılt - Remark	(	Verdict
(GLP-060791)								
Transformer enclosure (GLP-060792)			850	0,6s	47,3s	80mm	No	
Transformer enclosure (GLP-060792)			750					Not burning
Plastic part support transformer termina (54X18(452827400	al 175 ))		850					Not burning
Plastic part support transformer termina (54X18(452827401	al 175 ))		850					Not burning
Plastic part support transformer termina (GLP-060791)			850	30,9s	50,0s	20mm	No	
Plastic part support transformer termina (GLP-060791)			750					Not burning
Plastic part support transformer termina (GLP-060792)			850	30,9s	50,0s	20mm	No	
Plastic part support transformer termina (GLP-060792)			750					Not burning
Terminal block (JXO-P1-3)	175		850					Not burning
Winding enclosure pump (PSB-7)	of		850	0,1s	1,2s	20mm	No	
Winding enclosure pump (PSB-7)	of		750					Not burning
Electric box			850	0,9s	31,1s	50mm	No	
Electric box			750					Not burning
Terminal block (T36)	175		850	4,5s	30,6s	20mm	No	
Terminal block (T36)			750	6,1s	30,4s	20mm	No	

----- End of test report -----

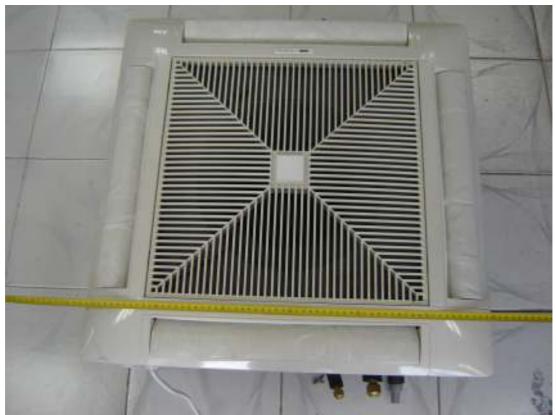
**Report Number:** 16009337 001



Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H







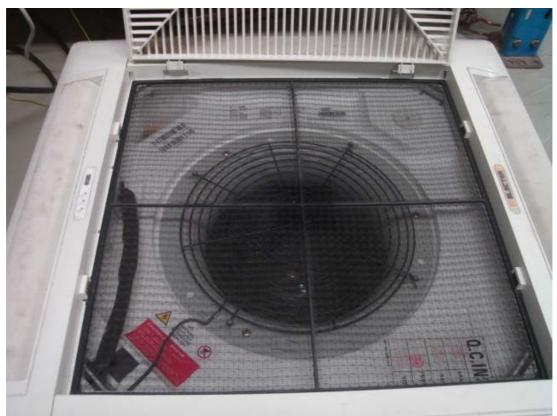
Report Number: 16009337 001



Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H







**Report Number:** 16009337 001



Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H





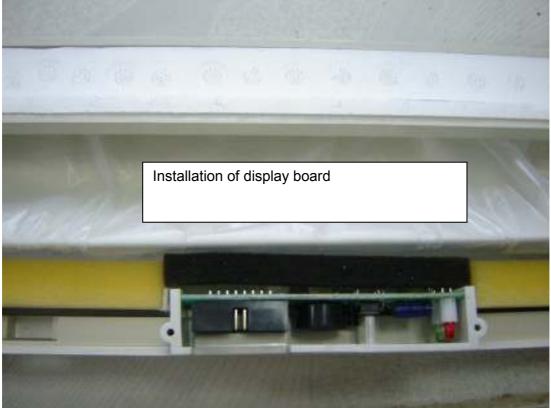


**Report Number:** 16009337 001



Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



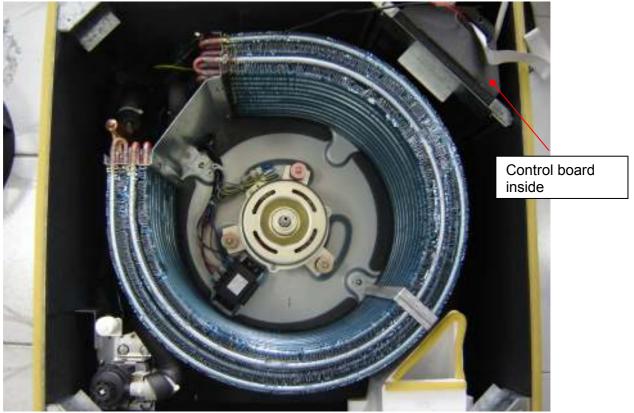


Picture 8



Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



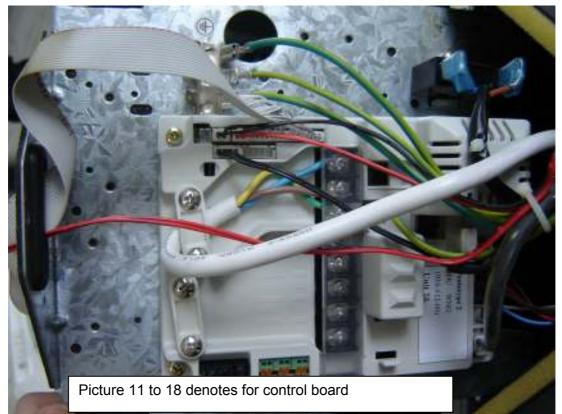


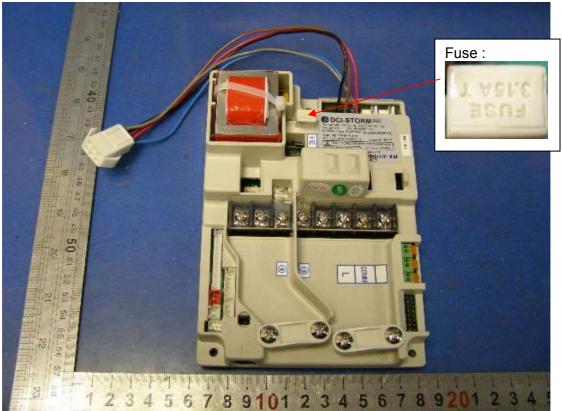
Picture 10



Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H





Picture 12



Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



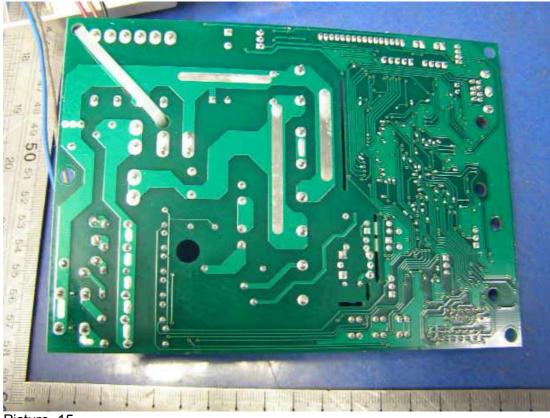


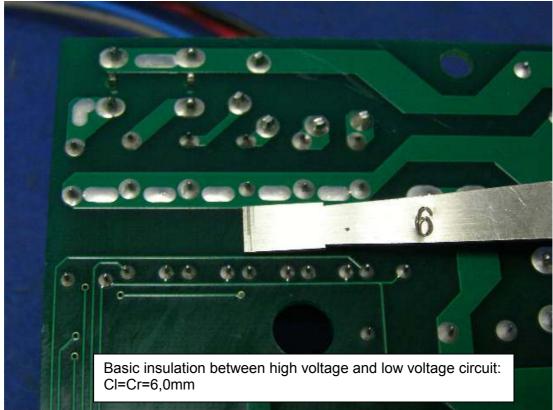




Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



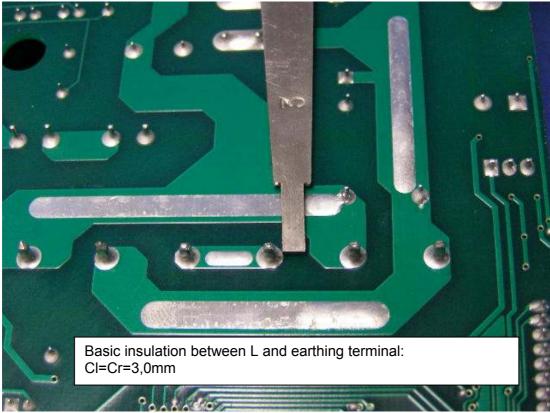




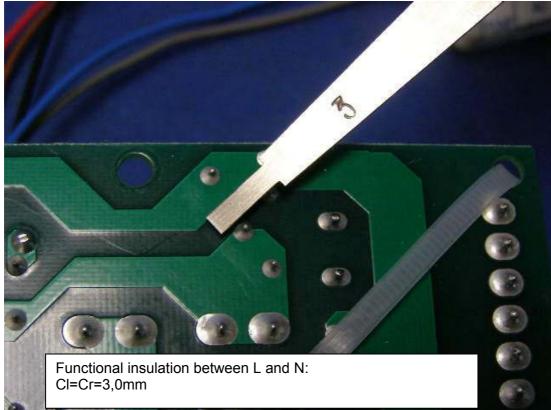


Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



Picture 17





Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



Picture 19

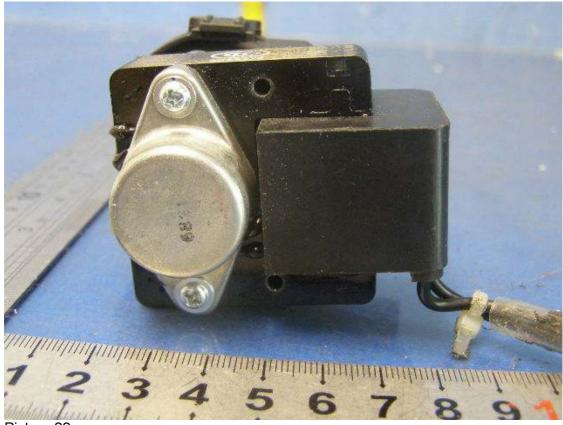




Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H

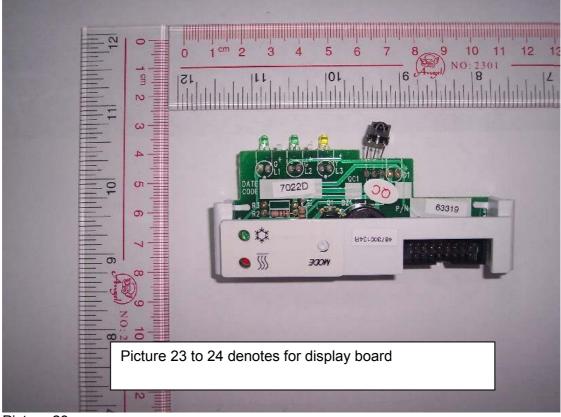


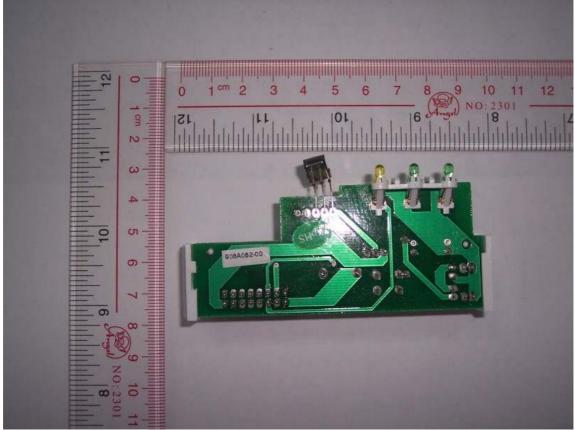




Model:

## K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H









Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



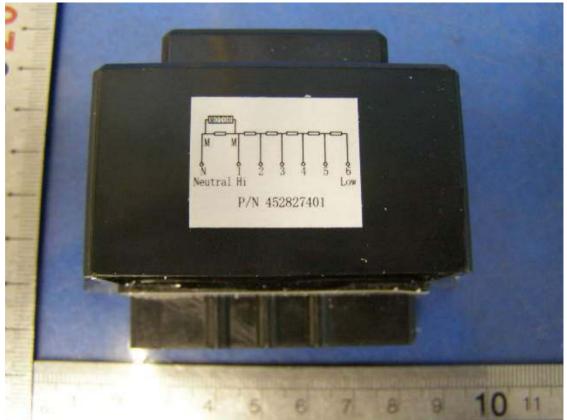
Picture 25



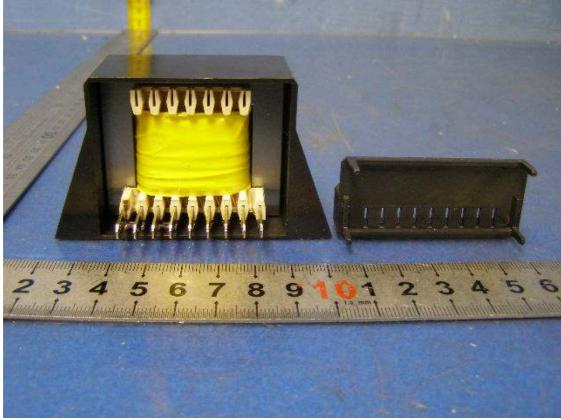


Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



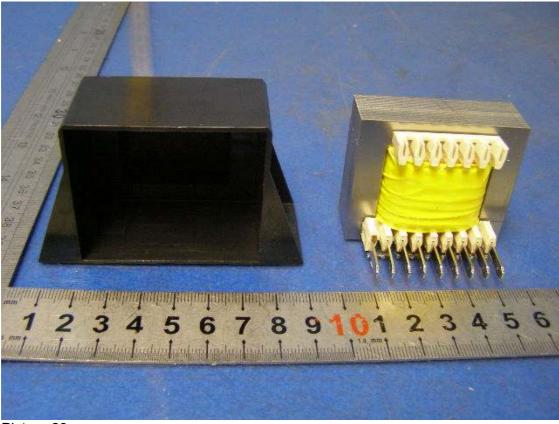
Picture 27





Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



Picture 29





Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



Picture 31





Model:

K 25 DCI, K 35 DCI, K 35S DCI K 50 DCI,C 303 H, C304 H,C 305 H



Picture 33

