

Test Report

Client Name : ACREL CO., LTD.

Address : No.253, Yulv Road, Jiading District, Shanghai, China

Product Name : Gateway

Date : Aug. 20, 2020



TEST REPORT IEC 61010-1

Amendment 1 - Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements

Report

Compiled by Jonny Wu

Journal Mr

Approved by...... Terry Tian

Testing laboratory

Name...... Anbotek (Guangzhou) Compliance Laboratory Limited

Address Rm.508, Bld.2, No.232, Kezhu Road, Science City, Economic &

Technology Development Area, Guangzhou, Guangdong, China.

510663

Testing location...... Same as above

Applicant

Name...... ACREL CO., LTD.

Manufacturer

Province, China

Test specification

Standard IEC 61010-1: 2010+A1:2016

Procedure deviation.....: N.A.

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

Type of test object

Description Gateway

Trademark..... Acrel

Model/type reference..... Anet

Rating..... DC24V





Test item particulars

Measurement (installation) category...... III

Pollution degree.....

Environmental conditions 5-40°C

Operating conditions....... Continuous operation

Connection to supply mains None

Degree of mobility...... Portable equipment

Special protection to IEC 60529 IP20

Possible test case verdicts

- test object does meet the requirement P (Pass)

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

Testing

Date of receipt of test item Aug. 11, 2020

General remarks

"(See remark #)" refers to a remark appended to the report.

"(See appended table)" refers to a table appended to the report.

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

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

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

- Factory: Jiangsu Acrel Electrical Manufacturing. Co., Ltd.
- Address: No.5, Dongmeng Road, Nanzha Street, Jiangyin City, Jiangsu Province, China







Copy of marking plate

Formed as following:

Gateway

Model No: Anet Rating: DC 24V



Jiangsu Acrel Electrical Manufacturing Co., Ltd.

No.5, Dongmeng Road, Nanzha Street, Jiangyin City, Jiangsu Province, China

General product information:

- Unless otherwise specified, models Anet are chosen as representative models to perform all tests.



e)t	Anbor	Lek Anbu	Anborek	IEC 61010-1	anbotek	Anbores	Anbotek	Anbo
Claus	se par	Requirement – Tes	t Anbore	k abotek	Result -	Remark	k moord	/erdict

Page 5 of 52

4.4	TESTING IN SINGLE FAULT CONDITION	And Lotek Anbotek	And P.ok
4.4.1	Fault tests	k wotek Ambotek	Anton rel
4.4.2	Application of fault conditions	ofer Annotek Anbotek	P
4.4.2.1	Single fault conditions not covered by 4.4.2.1 to 4.4.2.12	See appended table	otek Anbe
4.4.2.2	Protective impedance	No protective impedance required	Anbote N
4.4.2.3	Protective conductor	Anbo sek abotek	Anb Pres
4.4.2.4	Equipment or parts for short-term or intermittent operation	No such parts	Noore
4.4.2.5	Motors Motors	otek Anbotek Anbo	N
4.4.2.6	Capacitors	Anti-	N
4.4.2.7	Mains transformers	Ando stek anbotek	mbor N
4.4.2.7.2	Short circuit	Anbo tek Anbotek	Arib N
4.4.2.7.3	Overload	en Anbo	Nove
4.4.2.8	Outputs	potek Anbo sek abotel	N'upos
4.4.2.9	Equipment for more than one supply	Anbotek Anbo. Al	Hek N An
4.4.2.10	Cooling	anbotek Anbo. A.	, bote ^K N
4.4.2.11	Heating devices	Anbotek Anbot	N.
4.4.2.12	Insulation between circuits and parts	ek unpotek Aupon	Notek
4.4.2.13	Interlocks	otek anbotek Anbots	N
4.4.2.14	Voltage selectors	tek hotek Anbore	N
4.4.3	Duration of tests	Into stek anbotek Anbo	PAIN
4.4.4	Conformity after application of fault conditions	Anbo K Lotek Ar	pore P

5Anbo	Marking and documentation		An Pres
5.1.1	General	tek Anborn An botek	Pupot.
Anbo	Required equipment markings are:	storek Anbore Ar.	ek Ant
ek An	Visible:	anbotek Anbote Art	notek P
otek	From the exterior; or	anbotek Anbote An	P
abotek	After removing a cover; or	No cover provided	Nek Mek
abotek.	Opening a door	No door provided	Am N
hi.	After removal from a rack or panel	tek abotek Anbote	N
k Au	Not put on parts which can be removed by an operator	No such parts provided	orek N Ant





. No.	PL TY POLES. TUD.	_ ''o'r _ ''o'o'. bu	W.
Clause	Requirement – Test	Result - Remark	Verdict
bore	Latter overhold (IEC COOCT) wood	Anbote Ann	Anbotek
Aupolei	Letter symbols (IEC 60027) used	Anborer Ann	Prek
Anbotek	Graphic symbols (IEC 61010-1: Table 1) used	rek Ambotek Ambo	N N
5.1.2	Identification	See below	74 - VL
100 No	Equipment is identified by:	hotek Anbotek Anbor	P W.
- rek	a) Manufacturer's or supplier's name or trademark	(see marking plate for details)	P P
20,	b) Model number, name or other means	(see marking plate for details)	Aupore P
Aupora	Manufacturing location identified	Not required: unitis manufactured at one location	Anb New
5.1.3	Mains supply	ok abotek Anbote	Arr
K No.	Equipment is marked as follows:	bo. Ar potek Aupote	- Pulp
N. Dir	a) Nature of supply:	Aupor An	P P
obotek	1) a.c. rated mains frequency or range of frequencies	Anbotek Anbotek	nbote ^R P
abotek	2) d.c. mark with symbol 1 of Table 1	ok nbotek Anbote	Pote!
abore!	b) Rated supply voltage(s) or range	ek sootek Anbore	N
bu.	c) Max. Rated power (W or VA) or input current	both botek Anbote	-Vup
yek An	The marked value not less than 90 % of the maximum value	Tupotek Vupotek Vup.	hotek N
abotek	If more than one voltage range:	supotek Aupon k	N ^c
abotek	Separate values marked; or	k anbotek Anbot	Notek
protek	Values differ by less than 20%	tek abotek Anbotes	N
2,00	d) Operator-set for different rated supply voltages:	No such device	bu.
ek bii.	Indicates the equipment set voltage	Inpos Anbo	N
lpojek V	Portable equipment indication is visible from the exterior	Anbotek Anbotek As	botek N
anboiek	Changing the setting changes the indication	Anborek Anbore	Niek
Anbotek	e) Accessory Mains socket-outlets accepting standard MAINS plugs are marked:	tek Anbotek Anbotek	Anbo
ek Anbo	With the voltage if it is different from the mains supply voltage	hotek Anbotek Anbot	ek N An
otek	For use only with specific equipment	Ann Anbotek An	N
Anbotek	If not marked for specific equipment it is marked with:	Amborek Amborek	Anborek
Anbotes	The maximum rated current or power; or	rek Anbores Anbo	Noot
Anboh	Symbol 14 with full details in the documentation	hotek Anbotek Anbo	N N
5.1.4	Fuses Annual Ann	No operator replaceable fuses	V





luct Safety	Page 7 of 52	Report No. 18250	SC00059601
k Anbo	IEC 61010-1	Anbotek Anbotek Anbot	rek Anbo
Clause	Requirement – Test	Result - Remark	Verdict
abotek	Anbore Min Make Anboren Anboren	abotek Antion A	-otek
Anbotek	Operator replaceable fuse marking (see also 5.4.5):	Anbotek Anbotek	Anbolek Anbolek
5.1.5	Terminals, connections and operating devices	No such devices affecting safety	K Pupoter
5.1.5.1	General	Tipo, Park Pupo,	N Proces
botek	Where necessary for safety, indication of purpose of TERMINALS, connectors, controls and indicators marked	Anbotek Anbotek An	N Imborek
Ann	Insufficient space, symbol 14 used	And otek anbotek	AnbN .ak
Anbore	Push-buttons and actuators of emergency stop devices and indicators:	ootek Anbotek Anbotek	N anbote
ek Anb	used only to indicate a warning of danger or	hotek Anboter Anb	tek N ank
otek	the need for urgent action	Anbotek Anbotek Ant	N
-otek	coloured red	Antorek Anborek	N _K
Purp	coded as specified in IEC 60073	And work Anbotek	Aupon N
Anbotel	Supplementary means of coding provided, if meaning of colour relates (see IEC 60073):	Potek Wilpotek Wilpotek	AN Anbote
ek Anb	to safety of persons; or	abotek Anbote Ans	tek N anb
otek P	safety of the environment	abotek Anbotes Anb	n N _e kN
hotek	Indication of emergency stop devices	No such device used	N
5.1.5.2	Terminals	ok botek Anboter	Anb.
Pur Polsk	Mains supply terminals identified	ak notek Anboten	A'N Jel
r mo	Other terminal marking:	core Ambotek Anbotes	Pupp
V. Dur	a) Functional earth terminals (symbol 5 used)	Anbore Ann Sofek Anbo	N Anbe
O.c. by	b) Protective conductor terminals:	Anbore Ant Lotek Ar	boyer A
inposek	Symbol 6 is placed close to or on the terminal; or	Anbores Amborek	Anboln
hotek	Part of appliance inlet	ok hotek Anbotes	And Notek
r vo	c) Terminals of control circuits(symbol 7 used)	ok hotek Anbotek	N
stek An	d) Hazardous live terminals supplied from the interior	No hazardous live terminals	orek Anto
hotek	Standard mains socket outlet; or	upotek Anbores Ar	N _{oot} eN
nbotek	Ratings marked; or	k anbotek Anbore	Nek
abotek	Symbol 14 used	ek abotek Anboron	Notek
- b.,	No roles Man	o. h. A Polos	VUD

5.1.6



P P

If disconnecting device, off- position marked

If push-button used as power supply switch:

Switches and circuit-breakers



Clause	Requirement – Test	Result - Remark	Verdict
otek	Trequirement Foot	Troodit Tromain	-ak
ov rek	Symbol 9 and 15 used for on-position	Anbo stek anbotek	Antonio Pak
Auto.	Symbol 10 and 16 used for off-position	Aupo, tek upotek	Anbare
bupo,	Pair of symbols 9, 15 and 10, 16 close together	ciek Wipo, W. Spolek	Pibol
5.1.7	Equipment protected by double insulation or reinforced insulation	hotek Anborek Anbor	arek _ An
otek	Protected throughout (symbol 11 used)	hotek Anborek An	N
hotek	Only partially protected (symbol 11 not used)	And hotek Anbotek	Nex
5.1.8	Field-wiring terminal boxes	k hotek Anborek	Vupo.
Pupo Use	If terminal or enclosure exceeds 60 C:	and Andrek Anbotek	N
proc	Cable temperature rating marked	potek Anbote	Nank
otek bud	Marking visible before and during connection or beside terminal	Anbotek Anbotek Anb	otek N
5.2×e ^{lk}	Warning markings	An Anboren	up otek
hotek	Visible when ready for normal use	ok botek Anborek	P re
Pur	Are near or on applicable parts	ak hotek Anborok	P
P.02	Symbols and text correct dimensions and colour:	Note: Anbote	Panta
Hek Pup	a) symbols min 2,75 mm and text 1,5 mm high and contrastingin colour with background	Tupotek Vupotek Vupo	hotek P
hotek hotek	b) symbols and text moulded, stamped or engraved in material min. 2,0 mm high and	Anborek Anborek	Anbo Nº
Anbotek	0.5 mm depth or raised if not contrasting in colour	otek Anbotek Anbotek	PLN Ove
Anbo	If necessary marked with symbol 14	notek Anbotek Anbo	N N
notek An	Statement to isolate or disconnectif access by using a tool to HAZARDOUS LIVE parts is permitted	Anbotek Anbotek Anb	botek N
5.3 Anbotek	Durability of markings	Markings are durable and legible	Anbotek Anbotek
Aupor	The required markings remain clear and legible in normal use	(see appended table)	Rupo
5.4	Documentation	anbotek Anbo	Pr
5.4.1	General	Aupo, M. apotek W.	DOLEN.
anbotek	Equipment is accompanied by documentation for safety purposes for operator or responsible body	Anbotek Anbotek	Anborek
Anbotek	Safety documentation for service personnel authorized by the manufacturer	rek Anbotek Anbotek	N _{Anbo}
NUPO	Documentation necessary for safe operation is provided in printed media or	abote Anbote Anbote	PAT





IEC 61010-1 Clause Requirement - Test Result - Remark Verdict in electronic media if available at any time Documentation includes: a) Intended use b) Technical specification c) Name and address of manufacturer or supplier d) Information specified in 5.4.2 to 5.4.6 e) Information about how to mitigate risks remaining P f) accessories for safe operation of the equipment specified g) guidance provided to check correct function of the equipment, if incorrect reading may cause a hazard from harmful or corrosive substances of hazardous live parts h) Instructions for lifting and carrying (see 7.5) Warning statements and a clear explanation of warning symbols: Provided in the documentation; or Ν Information is marked on the equipment 5.4.2 Equipment ratings Documentation includes: DC24V a) Supply voltage or voltage range N Frequency or frequency range Power or current rating b) Description of all input and output connections in accordance to 6.6.1 a) c) Rating of insulation of external circuits as N. required by 6.6.1b) d) Statement of the range of environmental Ambient temperature: P conditions 5℃~40℃ IP20 e) Degree of ingress protection (IP, IEC 60529) Ρ f) Impact rating less than 5 J No impact rating less than 5 J Ν IK code in accordance to IEC 62262 marked or N symbol 14 of table 1 marked, with Ν N RATED energy level and test method stated 5.4.3 No special safety installation Equipment installation instructions deemed required

Shenzhen Anbotek Compliance Laboratory Limited





Report No. 18250SC00059601 IEC 61010-1 Clause Requirement - Test Result - Remark Verdict Documentation includes instructions for: a) Assembly, location and mounting requirements N b) Protective earthing N c) Connections to supply Ν d) Permanently connected equipment: 1) Supply wiring requirements N 2) If external switch or circuit-breaker, requirements and location recommendation e) ventilation requirements N f) special services (e.g. air, cooling liquid) Ν g) Instructions relating to sound level 5.4.4 Equipment operation Instructions for use include: a) identification and description of operating Р (see user manual) controls b) Positioning for disconnection N c) Instructions for interconnection Р d) Specification of intermittent operation limits (see user manual) Р e) Explanations of symbols used f) Replacement of consumable materials N g) Cleaning and decontamination h) Listing of anypoisonous or injurious gases and No hazards gases quantities i) RISK reduction procedures relating to No such flammable liquids Ν flammable liquids (see 9.5) provided j) RISK reduction procedures relating burn from Ν surfaces permitted to exceed limits of 10.1 Additional precautions for IEC 60950 conforming N equipment in regard to moistures and liquids A statement about protection impairment if used in Ν a manner not specified by the manufacturer 5.4.5 Equipment maintenance and service Instructions for responsible body include: Instructions sufficient in detail permitting safe maintenance and inspectionand continued safety: Instruction against the use of detachable MAINS supply cord with inadequate rating Specific battery type of user replaceable batteries

Shenzhen Anbotek Compliance Laboratory Limited

400-003-0500 www.anbotek.com

Any manufacturer specified parts



Clause	Requirement – Test	Result - Remark	Verdict
botek	Anbore Anboren Anboren	abotel Anton A	Lotek
	Rating and characteristics of fuses	Anbotek Anbotes	Ant Pek
Aupotek	Instructions include following subjects permitting safe servicing and continued safety:	tek Anbotek Anbotek	And P
Anbore	a) product specificRISKSmay affect service personnel	abotek Anbotek Anbot	k P
And	b) protective measures for theseRISKS	Anbotes And stek and	otek P Ar
otek	c) verification of the safe state after repair	Anbotek Anbo	nboteP
5.4.6	Integration into systems or effects resulting from special conditions	No such special conditions used	Aup Nsk
Arra	Aspects described in documentation	Array anbotek	N

6	Protection against electric shock	Ambore And Otek Antote	- Ant
6.1	General	Anbores Anb	otek-
6.1.1	Requirements	Anboten Anbo	upotek
Anboten	Protection against electric shock maintained in NORMAL CONDITION and SINGLE FAULT CONDITION	Comply with requirement	Anbotek Anbotek
PK DU	ACCESSIBLE parts not HAZARDOUS LIVE	nbotek Anbote Amb	P Anb
anbotek Anbotek	Voltage, current, charge or energy below the limits in NORMAL CONDITION and in SINGLE FAULT CONDITION between:	Anbotek Anbotek Anb	ntekP p
Anbotek	ACCESSIBLE parts and earth	ek Anbotek Anbo	Notek
Anboth	Two ACCESSIBLE parts on same piece of the equipment within a distance of 1,8 m	otek Anbotek Anbotek	PAnbotek
otek Ani	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.11	Inbotek Anbotek Anbotek	P Anbe
6.1.2	Exceptions	Anbotek Anbotes Asia	NOT-
Aupotek	Following HAZARDOUS LIVE parts may be accessible to an OPERATOR:	Anbotek Anbotek Ar	N Anbotek
Aupore	a) parts of lamps and lamp sockets after lamp removal	otek Anbotek Anbotek	Nipotek
Hek P	b) parts to be replaced by operator only by the use of tool and warning marking	Anbotek Anbotek Anbotek	N And
obotek	Those parts not hazardous live 10 s after interruption of supply	Anbotek Anbotek An	pot N
Anbotel	Capacitance test if charge is received from internal capacitor	rek Anbotek Anbotek	Antorek
6.2	Determination of accessible parts	hotek Anbotek Anbo	nbot
6.2.1	General	otek Anbotek Anbo	P





Page 12 of 52 Report No. 18250SC00059601 IEC 61010-1 Clause Requirement - Test Result - Remark Verdict Unless obviously determination of accessible parts as specified in 6.2.2 to 6.2.4 6.2.2 Examination Р - with jointed test finger (as specified B.2) with rigid test finger (as specified B.1) and a force of 10 N 6.2.3 Openings above parts that are hazardous live Ν - test pin with length of 100 mm and 4 mm in N diameter applied Openings for pre-set controls - test pin with length of 100 mm and 3mm in diameter applied Limit values for accessible parts 6.3 6.3.1 Levels in normal condition a) Voltage limits less than 33 V r.m.s. and 46,7 V Accessible enclosure voltage peak or 70 V d.c. limits less than 46,7 V peak or 70 V d.c. for wet locations voltage limits less than 16 V Ν r.m.s. and 22,6 V peak or 35 V d.c. Voltages are not HAZARDOUS LIVE the levels of: b) Current less than 0.5 mA r.m.s. for sinusoidal. Measure: 0.15mA r.m.s. 0,7 mA peak non sinusoidal or mixed frequencies or 2 mA d.c. when measured with measuring circuit A.1 or A.2 if less than 100 Hz for wet locations measuring circuit A.4 used c) Levels of capacitive charge or energy less: Ν 1) 45 µC for voltages up to 15 kV peak or d.c. or line A of Figure 3 2) 350 mJ stored energy for voltages above 15 kV peak or d.c. 6.3.2 Levels in single fault condition a) Voltage limits less than 33 V r.m.s. and 46,7 V Accessible enclosure voltage Ρ peak or 70 V d.c. less than limit value for wet locations voltage limits less than 16 V N r.m.s. and 22,6 V peak or 35 V d.c. Voltages are notHAZARDOUS LIVEthe levels of:

Shenzhen Anbotek Compliance Laboratory Limited



Measure: 0.15mA r.m.s.

P

b) Current less than 0,5 mA r.m.s. for sinusoidal,

frequencies or 2 mA d.c. when measured with measuring circuit A.1 or A.2 if less than 100 Hz

0,7 mA peak non sinusoidal or mixed



	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
ootek	Tupon M. Totak Vuposom Vupo	abotel Anbor A	rotek
bolek	for wet locations measuring circuit A.4 used	aborek Anbore	Ame Nek
Ar. shotek	c) Levels of capacitive charge or energy less:	ek shotek Anbotes	Ant N
Anbotel	1) 45 µC for voltages up to 15 kV peak or d.c. or line A of Figure 3	botek Anbotek Anboten	N Ani
kek Aup	2) 350 mJ stored energy for voltages above 15 kV peak or d.c.	Anbotek Anbons An	otek N
6.4	Primary means of protection	Anbo Lek abotek	Aupole
6.4.1	ACCESSIBLE parts prevented from being HAZARDOUS LIVE by one or more of following means:	ek Anbotek Anbotek	Anbore
k Aupo	a) ENCLOSURES or PROTECTIVE BARRIERS (see 6.4.2)	hotek Anbotek Anbote	PARIE
otek as	b) BASIC INSULATION(see 6.4.3)	Antotek Anbotek Ant	_{se} /P
otek	c) Impedance (see 6.4.4)	And anbotek	N
5.4.2	Enclosures and protective barriers	And otek Andotek	Anbor
Vupo sek	- meet rigidity requirements of 8.1	Aupotek Vupotek	N
Anbo	- meet requirements for BASICINSULATION, if protection is provided by insulation	totek Anbotek Anbote	N _{mb}
upotek An	- meet requirements of 6.7 for CREEPAGE and CLEARANCES between ACCESSIBLE parts and HAZARDOUS live parts, if protection is provided by limited access	Anbotek Anbotek Anbotek	Anbotek N
6.4.3	Basic insulation	Anbo tek anbotek	MP
Anbot	- meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7	orek Anbotek Anbotek	P.nbc
6.4.4	Impedance	hotek Anboren Anbe	"ek N
(pojek	Impedance used as primary means of protection meets all of following requirements:	Anbotek Anbotek Ar	Anborer
Anbore	a) limits current or voltage to level of 6.3.2	Anbore And	An Niem
Anbore	b) RATED for maximum WORKING VOLTAGE and the amount of power it will dissipate	rek Anbore Anborek	Nabo
atek Anb	c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of BASICINSULATION of 6.7	Anbotek Anbotek Anbo	potek N Ar
6.5	Additional means of protection in case of single fault condition	Anbotek Anbotek	Aupotek
6.5.1	ACCESSIBLE parts are prevented from becoming HAZARDOUS live by the primary means of	lek Anbotek Anbotek	Anbor



a) PROTECTIVE BONDING(see 6.5.2)



IEC 61010-1 Clause Requirement - Test Result - Remark Verdict b) SUPPLEMENTARYINSULATION (see 6.5.3) c) automatic disconnection of the supply (see N d) current-or voltage-limiting device (see 6.5.6) Ν Alternatively one of the single means of protection is used: e) REINFORCED INSULATION(see 6.5.3) Ν f) PROTECTIVE IMPEDANCE (see 6.5.4) N 6.5.2 Protective bonding 6.5.2.1 ACCESSIBLE conductive parts, may become HARZARDOUSLIVE in SINGLE FAULT CONDITION: Bonded to the PROTECTIVE CONDUCTOR N TERMINAL; or Separated by conductive screen or barrier bonded N to PROTECTIVE CONDUCTOR TERMINAL 6.5.2.2 Integrity of protective bonding a) Protective bonding consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses b) Soldered connections: Independently secured against loosening Ν Not used for other purposes Ν c) Screw connections are secured Ν d) Protective bonding not interrupted N exempted as removable partcarries MAINS N SUPPLY INPUT connection e) Any moveable PROTECTIVE BONDING N connection specifically designed, and meets 6.5.2.4 f) No external metal braid of cables used (not Ν regarded as PROTECTIVE BONDING) g) If mains supply passes through: Means provided for passing protective conductor N Impedance meets 6.5.2.4 N h) Protective conductors bare or insulated, if insulated, green-and-yellow

Shenzhen Anbotek Compliance Laboratory Limited



Report No. 18250SC00059601 IEC 61010-1 Clause Requirement - Test Result - Remark Verdict Exceptions: 1) earthing braids N 2) internal protective conductors etc. N Green/yellow not used for other purposes TERMINAL suitable for connection of a PROTECTIVE CONDUCTOR, and meets 6.5.2.3 6.5.2.3 Protective conductor terminal a) Contact surfaces are metal P b) Appliance inlet used c) For rewireable cords and permanently connected equipment, protective conductor terminal is close to mains supply terminals d) If no mains supply is required, any protective conductor terminal: Is near terminals of circuit for which protective N earthing is necessary External if other terminals external N e) Equivalent current-carrying capacity to mains Ν supply terminals f) If plug-in, makes first and breaks last N g) If also used for other bonding purposes, protective conductor: Applied first Secured independently Unlikely to be removed by servicing Ρ h) Protective conductor of measuring circuit: 1) Current RATING equivalent to measuring circuit TERMINAL; 2) PROTECTIVE BONDING: Ρ Not interrupted; or i) Functional earth terminals allow independent connection j) If a binding screw used for PROTECTIVE Р CONDUCTOR TERMINAL: Suitable size for bond wire Not smaller than 4,0mm (No. 6) P At least 3 turns of screw engaged

Shenzhen Anbotek Compliance Laboratory Limited

Passes tightening torque test



	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Tunny Tuntek Vupor Vun	abover And	-otek
	k) Contactpressure not capable being reduced by deformation of materials	Anborek Anborek	Anborek Anborek
6.5.2.4	Impedance of protective bonding of plug- connected equipment	tek Anborek Anborek	Noote
ek Anbr	Impedance between PROTECTIVE CONDUCTOR TERMINAL and each ACCESSIBLE part where PROTECTIVE BONDING is specified, is:	Anbotek Anbotek Anbo	botek A
Aupore	less than 0,1 Ohm; or	Anbore Ann hotek	Anto N
Anbore	less than 0,2 Ohm if equipment is provided with non detachable cord	ek Anborek Anborek	Nootek
6.5.2.5	Bonding impedance of PERMANENTLY CONNECTED EQUIPMENT	anbotek Anbotek Anbot	N ^{Anc}
6.5.2.6	Transformer protective bonding screen	Anbotek Anbor An	Nestocia
Anbotek otek	Transformer provided with screen for protective bonding:	Anbotek Anbotek	AupoNk
	screen bonding consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses (see6.5.2.2 a)	otek Anbotek Anbotek	ANOO!
otek An	screen bonding with soldered connection (see 6.5.2.2 b) is:	Anbotek Anbotek And	nbotekN
iupo.	- Independently secured against loosening	Anbo. tek anbotek	AmboN K
Anbo.	- Not used for other purposes	Anbo. Lak abotek	ATNO TO
6.5.3	Supplementary insulation and reinforced insulation	otek Anborek Anborel	P _{Anbore}
stek Anh	- meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7	Anbotek Anbotek Anb	potek P
6.5.4	Protective impedance	Anboten Anbo	Nodn
Anbotek	Limits current or voltage to level of 6.3.1 in NORMAL and to level of 6.3.2 in SINGLE FAULT CONDITION	tek Anbotek Anbotek	Andotel
Anbore Anb	CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of DOUBLE or REINFORCE DINSULATION of 6.7	anbotek Anbotek Anbo	botek N Anbr
(botek	The protective impedance consists of one or more of the following:	Anbotek Anbotek	AnboteN AnboteN
Anbotek	a) appropriate single component suitable for safety and reliability for protection, it is:	ek abotek Anbotek	Vul.

VOLTAGE



Ν

1) RATED twice the maximum WORKING



Page 17 of 52 Report No. 18250SC00059601 IEC 61010-1 Clause Requirement - Test Result - Remark Verdict 2) resistor RATED for twice the power Ν dissipation for maximum WORKING VOLTAGE b) combination of components N Single electronic device not used as Ν PROTECTIVE IMPEDANCE 6.5.5 Automatic disconnection of the supply No such device a) RATED to disconnect the load within time Ν specified in Figure 2 b) RATED for the maximum load conditions of the equipment 6.5.6 Current- or voltage-limiting device No such device Device complies with all of: Ν a) RATED to limit the current or voltage to the level of 6.3.2 b) RATED for the maximum working voltage; and Ν RATED for the maximum operational current if applicable c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of SUPPLEMENTARY **INSULATION of 6.7** Connections to external circuits 6.6.1 Connections do not cause ACCESSIBLE parts of the following to become HAZARDOUS LIVE in NORMAL CONDITION or SINGLE FAULT CONDITION: - the external circuits Ρ - the equipment Р Protection achieved by separation of circuits; or short circuit of separation does not cause a HAZARD Instructions or markings for each terminal include: a) Rated conditions for terminal b) Required rating of external circuit insulation 6.6.2 Terminals for external circuits TERMINALS which receive a charge from an internal capacitor are not HAZARDOUS LIVE after 10 s of interrupting supply connection

Shenzhen Anbotek Compliance Laboratory Limited

6.6.3



No such hazardous live

terminals

Circuits with terminals which are hazardous live



Clause	Requirement – Test	Result - Remark	Verdict
botek	Aurore Vun	hotek Anbote As	-otek
potek	These circuits are:	aborek Anbore	Ann sek
Pr. Polek	Not connected to accessible conductive parts; or	ok hotek Anbotes	AMN
ek Anbote	Connected to accessible conductive parts, but are not mains circuits and have one terminal contact at earth potential	botek Anbotek Anbotek	N Amb
rek .	No accessible conductive parts are hazardous live	Anbo tek abotek An	N
6.6.4	Accessible terminals for stranded conductors	Aupo. W. Spotek	Yupose.
Aupor	No RISK of accidental contact because:	Aupor Aur patek	AnbRica
Anbore	Located or shielded	ek Aupon Au Polek	Noore
yk Aupore	Self-evident or marked whether or not connected to ACCESSIBLE conductive parts	ootek Anbotek Anbot	K N _{Anb}
*ek	ACCESSIBLE TERMINALS will not work loose	Anto rek anbotek Ant	N
6.7	Insulation requirements	Aupo, his apotek	upoter
6.7.1	The nature of insulation	Aupo, by spokek	Aupoter
6.7.1.1	Insulation between ACCESSIBLE parts or between separate circuits consist of CLEARANCES, CREEPAGE DISTANCES and solid insulation if provided as protection against a HAZARD	Jotek Anbotek Anbotek Anbotek Anbotek Anbote	otek Aube
6.7.1.2	Clearances	Anbo tek abotek	nbore P
anbotek	Required CLEARANCES reflecting factors of 6.7.1.1	k Anbotek Anbotek	Anbo'P
Anbotek Anbot	Equipment rated for operating altitude greater than 2000 m correction factor of Table 3 of 61010-1 applied	otek Anbotek Anbotek	P Anbo
6.7.1.3	Creepage distances	hotek Anbotek Anb	AND P
hotek	Required CLEARANCES reflecting factors of 6.7.1.1	Anbotek Anbotek A	Anbotek
Anbore	CTI material group reflected by requirements	Anbore Ann Ann	An Preh
Anbores	CTI test performed	otek Anbores Anso	Panbot
6.7.1.4	Solid insulation	botek Anbotek Anbo	ek N val
ek Aut	Required CLEARANCES reflecting factors of 6.7.1.1	Anbotek Anbotek Arts	potek N
6.7.1.5	Requirements for insulation according to type of circuit	Anbotek Anbotek	Anbotek
Anbotek	a) In 6.7.2 for mains circuits of overvoltage category II with a nominal supply voltage up to 300V	lek Anbotek Anbotek	Anbore Anbore
ak Anb	b) In 6.7.3 for secondary circuits separated from the circuits in a) only by means of a transformer	Anbotek Anbotek Anbo	otek P

Hotline 400-003-0500 www.anbotek.com



Aupo	IEC 61010-1	inbotek Anbo tek nbo	rek Anb
Clause	Requirement – Test	Result - Remark	Verdict
poter	Anto Antonia Antonia Antonia	Anboren Anbo	potek
	c) In K.1 for mains circuits of overvoltage category III or IV or for overvoltage category II over 300V	Anborek Anborek	Anborek
Anbor	d) In K.2 for secondary circuits separated from the circuits in c) only by means of a transformer	tek Aupon Aupotek	Poole
ek at	e) In K.3 for circuits that have one or more of:	the tek abotek Anbot	N Pro
botek	maximum TRANSIENT OVERVOLTAGE is limited to known level below the level of MAINS CIRCUIT	Anbotek Anbotek An	Anbotek
Anbotek	maximum TRANSIENT OVERVOLTAGE above the level of MAINS CIRCUIT	ek Anbotek Anbotek	Anborek
ak Anbore	WORKING VOLTAGE is the sum of more than one circuit or a mixed voltage	potek Anbotek Anbote	k N _{Anbo}
ootek Am	WORKING VOLTAGE includes recurring peak voltage, may include non-sinusoidal or non-periodic waveform	Anbotek Anbotek Ant	nbotek
Anbotek	5) WORKING VOLTAGE with a frequency above 30 kHz	k Anbotek Anbotek	Anbotek
6.7.2	Insulation for mains circuits of overvoltage II with a nominal supply voltage up to 300V	otek Anboren Anbore	N Anbo
6.7.2.1	CLEARANCES and CREEPAGE DISTANCES	Anbore And	Her P An
Ofe. V	Values for MAINS CIRCUITS of table 4 are met	Anbore And otek	_{1b} otel ^k P
"upotek	Coatings to achieve reduction to POLLUTION DEGREE I comply with requirements of Annex H	Anborek Anborek	AnboPk rek
6.7.2.2	Solid insulation	ak hotek Anbotek	N
6.7.2.2.1	Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4	inbotek Anbotek Anbotek	lek Nuber
upojek Ar	Equipment passed voltage tests of 6.8.3 with values of Table 5	Anbotek Anbotek N	hotek N
Anbotek	Complies as applicable:	anbotek Anboro	Nek
Anbotek	a) ENCLOSUREor PROTECTIVE BARRIER Clause8	tek Anbotek Anbotek	Naribore
tek Aupo	b) moulded and potted parts requirements of 6.7.2.2.2	potek Anbotek Anbo	ek N And
hotek	c) inner layers of printed wiring boards requirements of 6.7.2.2.3	Anbotek Anbotek An	Anbore N
Anboie	d) thin-film insulation requirements of 6.7.2.2.4	Aupoles Aug Polek	Ant Nick
6.7.2.2.2	Moulded and potted parts	lek Aupole Aun Totek	Noote
ek Anborr	Conductors between same two layers are separated by at least 0,4 mm after moulding is completed	botek Anbotek Anbot	k N _{Anb}





Report No. 18250SC00059601 IEC 61010-1 Clause Requirement - Test Result - Remark Verdict 6.7.2.2.3 Inner insulation layers of printed wiring boards Separated by at least 0,4 mm between same two N REINFORCE DINSULATION have adequate Ν electric strength; one of following methods used: a) thickness at least 0,4 mm b) insulation is assembled of minimum two Ν separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION c) insulation is assembled of minimum two N separate layers, where the combination is rated for test voltage of Table 5 for REINFORCED INSULATION 6.7.2.2.4 Thin-film insulation Conductors between same two layers are N separated by applicable CLEARANCES and CREEPAGE DISTANCES REINFORCE DINSULATION have adequate Ν electric strength; one of following methods used: a) thickness at least 0,4 mm b) insulation is assembled of min two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION c) insulation is assembled of min three separate N layers, where the combination of two layers passed voltage tests of 6.8.3 with values of Table 5 for REINFORCED INSULATION 6.7.3 Insulation for secondeary circuits derived from mains circuits of overvoltage II with a nominal supply voltage up to 300V 6.7.3.1 Secondary circuits where separation from MAINS N CIRCUITS is achieved by a transformer providing: - REINFORCED INSULATION N **DOUBLE INSULATION** Ν - screen connected to the PROTECTIVE CONDUCTOR TERMINAL CLEARANCES 6.7.3.2 P a) meet the values of Table 6 for BASIC **INSULATION and SUPPLEMENTARY** INSULATION: or

Shenzhen Anbotek Compliance Laboratory Limited

INSULATION



twice the values of Table 6 for REINFORCED



IEC 61010-1 Clause Requirement - Test Result - Remark Verdict b) pass the voltage tests of 6.8 with values of Table 6; with following adjustments: 1) values for REINFORCED INSULATION are Po 1,6 times the values for BASIC INSULATION 2) if operating altitude is greater than 2000 m values of CLEARANCES multiplied with factor of Table 3 3) minimum CLEARANCE is 0,2 mm for Ν POLLUTION DEGREE 2 and 0,8 mm for **POLLUTION DEGREE 3** 6.7.3.3 CREEPAGE DISTANCES P Based on WORKING VOLTAGE meets the values Ν of Table 7 for BASIC and SUPPLEMENTARY INSULATION Values for REINFORCED INSULATION are twice the values of BASIC INSULATION Coatings to achieve reduction to POLLUTION No DEGREE I comply with requirements of Annex H 6.7.3.4 Solid insulation N 6.7.3.4.1 Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4 a) Equipment passed voltage test of 6.8.3.1 for N 5 s with VALUES of Table 6 for BASIC and SUPPLEMENTARY INSULATION values for REINFORCED INSULATION are 1,6 times the values of BASIC INSULATION b) if WORKING VOLTAGE exceeds300 V. equipment passed voltage test of 6.8.3.1 for 1 min with a test voltage of 1,5 times working voltage for BASIC or SUPPLEMENTARY INSULATION value for REINFORCED INSULATION are twice the WORKING VOLTAGE Complies as applicable: Ν 1) ENCLOSURE or protective barrier Clause 8 2) moulded and potted parts requirements of N 6.7.3.4.2 3) inner layers of printed wiring boards Ν requirements of 6.7.3.4.3 4) thin-film insulation requirements of 6.7.3.4.4 6.7.3.4.2 Moulded and potted parts

Shenzhen Anbotek Compliance Laboratory Limited





IEC 61010-1 Clause Requirement - Test Result - Remark Verdict Conductors between same two layers are Ν separated by applicable distances of Table 8 Inner insulation layers of printed wiring boards 6.7.3.4.3 N Separated by at least by applicable distances of Ν Table 8 between same two layers REINFORCED INSULATION have adequate Ν electric strength; one of following methods used: a) thickness at least applicable distance of Table 8 N b) insulation is assembled of minimum two separate layers, each RATED for test voltage of Table 6 for BASIC INSULATION c) insulation is assembled of min two separate layers, where the combination is rated for 1,6 times the test voltage of Table 6 6.7.3.4.4 Thin-film insulation Conductors between same two layers are N separated by applicable CLEARANCES andCREEPAGE DISTANCES REINFORCED INSULATION have adequate electric strength; one of following methods used: a) thickness at least applicable distance of Table 8 Ν b) insulation is assembled of min two separate layers, each RATEDfor test voltage of Table 6 for BASIC INSULATION c) insulation is assembled of min three separate layers, where the combination of two layers passed voltage tests with 1,6 time values of Table 6: a.c. test of 6.8.3.1; or Ν d.c. test of 6.8.3.2 for circuits stressed only by Ν d.c. voltages 6.8 Procedure for voltage tests 6.9 Constructional requirements for protection against electric shock If a failure could cause a HAZARD: 6.9.1 a) Security of wiring connections b) Screws securing removable covers c) Accidental loosening d) CREEPAGE and CLEARANCES not reduced below the values of basic insulation by loosening

Shenzhen Anbotek Compliance Laboratory Limited





Clause	Requirement – Test	Result - Remark	Verdict
botek	Aupage, Vun	abotek Anbote Ar	-otek
6.9.2	Material not to be used for safety relevant insulation:	Anbotek Anbotek	Anborek Anborek
Anbor	Easily damaged materials not used	clek Aupon ok Potek	Noote
Anbore	Non-impregnated hydroscopic materials not used	abotek Anbote An	K N Ant
6.9.3	Colour coding	abotek Anbote Anti-	otek N
potek p	Green-and-yellow insulation shall not be used except:	Anborek Anborek An	unpotek-
Anbo.	a) protective earth conductors;	Anbo. Anbotek	AIRIDN
Anbo.	b) protective bonding conductors;	ak Anbo. ak botek	Noore
Aupon	c) potential equilization conductors;	dootek Anbor ak hote	K Namb
Anbre Anbre	d) functional earth conductors	anbotek Anbote Ane	otel N p
6.10	Connection to mains supply source and connections between parts of equipment	Anbotek Anbotek	nbotek-
6.10.1	Mains supply cords	Anbo sek nbotek	Aupore.
Aupo.	Rated for maximum equipment current	hek Anbo sek shotek	NP OTO
Aupon	Cable complies with IEC 60227 or IEC 60245	botek Anbo ek abote	- Panbo
Anbo	Heat-resistant if likely to contact hot parts	inbotek Anbour	N A
otek bi	Temperature rating (cord and inlet)	uppotek Aupo, ak	N ⁴ stode
inbotek otek	Green-and-yellow used only for connection to protective conductor terminals	Anbotek Anbotek	Aupo PK
Anbotek	Detachable cords with IEC 60320 mains connectors:	otek Anbotek Anbotek	Vupo,
Anbot	Conform to IEC 60799; or	botek Anborek Anbo	N N
ick an	Have the current rating of the mains connector	Lotek Anbotek Anb	N
6.10.2	Fitting of non-detachable mains supply cords	Ann Motek Anbotek A	100 x8K
6.10.2.1	Cord entry	And anbotek	Aupo.
Yun Wek	Inlet or bushing smoothly rounded; or	Ann ofek Anbofek	MUN
Anto	Insulated cord guard protruding >5D	oter And otek anbotek	N _{po} ,
6.10.2.2	Cord anchorage:	Anboten Anbo	sk bu
hotek Ant	Protective earth conductor is the last to take the strain	Anbotek Anbotek Ar	pote ^K N
Anbotek	a) Cord is not clamped by direct pressure from a screw	Anbotek Anbotek	Anborek Anborek
Anbore	b) Knots are not used	olek Anbore Ann	Noote
Anbore	c) Cannot push the cord into the equipment to cause a hazard	Thotak Wipotes Wipot	N N Anto





Clause	Requirement – Test	Result - Remark	Verdict
notek	Anborek Anborok Anborok	All Anboten	notek
Anborek	d) No failure of cord insulation in anchorage with metal parts	Vupotek Vupotek	Anborek Anborek
Aupor	e) Not to be loosened without a tool	lek Aupone Au Potel	N/pot
ik Anboli	f) Cord replacement does not cause a HAZARD and method of strain relief is clear	botek Anbotek Anb	ok N An
rek h	Push-pull and or torque test	Anbo tek anbotek A	nboro N
6.10.3	Plugs and connectors	Aupo, wek apolek	Anbore-
Anbotek	Mains supply plugs, connectors etc., conform with relevant specifications	ek Anbotek Anbotek	AnbN
Anbore	If equipment supplied at voltages below 6.3.2.a) or from a sole source:	ootek Anbotek Anbo	kek N
otek tup	Plugs of supply cords do not fit mains sockets above rated supply voltage	Anbotes Anbotek Ar	lootek N I
nbotek	Mains-type plugs used only for connection to mains supply	Anbotek Anbotek	Anbotek Anbotek
Anbore	Plug pins which receive a charge from an internal capacitor	kek abotek Anbotek	Note
	Accessory MAINS socket outlets:	tek abotek Anbot	N
Hek by	a) Marking if accepts a standardMAINSplug (see 5.1.3e)	Anbotek Anbotek An	ootek N
hotek	b) Input has a protective earth conductor if outlet has EARTH TERMINAL CONTACT	Anbotek Anbotek	Anbo NK
5.11	Disconnection from supply source	Anbotek Anbotek	Pupo.
6.11.1	Disconnects all current carrying conductors	oter Ando tek anboth	- Aupo
6.11.2 S.11.2	Exceptions	nbotek Anbo stek and	olek b
5.11.3	Requirements according to type of equipment	Anbotek Anbu tek	bojek
6.11.3.1	Permanently connected equipment and multi- phase equipment	Anborek Anborek	AnboiN AnboiN
And	Employs switch or circuit-breaker	And otek anbotek	MAN
Anbot	If switch or circuit-breaker is not part of the equipment, documentation requires:	botek Anbotek Anbote	otek tupo
ak An	a) Switch or circuit-breaker must be included in the installation	Anbotek Anbotek Ant	inbotek N
, V	b) Suitable location easily reached	Aupor Au Motek	Arrbot N
Aupore	c) Marking as disconnecting for the equipment	Anbore And Antek	ANDNER
5.11.3.2	Single-phase cord-connected equipment	lek Anbores Anb	- Anbol
Anbore	Equipment is provided with:	botek Anbotes Anbo	40k 40k
K b	a) Switch or circuit-breaker; or	ok poley Mup	N





Anbore	IEC 61010-1	upotek Aupote Aup	rek Anb
Clause	Requirement – Test	Result - Remark	Verdict
abotek l	Pupp. Pupping View View	upoteli Anbo, A	Lotek
	b) Appliance coupler (disconnectable without tool);	abotek Anbote	And Nek
by, posek	c) Separable plug (without locking device)	ok botek Anbote	Ant N stek
6.11.4	Disconnecting devices	ok hotek Anboten	AUPO
k blue	Electrically close to the SUPPLY	bote Antek Anbot	N Anbo
6.11.4.1	Switches and circuit-breakers	Anborer And work An	ootek N Ar
pore P	When used as disconnection device:	Anbores Anti-	Inpote N
Anboren	Meets IEC 60947-1 and IEC 60947-3	Anbores Anbo	Nup Nek
Anbores	Marked to indicate function	ek Anbotek Anbo	Notek
Anbotel	Not incorporated in MAINS cord	sorek Anborek Anb	k N _{mb} o
ek Aupo	Does not interrupt PROTECTIVE EARTH CONDUCTOR	Amborek Anborek Ant	otek N Ari
6.11.4.2	Appliance couplers and plugs	Anbore. Amb	nbotek
Aupoton	Where an appliance coupler or separable plug is used as the disconnecting device (see 6.11.3.2):	anbotek Anbotek	Anbotek
Anbotek	Readily identifiable and easily reached by the operator	lotek Aupotek Aupote	Anborr
otek Vupo	Single-phase portable equipment cord length not more than 3 m	Anbotek Anbotek Anb	orek N Ant
anbotek A.	Protective earth conductor connected first and disconnected last	Anbotek Anbotek	nbote N

Page 25 of 52

7 Anboten	Protection against mechanical hazards		-nbote
7.1 NOO'	Equipment does not cause a mechanical HAZARD in NORMAL nor in SINGLE FAULT CONDITION	nbotek Anbotek Anbo	rek Anb
aborek	Conformity is checked by 7.2 to 7.7	abořek Anbore Ar	P
7.2	Sharp edges	Smooth and rounded	Amb Prek
A toolek	Easily-touched parts are smooth and rounded	ek abotek Anbote	And P Otek
k hote	Do not cause an injury in normal use and	ok potek Anboter	P
bu.	Do not cause an injury in single fault condition	hoof Anbor	P And
7.3	Moving parts	Anbore An Morek An	poter A
7.3.1	HAZARDS from moving parts limited to a tolerable level with the conditions specified in 7.3.2 and 7.3.5	Anbotek Anbotek	Anbotek Anbotek
Anbotel	RISK assessment in accordance with 7.3.3 carried out	notek Anbotek Anbotek	N _{oos}
7.3.2	Exceptions:	otek anbotek Anbo	nek .





Clause	Requirement – Test	Result - Remark	Verdict
workelt.	Antores Anbores	Antotek Antotek Ar	po- rela
Aupolek	Access to HAZARDOUS moving parts permitted under following circumstances:	Anbotek Anbotek	Anborek Anborek
Anbore	a) obviously intended to operate on parts or materials outside of the equipment	rek Anbotek Anbotek	Noore
ak Ant	inadvertent touching of moving parts minimized by equipment design (e .g. guards or handles)	Anbotek Anbotek Anbo	N Am
Anbotek Anbotek	b) If operator access is unavoidable outside normal use following precautions have been taken:	Anbotek Anbotek	unbotek Ambotek
Anbore	1) Access requires TOOL	rek Anbore And	Note
Anbore	2) Statement about training in the instructions	potek Anbores Anbo	N N
ik Aup	Warning markings on covers prohibiting access by untrained operators	Anbotek Anbotek Anbo	otek N A
on b	or symbol 14 with full details in documentation	Aupor Ar.	nbote N
7.3.3	Risk assessment for mechanical HAZARDS to body parts	anbotek Anbotek	Anb Per hotek
Anbotel	RISK is reduced to a tolerable level by protective measures as specified in Table 12	otek Anbotek Anbote	P
k Anbi	Minimum protective measures:	anbotek Anbo. Anbo. Anbo.	osek bi
PAGE V	A. Low level measures	anbotek Anbo. Al	obotekP
nbotek	B. Moderate measures	anbotek Anbo.	N/
Vupotek	C. Stringent measures	ek Anbotek Anbot	Notek
7.3.4	Limitation of force and pressure	otek Anbotek Anbot	Pu.
Anbo	Following levels are met in normal and single fault condition:	nbotek Anbotek Anbot	P An
rotek Ar	Continuous contact pressure below 50 N / cm² with force below 150 N	Anbotek Anbotek A	nbotek P
Anbotek	Temporary force below 250 N for an area at least of 3 cm² for a maximum duration of 0,75 s	Anbotek Anbotek	Anborek Anborek
7.3.5	Gap limitations between moving parts	otek Anbote. And wotek	-nbot
7.3.5.1	Access normally allowed	abotek Anboten Anb	rek - ant
potek An	If levels of 7.3.4 exceeded and body part may be inserted minimum gap as specified in Table 13 assured in NORMAL and in SINGLE FAULT CONDITION	Anbotek Anbotek Ank	potek N Anbotek
7.3.5.2	Access normally prevented	Aubo, Pr. Apolek	Aupoles.
Aupote	Maximum gap as specified in Table 14 assured in NORMAL and in SINGLE FAULT CONDITION	dek Anbotek Anbotek	Noon
7.4	Stability	ak botek Anto	200





Clause	Requirement – Test	Result - Remark	Verdict
-otel	Though the point Androne.	Antotek Antotek An	New York
Aupolek	Equipment not secured to the building structure is physical stable	Anbotek Anbotek	Anbotek Anbotek
Anbore	Stability maintained after opening of drawers, etc. By automatic means, or	rek Anborek Anbotek	Noore
rek Anb	Warning marking requires the application of means	Anbotek Anbotek Anbot	otek N Arr
botek p	Compliance checked by following tests as applicable:	Anbotek Anbotek	anbotek sek
Aug	a) 10° tilt test for other than handheld equipment	And otek anbotek	Anb P
Anborel	b) multi-directional force test for equipment exceeds height of 1 m and mass of 25 kg	ootek Anbotek Anbotek	Phon
ak Anbe	c) downward force test for floor-standing equipment	Ambotek Ambotek Amb	otek N A
oo't A	d) overload test with 4 times maximum load for castor or support that supports greatest load	Anbotek Anbotek	inbote N
Aupotek	e) castor or support that supports greatest load removed from equipment	ak Anbotek Anbotek	Anbotek Anbotek
7.5 Anbore	Provisions for lifting and carrying	hotek Anbors Ann botel	- Panbo
7.5.1	Equipment more than 18 kg:	Equipmentmass is way less than 18 kg	Hek P AT
tek	Has means for lifting or carrying; or	Anb. stek Anbotek A	upo. P
TUP TOK	Directions in documentation	Anto tek anborek	Anbor P
7.5.2	Handles or grips	Anbo tek anbotek	PLN O
Aupo.	Handles or grips withstand four times weight	Cotek Aupon tek upotek	Napor
7.5.3	Lifting devices and supporting parts	Inbotek Anbo sek abo	iek N An
otek An	Rated for maximum load; or	Anbotek Anbo	botek N
nbotek	tested with four times maximum static load	Anbotek Anbo. Lak	nbotN*
7.6	Wall mounting	Not a wall mounting equipment	Anborek
AMP	Mounting brackets withstand four times weight	oter Anb otek anbotek	Naposs
7.7 Amba	Expelled parts	No such expelled parts	ek - Aup
ter but	Equipment contains or limits the energy	Aupotek Aupo. Wek	potek N
botek	Protection not removable without the aid of a tool	abotek Anber	ol√Ň

8 Ambotell	Resistance to mechanical stresses	otek	Anbotek	Pupo.	- Paris	abotek
8.1 Mark	Equipment does not cause a hazard when subjected to mechanical stresses in normal use	Anbotek	Anbotek	K Anbor	/r [Anbot
ie. Vu	Normal protection level is 5J	Conside	ered 5J	tek at	otek	o Vu

Shenzhen Anbotek Compliance Laboratory Limited

Hotline 400-003-0500 www.anbotek.com



Clause	Requirement – Test	Result - Remark	Verdict
notek	Amorek Anborek Anborek	An Antoren Ar	-tek
Aupotek	Levels below 5 J but not less than 1 J are acceptable if all the following criteria are met	Anbotek Anbotek	Aupo, Nek
Anboren	a) lower level be justified by manufacturer	tek Anboten Anbo	Note
Anbol	b) cannot easily be touched by unauthorzed persons or the general public	potek Anborok Anbo	ek N Anb
er Vu	c) only occasional access during NORMAL USE	Anboren Anb	potek N p
potek Anbotek	d) IK code in accordance to IEC 62262 marked or symbol 14 used with full information in the documentation	Anbotek Anbotek	unbote N
Anbotek	For non-metallic ENCLOSURES rated below 2 °C ambient temperature value chosen for minimum rated temperature	ek Anbotek Anbotek	Anborek
k Aut	Impact energies between IK values, the IK code marked for nearest lower value	botek Anbotek Anbot	NAME NAME
otek	Conformity is checked by performing following tests:	Anbotek Anboten An	hotek
inbotek	1) the static test of 8.2.1	Anboren Anbo	P
Anbotek	impact test of 8.2.2 with 5J except for hand- held equipment	k Anbotek Anbor	Anborek
Anbore	If impact energy not selected to 5J alternate method of IEC 62262 used	otek Anbote Ann	N Anbo
-K And	3) drop test of 8.3.1 or 8.3.2 except for fixed and equipment with mass over 100kg	Anboten Anb	otek N
ster b	Equipment rated with an impact rating of lk 08 by that clearly meets the criteria	Anbotek Anbotek	nboterN
	After the tests inspection with following results:	And tek abotek	Aupol-
Aupo, Potel	- Hazardous live parts above the limits of 6.3.2 not accessible	Anbotek Anbotek	AL No.
	- insulation pass the voltage tests of 6.8	or Anbore	Nun
Vier	i) no leaks of corrosive and harmful substances	inpose Aug aup	IGH P AT
lo _p V.	ii) Enclosure shows no cracks resulting in hazard	Auporen Aup	aborek P
bolek	iii) CLEARANCES not less than their permitted values	Anbores Anborek	AnbotP ak
Anbumbotek	iv) the insulation of internal wiring remains undamaged;	ak Anborek Anborek	An Pro
Anbo	V) Protective barriers necessary for safety have not been damaged or loosened	ntek Anbotek Anbotes	N _{UD}
ek bi	vi) No moving parts exposed, except permitted by 7.3	Anbotek Anbotek Anbo	N M
ootek	vii) no damage which could cause spread of fire	anbotek Anbo A	P
8.2	Enclosure rigidity tests	abotek Anbote	Ans Pek
3.2.1	Static test	ek hotek Anbotes	AMP OF
Pr	- 30N with 12mm rod to each part of enclosure	ok hotek Anbotek	P
sk vi	- in case of doubt test conducted at maximum rated ambient temperature	botes Antotek Anbot	N And





Page 29 of 52

Anbore	IEC 61010-1	inbotek Anbote And	rek Anbo
Clause	Requirement – Test	Result - Remark	Verdict
botek	Anbore Andrew	abotel Anto	-otek
8.2.2	Impact test	abotek Anboter	And Prek
Anbotek	Impact applied to any part of enclosure causing a hazard if damaged	lek Anbolek Anbolek	Anbotek Anbotek
Anboro	Impact energy level and corresponding IK code:	botek Anbors Ar.	K P Anbot
tek Anb	Non-metallic enclosure cooled to minimum rated ambient temperature if below 2℃	Anbotek Anbotek An	otek P An
8.3	Drop test	Anbotek Anbotek	Aupor P
8.3.1	Equipment other than HAND-HELD EQUIPMENT and DIRECT PLUG-IN EQUIPMENT	ek Anbotek Anbotek	Auphotek
nborek	Test conducted with a drop height or angle of:	ntek anbotek Anbot	P Nor
8.3.2	HAND-HELD EQUIPMENT and DIRECT PLUG-IN EQUIPMENT	anbotek Anbotek Anbot	otek N Ant
ootek A	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C	Anbotek Anbotek An	inbotelN
Aupor	Drop test conducted with an height of 1 m	Aupo. An Potek	ANDN
- A10	- TO TO THE TOTAL THE TOTAL TO THE TOTAL TOT		

9 Anbor	Protection against the spread of fire		-Anbore
9.1	No spread of fire in normal and single fault condition	Anbotek Anbotek Anb	Hek P Anb
anbotek	Mains supplied equipment meets requirement of 9.6 additionally	Anbotek Anbotek A	nborek
Anbotek	Conformity for each source of HAZARD or area of the equipment is checked by one of the following:	k Anbotek Anbotek	Potek Anbotek
AUD O	a) Fault test of 4.4; or	ore. Ann orek Anborek	P.nbo.
Otek And	b) Application of 9.2 (eliminating or reducing the sources of ignition); or	nbotek Anbotek Anbo	rek N Anbr
mborek	c) Application of 9.3 (containment of fire within the equipment)	Anbotek Anbotes Ar	Ambotek
9.2	Eliminating or reducing the sources of ignition within the equipment	rek nbotek Anbotek	Antotek hotek
L aboth	a) 1) Limited-energy circuit (see 9.4); or	tek abotek Anbote	N
Hek Ant	Insulation meets the requirements for BASIC INSULATION; OR	Anbotek Anbotek Anbot	N And
obotek	Bridging the insulation does not cause ignition	Nupotek Aupo ek	N
Anbotek	b) Any ignition HAZARD related to flammable liquids (see 9.5)	No liquids used	Nek Anbulek
Augo	c) No ignition in circuits designed to produce heat	er Anti-	Npo
9.3	Containment of the fire within the equipment, should it occur	botek Anbotek Anbot	K Wupo,





IEC 61010-1 Clause Requirement - Test Result - Remark Verdict a) Energizing of the equipment is controlled by an Ν operator held switch b) ENCLOSURE is conform with constructional Po requirements of 9.3.1; and Requirements of 9.5 are met 9.3.1 Constructional requirements a) Connectors and insulating material have Fire enclosure is made of flammability classification V-2 or better metal and plastic flame rated b) Insulated wires and cables are flame retardant P (VW-1 or equivalent) c) ENCLOSURE meets following requirements: 1) Bottom and sides in arc of 5 ° (see Figure 13) to non-limited circuits (9.4) meets: i) no openings; or ii) perforated as specified in Table 16; or N iii) metal screen with a mesh; or Ν iv) baffles as specified in Figure 12 Ν 2) Material of ENCLOSURE and any baffle or flame barrier is made of: Metal (except magnesium); or Non-metallic materials have flammability P classification V-1 or better 3) ENCLOSURE and any baffle or flame barrier have adequate rigidity 9.4 Limited-energy circuit a) Potential not more than 30 r.m.s. and 42.4 V N peak, or 60 V dc b) Current limited by one of following means: 1) Inherently or by impedance; 2) Over current protective device; Ν 3) A regulating network limits also in SINGLE **FAULT CONDITION** c) Is separated by at least BASIC INSULATION N Fuse or a nonadjustable electromechanical device is used 9.5 Requirements for equipment containing or using No flammable liquids used flammable liquids

Shenzhen Anbotek Compliance Laboratory Limited





9.6.3

uct Safety	Page 31 of 52	Report No. 18250	SC00059601
Anbore	IEC 61010-1	unbotek Anbotek Anbo	rek Anbo
Clause	Requirement – Test	Result - Remark	Verdict
abotek	Hupon William Wuo	abotel Anto	Lotek
Aupotek	Flammable liquids contained in or specified for use with equipment do not cause spread of fire	Anborek Anborek	Anborek Anborek
Anbore	Risk is reduced to a tolerable level :	otek Aupon ak motek	Ar boter
ek Aupoli	a) The temperature of surface or parts in contact with flammable liquids is 25 °C below fire point	botek Anborok Anbor	K N Anbot
rek .	b) The quantity of liquid is limited	No such liquid used	N
ipo Pok	c) Flames are contained within the equipment	Anbo tek abotek	Aupore N
Anbo.	Detailed instructions for risk-reduction provided	Anbo Anbotek	AnbN
9.6	Overcurrent protection	sek Aupo, ak apotek	Noore
9.6.1	Mains supplied equipment protected	potek Anbo, ek abote	K N _{Anbore}
ek Aupo	Basic insulation between mains parts of opposite polarity provided	Anbotek Anbotek Anb	otek N Ant
o tek	Devices not in the protective conductor	Anboatek anbotek	inpo, N
Anbotek	Fuses or single pole circuit-breakers not fitted in neutral (multi-phase)	Anbotek Anbotek	Anb N
9.6.2	Permanently connected equipment	notek Anbotek Anbo	Nabote
ek anboi	Overcurrent device:	Lotek Anbotek Anbo	N N
otek an	Fitted within the equipment; or	Anbotek Anbotek Anb	N
otek .	Specified in manufacturer's instructions	And otek Anbotek A	N P

10 Arrio	Equipment temperature limits and resistance to	heat	iek Wup
10.1	Surface temperature limits for protection against burns	Anbotes Anbotek A	botek P p
Anbotek	Easily touched surfaces within the limits in NORMAL and in SINGLE FAULT CONDITION:	(see appended table)	Anbotek
Anbotes	- at an specified ambient temperature of 40 °C	otek Anborer And	Nabotek
yek Aupo	- for equipment rated above 40 °C ambient temperature limits not exceeded raised by the difference to 40 °C	Anbotek Anbotek Anbo	ek P Anbo
hotek hotek	Heated surfaces necessary for functional reasons exceeding specified values:	Anbotek Anbotek An	Anbotek k
Anbotek	Are recognizable as such by appearance or function; or	orek Anbotek Anbotek	An'N'
anbot	Are marked with symbol 13	otek anbotek Anbo	k N woo
iek vu	Guards are not removable without TOOL	otek unbotek Anbos	N
10.2	Temperatures of windings	Anto stek anbotek Ani	John Pu

Shenzhen Anbotek Compliance Laboratory Limited

Other equipment

Protection within the equipment



N

N



	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
ootek	Hupon Minnest William William William	abotel Anbor A	-otek
sbotek	Limits not exceeded in:	abotek Anbote	Ann
Air.	NORMAL CONDITION	ak botek Anboten	Amb P
All hote	SINGLE FAULT CONDITION	ak botek Anboten	P
10.3	Other temperature measurements	(see appended table)	P Ant
, but	Following measurements conducted if applicable:	Anbore And wotek And	otek
otek P	a) Value of 60 °C of field-wiring terminal box not exceeded	Anbotes Anbotek	anboteN
Aupolek	b) Surface of flammable liquids and parts in contact with this liquids	k Anbotek Anbotek	AnbN
h. botel	c) Surface of non-metallic enclosures	ok bořek Anboře	PP
k Au	d) Parts made of insulating material supporting parts connected to mains supply	pole All Anbotek Anbote	NAMO
0.4	Conduct of temperature test	Anti-	P
10.4.1	Tests conducted under reference test conditions and manufacturer's instructions	Anbotek Anbotek	inbot P
10.4.2	Temperature measurement of heating equipment	k abotek Anbote	An N
by, Potek	Tests conducted in test corner	ak hotek Anboten	N
0.4.3	Equipment intended for installation in a cabinet or wall	lots Ambotek Anbote	Nanb
iek bi	Equipment built in as specified in installation instructions	Anbotek Anbotek Anb	N P
0.5	Resistance to heat	upotek Aupote A	Potek
10.5.1	Integrity of CLEARANCE and CREEPAGE DISTANCES	k Anbotek Anbotek	Anbotek
0.5.2	Non-metallic ENCLOSURES	otek Anbor k hotek	Panbo
Anbot	Within 10 min after treatment:	abotek Anbote And	iek - Pi
10.5.3	Insulating material	(see appended table)	notek N
potek	a) Parts supporting parts connected to MAINS supply	Anbotek Anbotek A	Anbo N
Aupo.	b) TERMINALS carrying a current more than 0.5 A	Aupon by polak	Art Notes
Anbore	Examination of material data; or	Jek Aupon Au	Nipot
Anbote	in case of doubt::	botek Anbote Ann	8k an'
ek not	Ball pressure test; or	otek Anboten Anbo	"a⊁ N

11 mbotek	Protection against hazards from fluids	rek	anbotek	Aupor	Pur Potek
11.1 Anbore	Protection to OPERATORS and surrounding area provided by EQUIPMENT	abotek	Anbotek	Anbore	P Anbot
lek Aup	All fluids specified by manufacturer considered	anbote	Aupo	- o/t - v	otek P An



N

2) Vicat softening testof ISO 306



	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Aupon Williams	Pupo, Vupo, V	to tex
11.2	Cleaning	s abotek Anbore	Am Nek
11.3	Spillage	ok shotek Anboten	And P stek
11.4	Overflow	in An spotek Anboten	N
11.5	Battery electrolyte	bore Ant botek Anbot	- Anbo
Le Bire	Battery electrolyte leakage presents no hazard	Ambore Ari	oter N M
11.6	Specially protected equipment	IP20	Anbote P
11.7	Fluid pressure and leakage	Anbore And Lotek	Aupotek
11.7.1	Maximum pressure	ek Anbore And	Anporek
ak Anbore	Maximum pressure of any part does not exceed P_{RATED}	ootek Anbotek Anbot	K N _{Ambol}
11.7.2	Leakage and rupture at high pressure	Anbo. An botek Ant	oter N An
nbotek A	Fluid containing parts subjected to hydraulic test if:	Anbotek Anbotek	inbote N
Anbotek	a) product of pressure and volume > 200 kPal; and	k Aupotek Aupotek	Anborek Anborek
Anbo	b) pressure > 50 kPa	potek Anbo sak abote	Nupor.
otek Anbo	Parts of refrigerating systems meets pressure- related requirements of IEC 60335-24 or IEC 60335-24	Anbotek Anbotek Anb	tek N Anl
11.7.3	Leakage from low-pressure parts	Anborer Anb	anboN ^k
11.7.4	Overpressure safety device	k Aupotes Aupo	anbotek.
Anbotek	Does not operate in NORMAL USE	otek Anbotek Anbo	Nabote
k Anbot	a) Connected as close as possible to parts intended to be protected	nbotek Anbotek Anbo	ek N Anb
abotek Ari	b) Easy access for inspection, maintenance and repair	Anbotek Anbotek A	botek N
hotek	c) Adjustment only with TOOL	botek Anbotes	N _{rek}
An Hotek	d) No discharge towards person	ok botek Anbotes	AMN ONE
bu. Pul	e) No HAZARD from deposit of discharged material	or An-	N
ok brus	f) Adequate discharge capacity	hbor Ar hotek Anbo	N Anto
botek but	No shut-off valve between overpressure safety device and protected parts	Anborek Anborek Ar	potek N A

Page 33 of 52

12 Amborek	Protection against radiation, including laser so ultrasonic pressure	ources, and	against son	ic and	Ani	Anborek
12.1 Anbons	Equipment provides protection	abotek	Aupor	VII.	+	N Anbot
12.2	Equipment producing ionizing radiation	abotek	Anbore	bu.	otek	N Ari

Shenzhen Anbotek Compliance Laboratory Limited

Hotline 400-003-0500 www.anbotek.com



IEC 61010-1 Clause Requirement - Test Result - Remark Verdict 12.2.1 Ionizing radiation Ν 12.2.1.1 Equipment meets the following requirements: a) if intended to emit radiation meets requirements N of 12.2.1.2; or tested, classified and marked in accordance to IEC 60405 b) if only emits stray radiation meets requirements Ν of 12.2.1.3 12.2.1.2 Equipment intended to emit radiation Ν Effective dose rate of radiation measured...... If dose rate exceeds 5 µSv/h marked with the following: a) Symbol 17 (ISO 361) N b) Abbreviations of the radionuclides..... c) With maximum dose at 1 m;or..... N with dose rate value between 1 µSv/h and 5 μSv/h in m....: 12.2.1.3 Equipment not intended to emit radiation Limit for unintended stray radiation of 1 µSv/h at any easily reached point kept.....: 12.2.2 Accelerated electrons Ν Compartments opened only by the use of a TOOL N 12.3 Ultra-violet (UV) radiation Conformity test under consideration No unintentional and HAZARDOUS escape of UV Ν radiation: - checked by inspection; and N evaluation of RISK assessment documentation 12.4 Microwave radiation Power density does not exceed 10 W/m².....: Ν 12.5 Sonic and ultrasonic pressure 12.5.1 Sound level N No HAZARDOUS sound emission N Maximum sound pressure level measured and calculated for maximum sound power level as specified in ISO 3746 or ISO 9614-1 Instruction describes measures for protection N 12.5.2 Ultrasonic pressure

Shenzhen Anbotek Compliance Laboratory Limited





	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Anton V motek Antones Anto	abotek Anbor M	-otek
	Equipment not intended to emit ultrasound does not exceed limit of 110 dB between 20 kHz and 100 kHz	dek Anbotek Anbotek	Anborek Anborek
nboth	Equipment intended to emit ultrasound:	stek shotek Anbors	k No
ek Ant	Outside useful beam does not exceed limit of 110 dB between 20 kHz and 100 kHz	Anbotek Anbotek Anbot	otek N Ar
potek	If inside useful beam above values exceeded:	anbotek Anbo ak	-botek
anboyek	Marked with Symbol 14 of Table 1	k Anbotek Anbote	Nek
nborek	and following information in the documentation:	ek Anbotek Anbotek	por botek
abote	a) dimensions of useful beam	tek abotek Anbote	N
3K - 50	b) area where ultrasonic pressure exceed 110 dB	Thousand Anborek Anbor	N
rok Pro	c) maximum sound pressure inside beam area	Anbor Ank	N Arr
12.6	Laser sources	Aupon Au	nbote N
Anbore	Equipment meets requirements of IEC 60825-1	Anbott Anti-	Arib N

Page 35 of 52

13 Anbe	Protection against liberated gases, explosion a	nd implosion	,-	-	nboro
13.1	Poisonous and injurious gases and substances	No injurious gases	orek	N	Anb
otek l	No poisonous or injurious gases or substances liberated in NORMAL CONDITION	Anbotek Anbotek	nbote	N Kel	- 1
Yun	Attached data/test reports demonstrate conformity	Ant otek anbotek	Ant	N	You
13.2	Explosion and implosion	And stek anbotek		Vup.	, , ,
13.2.1	Components	oter Annotek Anbotek		- p/	upo,
V. Vuo.	Components liable to explode:	Inbotek Anbo tek nbr	Nek		Anbo
orek p	Pressure release device provided; or	Anbotek Anbo. Anbo.	doise,	N	P
inposek nosek	Apparatus incorporates OPERATOR protection (see also 7.7)	Anbotek Anbotek	Anb	Ň	No.
Anna	Pressure release device:	Anti-otek anbotek	P	upo	. ok
AUG	Discharge without danger	ore And otek Anbotek		N	po.
AUD	Cannot be obstructed	hbotes Anbo	ek	N	Anbo
13.2.2	Batteries and battery charging	Anboten Anbo	potek		PL
upotek	If explosion or fire hazard could occur:	Aupotek Aupo tek	- 200	rek.	
anborek	Protection incorporated in the equipment; or	Aupotek Aupo	-	N	ek
Anbotek	Instructions specify batteries with built-in protection	iek Anbotek Anbotek	-	N _A	potek
N VUD	In case of wrong type of battery used:	bore And Anbot	ek-		Vupo
le, Vu	No HAZARD; or	Anbores Anbo	oolek	N	PU





bu.	IEC 61010-1	inpo, by	ion Vup
Clause	Requirement – Test	Result - Remark	Verdict
botek	Anto Lakek Anbore And	abotel Anto	-otek
sbotek	Warning by marking and within instructions	abotek Anbote	Ans Nek
Anbotek	Equipment with means to charge rechargeable batteries:	lek Anbolek Anbolek	Anbotel
ek Anbor	Warning against the charging of non-rechargeable batteries; and	botek Anborek Anbor	K N Anbe
rok h	Type of rechargeable battery indicated; or	Anbo tek abotek An	N A
bo.	Symbol 14 used	Anbo tek abotek	Yupore N
Aupor	Battery compartment design	Anbo Ak abotek	AnbN
Aupor	Single component failure	ek Anbour An botek	Noore
Anbo	Polarity reversal test	ootek Anbo, ak abote	K Nanbo
13.2.3	Implosion of cathode ray tubes	No such device used	otek Ar
otek p	If maximum face dimensions > 160 mm:	obotek Anbote Am	notel-
abotek	Intrinsically protected and correctly mounted; or	abotek Anbotes	N/K
abotek	ENCLOSURE provides protection:	k abotek Anboros	Notek
abotek	If non-intrinsically protected:	tek abotek Anbore	Vunn-
by.	Screen not removable without TOOL	on Mindowsky Aupotes	N
P.O.	If glass screen, not in contact with surface of tube	Aupor Aup	N An

Page 36 of 52

14	Components and subassemblies		Anbore
14.1° Anborek	Where safety is involved, components meet relevant requirements	Components used in accordance with their specified ratings and comply with relevant IEC standard	Anbotel Anbotel
14.2	Motors	hotek Anboren Anbo	rek
14.2.1	Motor temperatures	Anbotek Anbotek Ar	Joe F
Aupotek	Does not present a HAZARD when stopped or prevented form starting; or	No Hazard	Anbotek Anbotek
Anbore	Protected by overtemperature or thermal protection device conform with 14.3	tek Anbotek Ambotek	Nabote
14.2.2	Series excitation motors	ibo. Ai shotek Anbot	- And
upotek bi	Connected direct to device, if overspeeding causes a HAZARD	Anbotek Anbotek An	potek N A
14.3	Overtemperature protection devices	abotek Anbot	Nek
abotek	Devices operating in a SINGLE FAULT CONDITION	ek abotek Anbote	Notek
abotel	a) Reliable function is ensured	tek abotek Anbore	N
rek Anbo	b) RATED to interrupt maximum current and voltage	anbotek Anbotek Anbot	otek N Ann



Report No. 18250SC00059601



VILL	k abotek Anbor Ali wtek ant	oter And abotek	Aupor
	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Aupon Mark Aupona Aug	abotek Anbo, M	-otek
hotek	c) Does not operate in NORMAL USE	Anboter Anboter	N. N.
Anbotek	If self-resetting device used to prevent HAZARD, protected part requires intervention before restarting	lek Anbotek Anbotek	An N Anbotek
14.4	Fuse holders	ip atek anbotek Anbor	N
rek .	No access to HAZARDOUS LIVE parts	Anbo tek abotek Anh	N by
14.5	Mains voltage selecting devices	No selecting devices used	Aupore N
Aupo	Accidental change not possible	Anbo Ak abotek	AribN
14.6	Mains transformers tested outside equipment	ek Auport Au	Noore
14.7 M	Printed wiring boards	potek Aupon yk mote	4 Panbot
ek Anbo	Data shows conformity with V-1 of IEC 60695-11-10 or better; or	Anbotek Anbotek Anb	otek P Ani
Anbotek	Test shows conformity with V-1 of IEC 60695-11-10 or better	Anbotek Anbotek	nbotek
Anbotek	Not applicable for printed wiring boards with limited-energy circuits (9.4)	ik Anbotek Anbotek	Notek
14.8	Circuits or components used as TRANSIENT OVERVOLTAGE limiting devices	obotek Anbotek Anbote	Nanba
otek An	Test conducted between each pair of MAINS SUPPLY TERMINALS	Anbotek Anbotek An	nbotekN
'upo _{tek}	No HAZARD resulting from rupture or overheating of the component:	k Anbotek Anbotek	Anbo'N
abotek	- no bridging of safety relevant insulation	tek abotek Anbote	N
P	K MOISE AND YOU ASK AND	a. b 'K Pole,	VIII

15	Protection by interlocks	Anbotek Anbo. Lek	spotak
15.1	Interlocks are designed to remove a hazard before OPERATOR exposed	e Anbotek Anbotek	Anberek Anberek
15.2	Prevention of reactivating	ortek Anbotek	Nupos
15.3	Reliability	Alboren Anbo	lek Hupo
year by	Single fault unlikely to occur; or	Anbotek Anbo. stek	botek N Ar
1botek	Cannot cause a HAZARD	anbotek Anbo. Lek	N rode

16 Anborek	HAZARDS resulting from application	otek	Anbotek	Aupor	Potek
16.1	REASONABLY FORESEEABLE MISUSE	-otek	anbotek	Anbo	P NOOT
lek Aut	No hazards arising from setting not intended and not described in the instructions	Anbotek	Anbotek	ek Anbo	otek P Ani

Shenzhen Anbotek Compliance Laboratory Limited

points



N

Address: 1/F., Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.

Tel:(86) 755–26066440 Fax: (86) 755–26014772 Email: service@anbotek.com

- no heat to other parts above the self-ignition



Starrage and	Description Tiles Note: Any	Descrit Democratic	1 / a a a l! a 4
Clause	Requirement – Test	Result - Remark	Verdict
oore	An atek anatek Anbo ak hotek	Anbore An	VUPOJEK.
Anbotek	Other cases of reasonable foreseeable misues addressed by risk assessment	k Anbotek Anbotek	Anbotek Anbotek
16.2	Ergonomic aspects	clek Aupon K wotek	Phote
Anbois	Factors giving rise to a HAZARD the RISK assessment is reflecting those aspects:	ybotek Anbores Anbor	ek P Anb
	a) Limitation of body dimensions	Anboren And stek an	otek P
ofer	b) Displays and indicators	Anboten Anb	nboteP
nbotek	c) Accessibility and conventions of controls	anbotek Anbo	Pek
Vupotek	d) Arrangements of TERMINALS	rek anbotek Anbor	Note
, abore	K Anborek Anborek Anhorek	tek abotek Anbote	N M
17	Risk assessment	upo. W. Polek Pupote	- 200
Ani	Rish assessment conducted, if hazard might arise	Fully covered by clauses 6 to	NI P
	and not covered by claused 6 to 16	Fully covered by clauses 6 to 16	nbotekN
nbotek	Tolerable rish achieved by iterative documented	Anborek Anbor	N ^N
botek	process covering the following:	k botek Anbote	Annatek
Vi. Potek	a) RISK analysis	ok hotek Anboten	N
bu.	identify HAZARDS and estimate RISKS	pore Ana Potek Aupore	Nambe
	b) RISK evaluation	Anbore And Anb	OLEK N WL
lbotek A	plan to judge acceptability of resulting risk level based on the estimated severity and likelihood of a rish	Anbotek Anbotek	ibotek Anbotek
Anboren	c) Rish reduction	ek Anbores And	Notek
Anboren	Initial risk reduced by counter measures:	cotek Anboten Aribu	Nabot
ak Anbo	Repeated risk evalution without new risks introduced	Inbotek Anbores Anbo	ek N An
oorek h	Risks remaining after risk assessment addressed in instruction to responsible body:	Anbotek Anbotek A	pole N
anbotek	Information contained how to mitigate these rishs	anbotek Anbo	Niek
Anbotek	Following principles in methods of risk reduction applied by manufactuer in giver order:	otek Anbotek Anbotek	N Anbote
Aupo	1) RISKS eliminated or reduced as far as possible	upotek Aupor Ar bo	ek N Ant
otek An	Protective measures taken for risks that cannot be eliminated	Anbotek Anbotek Ar	potek N
unbotek	User information about residual risk due to any defect of the protective measure	Anbotek Anbotek	Anbotek
Anbotek	Indication of particular training is required	otek Anboren Anbor	Noote
Anbote	Specification of the need for personal protective equipment	botek Anbotek Anboro	k N anb

Page 38 of 52





	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
boten P	up wiek wipon by	abote. And	potek
	Conformity checked by evaluation of the risk assessment documentation	Anborek Anborek	Anbotek
Anbor	An ak above Ant	Hek Aupon Br. Lek	abote
101 Model	Measuring circuits		P
101.1	The equipment shall provide protection against HAZARDS resulting from NORMAL USE and REASONABLY FORESEEABLE MISUSE of measuring circuits,	Anbotek Anbotek Anbotek An	otek P A
Anbotek Anbotek	a) a current measuring circuit shall not interrupt the circuit being measured during range changing, or during the use of current transformers without	ek Anbotek Anbotek	Ambotel Ambotel
napoten.	internal protection	otek anboten Anb	f- ,\o'
	b) An electrical quantity that is within specification for any TERMINAL shall not cause a HAZARD when it is applied to that TERMINAL or any other compatible TERMINAL, with the range and function settings set in any possible manner	Anbotek Anbotek Anbotek Anbotek	ofek A
Anbotek Anbotek	c) Any interconnection between the equipment and other devices or accessories shall not cause a HAZARD even if the documentation or markings	anbotek Anbotek	Anbotek
	prohibit the interconnection while the equipment is used for measurement purposes	loter Anbotek Anbotel	Anbo
otek Anbe	d) For measuring circuits that include one or more FUNCTIONAL EARTH TERMINALS	Anbotek Anbotek Anb	N AT
inbotek otek	e) Other HAZARDS that could result from REASONABLY FORESEEABLE MISUSE shall be	Anbotek Anbotek	Anbo Pr
Anbo	addressed by RISK assessment	Anbo tek Anbotek	Anboro
101.2	Current measuring circuits Current measuring circuits shall be so designed	otek Aupo, Aupotek	P
	that, when range changing takes place, there shall be no interruption which could cause a HAZARD	inbotek Anbotek Anbo	rek P An'
Anbotek Anbotek	Current measuring circuits intended for connection to current transformers without internal protection shall be adequately protected to prevent a HAZARD arising from interruption of these circuits during operation	Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek	Anborek Anborek
101.3	Protection against mismatches of inputs and ranges	abotek Anbotek Anbote	ek P
103.1	In NORMAL CONDITION and in cases of REASONABLY FORESEEABLE MISUSE, no HAZARD shall arise when the maximum RATED voltage or current of a measuring TERMINAL is applied to any other compatible TERMINAL, with	Anbotek Anbotek Anbotek Anbotek	potek P Anbotek Anbotek
Mupo.	any combination of function and range settings	lek Aupo. W. Potek	Anbore
101.3.2	Protection by a certified overcurrent protection device	botek Anbote Anbot	k P Anb
101.3.3	Protection by uncertified current limitation devices or by impedances	Anbote And And	otek N

Shenzhen Anbotek Compliance Laboratory Limited





Page 40 of 52

Anbor	IEC 61010-1	Anbotek Anbotek Anbor	otek Anbo
Clause	Requirement – Test	Result - Remark	Verdict
101.3.4	Test leads for the tests of 101.3.2 and 101.3.3	Anbotek Anbotek	Antotek Prek
ANNEX F	ROUTINE TESTS	anbotek Anbotek	k -polek
Anbore	Manufacturer's declaration	Potek Aupolek Vipo,	otek N _{Anbot}



Page	11	of	50
Faue	41	C)I	.)/

4.4.2	Table: Summary of single fault condtions			An nek Panb
Subclause	Titel	Not apply	Carried out	Comments
4.4.2.1	Single fault conditions not covered by 4.4.2.1 to 4.4.2.12	X	Diek by	Anborek Anborek
4.4.2.2	Protective impedance	×X	obotek	Anbor - An hotek
4.4.2.3	Protective conductor	rek	X	Anbore - Ans
4.4.2.4	Equipment or parts for short-term or intermittent operation	Х	Anbore	k Anborek An
4.4.2.5	Motors	X	Ant	o. h. botek
4.4.2.6	Capacitors	X	tek	upor Ar potek
4.4.2.7	Mains transformers	1/8	X	Aupor - Air Polek
4.4.2.8	Outputs	otek hotek	X	Short-circuit were applied to all outputs. No hazard.
4.4.2.9	Equipment for more than one supply	Yu. Motel	X Moderation	yer Anbon tek
4.4.2.10	Cooling	Х	lex o	upotek Anbo
4.4.2.11	Heating devices	Х	Lotek	Anborek - Anbo
	V	X		184 100

5.1.3 c)	TABLE: M	TABLE: MAINS supply					
botek	Marked rat	ting (V)	Anbotek Anb	0. In	itek Anbote	P	
botek	Number of	phases	"Wolek	iupo, tek	botek Anb	0/10"	
An abotel	Frequency	γ (Hz)	Morek	Anbo. A	abotek P	inbote.	
b1.	Current (A)	k amorek	Vupo.	Ar.	Anbore,	
ok Vi.	Power (W)	porer And	ately and otel	knbor-	Air.	Anbo	
ok p	Power (VA)botella		itek Anbor	ak hotel	L DZ	
Test No	Voltage (V)	Frequency (Hz)	Current (A)	Power in (W)	Power in (VA)	Comments	
VUD.	- wotek	Mr. Do.	P. sek	-aboter Ar		potek -Anbo	
Note(s):	k Ann	ek Anbotek	Anbo.	h. abotek	Anbore. A	un Potek Aupo,	

5.3	TABLE: Durak	ility of mark	ings					24	, P
Marking method (see note)					Agent				
1) Adhes	sive label	Polek	Aupotek	Anbo	A	Water	Anbore	ok bu	hotek
2) Ink prii	inted Moone	Andotek	Anborek	Anbo	В	Isopropyl ald	ohol 70%	-ak	Arrabotek
3) Laser	marked	Ai.	Anbot	Sr. VL	С	(specify age	nt)	po.	bi.
4) Filmco	pated (plastic foil o	control panel)	iek Anl	ole.	D	(specify age	nt)	Anbo	K M





5) Imprint	on plastic	c (moulded in)	inpotek Tupo	iek bu	E (spec	cify agent)	upotek b	nb.
		cable include p	orint method, label m	naterial, ir	nk or pain	t type, fixing metho	od, adhesive an	d p
		Mark	ing location			Marking method (s	see above)	
Anboro	- Identif	ication (5.1.2) .	Anbo	- Note	1 AF	por bu	rek Anborer	
Anbore	- Mains	supply (5.1.3).	yek Anber		M. K	Anbore Ann	work Anbo	ter
Anbore	- Fuses	(5.1.4)	chotek Anbor		botek	Anbores Ar	otek at	ho
rek Vup			ns and operating de		1 Anbotek	Anbores Anbores	Anbotek Anbotek	PZ
10. b	- Switch	nes and circuit-	breakers (5.1.6)	anbotek	Aupo.	tek abotek	Aupore	
Aupon	- Doubl	e/reinforced eq	uipment (5.1.7)	Kilpotek	pul	oo, who	ek Aupote	3.7
Aupo, C	- Field-\	wiring TERMIN	AL boxes (5.1.8)		Jek.	Anbore Am	ootek Anbo	6
Auporo	- Warni	ng markings (5	.2)	,x;	brek	Aupore Ma	hotek An	boy
Metho	d	Test agent	Remains legible Verdict		loose dict	Curled edges Verdict	Comments	
ofe. I A	Un Pakelk	A, B	Anbo. P.	abotek F	Anbore	P notek	Anb Pak	
Note(s):	Aug	k botek	Anbo	rek	day	ole, Vue	k hotek	

Page 42 of 52

1-0101	and		1/24	abo,	(p)	V.	-0,6	DUD
TABLE: Protection against electric shock							- Panbot	
Block diagram of the system: Pollution degree						Anbote	Ano	
						Anbore	And	
Overvoltage i	nstallation	category	Ambe		III NO	rek Ant	oter	
or type	working	Cree	epage dist	ance (no	ote 3)	Clearan ce (note	Test voltage	Comments
(note 1)	(note 2)	PWB	CTI	Other	СТІ	mm	(note 2)	
Amu	10 - N	lpotek	Anbo.	- po	ootek_	Anbore	Pur	rek - ant
INSULATION LE INSULATION ECTIVE IMPEI rced INSULAT	ON DANCE ION				ulse)	CATEGORI CATEGORI DEGREES should be s	ES (OVER ES) or PO which diffe hown unde	VOLTAGE LLUTION or from these
	Pollution degrand Pollution degrand Pollution degrand Pollution degrand Pollution degrand Pollution (note 1) Type of insulation INSULATION LE INSULATION LE INSULATION CECTIVE IMPETOR (NSULATION POLLUTION P	Block diagram of the system of	Block diagram of the system Pollution degree	Block diagram of the system	Block diagram of the system	Block diagram of the system	Block diagram of the system	Block diagram of the system

6.2	TABLE: Dete	ABLE: Determination of accessible parts					
It	tem	Description	Determination method	Exception under 6.2.1			
Anbotek Anbotek	Anbotek Anbotek	Examination	The jointed test finger (see figure B.2) is applied in every possible position	Anbotek P Anbotek			
Note(s):	Anboro	Anbotek Anboter	Anbo otek Anbotek	Aupore Au			





6.5.2.4	TABLE: Impeda	nce of protective bond	ing of plug-connected eq	uipment N N
ACCESSIE	BLE part under test	Test current (A)	Voltage attained after 1 min (V)	Result
lootek P	iupo-	stek Aupole A	botek Anbotek	hupo, H. upotek
Note(s):	Anbo. Mek	abotek Anbote	Ant botek Anbotek	Anbo. tek nbotek

Page 43 of 52

6.5.2.5	.5.2.5 TABLE: Impedance of protective bonding of permanently connected equipment					
ACCESSIE	BLE part under test	Voltage attained (s)	Time for voltage to drop below allowable levels(s)	Res	ult	
po. k.	abotek Anbote	And otek	anbotek anbo.	- abotek -	Aupole.	
Note(s):	abotek Anb	ote. And	Aupotek Aupo.	A botek	Anbore	

6.7	TABLE:	Insulation	requirements			K P _{Anbot}
8 Anbo	Resistan	ce to mech	anical stresses	rek ubotek	Aupor A	work P An
10.5.1	Integrity	of CLEARAN	CES and CREEPAGE DIS	STANCES	Anboro	An work!P
	Location		initial CREEPAGE DISTANCE (mm)	Initial CLEARANCE (mm)	Maximum working voltage (V)	Comments
Pu. Potek	Anbo	ler but	tek nbotek	Aupor-	hotek Anbo	Anb.
Note(s): Po	wer supply	approved a	adapter	Anbore	Pin Potek Di	Ipoter Anbo
Mechanica force		Static	Dynamic	Drop test, normal	Drop test, hand- held	Comments
tek -	anbotek	Anbor	k Polek Au	poter _ And	rek -notek	Anbor-
Note(s):	botek	Aupore	An. Otok	anbotek Anbo	ek spotek	Anbore

6.8 TABLE:	Dielectric strength	tests for protection	against the sprea	ad of fire	Papore
Location	Working voltage (V)	Test voltage (V)	Result	Comm	ents
Input to accessible part	Anbotek Ar	DC 500V	An Potek	Anbotek P	Anbotek
Note(s):	ak Anbotek	Aupo sek upo	ek Aupore	Answork	Anbotek

6.10.2	TABLE:	Cord	anchoraç	ge tests				N N
	Location		Mass kg	Pull N	Verdict	Torque Nm	Verdict	Comments
botek	Arthores	AUL	otek	Vupotek	-Aupor	Al botel	Airboter	And
Note(s):	: No cord provi	ided P	no	anbot	ek Ant	or bir.	ek Anboten	Anbo

8	TABLE: Resistance to mechanical stresses						P
Llocation	on	Static	Dynamic	Drop test, normal	Drop test, hand-held	Result	Comments





Page 44 of 52 Report No. 18250SC00059601

0	016	11/2	40-	200.	Dr.	-016.	7	
20	Enclosure	- CY	Pass	P11.	20/02	Pass	No+	
	V	1-07	D'A	181	- 40	1	-0	Dir.

- Note(s): 1). 30N applied by the hemispherical end of a hard rod of 12 mm diameter
 - 2). 50mm diameter steel sphere with a mass of 500g impact from position of 1m height
 - 3). dropped once through a distance of 1 m on to a 50 mm thick hardwood board having a density of more than 700 kg/m³.

9 1	TABLE: Protection against the spread of fire			Pibb
Item	Source of hazard or area of the equipment considered (circuit, component, liquid etc.)	Protection method (9a, 9b, 9c)	Protection details	Comments
Plastic parts	rek nbotek -nbote And hotek	9a	Anbo	nborek
Note(s):	nbo kak nbotek Anbote And	anbotek	Anbo.	hotek

9.3.1	TABLE: Containment of fire within the equipment	nt	N N
14.7	Printed wiring boards	nbotek Anbotek Anbo	N
net .	Material tested:	Anti-	
stek	Generic name ::	Anbotek Anbotek	
iupo otek	Material manufacturer	Anbo stek Anbotek	
Anbo -rel	Type designation	The August Augus	
Anbo	Colour:	otek Anbutek Anbotel	
Anb	Conditioning details:	Tupotek Tupo tek Tupo	
nbotek A	Thickness (mm):	1 – 2 – 3 -	
Anbotek Anbotek	Duration of flaming after first application (s):	1 – 2 – 3 -	
lek Vi	Duration of flaming plus glowing after second application (s)	1 – 2 – 3 -	
Anborek Anborek	Specimen burns to holding clamp (Yes/No):	1 – 2 – 3 -	
ootek An	Cotton ignited (Yes/No):	1 – 2 – 3 -	
Note(s):	And tek nbotek Anbote k notel	k Anbotek Anbu	anbotek









9.4	TABLE: Limited	-energy circuit				N Am		
botek A	Test details: 1 –Location; 2 – maximum voltage r.m.s./dc.(V); 3 – maximum current (A); 4 – maximum power(VA); 4 – overload protection after 120s(A); 5 – circuit separation; 6 – decision(Yes/No); 7 – comments							
1	2	3	4	5	6	7		
An-	anbotek	Aupo.	abotek A	Doje. Tu	-otek anbot	-Vupo		
Note(s):	tek kupotek	Anbo.	-potek	Anbore	And otek Ant	otek Anb		

Page 45 of 52

9.5	TABLE: Requirements for equipment containing or using flammable liquids				nboteN
Anbotek		details: 1 –Type of lic s (containment); 4 –	uid; 2 –flammable liquids (b. quantity); 3 – fla comments	mmable	Anbotek
1		2	3		4
bu.	otek	Anboren Anbo	ek obotek Arbon k hotek	Anbote	- Yup
Note(s): N	o such fl	ammable liquid used	in normal working or single fault condition.	itek ant	otek p
Note(s): N	o such fl	ammable liquid used	in normal working or single fault condition.	rek Ant	nbote

10	TABLE:	Temperature r	neasurements			Aup . P.
10.1	Surface to	emperature lim	nits – NORMAL CONI	DITION and / or SIGN	NLE FAULT CONDITION	ir Bosek
10.2	Tempera	ture of winding	js- NORMAL CONDIT	ION and / or SIGNLE	FAULT CONDITION	otel Nabote
10.3	Other ten	nperature mea	surements	ak hotek	Anborer And	Net P not
Operating	conditions:	Normal worki	ng botels Mibs	ok bush	Anbore	TUP.
hotek	Frequenc	y (Hz)	Motek N	hpor Are	tek Anboten	Ρ'
notek	12/2	- 10-	Mantek	77.	hour 30 min	
Ar. Polek	Voltage (V)	lek Wilsolek	Pupor - V	botek Anbote	
. No.			a (°C)		Pur Polek Pup.	
yek An	maximum		Γm + Ta − Tc (°C);		Tm (°C); 3 – correcte ved temperature (°C)	
1	1	2	3	4	5	6
PCB	Anbote	Anbo	57.2	100	inbotek P Anbotek	anbo.
Terminal	ek Anti	potek - An	56.1	120	Anbotek Anbo	hotek - Anbo
Enclosure	potek	Napotok.	46.7	120	Anboile. Ar	Anbotek A
Note(s):	Anorek	Anborek	Anborra An	Anborek Anborn	ek Anto	Anbotek

10.2	TABLE: Temperature of resistance method temperature measurement	ents	N	oo'e
4.4.2.7	MAINS Transformers	k hote	№ N	Anboh
14.2.1	Motor temperatures	V V	otek N	Ant

Shenzhen Anbotek Compliance Laboratory Limited



Anb



	K 50	D'1.		61		V 50	D/1.
Operating of	conditions:						- O
iek Anb	Frequency (I	Hz)	otek An	00. b.	abotek	Anbore. A	n.
botek	Duration (h,	min)	Artootek	Anbo,	hour	Anbore min	An
aborek	Voltage (V)	ATTE	allpotek.	Anbo.	N abotek	Anbore	
Ar. sbotek	Ambient tem	perature Ta ₁ /	Ta ₂ (°C)	Anbo.	ek his	°C(initial/fina	l)
Anbotel		nts: 1 – part/de 7 – result; 8 –		- R _{cold} ; 3 – R _w	_{varm} ; 4 – Tr (K)	; 5 – T _c (°C);	botek Anbot
1	2	3	4	5	6	7	8
potek P	up. rek	obotek_	Dupore.	Notek	Anbotek	Anbo - tek	r. abotek

Note(s): 1 - Rcold = initial resistance; Rwarm = final resistance; Tr = temperature rise; Tc = Tr corrected (Tc= Tr - { Ta2 - Ta1} + [40C or max rated ambient]); Tmax = maximum permitted temperature

Note(s): 2 – Indicate insulation class (IEC 85) under comments (optional)

Note(s): 3 – Record values for normal condition and / or single fault condition in this Form use additional form if necessary

10.5.2	TABLE: Resistance to	heat of non-metallic encl	osures	nbotel P	
nbotek	Test method used:	Aupore K Min	See below		
Anbotek	Non operative treatmer	nt	. [\lambda] Andorek	Potel	
Anbotek	Empty ENCLOSURE	rek popores America	. [√]	P	
anbo	Operative treatment	Mark Mayour M	. I lek Anbotek Anbore	N N	
	Part	Test temperature (°C)	Duration (h, min)	Verdict	
stek	Enclosure	125	And otek 1h unbotek p	Upo, B	
'po	Dielectric strength test	(6.8)	. 500 V r.m.s./peak/d.c	Aupo, B	
Note(s): No	hazardous live parts sha	ll be accessible	er Anbotek Anbotek	Anboro	
10.5.3	TABLE: Insulating mate	rials		P	
10.5.3a) Ball pressure test					
ok bu	Max. allowed impression	n diameter	2 mm	poter -	
	Part	Test temperature (°C)	Impression Diameter (mm)	Verdict	
Anbore	Terminal	125	1.0	AnPren	
Anbore	PCB	125	orek Anbort 1.0 And botek	Pabol	
Anbor	Enclosure	125	abotek Ant 1.1	ek P an	
Note(s): No	hazardous live parts sha	ll be accessible	Anbotek Anbote Am	potek	
10.5.3	TABLE: Insulating mate	rials		N ^o footeN	
10.5.3b)	Vicat softening test (ISC	O 306)	k Anbotek Anbo	Nek	
	Part	Vicat temperature (°C)	Thickness of sample (mm)	Verdict	

Shenzhen Anbotek Compliance Laboratory Limited

Hotline 400-003-0500 www.anbotek.com



11	TABLE: Pro	TABLE: Protection against hazards from fluids						o¥ N	
lek Aup	Measurements: 1 – location; 2 – cleaning; 3 – spillage; 4 – overflow; 5 – equipment plus liquid; 6 – working voltage (V); 7 – test voltage (V); 8 – result; 9 – comments						potek v	Þ	
1	2	3	4	5	6	7	8	9	
Vupo.	Po Polek	Anbore.	Aur	rek - no	otek Mc	0. b	note)	Aupore	200
Note(s): No	such fluid use	d. Anbore	AUD	*ek	anbotek	Aupore.	potek potek	Ant	otel

Page 47 of 52

100	ak hore	Die.	ASE.	VUD	You	PIL.
11.7.2	TABLE: Leakaç	ge and rupture at	t high pressure			otek N Ar
Part	Maximum permissible working pressure (Mpa)	Test pressure (Mpa)	Leakage test Yes / No	Burst test Yes / No	Com	ments
bupo.	ek -botek	Anboie.	Anto otek	upotek Ar	100 - br.	otek Anbor
Note(s):	rek abotel	k Anboten	Antonotek	anbotek	Aupor Ar	abotek Ant
11.7.3	TABLE: Leaka	ge from low-pres	sure parts			, hotel N
nbotek	Measurements:	1 - ; 2 – (Pa); 3 –	; 4 -	ak anbotek	Aupo	, botek
	Part	Test press	ure Leal	kage (Yes/No)	Com	nments
abotek	Aupore	Mosek -	Anboten Ant	arek kni	polek Yupor	- ok hote
Note(s):	ak Aupore	Arr. Motek	Anborek	Anbo tek	abotek Ant	Jose Am

12.2.1	TABLE: Ioniz	ing radiat	ion			20			C/C	N.
Lo	ocation	Measure	ed values µS	sv/h	Ve	rdict		С	omme	nts
Aupo.	hotek	Anbore	Anu	iek	anbotek	Ant	, o.	p. too'	ek	Anbore
Note(s):	ak wotek	Anbot	Anb.	otek	Anborel	-	Vupo.	ok bi	ootek	Anbote
12.5.1	TABLE: Sour	nd level m	easuremen	ts					(e)	K N AND
Location			Meas					ted maximum sound pressure level		
in otok	vupate _K	Aupor	A. botek	Ant	oter	AUG.	Nek	nbotek	P	upo,
Note(s):	Anbotek	Aupor	k 200	46K	upoter	AND	rek	Anbore	3K	Anbor
12.5.2	TABLE: Ultra	sonic pre	ssure meas	urement	5					Nipor
Lo	ocation		Measure	d values			Comments			
		d	В	k	Hz					
botek	Anbo rek	obotek	- Aupore	bu.	otek	Anbotel	- 1	Tupo Tok	P1	botek
Note(s):	Anbo	bolek	Anbore	hu.	rek	anbo	18/6	Aupo.	K-	botek

13.2.2	TABLE: Batteries tests				N N N
tek onbo	Battery load and charging circuit diagram:	in otek	anbotek	Aupo.	
rek	Battery type	Aug	anbotek	Ank	





Page 48 of 52 Report No. 18250SC00059601

As.	ek apore An	k hotel and	,000	le.	Sport D	1111
Aupo.	Battery manufacturer	Ankolie Anv	abotek	Aupo,	-0 ¹	
rek An	Battery model	Anto Care	, botek	Anbore	Vur	
botek	Battery catalogue No.	Mark Aupo	by.	ek Anbore.	V.	
hotek	Battery ratings	s Anbou	b.,	ootek Anbote		
bu.	Reverse polarity insta	lment test	rak bu	-botek Anbr	And	atek.
Single	e component failures		Verd	dict		
	Component	Open circuit, result		Short circuit, result		
Y Air	botek Anbotek	anbotek anbotek	Auporo	k hotek	- Anborek	An
Note(s):	hotek Anbotek	Anbo stek anbotek	Aupor	ok bolek	Anbotek	190

14.1	TABL	E: Comp	onents							Rose
Object/par	rt No.		ufac- idemark	Type/m	nodel		Technic	al data		Mark(s) o
rek k.	botek	Anboth	e. Burn	Lotek .	Anbotek	Aupo	Yes	h. abote	K DI	pole
rek by	abotel	Anl	pote	ing "otek	anbore	Vie Vie	Po.	- 2p	otek	Anbore
'po'	70°	tek	Anbore	Vup.	K 000	otek	Vupo.	k.	"botek	Aupole
Aupo.	p.	notek	Anbore	And	rek	abotek	Anbox	a/4	hotek	Anbore

14.3	TABLE: Over	temperature protection de	evices	,hotel N
Reliability to	est:			·
Com	ponent	Type(see note)	Verdict	Comments
abotek	Aupore	An Anbotek	Anbo	K Anbor - Air
Note(s):	k Auporen	And stek anbote	Anbo ak ab	otek Anbore Am
NSR = non-	self-resetting (1	10 times)		
NR = non-re	esetting (1 time)	otek Anbore An		
SR = self-re	esetting (200 tim	nes) and the same of the same		

14.6	TABLE: Mains transformers tested outside equi	pment	Ann N otek
p nb'	Type	otek Anbotek Anbot	
lok b	Manufacturer	hotek Anbotek An	00
botek	Temperature protection class of the lowest RATED winding (class or maximum RATED temperature) :		Þu
Anbore	Winding identification	Anboro Andrek	
Aupore	Type of protector for winding	tek Anbore Amb	**
		Short circuit (Over load
SK DA	Elapsed time	nbotek 1s Anbot	1s





Page 49 of 52

Current, primary (A)	abotek Anbote	And Anbo
Current, secondary (A)	abotek Anbote	K Pur
Winding temperature, primary (°C)	W. Votek - Wupote	Ant Otek
Winding temperature, secondary (°C)	bu,	oter. Pur.
Tissue paper/cheesecloth test:	W. Pr.	inboten And
Voltage test	- An-	Anboren Anb
any transformer used.	upor k wotek	Anboren Anb
	Current, secondary (A): Winding temperature, primary (°C): Winding temperature, secondary (°C): Tissue paper/cheesecloth test: Voltage test:	Current, secondary (A)



PHOTO DOCUMENTATION









PHOTO DOCUMENTATION



Photo 4 [] front [] rear [] right side [] left side [] top [] bottom [√] internal

Shenzhen Anbotek Compliance Laboratory Limited





PHOTO DOCUMENTATION





End of report

