

TEST REPORT

an	WTZ20F04017940J
JEN	V-TAC EXPORTS LTD
n. Lit	301, KAM ON BUILDING, 176 A QUEENS ROAD CENTRAL, CENTRAL, HONGKONG
ेः ्	V-TAC EXPORTS LTD
ب: ۲:	301, KAM ON BUILDING, 176 A QUEENS ROAD CENTRAL, CENTRAL, HONGKONG
: In	UVC Germicidal lamp
أتاري	VT-3238,VT-3239,VT-3338
SN.	Safety of household and similar electrical appliances IEC 60335-1:2010
÷	2020-04-13
: 6	2020-04-14 to 2020-04-29
:	2020-04-30
:0	WSH-603351T-01A
:	Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Page 1 of 73

Page 2 of 73



Test item description	: Germicidal lamp
Trade Mark	
Model/Type reference	: VT-3238,VT-3239,VT-3338
Ratings	: 220-240V~, 50/60Hz, 38W, Class II, IPX0
Copy of marking plate:	NITER INTERNATION WIT WIT WIT AND SE
Watt: 38W Input:220-240V,50/60Hz	ARNING! ad The Instruction 1 fore Using! loor Use Only
Model No.: VT-3239 Watt: 38W Input: 220-240V,50/60Hz	ARNING! ad The Instruction A fore Using! loor Use Only
Starting un During wo from the pl After steril for 20-30 m exposure of	king, human and animal must get out ace. zation, it is advised to ventilate the place inutes. the lamp emits ozone, intense f which is harmful.
	is vended to EU, then name and address of the importer or authorized shall be added on the equipment.
National Differences:	
	considered according to below standard:
EN 60335-1:2012+A11:2014+	A13:2017
EN 62233:2008	it are sure at a
Summary of testing:	
1. The sample complied with	the requirements of standards listed in this report.
	s assessed according to EN 62471:2008. uipment related to human exposure to electromagnetic fields was evalua

- and fulfilled the requirements of EN 62493:2015 and found to comply with the requirement.
- 4. Full tests were performed on model VT-3238.



Test item particulars:	
Classification of installation and use	Portable appliance and household indoor use
Supply Connection:	Power cord with a non-detachable plug, type Y
Possible test case verdicts:	at let the state with miles
- test case does not apply to the test object	N LET MALL WITH MALL MALL
- test object does meet the requirement:	P(Pass)
- test object does not meet the requirement	F(Fail)
General remarks:	it ist ret iter with with white

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

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

For the lamp part, EN 60598-1:2015+A1:2018, EN 60598-2-4:2018 were considered, please see attachment 2.

General product information:

1. The appliance is for household and indoor use only.



Page 4 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdic
5 V	GENERAL CONDITIONS FOR THE TESTS	with with anited an	NU NP
LIEK NAL	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.	ret ret with a	Int P
6	CLASSIFICATION	he me me ro	Р
6.1	Protection against electric shock: Class 0, 0I, I, II, III	Class II	sin Bin
6.2	Protection against harmful ingress of water	t set set set	N
7	MARKING AND INSTRUCTIONS	white when when y	Р
7.1	Rated voltage or voltage range (V)	220-240V	IT NP
	Symbol for nature of supply, or	" the me me	Р
E. WALT	Rated frequency (Hz):	50/60Hz	P
LA	Rated power input (W), or:	38W	Р
WALT	Rated current (A)	TIEK NITER MUTER	N ¹
INLITEK N	Manufacturer's or responsible vendor's name, trademark or identification mark	See label on page 2	P P
4	Model or type reference	See page 2	Р
LTER WAY	Symbol IEC 60417-5172, for class II appliances	TEX ITEX NITEX IN	Ster NL P
1 A	IP number, other than IPX0	IPX0	N
WALT	Symbol IEC 60417-5180, for class III appliances, unless	2et wattet watter watte	W LE NU
NLTER	the appliance is operated by batteries only	the set set ster	N
NUTEX W	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose- sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage	white white white	N
7.2	Warning for stationary appliances for multiple supply	the the her	N
wat	Warning placed in vicinity of terminal cover	TAK INLIER INLIE INALITE	JUL NC
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen	Tet Jet with	NUT - Pre
LIFEK ON	Different rated values marked with the values separated by an oblique stroke	white with some w	FIL PL
7.4	Appliances adjustable for different rated voltages, the voltage setting is clearly discernible	With white white with	N
WALTER	Requirement met if frequent changes are not required and the rated voltage to which the appliance is to be adjusted is determined from a wiring diagram	et watter watter watter	Not Not Unit

Page 5 of 73



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Clause	Requirement - Test	Result - Remark	Verdict
Clause		Result - Remark	Verdici
7.5 N	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	UNLIER WALTER WALTER WA	
et untres	the power input is related to the arithmetic mean value of the rated voltage range	at that that will	- DEFP
WALTER	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear	white white white	NALLE NUMBER
7.6	Correct symbols used	a stat	,t+ ₽⁺
int with	Symbol for nature of supply placed next to rated voltage	NUTER WALT WALT W	Р
TE WALL	Symbol for class II appliances placed unlikely to be confused with other marking	ret white white whi	N P.M
WALTER	Units of physical quantities and their symbols according to international standardized system	whitek whitek whitek	uni Phil
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless	unitet unitet unitet u	Not Not
LITER MAY	correct mode of connection is obvious	TEX STEX STER IN	N N N
7.8	Except for type Z attachment, terminals for connection indicated as follows:	on to the supply mains	× N
- Tet	- marking of terminals exclusively for the neutral conductor (letter N)	white white white	N
when	- marking of protective earthing terminals (symbol IEC 60417-5019)	watte watte wate	N N
nu The	- marking not placed on removable parts	ALL ATE MALTER AN	N N V
7.9	Marking or placing of switches which may cause a hazard	at a state out	Tet N
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means	By use of symbol	MALE P
NNLTEX N	This applies also to switches which are part of a control	Tet utet witet	N.C.
JIEK IN	If figures are used, the off position indicated by the figure 0	when when the set	
et st	The figure 0 indicates only OFF position, unless no confusion with the OFF position	it's white white white	N
7.11	Indication for direction of adjustment of controls	TE WALTE WALT WALT	ALL PAR
7.12	Instructions for safe use provided	t at at	Set P S
m	Details concerning precautions during user maintenance	min wat was	P

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The instructions state that:

Page 6 of 73



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	IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict	
Inter whi	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction	and and and an	P	
ER WALTE	- children being supervised not to play with the appliance	et watter watter wat	our in Puri	
WALTER	For a part of class III construction supplied from a detachable power supply unit, the instructions state that the appliance is only to be used with the unit provided	whitet whitet white	N C	
n m	Instructions for class III appliances state that it must only be supplied at SELV, unless	not what what a	N	
y when	it is a battery-operated appliance, the battery being charged outside the appliance	MALITY WALL WA	N 90	
7.12.1	Sufficient details for installation supplied	attek mitek antr	P.	
WALTER W	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated	white water water	unite Met	
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	et wattet wattet wat		
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected	water water water	N N	
7.12.4	Instructions for built-in appliances:	N. N.	N	
LTE WALT	- dimensions of space	The second second	LIE N.N	
4 . dt	- dimensions and position of supporting and fixing	211. 20. 1.	L N	
NINE	- minimum distances between parts and	A NITER MITER MAIN	JUL NUL	

installation, by accessible plug or a switch in the fixed wiring, unless a switch complying with 24.3 Ν 7.12.5 Replacement cord instructions, type X attachment Ν with a specially prepared cord

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surrounding structure

separate components

arrangement

- minimum dimensions of ventilating openings and

- connection to supply mains and interconnection of

- allow disconnection of the appliance after

Page 7 of 73



Clause	Requirement - Test	Result - Remark	Verdict
INLIEK W	Replacement cord instructions, type Y attachment	stret outet white	JULI JUP
at a	Replacement cord instructions, type Z attachment	Mr. When the	A N
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard	and white white white	
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed	stet stret miret	MALE MALE
7.12.8	Instructions for appliances connected to the water m	ains:	N L
nu in	- max. inlet water pressure (Pa)	TER NITER WITE .	N No
at a	- min. inlet water pressure, if necessary (Pa):		N
WAL-	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets	and the watter wat	N SI
7.13	Instructions and other texts in an official language	In English	P.
7.14	Marking clearly legible and durable, rubbing test as specified	NUTEX NATEX WALTER	UNITE NOPER
7.15	Markings on a main part	t t st	At SP
t where	Marking clearly discernible from the outside, if necessary after removal of a cover	Life white white w	Р
WALK	For portable appliances, cover can be removed or opened without a tool	et white white whi	SUL NUL
WALTER	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation	watter watter waiter	WILL N.
nei wr sek ais	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions	ALL ALL ALL AND A	nt MNN
t white	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	WIT WALTER WALTER WALTE	A WALEY WIT
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link	WALTER WALTER WALTER	
in, 1.8	PROTECTION AGAINST ACCESS TO LIVE PARTS	S TEK STER WITE .	NUT NUTP
8.1	Adequate protection against accidental contact with live parts	et set set	P
8.1.1	Requirement applies for all positions, detachable parts removed	which we we	Р
MA	Lamps behind a detachable cover not removed, if conditions met	white white whe	WAT P

Page 8 of 73



Clause	Requirement - Test	Result - Remark	Verdict
Internet with	Insertion or removal of lamps, protection against contact with live parts of the lamp cap	united white whited white	P
LIEN WALT	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts	Tex white white white	P
NNITER WALTER	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts	whitek whitek whitek	IN THE PAI
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts	Whitek whitek whitek white	S NUTES
iek white	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts	Tet outet woutet woutet	W LIFEN W
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements	would wonthet would w	
8.1.4	Accessible part not considered live if:	intite watte water wat	~ ^N N
ITEK WAL	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V	Tet wifet whilet white	- JULIN -
EK NALTEN	- safety extra-low d.c. voltage: not exceeding 42.4 V	at that that with	IN THE N
LIEK	- or separated from live parts by protective impedance	when when we want	N N
JUL Y	If protective impedance: d.c. current not exceeding 2 mA, and	white white white we	N
Ur. M	a.c. peak value not exceeding 0.7 mA	inthe life winth winth	- N
TEK WALT	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 μF	at the ret white	N STON ST
+ NNLTEK	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC	t set stat what	
LIEK	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ	when we we are	N
8.1.5	Live parts protected at least by basic insulation befo	re installation or assembly:	N
ITE IN	- built-in appliances	set set set are	Ň
	- fixed appliances	the when we are	N
Et untit	- appliances delivered in separate units	et jet jet nifet nifet	N
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	whilet whilet whitet	P

Page 9 of 73



∫ ÎEC	60335-1
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Clause	Requirement - Test	Result - Remark	Verdict
Intit w	Only possible to touch parts separated from live parts by double or reinforced insulation	united whited whited wh	P
9	STARTING OF MOTOR-OPERATED APPLIANCES	TEX TEX STER WIT	N ¹ N
	This clause of Part 1 is not applicable	m m m	N
10	POWER INPUT AND CURRENT	et stet stret with	IN RIN
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.:	Whitek waitek waitek	ALTE P
NLTEK WA	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless	ALTER WATER WALTER WAY	JEK WINK
IER WALT	the rated power input is related to the arithmetic mean value	Set white white white	WITEPW
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2	(see appended table)	ount et N
NUNLITE N	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless	Intifet wontret wontret w	N N
NN IN	the rated current is related to the arithmetic mean value of the range	tree white white whe	N
11 . m ¹²	HEATING	It with out of any	N Pur
11.1	No excessive temperatures in normal use	all in a	Р
11.2	The appliance is held, placed or fixed in position as described:	Placed on test corner	Into Phi
11.3	Temperature rises, other than of windings, determined by thermocouples	INTER AND	TEL WNP
TEK WALT	Temperature rises of windings determined by resistance method, unless	the second	N NICEN
+ NNLIEK	the windings are non-uniform or it is difficult to make the necessary connections	A stek stek mitek	SUN SUN
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W):	with any state	N
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)	(see appended table)	P. Miller
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V):	Et MUTEX WAITER WAITER	N THE N
11.7 John	Operation duration corresponding to the most unfavourable conditions of normal use	whet milet white	INT P P
11.8	Temperature rises monitored continuously and not exceeding the values in table 3	(see appended table)	ITEN PEN

Page 10 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
INLIEK W	If the temperature rise of a motor winding exceeds the value of table 3, or	UNITER UNITED UNITED UN	N
ITE, WALT	if there is doubt with regard to classification of insulation,	TEX WALTER WALTER WALT	N N
* JIE	tests of Annex C are carried out	t at at at	N.S
Un.	Sealing compound does not flow out	white when when	N N
NUTER	Protective devices do not operate, except	at the set	N
JEK .	components in protective electronic circuits tested for the number of cycles specified in 24.1.4	when when we we we	N STATE
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH TEMPERATURE	AT OPERATING	Р
13.1	Leakage current not excessive and electric strength adequate	ret white white white	V PV
WALTE	Heating appliances operated at 1.15 times the rated power input (W):	watter watter watter	uni Nri
WALTER N	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V)	(see appended table)	LIE PE
LIE WAL	Protective impedance and radio interference filters disconnected before carrying out the tests	tiet whitet white whi	SUL N S
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990	(see appended table)	IN THE P
white	For other appliances, a low impedance ammeter may be used	watter watter watter	N N
NITER NI	Leakage current measurements	(see appended table)	P
13.3	The appliance is disconnected from the supply	127 - 241 - 241	Р
IE. NALT	Electric strength tests according to table 4	(see appended table)	P N
	No breakdown during the tests	M. M. A.	Р
14	TRANSIENT OVERVOLTAGES	et utet sufet white	Nr Nr
NLTEK .	Appliances withstand the transient over-voltages to which they may be subjected	with the lifet	
LIFEK MAN	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6	white white white	N N
at it	No flashover during the test, unless		N
WAL	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited	water water water water	Not Not
15	MOISTURE RESISTANCE	t at all all	N RV

Page 11 of 73



IEC	60335-1
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Clause	Requirement - Test	Result - Remark	Verdict
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance	NALIER WALFER WALFER	NALL SUNN
with white	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3	the world world with	
NINITEK V	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29	whitek whitek whitek	WALTE WALTE
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529	IPX0	MITEK NK
EX WALTS	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances	tet outet woutet wou	Tet N TEN N
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test	stret stret white	st not sunt
MLTEK N	Built-in appliances installed according to the instructions	with white with	NUT NEW
TEX J	Appliances placed or used on the floor or table placed on a horizontal unperforated support	int whe will	N N
ANTEN NATES	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board	the work work w	N STAT
MALTER	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube	when white white	MALE MALE
NUTEK W	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and	ALL ALL AND THE A	united with
IEL WALT	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	where we ret with	N
TEX	Wall-mounted appliances, take into account the distance to the floor stated in the instructions	MAL MAL MI	N
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and	White white white	MATER WALTER
ex white	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min	set while while whi	
WALTE	Appliances with type X attachment fitted with a flexible cord as described	MITER MAITER WALTE	WE NE

Page 12 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdic
INLIEK W	Detachable parts subjected to the relevant treatment with the main part	united white white wh	N
TE WAL	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed	Tex while while whi	N N
15.2	Spillage of liquid does not affect the electrical insulation	white white white	SUN NU
WALTE V	Appliances with type X attachment fitted with a flexible cord as described	WALTER WAITER WALTER W	N ^L N ^N
NUTER WIN	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable	ALTER WATER WALTER WAS	
WAL	Detachable parts are removed	ret liet miles white	N N N
- INLIEK	Overfilling test with additional amount of water, over a period of 1 min (I):	tet stet stat	
JEK	The appliance withstands the electric strength test of 16.3	what with sur	N
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29	net set with white	et minet
15.3	Appliances proof against humid conditions	e m m m	Р
WALT	Checked by test Cab: Damp heat steady state in IEC 60068-2-78	et whitet whitet white	VIL 2 Por
WALTER	Detachable parts removed and subjected, if necessary, to the humidity test with the main part	whitek whitek whitek	IN THE NEW
JEX .	Humidity test for 48 h in a humidity cabinet	25°C, 93%R.H.	P ^t
in w	Reassembly of those parts that may have been removed	at and and	N N
NNN.	The appliance withstands the tests of clause 16	The Maria	_ \ [™] P <
16 🦽	LEAKAGE CURRENT AND ELECTRIC STRENGTH	i i at at	P .
16.1	Leakage current not excessive and electric strength adequate	WALTER MALL MALL	M P
NULTE D	Protective impedance disconnected from live parts before carrying out the tests	Whitek whitek white w	N ¹ N
	Tests carried out at room temperature and not connected to the supply	NITEX WALTER WALTER WAL	INCP
16.2 June 1	Single-phase appliances: test voltage 1.06 times rated voltage (V):	(see appended table)	- P
NALTEK	Three-phase appliances: test voltage 1.06 times rated voltage divided by $\sqrt{3}$ (V):	TEX TEX MITEX	INT AN INT
A	Leakage current measurements	(see appended table)	Р
INLIE A	Limit values doubled if:	let set sta	N N

Page 13 of 73



IEC 6033	5-1
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Clause	Requirement - Test	Result - Remark	Verdict
INLIEK W	- all controls have an off position in all poles, or	auter aller water waiter	SNN N
JEK MAL	- the appliance has no control other than a thermal cut-out, or	Tet itet with with	NUTEN
* SITE	- all thermostats, temperature limiters and energy regulators do not have an off position, or	at left reft reft a	THE N
-u.	- the appliance has radio interference filters	When we we are	Ň
WALTER	With the radio interference filters disconnected, the leakage current do not exceed limits specified:	(see appended table)	N
16.3	Electric strength tests according to table 7	(see appended table)	Р
iet with	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified	(see appended table)	W P
	No breakdown during the tests	when when we a	Р
17 ₀ 0	OVERLOAD PROTECTION OF TRANSFORMERS	AND ASSOCIATED CIRCUITS	P
NNLTEX N	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use	(see appended table)	P
TEK WINT	Appliance supplied with 1.06 or 0.94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V)	(see appended table)	P
EX INLIE	Basic insulation is not short-circuited	at that the street of	л ^{ет} Р "г
whitek	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	water water water water	N
NITER W	Temperature of the winding not exceeding the value specified in table 8	NU STREE WALTER WALTER	M P
FEK WALT	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1	when a su fet whitet w	NUTEN ST
18 5	ENDURANCE	et the street street shi	N
	This clause of Part 1 is not applicable	Mr. M. To	Ν
19	ABNORMAL OPERATION	with aller white white	NP
19.1. 	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated	stret white white	MULTER
EX WALTE	Electronic circuits so designed and applied that a fault will not render the appliance unsafe	Considered	
- INLIEK	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		
INLIEK W	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and	when when we wanted	N

Page 14 of 73



IEC 60335-	·1
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Clause	Requirement - Test	Result - Remark	Verdict
INL'TEK N	if applicable, to the test of 19.5	street intreet intract.	N N
LIEK MAL	Appliances incorporating PTC heating elements are also subjected to the test of 19.6	ret jut stat	LITEK NITEN
* JIE	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable	and the set of	at In N
MALTER	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable	White white white	P P
NITEK WA	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11	with white white	MITEX MATTER
EK WALT	Appliances incorporating voltage selector switches subjected to the test of 19.15	tet unet muret an	THE NUTEN
wintifex	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or	watter watter wait	x which is N
JEK	until steady conditions are established	t at at	P
NA N	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample	and white white	STEP NITER
19.2	Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0.85 times rated power input (W)	et intret intret int	iet un ret N
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W):	Tet with with	NUT N
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited	when we whitek	unties white
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath	where we there we	A CALLER N
MITEX	The test repeated with reversed polarity and the other end of the heating element connected to the sheath	white white white	NUC N
strek wn	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	whe whe where	ALTER WALTER
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions	et wiret whitet and	SET NUT NO

Page 15 of 73



Clause	Requirement - Test	Result - Remark	Verdic
		Result - Remark	Verdic
INCIEC JUNIC	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures (V)	UNLIEK WALTER WALTER	at ret
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or	water water water	N
white a	locking moving parts of other appliances	INLIER INLIE WALTE	W N
NLIEK NN	Locked rotor, capacitors open-circuited one at a time	THE STREE STILLER	ntiet Mt
EK NIT	Test repeated with capacitors short-circuited one at a time, unless	at alt alt a	N ITEN
14.	capacitor is of class P2 of IEC 60252-1	white whe wit	N
WALTER	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed	whitet whitet white	N.V.
WULL W	Other appliances supplied with rated voltage for a period as specified	UNITER WAITER WAITE	snt snN
LIE. WIL	Winding temperatures not exceeding values specified in table 8	LIEX WALTER WALTER W	UT N
19.8	Multi-phase motors operated at rated voltage with one phase disconnected	et minet antifet anti	THE SET N
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously	watter watter watter	SUNT SUNT
NUTER W	Motor-operated and combined appliances for which 30.2.3 is applicable and that use overload protective devices relying on electronic circuits to protect the motor windings, are also subjected to the test	ALL CALLER WALLER	NUTER NON
	Winding temperatures not exceeding values as specified	* wret miret white	A MARK N
19.10	Series motor operated at 1.3 times rated voltage for 1 min (V)	tet set site	NITE ME
ITEK J	During the test, parts not being ejected from the appliance	with with with	N
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	the water water and	P
	they comply with the conditions specified in 19.11.1	all all a	Ν
WALT	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless	white white white	WALL PL

Page 16 of 73



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TE	IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict	
Intret W	restarting does not result in a hazard	STER STER MUTER MUTER MAIL	N N	
istert would	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4	Tet whilet whilet whilet	P	
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out	NUTER WALTER WALTER WALTER		
At .	During and after each test the following is checked:	so at at a	- P	
nt mn	- the temperature of the windings do not exceed the values specified in table 8	NUTER WALTE WALT WALT	P	
NALL WALL	- the appliance complies with the conditions specified in 19.13	antifet watter water	WITT P.W	
WALTER	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4	whitek whitek whitek w	N.L	
	If a conductor of a printed board becomes open-circ considered to have withstood the particular test, pro- conditions are met:		S N C	
tites whi	- the base material of the printed circuit board withstands the test of Annex E	TEX WALTER WALTER MAILE	JULY N	
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29	et would wontret would v		
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to meeting both of the following conditions:	circuits or parts of circuits	N	
TEX MI	- 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	nte strand white	N N	
WALTER	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit	When white white white	N	
19.11.2	Fault conditions applied one at a time, the appliance specified in clause 11, but supplied at rated voltage, specified:		E NPIE	
et un	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29	LIFE WALTER WALT WALT	N ^P P	
-2m	b) open circuit at the terminals of any component	white white white	P P	
LIFER	c) short circuit of capacitors, unless	. It set set	S P.S	

they comply with IEC 60384-14

Page 17 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
INTER WA	d) short circuit of any two terminals of an electronic component, other than integrated circuits	united writed writed	
TE WALT	This fault condition is not applied between the two circuits of an optocoupler	LIET MALIER MALIER M	ST N
* JIEK	e) failure of triacs in the diode mode	t at at a	P S
-11.	f) failure of microprocessors and integrated circuits	MULT MULT MULT	P
NUTER	g) failure of an electronic power switching device	at at at	N.T.
nifet wat	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made	white white white	Martin Martine
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to g) of 19.11.2	ret whitet whitet white	Sector Strength
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or	NUTER MUTER WALTER	MALTE NE
At A	a device that can be placed in the stand-by mode,		P-
et whe	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand- by mode	the white white w	P State
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, the tests being carried out after the protective electronic circuit has operated, except that	white white white	
nt wn	Appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.	and a set of the set	Set List
and the second s	Surge protective devices disconnected, unless	in the second	N
- INLIER	They incorporate spark gaps	at ant and all	NN
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4	whe whe we	P Mile Mile
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3	and the state	NUTER MUTER
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified	int minet waited wat	P P
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified	martet whitet would	MIL AF PIL

Page 18 of 73



Clause	Requirement - Test	Result - Remark	Verdict
INLIEK WA	Earthed heating elements in class I appliances disconnected	UNITER WAITER WAITER WAITER	N
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3	JEt wattet watter watter	P
19.11.4.6	Appliances having a rated current not exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-11	at white white white white	Р
WALT W	Appliances having a rated current exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-34	white white white white	N
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2	NITER WALTE WALL WAL	N ^{III} P
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate	WALTER WALTER WALTER WALTER WAL	Por of Vini
	The appliance continues to operate normally, or	tet stet stet stret with	N
	requires a manual operation to restart	ne. me m. m.	Р
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):	et whitet whitet whitet	
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts	watter watter water water	NP NITEK
Let Je	Temperature rises not exceeding the values shown in table 9	(see appended table)	P
m	Compliance with clause 8 not impaired	and the subscription of	P V
MALIEK	If the appliance can still be operated it complies with 20.2	* strek wirek whitek wh	SEK N
whitek w	Insulation, other than of class III appliances or class contain live parts, withstands the electric strength tes specified in table 4:		P
JEK J	- basic insulation (V)	1000V	P
- Mis	- supplementary insulation (V)	1750V	Р
ex lifes	- reinforced insulation (V)	3000V	P
whitek y	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage	while while while whi	N

Page 19 of 73



IEC 60335-1

Clause	Requirement - Test Result - Remark	Verdict
Intitit w	The appliance does not undergo a dangerous malfunction, and	P
LIER WALT	no failure of protective electronic circuits, if the appliance is still operable	N S
X WALTER	Appliances tested with an electronic switch in the off position, or in the stand-by mode:	THE P I
lit	- do not become operational, or	F P K
whitek w	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4	NN MITEK
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:	N
WITT t jet	- the lid or door does not move automatically to an open position when the interlock is released, and	N
with	- the appliance does not start after the cycle in which the interlock was released	N
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited	JUL N
et oute	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time	
MALTER	A relay or contactor operating only to ensure the appliance is energized for normal use is not short- circuited	P
ALTER OF	If more than one relay or contactor operates in clause 11, they are short-circuited in turn	Nit
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied	N
20	STABILITY AND MECHANICAL HAZARDS	P
20.1	Appliances having adequate stability	Р
WALTER WAN	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn	NP.
EK INLIE	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°	N.
WALTER	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9	N St sunif
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury	Not

Page 20 of 73



JEC 60	335-1
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Clause	Requirement - Test	Result - Remark	Verdict
Intitit W	Protective enclosures, guards and similar parts are non-detachable, and	UNLIER WAITER WALTER WALTER	JUN N
LIER WAL	have adequate mechanical strength	TEX LIFE ALIER WITER	N N
* JIE	Enclosures that can be opened by overriding an interlock are considered to be detachable parts	t with the the	STELL N
Whitek .	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure	while white white white	N
NITEK IN	Not possible to touch dangerous moving parts with the test probe described	when we set set with	NC
21	MECHANICAL STRENGTH	with much much and	Р
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling	Everyone must leave the scene when the appliance is in normal use.	N N
WINES N	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J	white white white white	NUTER
LTEX MI	The appliance shows no damage impairing compliance with this standard, and	tet tet stet stet sufet	N-
et sure	compliance with 8.1, 15.1 and clause 29 not impaired	at which we will be	TEK N
N. TEX	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3	white white with we	N
when .	If necessary, repetition of groups of three blows on a new sample	white white whe whi	N
21.2 🕔	Accessible parts of solid insulation having strength to prevent penetration by sharp implements	att white white	"л [°] Р
TEN WALT	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm	with the set watter w	P
white	The insulation is tested as specified, and does withstand the electric strength test of 16.3	WALTER WAITE WAITE WAS	N
22	CONSTRUCTION	TEX TEX MITEX MITEX MITE	P
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IPX0	NU
22.2	Stationary appliance: means to ensure all-pole disco provided:	onnection from the supply being	LIEN N
	- a supply cord fitted with a plug, or	Jul Jul St.	N
MALI	- a switch complying with 24.3, or	- JER JER NUE NU	N

Page 21 of 73



JE	IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdic	
Inter w	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or	whitet whitet whitet	N N	
-un-	- an appliance inlet	ist wait wat w	N	
WALTER V	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor	at whitek whitek white	N N	
22.3	Appliance provided with pins: no undue strain on socket-outlets	inter whet while .	NUTER NUT	
A A	Applied torque not exceeding 0.25 Nm	he and an a	N	
t whitek	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	tet whitet white white	N SI	
Whitek of	Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless	and the state	N II	
	rotating does not impair compliance with this standard	int whit will .	N STATE	
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets	the worth worth wi	N STOL	
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding $0,1\mu$ F, the appliance being disconnected from the supply at the instant of voltage peak	whitek whitek whitek	P	
n a	Voltage not exceeding 34 V (V)	2V	P	
22.6	Electrical insulation not affected by condensing water or leaking liquid	the and text out	UP NUP	
+ NNITEK	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks	* stret miret anti	At NICE N	
1.t	In case of doubt, test as described	Str. A. St.	P,	
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices	WALTER WALTE WALTE	UNIT UN	
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	EX WILLEX WALLEX	P P	
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless	whitek whitek white	SUNT PL	
Intit M	the substance has adequate insulating properties	THE THE THE	N'AN N	



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
22.10	Not possible to reset voltage-maintained non-self- resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:	MALTER WALTER WALTER	
ANNETER NATER	- a non-self-resetting thermal cut-out is required by the standard, and	at the states with	A THEN
TEK	- a voltage maintained non-self-resetting thermal cut-out is used to meet it	when we we we	N
NI Y	Non-self-resetting thermal motor protectors have a trip-free action, unless	white white white	N
v. w	they are voltage maintained	NUTER WALTE WALT V	n n N
IEX MALT	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely	et whitet whitet whi	THE NUTEN
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts	water water water	P
white w	Obvious locked position of snap-in devices used for fixing such parts	INTER WATER WAITE	with with
ex rel	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing	aret water water of	STE N
when	Tests as described	et intre intre white	N PM
22.12	Handles, knobs etc. fixed in a reliable manner	the the second	P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible	white white white	NATE MITER
18 * . 5	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied	at a suit of	P
t set	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	we we we	P
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only	A MATER WATER WATER	unite unite
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance	Tet Jet Jet	NUTER P
et white	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance	ret miret united whi	Tex I TEP P
22.15	Storage hooks and the like for flexible cords smooth and well rounded	- 14 14 54	F STOR N

Page 23 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts	Multer white white	N N
	Cord reel tested with 6000 operations, as specified		,,t−N
whit	Electric strength test of 16.3, voltage of 1000 V applied	at waiter waite wat	M N'
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner	watter watter watter	Martin Martin
22.18	Current-carrying parts and other metal parts resistant to corrosion	NITEK WAITER WAITER	MITER MIP
22.19	Driving belts not relied upon to provide the required level of insulation, unless	tet stat mittet whi	TEK NITEN
- At	constructed to prevent inappropriate replacement		L N
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless	White white white	NU P
WUTTER W	material used is non-corrosive, non-hygroscopic and non-combustible	INTER WALTER WALTER	WILL WIN
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless	LIEX WALTER WALTER W	LIFER ML P
et	impregnated		at AtN
MALTER	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements	et white white white	NIN NU
22.22	Appliances not containing asbestos	white white white	Р
22.23	Oils containing polychlorinated biphenyl (PCB) not used	INLI TEL VINITER	MUTER WAR
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported	at all an ret un	LICK N N
WALTE	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts	Whitek whitek white	Jun Str. Nr.
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts	whitek whitek whitek	white white
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation	EX WALEX WALLEX WAL	Tet winet wi
22.27	Parts connected by protective impedance separated by double or reinforced insulation	- ALTER MITER AMITE	MIC NIC

Page 24 of 73



JE	IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict	
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	WALTER WALTER WALTER	N N	
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	et whitet whitet whit	et sin sin	
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or	whitek whitek whitek	WILLY PLY	
NET WALT	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	NUTER WALTER WALTER W		
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear	whitet whitet white	P P	
NALITEX MAL	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose	neret white white	WILL WP	
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29	et whitet whitet whi	The P	
whitek wh	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	white white white	Martin N	
TEX WALT	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation	A AN AN TEK W	LICK NUT N	
* WALTER	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation	* white white white	at while N	
WALTE N	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature	WAITER WAITER WAITER	WITE WN	
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts	LIEK WALTER WALTER W	N N	
100	Electrodes not used for heating liquids	which which which	N	

Page 25 of 73



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Churce Demission of Test			
Clause	Requirement - Test	Result - Remark	Verdic
Internet W	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless	WALTER WALTER WALTER	N
white	the reinforced insulation consists of at least 3 layers	set whitek whitek whit	an se Ne
WALTER	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless	watter watter watter	WALTE N. F
The WN	the reinforced insulation consists of at least 3 layers	Antifet wattet watter v	IN STE STON
ek watr	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid	ret whitek whitek wh	THE WITCH
22.34	Shafts of operating knobs, handles, levers etc. not live, unless	WALTER WALTER WALT	Mrs Bry
WILLER W	the shaft is not accessible when the part is removed	MITEK WAITEK WAITEK	White WN
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation	LIEK WALLEK WALLEK W	P
WALTER .	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation	Se while while white	
rex whitek	This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal	AND AND THE WALT	A AN ANA
WALTER W	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation	whitet whitet whitet	SMITE - N.E
22.36	For appliances other than class III, handles continuously held in the hand in normal use so	witer whiter whiter w	NUTER WITN

constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts,

they are separated from live parts by double or

unless

Page 26 of 73



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Clause	Requirement - Test	Result - Remark	Verdict
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless	White white white white	P
t de	the capacitors comply with 22.42	the state	-N
22.38	Capacitors not connected between the contacts of a thermal cut-out	et watter watter water water	P
22.39	Lamp holders used only for the connection of lamps	watter watter watter watt	_√P
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	NUTER WALTER WALTER WALTER	
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible	whitek whitek whitek white	N
22.41	No components, other than lamps, containing mercury	the south south south	N
22.42	Protective impedance consisting of at least two separate components	et while while while wh	NM
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open- circuited	white white white white	N
Int. M	Resistors checked by the test of 14.1 a) in IEC 60065	at water water	SUN N
LIE WALT	Capacitors checked by the tests for class Y capacitors in IEC 60384-14	we with south a	N N
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur	while while white white	N
22.44	Appliances not having an enclosure that is shaped or decorated like a toy	WALTER WAITER WALTER WALTE	P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure	the set white	N N
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1	water water water water	er N VIIII

Page 27 of 73



J.F.	IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdic	
Intrest whit	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards	NALIER WAITER WALLER WAL	N	
NNITEN	These requirements are not applicable to software used for functional purpose or compliance with clause 11	et whitet whitet whitet	oun TEKN	
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use	wifet whifet whitet w	LITE N.C.	
NLTEX NN	No leakage from any part, including any inlet water hose	Tet with with and	et NX	
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non- potable water	set ouret would would	MUTEN N	
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless	stret ouret water	nt at N	
MUTEK	the appliance switches off automatically or can operate continuously without hazard	we state with a		
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation	in the set of	N	
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode	lit whit whit white	N	
LIEK	There is a visual indication showing that the appliance is adjusted for remote operation	when we are the	N	
NU	These requirements not necessary on appliances the without giving rise to a hazard:	at can operate as follows,	N	
w. m	- continuously, or	INLY JIL WALL WALL	- N	
at s	- automatically, or		<́N	
m	- remotely	Mr. White white	~ N ~	
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold	Moutek woutek woutek	un cet N	
23	INTERNAL WIRING	TEX LIFE NUTER IN	P	
23.1	Wireways smooth and free from sharp edges	me me me	P	
ILIE WAY	Wires protected against contact with burrs, cooling fins etc.	stret white white white	NUT P	
EK WALTE	Wire holes in metal well-rounded or provided with bushings	ist united white white	N LICN	
WALTER	Wiring effectively prevented from coming into contact with moving parts	with with anything	NU SUNT	
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges	at at at	Set Net	

Page 28 of 73



IEC 6	50335-1
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Clause	Requirement - Test	Result - Remark	Verdict
INLIEK W	Beads inside flexible metal conduits contained within an insulating sleeve	Whitek whitek whitek	solution solution
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress	Tet white white w	N N
WAL	Flexible metallic tubes not causing damage to insulation of conductors	at watthe watthe wat	N
WALTE	Open-coil springs not used	TEX NITER WITE	N. N.
utet	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another	when you we we	N.C.
	No damage after 10 000 flexings for conductors flexed during normal use, or	nti yunti yuni y	N
with t set	100 flexings for conductors flexed during user maintenance	anti whit wh	N
where	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts	WALTER WALTER WALT	Nr Nr
White w	Not more than 10% of the strands of any conductor broken, and	Intret watter watter	while will
ITEK WAT	not more than 30% for wiring supplying circuits that consume no more than 15W	LIEK WHITEK WALTER W	NUTER UNLIN
23.4 🧹	Bare internal wiring sufficiently rigid and fixed		dt dtN
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use	et white white whi	
NUTEK W	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or	white whe with	UNLIEK UNLIEK
TEX WALT	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation	at an a south and	LIEK VILLEP V
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or	A WALTER WALTER WALT	N S
NUNLIE V	be such that it can only be removed by breaking or cutting	WALTER WALTER WALTER	white wN
23.7	The colour combination green/yellow only used for earthing conductors	LIFE INLIEK MAITER	NUTER INT
23.8	Aluminium wires not used for internal wiring		AL AP
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless	white white wh	
24	the contact pressure is provided by spring terminals	when when we	N

Page 29 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)	WALTER WALTER WALTER WA	N
24	COMPONENTS	et tet tet stet	PIN
24.1	Components comply with safety requirements in relevant IEC standards	When we we we	Р
24. 1	List of components:	(see appended table)	Р
NLIFE WN	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9	NUTER WALTER WALTER WAL	LIP MILP
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9	water water water	uni P
NALTEX N	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance	whitek whitek whitek w	
et watter	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard	et whitet whitet white	P W
MUTEX NO	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309	ALL ALL AND ALL AND	P
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14	Approved	P S
MALIEK W	If the capacitors have to be tested, they are tested according to Annex F	THE THE MUTHEN	
24.1.2	Safety isolating transformers complying with IEC 61558-2-6	all all the set	Set NL
	If they have to be tested, they are tested according to Annex G	it with with with	N
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000	White white white	N ^{NI}
WALL	If they have to be tested, they are tested according to Annex H	WALTER WALTE WALTE	N N

Page 30 of 73



IEC (60335-1
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Clause	Requirement - Test	Result - Remark	Verdict
Intrest wi	If the switch operates a relay or contactor, the complete switching system is subjected to the test	MALTER WALTER WALTER WA	N STR
A NALIEN	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested	TEX WAITER WAITER WAITE	N
24.1.4	Automatic controls complying with IEC 60730-1 with number of cycles of operation being at least:	the relevant part 2. The	N
m a	- thermostats: 10 000	white white where we	N
UTER IN	- temperature limiters: 1 000	at set set	SET N
	- self-resetting thermal cut-outs: 300	Up Mr Mr M	N
Er white	- voltage maintained non-self-resetting 1 000 thermal cut-outs:	Tet white white white	NUTNN
TEX	- other non-self-resetting thermal cut-outs: 30	at at set	N S
2hr	- timers: 3 000	water water water	Ň
LIFER	- energy regulators: 10 000	at let let	S ^e N ^e
en vi	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited	white white white and	N N
et white	Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D	et wattet wattet watte	VIII STE NUI
NUNLIN N	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7	WALTER WALTER WALTER WA	IT N
24.1.5	Appliance couplers complying with IEC 60320-1	A THE NIT	N N
t white	However, for appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3	A NUTER MUTER MUTER	UN FEL N
MITEK	Interconnection couplers complying with IEC 60320-2-2	aft affet with	NTE NTE
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable	when when when the when	NALINA
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151	SEX WALLEX WALLEY WALLEY	N
24.1.8	The relevant standard for thermal links is IEC 60691	wate main main a	N



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
INCLER W	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19	uniter white white	
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance	the write write wr	P
whitek w	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance	Approved	UN P.C.
24.2	Appliances not fitted with:	int at	At Pt
in m	- switches or automatic controls in flexible cords	NUTER MALTER WALL W	N ^{III} P
FEX WALT	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance	TEX MALTEX WALTER WALT	St ST P
WALTER	- thermal cut-outs that can be reset by soldering, unless	WALTER WALTER WALTER	WAL SHA
THE	the solder has a melding point of at least 230 °C	the set set	N ^{et}
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions	LIET WALL WALTER WALTER WA	North States
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1	et white white white	NON NO
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly	rest of the set	Set N
* white	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	WALTER WALTER WALTER	WAY THE N
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V	WALTER WALTER WALTER	
EK INLIE	In addition, the motors comply with the requirements of Annex I	at all all all	et uten
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770	whe we we	N
- m	They are supplied with the appliance	Inthe water water	N N

Page 32 of 73



Clause	Requirement - Test	Result - Remark	Verdict
Intrate w	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set	WALTER WALTER WALTER WALTER	- NN
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure	Et while while while w	N
TER	One or more of the following conditions are to be met	t at at at a	N
WI Y	- the capacitors are of class P2 according to IEC 60252-1	white white white white	N
Nr. Mr.	- the capacitors are housed within a metallic or ceramic enclosure	ALTER WALTE WALT WALT	N
WALK	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm	TEX MALIFE WALTER WALTE S	N.N
WALTER	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E	WALTER WALTER WALTER WAL	N
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695- 11-10		N ^{CA}
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE	E CORDS	J P
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		TELP
20	- supply cord fitted with a plug,	when whe will we	Р
WALTER	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or	whitet whitet whitet white	N
net w	- pins for insertion into socket-outlets	ALL ATE WALTE WALTE	JU.N
25.2	Appliance not provided with more than one means of connection to the supply mains	the street outer	P
WALTER	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	t ret ret of	
25.3	Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains:		N
r m	- a set of terminals allowing the connection of a flexible cord	NUTE WALL WALL WALL	N N
WALT	- a fitted supply cord	let still nite with white w	N ₀ N
Tek	- a set of supply leads accommodated in a suitable compartment	when the set	N S

Page 33 of 73



Clause	Requirement - Test	Result - Remark	Verdict
		Result - Remain	veruic
UNUTER WAL	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support	antifet antifet antifet antifet a	MNN ALTER
whitek	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support	whitek whitek whitek white	N N N
net whit	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support	NETER WALTER WALTER WALTER W	MAN LITER M
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm)	white white white white whi	N
NAL N	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29	inter white white white	NNN NJEK
25.5	Method for assembling the supply cord to the appliar	nce: M M	Р
ERMITE	- type X attachment	at the the street of	N N
.*	- type Y attachment	mur mur in m	Р
MALTE	- type Z attachment	TEX STEX MITER MITER MAIN	N
INLIEK MI	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords	when we white white	NILLER
TEX WALT	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment	A WILL IN THE WALTER W	
25.6	Plugs fitted with only one flexible cord	and white white white wh	Ρ
25.7	Supply cords, other than for class III appliances, beir	ng one of the following types:	P
an a	- rubber sheathed (at least 60245 IEC 53)	white white whe whe	N
ITEK N	- polychloroprene sheathed (at least 60245 IEC 57)	See table 24.1	Р
64 .74	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 88)	it whit white white	N
whit	- Polyvinyl chloride sheathed. Not used if they are lik a temperature rise exceeding 75 K during the test of		N
	 light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg 	See table 24.1	Ρ



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
Intities wi	 ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances 	unifet whitet white white	N
LTE. WALT	- Heat resistant polyvinyl chloride sheathed. Not use than specially prepared cords	d for type X attachment other	N N
A WALTER	 heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg 	at writter writter writter w	STEL N
WALL V	heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances	white white white white	N
NUTE WA	Supply cords for class III appliances adequately insulated	NITER WALTER WALTER WALTER	on N
FEK WALTE	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts	tet allet walter walter	ULIEN N
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross- sectional area (mm ²)	Rated current: 0.28A; Cross- sectional area: 0.75mm ²	P P
25.9	Supply cords not in contact with sharp points or edges	Intrest Multer watter Mult	PE
25.10	Supply cord of class I appliances have a green/yellow core for earthing	Tex strex wires white	N ⁻
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless	et antiet antiet antiet a	TECP M
TEX	the contact pressure is provided by spring terminals	the state	^k N ≤
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure	white white white white	P
25.13	Inlet openings so constructed as to prevent damage to the supply cord	RE MALL MALL MALL	SUNN St
TE WALT	If the enclosure at the inlet opening is not of insulating material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided	t stek strek strek strek	N
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is	wither whiter whiter white	N N
At .	class 0, or	the second second	N
no an	a class III appliance not containing live parts	NTER WAITE WALL WAL	N
25.14	Supply cords moved while in operation adequately protected against excessive flexing	et wret miret miret	I TENN
- 10-	Flexing test, as described:	AN A A	N .
WILL	- applied force (N)	NUTER INTER MALITY MAL	Ň
×	- number of flexings	10 10 10 10	- N

Page 35 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
Clause	Requirement - Test	Result - Remark	verdici
The test does not result in:			S N
LIEK WINL	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current	TEX WAITER WAITER WAI	int N
X WALTER	- breakage of more than 10% of the strands of any conductor	at intract intract would	WALL THE N
. let	- separation of the conductor from its terminal	L A At	× N×
mur 1	- loosening of any cord guard	White white white	N N
. Tet	- damage to the cord or the cord guard	at at at	N
in all	- broken strands piercing the insulation and becoming accessible	NUTE WALL WALL WA	N
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage	WALTER WALTER WALTER	yen fr
NALTE N	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged	INTER WATER WATER W	P
ex site	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm):	30N, 0.1Nm	Р
NU TEK	Cord not damaged and max. 2 mm displacement of the cord	1.0mm	Р
25.16	Cord anchorages for type X attachments constructed	d and located so that:	sur N
Jet .	- replacement of the cord is easily possible	the state	N ^t
in w	- it is clear how the relief from strain and the prevention of twisting are obtained	at and and	N
I wat	- they are suitable for different types of supply cord	The second second	3 N 4
+ MALTER	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless	at their whet whet	In N
ALTER	they are separated from accessible metal parts by supplementary insulation	with the set	N
NI V	- the cord is not clamped by a metal screw which bears directly on the cord	white white white a	N
it with	- at least one part of the cord anchorage securely fixed to the appliance, unless	stife white white wh	N N
WAL	it is part of a specially prepared cord	let allet white white	NN NN
INLIEK	- screws which have to be operated when replacing the cord do not fix any other component, unless	- THE LIFE MITH	
TEX	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool	when when we are	N

Page 36 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
White W	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood	MALTER WALTER WALTER WA	Ň
ite whit	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless	Tet while while while	N ¹ N _N
WAL	failure of the insulation of the cord does not make accessible metal parts live	white white white	N N
WALTER	- for class II appliances they are of insulating material, or	whiter whiter white w	N N
NLTER WN	if of metal, they are insulated from accessible metal parts by supplementary insulation	NITER MUTER WAITER WAI	STATE N
IEX WALT	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals	Et whitet whitet white	V LICN
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	water water water	Pri Pri
25.18	Cord anchorages only accessible with the aid of a tool, or	UNITER WALTER WALTE WA	Р
ITER WAL	Constructed so that the cord can only be fitted with the aid of a tool	TEX WALTER WALTER WALT	P
25.19	Type X attachment, glands not used as cord anchorage in portable appliances	et minet whitet whitet	WI TEEN
MALTER	Tying the cord into a knot or tying the cord with string not used	Tex with outer	NUT NOT
25.20	The insulated conductors of the supply cord for type Y and Z attachment additionally insulated from accessible metal parts	with the with white	TEX PX
25.21	Space for supply cord for type X attachment or for co constructed:	onnection of fixed wiring	A NITCH N
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover	A WALTER WALTER WALTER	oun sunt
	- so there is no risk of damage to the conductors or their insulation when fitting the cover	wifet whitet whitet w	LIE NIE
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts	stret whilet whitet whi	et N ^L
	2 N test to the conductor for portable appliances; no contact with accessible metal parts	NALTE WALT WALT	No ⁶
25.22	Appliance inlets:	t JER NIER MITER.	N ^{LL} N ^{LL}
jit.	- live parts not accessible during insertion or removal	Juli Juli VIII I	Not
Page 37 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
INLIEK W	Requirement not applicable to appliance inlets complying with IEC 60320-1	White white white	IN N
TEL NAL	- connector can be inserted without difficulty	tet the steet of	N N
	- the appliance is not supported by the connector	n m m m	N
MALT	- Not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless	et whitet whitet white	No.
NUTER	the supply cord is unlikely to touch such metal parts	et jet jet	N
25.23	Interconnection cords comply with the requirements for the supply cord, except that:	whi whe wh	N N
ne with	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11	ALTE WALL WALL W	Net stret
	- the thickness of the insulation may be reduced	all all a	N
MUTE	If necessary, electric strength test of 16.3	tift stift stife	N ¹
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected	wither whiter whiter	Matter Martin
25.25	Dimensions of pins that are inserted into socket- outlets compatible with the dimensions of the relevant socket-outlet.	and whitek whitek w	thet on N
NNITE	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083	et whitet whitet whit	et on ste N
26	TERMINALS FOR EXTERNAL CONDUCTORS	ALTER INTERVINITE	JULI JPL
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors	ANT ATT ANTIFE S	MITER MALIER
TEK WALT	Terminals only accessible after removal of a non- detachable cover, except	the second second	State State
t det	for class III appliances that do not contain live parts		¢N
WALTER D	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection	MALTER WATER WALTER	MALTE MALTE
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless	stret whitek whitek w	NTEK NE
Mu	the connections are soldered	it white white white	N ^M
INLIEK	Screws and nuts not used to fix any other component, except	- Tet Jiet Jiel	- NIT OF NIT

Page 38 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
unticit w Stet w	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors	united whited whited wh	et
X NALTEN	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless	at whit whe whe	N STER
whitek	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint	whitet whitet whitet	
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor	ret white white white	N
NUL	Terminals fixed so that when the clamping means is	tightened or loosened:	Mr N
JH+	- the terminal does not become loose	s at at	N ^e
nn n	- internal wiring is not subjected to stress	Inter white white w	N N
LTEX WAY	- neither clearances nor creepage distances are reduced below the values in clause 29	Tet milet milet white	et min N
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm)	et whitet whitet white	NI SEKN
me	No deep or sharp indentations of the conductors	NUTER NALTE WALL	n sn
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and	NU STER WALTER WA	A NEW W
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened	* INTEX WATER WATER	om tek N
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	WALTER WALTER WALTER W	
in all	Stranded conductor test, 8 mm insulation removed	WITE MALL WALL WALL	N
EK WALT	No contact between live parts and accessible metal parts and,	et writet wattet waite	- N IT N
WALTER	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only	milet whilet watter	NUT AL N

Page 39 of 73



IEC 6	60335-1
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Clause	Requirement - Test	Result - Remark	Verdict
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm ²)	Whitek whitek whitek	NATE NON
WALTE	If a specially prepared cord is used, terminals need only be suitable for that cord	at whitek whitek whi	and Nr.
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure	whitet whitet white	SUNTE N
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other	ALTER WALTER WALTER	IN N
26.9	Terminals of the pillar type constructed and located as specified	office white white	N
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless	watter watter watt	mi Bri
NNLTER N	conductors ends fitted with means suitable for screw terminals	Intifet watter watter	WILLE WN
All S	Pull test of 5 N to the connection	it at alt	P.
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	the water water w	Р
whitek	For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone	et white white whi	P
ANTER W	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free	white white white	N STATES
27	PROVISION FOR EARTHING	M. M. L.	Р
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet	NALTER WAITE WAIT	N
WAL V	Earthing terminals and earthing contacts not connected to the neutral terminal	White white white	WAY NA
NN WA	Class 0, II and III appliances have no provision for earthing	Class II	N ¹ P
E. NALIE	Safety extra-low voltage circuits not earthed, unless	et set set with	LET NUT NUT
	protective extra-low voltage circuits	m m m	Ν
27.2	Clamping means of earthing terminals adequately secured against accidental loosening	NITER WAITER WAITE	WILL N.L.

Page 40 of 73



Clause	Requirement - Test	Result - Remark	Verdict
.et	THE THE STATE ATTACK WATE WATE		1. 18
INLA W	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm ² , and	white white white	NAL SUN
5 - 50 5 - 50	do not provide earthing continuity between different parts of the appliance, and	it whit whit wh	N
MAL	conductors cannot be loosened without the aid of a tool	et watter watte wat	Su Nu
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part	MATTER WATTER WATTER	
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage	ret white white whi	A A A A A A A A A A A A A A A A A A A
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal	white white white	N N N
NA N	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion	white would would be	SUNT SUNN
et jie	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm	to when we we	
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure	THE THE STREET	
NITEX W	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion	white with white	UNITER SUNTTER
27.5	Low resistance of connection between earthing terminal and earthed metal parts	at a set of	LIFE NUTEN
WALTER .	This requirement does not apply to connections providing earthing continuity in the protective extra- low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance	MULTER WALTER WALT	
Nº V	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω)	which which which	N
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.	est ret inter an	N
WALTER	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit	white white white	t M M
28	SCREWS AND CONNECTIONS	it it it	P

Page 41 of 73



	IEC 60335-1	e at at at .	SEX JE
Clause	Requirement - Test	Result - Remark	Verdict
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses	white white white white	NP
et st	Screws not of soft metal liable to creep, such as zinc or aluminium	To write write write.	Р
whit	Diameter of screws of insulating material min. 3 mm	wintres white white w	N
WALT .	Screws of insulating material not used for any electrical connections or connections providing earthing continuity	watter watter watter wat	N
INC WIN	Screws used for electrical connections or connections providing earthing continuity screwed into metal	NUTER WALL WALL WALL	SU N
* Whitek	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation	WALL WALL WALL	N N
WALTER W	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation	with whitek whitek white	e Net
et Je	For screws and nuts; torque-test as specified in table 14	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless	whitek whitek whitek whi	N N N
UNLIFEK W	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material	at white white	N
TE WALT	This requirement does not apply to electrical connect for which:	tions in circuits of appliances	N SI
WALTER WALTER	30.2.2 is applicable and that carry a current not exceeding 0,5 A	* INLIER WALTER WALTER WA	STEEL NALL
MALTER	30.2.3 is applicable and that carry a current not exceeding 0,2 A	aliet with white white	e- Nyek
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together	LIEX WALTER WALTER WALTER	N-
rek wnife t strek	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread	WAITER WAITER WAITER	
Whitek w	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer	white white white his	N

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Page 42 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
Intert wi	Thread-cutting, thread rolling and space threaded so connections providing earthing continuity provided it connection:		N
-m-	- in normal use,	TE WITT WAT WAT Y	N
* NITE	- during user maintenance,	at let let let	N.
-NV -TEX	- when replacing a supply cord having a type X attachment, or	wint with with su	N
un 1	- during installation	white white white white	Ň
NLIEK WN	At least two screws being used for each connection providing earthing continuity, unless	The suffet multiply and the	N
EK NALT	the screw forms a thread having a length of at least half the diameter of the screw	ret that the whet	LI EN
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity	whitet whitet whitet	EK N
NALTE N	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or	Intret water water water	N
ITEK NI	if an alternative earthing circuit is provided	at left set set	Ň
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion	et white white white	N
29	CLEARANCES, CREEPAGE DISTANCES AND SO		P
TEX	Clearances, creepage distances and solid insulation withstand electrical stress	white white white and	P
TEX WALT	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies	at the sure wat	N
t JIEK	The microenvironment is pollution degree 1 under type 1 protection	t at at at	N
whitek s	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3	white white white	N
LIFEK	These values apply to functional, basic, supplementary and reinforced insulation	(see appended table)	NUL P
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless	(see appended table)	LTE P
with	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14	white white white white	N

Page 43 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
Intific white	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable	untitet untitet untitet uni	A CONP
A NITE	Impulse voltage test is not applicable:	et alt set set	N
LIFE	- when the microenvironment is pollution degree 3, or	which we will	N
Nº Y	- for basic insulation of class 0 and class 01 appliances	which which which which	N SIL
in m	Appliances are in overvoltage category II	NUTER WALTE WALT WAL	n P
EX WALT	A force of 2 N is applied to bare conductors, other than heating elements	et wret muret aniret	N L P
t st	A force of 30 N is applied to accessible surfaces	all the state	P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage	white white white	
NI V	The values of table 16 or the impulse voltage test of clause 14 are applicable:	(see appended table)	Р
et win	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1	the while while while	N N
TEX	Lacquered conductors of windings considered to be bare conductors	white white white	Р
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16	(see appended table)	P FK nifek
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage	(see appended table)	V LITER V
WALTER S	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation	Multer whiter whiter	NN PN
29.1.4	Clearances for functional insulation are the largest v	alues determined from:	it jpt
m	- table 16 based on the rated impulse voltage:	(see appended table)	Р
et white	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz	Tek unitek anitek anitek	N LICN N
MALTER	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz	unet ninet uninet	NI SUNT
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless	it let let	P

Page 44 of 73



IEC 6	60335-1
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Clause	Requirement - Test	Result - Remark	Verdict
INLIEK W	the microenvironment is pollution degree 3, or	wift with white white	N ^P P
JEK NAL	the distances can be affected by wear, distortion, movement of the parts or during assembly	Tet stet stret maret	N. I.I.N
* white	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited	et miret intret waitet wa	STER N
MALTER	Lacquered conductors of windings considered to be bare conductors	Tet whet mitet white	P P
LITEK N	However, clearances at crossover points are not measured	at not not not the	Pr
et .1	Clearance between surfaces of PTC heating elements may be reduced to 1mm	AL WAY WAY THE	N
29.1.5	Appliances having higher working voltages than rate insulation are the largest values determined from:	d voltage, clearances for basic	N
with	- table 16 based on the rated impulse voltage:	NUTER INTER MALT WAL	N
UNLITEK W	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz	the street outer on the	- Nek
JEK NI	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz	at set set set	N.
et white	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation	et waitet waitet waitet wa	N
NITEK VI	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation	white white white white	N
t whitek	If clearances for basic insulation are selected from Clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation	A ALTER MULTER MULTER MAN	
WALTER WAL	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	whitek whitek whitek white	
WALTER	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15	White white white white	N M

Page 45 of 73



Clause	Requirement - Test	Result - Remark	Verdict
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree	(see appended table)	A MILES
* .1*	Pollution degree 2 applies, unless	i i it it	
WAL	 precautions taken to protect the insulation; pollution degree 1 	WALTER WALTE WALT	Sur Nur
white v	- insulation subjected to conductive pollution; pollution degree 3	WALTER WALTER WALTER W	N ¹ N ¹
NUTER WIN	A force of 2 N is applied to bare conductors, other than heating elements	NITER MATER WALTER WAS	IFF MILP
1 J	A force of 30 N is applied to accessible surfaces	a at at al	P
wint fet	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system	whitek whitek whitek	
29.2.1	Creepage distances of basic insulation not less than specified in table 17	(see appended table)	LIE WALES
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17	and whitet whitet white	N
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14	whitek whitek whitek	
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or	(see appended table)	A NUTER
	Table 2 of IEC 60664-4, as applicable	2m 2m 2m	N
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or	(see appended table)	N P
un a	Table 2 of IEC 60664-4, as applicable	WALTER WALTE WALT W	Ň
29.2.4	Creepage distances of functional insulation not less than specified in table 18	(see appended table)	P ⁺
et white	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18	Tet whitet whitet white	Martin Martin
INLIEK M	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited	WIT WITH WITH	ITE MILIE

Page 46 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses	whitek whitek whitek	
- n	Compliance checked:	NITE WALL WAL WA	Р
t alle	- by measurement, in accordance with 29.3.1, or	at at at a	THE P
N. TEX	- by an electric strength test in accordance with 29.3.2, or	white white white	N
WAL V	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and	white white white	SMIL SN SITEK SSITEK
EK white	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or	anti wat with a	IFK NITE N
WALTER	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz	white white white	t of N
29.3.1	Supplementary insulation have a thickness of at least 1 mm	wifet outet unifet	white Pre
LIEK WAL	Reinforced insulation have a thickness of at least 2 mm	Tet wet with a	LIEK MIP
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation	at the test of	et Tet N
-w.	Supplementary insulation consist of at least 2 layers	white white white	N
June .	Reinforced insulation consist of at least 3 layers	MALTE WALT WALT	Mr N
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by	and the muter	NITEK NEK
at a	the electric strength test of 16.3		N
t autek	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out	and and an are and	N
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19	white white white	NI N
30	RESISTANCE TO HEAT AND FIRE	me me m	P
30.1	External parts of non-metallic material,	TEK STER MITER	N ¹ P
* 1	parts supporting live parts, and	the shi she a	P
WAL	parts of thermoplastic material providing supplementary or reinforced insulation	white white white whi	P
NUTE:	sufficiently resistant to heat	- THE THE STEE	P
N	Ball-pressure test according to IEC 60695-10-2	Mr. Mr. m.	Р

Page 47 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
INTER WINT	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C):	(see appended table)	P
A WALTER	Parts supporting live parts tested at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C):	(see appended table)	
MILLEK WN	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C):	(see appended table)	N SPEC
30.2	Parts of non-metallic material resistant to ignition and spread of fire	Et OLIEX WALTER WALTE	N LIPP
- Jet	This requirement does not apply to:	at at at	of N s
WALTER N	parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or	WALTER WALTER WALTER W	SAN N
LITEK WAL	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance	LTEX WAITER WAITER WAITER	ST. N
EL WALTE	Compliance checked by the test of 30.2.1, and in addition:	et white white white	we see Pour
TEK	- for attended appliances, 30.2.2 applies	at at at	S NS
201.	- for unattended appliances, 30.2.3 applies	white white white v	Р
NITER II	For appliances for remote operation, 30.2.3 applies	THE THE A	S ^{et} N
Tet J	For base material of printed circuit boards, 30.2.4 applies	at a star	Р
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C	and and and	S P S
whitek	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or	watter waite wait	
NIT I	the material is classified at least HB40 according to IEC 60695-11-10	white white white w	N
et mit	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF	stret white white whi	N N
30.2.2	Appliances operated while attended, parts of non- metallic material supporting current-carrying connections, and	When when when the	UNITEX N
TEK	parts of non-metallic material within a distance of 3mm of such connections,	the set set	N N

Page 48 of 73



IEC	60335-1
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Clause	Requirement - Test	Result - Remark	Verdict
INL'EX W	subjected to the glow-wire test of IEC 60695-2-11	stift outer white white	N N
st i	The test severity is:	m w t it	- N
L WAL	- 750 °C, for connections carrying a current exceeding 0,5 A during normal operation	JET WALTE WALT WAL	N
WALT	- 650 °C, for other connections	ex with outer outers	n Nr
MITEK	Glow-wire applied to an interposed shielding material, if relevant	the state with a	
JEK N	The glow-wire test is not carried out on parts of mate glow-wire flammability index according to IEC 60695		N N
et se	- 750 °C, for connections carrying a current exceeding 0,5 A during normal operation	NUT WALL WALL WALL	N
MULT	- 650 °C, for other connections	set white white white	-1 N 11
t still	The glow-wire test is also not carried out on small pa	arts. These parts are to:	N
	- comprise material having a glow-wire flammability index of at least 750 °C, or 650 °C as appropriate, or	while while whe w	N
	- comply with the needle-flame test of Annex E, or	ne me m	N
LTE WAL	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10	LIEK WALTER WALTER WALTE	JUL N
ek white	Glow-wire test not applicable to conditions as specified	et antiet antiet whitet	NT TE N
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2	stret miret white w	IT P P
NLTEX NO	The tests are not applicable to conditions as specified	We see the street with	N.S.
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and	at a present and the	P
t MALTER	parts of non-metallic material, other than small parts, within a distance of 3 mm,	t ret with with	N FIF P
LIEK	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C	when we we are	P NITE
NI V	Glow-wire applied to an interposed shielding material, if relevant	white white white white	P F
et white	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C	Et milet would would	SIL N
30.2.3.2	Parts of non-metallic material supporting connections, and	NITER NITER WITER W	
LIFEK .	parts of non-metallic material within a distance of 3mm,	at set set of	Pat

Page 49 of 73



Clause	Requirement - Test	Result - Remark	Verdict
MITEK W	subjected to glow-wire test of IEC 60695-2-11	I TEX NITEX MUTEX MUTEX	P
	The test severity is:	Mr. Mr. M. S.	Р
s whi	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation	LIFE WALTE WALTE WALTE	P
WALT	- 650 °C, for other connections	set with outer white w	RI
NUTER	Glow-wire applied to an interposed shielding material, if relevant	Tet tet with a	P P
ifet	However, the glow-wire test of 750 °C or 650 °C as on parts of material fulfilling both or either of the follo		N
14 . 14	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:	ntit wint wint with	N
MUT	• 775 °C, for connections carrying a current exceeding 0,2 A during normal operation	ret white white white s	N N
white	675 °C, for other connections	whitek white white wh	N
INLIEK	- a glow-wire flammability index according to IEC 60695-2-12 of at least:	Tet stet witet wite	
ster at	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation	at set set set	N
- Car	- 650 °C, for other connections	the wat wat with	N
NITE .	The glow-wire test is also not carried out on small particular	arts. These parts are to:	S. N.
WALTER.	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or	white white white white	A N
NITEK W	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or	were start wontrest wontrest	Net
EX INIT	- comply with the needle-flame test of Annex E, or	A TEK ALTER	S N
. Jet	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10	with the set of the	N
whitek w	The consequential needle-flame test of Annex E appendix encroach within the vertical cylinder placed above the zone and on top of the non-metallic parts supporting and parts of non-metallic material within a distance of these parts are those:	ne centre of the connection g current-carrying connections,	N
white white	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or	White white white white	N ^N N
NITEX	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or	which which which we	N

Page 50 of 73



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IEC 60335-1				
Clause	Requirement - Test	Result - Remark	Verdict	
NALIEN N	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or	unifet unifet unifet unife	N	
it in	- small parts for which the needle-flame test of Annex E was applied, or	it wat wat wat	N	
MAL	- small parts for which a material classification of V- 0 or V-1 was applied	white white white white w	N	
where	However, the consequential needle-flame test is no parts, including small parts, within the cylinder that a		N	
NLTER WN	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or	NITER WALTER WALTER WALTER	SUL N	
TEX MALT	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or	ret suret whitet watter	N STON	
t whitek	- parts shielded by a flame barrier that meets the needle-flame test of Annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10	whitek whitek whitek wh	et N synth	
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of Annex E	intife white white white	P	
LIE WAY	Test not applicable to conditions as specified:	TEX TEX WITH WITH	N ¹² N N	
31	RESISTANCE TO RUSTING	White the second	Р	
WALT	Relevant ferrous parts adequately protected against rusting	ex white white white w	PN	
NUTE	Tests specified in part 2 when necessary	THE STEP STEP OF	N	
32	RADIATION, TOXICITY AND SIMILAR HAZARDS	MUT MI MI M	Р	
untite wi	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their	Everyone must leave the scene when the appliance is	SUCP.	

A	ANNEX A (INFORMATIVE) ROUTINE TESTS	NITE NITE
	Description of routine tests to be carried out by the manufacturer	N N
В	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES	N
t sunt	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance	N V
-24	This annex does not apply to battery chargers	N
3.1.9	Appliance operated under the following conditions:	S N

in normal use.

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operation in normal use

Compliance is checked by the limits or tests specified in part 2, if relevant

Page 51 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
UNLIEK W	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2	untilet unifer untilet	unti su'N
the write	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate	Tet whitet whitet w	
WALTER V	-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	whitek whitek whitek	MALE WALE
NUTE WALT	- 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	ALTER WALTER WALTER	net wenn
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable	with the state	t of N
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances	when when when	N
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals	unite unit unit	SUN SUN
EX WALTEN	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006	et outet outet out	Et In Ter N
7.6	Symbols 60417-5005 and IEC 60417-5006		N N
7.12	The instructions give information regarding charging	WALTER WALTE WALT	N N
net w	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information	NUT STR WINLING	nut on N
white L ct	Details about how to remove batteries containing materials hazardous to the environment given	The sure of	N
7.15	Markings placed on the part of the appliance connected to the supply mains	Multer White white	W. N.
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	whitek whitek whitek	WALTE WIN
et ste	If the appliance can be operated without batteries, double or reinforced insulation required	it when we we	N
11.7	The battery is charged for the period stated in the instructions or 24 h	white white white	N N
19.1	Appliances subjected to tests of 19.B.101, 19.B.102 and 19.B.103	watter waite wait	N N
19.10	Not applicable	at the the	N

Page 52 of 73



Jr'	IEC	603	35-1

Clause	Requirement - Test	Result - Remark	Verdic
19.B.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged	white white white white	J.N.
19.B.102	For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged,	Tex white white white w	
19.B.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction	whitek whitek whitek white	t N VINIT
21.B.101	Appliances having pins for insertion into socket- outlets have adequate mechanical strength	NITER WALTER WALTER WALTE	N n
EK WALTE	Part of the appliance incorporating the pins subjecte 2, of IEC 60068-2-31, the number of falls being:	d to the free fall test, procedure	LITEN N
MALTER	- 100, if the mass of the part does not exceed 250 g (g)	stret stret antret and	et N Wh
1.t	- 50, if the mass of the part exceeds 250 g	The the state	N
NUT - MU	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met	uniter waite wait wat	JUN A
22.3	Appliances having pins for insertion into socket- outlets tested as fully assembled as possible	Tex watter watter watter	N ^N N
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts	et waitet waitet waitet wa	
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies	which which which we	N
ur mu	For other parts, 30.2.2 applies	inter suntil winter	~n_N
Cet white	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS	The set of the set	NUTEN S
would be the	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding	* MALTER WALTER WALTER WAI	IFK N
JEK .	Test conditions as specified	at at at a	N
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS	white white white white	N
et nites	Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard	et ret ret int	N N
14.	Test conditions as specified	where we are an	N
E WALTER V	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST	* Whitek whitek whitek whit	P.L
INLIEX NN	Needle-flame test carried out in accordance with IEC modifications:	C 60695-11-5, with the following	P

Page 53 of 73



Clause	Requirement - Test	Result - Remark	Verdict
	THE NUTLE WITH AND AND AND		
7~ ~~	Severities	WALTE WALTE WALT WAL	JU P
LTEK MALT	The duration of application of the test flame is $30 \text{ s} \pm 1 \text{ s}$	ret thet alles alles	, NUT P
9	Test procedure	the market of the second secon	Р
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	white white white w	P
9.2	The first paragraph does not apply	white white white white	P
NITEK WN	If possible, the flame is applied at least 10 mm from a corner	thet maret white white	P
9.3	The test is carried out on one specimen	r sr st at	Р
t unt	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test	and the watthe wall	N N N
110	Evaluation of test results	white white white wh	Р
JIEK	The duration of burning not exceeding 30 s	at at at it	N
Nº V	However, for printed circuit boards, the duration of burning not exceeding 15 s	until white white will	P
F W	ANNEX F (NORMATIVE) CAPACITORS	the watthe watthe wat	N
white	Capacitors likely to be permanently subjected to the radio interference suppression or voltage dividing, co clauses of IEC 60384-14, with the following modifica	omply with the following	n Nyn
1.5	Terms and definitions	White white whe wh	Ň
1.5.3	Class X capacitors tested according to subclass X2	- at at at	N
1.5.4	This subclause is applicable	WELL AND AND AND	N
1.6 🔬	Marking	the states of the	S ^C N
-24-	Items a) and b) are applicable	Mr m m	N
3.4	Approval testing	at all set set a	N.S
3.4.3.2	Table 3 is applicable as described	me me me m	N
4.1	Visual examination and check of dimensions	TEX JEX NIFET MIT	N
,L	This subclause is applicable	Mr. M. W. W.	N
4.2	Electrical tests	TEX ALTER ALTER ANTE	N N
4.2.1	This subclause is applicable	The second second	N
4.2.5	This subclause is applicable	It with white white y	No ^r
4.2.5.2	Only table 11 is applicable	The second second	
WAL	Values for test A apply	NUTER UNITER WALTER WA	N
TEK	However, for capacitors in heating appliances the values for test B or C apply	at at at a	Net

Page 54 of 73



IEC 60335-1

Clause	Requirement - Test Result - Remark	Verdict
4.12	Damp heat, steady state	ST NN
at a	This subclause is applicable	× N
r wh	Only insulation resistance and voltage proof are checked	S N S
4.13	Impulse voltage	Nr Nr
A	This subclause is applicable	N
4.14	Endurance	n ^{it} N
NUTER MAIT	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable	TEK NK
4.14.7	Only insulation resistance and voltage proof are checked	- N
In	No visible damage	51 N 55
4.17	Passive flammability test	N.S
20. 1	This subclause is applicable	Ň
4.18	Active flammability test	N ^E
	This subclause is applicable	N
G ^{EN} WILL	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS	N N
EK WALTER	The following modifications to this standard are applicable for safety isolating transformers:	NU TELN
7	Marking and instructions	N N
7.1	Transformers for specific use marked with:	Net N
NITEK WA	-name, trademark or identification mark of the manufacturer or responsible vendor	TEK NEK
at at	-model or type reference	N
17	Overload protection of transformers and associated circuits	N
+ MALTER N	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1	NN SIN
22	Construction	N
WALTE M	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable	N N
29	Clearances, creepage distances and solid insulation	SET N
29.1, 29.2, 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply	N
WITEK	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances	
Intrest uni	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed	N N

Page 55 of 73



Clause	Requirement - Test	Result - Remark	Verdic
uniorsky Litek vunič	For safety isolating transformers subjected to periodic voltages with a frequency exceeding 30 kHz, the clearances, creepage distances and solid insulation values specified in IEC 60664-4 are applicable, if greater than the values specified in items 2a, 2c and 3 in table 13 of IEC 61558-1	Whitee white white white	N
H M	ANNEX H (NORMATIVE) SWITCHES	re water water water w	N
man	Switches comply with the following clauses of IEC 6	1058-1, as modified below:	_⇒Ñ
NLTEX NN	The tests of IEC 61058-1 carried out under the conditions occurring in the appliance	Tet wifet wifet with	st Nt
SEX MIT	Before being tested, switches are operated 20 times without load	at all the text	N
8	Marking and documentation	other when when	N
INLIE.	Switches are not required to be marked	TEX LIEX NITER	N.S
MALTEK N	However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference	whet whet we we	N N
13	Mechanism		N-
r. m	The tests may be carried out on a separate sample	LIEF WALTE WALTE WALT	- N -
15 🏑	Insulation resistance and dielectric strength	the state	
15.1	Not applicable	Ter white white when y	Nen Nen
15.2	Not applicable	the state	S N
15.3	Applicable for full disconnection and micro- disconnection	while while while wh	N
17 📣	Endurance	NH ATE WALL WALL	JUNN
TEX MALT	Compliance is checked on three separate appliances or switches	Tet outet	N
* NLTEX	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless	t ret set set	N SEL N
TEX	otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335	white white with a	N
when w	Switches for operation under no load and which can be operated only by a tool, and	white white white wh	NN L
Ner was	switches operated by hand that are interlocked so that they cannot be operated under load,	NITER WALTER WAITE WAIT	N N
Er NALT	are not subjected to the tests	let set allet allet	N
WALTER	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation	when we with the set	IT A MIT
st	Subclauses 17.2.2 and 17.2.5.2 not applicable		N N



- Jet	IEC 60335-1	in at at at a	et _14
Clause	Requirement - Test	Result - Remark	Verdict
untit un	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1	untilet while while while	N
ex whitek	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K)	et and and and a	N N
20	Clearances, creepage distances, solid insulation and assemblies	d coatings of rigid printed board	L N
NUTER MAI	This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24	WALL WALTER WALTER WALTER	N
IEK WALTE	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS IN RATED VOLTAGE OF THE APPLIANCE	NADEQUATE FOR THE	ST N ST
watt	The following modifications to this standard are appl insulation that is inadequate for the rated voltage of		N
8,5	Protection against access to live parts	Let tet the stee street	N
8.1	Metal parts of the motor are considered to be bare live parts	int whe will set	N
11 5	Heating	ETC MALT WALL WALL	N N
11.3	The temperature rise of the body of the motor is determined instead of the temperature rise of the windings	et waiter waiter waiter wa	STE N N
11.8	The 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	white white white white	N
16	Leakage current and electric strength	and the second sec	N
16.3	Insulation between live parts of the motor and its other metal parts is not subjected to the test	where we fee would be	N M
19	Abnormal operation	at wat stat state of	N _N S ^S
19.1	The tests of 19.7 to 19.9 are not carried out	me me me	Ν
19.1.101	Appliance operated at rated voltage with each of the	following fault conditions:	N
NITEK WALT	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit	when when the whitek	NL M
at the	- short circuit of each diode of the rectifier	i i it it	× N
Mur	- open circuit of the supply to the motor	it white white white w	N
t whitek y	- open circuit of any parallel resistor, the motor being in operation	allet milet inter water	et Nurr
INLIEK NA	Only one fault simulated at a time, the tests carried out consecutively	THE LIFE WITH MITH	Net

Requirement - Test

Clause

Page 57 of 73



Verdict

	JUNIE(C 60335-	·1	t at
.it	t	NUTER	MLIE	Result - Remark
Nº .	J. L.	24	<i>A</i> .	

22 🔊	Construction	JUN N	
22.I.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	NUT N	
WAL	Compliance checked by the tests specified for double and reinforced insulation	N	
Jurino	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS	N	
NITER WAY	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:	SULL N	
5.7	Conditioning of the test specimens	√⊗N	
with the set	When production samples are used, three samples of the printed circuit board are tested	N	
5.7.1	Cold	N	
.et	The test is carried out at -25 °C	N N	
5.7.3 📣	Rapid change of temperature	- NN	
At S	Severity 1 is specified	N	
5.9	Additional tests	N N	
et tiet	This subclause is not applicable	N N	
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		
when y	The information on overvoltage categories is extracted from IEC 60664-1	P	
intite wh	Overvoltage category is a numeral defining a transient overvoltage condition	SUL B	
JEE WALT	Equipment of overvoltage category IV is for use at the origin of the installation	S S N	
WNLIEK ITEK	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		
NA N	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation	P	
EX WALTE	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies	N LIFE N	
WALTER.	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 N	

Page 58 of 73



IEC 60335-1

Clause	Requirement - Test	Result - Remark	Verdict
1541 - N	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEAR DISTANCES	ANCES AND CREEPAGE	
	Information for the determination of clearances and creepage distances	it whit with white	P
M M	ANNEX M (NORMATIVE) POLLUTION DEGREE	WALTER WALTE WALTE W	P
WALTER	The information on pollution degrees is extracted from IEC 60664-1	white white white white whi	P
JIET IN	Pollution	at at at at	Р
iek whit	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment	tet whet white white	N LIFE M
+ INLIEK	Means may be provided to reduce pollution at the insulation by effective enclosures or similar	tet stet stet	U EX P
TEX	Minimum clearances specified where pollution may be present in the microenvironment	when we we are	P
1. 1	Degrees of pollution in the microenvironment	intit whith white white	[√] P
LIEK WA	For evaluating creepage distances, the following deg microenvironment are established:	grees of pollution in the	IN SP
ex white	- Pollution degree 1: no pollution or only dry, non- conductive pollution occurs. The pollution has no influence	et wattet wattet wattet	IN THE N
WALTER .	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected	WALTER WALTER WALTER WA	S P.S
Tex whit	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected	at whe is the wanter	N
WALTE	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow	WALTER WALTER WALTER W	N
Ŋ Ś	ANNEX N (NORMATIVE) PROOF TRACKING TEST	White white white white white	P
LIE WA	The proof tracking test is carried out in accordance v following modifications:	with IEC 60112 with the	P
7 ^t nit	Test apparatus	at at alt alt	T P
7.3	Test solutions	in which which which is	Р
NUTER	Test solution A is used	- tet stet stet	S P.C
10	Determination of proof tracking index (PTI)	Mrt. Mr. M. M.	Р
10.1	Procedure	at let jet it	P



Clause	Requirement - Test	Result - Remark	Verdict
INLIEK W	The proof voltage is 100V, 175V, 400V or 600V:	175V	P
<u>.</u>	The test is carried out on five specimens	and the in the	Р
the who	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100	The watter watter water	N N
10.2	Report	in which which we we	Р
WALTER V	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V	watter watter watter watte	N
03 . 10	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF	CLAUSE 30	on P
Er white	Description of tests for determination of resistance to heat and fire	ret white white white w	LIT P N
PUNLTER	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STA USED IN WARM DAMP EQUABLE CLIMATES	ANDARD TO APPLIANCES	et N C
NALIE N	Modifications applicable for class 0 and 01 appliance exceeding 150V, intended to be used in countries had climate and that are marked WDaE		N N
et would	Modifications may also be applied to class 1 applian exceeding 150V, intended to be used in countries ha climate and that are marked WdaE, if liable to be co excludes the protective earthing conductor	aving a warm damp equable	
5.7 John	The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C	The suret multiple and	
7.1	The appliance marked with the letters WDaE	WILL IN THE AND	N, -
7.12	The instructions state that the appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA	MULTE WALTE WALTER	SUCN NITES SU
* WALTER	The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries	whitek whitek whitek wh	Let N
11.8	The values of Table 3 are reduced by 15 K	miter white white white	_Ä
13.2	The leakage current for class I appliances not exceeding 0,5 mA	ret wet with which	N
15.3	The value of t is 37 °C	ST ST ST ST	N
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):	iter waiter waite waite w	Nor
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3	WAITER WAITER WAITER WAI	N
QUIER	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION C	F ELECTRONIC CIRCUITS	PE

Page 60 of 73



Clause	Requirement - Test Result - Remark	Verdict
1. Art	and a the second s	* 1
IN. M	Description of tests for appliances incorporating electronic circuits	√n P
Ret	ANNEX R (NORMATIVE) SOFTWARE EVALUATION	NUTEN
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex	N SUN
R.1	Programmable electronic circuits using software	N N
NUTER WA	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 constructed so that the software does not impair compliance with the requirements of this standard	
R.2	Requirements for the architecture	N
WALTER W	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety- related segments of the software	E WALLEY
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:	N N
NEX	- single channel with periodic self-test and monitoring	N
m	- dual channel (homogenous) with comparison	N N
.et	- dual channel (diverse) with comparison	⊢ N≥ ^L
nt wi	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures:	N N
	- single channel with functional test	N
NUTE	- single channel with periodic self-test	NN
	- dual channel without comparison	N
R.2.2	Measures to control faults/errors	N
R.2.2.1	When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area	L N.
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison	

Page 61 of 73

12	7
	2

.TE	IEC 60335-1						
Clause	Requirement - Test	Result - Remark	Verdict				
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths	ANTER ANTER ANTER ANTER	N				
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate	whitek whitek whitek white	N .				
R.2.2.5	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, detection of a fault/error occur before compliance with clause 19 is impaired	et whitet whitet whitet w	EK MIL				
R.2.2.6	The software is referenced to relevant parts of the operating sequence and the associated hardware functions	MITER WAITER WAITER WAITE	Net				
R.2.2.7	Labels used for memory locations are unique	at all set set	N N				
R.2.2.8	The software is protected from user alteration of safety-related segments and data	to write write and	N				
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 is impaired	et while while whe wh	N ^{OU}				
R.3	Measures to avoid errors	mus mus mus mus	N				
R.3.1	General	THE STREE MUTER	N				
TEX WALT	For programmable electronic circuits with functions re measures to control the fault/error conditions specifie following measures to avoid systematic fault in the so	d in table R.1 or R.2, the	NUTER				
WALTER WALTER	Software that incorporates measures used to control the fault/error conditions specified in table R.2 is inherently acceptable for software required to control the fault/error conditions specified in table R.1	whitek whitek whitek whi	IEK N VINT				
R.3.2	Specification	Mr. Mr. M.	N				
R.3.2.1	Software safety requirements:	Software Id:	N ² N				
EK UNLTE	The specification of the software safety requirements includes the descriptions listed	et the state state					
R.3.2.2	Software architecture	when the set of	Ν				



Clause	Requirement - Test	Result - Remark	Verdic
t	alt alt with a the second with the		
R.3.2.2.1	The specification of the software architecture includes the aspects listed	Document ref. No:	N ¹² WN
	- techniques and measures to control software faults/errors (refer to R.2.2);	TEX whitek whitek wh	TEX MITE V
	- interactions between hardware and software;	s at at a	t set
	- partitioning into modules and their allocation to the specified safety functions;	watte wait wat	wh wh
	- hierarchy and call structure of the modules (control flow);	white white white.	white white
	- interrupt handling;	at set set	LITER MITER
	- data flow and restrictions on data access;	VIT. ANT. ANUT M	
	- architecture and storage of data;	let tet tet at	EK INTERN
	- time-based dependencies of sequences and data	soft. whe will	
R.3.2.2.2	The architecture specification is validated against the specification of the software safety requirements by static analysis	watter waiter waite	N
R.3.2.3	Module design and coding	NUTER INTERNATION	Mr MN
R.3.2.3.1	Based on the architecture design, software is suitably refined into modules	THE THE NUT IN	JEK JULIN
et whitet	Software module design and coding is implemented in a way that is traceable to the software architecture and requirements	et initet unitet unit	at Jun Tex N
R.3.2.3.2	Software code is structured	e at at	<* N<
R.3.2.3.3	Coded software is validated against the module specification by static analysis	WALL WALL WALL	N N
ner win	The module specification is validated against the architecture specification by static analysis	ALL ATE WALLE W	N SUNN
R.3.3.3	Software validation	at a state out	N N
WALTER	The software is validated with reference to the requirements of the software safety requirements specification	A INTER WALTER WAITE	NIN JUN
Alt	Compliance is checked by simulation of:	s at at	N<
m. m	- input signals present during normal operation	Intite white white	N N
At A	- anticipated occurrences	1 A A	N.
T. ML	- undesired conditions requiring system action		N

TABLE R.1 ° – GENERAL FAULT/ERROR CONDITIONS							
Component ^a	Fault/error	Acceptable measures ^{b, c}	Definitions	Document reference for applied measure	Document reference for applied test	Ver- dict	

Page 63 of 73



	IT MIT	IEC 60335-1	at at		TL. TL
Clause	Requirement	- Test	Result -	Remark	Verdict
1 CPU	s. mint	at all the wind	TEX WALTER	INLIEK JUNITER V	N N
1.1 Registers	Stuck at	Functional test, or	H.2.16.5	let let	TEX NIEX.
	st si	periodic self-test using either:	H.2.16.6	- we we	20 1
	LIFE WALT	- static memory test, or	H.2.19.6	* JEK JE	A INLIER NN
	EK WITEK	 word protection with single bit redundancy 	H.2.19.8.2	when she	JUEK NUT
1.2 VOID		at all all with a	NUTE WALT	when when	ALL N
1.3	Stuck at	Functional test, or	H.2.16.5	Alt Alt	Jah JAN
Programme counter		Periodic self-test, or	H.2.16.6	ner more m	1. 21
counter	untite wat	Independent time-slot monitoring, or	H.2.18.10.4	iet whitet whi	EX WUTER W
	LTEX WALTER	Logical monitoring of the programme sequence	H.2.18.10.2	TEK NITEK	NNITER MINI
2	No	Functional test, or	H.2.16.5	20. 2.	N
Interrupt handling and execution	interrupt or too frequent interrupt	time-slot monitoring	H.2.18.10.4	united whites	unite nite
3	Wrong	Frequency monitoring, or	H.2.18.10.1	<u> </u>	
Clock	frequency (for quartz synchroniz ed clock: harmonics/ sub- harmonics only)	time slot monitoring	H.2.18.10.4	et whitet white	whitek whitek
4. Memory		ACT MAY AND AN		A let	A N
4.1	All single	Periodic modified checksum, or	H.2.19.3.1	In St. Mr.	nn n
Invariable memory	bit faults	multiple checksum, or	H.2.19.3.2	t at a	t .5° .3
	et set	word protection with single bit redundancy	H.2.19.8.2	white wat	WAT WIT
4.2	DC fault	Periodic static memory test, or	H.2.19.6	INTE WALL	MN. MN
Variable memory	WALTER WA	word protection with single bit redundancy	H.2.19.8.2	it white white	UTEK W ITEK.
4.3 Addressing (relevant to variable and invariable memory)	Stuck at	Word protection with single bit redundancy including the address	H.2.19.8.2	whitek whitek	SUNTRES SUNT

Page 64 of 73



		IEC 60335-1	the state of the s	
Clause	Requirement	- Test	Result - Remark	Verdict
5 Internal data path	Stuck at	Word protection with single bit redundancy	H.2.19.8.2	N
5.1 VOID	24	at let let out	en until main wh	N N
5.2 Addressing	Wrong address	Word protection with single bit redundancy including the address	H.2.19.8.2	N N
6 External	Hamming distance 3	Word protection with multi-bit redundancy, or	H.2.19.8.1	white white or N
communicat ion	WALTER WI	CRC – single work, or	H.2.19.4.1	THE THEY WITH
1011 10		Transfer redundancy, or	H.2.18.2.2	in me m
EX NITEX UNITER IN	Intites whit	Protocol test	H.2.18.14	LEK STEK NITEK I
6.1 VOID	at at	THE ME ALTE	when when when	N
6.2 VOID	LIE WALT	WAL		N N
6.3 Wrong Timing point in time	point in	Time-slot monitoring, or	H.2.18.10.4	N
		scheduled transmission	H.2.18.18	alfer alfer alfer
		Time-slot and logical monitoring, or	H.2.18.10.3	NAT WAS TEX TEX
	MITEX WALTE	comparison of redundant communication channels by either:	and the second second	it wat way a
	at at	- reciprocal comparison	H.2.18.15	an an ar
	NE WALL	- independent hardware comparator	H.2.18.3	WATER WALTER WALT
	Wrong	Logical monitoring, or	H.2.18.10.2	The set set
	sequence	time-slot monitoring, or	H.2.18.10.4	nt was sh
JEK NITEK		Scheduled transmission	H.2.18.18	set set siet
7 Input/output periphery	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13	S WE WIT WIT
7.1 VOID	er nure	intit wat we we	at at at	N ST N
7.2 Analog I/O	. if the second	TEX white white white w	the work way	N N N
7.2.1 A/D and D/A- converter	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13	EX MILE WILL W
7.2.2 Analog multiplexer	Wrong addressing	Plausibility check	H.2.18.13	w the write w
8 VOID				N ST SN

Page 65 of 73



 IEC 60335-1

 Clause
 Requirement - Test
 Result - Remark
 Verdict

9 Custom	Any output outside the	Periodic self-test	H.2.16.6	white white	N
chips ^d e.g. ASIC, GAL, gate array	functional	Tet thet with	white white white	WALTER WALTER W	V.TEX N
	specificatio n	white white white	at the trat	NITEX NITEX WAL	er whi

NOTE A Stuck-at fault model denotes a fault model representing an open circuit or a non-varying signal level. A DC fault model denotes a stuck-at fault model incorporating short circuit between signal lines.

^{a)} For fault/error assessment, some components are divided into their sub-functions.

^{b)} For each sub-function in the table, the Table R.2 measure will cover the software fault/error.

^{c)} Where more than one measure is given for a sub-function, these are alternatives.

^{d)} To be divided as necessary by the manufacturer into sub-functions.

^{e)} Table R.1 is applied according to the requirements of R.1 to R.2.2.9 inclusive.

Page 66 of 73



IEC 60335-1

10.1	TABLE: Powe	ABLE: Power input deviation					P
Input devi	ation of/at:	P rated (W)	P measured (W)	dP (W, %)	Required dP (W, %)	Re	emark
230V	White white	38 5	32.6	-14.2%	+20%	LIFE	IT IN

10.2	TABLE: Curr	ent deviation	A At	JEt JE	- INLIER INLI	Not Not
Current de	viation of/at:	I rated (A)	I measured (A)	dl (A, %)	Required dI (A, %)	Remark
	st st	at the	all white white	v 1 v	w2m	

11.8	TABLE: Heating test			Р
in whi			• • • • • • • • • • • • • • • • • • •	220V=206.8V — 240V=254.4V
MALTE	Ambient, t ₁ (°C)		: 23.5,	23.7 —
st	Ambient, t ₂ (°C)	Star Stranger	: 23.8,	
Thermocouple locations:		Max. temperature rise		Max. temperature ris
		Test 1	Test 2	limit, Δ T (K)
Power cord junction point		3.2	7.8	50
Internal wire (hottest)		32.6	47.1	T105-25=80
PCB surface		27.6	35.4	CI.30
Varistor		47.6	52.3	T85-25=60
X2 capa	citor	36.4	45.2	T85-25=60
Primary	winding of transformer	28.4	35.7	Class 105, 65
Seconda	ary winding of transformer	32.6	41.5	Class 105, 65
Relay	set of	37.4	44.5	T85-25=60
Ambient of lamp holder		48.2	56.9	T140-25=115
Plastic enclosure (inside, hottest)		33.5	46.8	CI.30
Plastic enclosure (outside, hottest)		27.7	38.2	75
Switch b	utton	26.5	33.4	60
Test cor	ner	18.5	28.4	65

13.2	TABLE: Leakage current			Р	
IER INL	Heating appliances: 1.15 x rated input (W):	at set - set site		CLIE - NN	
t Jet	Motor-operated and combined appliances: Same as CI.11.8 1.06 x rated voltage (V):		Cl.11.8	Jet aut	
Leakage current between		I (mA)	Max. allow	ed I (mA)	
Live part	Live part and switch button / plastic enclosure		0.35	beak	

Page 67 of 73

IEC 60335-1

13.3	TABLE: Electric strength	- LEK SEK STEK O	PP
Test voltage	e applied between:	Voltage (V)	Breakdown (Yes/No)
Live part and switch button / plastic enclosure		3000	No

14	TABLE: Transi	TABLE: Transient overvoltages					
Clearan	ce between:	CI (mm)	Required Cl (mm)	Rated impulse voltage (V)	Impulse test voltage (V)	Flashover (Yes/No)	
-TIEK	NUTER WAITER WALT	WILL -MILL		L	et . Tet . i	Et STER	

16.2	TABLE: Leakage current			P
*	Single phase appliances: 1.06 x rated voltage (V)	254.4V		
June .	Three phase appliances 1.06 x rated voltage divided by $\sqrt{3}$ (V)	white white	WIND WA	<u>n</u> 1.11
Leakage c	urrent between	I (mA)	Max. allow	ed I (mA)
Live part ar	nd switch button / plastic enclosure	0.029	0.2	5

16.3	TABLE: Electric strength	L A A	et set	P S
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)	
Live part ar	nd switch button / plastic enclosure	3000	No No	m

17 TABLE: Overload protection, tested at 254.4V				
Thermoo	couple locations:	Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)	
Primary	winding of transformer	35.7	Class 105, 150-25=125	
Seconda	ary winding of transformer	38.9	Class 105, 150-25=125	

19.7	D.7 TABLE: abnormal operation, temperature rise measurements					N N
INITEK WIT	Abnormal conditions:	Supplied at rated voltage 240V; Until steady conditions1) Locking moving parts				
Temperature rise dT of part/at:		June		dT (K)	Requ	ired dT (K)
- ~	a at at	THE	NUTE N	in - white white	m. m	
e nite	Winding temperature r	ise measure	ements :	at at at	JEK JIEK	NUTER PALIT
temperat	ure rise dT of winding:	R1 (Ω)	R2 (Ω)	Temperature (°C)	Required (°C)	Insulation class



IEC 60335-1

We we we		s a		INTER INTER	W. W.
 at set set set sites	LITE NI	4nh	mu -m		

19.9	TABLE: Abnormal operation, running overload						N
r. wu	Test voltage (V)	NUTER MALTE WALL WALL		1	1 - M		
et . 5	Ambient, t1 (°C)	1		5	t at the state of		
- nu-	Ambient, t2 (°C)	ster water water water v		m	n <u>-</u> n		
Tempera	ature of winding	R1 (Ω)	R2 (Ω)	dT (K)	- T (°C)	M	ax. T (°C)
-74	a at at	.etfet	MITE MALT	n <u>n</u> n	the state .	24	

19.13 TABLE: Abnormal operation, temperature rises					
Thermocouple locations:	Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)			
Plastic enclosure (inside, hottest	38.4	CI.30			
Test corner	34.2	150			

24.1 T/	ABLE: Components i	nformation	it's of white		Р
Object / part No	o. Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Plug(for EU market)	Zhongshan Guzhen Hongli Cable & Appliance Factory	HL-6	250V~, 2.5A	VDE 0620	VDE
Alternative	Various	Various	250V~, 2.5A	VDE 0620	VDE approved
Power cord(for EU market)	Zhongshan Guzhen Hongli Cable & Appliance Factory	H03VVH2-F	2x0.75mm ²	EN 50525-2-11	VDE
Alternative	Various	H03VVH2-F	2x0.75mm ²	EN 50525-2-11	VDE approved
Alternative	Zhongshan Guzhen Hongli Cable & Appliance Factory	H05RN-F	2x0.75mm ²	EN 50525-2-21	VDE
Alternative	Various	H05RN-F	2x0.75mm ²	EN 50525-2-21	VDE approved
Internal wire	ZHONGSHAN CITY BOYU WIRE CO LTD	1015	20AWG, 600V, 105℃	er ret ret	UL
Alternative	Various	1015	20AWG, 600V, 105℃	- alt ret	UL approved

Page 69 of 73

IEC 60335-1



Mr. Mr.	An an a		At 1th 1th	NHIE MARK	Martin Martin
Ballast	ZhongShan Eagle Electrical Co., Ltd.	- watter wat	Input: 220-240~, 50/60Hz, 0.3A; Output: 43V~; Built- in; ta: 25C; tc: 70°C	IEC/EN 61347-1 IEC/EN 61347-2- 13	CE STATE
Lamp holder	Ningbo Economic & Technical Development Zone Hengda	2G11-F446	500V~, 2A, T140, 2G11	IEC/EN 60400	TUVR
Plastic enclosure	QIMEI	FR500	ABS	IEC/EN 60335-1	Tested with appliance

28.1	TABLE: Thread	led part torque test	WILL WILL WE'P V		
Threaded part identification		Diameter of thread (mm) Column number (I, II, or III)		Applied torque (Nm)	
Screw for fixing enclosure		3.0	St. St. II St.	0.5	

29.1	TABLE: Clearances	SILLIE				L A PA				
nut nu	Overvoltage categor	vervoltage category								
At St	t aller mil	ALL A	Type of in	nsulation:	t it	ret ret				
Rated impul voltage (V		Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark				
330	0,2* / 0,5 / 0,8**	N	, d+ N	JEN JE	N	no Mue V				
500	0,2* / 0,5 / 0,8**	N	N	N	N	N				
800 0	0,2* / 0,5 / 0,8**	N	Net	JEL NJEL	N N N	W N W				
1 500	0,5 / 0,8** / 1,0**	* <u>`</u> N _	N N N	N	Ν	N A				
2 500	1,5 / 2,0***	>2.0	>2.0	N	>2.0	NUL BUL				
4 000	3,0 / 3,5***	S N ^{sr}	- N N	> 3.5	N	P				
6 000	5,5 / 6,0***	N	N N	N N	N N	N 20				
8 000	8,0 / 8,5***	_⇒Ñ	N N	Ν	N-	At Nt S				
10 000	11,0 / 11,5***	N-	N.J.	NUL NUL	NN N	N N				

Supplementary information:

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

29.2	TABLE:	Creepage	Creepage distances, basic, supplementary and reinforced insulation									
Working (V)	/oltage	JEX WAITE	Creepage of (mm Pollution of		MANJEK WALTER WALTE	MINITE						
JEN N	IEK INLIS	1,1	2 M 3	3	Type of insulation	JUER						

Page 70 of 73

IEC 60335-1



we with the	<u> </u>	<u>11 </u>	<i>b</i> , .	1200	0000-1	Jet	with a		INL'ER	- Martin	MILI
at the s	*	M	aterial g	roup 🔊	Material group				A	A	<u>A</u> t
inter when when	-m		Ш	IIIa/IIIb	* 1 .	× ۱۱ ر	IIIa/IIIb*)	B** ⁾	S**)	R**)	Verdic
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9		L —		Ň
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	MALIN	m		۶ Z
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8			-	N
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		Nr.	m	N
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		TEX		Z
125	0,56	_1,5	2,1	3,0	3,8	4,2	4,8		_	NI.	Ν
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	> 2.5			ŇĚ
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	-1,	> 2.5		Р
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0	IN THE		> 5.0	P _N
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3			—	ς Ν ,
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	5 <u>~</u>	INLIT	1there	Ň
400	2,0	4,0	5,6	8,0 🗸	10,0	11,2	12,6	~		At	N
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	ne.	~_~	<u>111</u>	JN N
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		*	1th	Ň
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	m	-m	-1	Ν
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	TEK		+	N
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	_	In.	-20.	N
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0		LITER -	INLIE	N
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	1			N
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		E. N	1 <u>1</u>	N'N
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0			A	N
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	A. C.	The		× N4
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0				<u>الم</u>
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	<u>. </u>	Mr.	m	N
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	÷	1 st		N
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0			<u>n —</u>	N
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0		*	TEK	Ń
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	m	-14		N
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0				N
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0				Ν
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	THE .	NUT	Ner Charles	Ň
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	_			N

Page 71 of 73



- JEK JIEK W	LIER	NUTE	NALI	IEC 60	0335-1	S ^{ar} d		.et	, et	<u></u>	x JE
m. m. n.				4		JE.	LIL NO		n'	MA	Ju.
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0		Ŧ	at	N
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	-nin	''l	×	SUL N
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		F.	<u>_</u>	<u></u> N
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	water	-m	12	N ~~"
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	.et			رد N
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		m	-m	N
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	<u>للم</u>	J.C.	NUTE	N
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	-11	—		N
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0				N N
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	-201	_	.L	Ν
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	NUTE	- NT-LI		New Street
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0				<u> </u>
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	۲ <u>–</u> ۲	11 <u>17</u>	with	Ň
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	*	4	, The	N
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	-11	1	<u> </u>	N
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0		*	TEX	Ń
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	m	- zu.		Ν
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		LIFE		N
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0		10		Ν
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	(EX	J.L.	NITE	N
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		.st-		N
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	- NI	-n ¹	LL .	on N ≺

Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V
 **) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation

29.2	TABLE	: Creep	age dis	tances	P				
	y voltage √)		EX MAL		eepage di (mm) Pollution de		TEK W	LITER WALT	white white white
w m	et allet allet			2	et Jie	INLIE	3	WALT	white white white
IEX NITE			Ma	Material group		Material group			THE JEEK STEEK OF
201		*	1	<u>I</u>	IIIa/IIIb	N'IE	Nr ÎÎ	IIIa/IIIb*)	Verdict / Remark
NITEE ≤	10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	TEK STEK NATER MAT
5	0	0,16	0,56	0,8	1,0	1,4	1,6	1,8	N
12	25	0,25	0,71	1,0	1,4	_ 1,8	2,0	2,2	NIE NIE

Page 72 of 73

LIFEK NITEK NO	LIE.	MIT .	NNL.	M IEC 6	0335-1	<u></u>		et et stet s
250	0,42	<u>(1,0</u>	1,4	2,0	2,5	2,8	3,2	Р
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	MULTUNN WAL
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N- A-
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	white white white
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	A AN AN
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	it was Nave a
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	at sat North an
>1600 and ≤2000	5,6	8,0	11,0	(16,0	20,0	22,0	25,0	N
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	- 32,0	TEK NEL MITE
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	NUTER MUT N WIT
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	The watch Nation
>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	we she we
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	NF St

 $^{\rm *)}$ Material group IIIb is allowed if the working voltage does not exceed 50 V

30.1	TABLE: Bal	pressure	John John Paulo			
Part		Test temperature (°C)	Impression diameter (mm)	Allowed impressior diameter (mm)		
PCB material		125	۲.0 ² ا.0 ²	2.0 %		
Plastic end	closure	87	1.1	2.0		
Transform	er bobbin	125	1.3	2.0		

30.2	TABLE: Glov	TABLE: Glow-wire test							
Part	NUTE WALTE W	550	65	50	7	50	850	Needle-	verdict
all with anyther and		ex white	te(S)	ti(S)	te(S)	ti(s)		flame test (NFT)	NUTEK
Plastic end	closure	x	ALC IN	NUTE N	in - m	-11-	- Mar	20	Р
PCB mate	rial M	mr <u>-</u>	· · · ·		. 0	+ 0,d+	x	x	NITE P IN
Transform	er bobbin		LITEN	Je - MU	.0~~	~0	X	w	Р
Relay	white white a	1 - n		L 2	0,0+	0	X	ITE- N	P
Lamp hold	er de	(#*)	E JALIE	1 th	<u></u>	2 0 V	x		Р
X2 capacit	or m m		0	0		Set .	5 ⁶⁸	Er JULIE	P
Page 73 of 73

IEC 60335-1

Remark: Ti = the time between glow wire touched the material and the material ignite Te = the time between glow wire touched the material and the flame extinguished;

===== End of Report ======

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Page 1 of 4

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IEC 60335-1 - Attachment 1

Clause Requirement + Test

Result - Remark

Verdict

ATTACHMENT TO TEST REPORT IEC 60335-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Differences according to

EN 60335-1:2012+A11:2014+A13:2017 EN 62233:2008

	Group/CENELEC Common Differences to IEC 6	0335-1:2010 (5 th Edition)
6.1	Delete "class 0" and "class 01"	NITE MIT WALL SN
7.10	Add:	N ⁺
IN W	Devices used to start/stop operational functions of the appliance, if any, shall be distinguished from other manual devices by means of shape, or size, or surface texture, or position, etc.	ntie white white white an P
* .4	A tactile feedback or	t at at at P S
m	An audible and visual feedback	unit while whe whe P
WALTER W	NOTE Z1 The sound of the motor or sound of an actuator switching ON/OFF is regarded as audible feedback. The stopping of the typical function (e.g.stopping of the vibration on the body of the appliance or of a part of it) is regarded as tactile means.	ATEX WAITEX WAITEX WAITEX
IE WALT	NOTE Z2 Devices used to start/stop operational functions mean devices that are operated by the user to start/stop the intended function of the appliance.	at white white white we are purchased
JEX	A selector switch with an off-position clearly identifiable is allowed.	where where the state
LIEX WAY	An ON/OFF switch, if any, is considered a suitable device to stop operational functions. A plug is not considered a suitable device to stop operational functions, as it can be difficult to be reached by vulnerable persons.	When the south of
7.12	The instructions shall include the substance of the following:	white white when where Photo
whitek w hitek w fet whi t red	This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.	whitek whitek whitek whitek whitek

Page 2 of 4



	IEC 60335-1 – Attachme	nt 1	
Clause	Requirement + Test	Result - Remark	Verdict
7.12.Z1	The specific instructions related to the safe operation of this appliance (as given in 7.12 of this standard) shall be collated together in the front section of the user instructions. The height of the characters, measured on the capital letters, shall be at least 3mm	WALTER WALTER WALTER	SUPE SUP
-MI-	These instructions shall also be available in an alternative format, e.g. on a website	white white white	P
7.14	Added:	* NITER INTER WALTE	JULY JP
INLIEK .NO	For the evaluation of legibility and clarity of safety warnings guidance can be found in IEC 62079	Tet with with	INTER PAR
8.1.1	Replace the 3 rd paragraph by the following:	in m	Р
t whit	Test probe B and probe 18 of EN 61032 are applied with a force not exceeding 1N,the appliance being in every possible position	and watter watter wa	et et s
8.2	Replace "test probe B of EN 61032" by "test probe of EN 61032"	white white white	P
water of	Replace "test probe B of EN 61032" by "test probe B and probe 18 of EN 61032 are"	INTER WATE WATE	unti viP
11.8	Delete the sentence "The temperature rise of the " of the first paragraph.	LIEX WALTER WALTER D	NUT ON P
15.1.2	Appliances with an automatic cord reel are tested with the cord in the most unfavourable position in such a way that the reeling of the wet cord may affect electrical insulation during operation. The cord shall not be dried before reeling	tet watter watter wat	Tet of the source
20	Replace Note 1 by the following requirement:	What has a set	Not
Liet whit	For appliances having dangerous movable parts, due to their main function, e.g. the needle of a sewing machine, tools of kitchen machines of the blade of an electrical knife, full protection is not possible for performing their intended use.	net and the source of	White white
20.2	Replaced the 1 st paragraph of compliance by:	at the the state	er nur Nnu
	-a test probe that is similar to test probe B of EN 61032 but having a circular stop face with a diameter of 50 mm, instead of the non-circular face, applied with a force of 5N with the accessories and detachable cover removed and	whitek whitek whitek	white white
	- test probe 18 of EN 61032, applied with a force of 2.5N on the appliance in a fully assembled situation.	ALTER WALTER WALTER	unit suntry

Page 3 of 4



- 1 ¹¹	IEC 60335-1 – Attachme	nt 1	
Clause	Requirement + Test	Result - Remark	Verdic
24.1 W	Plugs and socket-outlets and other connecting devices of interconnection cords shall not be interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 6906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1, if direct supply to these parts from the supply mains could give rise to a hazard	WINTER WITER WITTER	WALL WP
24.1.3	Add NOTE Z1 For this test a thermostat or timer that is operating the relay or contactor is considered to be a switch	WALTER WALTER WALTER	N N
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003.	MUTER WALTER WALTER	une un N
24.Z1	For motor running capacitors (IEC 60252-1 type P2) with a metallic enclosure having an overpressure fuse the flame testing of internal plastic parts supporting current carrying connections as required in 30.2.2 and 30.2.3.1 is not necessary.	whitek whitek white	at white white
25.6	Add Supply cords of single-phase portable appliances having a rated current not exceeding 16A shall be fitted with a plug complying with the following standard sheets of IEC/TR60083	TEX WALTEX WALTEX WAL	NUTER MALE
26	Add after the second sentence in the first paragraph:	t stret wiret wire	
Millet W	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position unless they are held in place near the terminals independently of the solder.	AND A STAR WALTER	antife Pr
29	Modification: Replace NOTE 5 by: Attention is drawn on the fact that for appliances intended for use at altitudes exceeding 2000 m, the altitude correction factors, relevant to the intended altitude, for clearances specified in Table A.2 of EN 60664-1:2007 may need to be taken into account.	et whitet whitet white	et white white
29.3.Z1	Appliance shall be constructed so that if there is a possibility of damaging the insulation during installation, the insulation shall withstand the scratch and penetration test of 21.2.	ALTER WALTER WALTER WA	TEK NITEK N
Annex ZB	Deleted 7.1 and 29.3	i at at a	t et N
Annex ZF	Table ZF.1 add EN 60335-2-97, drives for rolling shutters, awnings, blinds and similar equipment	white white white	N
Annex ZG	Add the following:	THE JE ATE	P

Page 4 of 4



IEC 60335-1 – Attachment 1

Clause	Requirement + Test	Result - Remark	Verdict
1. Art	the the stre with which we are	the second second	it it
7.12.ZG	The instructions for appliances incorporating UVC emitters shall include the substance of the following:	white white white whi	F ST
et set	WARNING-This appliance contains a UV emitter. Do not stare at the light source.	white white white white	Р
32	Add the following:	LEE MITER WAITE WALL	M PN
whitek w	For appliances incorporating UV emitters the manufacturer's shall deliver a declaration providing evidence that the plastic material exposed to the radiation is UV resistant	yuntifet whitet whitet w	STAR P. 16
ne vn sek str	NOTE Examples of appliances that may incorporate UVC emitters are range hoods, air cleaners and finger nail hardeners	white white white white	SVP P

	EN 60335-1: 2012/A11: 2014	
7	MARKING AND INSTRUCTIONS (EN 60335-1/A11)	Р
7.1	(Replacement:) In NOTE Z1, replace "IEC 82079-1" by "EN 82079- 1".	UN N
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD(EN 60335-1/A11)	on N a
WALTER	(Replacement:) In Table ZF.1 – List of standards under CLC/TC 61, replace line of EN 60335-2-38	St N

	EN 60335-1:2012/A13:2017	
Annex ZC	Normative references to international publications with their corresponding European publications	Р
Annex ZZA	Relationship between this European Standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered	P
Annex ZZB	Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered	N

ANNEX	EMF of the set of the	Р
ITE NAL	The test product also complies with the requirements of EN62233:2008	
1	Limit100% Measured Max: 23.487%	Р

===== End of Attachment 1 ======

Page 1 of 32



EN 60598-2-4 -- Attachment 2

	Clause	Requirement + Test	Result - Remark	Verdict
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4.4 (0)	GENERAL TEST REQUIREMENTS	* stift stift white water	n P .
4.4 (0.3)	More sections applicable	Yes 🗌 No 🖾	1. st
4.4 (0.5)	Components	(see Annex 1)	~_n
4.4 (0.7)	Information for luminaire design in light sources standards		(# -
4.4 (0.7.2)	Light source safety standard	EN 61199	- m
WALTER WAY	Luminaire design in the light source safety standard	et wiret miret waitet	PIER

4.5 (2)	CLASSIFICATION		it water	w P ⊲
4.5 (2.2)	Type of protection	Class II	t it	
4.5 (2.3)	Degree of protection	IP20	we we	
4.5 (2.5)	Luminaire for normal use	Yes 🛛 No		
m. n	Luminaire for rough service	Yes 🗌 No		-20-
4.5.1 (-)	Ordinary luminaire	Yes 🛛 No		INTER OF
4.5.2 (-)	Portable luminaire for outdoor use	Yes 🗌 No	\square	7
LIFER MITE	Classified IPX4 or higher	let let is	et stret	N ^N
4.5.3 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes 🛛 No		TEK JU

4.6 (3)	MARKING		P P
4.6 (3.2)	Mandatory markings	See copy of marking plate	P
JEK STE	Position of the marking	the set of	Р
	Format of symbols/text	is an and	Р
4.6 (3.3)	Additional information	the set of the state	J ^E P
1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	Language of instructions	In English	Р
4.6 (3.3.1)	Combination luminaires	at all the allet with	N
4.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	Р
4.6 (3.3.3)	Operating temperature	let ret iter with	N
4.6 (3.3.4)	Symbol or warning notice	the me me me	N
4.6 (3.3.5)	Wiring diagram	et tet stet stret with	N ¹ N
4.6 (3.3.6)	Special conditions	Ma Mr. M.	N
4.6 (3.3.7)	Metal halide lamp luminaire – warning	Tex ifet wifet white it	N.
4.6 (3.3.8)	Limitation for semi-luminaires	m m m	N
4.6 (3.3.9)	Power factor and supply current	THE STER STER WITE WITE WITE	N
4.6 (3.3.10)	Suitability for use indoors	In The The State of	N
4.6 (3.3.11)	Luminaires with remote control	tet itet itet with white	N ^P P

Page 2 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
4.6 (3.3.12)	Clip-mounted luminaire – warning	uter sufer miner spirit	MN N
4.6 (3.3.13)	Specifications of protective shields		N
4.6 (3.3.14)	Symbol for nature of supply	the other optical and	1 P 1
4.6 (3.3.15)	Rated current of socket outlet	the state	N
4.6 (3.3.16)	Rough service luminaire	a mite white white a	N
4.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Туре Ү	FF- Pres
4.6 (3.3.18)	Non-ordinary luminaires with PVC cable	Mr. M.	L NL
4.6 (3.3.19)	Protective conductor current in instruction if applicable	thet white white white	N N
4.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach	et whitet whitet whitet	W LIEN W
4.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided	wifet milet whitet w	US AL NUT
at a	Cautionary symbol	w w st	Not
4.6 (3.3.22)	Controllable luminaires, insulation	WITER WAITE WAITE WAIT	- NN
4.6 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component	TEX WALTER WALTER WALTER	VINITIN N
4.6 (3.3.24)	If not supplied with terminal block, information on the packaging	* wifet watter waiter	IN SEE N IS
4.6 (3.4)	Test with water	a stat	P.A
me me	Test with hexane	INTER WALT WALL WA	νP
Alt Al	Legible after test		+ P
IL. MIL	Label attached	ALL WALL WALL	N P
4.6.1 (-)	Luminaire not suitable for outdoor application	at the set of	_≪N
- NIL -	Required symbol	See copy of user manual	N N
t titet a	Information in the instructions	- at at at	N
4.6.2 (-)	Outdoor use, socket outlet incorporated in the luminaire	white white white w	N
When when	Maximum power rating marked	MUTER MUTE MALL WAL	- NN
it it	Position of the marking		- N-

4.7 (4)	CONSTRUCTION	<u>к</u> Р. (
4.7 (4.2)	Components replaceable without difficulty	P
4.7 (4.3)	Wireways smooth and free from sharp edges	P
4.7 (4.4)	Lampholders	́Р
4.7 (4.4.1)	Integral lampholder	P
4.7 (4.4.2)	Wiring connection	<i>∕</i> ₩ P ``

Page 3 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
		the state	
4.7 (4.4.3)	Lampholder for end-to-end mounting	white white white	JUL JUL B
4.7 (4.4.4)	Positioning	t. it it	P
- WI-	- pressure test (N)	. 30N	<u> </u>
ANNLIEK W	After test the lampholder comply with relevant standard sheets and show no damage	t ret stret mit	et p
WALTER WALT	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation	where we ret watter	JUNLIE JUNLIE
Let Set	- bending test (N)		At At
nt when	After test the lampholder have not moved from its position and show no permanent deformation	the watt watt	N
4.7 (4.4.5)	Peak pulse voltage	Et JIER NUTER IN	Nov Nov
4.7 (4.4.6)	Centre contact	101 00 00	
4.7 (4.4.7)	Parts in rough service luminaires resistant to tracking	white white white	N.
4.7 (4.4.8)	Lamp connectors	all the till	P
4.7 (4.4.9)	Caps and bases correctly used	ne me m	N
4.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way	LIEK WALTER WALTER W	N N
4.7 (4.5)	Starter holders	it at at a	N.
No 1	Starter holder in luminaires other than class II	white white white	Ň
JIE N	Starter holder class II construction	at at at	N.
4.7 (4.6)	Terminal blocks	WALS WAL WAL	N
JITEN NTE	Tails	the set state	N.
	Unsecured blocks	ALL A WIN A	N
4.7 (4.7)	Terminals and supply connections	at a state of	JE JEP
4.7 (4.7.1)	Contact to metal parts	me me m	Р
4.7 (4.7.2)	Test 8 mm live conductor	t tet the state	N ¹
	Test 8 mm earth conductor	m m m	N
4.7 (4.7.3)	Terminals for supply conductors	THE LIFE NUTER	N
4.7 (4.7.3.1)	Welded connections:	me m m	N
LITE WALT	- stranded or solid conductor	TEX STER MITER A	N ^{LT} N
st st	- spot welding	241 24	N
WALL N	- welding between wires	ex niter inite uni	N/C
	- Type Z attachment	241 22 2	L N
mur mu	- mechanical test according to 15.8.2	NUTER INLIE WALTE	N. N
At A	- electrical test according to 15.9	St at at	N/
unt whit	- heat test according to 15.9.2.3 and 15.9.2.4	THE STREE STILL	N N N

Page 4 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.7.4)	Terminals other than supply connection	LIEK NITES UNITES	MARCH STR
4.7 (4.7.5)	Heat-resistant wiring/sleeves		N
4.7 (4.7.6)	Multi-pole plug	JER NITER WITCH W	N N N
* At	- test at 30 N		<u>د ک</u>
4.7 (4.8)	Switches:	et intre intra nutition	N P
it i	- adequate rating	and at at	- P.
mur mur	- adequate fixing	INTE WALLS WALLS	JAN JAP
Let 5th	- polarized supply	i it it	N
at whit	- compliance with IEC 61058-1 for electronic switches	UNITE WALL WALL W	Р
4.7 (4.9)	Insulating lining and sleeves	TEX SLIFER WITE WIT	Nol Nol
4.7 (4.9.1)	Retainment		L N
me m	Method of fixing	- ALTER WALTE WALTE	mer the
4.7 (4.9.2)	Insulated linings and sleeves	the state	Not
white white	Resistant to a temperature > 20 °C to the wire temperature or	untre write write.	M MN
LIE WALK	a) & c) Insulation resistance and electric strength	TEX STER WITE OF	IT JULIN S
t it	b) Ageing test. Temperature (°C)		, N
4.7 (4.10)	Double or reinforced insulation	let aller aller white	N RV
4.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation	t at at at	NIT P
	Safe installation fixed luminaires	Mr. M. M.	N
NHTE WAT	Capacitors and switches	1 IF ALTER	N ^{II} N ^P
TEK NITEK	Interference suppression capacitors according to IEC 60384-14	t ju ret	TEL P
4.7 (4.10.2)	Assembly gaps:	in the star the	N
A INTER I	- not coincidental	at at at the	N.C
24. 2.	- no straight access with test probe	white white white	N
4.7 (4.10.3)	Retainment of insulation:	tet tet tet	P
24	- fixed	mur mur m	Р
LIE MITE	- unable to be replaced; luminaire inoperative	set set ster ster	JIE NIP
4	- sleeves retained in position	le me m m	Р
E. MALTE	- lining in lampholder	et stet stret wit	N.N.
4.7 (4.10.4)	Protective impedance device	M. M. M.	N
white wh	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor	Whitek whitek white	N N
NAL MAL	Y1 or Y2 capacitors comply with IEC 60384-14	THE NUTE NUTE	JAN N



Verdict

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Reference N	o.: WTZ20F04017940J Page 5 of 32		
t set	EN 60598-2-4 Attachmer	nt 2	Ś
Clause	Requirement + Test	Result - Remark	
Mr. M.	Resistors comply with test (a) in 14.1 of IEC 60065	Intit would woll whe	1
4.7 (4.11)	Electrical connections and current-carrying parts	THE THE STREET MUTER A	
4.7 (4.11.1)	Contact pressure	m m m	
4.7 (4.11.2)	Screws:	et stet stret miller and	
	- self-tapping screws	Mr. m. r.	
white white	- thread-cutting screws	THE STEEL WITE WATE	
4.7 (4.11.3)	Screw locking:	Mr. M. W. St.	
Inthe Math	- spring washer	TEX ALTER WITE WAITE	
it it	- rivets	the second second	
4.7 (4.11.4)	Material of current-carrying parts	et still with while w	2
4.7 (4.11.5)	No contact to wood or mounting surface		2
4.7 (4.11.6)	Electro-mechanical contact systems	ALTER ALTER MALE MALE	
4.7 (4.12)	Screws and connections (mechanical) and glands	Self and and and and	
4.7 (4.12.1)	Screws not made of soft metal	alifet white while white	
at at	Screws of insulating material		
in which	Torque test: torque (Nm); part	. Screws used for fixing bottom cover: 1.2Nm	55
NUTL 2	Torque test: torque (Nm); part	. Screws used for fixing PCB: 0.8Nm	
4.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal	the set set set all	
4.7 (4.12.4)	Locked connections:	MUT MUT MU M	
ALTER INTE	- fixed arms; torque (Nm)	The suffic	
	- lampholder; torque (Nm)	We with the second seco	
LIE INLIE	- push-button switches; torque 0,8 Nm	TEK STER	1
4.7 (4.12.5)	Screwed glands; force (Nm)		
4.7 (4.13)	Mechanical strength	et ret stret stret with	
4.7 (4.13.1)	Impact tests:	we we we	
Intre MAL	- fragile parts; energy (Nm)	- JEK JEK MIE MIE	
A A	- other parts; energy (Nm)	. All enclosure: 0.5 Nm	
NUT WALT	1) live parts	SER ALTER MUTER MALES	5
at at	2) linings		
NALLY	3) protection	et stret white white w	P
t at	4) covers	The second second	
4.7 (4.13.3)	Straight test finger	All enclosure: 30 N	F
4.7 (4.13.4)	Rough service luminaires	so the state	
NULT NULT	- IP54 or higher	NUTER INTER WALTER WALTE	
			1

Page 6 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
UNLIEK WALTE	a) fixed	+ ITEK ALTEK MITTEK	UNITE ON N
t it	b) hand-held	- the state of the	N
LIE WILL	c) delivered with a stand	TEL NITER INTEL W	N N N
at antitet w	d) for temporary installations and suitable for mounting on a stand	and they shall not	
4.7 (4.13.6)	Tumbling barrel	in the the to	N
4.7 (4.14)	Suspensions, fixings and means of adjusting	et the street outer	N. N
4.7 (4.14.1)	Mechanical load:	m m m	N
NUT WALT	A) four times the weight	JER STER OTEN	N ^{LIN} N ^L N
st at	B) torque 2,5 Nm	1 10 10	N
it which is	C) bracket arm; bending moment (Nm)	4 ALTER MITE MI	Not Not
t st	D) load track-mounted luminaires		L N
we we	E) clip-mounted luminaires, glass-shelve. Thickness (mm)	white white white	N N
White white	Metal rod. diameter (mm)	- TEK JIEK NITE	N
TEK NITEK	Fixed luminaire or independent control gear without fixing devices	in sur sur	I N
4.7 (4.14.2)	Load to flexible cables	the water water wi	N
Et NUTER	Mass (kg)		Et NIFE -N
20. 1	Stress in conductors (N/mm ²)	- m m m	Ň
MITENNI	Mass (kg) of semi-luminaire		NITE NT
	Bending moment (Nm) of semi-luminaire		N
4.7 (4.14.3)	Adjusting devices:	THE STREET	NIN N
st at	- flexing test; number of cycles	····· ···· ··· · · · · · · · · · · · ·	N
TE WALTE	- strands broken		LE N N
L	- electric strength test afterwards	n m n n	N
4.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors	ITE MAINER MAITER MAIN	N. N.
4.7 (4.14.5)	Guide pulleys	t at all set	N
4.7 (4.14.6)	Strain on socket-outlets	white white white	N
4.7 (4.15)	Flammable materials:	tet set stet	JIE NIP
1	- glow-wire test 650°C		N
E. MALTE	- spacing ≥30 mm	THE THE STAR OF	Nor Nor
A	- screen withstanding test of 13.3.1	un mu m	Ν
WALTE WA	- screen dimensions	EN LIEN LIEN NITE	N ^{LI} N ^{LI}
A 1	- no fiercely burning material	THE WE WE	N
mill mill	- thermal protection	t let set se	N'N N

Page 7 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
UNLIEK WALT	- electronic circuits exempted	THE STEEL NUTER WITCH	N N
4.7 (4.15.2)	Luminaires made of thermoplastic material with la	mp control gear	Р
LIE WALT	a) construction	THE NUTER INTER WATER I	P
* #	b) temperature sensing control	L At	.⊲+ N .
write w	c) surface temperature	A MITER MUTER WAITE WA	P
4.7 (4.16)	Luminaires for mounting on normally flammable su	urfaces	P
mer m	No lamp control gear	. (compliance with Section 12)	- NN
4.7 (4.16.1)	Lamp control gear spacing:	is at at at	Р
UT MUT	- spacing 35 mm	NITE MALLE MALL MAL	N
et set	- spacing 10 mm	1 A A A	Р
4.7 (4.16.2)	Thermal protection:	TE WALT WALT WAT W	N
t jet	- in lamp control gear	at let let 3	N S
m. m.	- external	white white white white	N
JIEK MIT	- fixed position	at all set set	N
m m	- temperature marked lamp control gear	inter when when we	N
4.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	ŃŇ
4.7 (4.17)	Drain holes	the white white white	N
et aller	Clearance at least 5 mm	at all all all all a	N
4.7 (4.18)	Resistance to corrosion:	MUS ME MUS MU	Р
4.7 (4.18.1)	- rust-resistance	tet itet itet aut	N
4.7 (4.18.2)	- season cracking in copper	Mrs. Mrs. Mrs. Mrs.	Р
4.7 (4.18.3)	- corrosion of aluminium	TE ALTER MITE	N N
4.7 (4.19)	Igniters compatible with ballast	201 201 20	N
4.7 (4.20)	Rough service vibration	at a ret muter of	N N
4.7 (4.21)	Protective shield	- Mr. Mr. C.	N
4.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps	watter watter watter wat	N
NITER	Shield of glass if tungsten halogen lamps	let tet the ster stre	N
4.7 (4.21.2)	Particles from a shattering lamp not impair safety	mr. m. m. m.	N
4.7 (4.21.3)	No direct path	set set siet after	N V.
4.7 (4.21.4)	Impact test on shield	- when when we	N
E. MALTE	Glow-wire test on lamp compartment	. See Test Table 4.15 (13.3.2)	N
4.7 (4.22)	Attachments to lamps not cause overheating or damage	when we we we are	N
4.7 (4.23)	Semi-luminaires comply Class II	white white white white	N
4.7 (4.24)	Photobiological hazards	a to the state	Р



Verdict

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Reference N	o.: WTZ20F04017940J Page 8 of 32	ite applies while whe wh
t set	EN 60598-2-4 Attachmen	t 2 💦 🕹
Clause	Requirement + Test	Result - Remark
<u> </u>	at writer write white white white	the state of the
4.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)	INTE WATE WATE WATE
4.7 (4.24.2)	Retinal blue light hazard	ret tret stret with a
et stret	Class of risk group assessed according to IEC/TR 62778	- when we we are
n n	Luminaires with Ethr:	white white where whe
NITER IN	a) Fixed luminaires	let tet stet ste
m. n.	- distance x m, borderline between RG1 and RG2	mer me me m
NUTER INLIE	- marking and instruction according 3.2.23	ret ret ret niet niet
	b) Portable and handheld luminaires	it's white white white
JER WALTER.	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778	et white white white ou
whitek w	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2- 12 not exceed RG1 at 200 mm according to IEC/62778	whitet whitet whitet whit
4.7 (4.25)	Mechanical hazard	INTER WATE WATE WATE
JEK JEK	No sharp point or edges	at at at at
4.7 (4.26)	Short-circuit protection:	the working when when y
4.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts	* milet whitet whitet wh
4.7 (4.26.2)	Short-circuit test with test chain according 4.26.3	
mur mu	Test chain not melt through	untite watthe water water
UNLIEK WATE	Test sample not exceed values of Table 12.1 and 12.2	and the second second
4.7 (4.27)	Terminal blocks with integrated screwless earthing	contacts
LT WAL	Test according Annex V	THE WALTE W
t it	Pull test of terminal fixing (20 N)	w t t
	Attentent registeres : 0.05 0	

white a	After test, resistance < 0,05 Ω	m	
let .	Pull test of mechanical connection (50 N)	, et	
when wh	After test, resistance < 0,05 Ω		
JEt JE	Voltage drop test, resistance < 0,05 Ω	.et	
4.7 (4.28)	Fixing of thermal sensing control		J
It stat	Not plug-in or easily replaceable type	-	
211.	Reliably kept in position	-m	
WALTER W	No adhesive fixing if UV radiations from a lamp can degrade the fixing	NNLTE	2.2
Alt is	Not outside the luminaire enclosure	,et	
WUT WUT	Test of adhesive fixing:	¥ .	k

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Page 9 of 32



Clause	Requirement + Test	Result - Remark	Verdict
NUT MUT	Max tanna actual an adharing matarial (20)	the set set as	et set
<u>11. 26.</u>	Max. temperature on adhesive material (°C)	10 Junt Mr Mr	
tet ster	100 cycles between t min and t max	at at at at	N
24	Temperature sensing control still in position	it whit whit whit	3 N 3
4.7 (4.29)	Luminaires with non-replaceable light source	t at at	N
<u>-111- 11</u>	Not possible to replace light source	white white white a	N.
MALTER MAL	Live part not accessible after parts have been opened by hand or tools	wifet attet united an	STE N C
4.7 (4.30)	Luminaires with non-user replaceable light source	Mr. W. A.	_ N_
nti wnt	If protective cover provide protection against electri "caution, electric shock risk" symbol:	c shock and marked with	N N
IER INLIE	Minimum two fixing means	et set set ster ster	N
4.7 (4.31)	Insulation between circuits	all all all	Р
white w	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	WAITER WALLER WALTER W	Star Bri
WALTER WALT	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3	INTER MAILER WAITER WAI	N
4.7 (4.31.1)	SELV circuits	it wat was way	N
et the	Used SELV source	s at at at	N
In a	Voltage ≤ ELV	MULT MULT MILL	N
JIEF N	Insulating of SELV circuits from LV supply	at all all	N.
we w	Insulating of SELV circuits from other non SELV circuits	which which we want the	N
he m	Insulating of SELV circuits from FELV	NL JIE WALT WAIT	N N
TEX WALTER	Insulating of SELV circuits from other SELV circuits	the states white	N LICN N
* INLIEX N	SELV circuits insulated from accessible parts according Table X.1	+ ret set site	N OF N
JEK N	Plugs not able to enter socket-outlets of other voltage systems	when when the set	N
when the	Socket outlets does not admit plugs of other voltage systems	white white white white	N L
it whit	Plugs and socket-outlets does not have protective conductor contact	LIE WALL WALL WAL	N N
4.7 (4.31.2)	FELV circuits	et the atter white	NN Th
A	Used FELV source	Mr. Mr. M.	N
MALITE WA	Voltage ≤ ELV	TEX STER STER	N N
	Insulating of FELV circuits from LV supply	Mr. mr. m. Co.	N

Page 10 of 32



Clause	Requirement + Test	Result - Remark	Verdic
NUTER INTE	FELV circuits insulated from accessible parts	let set out of	<u>**</u>
	according Table X.1	inter with sure with	
LIE WALTE	Plugs not able to enter socket-outlets of other voltage systems	Tet white white vulter	N N
et white w	Socket outlets does not admit plugs of other voltage systems	A MITER WAITER WAITER W	N CER N
NALTEX MAL	Socket-outlets does not have protective conductor contact	Tet allet wiret wi	
4.7 (4.31.3)	Other circuits	m. m. m.	P
NUTE WALT	Other circuits insulated from accessible parts according Table X.1	LIFE WALTER WALTER WALTE	P
JEK WALTER	Class II construction with equipotential bonding for contacts with live parts:	r protection against indirect	NI LIEN
t set	- conductive parts are connected together	at at at	× N
m. m	- test according 7.2.3	white white white wh	Ň
WALTER WALT	- conductive part not cause an electric shock in case of an insulation fault	aufet miret maret main	er Nel
LTEX MUTEX	- equipotential bonding in master/slave applications	ret stat stat stat	N
et stet	- master luminaire provided with terminal for accessible conductive parts of slave luminaires	t at at the	N
-2112	- slave luminaire constructed as class I	" MALL MAL MAL &	N
4.7 (4.32)	Overvoltage protective devices	at let let	N
In m	Comply with IEC 61643-11	white white white white	N
LIEK NE	Fixed luminaires connected to a protective earth	TEX JEEK JIE	N
	External to controlgear and connected to earth:	White a Mile and	N
TER INTER	- only in fixed luminaires	A TEX STREET	N N
	- only connected to protective earth	Jule In In	N
4.7.1 (-)	Insulation not damaged when placing on support	at the tree other	P
4.7.2 (-)	Wiring fixed, to avoid rubbing	me me me	Р
4.7.3 (-)	Luminaire not overturn at angle 6°	THE THE WITH OUT ON	P
4.7.4 (-)	Candlestick luminaires with E5 or E10 lampholders provided with a switch	at the tet the	N
et su	Switch part of the luminaire or within 300 mm of the luminaire if with cord	it what what whe	N
4.7.5 (-)	Voltage not exceed 25 V for E5 lampholders	Et INITE MALL WALL	M NM
WALTER WA	Voltage not exceed 60 or 250 V for E10 lampholders	and and a state and the	LISK N
1 J. J	Maximum rated wattage not exceed 100 W	The second second	N

Page 11 of 32

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EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
4.7.6 (-)	Portable luminaires for outdoor use tails not provided	MITER WAITER WAITER W	N N
4.7.7 (-)	Portable luminaires for outdoor use, cable entries	alt all all all a	N N
4.7.8 (-)	Portable luminaires for outdoor use, socket-outlet degree of protection at least same as the luminaire but not less than IPX4.	A MITER MAILER MALTER	WN IEL N
UNLITEX MI	Degree of protection maintained with or without a plug inserted into the socket-outlet.	Tet tret with	INLIE - N.E
NITEK WALT	Class II luminaires, mains socket-outlets comply with the standard and only allow connection to Class II luminaires	LIEX WITH MUTER W	LIEK WILLER
FEK WALTER	Class I luminaires, mains socket-outlets comply with the standard and only allow connection to Class I or Class II luminaires	Et whitet whitet white	at out of out
4.7.9 (-)	Portable luminaires for outdoor use, lampholders and plugs are of material resistant to tracking	INTER WALTER WALTER	white Net
let .	Compliance to clause 13.4	i it at	NO NO

4.8 (11)	CREEPAGE DISTANCES AND CLEARANCES	1 A A At	Р
4.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II 🛛 Category III 🗌	- 1
IFK JIFK	Category III according Annex U	+ at at set	N
WIT V	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1	white white white white	N
4.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 4.7 (11.2) I	sР
At A	Creepage distances for frequency over 30 kHz:	No and the state	N
in wit	- Controlgear marked with \hat{U}_{out} and f_{Uout} according IEC 61347-1, clause 7.1, item w	See Test Table 4.7 (11.2) II	N
IT WALT	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 4.7 (11.2) II	N
4.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 4.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:	MUL ML ML M	N
INTER INT	- Controlgear marked with UP	See Test Table 4.7 (11.2) II	N
THE THE	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 4.7 (11.2) II	N

4.9 (7)	PROVISION FOR EARTHING	J ^{EE} N
4.9 (7.2.1 + 7.2.3)	Accessible metal parts	Ň
me n	Metal parts in contact with supporting surface	⇒Ñ
Alt S	Resistance < 0,5 Ω	N
me m	Self-tapping screws used	~ N

Page 12 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
to the	the state state with some with	i i it	it it
ner mer	Thread-forming screws	ALTER INTER MALTE	unt un N
it it	Thread-forming screw used in a grove	n st st	N
the write	Earth makes contact first	THE INLIES WALTE W	5 N 1
at whitek w	Terminal blocks with integrated screwless earthing contacts tested according Annex V	t unet wiret mir	et in int N
allet mi	Protective earthing of the luminaire not via built-in control gear	when you want	N
4.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.	while white white	N
4.9 (7.2.4)	Locking of clamping means	NITER WALT WALT V	N N N
et set	Compliance with 4.7.3	1 A At	A N
where we want	Terminal blocks with integrated screwless earthing contacts tested according Annex V	MALL WALL WA	N
4.9 (7.2.5)	Earth terminal integral part of connector socket	ALTER WITE WAIT	N N
4.9 (7.2.6)	Earth terminal adjacent to mains terminals	The second	N N
4.9 (7.2.7)	Electrolytic corrosion of the earth terminal	ALTER MITE WALTE	Mr. MN
4.9 (7.2.8)	Material of earth terminal	i i it	N
it with	Contact surface bare metal	LIER INLIE WALL W	N N N
4.9 (7.2.10)	Class II luminaire for looping-in	i et et	at at N
me a	Double or reinforced insulation to functional earth	in the work work	Nº Nº
4.9 (7.2.11)	Earthing core coloured green-yellow		N N
me m	Length of earth conductor	NUTE INTE MAL	Nº N

4.10 (14)	SCREW TERMINALS	inter white white	с ^л И ~о
JEK JIEK	Separately approved; component list	(see Annex 1)	N N
- 111	Part of the luminaire	(see Annex 3)	Ν

4.10 (15)	4.10 (15) SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N
NUTER	Separately approved; component list	(see Annex 1)	N
w w	Part of the luminaire	(see Annex 4)	N

4.11 (5)	.11 (5) EXTERNAL AND INTERNAL WIRING		Р
4.11 (5.2)	Supply connection and external wiring	et tet tet stet stret	I P. N
4.11 (5.2.1)	Means of connection	Power cord	Р
white wh	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment	whiter whiter whiter whit	N
4.11 (5.2.2)	Type of cable	(see Annex 1)	N P

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Page 13 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
UNLIEK WALTE	Nominal cross-sectional area (mm ²)	(see Annex 1)	N ¹ N ^P
st st	Cables equal to IEC 60227 or IEC 60245	n nu th	Р
4.11 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
4.11 (5.2.5)	Type Z not connected to screws		L N
4.11 (5.2.6)	Cable entries:	et aller miller waite	W P
At 1	- suitable for introduction		- P./
MUT MIT	- adequate degree of protection	NUTER INTERNATION	N P
4.11 (5.2.7)	Cable entries through rigid material have rounded edges	with with out of	LIEL NLN
4.11 (5.2.8)	Insulating bushings:	the state of the s	P
NAL Y	- suitably fixed	et lifet white whit	N PN
t st	- material in bushings	ANT SHE SH	P
when wh	- material not likely to deteriorate	ALTER MITE WALTER	JUL P
the de	- tubes or guards made of insulating material	in the state	e Pot
4.11 (5.2.9)	Locking of screwed bushings	NUTER UNITED WALTER	MN MN
4.11 (5.2.10)	Cord anchorage:	i st at	, P
r w	- covering protected from abrasion	LIES WALTE WALTE WAY	P V
et set	- clear how to be effective	i it it i	¢ − Ρ
m m	- no mechanical or thermal stress	WALTE WALT WAL	Au bu
JEt J	- no tying of cables into knots etc.	t it it	P.
m. m.	- insulating material or lining	white white where	n N P
4.11 (5.2.10.1)	Cord anchorage for type X attachment:	NL TEX WALTER W	TEK WUNN
it it	a) at least one part fixed		<i>d</i> ≁ ∠∂N
MUL	b) types of cable	The second second	N-N
t let	c) no damaging of the cable		
me m	d) whole cable can be mounted	White white white	N N
Jet J	e) no touching of clamping screws	the state	N.
nu nu	f) metal screw not directly on cable	WALTE WALT WALT	N NN
JEt JEt	g) replacement without special tool	A A At	N SN
te an	Glands not used as anchorage	the water water wa	N
Et JIEt	Labyrinth type anchorages	at at at at	× N
4.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Туре Ү	Р
4.11 (5.2.10.3)	Tests:	WALTER WALTE WALT	M ¹ P
UNLIE WALL	- impossible to push cable; unsafe	THE STREE STREET	NTE NP

Page 14 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
UNLIEK WALTE	- pull test: 25 times; pull (N)	60 N	P
s st	- torque test: torque (Nm)	a a a	P
LIEWNNIE	- displacement ≤ 2 mm	THE STREE STREET MALINE	P
t it	- no movement of conductors	and the state of t	P
NNIT W	- no damage of cable or cord	1 - LTEX MITEX MITEX	N P
4.11 (5.2.11)	External wiring passing into luminaire	Sill Sill St	- P.4
4.11 (5.2.12)	Looping-in terminals	NITER INTERNITER IN	N
4.11 (5.2.13)	Wire ends not tinned	all and the	<
In the second se	Wire ends tinned: no cold flow	ITTEL INTERNATION	N
4.11 (5.2.14)	Mains plug same protection	i i i it it	́₽
No I	Class III luminaire plug	The white white	N ^{or}
t set s	No unsafe compatibility	t at at	P.S
4.11 (5.2.16)	Appliance inlets (IEC 60320)	White White White a	N
JEK JIE	Installation couplers (IEC 61535)		N
Nor with	Other appliance inlet or connector according relevant IEC standard	intit white white wh	N
4.11 (5.2.17)	No standardized interconnecting cables properly assembled	THE MAILE WALL WALL	N
4.11 (5.2.18)	Used plug in accordance with	THE STEEL NITE WATER	N RI
. At l	- IEC 60083	Jun Jun Jun Jun	
when whe	- other standard	A STER WITE WITE W	.√P
4.11 (5.3)	Internal wiring	M. S.	,↓ P,↓
4.11 (5.3.1)	Internal wiring of suitable size and type	NE STE WALLS WALL	J P
let let	Through wiring		N
WUT V	- not delivered/ mounting instruction	The super-	~ N~
t dit .	- factory assembled	L A A	⊘ N _
me m	- socket outlet loaded (A)	- nere white where v	N N
	- temperatures	(see Annex 2)	N ^d
me m	Green-yellow for earth only	intre white white wh	_∿ [™] N
4.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring	is at at a	P
- w	Cross-sectional area (mm ²)	(see Annex 1)	Р
et tiet	Insulation thickness	it at at at	P
Nr N	Extra insulation added where necessary	The water water water	N N
4.11 (5.3.1.2)	Internal wiring connected to fixed wiring via intern	al current-limiting device	S P.S
THE TEN	Adequate cross-sectional area and insulation thickness	white white white we	P
4.11 (5.3.1.3)	Double or reinforced insulation for class II	street intre intre unit	P

Page 15 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
4.11 (5.3.1.4)	Conductors without insulation	JEE ALTER MITTER MAINE	N N
4.11 (5.3.1.5)	SELV current-carrying parts	in the state	N
4.11 (5.3.1.6)	Insulation thickness other than PVC or rubber	TER INTER INTERNATION	N -
4.11 (5.3.2)	Sharp edges etc.	i i i it	P .
MUT M	No moving parts of switches etc.	A MITER MALIE WALL W	N
At 5	Joints, raising/lowering devices	I A A A	∂- N.<
mer mer	Telescopic tubes etc.	Intite water water water	-√ ^N N
Tet Jet	No twisting over 360°	t at at at	P
4.11 (5.3.3)	Insulating bushings:	NUTE WALL WALL WAL	N
IFK LIFEK	- suitable fixed	s at at at	Ň
w v	- material in bushings	white white where a	N
+ JIEH IN	- material not likely to deteriorate	at all the	S N S
In in	- cables with protective sheath	white white where we	N
4.11 (5.3.4)	Joints and junctions effectively insulated	et tet stet site	N
4.11 (5.3.5)	Strain on internal wiring	nut and and an	N
4.11 (5.3.6)	Wire carriers	ret ret tret street	N N
4.11 (5.3.7)	Wire ends not tinned	to when when we	Р
et antife all	Wire ends tinned: no cold flow	at the the other of	N _N
4.10 (5.4)	Test to determine suitability of conductors having a	reduced cross-sectional area	Ν
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N
inter and	No damage to luminaire wiring after test	att stranger water	SIN N
4.11.1 (-)	Indoor use luminaire The requirement of one part of cord anchorage to be fixed to the luminaire not applied for table lamps of glass or ceramic	at which will the which a	V LIFE W
4.11.2 (-)	Class I and class II indoor use Luminaire with a mass less than 1 kg the current $\leq 2,5$ A and cable ≤ 2 m and conductor $\geq 0,5$ mm ²	WALL WAL WAL W	N
4.11.3 (-)	Terminals, a cord anchorage and an inlet opening for the proper connection of the flexible cable or cord if for outdoor use and delivered without a flexible cable or cord and a plug.	LIEX WALLEX WALTER WALTER	N
4.11.4 (-)	Portable luminaires for outdoor use Insulation class I and class II, non-detachable flexible cables or cords at least type 245 IEC 57.	et white white white w	N

Page 16 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
4.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK	iftet sizet milet al	V N P
4.12 (8.2.1)	Live parts not accessible	and the the state	P
LIE WALL	Basic insulated parts not used on the outer surface without appropriate protection	TER WALTER WALTER WAL	P
MALL MA	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	white white white	MALE PAN
whit whit	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires	white white white o	N N
MIT WALL	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements	thet white white wh	yn ⁿ N .
	Basic insulation only accessible under lamp or starter replacement	sontre work work	~ P ~
white whi	Protection in any position	stift atter white	Nr ¹² P ¹¹
at a	Double-ended tungsten filament lamp	24 24	N
when when	Insulation lacquer not reliable	NITEK INITE WAITE W	N ST N
at at	Double-ended high pressure discharge lamp		A N
the when .	Relevant warning according to 3.2.18 fitted to the luminaire	TEL MOUTE MOUTE MOUT	N -
4.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position	A WALTER WALTER WALTER	Jun Fr Pun
4.12 (8.2.3.a)	Class II luminaire:	at at at	P
WE THE	- basic insulated metal parts not accessible during starter or lamp replacement	white white white a	P
int with	- basic insulation not accessible other than during starter or lamp replacement	St. Jee winth win	P
it water y	- glass protective shields not used as supplementary insulation	w when the world	White N A
4.12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed	+ MALTER WALTER WALTER	JUNE N.C
4.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:	the state	N ^d
Mr. Mr.	Ordinary luminaire:	MALTE WALT WALT W	N N
JEX STER	- voltage under load (V)		Set SN
1 WI-	- no-load voltage (V)	-The work with with	N
et liter	- touch current if applicable (mA)	The state of	S N
20, 20	One conductive part insulated if required	white white white	N N
LIFEK IN	Other than ordinary luminaire:	- it it it	N.S.
20, 20,	- nominal voltage (V)	- when when when	N
JEK JE	Class III luminaire only for connection to SELV	t at at	



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
NNITER NNT	Class III luminaire not provided with means for protective earthing	MATER WALTER WALTER	N N
4.12 (8.2.4)	Portable luminaire have protection independent of supporting surface	JEEK WALTER WALTER WA	LIE VILLEP W
4.12 (8.2.5)	Compliance with the standard test finger or relevant probe	et allet white white	A WALLER PLI
4.12 (8.2.6)	Covers reliably secured	The state	P
4.12 (8.2.7)	Luminaire other than below with capacitor $> 0,5 \ \mu$ F not exceed 50 V 1 min after disconnection	white white white	NN NN
et set	$\begin{array}{ c c c } \hline Portable \ luminaire \ with \ capacitor > 0,1 \ \mu F \ (0.25) \\ not \ exceed \ 34 \ V \ 1 \ s \ after \ disconnection \end{array}$	white white white white white	Р
t miret of	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection	ret stet stet	Not Not Not
4.12.1 (-)	Class I luminaire with bayonet lampholder:	me me m	N
INLIE WALT	1) cap not accessible with test finger	TEX LIEK NITER	N
	2) metal lampholder is earthed	n. m. m.	N

4.13 (12)	ENDURANCE TEST AND THERMAL TEST		Р
4.13 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12. specified in 4.13	6) after (9.2) before (9.3)	Write - M
4.13 (12.2)	Selection of lamps and ballasts		JER JAI
	Lamp used according Annex B	. UV tube	
NUTERNA	Controlgear if separate and not supplied		In the
4.13 (12.3)	Endurance test:	No. No. No.	Р
TE WALTE	a) mounting-position	. Acc. to user manual	WHITE J
e at	b) test temperature (°C)	. 35 °C	×-
white wh	c) total duration (h)		12 <u></u> 1
MUTEX WALT	d) if not equipped with controlgear, constant voltage/current (V) or (A)	1.1 U _n	IEV JALTE
a st	e) luminaire ceases to operate	Mun Mu Mu Mu	_
4.13 (12.3.2)	After endurance test:	TEX LIER ALIER MUTE	N ¹ P
L A	- no part unserviceable	- M - M	Р
NALL N	- luminaire not unsafe	Et JET NIE MIE	N PN
t at	- no damage to track system	all in the	N
white whi	- marking legible	LIFE NUTER INTERIOR	ν _s ρ ^v
1 1	- no cracks, deformation etc.	July In the	P
4.13 (12.4)	Thermal test (normal operation)	(see Annex 2)	N ^P P

Page 18 of 32

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EN 60598-2-4	Attachment 2
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Clause	Requirement + Test	Result - Remark	Verdict
4.13 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N
4.13 (12.6)	Thermal test (failed lamp control gear condition):	by the contract	N
4.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)	The south of south and south	- 11 - 11
* INLIER NI	- case of abnormal conditions	+ tet tet ster	IN IT THE
	- electronic lamp control gear	MIL WIT WIT	N
White whi	- measured winding temperature (°C): at 1,1 Un	- JEK JIEK MITE IN	1° North
NUTEK WITEK	- measured mounting surface temperature (°C) at 1,1 Un	all with the state	N N
1	- calculated mounting surface temperature (°C)	- Mr. M. M.	N
IET. WALTER V	- track-mounted luminaires	et set site aster	NN NN
4.13 (12.6.2)	Temperature sensing control	sales when we	N
WALTE WA	- case of abnormal conditions	- ITEN NITER WITE N	NI TU
the de	- thermal link	W. W. C.	N
NALIE WAL	- manual reset cut-out	THE NUTER INTERNAL	JUN N
at at	- auto reset cut-out	11 50 5 1	N
tit white	- measured mounting surface temperature (°C)	HER NUTER WALTE WALTE	_ N <
it lit	- track-mounted luminaires	i i it it	
4.13 (12.7)	Thermal test (failed lamp control gear in plastic lun	ninaires):	N P
4.13 (12.7.1)	Luminaire without temperature sensing control	a at at	P /
4.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W	white white white wh	N
INLIE WAY	Test method 12.7.1.1 or Annex W	The Antifer WALTER WALT	m ¹
it it	Test according to 12.7.1.1:		N
NUL.	- case of abnormal conditions		n n
t set	- Ballast failure at supply voltage (V)		at
mr m	- Components retained in place after the test	white white white w	N N
Tet of	- Test with standard test finger after the test	at at at	N.
m. m.	Test according to Annex W:	White white when wh	N
JEK JIEK	- case of abnormal conditions		t ut
- m	- measured winding temperature (°C): at 1,1 Un	the water water water	- ·
EX WALTER W	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	antiet whitet whitet	WI IFF W
WALTER WAL	- calculated temperature of fixing point/exposed part (°C)		ITEK WALT
A A	Ball-pressure test:	See Table 4.15 (13.2.1)	, N.

Page 19 of 32



	EN 60598-2-4 Attachmen	t 2	
Clause	Requirement + Test Result - Remark		Verdict
4.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp >	• 70W, transformer > 10 VA	NON
LIET MILLE	- case of abnormal conditions	tet stet stet street	NITE N
1 A	- measured winding temperature (°C): at 1,1 Un	- Mr m	
white w	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	- MALIER WALTER MALITE W	m. Lun
WALTER WALT	- calculated temperature of fixing point/exposed part (°C)		e witte
JEK JEK	Ball-pressure test	. See Table 4.15 (13.2.1)	N
4.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA	it's which which which	N
WUL 1	- case of abnormal conditions	ALTER WALTE WALT V	nr -m
t dit	- Components retained in place after the test	t at at	< N <
me m	- Test with standard test finger after the test	white white white wh	Ň
4.13 (12.7.2)	Luminaire with temperature sensing control	and the state of	N
	- thermal link	.Yes 🗌 No 🗌	201-
JEK NITER	- manual reset cut-out	Yes 🗌 No 🗌	JIEN .
24	- auto reset cut-out	Yes 🗌 No 🗌	2n - 2
EX INTER N	- case of abnormal conditions	The set set set	inter-ni
	- highest measured temperature of fixing point/ exposed part (°C):	- which and the set	
m. m.	Ball-pressure test:	. See Table 4.15 (13.2.1)	<i>S</i> [™] N
4.13 (-)	Indoor use luminaire, Test overturned position (overturns < 15)	15 degree was overturned	P

4.14 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND	MOISTURE	N PM
4.14 (-)	If IP > IP 20 the order of tests as specified in claus	se 4.12	🦽 P 🏑
4.14 (9.2)	Tests for ingress of dust, solid objects and moistu	re: mult white	mer me
. Tet .	- classification according to IP	. IP20	Alt Jet
me m	- mounting position during test	. Acc. to user manual	- m
JIEK NITE	- fixing screws tightened; torque (Nm)	- the state of	et jet
20.	- tests according to clauses	. 9.2.0	
IEK NITER	- electric strength test afterwards	et alt set set	J ^E P J
	a) no deposit in dust-proof luminaire	when when when	N
INLIE N	b) no talcum in dust-tight luminaire	t tet tet stet	NUT
Tet 5	c) no trace of water on current-carrying parts or SELV parts or where it could become a hazard	when when we we	N

Page 20 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	Result - Remark	Verdict
	at which which which we are		<u>+ (*</u>
MUT MUT	d) i) For luminaires without drain holes – no water entry	METER WALTE WALL WALL	SUL N
ITE WALTE	d) ii) For luminaires with drain holes – no hazardous water entry	Tet watter watter watter	S S N SI
et lifet	e) no water in watertight luminaire	t at all the	N S
20. 1	f) no contact with live parts (IP 2X)	white white white w	Р
JIEK IN	f) no entry into enclosure (IP 3X and IP 4X)	at at at 5	N
w. w.	f) no contact with live parts (IP3X and IP4X)	water water water water	N
UNLIER WALT	g) no trace of water on part of lamp requiring protection from splashing water	whitek whitek whitek white	NON S
TEK WALTER	h) no damage of protective shield or glass envelope	et the maret white	ULTEN N
4.14 (9.3)	Humidity test 48 h	25 °C, 93%RH	P
4.14 (-)	Portable luminaire for outdoor use tested in the most unfavourable of the overturned positions likely to occur	white white white wh	N

4.15 (10)	INSULATION RESISTANCE AND ELECTRIC STR	ENGTH A A	S P
4.15 (10.2.1)	Insulation resistance test	in which which which is	Р
EK WALTER W	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø	The water water water	TER NI
Jet J	Insulation resistance (MΩ)	s at at at	<u>+</u> (
me m	SELV	white white white white	<i>∕</i> ² N
INLITER WATE	- between current-carrying parts of different polarity	at white	NIL NK
TEX MUTEX	- between current-carrying parts and mounting surface	-	I TEN
t stret of	- between current-carrying parts and metal parts of the luminaire	- when you we will all	N
WILL WALT	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	- WALL WALL WALL WITH	N
L X	- Insulation bushings as described in Section 5	cile me me me	Ν
HIE WALT	Other than SELV	TEX LIFE OUTER MUTER	"Ч [°] Р
st at	- between live parts of different polarity	100 MΩ	Р
WILL N	- between live parts and mounting surface	100 MΩ	° ₽"
	- between live parts and metal parts	100 MΩ	Р
white white	- between live parts of different polarity through action of a switch	white white white white	N

Page 21 of 32

342		
	V	
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EN 60598-2-4 Attachment 2	EN 60598-2-4 Attachment 2	
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Clause	Requirement + Test	Result - Remark	Verdic
UNLIEK WALLE	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage	Intret watter watter water	N N
TEX JIEK	and accessible metal parts	it at at at	TEX
- MI -	- Insulation bushings as described in Section 5	The water water water	
4.15 (10.2.2)	Electric strength test	t at all set	P
2m. m.	Dummy lamp	while whe whe w	N
ALTER MIT	Luminaires with ignitors after 24 h test	at set set	S N
21. 2.	Luminaires with manual ignitors	water water war with	N
LITER INLIE	Test voltage (V)	at set set set	P
	SELV	ner when when we	Ν
TER WALTER W	- between current-carrying parts of different polarity	et whitet whitet whitet	W LEN N
WILLIEK WIN	- between current-carrying parts and mounting surface	MITEX INTEX WAITEX W	STAT N.S.
INLITER INLIFE	- between current-carrying parts and metal parts of the luminaire	Tet stet stret with	ex Nex
TEX WALTER	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	TEX MITEX WALTER WALTER	M
t st	- Insulation bushings as described in Section 5		N
with m	Other than SELV	et intre intre water v	n Bu
At 5	- between live parts of different polarity	1480 V	P.
me me	- between live parts and mounting surface	2960 V	×Ρ
At Al	- between live parts and metal parts	2960 V	P
at at	- between live parts of different polarity through action of a switch	the work when	N
t stek	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	- when white white	N S
m. m.	- Insulation bushings as described in Section 5	- white white white w	Ň
4.15 (10.3)	Touch current or protective conductor current (mA)	Touch current: 0.050mA	P

4.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING	utet intre intre white	N_
4.16 (13.2.1)	Ball-pressure test	See Test Table 4.15 (13.2.1)	, A⊢P
4.16 (13.3.1)	Needle-flame test (10 s)	See Test Table 4.15 (13.3.1)	N
4.16 (13.3.2)	Glow-wire test (650°C)	See Test Table 4.15 (13.3.2)	* P _S ¢
4.16 (13.4)	Proof tracking test (IEC 60112)	See Test Table 4.15 (13.4)	≦N

Page 22 of 32



EN 60598-2-4 -- Attachment 2

Clause	Requirem	nent + Test	et et	LIFER MITE	Result - Rema	ark M M	Verdict
4.7 (11.2)	TABLE: Cre	eepage distar	nces and clear	ances	UTEK NUTER	INTER WALT	<u>.</u> Р
at di	Minimum d	istances (mn	n) for a.c. (50/6	60 Hz) sinus	oidal voltages		Р
the write	Applicable	part of IEC 6	0598-1 Table 1	1.1* and 11	.2*	INTER WALTER	_ 0° Р <
it set	Insulation	Measured	Required		Measured	Requi	ired
	type **	clearance	clearance	*Table	creepage	creepage	*Table
Distance 1:	Set B Se	2.6	1.5	11.1	2.6	2.5	<u></u>
Working vo	Itage (V)				Max.240V~	when wh	-m
PTI				:	< 600 🖂	≥ 600 🗌	*
Pulse volta	ge if applicab	le (kV)		;	1-TE MALI	me me	- m_
Supplement	tary information	on: Current-ca	rrying parts of	different pola	arity	JEt JEt	LITER I
Distance 2:	R	5.3	3.0	11.1	5.3	5.0	11.1
Working vo	Itage (V)			:	Max.240V~	Tet Jiet	UTER JUL
PTI				:	< 600 🖂	≥ 600 🗌	
Pulse volta	ge if applicab	le (kV)	-10-		- 14 54	A STER NI	le <u>stra</u>
Supplement	tary information	on: Current-ca	rrying parts an	d accessible	parts	14. 1.	A
Distance 3:	JAR V	5.3	3.0	11.1	<u>رما</u> 5.3 روا	5.0	11.1
Working vo	Itage (V)			:	Max.240V~	See and	~-
PTI				:	< 600 🖂	<u> </u>	mer -m
Pulse volta	ge if applicab	le (kV)				1	* - *
			rrying parts an			E NITE N	LT NAL

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

1.7 (11.2)	TABLE II: (Creepage di	stances and o	clearances			N N N
1 A	Minimum	distances (I	mm) for a.c. h	igher than 3	0 kHz sinusoi	idal voltages	t.
NINH V	Applicable	part of IEC	61347-1 Tabl	e 7 and 8* or	IEC 60664-4	Table 1 and 2	WALTE WALT
Distances	Insulation	Measured	Required		Measured	Requ	uired
	type **	clearance	clearance	*Table &	creepage	creepage	*Table
Distance 1:	the set	ITEK NITE	with w	T. MUT	24. 26.		at at
Working vol	tage (V)				ITEK NITE	white white	nnt - 1
Frequency it	f applicable (k	(Hz)	ant an			x at	
PTI	Pues In				: < 600 🗌	<u>≥</u> 600 □	1 m
Peak value	of the working	g voltage Û₀u	if applicable (kV)		it it	1 - S
Supplement	ary informatio	n:	et set	ALTER MUT	A NULLE NN	LIE WALL V	in m
Distance 2:	I'd nuter	Intrea wh	m	a a	1	t st	TEK JEK
Working vol	tage (V)				UNLIE WALT	me m	-111-
Waltek Servi	ces (Foshan)	Co., Ltd.	m m			at A	

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Page 23 of 32

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EN 60598-2-4 -- Attachment 2

Clause	Requirement + Test	NUTE	Result - Rema	rk with wh	Verdict
.et	the star and all and and a	<u> </u>		at at	- 11-
Frequency	if applicable (kHz)				with a
PTI		:	< 600 🗌	<u>></u> 600 🗌	<u>t</u>
Peak value	of the working voltage \hat{U}_{out} if applicable (kV)	·····:	LIER WALTE	INLI WAL Y	n. n.
Supplemen	tary information:	10.	1 A	at at	JEK JI
Distance 3:	A A A A A A	INIT	er white wh	I. WUT WU	- MI
Working vo	Itage (V)			t let it	
Frequency	if applicable (kHz)	:	WALT WAL	when when	20-
PTI		:	< 600 🗌	≥ 600 🗌	IN IT IT
Peak value	of the working voltage \hat{U}_{out} if applicable (kV)	;	ner whe	me m	7
Supplemen	tary information:	Ļ	at at	LTER SLIFER	NUTE NAL

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

Page 24 of 32

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211		

Â	t stelt	TEX INTER INTERIO	EN 60598-2-4	i it it it	- JEK JEK
	Clause	Requirement + Test	at all white white	Result - Remark	Verdict

4.15a (13.2.1) TABLE: Ball Pressure Test of Thermoplastics					
Allowed impression diam	eter (mm)	<u> <</u> 2.0	1 A A	1ª	
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diame	ter (mm)	
Bottom cover & plastic enclosure	See Annex 1	96.8	1.741	LIC MA	

4.15b (13.3.1) TAI	BLE: Needle-flame te	st (IEC 60695-11-5)			Ň
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
I at at	Tek JIEk	-nt me	201 - 24		
Supplementary info	rmation:	at the	JEK JE	nute and	MAL

Glow wire temper	ature	650°C			
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Bottom cover & plastic enclosure	See Annex 1	1 June 30 Minut	white white	mo on	Р
		guished within 30 s of with nite the underlying parts			Yes

4.15d (13.4)	TABLE: Pro	of tracking test (IE	C 60112)			N N
Test voltage	PTI			MU. MU	ru w v	
Object/ Part N	o./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens		Verdict	
- 1 1		- mer m			1 1 A	

Page 25 of 32

EN 60598-2-4

Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information	Р
See table 24.1	in IEC 60335	white wh

The codes above have the following meaning:

- A The component is replaceable with another one, also certified, with equivalent characteristics
- B The component is replaceable if authorised by the test house
- C Integrated component tested together with the appliance
- D Alternative component

ANNEX 2	NNEX 2 TABLE: Temperature measurements, thermal tests of Section 12						2	P
in white	me m	10			10th	ALLER A	phile water	112 Ju
y st	Type reference							
WALL V	Lamp used				UV tub	be	TEL WALTER	nti stat
it.	Lamp control g	ear used		:		Sec.	1 A	the state
	Mounting posit	ion of Iumii	naire	:	Acc. to	o user m	anual	MUT
15 1	Supply wattage	ə (W)		:		4	* 1	r A
U. MUL	Supply current	(A)		:	- TEL	MLTER	White white	2 m _ 2
let tet	Calculated power factor						at at	at-
MIL	Table: measur	ed tempera	tures correcte	ed for ta = 2	5 °C:	LIE N	the way	en ba
- JEK	- abnormal ope	erating mod	le		15 deg	gree was	overturned	510 -510
4.12 (12.4)	- test 1: rated v	/oltage		- white white white white				
NNLTER WA	- test 2: 1,06 til rated wattage.			1.06 times rated voltage			ownite.	
LIEK WALTER	- test 3: Load o voltage or 1,05						WILLIEK W	
ex minex	- test 4: 1,1 tim wattage		-		1.1 tim	nes rateo	l voltage	INITEK -
4.12 (12.5)	Through wiring or looping-in wiring loaded by a current of A during the test:				- m	× 1/1	t set	
me m	t at a	Те	mperature m	easurement	s, (°C)	white	Mut Mu	- Mr.
NUTE NALT	WILL WAL	M	Clause 1	2.4 – norma	1 <i></i>	JEt	Clause 12.5	– abnormal
Part	Ambient	test 1	test 2	test 3	m	limit	test 4	limit

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Page 26 of 32

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t set			See 10 10 10 10 10 10 10 10 10 10 10 10 10	598-2-4			
Clause	Requirement	+ Test	t At	TEX NITE	Result - Remark	with w	Verdict
		It NIT	and an	24.		at a	it it
Power cord	25.0		32.9	et Jet	90	NALT - NAL	
Switch	25.0	A INTER	64.3	m.	65		1
Switch ambier	nt 25.0	·	64.3	Jan .	65	VIII ANVII	mur- m
Input wire of ballast	25.0	WULLE W	66.6	M. M.	90	let stet	NLTEX MLT
Output wire of ballast	f 25.0	uret- nu	66.3	ULL ANT	105		
Tc of ballast	25.0		99.7	at - at	<u>100</u>	unite un	the start
Lead wire of lampholder	25.0	EK WILTE	72.1	with the	105		t stift
Lampholder contact	25.0	TEK	81.9	White w	140	nut - mu	SW T
Bottom cover plastic enclosure	& 25.0	VNI TEL	71.8	ALTEK WA	CI.13	LIEL MILLE	white wh
Mounting surface	25.0		61.0	LIFEK -	90 00	63.8	130
Illuminated surface (0.1m) 25.0	a - Juli	35.1	-	90	36.6	175

Page 27 of 32



EN 60598-2-4

Clause	Requirement + Test Result - Remark	Verdict
	Alt alt with and and a set of the	Tet with with
ANNEX 3	Screw terminals (part of the luminaire)	- Jun N
(14)	SCREW TERMINALS	A SAL SAN
(14.2)	Type of terminal	nu n - a
	Rated current (A)	aller out the solution
(14.3.2.1)	One or more conductors	N
(14.3.2.2)	Special preparation	N ^{TE} N ^{TE}
(14.3.2.3)	Terminal size	N
INLIFE NALT	Cross-sectional area (mm ²)	ret intre intre
(14.3.3)	Conductor space (mm)	N
(14.4)	Mechanical tests	Nur Nur
(14.4.1)	Minimum distance	N
(14.4.2)	Cannot slip out	N ^L
(14.4.3)	Special preparation	N
(14.4.4)	Nominal diameter of thread (metric ISO thread)	in Nan N
it is	External wiring	N
the wat	No soft metal	N S N S
(14.4.5)	Corrosion	N St N
(14.4.6)	Nominal diameter of thread (mm)	which which Non
	Torque (Nm)	N N
(14.4.7)	Between metal surfaces	nti ma MN
. set	Lug terminal	
in min	Mantle terminal	MULT MULT
TEK JEK	Pull test; pull (N)	t set se N
(14.4.8)	Without undue damage	m m Nn

Page 28 of 32

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EN 60598-2-4

Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	Screwless terminals (part of the luminaire)	MITER WAITE WAITER WAIT	N
(15)	SCREWLESS TERMINALS	s at at at	∕ [∞] N
(15.2)	Type of terminal	NITE WALL WALL WALL	1 _1
et lifet	Rated current (A)	at at all all	JER-N
(15.3.1)	Material	it white the the the	N
(15.3.2)	Clamping	- let the state of	N
(15.3.3)	Stop	Mr. Mr. M. W.	N
(15.3.4)	Unprepared conductors	THE THE STREET MATE	N VN
(15.3.5)	Pressure on insulating material	me me me	N
(15.3.6)	Clear connection method	TEX LIEX NITER MITER	NN NN
(15.3.7)	Clamping independently	and the second	N
(15.3.8)	Fixed in position	with aller white wh	√ _N [∞]
(15.3.10)	Conductor size	WIT WIT IN THE	N
white wh	Type of conductor	strek nures intre- white	J. N
(15.5.1)	Terminals internal wiring	n n w w	N
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)	LIER NUTER WALTE WALTE	SV NS
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)	Star And	
NUL.	Insertion force not exceeding 50 N	TEX MITER MITE WALL V	n Nu
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N<
(15.5.2)	Electrical tests	et intifer white white wh	Ň
Alt of	Voltage drop (mV) after 1 h (4 samples)	the second second	+ N [↓]
nut an	Voltage drop of two inseparable joints	with the winds white	N N
TEK JEK	Number of cycles:	at the set	Jet-
it with	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)	to the start of the	N ^N N
wint.	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)	et white white white w	N
white w	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)	MALTER WAITER WAITER WAIT	N N
NLIEK WALT	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)	stift milet waited waited	IN SN
(15.6)	Terminals external wiring	in the state	N.
MUL	Terminal size and rating	LIER INTERNATION WALL	M NM
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)	at a tet antet mitet an	
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N)	- when we with the	N.L

Page 29 of 32

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	EN 60598-2-4		
Clause	Requirement + Test	Result - Remark	Verdict
(15.6.3)	Electrical tests	fet alfet with white white	N N
NITEK MALT	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1	t ret iret iret miret	N NICEN

(15.6.3.1)	TABLE	: Conta	act resist	ance tes	st 🔔						N
. At	Voltage	drop (I	mV) after	1 h	intit v	in a	10. 2	4	*	it i	at <u>-</u> 14
terminal	1 - 20	1	2	3	4	5	6	7,0	8,0	.9	10
voltage dro	p (mV)	LEF .	JIE IN	ie na	n n	- Un			- 0	t let	. Tex
ne m	Vol	tage dr	op of two	insepara	able joint	s j	it nite	NALIE	white	m	N N
at de	Vol	tage dr	op after 1	0th alt. 2	5th cycle	;			it.	,et	
m	Max	x. allow	ved voltag	e drop (r	nV)		J. P.	JALIE .	Mrt.	unt s	1 -24
terminal	JIE	1	2	3	4	5	6	7	8	9	10
voltage drop (mV				t	. Alt	LI ^E		NI NI	L' N	200	- and
JEN.	Vol	tage dr	op after 5	0th alt. 1	00th cyc	le			et s	et 54	N
In In	Ma	x. allow	ved voltag	e drop (r	nV)	:	1 Int	WILL	-m-	ME	
terminal	in i	1.5	2	3	4	5	6	7.0	8	9	10
voltage drop (mV)						anti l		M	m	- Mar	
IEL NITE	Cor	ntinued	ageing: \	/oltage d	rop after	10th alt.	25th cyc	le 🦽	. Allt	J.T.E.	N
	Ma	x. allow	ved voltag	e drop (r	nV)	:	NULL	n in	n i	10. 20	
terminal	Intra I	1	2	3	4	5	6	7	8	9.0	10
voltage dro	p (mV)	.it-	Alt .	THE AL	11	In it	2. 24	- 24	24		
INLIER NN	Cor	ntinued	ageing: \	/oltage d	rop after	50th alt.	100th cy	rcle		INLIE .	N N
	Max	x. allow	ved voltag	e drop (r	nV)						
terminal	3	1	2	3	4	5	6	7	8	9	10
	p (mV)	JEX	JEt	INLIER	mi	MUL	M	2010	4		it.
voltage dro											

Page 30 of 32

EN 60598-2-4

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

ANNEX 5 National Differences for (country name) or Group Differences Ρ CENELEC COMMON MODIFICATIONS (EN) Ρ

EUROPEA	ATTACHMENT TO TEST REPORT IEC 60598-2-4 IN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Luminaires Part 2: Particular Requirements: ION 4: PORTABLE GENERAL PURPOSE LUMINAIRES
Differences according to	EN 60598-2-4:2018 used in conjunction with EN 60598-1:2015+A1:2018
Annex Form No Annex Form Originator Master Annex Form	When the set whether white whi

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N
(3.3)	DK: power supply cords of class I luminaires with label	et watter watter watter	MULT N -91
(4.5.1)	DK: socket-outlets	at set set	5 ⁶⁵ N 5
(5.2.1)	CY, DK, FI, GB: type of plug	mer mer me m	N

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)	N
(4 & 5)	FR: Shuttered socket-outlets 10/16A FR: Safety requirements for high buildings (Arrêté du 30 décembre 2011 portantrèglement de sécurité pour la construction	
Tet would		
WALTER W	- 850°C for luminaires in stairways and horizontal travel paths	TEL WALTS WN
JIEK MI	- 650°C for indoor luminaires	N SN
(13.3)	GB: Requirements according to United Kingdom Building Regulation	N N

Page 31 of 32



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EN 62493

Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 6	Assessment Of Lighting Equipment Related To Human Exposure To Electromagnetic Fields according to standard EN 62493:2015	

4	LIMITS				he we w	Р
4.1 💉	General					P
WALTER	Comply with Van der Hoofden test limit in 4.2.3 or inherently compliant in 4.2.2 and pass assessment procedure for intentional radiators in 4.3					
4.2	Unintentional radiating part of lighting equipment					, ́Р
4.2.2	Lighting equipment deemed to comply with the Van der Hoofden test without testing					Р
	1) electronic controlgear	Yes		No	JO JIEK IN	1 ⁶
	2) incandescent-lamp technology	Yes	N	No		
	3) LED-light-source technology	Yes		No	E nite nut	1
	4) OLED-light-source technology	Yes		No		_
	5) high-pressure discharge lamp LED-light-source technologies	Yes	Č.	No	The main	mit
LIER W	6) low-pressure discharge lamp technologies with exposure distance \geq 50 cm	Yes		No	In the mutile of	NITE.
et ji	7) independent auxiliary	Yes		No		
2m	Not fulfil any of 1-7 above subject to 4.2.3		MAL	na	- me m	1
4.2.3	Applications of limits					
Ju Jet	Not fulfil any of 1-7 in 4.2.2 but the compliance factor F is ≤ 1					N
4.3	Intentional radiating part of lighting equipment					s, N
LTEX WAY	Comply with one of methods in Clause 7 if intentional radiator				FIEK WALTER W	N ^م کی

6	MEASUREMENT PROCEDURE FOR THE VAN DER HOOFDEN TEST General		
6.1			
white	Measurements carried out under conditions according Clause 6.1 – 6.6	See Table 6	N LAN

7 🚿	ASSESSMENT PROCEDURE INTENTIONAL RADIATORS Low-power exclusion method	
7.2		
7.2.1	Input P _{int,rad}	
A NUTE	Exclusion level Pmax	Jer Julie
at .	Input power P _{int,rad} < exclusion level P _{max}	N
7.3	Application of the EMF product standard for body worn-equipment	

Page 32 of 32



EN 62493

Clause	Requirement + Test	Result - Remark	Verdict
suntification of	If not Clause 7.2 is met and expose distance \leq 0.05 m, comply with IEC 62209-2	whites while white	Martin Martin
7.4	Application of the EMF product standard for base stations		
ex Intre	If not Clause 7.2 is met and if intentional radiator is base station, comply with IEC 62232	at the the	
7.5	Application of another EMF standard		
WALTER	If not Clause 7.2 is met and if intentional radiator cannot be considered as in Clause 7.3 or 7.4, comply with IEC 62311	at white white white	N N

6	TABLE: Mea	TABLE: Measurement results with Van der Hoofden test head				
Location	of EUT	Test model	Measuring distance	Result(F)	Limit(F)	Verdict
Reference EN 6249	e Annex B of 3:2015	white the state	t Jack	WALTER WALTER	≤1.0	N

===== End of Attachment 2 ======

Page 1 of 4

Photo Documentation





Photo 1



Page 2 of 4

Photo Documentation



Photo 4

Page 3 of 4

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Photo Documentation



Photo 5



Photo 6

Page 4 of 4







Photo 8

===== End of Photo ======