IEC | IECEE CB SCHEME

Ref. Certif. No.

HU-000735

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	Fans
Name and address of the applicant Nom et adresse du demandeur	Ventilation Systems JSC 1, Mikhaila Kotzubinskiego St., Kiev UA-01030, Ukraine
Name and address of the manufacturer Nom et adresse du fabricant	Ventilation Systems JSC 1, Mikhaila Kotzubinskiego St., Kiev UA-01030, Ukraine
Name and address of the factory Nom et adresse de l'usine Note: When more than one factory, please report on page 2 Note: Lorsque il y plus d'une usine, veuillez utiliser la 2ème page	Ventilation Systems JSC 36, 40-Richchya Str., Boyarka 08150, Kiev Region, Ukraine
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	AC 220-240V, 50Hz; 0-45°C; Class II; IP34 6, 9, 14, 16, 20, 24, 30W
Trademark (if any) Marque de fabrique (si elle existe)	VENTS
Modell / Type Ref. Ref. de type	VENTS xxx Myuuu z (see details of type variants on pages 2 through 5 of this Certificate)
Additional information (if neccessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent étre indiqués sur la 2ème page	The products were also tested to and found to be in conformity with EN 60335-2-80:2003 + A1 + A2, EN 60335-1:2002 + A11 + A1 + A2 + A12 + A13 and EN 62233:2008.
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	PUBLICATION / EDITION IEC 60335-2-80:2002 (ed. 2) + A1 + A2 IEC 60335-1:2001 (ed. 4) + A1 + A2 EU Group Differences National Differences of DE
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 partie de ce Certificat	28210042 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

TÜVRheinland®
MEEI

Hungarian Institute for Testing and Certification of Electrical Equipment Ltd. (MEEI Kft.)
H-1132 Budapest, Váci út 48/A-B
www.meei.hu

Date: 2010-09-09

Signature: Janos SZUCS

Type references:

VENTS xxx Myuuu z

- where:

xxx:	"100", "125" or "150" (diameter of the duct [mm])
My:	"M", "M1", "M2", or "M3" (fan type)
uuu:	blank or "V" (with switch), "T" (with timer), "TH" (with timer and humidity relay), "VT" (with switch and timer), VTH (with switch, timer and humidity relay) or "TP" (with timer and motion sensor)
z:	blank, "Q" (quiet operation motor), "turbo" (motor with increased power), or "press" (increased pressure)

Type variants:

Type reference	Rated power (W)	Type reference	Rated power (W)	Type reference	Rated power (W)
VENTS 100 M	14	VENTS 100 M3VTH	14	VENTS 100 M3TH press	16
VENTS 100 MV	14	VENTS 100 M3TP	14	VENTS 100 M3VT press	16
VENTS 100 MT	14	VENTS 100 M press	16	VENTS 100 M3VTH press	16
VENTS 100 MTH	14	VENTS 100 MV press	16	VENTS 100 M3TP press	16
VENTS 100 MVT	14	VENTS 100 MT press	16	VENTS 100 M Q	6
VENTS 100 MVTH	14	VENTS 100 MTH press	16	VENTS 100 MV Q	6
VENTS 100 MTP	14	VENTS 100 MVT press	16	VENTS 100 MT Q	6
VENTS 100 M1	14	VENTS 100 MVTH press	16	VENTS 100 MTH Q	6
VENTS 100 M1V	14	VENTS 100 MTP press	16	VENTS 100 MVT Q	6
VENTS 100 M1T	14	VENTS 100 M1 press	16	VENTS 100 MVTH Q	6
VENTS 100 M1TH	14	VENTS 100 M1V press	16	VENTS 100 MTP Q	6
VENTS 100 M1VT	14	VENTS 100 M1T press	16	VENTS 100 M1 Q	6
VENTS 100 M1VTH	14	VENTS 100 M1TH press	16	VENTS 100 M1V Q	6
VENTS 100 M1TP	14	VENTS 100 M1VT press	16	VENTS 100 M1T Q	6
VENTS 100 M2	14	VENTS 100 M1VTH press	16	VENTS 100 M1TH Q	6
VENTS 100 M2V	14	VENTS 100 M1TP press	16	VENTS 100 M1VT Q	6
VENTS 100 M2T	14	VENTS 100 M2 press	16	VENTS 100 M1VTH Q	6
VENTS 100 M2TH	14	VENTS 100 M2V press	16	VENTS 100 M1TP Q	6
VENTS 100 M2VT	14	VENTS 100 M2T press	16	VENTS 100 M2 Q	6
VENTS 100 M2VTH	14	VENTS 100 M2TH press	16	VENTS 100 M2V Q	6
VENTS 100 M2TP	14	VENTS 100 M2VT press	16	VENTS 100 M2T Q	6
VENTS 100 M3	14	VENTS 100 M2VTH press	16	VENTS 100 M2TH Q	6
VENTS 100 M3V	14	VENTS 100 M2TP press	16	VENTS 100 M2VT Q	6
VENTS 100 M3T	14	VENTS 100 M3 press	16	VENTS 100 M2VTH Q	6
VENTS 100 M3TH	14	VENTS 100 M3V press	16	VENTS 100 M2TP Q	6
VENTS 100 M3VT	14	VENTS 100 M3T press	16	VENTS 100 M3 Q	6

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

TÜVRheinland®
MEEI

Hungarian Institute for Testing and Certification of Electrical Equipment Ltd. (MEEI Kft.)
H-1132 Budapest, Váci út 48/A-B
www.meei.hu

Date: 2010-09-09

Signature: Janos SZUCS

Type variants (continued):

Type reference	Rated power (W)	Type reference	Rated power (W)	Type reference	Rated power (W)
VENTS 100 M3V Q	6	VENTS 100 M3TP turbo	16	VENTS 125 MVT press	24
VENTS 100 M3T Q	6	VENTS 125 M	16	VENTS 125 MVTH press	24
VENTS 100 M3TH Q	6	VENTS 125 MV	16	VENTS 125 MTP press	24
VENTS 100 M3VT Q	6	VENTS 125 MT	16	VENTS 125 M1 press	24
VENTS 100 M3VTH Q	6	VENTS 125 MTH	16	VENTS 125 M1V press	24
VENTS 100 M3TP Q	6	VENTS 125 MVT	16	VENTS 125 M1T press	24
VENTS 100 M turbo	16	VENTS 125 MVTH	16	VENTS 125 M1TH press	24
VENTS 100 MV turbo	16	VENTS 125 MTP	16	VENTS 125 M1VT press	24
VENTS 100 MT turbo	16	VENTS 125 M1	16	VENTS 125 M1VTH press	24
VENTS 100 MTH turbo	16	VENTS 125 M1V	16	VENTS 125 M1TP press	24
VENTS 100 MVT turbo	16	VENTS 125 M1T	16	VENTS 125 M2 press	24
VENTS 100 MVTH turbo	16	VENTS 125 M1TH	16	VENTS 125 M2V press	24
VENTS 100 MTP turbo	16	VENTS 125 M1VT	16	VENTS 125 M2T press	24
VENTS 100 M1 turbo	16	VENTS 125 M1VTH	16	VENTS 125 M2TH press	24
VENTS 100 M1V turbo	16	VENTS 125 M1TP	16	VENTS 125 M2VT press	24
VENTS 100 M1T turbo	16	VENTS 125 M2	16	VENTS 125 M2VTH press	24
VENTS 100 M1TH turbo	16	VENTS 125 M2V	16	VENTS 125 M2TP press	24
VENTS 100 M1VT turbo	16	VENTS 125 M2T	16	VENTS 125 M3 press	24
VENTS 100 M1VTH turbo	16	VENTS 125 M2TH	16	VENTS 125 M3V press	24
VENTS 100 M1TP turbo	16	VENTS 125 M2VT	16	VENTS 125 M3T press	24
VENTS 100 M2 turbo	16	VENTS 125 M2VTH	16	VENTS 125 M3TH press	24
VENTS 100 M2V turbo	16	VENTS 125 M2TP	16	VENTS 125 M3VT press	24
VENTS 100 M2T turbo	16	VENTS 125 M3	16	VENTS 125 M3VTH press	24
VENTS 100 M2TH turbo	16	VENTS 125 M3V	16	VENTS 125 M3TP press	24
VENTS 100 M2VT turbo	16	VENTS 125 M3T	16	VENTS 125 M Q	9
VENTS 100 M2VTH turbo	16	VENTS 125 M3TH	16	VENTS 125 MV Q	9
VENTS 100 M2TP turbo	16	VENTS 125 M3VT	16	VENTS 125 MT Q	9
VENTS 100 M3 turbo	16	VENTS 125 M3VTH	16	VENTS 125 MTH Q	9
VENTS 100 M3V turbo	16	VENTS 125 M3TP	16	VENTS 125 MVT Q	9
VENTS 100 M3T turbo	16	VENTS 125 M press	24	VENTS 125 MVTH Q	9
VENTS 100 M3TH turbo	16	VENTS 125 MV press	24	VENTS 125 MTP Q	9
VENTS 100 M3VT turbo	16	VENTS 125 MT press	24	VENTS 125 M1 Q	9
VENTS 100 M3VTH turbo	16	VENTS 125 MTH press	24	VENTS 125 M1V Q	9

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

TÜVRheinland®
MEEI

Hungarian Institute for Testing and Certification of Electrical Equipment Ltd. (MEEI Kft.)
H-1132 Budapest, Váci út 48/A-B
www.meei.hu

Date: 2010-09-09

Signature: Janos SZUCS

Type variants (continued):

Type reference	Rated power (W)	Type reference	Rated power (W)	Type reference	Rated power (W)
VENTS 125 M1T Q	9	VENTS 125 M2 turbo	24	VENTS 150 M2VTH	24
VENTS 125 M1TH Q	9	VENTS 125 M2V turbo	24	VENTS 150 M2TP	24
VENTS 125 M1VT Q	9	VENTS 125 M2T turbo	24	VENTS 150 M3	24
VENTS 125 M1VTH Q	9	VENTS 125 M2TH turbo	24	VENTS 150 M3V	24
VENTS 125 M1TP Q	9	VENTS 125 M2VT turbo	24	VENTS 150 M3T	24
VENTS 125 M2 Q	9	VENTS 125 M2VTH turbo	24	VENTS 150 M3TH	24
VENTS 125 M2V Q	9	VENTS 125 M2TP turbo	24	VENTS 150 M3VT	24
VENTS 125 M2T Q	9	VENTS 125 M3 turbo	24	VENTS 150 M3VTH	24
VENTS 125 M2TH Q	9	VENTS 125 M3V turbo	24	VENTS 150 M3TP	24
VENTS 125 M2VT Q	9	VENTS 125 M3T turbo	24	VENTS 150 M press	30
VENTS 125 M2VTH Q	9	VENTS 125 M3TH turbo	24	VENTS 150 MV press	30
VENTS 125 M2TP Q	9	VENTS 125 M3VT turbo	24	VENTS 150 MT press	30
VENTS 125 M3 Q	9	VENTS 125 M3VTH turbo	24	VENTS 150 MTH press	30
VENTS 125 M3V Q	9	VENTS 125 M3TP turbo	24	VENTS 150 MVT press	30
VENTS 125 M3T Q	9	VENTS 150 M	24	VENTS 150 MVTH press	30
VENTS 125 M3TH Q	9	VENTS 150 MV	24	VENTS 150 MTP press	30
VENTS 125 M3VT Q	9	VENTS 150 MT	24	VENTS 150 M1 press	30
VENTS 125 M3VTH Q	9	VENTS 150 MTH	24	VENTS 150 M1V press	30
VENTS 125 M3TP Q	9	VENTS 150 MVT	24	VENTS 150 M1T press	30
VENTS 125 M turbo	24	VENTS 150 MVTH	24	VENTS 150 M1TH press	30
VENTS 125 MV turbo	24	VENTS 150 MTP	24	VENTS 150 M1VT press	30
VENTS 125 MT turbo	24	VENTS 150 M1	24	VENTS 150 M1VTH press	30
VENTS 125 MTH turbo	24	VENTS 150 M1V	24	VENTS 150 M1TP press	30
VENTS 125 MVT turbo	24	VENTS 150 M1T	24	VENTS 150 M2 press	30
VENTS 125 MVTH turbo	24	VENTS 150 M1TH	24	VENTS 150 M2V press	30
VENTS 125 MTP turbo	24	VENTS 150 M1VT	24	VENTS 150 M2T press	30
VENTS 125 M1 turbo	24	VENTS 150 M1VTH	24	VENTS 150 M2TH press	30
VENTS 125 M1V turbo	24	VENTS 150 M1TP	24	VENTS 150 M2VT press	30
VENTS 125 M1T turbo	24	VENTS 150 M2	24	VENTS 150 M2VTH press	30
VENTS 125 M1TH turbo	24	VENTS 150 M2V	24	VENTS 150 M2TP press	30
VENTS 125 M1VT turbo	24	VENTS 150 M2T	24	VENTS 150 M3 press	30
VENTS 125 M1VTH turbo	24	VENTS 150 M2TH	24	VENTS 150 M3V press	30
VENTS 125 M1TP turbo	24	VENTS 150 M2VT	24	VENTS 150 M3T press	30

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

TÜVRheinland®
MEEI

Hungarian Institute for Testing and Certification of Electrical Equipment Ltd. (MEEI Kft.)
H-1132 Budapest, Váci út 48/A-B
www.meei.hu

Date: 2010-09-09

Signature: Janos SZUCS

Type variants (continued):

Type reference	Rated power (W)	Type reference	Rated power (W)	Type reference	Rated power (W)
VENTS 150 M3TH press	30	VENTS 150 M1V Q	20	VENTS 150 M2TP Q	20
VENTS 150 M3VT press	30	VENTS 150 M1T Q	20	VENTS 150 M3 Q	20
VENTS 150 M3VTH press	30	VENTS 150 M1TH Q	20	VENTS 150 M3V Q	20
VENTS 150 M3TP press	30	VENTS 150 M1VT Q	20	VENTS 150 M3T Q	20
VENTS 150 M Q	20	VENTS 150 M1VTH Q	20	VENTS 150 M3TH Q	20
VENTS 150 MV Q	20	VENTS 150 M1TP Q	20	VENTS 150 M3VT Q	20
VENTS 150 MT Q	20	VENTS 150 M2 Q	20	VENTS 150 M3VTH Q	20
VENTS 150 MTH Q	20	VENTS 150 M2V Q	20	VENTS 150 M3TP Q	20
VENTS 150 MVT Q	20	VENTS 150 M2T Q	20		
VENTS 150 MVTH Q	20	VENTS 150 M2TH Q	20		
VENTS 150 MTP Q	20	VENTS 150 M2VT Q	20		
VENTS 150 M1 Q	20	VENTS 150 M2VTH Q	20		

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

TÜVRheinland®
MEEI

Hungarian Institute for Testing and Certification of Electrical Equipment Ltd. (MEEI Kft.)
H-1132 Budapest, Váci út 48/A-B
www.meei.hu

Date: 2010-09-09

Signature: Janos SZUCS

Test Report issued under the responsibility of:

TEST REPORT
IEC 60335-2-80
Safety of household and similar electrical appliances
Part 2 : Particular requirements for fans

Report Reference No. ..... :	28210042 001
Date of issue ..... :	06-09-2010
Total number of pages ..... :	85
CB Testing Laboratory ..... :	MEEI Kft.
Address ..... :	H-1132 Budapest, Váci út 48. a-b. Hungary
Applicant's name ..... :	Ventilation Systems JSC
Address ..... :	1, Mikhaila Kotzubinskiego St., Kiev, UA-01030, Ukraine
Test specification:	
Standard ..... :	IEC 60335-2-80:2002 (Second edition) + A1:2004 +A2:2008 in conj. With IEC 60335-1:2001 (Fourth Edition) + A1:2004 + A2:2006 and the followings in attachment 1:EN 60335-2-80: 2003 +A1 : 2004 + A2 :2009 ; EN 60335-1: 2002+A1: 2004 + A11: 2004 + A2: 2006 + A12: 2006 + A13: 2008 ; EN 62233: 2008
Test procedure ..... :	CB
Non-standard test method. ..... :	N/A
Test Report Form No. ..... :	IEC60335_2_80C
TRF Originator ..... :	KEMA Quality B.V.
Master TRF ..... :	Dated 2008-12

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

Test item description ..... :	Fans
Trade Mark ..... :	VENTS
Manufacturer ..... :	Ventilation Systems JSC 1, Mikhaila Kotzubinskiego St., Kiev, UA-01030, Ukraine
Model/Type reference ..... :	VENTS xxx Myuuu z
Ratings ..... :	AC 220-240V, 50 Hz, 0 – 45 °C, Class II, IP 34 6, 9, 14, 16, 20, 24, 30 W; for details see 'model list' on pages 3 – 9.

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

Testing procedure and testing location:

☒ **CB Testing Laboratory:** MEEI Kft.

Testing location/ address.....: H-1132 Budapest, Váci út 48. a-b. Hungary

☐ **Associated CB Laboratory:**

Testing location/ address.....:

Tested by (name + signature).....: Ferenc Horvát

Approved by (+ signature) .....: László Nógrádi

☐ Testing procedure: TMP

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

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

Testing location/ address.....:

☐ Testing procedure: WMT

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

Witnessed by (+ signature).....:

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

Testing location/ address.....:

☐ Testing procedure: SMT

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

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

Supervised by (+ signature).....:

Testing location/ address.....:

☐ Testing procedure: RMT

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

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

Supervised by (+ signature).....:

Testing location/ address.....:

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

Summary of testing: Tests were conducted on models: VENTS 100 MVTH, VENTS 125 M1 and VENTS 150 M3TP Q
During the documentation check the English User's Manual was evaluated.

Factory location: 36, 40-Richchya Zhovtnya Str. Boyarka 08150, Kiev Region, Ukraine.

The following standard amendments are added in the Attachment 1:
EN 60335-2-80: 2003 +A1: 2004 + A2: 2009
EN 60335-1: 2002+A1: 2004 + A11: 2004 + A2: 2006 + A12: 2006 + A13: 2008; EN 62233: 2008

Attachments: 1: Standard amendments TRF (8 pages)
2: Measuring equipment list (1 page)

This Test Report consists of two parts:

- first part contains requirements of IEC 60335-2-80:2002 incl. A1:2004, A2:2008 in conjunction with IEC 60335-1:2001, incl. A1:2004, A2:2006;
- second part (1. attachment) contains requirements of EN 60335-2-80: 2003 +A1: 2004 + A2 :2009; EN 60335-1: 2002+A1: 2004 + A11: 2004 + A2: 2006 + A12: 2006 + A13: 2008; EN 62233: 2008.

Model list, technical data:

Fan type	Rated power [W]	Motor type	Motor manufacturer
VENTS 100 M	14	BL 58-12A01	Hunan Keli Motor Ltd.
VENTS 100 MV			
VENTS 100 MT			
VENTS 100 MTH			
VENTS 100 MVT			
VENTS 100 MVTH			
VENTS 100 MTP			
VENTS 100 M1			
VENTS 100 M1V			
VENTS 100 M1T			
VENTS 100 M1TH			
VENTS 100 M1VT			
VENTS 100 M1VTH			
VENTS 100 M1TP			
VENTS 100 M2			
VENTS 100 M2V			
VENTS 100 M2T			
VENTS 100 M2TH			
VENTS 100 M2VT			
VENTS 100 M2VTH			
VENTS 100 M2TP			
VENTS 100 M3			
VENTS 100 M3V			
VENTS 100 M3T			

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 100 M3TH	14	BL 58-12A01.	Hunan Keli Motor Ltd
VENTS 100 M3VT			
VENTS 100 M3VTH			
VENTS 100 M3TP			
VENTS 100 M press	16		
VENTS 100 MV press			
VENTS 100 MT press			
VENTS 100 MTH press			
VENTS 100 MVT press			
VENTS 100 MVTH press			
VENTS 100 MTP press			
VENTS 100 M1 press			
VENTS 100 M1V press			
VENTS 100 M1T press			
VENTS 100 M1TH press			
VENTS 100 M1VT press			
VENTS 100 M1VTH press			
VENTS 100 M1TP press			
VENTS 100 M2 press			
VENTS 100 M2V press			
VENTS 100 M2T press			
VENTS 100 M2TH press			
VENTS 100 M2VT press			
VENTS 100 M2VTH press			
VENTS 100 M2TP press			
VENTS 100 M3 press			
VENTS 100 M3V press			
VENTS 100 M3T press			
VENTS 100 M3TH press			
VENTS 100 M3VT press			
VENTS 100 M3VTH press			
VENTS 100 M3TP press			
VENTS 100 M Q	6	BL 58-12Y03	CIXI CITI YIXIONG ELECTROMOTOR FACTORY
VENTS 100 MV Q			
VENTS 100 MT Q			
VENTS 100 MTH Q			
VENTS 100 MVT Q			
VENTS 100 MVTH Q			
VENTS 100 MTP Q			
VENTS 100 M1 Q			
VENTS 100 M1V Q			
VENTS 100 M1T Q			
VENTS 100 M1TH Q			
VENTS 100 M1VT Q			
VENTS 100 M1VTH Q			
VENTS 100 M1TP Q			
VENTS 100 M2 Q			
VENTS 100 M2V Q			

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 100 M2T Q	6	BL 58-12Y03	CIXI CITI YIXIONG ELECTROMOTOR FACTORY
VENTS 100 M2TH Q			
VENTS 100 M2VT Q			
VENTS 100 M2VTH Q			
VENTS 100 M2TP Q			
VENTS 100 M3 Q			
VENTS 100 M3V Q			
VENTS 100 M3T Q			
VENTS 100 M3TH Q			
VENTS 100 M3VT Q			
VENTS 100 M3VTH Q			
VENTS 100 M3TP Q			
VENTS 100 M turbo	16	BL 58-16A01	Hunan Keli Motor Ltd.
VENTS 100 MV turbo			
VENTS 100 MT turbo			
VENTS 100 MTH turbo			
VENTS 100 MVT turbo			
VENTS 100 MVTH turbo			
VENTS 100 MTP turbo			
VENTS 100 M1 turbo			
VENTS 100 M1V turbo			
VENTS 100 M1T turbo			
VENTS 100 M1TH turbo			
VENTS 100 M1VT turbo			
VENTS 100 M1VTH turbo			
VENTS 100 M1TP turbo			
VENTS 100 M2 turbo			
VENTS 100 M2V turbo			
VENTS 100 M2T turbo			
VENTS 100 M2TH turbo			
VENTS 100 M2VT turbo			
VENTS 100 M2VTH turbo			
VENTS 100 M2TP turbo			
VENTS 100 M3 turbo			
VENTS 100 M3V turbo			
VENTS 100 M3T turbo			
VENTS 100 M3TH turbo			
VENTS 100 M3VT turbo			
VENTS 100 M3VTH turbo			
VENTS 100 M3TP turbo			
VENTS 125 M	16	BL 58-16A01	Hunan Keli Motor Ltd.
VENTS 125 MV			
VENTS 125 MT			
VENTS 125 MTH			
VENTS 125 MVT			
VENTS 125 MVTH			
VENTS 125 MTP			
VENTS 125 M1			

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 125 M1V VENTS 125 M1T VENTS 125 M1TH VENTS 125 M1VT VENTS 125 M1VTH VENTS 125 M1TP VENTS 125 M2 VENTS 125 M2V VENTS 125 M2T VENTS 125 M2TH VENTS 125 M2VT VENTS 125 M2VTH VENTS 125 M2TP VENTS 125 M3 VENTS 125 M3V VENTS 125 M3T VENTS 125 M3TH VENTS 125 M3VT VENTS 125 M3VTH VENTS 125 M3TP	16	BL 58-16A01	Hunan Keli Motor Ltd.
VENTS 125 M press VENTS 125 MV press VENTS 125 MT press VENTS 125 MTH press VENTS 125 MVT press VENTS 125 MVTH press VENTS 125 MTP press VENTS 125 M1 press VENTS 125 M1V press VENTS 125 M1T press VENTS 125 M1TH press VENTS 125 M1VT press VENTS 125 M1VTH press VENTS 125 M1TP press VENTS 125 M2 press VENTS 125 M2V press VENTS 125 M2T press VENTS 125 M2TH press VENTS 125 M2VT press VENTS 125 M2VTH press VENTS 125 M2TP press VENTS 125 M3 press VENTS 125 M3V press VENTS 125 M3T press VENTS 125 M3TH press VENTS 125 M3VT press VENTS 125 M3VTH press VENTS 125 M3TP press	24	BL 58-16A01	Hunan Keli Motor Ltd.

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 125 M Q	9	BL 58-16Y03	CIXI CITI YIXIONG ELECTROMOTOR FACTORY
VENTS 125 MV Q			
VENTS 125 MT Q			
VENTS 125 MTH Q			
VENTS 125 MVT Q			
VENTS 125 MVTH Q			
VENTS 125 MTP Q			
VENTS 125 M1 Q			
VENTS 125 M1V Q			
VENTS 125 M1T Q			
VENTS 125 M1TH Q			
VENTS 125 M1VT Q			
VENTS 125 M1VTH Q			
VENTS 125 M1TP Q			
VENTS 125 M2 Q			
VENTS 125 M2V Q			
VENTS 125 M2T Q			
VENTS 125 M2TH Q			
VENTS 125 M2VT Q			
VENTS 125 M2VTH Q			
VENTS 125 M2TP Q			
VENTS 125 M3 Q			
VENTS 125 M3V Q			
VENTS 125 M3T Q			
VENTS 125 M3TH Q			
VENTS 125 M3VT Q			
VENTS 125 M3VTH Q			
VENTS 125 M3TP Q			
VENTS 125 M turbo	24	BL 58-20A01	Hunan Keli Motor Ltd.
VENTS 125 MV turbo			
VENTS 125 MT turbo			
VENTS 125 MTH turbo			
VENTS 125 MVT turbo			
VENTS 125 MVTH turbo			
VENTS 125 MTP turbo			
VENTS 125 M1 turbo			
VENTS 125 M1V turbo			
VENTS 125 M1T turbo			
VENTS 125 M1TH turbo			
VENTS 125 M1VT turbo			
VENTS 125 M1VTH turbo			
VENTS 125 M1TP turbo			
VENTS 125 M2 turbo			
VENTS 125 M2V turbo			
VENTS 125 M2T turbo			
VENTS 125 M2TH turbo			
VENTS 125 M2VT turbo			
VENTS 125 M2VTH turbo			

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 125 M2TP turbo	24	BL 58-20A01	Hunan Keli Motor Ltd.
VENTS 125 M3 turbo			
VENTS 125 M3V turbo			
VENTS 125 M3T turbo			
VENTS 125 M3TH turbo			
VENTS 125 M3VT turbo			
VENTS 125 M3VTH turbo			
VENTS 125 M3TP turbo			
VENTS 150 M	24	BL 58-30A01	Hunan Keli Motor Ltd.
VENTS 150 MV			
VENTS 150 MT			
VENTS 150 MTH			
VENTS 150 MVT			
VENTS 150 MVTH			
VENTS 150 MTP			
VENTS 150 M1			
VENTS 150 M1V			
VENTS 150 M1T			
VENTS 150 M1TH			
VENTS 150 M1VT			
VENTS 150 M1VTH			
VENTS 150 M1TP			
VENTS 150 M2			
VENTS 150 M2V			
VENTS 150 M2T			
VENTS 150 M2TH			
VENTS 150 M2VT			
VENTS 150 M2VTH			
VENTS 150 M2TP			
VENTS 150 M3			
VENTS 150 M3V			
VENTS 150 M3T			
VENTS 150 M3TH			
VENTS 150 M3VT			
VENTS 150 M3VTH			
VENTS 150 M3TP			
VENTS 150 M press	30	BL 58-30A01	Hunan Keli Motor Ltd.
VENTS 150 MV press			
VENTS 150 MT press			
VENTS 150 MTH press			
VENTS 150 MVT press			
VENTS 150 MVTH press			
VENTS 150 MTP press			
VENTS 150 M1 press			
VENTS 150 M1V press			
VENTS 150 M1T press			
VENTS 150 M1TH press			
VENTS 150 M1VT press			

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 150 M1VTH press	30	BL 58-30A01	Hunan Keli Motor Ltd.
VENTS 150 M1TP press			
VENTS 150 M2 press			
VENTS 150 M2V press			
VENTS 150 M2T press			
VENTS 150 M2TH press			
VENTS 150 M2VT press			
VENTS 150 M2VTH press			
VENTS 150 M2TP press			
VENTS 150 M3 press			
VENTS 150 M3V press			
VENTS 150 M3T press			
VENTS 150 M3TH press			
VENTS 150 M3VT press			
VENTS 150 M3VTH press			
VENTS 150 M3TP press			
VENTS 150 M Q	20	BL 58-30Y03	CIXI CITI YIXIONG ELECTROMOTOR FACTORY
VENTS 150 MV Q			
VENTS 150 MT Q			
VENTS 150 MTH Q			
VENTS 150 MVT Q			
VENTS 150 MVTH Q			
VENTS 150 MTP Q			
VENTS 150 M1 Q			
VENTS 150 M1V Q			
VENTS 150 M1T Q			
VENTS 150 M1TH Q			
VENTS 150 M1VT Q			
VENTS 150 M1VTH Q			
VENTS 150 M1TP Q			
VENTS 150 M2 Q			
VENTS 150 M2V Q			
VENTS 150 M2T Q			
VENTS 150 M2TH Q			
VENTS 150 M2VT Q			
VENTS 150 M2VTH Q			
VENTS 150 M2TP Q			
VENTS 150 M3 Q			
VENTS 150 M3V Q			
VENTS 150 M3T Q			
VENTS 150 M3TH Q			
VENTS 150 M3VT Q			
VENTS 150 M3VTH Q			
VENTS 150 M3TP Q			

Models differ in model name, rated power, shape of enclosure, type of the motor, switch, motion sensor, humidity sensor and timer.
All type: 220 – 240 V, 50 Hz, IP 34, Class II, 0 – 45 °C

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

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

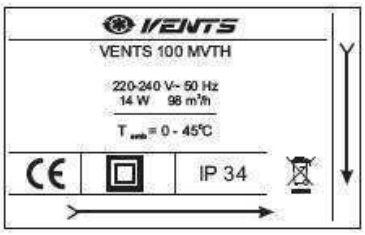
Testing location:

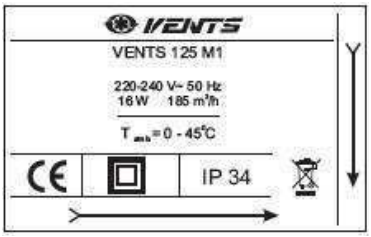
MEEI Kft.

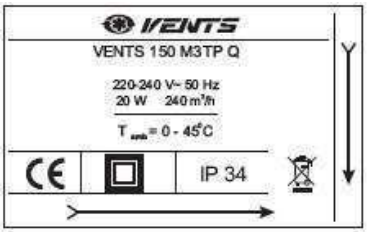
H-1132 Budapest, Váci út 48. a-b. Hungary

Summary of compliance with National Differences: EU Group Differences and National Differences of DE have been tested and found to be complied with. (See in attachment 2)

Copy of marking plate:







Design of rating label of other models is identical to the above except for type designation, rated power and flow rate

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

Test item particulars ..... :	
Classification of installation and use ..... :	Class II
Supply Connection..... :	Permanent connection, supply cord is not provided
..... :	-
..... :	-
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement .....:	P(Pass)
- test object does not meet the requirement .....:	F(Fail)
Testing ..... :	
Date of receipt of test item .....:	14-07-2010
Date (s) of performance of tests .....:	19-08-2010 – 06-09-2010

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 object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report a comma (point) is used as the decimal separator.

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

General product information: The fans are designed for ventilation of domestic and similar purposes and for continuous operation. Meaning of characters in type references:

VENTS xxx Myuu z

- 'VENTS': trade mark
- 'xxx': the diameter of the duct [mm].It can be: 100; 125; 150.
- 'My': fan type. It can be M, M1, M2, M3. (They differ in shape of enclosure)
- 'uuu': it can be blank, V, T, TH, VT, VTH, TP.

  T: supplied with timer

  V: supplied with switch

  H: supplied with humidity relay

  P: supplied with motion sensor

- 'z': it can be blank, Q, turbo, press

  Q: quiet operation motor
  turbo: motor with increased power is installed
  press: increased press

Possible variants can be seen in table of model list, on pages 3 – 9.

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		P
	Tests performed according to cl. 5, e.g. nature of supply, sequence of testing, etc.		P
5.7	Fans to be used in tropical climates, the tests of clause 10,11 and 13 are carried out at 40 °C +/- 2 °C (IEC 60335-2-80)		N/A
	Fans marked with ambient operating temperature, the tests of clause 10, 11 and 13 are carried out at marked value +/- 2 °C (IEC 60335-2-80/A1)	45 °C	P
6	CLASSIFICATION		
6.1	Protection against electric shock: Class 0, 0I, I, II, III .....:	II.	P
6.101	Classification to climatic conditions : temperature climates, tropical climates (IEC 60335-2-80)	For temperate climate.	P
6.2	Protection against harmful ingress of water	IP X4	P
7	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V) .....:	220-240 V	P
	Nature of supply.....:	~	P
	Rated frequency (Hz) .....:	50 Hz	P
	Rated power input (W): .....:	6, 9, 14, 16, 20, 24, 30 W for details see 'model list' on pages 3 - 9	P
	Rated current (A) .....:	Rated power stated.	N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark.....:	VENTS	P
	Model or type reference.....:	See copy of marking plate.	P
	Symbol 5172 of IEC 60417, for Class II appliances	See copy of marking plate.	P
	IP number, other than IPX0.....:	IP 34 See copy of marking plate.	P
	For tropical climates marked with letter T (IEC 60335-2-80)	Not for tropical climates.	N/A
	Fans intended for operation in location where the local temperature exceeds 40 °C shall be marked with the ambient operating temperature. (IEC 60335-2-80/A1)	0 – 45 °C See copy of marking plate.	P
7.2	Warning for stationary appliances for multiple supply	One supply.	N/A
	Warning placed in vicinity of terminal cover		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen	220-240 V~ See copy of marking plate.	P
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages, the voltage setting is clearly discernible	Not adjustable.	N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A
	the power input is related to the arithmetic mean value of the rated voltage range (IEC 60335-1/A2)	Difference is less than 10%	P
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		P
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		N/A
	- marking of terminals exclusively for the neutral conductor (N)		N/A
	- marking of protective earthing terminals (symbol 5019 of IEC 60417)	Class II	N/A
	- marking not placed on removable parts		N/A
7.9	Marking or placing of switches which may cause a hazard		N/A
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means .....:	-	N/A
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N/A
7.11	Indication for direction of adjustment of controls		N/A
7.12	Instructions for safe use provided		P
	- the appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction. (IEC 60335-1/A2)		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	- Children should be supervised to ensure that they do not play with the appliance. (IEC 60335-1/A2)		P
	For the guards have to be removed purpose for cleaning should: (IEC 60335-2-80/A1)		N/A
	Ensure that the fan is switched off from the supply mains before removing the guard.	No guard	N/A
7.12.1	Sufficient details for installation supplied		P
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules	User's Manual "Preparation to device operation" states the necessary disconnection	P
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions stating that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		N/A
	- dimensions of space		N/A
	- dimensions and position of supporting means		N/A
	- distances between parts and surrounding structure		N/A
	- dimensions of ventilation openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- plug accessible after installation, unless		N/A
	a switch complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		N/A
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Instructions for heating appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection the supply mains contains the warning (IEC 60335-1, A1)	No heating appliances.	N/A
7.12.7	The instructions for fixed appliances shall state how the appliance is to be fixed to its support (IEC 60335-1, A1)		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
7.12.8	The instructions for appliances connected to the water mains shall state: - max. inlet water pressure - min. inlet water pressure (if necessary for correct operation (IEC 60335-1, A1)		N/A
7.13	Instructions and other texts in an official language	English and German provided.	P
7.14	Marking clearly legible and durable		P
7.15	Marking on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover	Marking label repeated inside too.	P
	For portable appliances, cover can be removed or opened without a tool		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		P
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		N/A
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link	Non-replaceable thermal link provided.	N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		P
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032: no contact with live parts		P
	Add NOTE 2 ”Without appreciable force” is considered to be a force not exceeding 1 N (IEC 60335-1/A2)		P
8.1.2	Use of test probe 13 of IEC 61032 through openings in class 0 appliances and class II appliances/ constructions: no contact with live parts	No contact	P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Add NOTE 2 "Without appreciable force" is considered to be a force not exceeding 1 N (IEC 60335-1/A2)		P
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032: no contact with live parts of visible glowing heating elements		N/A
	Add NOTE 2 "Without appreciable force" is considered to be a force not exceeding 1 N (IEC 60335-1/A2)		N/A
8.1.4	Accessible part not considered live if:		N/A
	- safety extra-low arc. voltage: peak value not exceeding 42.4 V		N/A
	- safety extra-low o.k. voltage: not exceeding 42.4 V		N/A
	- or separated from live parts by protective impedance		N/A
	If protective impedance: o.k. current not exceeding 2 am, and		N/A
	arc. peak value not exceeding 0.7 am		N/A
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 µF		N/A
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 µC		N/A
	-for voltages having a peak value over 15 kV, the energy in the discharge shall not exceed 350 my (IEC 60335-1/A2)		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		P
	- built-in appliances		N/A
	- fixed appliances		P
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
	Remove the detachable parts for user maintenance purpose, the basic insulation of internal wiring may be touched provide the equivalent insulating of cords complying with IEC 60227 or IEC 60245. (IEC 60335-2-80/A1)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
10	POWER INPUT AND CURRENT		P
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1	(see appended table)	P
	Test for an appliance with one or more rated voltage ranges. (IEC 60335-1/A2)		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2	Rated current is not marked.	N/A
	Test for an appliance with one or more rated voltage ranges. (IEC 60335-1/A2)		N/A
11	HEATING		P
11.1	No excessive temperatures in normal use		P
11.2	Placing and mounting of appliance as described		P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		P
	the windings makes it difficult to make the necessary connections		N/A
11.4	Heating appliances operated under normal operation at 1.15 times rated power input .....:	-	N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage.....:	254.4V (1.06x240V) was the most unfavourable.	P
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage.....:	-	N/A
11.7	Operation duration corresponding to the most unfavourable conditions of normal use		P
11.8	Temperature rises not exceeding values in table 3	(see appended tables)	P
	Protective devices do not operate		P
	Sealing compound does not flow out		P
	For fans marked with operating temperature, the temperature rise limit is reduced by the difference between the marked value and 25°C. (IEC 60335-2-80/A1)		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times rated power input .....:	-	
	Motor-operated appliances and combined appliances supplied at 1.06 times rated voltage .....:	254.4 V (1.06x240 V)	N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
13.2	Leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	Leakage current measurements	(see appended table)	P
13.3	Electric strength tests according to table 4	(see appended table)	P
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		N/A
	Appliances withstand the transient overvoltages to which they may be subjected		N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6	Clearances are not less than specified.	N/A
	No flashover during the test, unless of functional insulation		N/A
	In case of flashover of functional insulation, the appliance complies with clause 19 with the clearance short circuited		N/A
15	MOISTURE RESISTANCE		P
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance		P
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		P
	No trace of water on insulation which can result in a reduction of clearances and creepage distances below values specified in clause 29		P
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529.....:	Tested for IPX4.	P
	Water valves containing live parts are subjected to the tests for IPX7 appliances (IEC 60335-1/A1)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	The outer part of fans to be installed in the external structure is subjected to subclause 14.2.4(a) of IEC 60529. The outer part of fans is not to be installed in the external structure is protected against the water. (IEC 60335-2-80/A1)		N/A
	The fans supplied as rated voltage with shutters or similar devices being the open position. (IEC 60335-2-80/A1)	Tested for IPX4.	P
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube		P
	For IPX4 appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support that prevents water spraying onto the top surface (IEC 60335-1/A1)		N/A
	However, for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		P
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts tested as specified		N/A
15.2	Spillage of liquid does not affect the electrical insulation	No spillage in normal condition.	N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts removed		N/A
	Overfilling test with additional amount of water, over a period of 1 min (l).....:	-	N/A
	The appliance withstands the electric strength test of 16.3		N/A
	No trace of water on insulation that can result in a reduction of clearances and creepage distances below values specified in clause 29		N/A
15.3	Appliances proof against humid conditions	48h, 95%, 25℃	P
	Humidity test for 48 h in a humidity cabinet		P
	The appliance withstands the tests of clause 16		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
16.2	Single-phase appliances: test voltage 1.06 times rated voltage .....:	254.4V (1.06x240V)	P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by √3.....:	-	N/A
	Leakage current measurements	(see appended table)	P
16.3	Electric strength tests according to table 7	(see appended table)	P
	No breakdown during the tests		P
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		N/A
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use		N/A
	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 .....:	-	N/A
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		N/A
	Temperature of the winding not exceeding the value specified in table 8,		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	however limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
18	ENDURANCE		N/A
	Requirements and tests are specified in part 2 when necessary		N/A
19	ABNORMAL OPERATION		P
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe		P
	Appliances incorporating contactors or relays are subjected to the test of 19.14 (IEC 60335-1/A2)		N/A
	Fans incorporating shutters or similar subjected to the test of cl. 19.101 (IEC 60335-2-80)	See cl. 19.101.	N/A
19.2	Test of appliance with heating elements with restricted heat dissipation; test voltage (V): power input of 0.85 times rated power input.....:	-	N/A
19.3	Test of 19.2 repeated; test voltage (V): power input of 1.24 times rated power input.....:	-	N/A
19.4	Test conditions as in cl. 11, any control limiting the temperature during tests of cl. 11 short-circuited		N/A
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the elements sheath		N/A
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N/A
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N/A
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque or locking moving parts of other appliances		P
	Locked rotor, motor capacitors open-circuited or short-circuited, if required	No motor-capacitor	N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, if required		N/A
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed		N/A
	Other appliances supplied with rated voltage for a period as specified		P
	Winding temperatures not exceeding values specified in table 8	(see appended table)	P
19.8	Three-phase motors operated at rated voltage with one phase disconnected		N/A
19.10	Series motor operated at 1.3 times rated voltage for 1 min .....:	-	N/A
	During the test, parts not being ejected from the appliance		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless they comply with the conditions specified in 19.11.1		P
	Appliances having a switch with an off position obtained by electronic disconnection, or a switch placing the appliance in a stand-by mode, subjected to the tests of 19.11.4 :(IEC 60335-1/A2)	The most unfavourable case is the permanent operation. It is not dangerous.	N/A
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly are subjected to the test of 19.11.4.8, unless:(IEC 60335-1/A2)		N/A
	-restarting at any point in the operating cycle after interruption of operation due to a supply voltage dip will not result in a hazard. (IEC 60335-1/A2)		N/A
	- the test is carried out after removal of all batteries and other components intended to maintain the programmable component supply voltage during mains supply voltage dips, interruptions and variations. (IEC 60335-1/A2)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
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:		P
	- 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	C2, C3, VD1, VD2 were short-circuited;	P
	- 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		P
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:		P
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in 29		N/A
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless they comply with IEC 60384-14	C1 complies with IEC 60384-14. (CKX type)	P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits. This fault condition is not applied between the two circuits of an optocoupler		P
	e) failure of triacs in the diode mode	No such triacs	N/A
	f) failure of an integrated circuit. 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
	g) failure of an electronic power switching device in a partial turn-on mode with loss of gate (base) control. During this test, winding temperatures shall not exceed the values given in 19.7. (IEC 60335-1/A2)		N/A
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to f) of 19.11.2	No protective electronic circuit	N/A
	During and after each test the following is checked:		N/A
	- the temperature rise of the windings do not exceed the values specified in table 8		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	- the appliance complies with the conditions specified in 19.13		N/A
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided all three of the following conditions are met:		N/A
	- the material of the printed circuit board withstands the burning test of annex E		N/A
	- any loosened conductor does not reduce the clearances or creepage distances between live parts and accessible metal parts below the values specified in cl. 29		N/A
	- the appliance withstands the tests of 19.11.2 with open-circuited conductor bridged		N/A
19.11.4	Protective electronic circuits are subjected to the tests of clause 19.11.4.1 to 19.11.4.7 (IEC 60335-1, A1)		N/A
	Appliances with a device with an off position obtaining by electronic disconnection or that can be placed in a stand-by mode, are subjected to the tests of clause 19.11/4.1 to 19.11.4 7 (IEC 60335-1, A1) (IEC 60335-1/A2)		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4 (IEC 60335-1, A1)		N/A
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3 (IEC 60335-1, A1)		N/A
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 (IEC 60335-1, A1)		N/A
19.11.4.4	The power supply terminals of the appliance are subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 (IEC 60335-1, A1)		N/A
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3 (IEC 60335-1, A1)		N/A
19.11.4.6	The appliance is subjected to the values specified in Table 1 and Table 2 of IEC 61000-4-11, test level Class 3. (IEC 60335-1/A2)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2 (IEC 60335-1, A1)		N/A
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. (IEC 60335-1/A2)		N/A
	- after approximately 60 s, the power supply voltage is reduced to a level such that the appliance ceases to respond to user inputs or parts cease to operate, whichever occurs first. Record the value of supply voltage. (IEC 60335-1/A2)		N/A
	-the voltage is then reduced to a value of approximately 10 %. Holding at this value for approximately 60 s and then increased to rated voltage. The rate is approximately 10 V/s. (IEC 60335-1/A2)		N/A
	The appliance shall continue to either operate normally or a manual operation shall be required to restart it.(IEC 60335-1/A2)		N/A
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A):	-	N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9	(see appended table)	P
	Compliance with cl. 8 is not impaired (IEC 60335-1/A2)		P
	Enclosures not deformed to such an extent that compliance with cl. 8 is impaired		P
	If the appliance can still be operated it complies with 20.2		N/A
	Insulation, other than of class III appliance, withstand the electric strength test of 16.3, the test voltage specified in table 4:		P
	- basic insulation:	L/N and motor surface (1250V)	P
	- supplementary insulation:	Motor surface and enclosure wrapped into metal foil (1750V)	P
	- reinforced insulation:	L/N and enclosure wrapped into metal foil (3000V)	P
	- functional insulation, the test voltage is twice the working voltage. (IEC 60335-1/A2)	480 V	P
	The appliance shall not undergo a dangerous malfunction and there shall be no failure of protective electronic circuits if the appliance is still operable (IEC 60335-1, A1)		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances with an electronic switch in the off position or in the stand-by mode shall not become operable (IEC 60335-1, A1)		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode, shall: (IEC 60335-1/A2)	The most unfavourable case is the permanent operation. It is not dangerous.	N/A
	- not become operational, or		N/A
	- if they become operational, not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
19.14	Any contactor or relay contact that operates under the conditions of Clause 11 is short-circuited. (IEC 60335-1/A2)		N/A
	Note: If a relay or contactor with more than one contact is used, all contacts are short-circuited at the same time. (IEC 60335-1/A2)		N/A
19.101	Fans incorporating shutters or similar that are operated automatically are supplied at rated voltage in the closed or open position, whichever is more unfavourable (IEC 60335-2-80)	No shutter	N/A
20	STABILITY AND MECHANICAL HAZARDS		P
20.1	Adequate stability	Appliance shall be installed properly according to the User's Manual.	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°		N/A
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
	Portable pedestal fans exceeding 1,7 m and exceeding 10 kg tested with a force of 40 N at 1,5 m (IEC 60335-2-80)	No such fan	N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable		P
	Adequate mechanical strength and fixing of protective enclosures		P
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, by unexpected reclosure	No such cut-outs	N/A
	Not possible to touch dangerous moving parts with test probe		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
20.101	Fan blades, other than those for mounting at high level, shall be guarded, unless ..... (IEC 60335-2-80)	Blades are guarded after the installation according the User's Manual by the duct	P
21	MECHANICAL STRENGTH		P
	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	No damage after three blows applied to various parts of the enclosure, impact energy 0,5 ± 0,04 J		P
	If necessary, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
21.2	Accessible parts of solid insulation shall have sufficient strength to prevent penetration by sharp implements. The parts are scratched with a hardened steel pin. After the test there shall be no damage and the insulation shall withstand the tests of clause 16.3 (IEC 60335-1, A1)		P
21.101	Fan guards are subjected to a push and pull force of 20 N. Dangerous moving parts are not accessible (IEC 60335-2-80)	Blades are guarded after the installation according the User's Manual by the duct	P
	The test probe is applied with a force not exceeding 5N. (IEC 60335-2-80/A2)		N/A
21.102	Ceiling fans have adequate strength. Load four times mass (.....) (IEC 60335-2-80)	No such fans.	N/A
22	CONSTRUCTION		P
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		P
22.2	Stationary appliance: means to provide all-pole disconnection from the supply provided, the following means being available:		P
	- a supply cord fitted with a plug		N/A
	- a switch complying with 24.3	No switch with all-pole disconnection.	N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided	Statement in the User's Manual.	P
	- an appliance inlet	No appliance inlet.	N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Single-pole switches and single-pole protective devices that disconnect heating elements from the supply mains in single-phase, permanently connected class 0I appliances and class I appliances shall be connected to the phase conductor. (IEC 60335-1/A2)		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets	No pins.	N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Pull force of 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating unless rotating does not impair compliance with the standard		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		N/A
22.6	Electrical insulation not affected by condensing water or leaking liquid		N/A
	Electrical insulation of Class II appliances not affected in case of a hose rupture or seal leak		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances provided with steam-producing devices		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 that are likely to be cleaned in normal use		N/A
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances		P
	Adequate insulating properties of oil or grease to which insulation is exposed		N/A
22.10	Location or protection of reset buttons of non-self-resetting controls is so that accidental resetting is unlikely		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	It shall not be possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device (IEC 60335-1/A1)		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described		P
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 being so that an axial pull is unlikely to be applied		N/A
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		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		P
	No exposed pointed ends of self tapping screws etc., liable to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands, no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
22.18	Current-carrying parts and other metal parts resistant to corrosion under normal conditions of use		P
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
	Compliance is checked by inspection and, if necessary, by appropriate test		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements. (IEC 60335-1/A2)		N/A
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements adequately supported		N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		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		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		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		P
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	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		P
22.31	Clearances and creepage distances over supplementary and reinforced insulation not reduced below values specified for supplementary insulation		P
	Creepage distances and clearances over supplementary or reinforced insulation not reduced to less than 50% of values specified in 29 if wires, screws etc. becomes loose		P
22.32	Supplementary and reinforced insulation designed or protected against deposition of dirt or dust		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar material or beads alone not used as supplementary or reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation and not reinforced insulation (IEC 60335-1/A2)		N/A
22.33	Conductive liquids that are or may become accessible in normal use are not in direct contact with live parts		N/A
	Electrodes not used for heating liquids		N/A
	For class II constructions, conductive liquids that are or may become accessible in normal use, not in direct contact with basic or reinforced insulation		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation		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 basic insulation fault (IEC 60335-1/A2)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of an basic insulation fault, they are either adequately covered by insulation material, or their accessible parts are separated from their shafts or fixings by supplementary insulation (IEC 603351/A2)		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
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		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		N/A
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A
	The appliance can operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation shall be fitted with a switch for stopping the operation of the appliance. The actuating member of this switch shall be easily visible and accessible (IEC 60335-1/A2)		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
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 that is shaped or decorated like a toy (IEC 60335-1/A2)		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.4 due to deformation as a result of an external force applied to the enclosure		N/A
22.46	Software used in protective electronic circuits shall be software class B or software class C (IEC 60335-1/A1)		N/A
22.47	Appliances intended to be connected to the water mains shall withstand the water pressure expected in normal use (IEC 60335-1/A1)		N/A
22.48	Appliances intended to be connected to the water mains shall be constructed to prevent backsiphonage of non-potable water into the water mains (IEC 60335-1/A1)		N/A
22.49	For remote operation, the duration of operation shall be operated without giving rise to a hazard: (IEC 60335-1/A2)		N/A
	- set before the appliance is started		N/A
	- the appliance switches off automatically at the end of a cycle		N/A
	- it can operate continuously		N/A
22.50	Controls incorporated in the appliance shall take priority over controls actuated by remote operation (IEC 60335-1/A2)		N/A
22.51	A control on the appliance shall be manually adjusted to the setting for remote operation before the appliance can be operated in this mode. (IEC 60335-1/A2)		N/A
	There shall be a visual indication on the appliance showing that the appliance is adjusted for remote operation, or (IEC 60335-1/A2)		N/A
	The manual setting and the visual indication of the remote mode are not necessary on appliances if it can operate continuously or automatically or remotely without giving rise to a hazard. (IEC 60335-1/A2)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
22.52	Socket-outlets on appliances accessible to the user shall be in accordance with the socket-outlet system used in the country in which the appliance is sold. (IEC 60335-1/A2)		N/A
22.101	Appliances having provision for attaching a luminaire incorporate appropriate terminals and internal wiring (IEC 60335-2-80)		N/A
23	INTERNAL WIRING		
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		P
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 movable relatively to each other not exposed to undue stress		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 100 000 flexings for conductors flexed during normal use and at rated voltage (IEC 60335-2-80)		N/A
	Electric strength test, 1000 V between live parts and accessible metal parts		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
23.5	The insulation of internal wiring withstanding the electrical stress likely to occur in normal use		P
	No breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by positive means		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
23.7	The colour combination green/yellow used only for earthing conductors	Green/yellow is not used in the appliance.	N/A
23.8	Aluminium wires not used for internal wiring	No aluminium wire.	P
23.9	No lead-tin soldering of stranded conductors where they are subject to contact pressure, unless	No soldering for this reason.	P
	clamping means so constructed that there is no risk of bad contact due to cold flow of the solder		N/A
23.10	The insulation and sheath of internal wiring, in external hoses for the connection of appliances to the water mains, shall be at least equivalent to that of light polyvinyl chloride sheathed flexible cords, code designation 60227 IEC 52 (IEC 60335-1/A1)		N/A
24	COMPONENTS		P
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components	(see appended table)	P
	Components not tested and found to comply with relevant IEC standard for the number of cycles specified are tested in accordance with 24.1.1 to 24.1.9 (IEC 60335-1/A2)		N/A
	Components not tested and found to comply with relevant IEC standard for the number of cycles specified are tested in accordance with 24.1.1 to 24.1.6		N/A
	Components not tested and found to comply with relevant IEC standard, components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		N/A
	Lampholders and starterholders that have not been previously tested and found to comply with the relevant IEC standard are tested as a part of the appliance and shall additionally comply with the gauging and interchangeability requirements of the relevant IEC standard under the conditions occurring in the appliance. (IEC 60335-1/A2)		N/A
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14, or	Approved component	P
	tested according to annex F		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
24.1.2	Safety isolating transformers complying with IEC 61558-2-6, or		N/A
	tested according to annex G		N/A
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000, or		P
	tested according to annex H		N/A
24.1.4	Automatic controls complying with IEC 60730-1 with relevant part 2. The number of cycles of operation being:		N/A
	- thermostats: 10 000		N/A
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		N/A
	- non-self-resetting thermal cut-outs: 30	Approved component	P
	- timers: 3 000		P
	- energy regulators: 10 000		N/A
	- voltage maintain non-self-resetting thermal cut-outs (IEC 60335-1/A1) 1 000		N/A
	- other non-self-resetting thermal cut-outs (IEC 60335-1/A1) 30		N/A
24.1.5	Appliance couplers complying with IEC 60320-1		N/A
	However, appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N/A
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N/A
24.1.7	If the remote operation of the appliance is via a telecommunication network, the telecommunication interface circuitry in the appliance shall comply with IEC 62151. (IEC 60335-1/A2)		N/A
24.1.8	Thermal links shall comply with IEC 60691, or (IEC 60335-1/A2)		P
	Thermal links are considered to be an intentionally weak part for the purposes of Clause 19. (IEC 60335-1/A2)		N/A
24.1.9	Relays, other than motor starting relays, are tested as part of the appliance. (IEC 60335-1/A2)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	However, they are also tested in accordance with Clause 17 of IEC 60730-1 under the maximum load conditions occurring in the appliance for at least the number of operations in 24.1.4 selected according to the relay function in the appliance. (IEC 60335-1/A2)		N/A
24.2	Switches or automatic controls in flexible cords are allowed for appliances not exceeding 25 W (IEC 60335-2-80)		N/A
	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 that can be reset by soldering		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and having a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance and used accordingly		N/A
	Capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, are of class P1 or P2 of IEC 60252		N/A
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42V.		N/A
	In addition, the motors are complying with the requirements of Annex I		N/A
24.7	Hose-sets for the connection of appliances to the water mains shall comply with IEC 61770 and supplied with the appliances (IEC 60335-1/A1)		N/A
24.101	Thermal cut-outs in duct fans in order to comply with cl. 19 are not self-resetting (IEC 60335-2-80)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		P
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		N/A
	- supply cord fitted with a plug		N/A
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance		N/A
	- pins for insertion into socket-outlets		
25.2	Appliance not provided with more than one means of connection to the supply mains		P
	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		N/A
25.3	Connection of supply conductors for appliance intended to be permanently connected to fixed wiring possible after the appliance has been fixed to its support		P
	Appliance provided with a set of terminals for the connection of cables or fixed wiring, cross-sectional areas specified in 26.6		N/A
	Appliance provided with a set of terminals allowing the connection of a flexible cord		P
	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, dimensions according to table 10		P
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in 29		P
25.5	Method for assemble supply cord with the appliance:		P
	- type X attachment		N/A
	- type Y attachment		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	- type Z attachment is allowed for portable fans (IEC 60335-2-80)		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
25.6	Plugs fitted with only one flexible cord		N/A
25.7	Supply cord shall be one of the following types: (IEC 60335-1/A2)		N/A
	- at least ordinary tough rubber sheathed cord (60245 IEC 53) (IEC 60335-1/A2)		N/A
	- at least ordinary polychloroprene sheathed flexible cord [60245 IEC 57] (IEC 60335-1/A2)		N/A
	- at least cross-linked polyvinyl chloride sheathed cords [60245 IEC 87] (IEC 60335-1/A2)		N/A
	- Polyvinyl chloride sheathed, not be used to touch metal parts having a temperature rise exceeding 75 K during the test of Clause 11. Their properties shall be at least those of: (IEC 60335-1/A2)		N/A
	--light polyvinyl chloride sheathed cord (code designation 60227 IEC 52), for appliances having a mass not exceeding 3 kg or		N/A
	--ordinary polyvinyl chloride sheathed cord (code designation 60227 IEC 53), for other appliances		N/A
	-Heat resistant polyvinyl chloride sheathed, not be for type X attachment other than specially prepared cords. Their properties shall be at least those of: (IEC 60335-1/A2)		N/A
	--heat-resistant light polyvinyl chloride sheathed cord (code designation 60227 IEC 56), for appliances having a mass not exceeding 3 kg or		N/A
25.8	Nominal cross-sectional area of supply cords according to table 11; rated current (A); cross-sectional area (mm^2) .....:	-	N/A
25.9	Supply cord not in contact with sharp points or edges		N/A
25.10	Green/yellow core for earthing purposes in Class I appliance		N/A
25.11	Conductors of supply cords not consolidated by lead-tin soldering where they are subject to contact pressure, unless		N/A
	clamping means so constructed that there is no risk of bad contacts due to cold flow of the solder		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
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 so shaped as to prevent damage to the supply cord		N/A
	Unless the enclosure at the inlet opening is of insulation material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N/A
	If unsheathed supply cord, a similar additional bushing or lining is required, unless		N/A
	the appliance is class 0		N/A
25.14	Supply cords adequately protected against excessive flexing		N/A
	Flexing test:		N/A
	- applied force (N).....:	-	N/A
	- number of flexings.....:	-	N/A
	The test does not result in:		N/A
	- short circuit between the conductors		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage, within the meaning of the standard, to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
25.15	Conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord, values shown in table 10: pull (N); torque (not on automatic cord reel) (Nm).....:	30 N; 0,1 Nm	P
	Max. 2 mm displacement of the cord, and conductors not moved more than 1 mm in the terminals		P
	Creepage distances and clearances not reduced below values specified in 29.1		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
25.16	Cord anchorages for type X attachments constructed and located so that:		N/A
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, if applicable		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for Class 0, 0I and I appliances: they are of insulating material or are provided with an insulating lining, unless 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		N/A
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	so constructed that the cord can only be fitted with the aid of a tool		N/A
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	Conductors of the supply cord for type Y and Z attachment adequately additionally insulated		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed to permit checking of conductors with respect to correct positioning and connection before fitting any cover, no risk of damage to the conductors when fitting the cover, no contact with accessible metal parts if a conductor becomes loose, etc.		P
	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
	- 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		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	Interconnection cords not detachable without the aid of a tool if compliance with the standard is impaired when they are disconnected		N/A
25.25	Dimensions of pins compatible with the dimensions of the relevant socket-outlet. Dimensions of pins and engagement face in accordance with the relevant plug in IEC 60083		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		P
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover		P
	Only the earthing terminal may be accessible if a tool is required to make the connections and means to provide to clamp the wire independently from its connection (IEC 60335-1/A1)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
26.2	Appliances with type X attachment and appliances for connection to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless the connections are soldered	By screw	P
	Screws and nuts serve only to clamp supply conductors, except		P
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone		N/A
	Soldering alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free at the soldered joint		N/A
26.3	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		P
	Terminals for type X attachment and those for connection to fixed wiring so fixed that when tightening or loosening the clamping means:		P
	- the terminal does not loosen		P
	- internal wiring is not subjected to stress		P
	- clearances and creepage distances are not reduced below the values in 29		P
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified. Nominal diameter of thread (mm); screw category; torque (Nm) (IEC 60335-1/A2).....:	0,28	P
26.4	Terminals for type X attachment, except those with a specially prepared cord, and those for connection to fixed wiring, no special preparation of conductors required, and so constructed or placed that conductors prevented from slipping out		P
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	No contact between live parts and accessible metal parts and, for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection to fixed wiring suitable for connection of conductors with required cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm^2).....:	Terminal block is suitable for connection up to 2,5mm^2 rated current < 3A	P
	Terminals only suitable for a specially prepared cord		N/A
26.7	Terminals for type X attachment accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection to fixed wiring, including the earthing terminal, located close to each other		P
26.9	Terminals of the pillar type constructed and located as specified		P
26.10	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		N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment: soldered, welded, crimped and similar connections may be used		N/A
	For Class II appliances: the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	For Class II appliances: soldering, welding or crimping alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free		N/A
27	PROVISION FOR EARTHING		P
27.1	Accessible metal parts of Class 0I and I appliances, permanently and reliably connected to an earthing terminal or contact of the appliance inlet		N/A
	Earthing terminals not connected to neutral terminal		N/A
	Class 0, II and III appliances have no provision for earthing		P
	Safety extra-low voltage circuits not earthed, unless protective extra-low voltage circuits		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
27.2	Clamping means adequately secured against accidental loosening		N/A
	Terminals used for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm², 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
27.3	For appliances with supply cord, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		N/A
	If a detachable part having an earth connection is plugged into another part of the appliance, the earth connection shall be made before the current-carrying connections are established and the current carrying connections shall be separated before the earth connection when removing the part (IEC 60335-1/A1)		N/A
27.4	No risk of corrosion resulting from contact between metal of earthing terminal and other metal		N/A
	Adequate resistance to corrosion of coated or uncoated parts providing earthing continuity, other than parts of a metal frame or enclosure		N/A
	Parts of steel providing earthing continuity provided at the essential areas with an electroplated coating, thickness at least 5 µm		N/A
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N/A
	In case of aluminium alloys precautions taken to avoid risk of corrosion		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		N/A
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided that clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand held appliances (IEC 60335-1/A2)		N/A
	They may be used in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit (IEC 60335-1/A2)		N/A
28	SCREWS AND CONNECTIONS		P
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium	Only metal screws used	P
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connection or connections providing earthing continuity		N/A
	Screws used for electrical connections or connections providing earthing continuity screw into metal		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A
	Type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw can impair basic insulation		N/A
	For screws and nuts; test as specified	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure not transmitted through insulating material liable to shrink or distort, unless shrinkage or distortion compensated	Class II appliance	N/A
	This requirement does not apply to electrical connections in circuits carrying a current not exceeding 0.5A		N/A
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Thread-cutting (self-tapping) screws and thread rolling screws shall only be used for electrical connections if they generate a full form standard machine screw thread. (IEC 60335-1/A2)		N/A
	However, such screws not used if they are likely to be operated by the user or installer (IEC 60335-1/A2)		N/A
	Thread-cutting, thread rolling and space-threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection of normal use, user maintenance, when replacing a supply cord having a type X attachment and during installation. (IEC 60335-1/A2)		N/A
	At least two screws must be used for each connection providing earthing continuity unless: (IEC 60335-1/A2)		N/A
	The screw forms a thread having a length of at least half the diameter of the screw. (IEC 60335-1/A2)		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity	Mechanical connection does not serve electrical connection.	N/A
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if subjected to torsion		N/A
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		P
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuit boards to protect the microenvironment (Type 1 coating) or to provide basic insulation (Type 2 coating), Annex J applies. (IEC 60335-1/A2)	No coating used	N/A
	The microenvironment is pollution degree 1 under Type 1 coating. (IEC 60335-1/A2)		N/A
	There are no clearance or creepage distance requirements under Type 2 coating. (IEC 60335-1/A2)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15		P
	The values specified may be smaller for basic insulation and functional insulation if the clearance meets the impulse voltage test of clause 14		N/A
	Appliances are in overvoltage category II		P
	Clearances less than specified in table 16 not allowed for basic insulation of class 0 and class 0I appliances,		N/A
	or if pollution degree 3 is applicable		N/A
	Compliance is checked by inspection and measurements as specified		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage and the impulse voltage test of Clause 14 (IEC 60335-1/A2)		P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings assumed to be bare conductors, but the clearances specified in table 16 are reduced by 0.5mm for rated impulse voltages of at least 1500V		N/A
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16		P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, but using the next higher step for rated impulse voltage		P
29.1.4	For functional insulation, the values of table 16 are applicable, unless		P
	the appliance complies with clause 19 with the functional insulation short-circuited		N/A
	Clearances at crossover points of lacquered conductors not measured		N/A
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
	Lacquered conductors of windings assumed to be bare conductors, but the clearances specified in table 16 are reduced by 0.5mm for rated impulse voltages of at least 1500V		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
29.1.5	Appliances having higher working voltage than rated voltage, the voltage used for determining clearances from table 16 is the sum of the rated impulse voltage and the difference between the peak value of the working voltage and the peak value of the rated voltage		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree		P
	Pollution degree 2 applies, unless		N/A
	precautions taken to protect the insulation; pollution degree 1		N/A
	insulation subjected to conductive pollution; pollution degree 3		P
	Compliance is checked by inspection and measurements as specified		P
	Microenvironment is pollution degree 3 unless insulation is enclosed or located that it is unlikely to be exposed to pollution during normal use (IEC 60335-2-80)		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17		P
	For pollution degree 1, creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14		N/A
29.2.2	Creepage distances of supplementary insulation at least as specified for basic insulation in table 17		P
29.2.3	Creepage distances of reinforced insulation at least double as specified for basic insulation in table 17		P
29.2.4	Creepage distances of functional insulation not less than specified in table 18		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Solid insulation having a minimum thickness of 1mm for supplementary insulation,		P
	and 2mm for reinforced insulation		P
	This requirement does not apply if the supplementary insulation, 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		N/A
	This requirement does not apply if the reinforced insulation, other than mica or similar scaly material, consists of at least three layers, any two layers together withstand the electric strength test of 16.3		N/A
	This requirement also does not apply to inaccessible insulation and does not exceed the maximum permissible temperature values, or		N/A
	if the insulation, after conditioning as specified, withstands the electric strength test of 16.3		N/A
29.3.1	The thickness of the insulation shall be at least - 1 mm for supplementary insulation - 2 mm for reinforced insulation (IEC 60335-1/A1)		P
29.3.2	Each layer of material shall withstand the tests of clause 16.3. Supplementary insulation shall consist of at least 2 layer and reinforced insulation at least 3 layers (IEC 60335-1/A1)		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2 for 48 hours at a temperature of 50 K in excess of the maximum temperature rise during clause 19 and withstand the tests of clause 16.3 (IEC 60335-1/A1)		N/A
30	RESISTANCE TO HEAT AND FIRE		P
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and	Approved components	P
	thermoplastic material providing supplementary or reinforced insulation,		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	External parts: at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C).....:	Enclosure tested on 75 °C	P
	Parts supporting live parts: at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125°C, whichever is the higher; temperature (°C).....:	-	N/A
	Parts of thermoplastic material providing supplementary or reinforced insulation, 25°C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C).....:	-	P
30.2	Relevant parts of non-metallic material adequately resistant to ignition and spread of fire (IEC 60335-1/A2)		P
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance (IEC 60335-1/A2)		N/A
	Compliance checked by the test of 30.2.1. In addition:		P
	- attended appliances, 30.2.2 applies		N/A
	- unattended appliances, 30.2.3 applies		P
	Appliances for remote operation are considered to be unattended and consequently so they need comply with the test of 30.2.3. (IEC 60335-1/A2)		N/A
30.2.1	Glow-wire test of IEC 60695-2-11 at 550 °C, unless		P
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out meet the requirements in ISO9772 for material classified HBF (IEC 60335-1/A2)		N/A
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P
	Test not applicable to conditions as specified		P
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0.2A during normal operation, and (IEC 60335-1/A2)	Current is less than 0,2 A	N/A
	parts of non-metallic material within a distance of 3mm, and (IEC 60335-1/A2)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Parts within 3mm but it is shielded from the connection by a different material, then the interposed shielding material in place but not directly to the shielded material (IEC 60335-1/A2)		N/A
	having a glow-wire flammability index of at least 850°C according to IEC 60695-2-11. (IEC 60335-1/A2)		N/A
	However, the test is not carried out on such parts: (IEC 60335-1/A2)		N/A
	- the material classified as having a glow-wire flammability index of at least 850 °C according to IEC 60695-2-12 and the thickness comply with the requirements, or		N/A
	- small parts, comply with the needle-flame test of Annex E or		N/A
	- small parts, classified as V-0 or V-1 according to IEC 60695-11-10 and no thicker than the relevant.		N/A
30.2.3.2	Parts of insulating material supporting current-carrying connections, and		P
	parts of insulating material within a distance of 3mm,		N/A
	subjected to glow-wire test of IEC 60695-2-11	Approved components	N/A
	Test not carried out on material having a glow-wire ignition temperature according to IEC 60695-2-13 as specified		N/A
	Where an non-metallic material is within 3 mm of a current carrying connection, but is shielded from the connection by a different material, then the interposed shielding material in place but not directly to the shielded material shall comply with IEC 60695-2-11 (IEC 60335-1/A2)		N/A
	Glow-wire test of IEC 60695-2-11, the temperature being:		P
	-750°C, for connections carrying a current exceeding 0,2A during normal operation		N/A
	-650°C, for other connections	Approved components	N/A
	Parts that during the test produce a flame persisting longer than 2 s, tested as specified		N/A
	If a flame persists longer than 2 s during the test, parts above the connection, as specified, subjected to the needle-flame test of annex E, unless		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	the material is classified as V-0 or V-1 according to IEC 60695-11-10, no thicker than the relevant part of the appliance. (IEC 60335-1/A2)		N/A
30.2.4	Base material of printed circuit boards subjected to needle-flame test of annex E		P
	Test not applicable to conditions as specified (IEC 60335-1/A2)		N/A
31	RESISTANCE TO RUSTING		P
	Relevant ferrous parts adequately protected against rusting		P
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		N/A
	Appliance does not emit harmful radiation		N/A
	Appliance does not present a toxic or similar hazard due to their operation in normal use. (IEC 60335-1/A2)		N/A
	Compliance is checked by the limits or tests specified in Part 2. (IEC 60335-1/A2)		N/A
	However, if no limits or tests are specified in Part 2, then the appliance is deemed to comply with the requirement without testing. (IEC 60335-1/A2)		N/A
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		N/A
	Description of routine tests to be carried out by the manufacturer		N/A
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES		N/A
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	This annex does not apply to battery chargers		N/A
3.1.9	Appliance operated under the following conditions:		N/A
	-the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	-the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	If the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N/A
7.12	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N/A
	Details about how to remove batteries containing materials hazardous to the environment given		N/A
7.15	Markings placed on the part of the appliance connected to the supply mains		N/A
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment		N/A
	If the appliance can be operated without batteries, double or reinforced insulation required		N/A
11.7	The battery is charged for the period described		N/A
19.1	Appliances subjected to tests of 19.101, 19.102 and 19.103		N/A
19.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A
19.102	Short-circuiting of the terminals of the battery, being fully charged, for appliances having batteries that can be removed without the aid of a tool		N/A
19.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
21.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength, checked according to procedure 2 of IEC 68-2-32		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-32, the number of falls being:		N/A
	- 100, the mass of part does not exceed 250 g		N/A
	- 50, the mass of part exceeds 250 g		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords operating at safety extra-low voltage		N/A
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		N/A
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
D	ANNEX D (NORMATIVE) ALTERNATIVE REQUIREMENTS FOR PROTECTED MOTORS		N/A
	Applicable to motors that incorporate thermal motor protectors (IEC 60335-1/A1)		N/A
	Applicable to protected motors for unattended use, test of 19.7 carried out on a separate sample according to the specification		N/A
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST (IEC 60335-1, A2: 2006)		P
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		P
7	Severities		P
	The duration of application of the test flame is 30 s ± 1 s		P
9	Test procedure		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1		P
9.2	Application of needle-flame, modification: The first paragraph does not apply		P
	If possible, the flame is applied at least 10 mm from a corner		P
9.3	The test is carried out on one specimen		P
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N/A
11	Evaluation of test results		P
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		P
F	ANNEX F (NORMATIVE) CAPACITORS		N/A
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		N/A
1.5	Terminology		N/A
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A
1.6	Marking		N/A
	Items a) and b) are applicable		N/A
3.4	Approval testing		N/A
3.4.3.2	Table II is applicable as described		N/A
4.1	Visual examination and check of dimensions		N/A
	This subclause is applicable		N/A
4.2	Electrical tests		N/A
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A
4.2.5.2	Only table IX is applicable		N/A
	Values for test A apply		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		N/A
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		N/A
	This subclause is applicable		N/A
4.14	Endurance		N/A
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 applicable		N/A
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	Visual examination, no visible damage		N/A
4.17	Passive flammability test		N/A
	This subclause is applicable		N/A
4.18	Active flammability test		N/A
	This subclause is applicable		N/A
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		N/A
	The following modifications to this standard are applicable for safety isolating transformers:		N/A
7	Marking and instructions		N/A
7.1	Transformers for specific use marked with:		N/A
	-name, trademark or identification mark of the manufacturer or responsible vendor		N/A
	-model or type reference		N/A
17	Overload protection of transformers and associated circuits		N/A
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		N/A
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N/A
29	Clearances, creepage distances and solid insulation		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
29.1 and 29.2	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N/A
H	ANNEX H (NORMATIVE) SWITCHES		N/A
	Switches comply with the following clauses of IEC 61058-1, as modified:		N/A
	-The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N/A
	-Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		N/A
	Switches are not required to be marked		N/A
	However, switches that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		N/A
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		N/A
15.1	Not applicable		N/A
15.2	Not applicable		N/A
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		N/A
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles is 10 000, unless otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335		N/A
	Switches for operation under no load and which can be operated only by a tool and switches operated by hand that are interlocked so that they cannot be operated under load, are not subjected to the tests		N/A
	Subclause 17.2.5.2 is not applicable		N/A
	Temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1		N/A
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24		N/A
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		N/A
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		N/A
8	Protection against access to live parts		N/A
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		N/A
11.3	Temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	Temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N/A
16	Leakage current and electric strength		N/A
16.3	Insulation between live parts of the motor and its other metal parts not subjected to the test		N/A
19	Abnormal operation		N/A
19.1	The tests of 19.7 to 19.9 not carried out		N/A
19.101	Appliance operated at rated voltage with each of the following fault conditions:		N/A
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
22.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS (IEC 60335-1/A2)		N/A
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		N/A
5.7	Conditioning of the test specimens		N/A
	When production samples are used, three samples of the printed circuit board are tested		N/A
5.7.1	Cold		N/A
	The test is carried out at -25°C		N/A
5.7.3	Rapid change of temperature		N/A
	Severity 1 is specified		N/A
5.9	Additional tests		N/A
	This subclause is not applicable		
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		P
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation	According to the subclause 29.1	P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		P
	Sequences for the determination of clearances and creepage distances		P
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		P
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		P
	The microenvironment determines the effect of pollution on the insulation, taking into account the microenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		P
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		P
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N/A
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N/A
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected	According to the subclause 29.2 of IEC 60335-2-80	P
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		N/A
5	Test apparatus		N/A
5.1	Electrodes		N/A
	The note does not apply		N/A
5.4	Test solutions		N/A
	Test solution A is used		N/A
6	Procedure		N/A
6.3	Proof tracking test		N/A
	Voltage is 100V, 175V, 400V or 600V.....:	-	N/A
	Note 3 of clause 3 applies		N/A
	The test is carried out on five specimens		N/A
	In case of doubt, additional test with voltage reduced by 25V, the number of drops increased to 100		N/A
7	Report		N/A
	The report stating if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
10.1	The proof voltage is 100 V, 175 V, 400 V or 600 V		N/A
10.2	The report shall state if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V (IEC 60335-1/A1)		N/A
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30 (IEC 60335-1/A2)		P
	Description of tests for determination of resistance to heat and fire		P
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		N/A
5.7	Ambient temperature during tests of clause 11 and 13 is 40 +/- 3 °C (IEC 60335-1/A1)		N/A
7.1	The appliance shall be marked with the letters WDaE (IEC 60335-1/A1)		N/A
7.12	The instructions shall state that the appliance is to be supplied trough a residual current device (RCD) not exceeding 30 mA (IEC 60335-1/A1)		N/A
15.3	The value of t is 37 °C (IEC 60335-1/A1)		N/A
19.13	The leakage current test of clause 16.2 is applied		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	(IEC 60335-1/A1)		
R	ANNEX R (INFORMATIVE) SOFTWARE EVALUATION ACCORDING TO IEC 60730-1		N/A
H.2	Only definitions H.2.16 to H.2.20 are applicable (IEC 60335-1/A1)		N/A
H.11.12	All the subclauses of H.11.12 as modified are applicable (IEC 60335-1/A1)		N/A
H.11.12.7.1	For appliances using software class C having a single channel with self-test monitoring structure, the manufacturer shall provide measures (IEC 60335-1/A1)		N/A
H.11.12.8	Software fault/error detection shall occur before compliance with clause 19.13 is impaired (IEC 60335-1/A1)		N/A
H.11.12.13	Software and safety related hardware under its control shall initialize and terminate before compliance with clause 19.13 is impaired (IEC 60335-1/A1)		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	dP	Required dP	Remark
VENTS 100 MVTH	14	16	2 W	+ 2,8 W	See below
VENTS 125 M1	16	17,7	1,7 W	+ 3,2 W	See below
VENTS 150 M3TP Q	24	23	– 1 W	+ 4,8 W	See below
Remark: Maximum value of deviation can be measured at 240 V.					

10.2	TABLE: Current deviation				N/A
Current deviation of/at:	I rated (A)	I measured (A)	dI	Required dI	Remark
-					

11.8	TABLE: Heating test, thermocouples		P
	Test voltage (V) .....:	254	—
	Ambient (°C) .....:	45	—

Thermocouple locations	dT (K)	Max. dT (K)
VENTS 100 MVTH		
Terminal block	2	40
Internal wire	2	30
Enclosure	12	according to scl. 30.1
PCB	13	100
VENTS 125 M1		
Terminal block	2	40
Internal wire	2	30
Enclosure	6	according to scl. 30.1
VENTS 150 M3TP Q		
Terminal block	1	40
Internal wire	2	30
Enclosure	15	according to scl. 30.1

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

Thermocouple locations	dT (K)	Max. dT (K)
PCB	16	100

Note(s):

With a rated maximum ambient temperature of 45 °C, the max. temperature rise is calculated as follows:

Winding components:

- Class B (resistance method) → ΔTmax = 95- (45-25) K = 75 K

Surface of components:

- Terminal block → ΔTmax = 60- (45-25) K = 40 K
- Internal wire → ΔTmax = 50- (45-25) K = 30 K
- PCB → ΔTmax = 120- (45-25) K = 100 K

11.8	TABLE: Heating test, resistance method					P
	Test voltage (V) .....:			254,4		—
	Ambient, t_1 (°C) .....:			45		—
	Ambient, t_2 (°C) .....:			45		—
Temperature rise of winding		R_1 (Ω)	R_2 (Ω)	dT (K)	Max. dT (K)	Insulation class
VENTS 100 MVTH		809	939	45	75	130
VENTS 125 M1		619	714	55	75	130
VENTS 150 M3TP Q		278	335	27	75	130

13.2	TABLE: Leakage current			P
	Heating appliances: 1.15 x rated input .....:		-	—
	Motor-operated and combined appliances: 1.06 x rated voltage.....:		254,4	—
Leakage current between			I (mA)	Max. allowed I (mA)
Live and enclosure wrapped with foil:				
VENTS 100 MVTH			0,02	0,25
VENTS 125 M1			0,01	0,25

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 150 M3TP Q	0,02	0,25

13.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Live and motor surface		1000	No
Motor surface and enclosure wrapped with foil		1750	No
Live and enclosure wrapped with foil		3000	No

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

16.2	TABLE: Leakage current		P
	Single phase appliances: 1.06 x rated voltage.....:	-	—
	Three phase appliances 1.06 x rated voltage divided by √3: .....:	254,4	—
Leakage current between		I (mA)	Max. allowed I (mA)
Live and enclosure wrapped with foil:			
VENTS 100 MVTH		0,01	0,25
VENTS 125 M1		0,01	0,25
VENTS 150 M3TP Q		0,01	0,25

16.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Live and motor surface		1250	No
Motor surface and enclosure wrapped with foil		1750	No
Live and enclosure wrapped with foil		3000	No

17	TABLE: Overload protection, temperature rise	N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

Temperature rise of part/at:	dT (K)	Max. dT (K)
-		

19.7	TABLE: Abnormal operation, locked rotor/moving parts					N/A
	Test voltage (V) .....:		240			—
	Ambient, t_1 (°C) .....:		25			—
	Ambient, t_2 (°C) .....:		25			—
Temperature of winding	R_1 (Ω)	R_2 (Ω)	dT (K)	T (°C)	Max. T (°C)	
- (Thermal link operated)	-					

19.9	TABLE: Abnormal operation, running overload					N/A
	Test voltage (V) .....:		-			—
	Ambient, t_1 (°C) .....:		-			—
	Ambient, t_2 (°C) .....:		-			—
Temperature of winding	R_1 (Ω)	R_2 (Ω)	dT (K)	T (°C)	Max. T (°C)	

19.13	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations	dT (K)	Max. dT (K)	
VENTS 100 MVTH			
Enclosure	30	According to scl. 30.1	
VENTS 125 M1			
Enclosure	24	According to scl. 30.1	
VENTS 150 M3TP Q			
Enclosure	33	According to scl. 30.1	

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

24.1	TABLE: Components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Motor protector	Aupo Electronics Ltd.	P7	AC 250V, 150℃	EN 60691	VDE
Terminal	SIMET S.A.	LTA12-2,5	2,5mm^2, 380V	IEC 60998	BBJ
Terminal alt.	Heavy Power Co. Ltd.	PA8	1,5mm^2, 450V	EN 60998	VDE
PCB	Lamitec - AG	LAMPLEX – FR4	-	EN 60335-1 EN 60335-2-80	Tested in the appliance
- Capacitor	Chiefcon Electronics	CKX	250 V~	EN 60384-14	VDE
- Terminal	Degson	DG 340	300 V; 10 A;	EN 60998	VDE
Switch	VLM S.p.a.	200, 200/328	250V~ 2 A T 125	EN 61058	IMQ
Engine	Hunan Keli Motor Ltd.	BL 58-12A01	220-240V~ 50Hz	EN 60335-1 EN 60335-2-80	Tested in the appliance
Engine	Hunan Keli Motor Ltd.	BL 58-16A01	220-240V~ 50Hz	EN 60335-1 EN 60335-2-80	Tested in the appliance
Engine	Hunan Keli Motor Ltd.	BL 58-30A01	220-240V~ 50Hz	EN 60335-1 EN 60335-2-80	Tested in the appliance
Engine	CIXI CITI YIXIONG ELECTROMOTOR FACTORY	BL 58-12Y03	220-240V~ 50Hz	EN 60335-1 EN 60335-2-80	Tested in the appliance
Engine	CIXI CITI YIXIONG ELECTROMOTOR FACTORY	BL 58-16Y03	220-240V~ 50Hz	EN 60335-1 EN 60335-2-80	Tested in the appliance
Engine	CIXI CITI YIXIONG ELECTROMOTOR FACTORY	BL 58-30Y03	220-240V~ 50Hz	EN 60335-1 EN 60335-2-80	Tested in the appliance
Engine	Hunan Keli Motor Ltd.	BL 58-20A01	220-240V~ 50Hz	EN 60335-1 EN 60335-2-80	Tested in the appliance
[1)] An asterisk indicates a mark which assures the agreed level of surveillance					

28.1	TABLE: Threaded part torque test	P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Motor holder screw	5,8	II	2,5

29.1	TABLE: Clearances		P
	Overvoltage category.... :		—

		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic	Functional	Supplementary	Reinforced	Verdict / Remark
330	0,5					
500	0,5					
800	0,5					
1 500	1,0					
2 500	**2,0**	3	2,5	4,6		P
4 000	**3,5**				7,6	P / between live and accessible part of enclosure
6 000	6,0					
8 000	8,5					
10 000	11,5					

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										
Working voltage (V)	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			P
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb	B*)	S*)	R*)	Verdict
>50	0,2	0,6	0,9	1,2	1,5	1,7	1,9		—	—	
>50	0,2	0,6	0,9	1,2	1,5	1,7	1,9	—		—	
>50	0,4	1,2	1,8	2,4	3,0	3,4	3,8	—	—		
>50 and ≤125	0,3	0,8	1,1	1,5	1,9	2,1	2,4		—	—	

IEC 60335-2-80											
Clause	Requirement + Test							Result - Remark			Verdict
>50 and ≤125	0,3	0,8	1,1	1,5	1,9	2,1	2,4	—		—	
>50 and ≤125	0,6	1,6	2,2	3,0	3,8	4,2	4,8	—	—		
>125 and ≤250	0,6	1,3	1,8	2,5	3,2	3,6	4,0	5	—	—	P
>125 and ≤250	0,6	1,3	1,8	2,5	3,2	3,6	4,0	—	9	—	P(1)
>125 and ≤250	1,2	2,6	3,6	5,0	6,4	7,2	8,0	—	—	12	P(2)
>250 and ≤400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	
>250 and ≤400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	
>250 and ≤400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		
>400 and ≤500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	
>400 and ≤500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	
>400 and ≤500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	
>500 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		
>2000 and ≤2500	7,5	10,0	14,0	20,0	25, 0	28,0	32,0		—	—	
>2000 and ≤2500	7,5	10,0	14,0	20,0	25, 0	28,0	32,0	—		—	
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		

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

(1): between motor body and accessible part of enclosure
(2): Between live and accessible part of enclosure

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	Creepage distance (mm) Pollution degree							
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb	Verdict / Remark
>50	0,2	0,6	0,8	1,1	1,4	1,6	1,8	
>50 and ≤125	0,3	0,7	1,0	1,4	1,8	2,0	2,2	

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

>125 and ≤250	0,4	1,0	1,4	**2,0**	2,5	2,8	3,2	P
>250 and ≤400	0,8	1,6	2,2	3,2	4,0	4,5	5,0	
>400 and ≤500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	

30.1	TABLE: Ball pressure			P
Part	Test temperature (°C)	Impression diameter (mm)	Allowed impression diameter (mm)	
Enclosure	75	0.8	2	

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

Group/CENELEC Common Differences to IEC 60335-1:2001 (4. Edition)			
6.1	Delete “class 0” and “class 01”		P
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC 60083:1975:		N/A
	- for Class I appliances: standard sheet C2b, C3b or C4 .....:	-	N/A
	- for Class II appliances: standard sheet C5 or C6..:	-	N/A
25.7	Additional type of supply cord:		N/A
	- ordinary polychloroprene sheathed flexible cord (60245 IEC 57)		N/A
25.7	Supply cords having high flexibility, not lighter than:		N/A
	- rubber insulated and sheathed cord (60245 IEC 86)		N/A
	- rubber insulated, crosslinked PVC sheathed cord (60245 IEC 87)		N/A
	- crosslinked PVC insulated and sheathed cord (60245 IEC 88)		N/A
29.3	The third dashed item replaced by: - an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and, for accessible reinforced insulation consisting of a single layer, measurement in accordance with 29.3.Z1		P
29.3.Z1	For accessible reinforced insulation consisting of a single layer, the thickness of the layer complies with table Z1; rated voltage (V); overvoltage category; thickness (mm) .....:	240 V; II; 2;	P
Annex ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		P
	A list of referenced documents in this standard		P
Annex ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	A list of code designations for different types of flexible cords		N/A

National Differences for Austria			
25.6	Plugs according to standard sheet C3b not allowed		N/A

National Differences for Belgium			
25.6	Plugs according to standard sheet C2b not allowed		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
National Differences for Denmark			
7.12	Requirements regarding marking tag of power supply cord and connection of earthing wire for class I appliances delivered without a plug		N/A
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 13 A provided with a plug according to the following:		N/A
	Class I appliances: Section 107-2-D1, ed.3 1998, Standard Sheet DK 2-1a		N/A
	For appliances covered by a Part 2 of EN 60335, also plugs in accordance with Section 107-2-D1, ed. 3, 1998, Standard Sheet C2b, C3b or C4 are allowed		N/A
	Class II appliances: Section 107-2-D1, ed.3 1998, Standard Sheet C1b, C5, C6, DKA 2-1a and DKA 2-1b		N/A
	Stationary single-phase appliances, having a rated current not exceeding 13 A, and provided with a supply cord and a plug, the plug is in accordance with the requirements above		**N**/A
	Multi-phase appliances and single-phase appliances having a rated current exceeding 13 A, and provided with a supply cord and a plug, the plug is in accordance with the requirements below:		**N**/A
	Class I appliances: Section 107-2-D1, Standard Sheet DK 6-1a / EN 60309-2, Standard Sheet 2-II, 2-IV		**N**/A
	Class II appliances: Section 107-2-D1, Standard Sheet DK 6-1a / EN 60309-2, Standard Sheet 2-II, 2-IV, the earthing contact not being connected		**N**/A
	The current for the plug not exceeding the values specified; standard sheet (no.); current (A) .....:	-	**N**/A
National Differences for Finland			
25.6	Plugs according to standard sheet C3b not allowed		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
National Differences for France			
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A
25.6	Plugs according to standard sheet C2b not allowed		N/A
National Differences for Germany			
25.6	Plugs according to standard sheet C3b not allowed		N/A
29.3	Third dashed item not applicable for appliances where the insulation is accessible. Additional measures, such as a multi-layered insulation or adequate thickness, taken.		P
National Differences for Iceland			
25.6	Plugs according to standard sheet C3b not allowed		N/A
National Differences for Ireland			
25.6	Plugs according to standard sheet C3b not allowed		N/A
25.6	Only plugs according to Standard Sheets B2 and C5 allowed		N/A
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances.		N/A
25.8	Replacement of figures (rated current/cross-sectional area) in the table		N/A
National Differences for Italy			
7.1	The voltage is 220 V/380 V		N/A
25.6	Plugs according to standard sheet C3b not allowed		N/A
25.6	Only plugs listed in CENELEC Report R0BT-005:2001 allowed		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
National Differences for Luxembourg			
25.6	Plugs according to standard sheet C3b not allowed		N/A
National Differences for Netherlands			
25.6	Plugs according to standard sheet C3b not allowed		N/A
National Differences for Norway			
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A
25.6	Plugs according to standard sheet C3b not allowed		N/A
National Differences for Portugal			
25.6	Plugs according to standard sheet C3b not allowed		N/A
National Differences for Spain			
25.6	Plugs according to standard sheet C2b not allowed		N/A
25.6	Plugs according to standard sheet C3b not allowed		N/A
25.6	For appliances for household use, only the following plugs are allowed:		N/A
	according to UNE 20315: ESC 10-1b, C2b, C4, C6 or ESB 25-5b		N/A
	according to UNE-EN 50075		N/A
			N/A
National Differences for Sweden			
25.6	Plugs according to standard sheet C3b not allowed		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

National Differences for Switzerland			
4	Information about batteries with carbon-zinc and alkali-manganese		N/A
25.6	Plugs according to standard sheet C3b not allowed		N/A
25.6	Supply cords of portable household and similar electrical appliances having a rated current not exceeding 10 A, provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:		N/A
	SEV 6532-2.1991, plug type 15, 3P+N+PE, 250/400 V, 10 A		N/A
	SEV 6533-2.1991, plug type 11, L+N, 250 V, 10 A		N/A
	SEV 6534-2.1991 plug type 12, L+N+PE, 250 V, 10 A		N/A

National Differences for United Kingdom			
25.6	Plugs according to standard sheet C2b not allowed		N/A
25.6	Plugs according to standard sheet C3b not allowed		N/A
25.6	Only plugs according to Standard Sheets B2 and C5 allowed		N/A
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and standard sheet C5 to be fitted to shavers and toothbrushes.		N/A
25.8	Replacement of figures (rated current/cross-sectional area) in the table		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

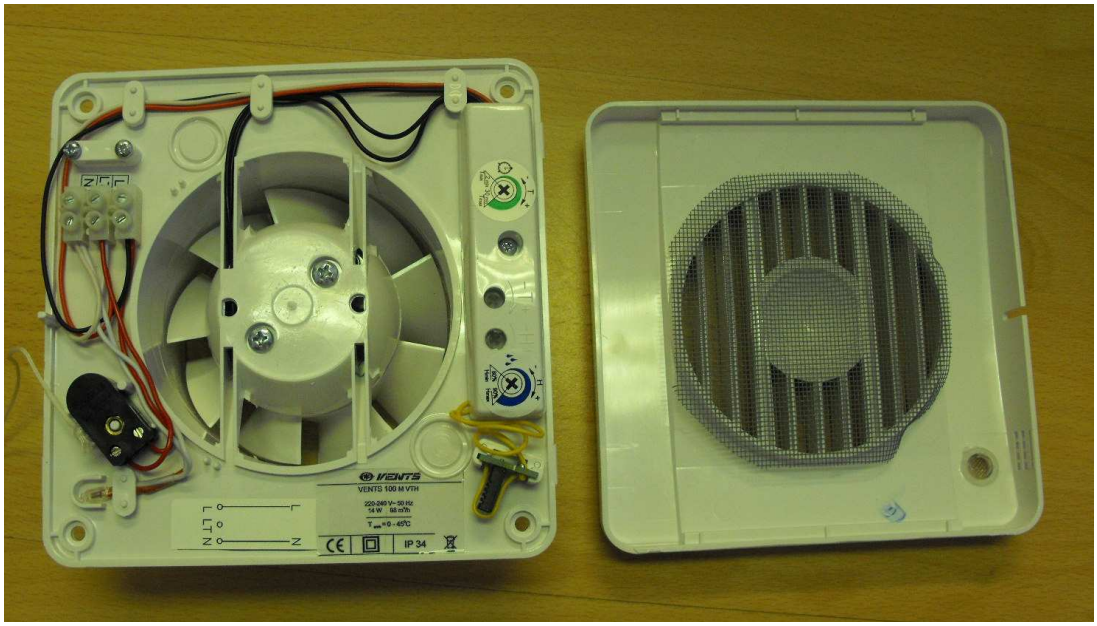
Pictures of the appliances

VENTS 100 MVTH

VENTS 100 MVTH

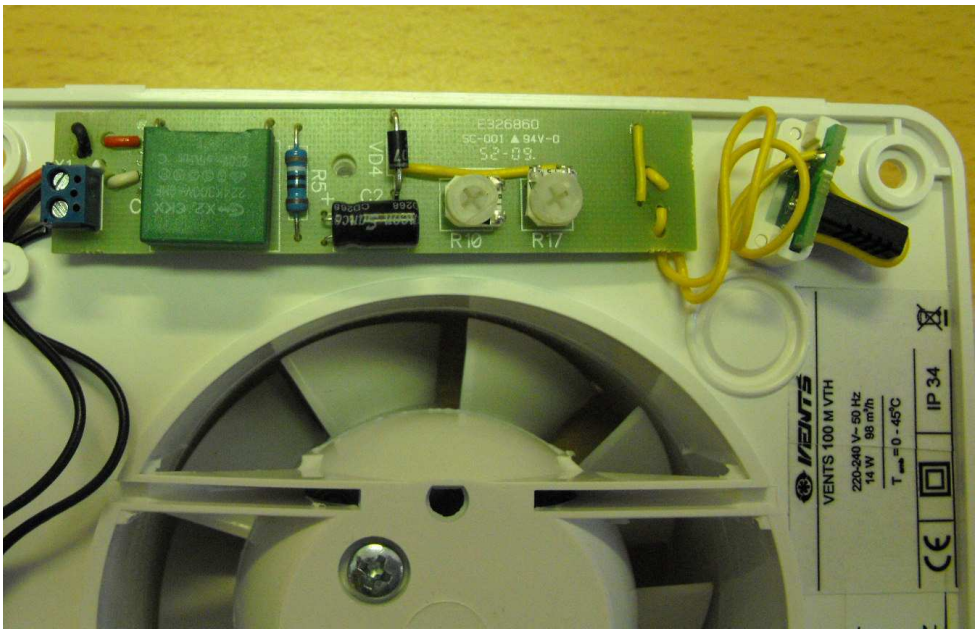
IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 100 MVTH



VENTS 100 MVTH

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict



VENTS 100 MVTH inside

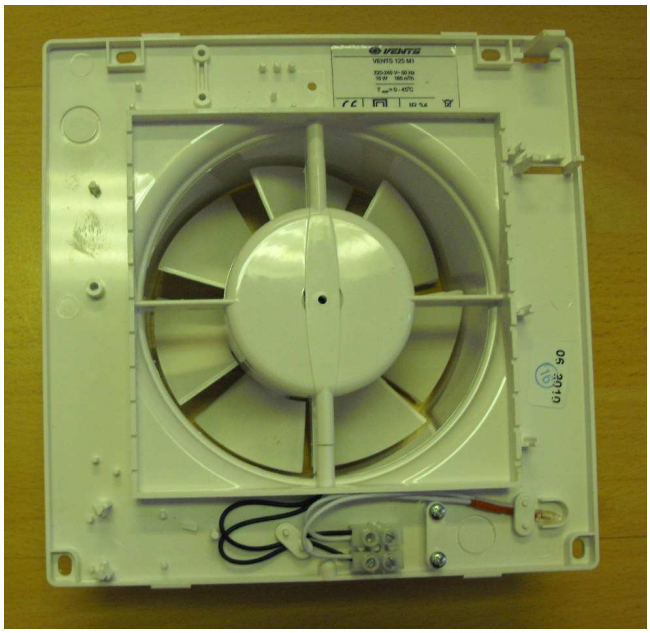
VENTS 125 M1

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 125 M1

VENTS 125 M1

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

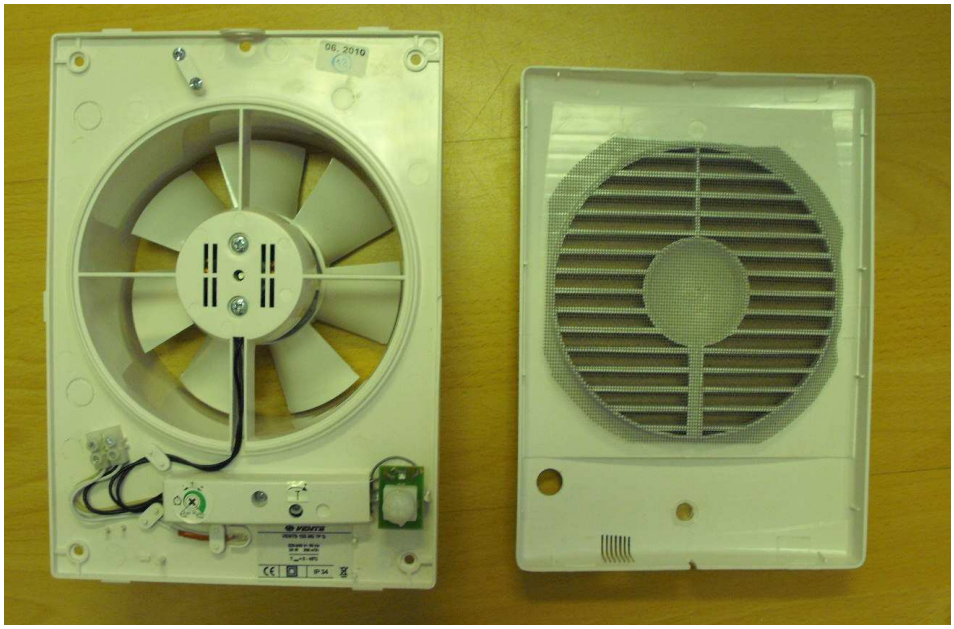


VENTS 125 M1

VENTS 150 M3 TP Q

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict

VENTS 150 M3 TP Q



VENTS 150 M3 TP Q

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-2-80
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
(Part 2: Particular requirements for Drives for fans)

Differences according to.....:	EN 60335-2-80: 2003 +A1: 2004 + A2 :2009 EN 60335-1: 2002+A1: 2004 + A11: 2004 + A2: 2006 + A12: 2006 + A13: 2008 EN 62233: 2008
Attachment Form No.....:	EU_GD_IEC60335_2_80C
Attachment Originator .....:	KEMA Quality B.V.
Master Attachment.....:	Dated 2009-10

	CENELEC COMMON MODIFICATIONS (EN)		P
6.1	Delete “class 0” and “class 01”		P
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		**N**/A
21.101	Add: The test probe is applied with a force not exceeding 5 N. (EN 60335-2-80/A2)		P
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standards for the telecommunication interface circuitry in the appliance are EN 41003 and EN 60950-1:2006, Subclause 6.3.		**N**/A
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC 60083:1975:		**N**/A
	- for Class I appliances: standard sheet C2b, C3b or C4 ..... :	-	**N**/A
	- for Class II appliances: standard sheet C5 or C6 :	-	**N**/A
25.7	Additional type of supply cord:		**N**/A
	- ordinary polychloroprene sheathed flexible cord (60245 IEC 57)		**N**/A
25.7	Supply cords having high flexibility, not lighter than:		**N**/A
	- rubber insulated and sheathed cord (60245 IEC 86)		**N**/A

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
	- rubber insulated, crosslinked PVC sheathed cord (60245 IEC 87)		**N**/A
	- crosslinked PVC insulated and sheathed cord (60245 IEC 88)		**N**/A
29.3	The third dashed item replaced by: - an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and, for accessible reinforced insulation consisting of a single layer, measurement in accordance with 29.3.Z1		P

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
29.3.Z1	For accessible reinforced insulation consisting of a single layer, the thickness of the layer complies with table Z1; rated voltage (V); overvoltage category; thickness (mm) ..... :	240 V; II; 2;	P
ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)** NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		P
	A list of referenced documents in this standard		P
ZD	**ANNEX ZD, INFORMATIONS(EN)** IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		**N**/A
	A list of code designations for different types of flexible cords		**N**/A
National Differences for Austria			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
National Differences for Belgium			
25.6	Plugs according to standard sheet C2b not allowed		**N**/A

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

National Differences for Denmark			
7.12	Requirements regarding marking tag of power supply cord and connection of earthing wire for class I appliances delivered without a plug		**N**/A
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 13 A provided with a plug according to the following:		**N**/A
	Class I appliances: Section 107-2-D1, ed.3 1998, Standard Sheet DK 2-1a		**N**/A
	For appliances covered by a Part 2 of EN 60335, also plugs in accordance with Section 107-2-D1, ed. 3, 1998, Standard Sheet C2b, C3b or C4 are allowed		**N**/A
	Class II appliances: Section 107-2-D1, ed.3 1998, Standard Sheet C1b, C5, C6, DKA 2-1a and DKA 2-1b		**N**/A
	Stationary single-phase appliances, having a rated current not exceeding 13 A, and provided with a supply cord and a plug, the plug is in accordance with the requirements above		**N**/A
	Multi-phase appliances and single-phase appliances having a rated current exceeding 13 A, and provided with a supply cord and a plug, the plug is in accordance with the requirements below:		**N**/A
	Class I appliances: Section 107-2-D1, Standard Sheet DK 6-1a / EN 60309-2, Standard Sheet 2-II, 2-IV		**N**/A
	Class II appliances: Section 107-2-D1, Standard Sheet DK 6-1a / EN 60309-2, Standard Sheet 2-II, 2-IV, the earthing contact not being connected		**N**/A
	The current for the plug not exceeding the values specified; standard sheet (no.); current (A) .....:		**N**/A

National Differences for Finland			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
National Differences for France			
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		**N**/A
25.6	Plugs according to standard sheet C2b not allowed		**N**/A
National Differences for Germany			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
29.3	Third dashed item not applicable for appliances where the insulation is accessible. Additional measures, such as a multi-layered insulation or adequate thickness, taken.		P
National Differences for Iceland			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
National Differences for Ireland			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
25.6	Only plugs according to Standard Sheets B2 and C5 allowed		**N**/A
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances.		**N**/A
25.8	Replacement of figures (rated current/cross-sectional area) in the table		**N**/A
National Differences for Italy			
7.1	The voltage is 220 V/380 V		**N**/A
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
25.6	Only plugs listed in CENELEC Report R0BT-005:2001 allowed		**N**/A

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

National Differences for Luxembourg			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A

National Differences for Netherlands			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A

National Differences for Norway			
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		**N**/A
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		**N**/A
25.6	Plugs according to standard sheet C3b not allowed		**N**/A

National Differences for Portugal			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A

National Differences for Spain			
25.6	Plugs according to standard sheet C2b not allowed		**N**/A
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
25.6	For appliances for household use, only the following plugs are allowed:		**N**/A
	according to UNE 20315: ESC 10-1b, C2b, C4, C6 or ESB 25-5b		**N**/A
	according to UNE-EN 50075		**N**/A
			N/A

National Differences for Sweden			
25.6	Plugs according to standard sheet C3b not allowed		**N**/A

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

National Differences for Switzerland			
4	Information about batteries with carbon-zinc and alkali-manganese		**N**/A
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
25.6	Supply cords of portable household and similar electrical appliances having a rated current not exceeding 10 A, provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:		**N**/A
	SEV 6532-2.1991, plug type 15, 3P+N+PE, 250/400 V, 10 A		**N**/A
	SEV 6533-2.1991, plug type 11, L+N, 250 V, 10 A		**N**/A
	SEV 6534-2.1991 plug type 12, L+N+PE, 250 V, 10 A		**N**/A

National Differences for United Kingdom			
25.6	Plugs according to standard sheet C2b not allowed		**N**/A
25.6	Plugs according to standard sheet C3b not allowed		**N**/A
25.6	Only plugs according to Standard Sheets B2 and C5 allowed		**N**/A
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and standard sheet C5 to be fitted to shavers and toothbrushes.		**N**/A
25.8	Replacement of figures (rated current/cross-sectional area) in the table		**N**/A

IEC60335_2_80C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX EMF			
	The Tested product also complies to the requirements of EN 62233:2008		—
	Limit ……100%	Appliance is classified as 'benign' appliance based on OSM/HA(WG-EMF)01/07 documents so the appliance is in accordance with EMF requirement according to EN 62233:2008 without testing.	P

Mérőeszköz Measuring equipment	Gyártó Manufacturer	Típus Type	Leltári sz. / széria sz. Inventory / Serial No.	Köv. kalibráció Next calibration
Dielectric strength tester	ELABO	90-1F	23138	09. 2010.
Ohm meter	Ganz	DKE	0570632051	10. 2010.
Leakage current measurer	HIOKI	3156	2041/23317	08. 2011.
Wattmeter	Norma	D 1150	023066	08. 2011.
Data acquisition system	DATCON	DT9040	023268	11. 2010.
Torque screwdriver	Facom	A301A	60044	10. 2010.
Glow wire test equipment	PTL	T 03.34	22196	06. 2011.
Test probe B of IEC 61032	MEEI KFT	-	023031	07. 2013.
Test probe 13 of IEC 61032	MEEI KFT	-	023031	07. 2013.
Caliper	Mitutoyo	CD-15B	0556014008	06. 2011.
Spring hammer	NEMKO	0,5Nm	22869	07. 2011.
Force meter spring	ERICHSEN	0-50N	0570550051	07. 2011.
Heating chamber	Heraeus	UT 6120	022308	03. 2011.

Megjegyzés / *Remark*: –