

Report No.: 18250SC00074301

# **Test Report**

Client Name : ACREL CO., LTD.

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

Product Name : DC Power meter

Date : Sept. 29, 2020

Shenzhen Anbotek Compliance Laboratory Limited



# 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 ...... Sanko Chen

Sanko Chen

Report No. 18250SC00074301

Approved by...... Jeff Zhu

Testing laboratory

Name...... Shenzhen Anbotek Compliance Laboratory Limited

community, Hangcheng Street, Bao'an District, Shenzhen,

Guangdong, China.518128

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 ...... DC Power meter

Trademark.....: Acrel

Model/type reference...... PZ72L-DE, PZ72, PZ72-DE, PZ96-DE

Rating...... Input: DC 0-1000V

Input: DC 75mV,0-40mA, 0-10V







Report No. 18250SC00074301

Test item particulars

Measurement (installation) category......

Pollution degree.....

Protection degree ...... Class I

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 ...... Sept. 15, 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:

DC Power meter
Model No: PZ72L-DE

Rating: Input: DC 0-1000V

Input: DC 75mV,0-40mA, 0-10V



Jiangsu Acrel Electrical Manufacturing Co., Ltd.

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



elt	Anbore	Anbo Abotek	Anbotek	IEC 61010-1	anbotek	Anborek	Anbotek	Anbo
C	Clause	Requirement – Test	Anbore	Ann	Result -	Remark	r propord	Verdict

4.4	TESTING IN SINGLE FAULT CONDITION	k hotek Anbote	And Prek
4.4.1	Fault tests	ak hotek Anbotek	Anbo
4.4.2	Application of fault conditions	ok botek Anbotek	Р
4.4.2.1	Single fault conditions not covered by 4.4.2.1 to 4.4.2.12	See appended table	otek And
4.4.2.2	Protective impedance	No protective impedance required	anbote N
4.4.2.3	Protective conductor	Anbo. Lek abotek	AIN'D P
4.4.2.4	Equipment or parts for short-term or intermittent operation	No such parts	Noore
4.4.2.5	Motors	otek Anbotek Anbo	N
4.4.2.6	Capacitors	Anti-	N
4.4.2.7	Mains transformers	Anbo rek anborek	inboa N
4.4.2.7.2	Short circuit	Anbo tek nbotek	Arib N
4.4.2.7.3	Overload	Anbo kek aborek	N
4.4.2.8	Outputs	Josek Anbourek	N <sub>inbot</sub>
4.4.2.9	Equipment for more than one supply	unbotek Anbo. Al	rek N Ant
4.4.2.10	Cooling	anbotek Anbo. A.	,bote <sup>K</sup> N
4.4.2.11	Heating devices	unpotek Aupo, b	N.
4.4.2.12	Insulation between circuits and parts	k anbotek Anbot	Notek
4.4.2.13	Interlocks	yek anbotek Anbote	N
4.4.2.14	Voltage selectors	stek nbotek Anbote	N
4.4.3	Duration of tests	upo sek upotek Aupo	P
4.4.4	Conformity after application of fault conditions	Anbo k sotek as	por P

5Anbo	Marking and documentation	Anbo ak hotek	An Pre
5.1.1	General	tek Aupon ok Potek	Propose
Anbo	Required equipment markings are:	sbotek Anbore An	ek Anb
ek Ar	Visible:	Anbotek Anbote Anti-	ootek P
potek	From the exterior; or	anbotek Anbote An	~ote₽
abotek	After removing a cover; or	No cover provided	Nek Work
A botek	Opening a door	No door provided	Arri N Note
A'oo'	After removal from a rack or panel	tek abotek Anbote	N
ik bu	Not put on parts which can be removed by an operator	No such parts provided	N Ant

Hotline Hotime 400-003-0500 www.anbotek.com

Page 6 of 54

Clause	Requirement – Test	Result - Remark	Verdict
ootek	nex potek pupou Am	Anboren Anbo	spotek
nbotek.	Letter symbols (IEC 60027) used	poporek Anbor	Pr. Potek
h. shotek	Graphic symbols (IEC 61010-1: Table 1) used	ok botek Anbore	N N
5.1.2	Identification	See below	And
k bu	Equipment is identified by:	bors An botek Anbot	P An
-K Bu	a) Manufacturer's or supplier's name or trademark	(see marking plate for details)	of P
Ofe. b	b) Model number, name or other means	(see marking plate for details)	nboteP
Inposek	Manufacturing location identified	Not required: unitis manufactured at one location	Anb Nek
5.1.3	Mains supply	ok Abotek Anbote	Vur
r Mc	Equipment is marked as follows:	born by Wolfek Williams	_ Ant
Ken	a) Nature of supply:	Anbore And work And	P
abotek A	a.c. rated mains frequency or range of frequencies	Anbotek Anbotek	nbotek P
abotek	2) d.c. mark with symbol 1 of Table 1	ak abotek Anbore	Pote
Pur Potek	b) Rated supply voltage(s) or range	ok hotek Anbores	N
Pro.	c) Max. Rated power (W or VA) or input current	or Anbore	Anb
tek Vu	The marked value not less than 90 % of the maximum value	anbotek Anbotek Anb	notek N
botek	If more than one voltage range:	anbotek Anbote A	<sub>N</sub> oN <sup>←</sup>
abotek	Separate values marked; or	k abotek Anbote	Note
abotek .	Values differ by less than 20%	iek abotek Anboten	N
Pri.	d) Operator-set for different rated supply voltages:	No such device	VIII.
ok hour	Indicates the equipment set voltage	inbore An botek Anbo	N
poiek An	Portable equipment indication is visible from the exterior	Anbotek Anbotek At	botek N
anborek	Changing the setting changes the indication	anbotek Anbote	Niek
Anbotek	e) Accessory Mains socket-outlets accepting standard MAINS plugs are marked:	rek Anbotek Anbotek	Anbo
anto.	With the voltage if it is different from the mains supply voltage	storek Antorek Anto	N A
otek	For use only with specific equipment	Ann Anbotek An	N
anbotek	If not marked for specific equipment it is marked with:	Ambotek Anbotek	Anborek
Anborek	The maximum rated current or power; or	lek Anboten Anbo	Noot
Anbore	Symbol 14 with full details in the documentation	notek Anbotek Anbo.	N N
.1.4	Fuses	No operator replaceable fuses	/r D//

#### **Shenzhen Anbotek Compliance Laboratory Limited**



	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
ootek	Aupon Aupon Aug	abotek Anto, A	rotek
Anborek	Operator replaceable fuse marking (see also 5.4.5)	Anborek Anbore	Anborek Anborek
5.1.5	Terminals, connections and operating devices	No such devices affecting safety	k kilote
5.1.5.1	General	tek obotek Anbor	N
jotek p	Where necessary for safety, indication of purpose of TERMINALS, connectors, controls and indicators marked	Anbotek Anbotek An	N Inbotek
Yun Viek	Insufficient space, symbol 14 used	And otek anbotek	AnbN
Anbotek	Push-buttons and actuators of emergency stop devices and indicators:	ootek Anbotek Anbotek	No
K Anbe	used only to indicate a warning of danger or	botek Anboten Anb	rek N
otek A	the need for urgent action	Antotek Anbotek Ank	N
-otek	coloured red	Ambotek Anbotek	N×
'un otek	coded as specified in IEC 60073	And otek Anbotek	Anbon N
Anbotek	Supplementary means of coding provided, if meaning of colour relates (see IEC 60073):	otek Anbotek Anbotek	AND Anb
Aupo	to safety of persons; or	abotek Anbore And	e⊬ N
yek Ar	safety of the environment	abotek Anbote And	-oteVN
botek	Indication of emergency stop devices	No such device used	N
5.1.5.2	Terminals	k totek Anbotes	And - otek
W. Motek	Mains supply terminals identified	ok hotek Anboten	AN
Vu.	Other terminal marking:	or Augotek Augotes	VUp.
r bu	a) Functional earth terminals (symbol 5 used)	upote Am Potek Aupo	N N
to. Vu.	b) Protective conductor terminals:	Aupore Aur Lotek M.	poiek
potek	Symbol 6 is placed close to or on the terminal; or	Anborek Anborek	Anbo'N
hotek.	Part of appliance inlet	ek hotek Anbotes	ATTN N
Pr.	c) Terminals of control circuits(symbol 7 used)	ek botek Anboter	N
ak Ant	d) Hazardous live terminals supplied from the interior	No hazardous live terminals	otek - Ar
potek	Standard mains socket outlet; or	Anbotek Anbote Ar	, not N
abotek	Ratings marked; or	abotek Anbota	Nek
abotek	Symbol 14 used	ek abotek Anboros	N
5.1.6	Switches and circuit-breakers	rek abotek Anbotek	P
Plen	If disconnecting device, off- position marked	Mose Mary	P Arri

**Shenzhen Anbotek Compliance Laboratory Limited** 



Page 8 of 54

Clause	Requirement – Test	Result - Remark	Verdict
ootek	And tek apolek Andoos And	Aupoten Augus	ntotek
mbolek	Symbol 9 and 15 used for on-position	k abotek Anbor	Pr. Potek
h. bolek	Symbol 10 and 16 used for off-position	ok botek Anbore	An P
Air.	Pair of symbols 9, 15 and 10, 16 close together	or An botek Anboten	Р
5.1.7	Equipment protected by double insulation or reinforced insulation	anbotek Anbotek Anbot	otek Ant
otek	Protected throughout (symbol 11 used)	obotek Anbote An	N
-potek	Only partially protected (symbol 11 not used)	s botek Anbores	Nok
5.1.8	Field-wiring terminal boxes	ok botek Anbotek	PUB-
Pur Pote	If terminal or enclosure exceeds 60 C:	k hotek Anborer	N
bus	Cable temperature rating marked	poots. K motek aupots	NAME
otek but	Marking visible before and during connection or beside terminal	Anbotek Anbotek Anb	otek N P
5.2	Warning markings	botek Anbores	up. Olek
botek	Visible when ready for normal use	ik botek Anbotek	P rel
Pur	Are near or on applicable parts	ak hotek Anborok	P
Pan.	Symbols and text correct dimensions and colour:	More And Morek Anbore	PArib
Hek And	a) symbols min 2,75 mm and text 1,5 mm high and contrastingin colour with background	Tupotek Vupotek Vup.	P P
hotek	b) symbols and text moulded, stamped or engraved in material min. 2,0 mm high and	Anbotek Anbotek	Anbo NK
Anbotek	0.5 mm depth or raised if not contrasting in colour	otek Anbotek Anbotek	A'Ѱ
anbo	If necessary marked with symbol 14	sotek Anbotek Anbo	N
rek Ar	Statement to isolate or disconnectif access by using a tool to HAZARDOUS LIVE parts is permitted	Anbotek Anbotek Anb	botek N
5.3 otek	Durability of markings	Markings are durable and legible	Ambotek Anbotek
Anbor	The required markings remain clear and legible in normal use	(see appended table)	Phoof
5.4	Documentation	atek Anbotek Anbo	- PL
5.4.1	General	Aupo. Po apolek Vi	DOLO.
Anbotek	Equipment is accompanied by documentation for safety purposes for operator or responsible body	Anbotek Anbotek	Anbotek
Anbotek	Safety documentation for service personnel authorized by the manufacturer	crek Anbotek Anbotek	Nanbor
AUD	Documentation necessary for safe operation is provided in printed media or	abote And Anbote	P An

#### **Shenzhen Anbotek Compliance Laboratory Limited**



Page 9 of 54

Clause	Requirement – Test	Result - Remark	Verdict
botek	Anboth Ann otek anbotak Anbo	Antorek Antore An	-otek
bolek	in electronic media if available at any time	k abotek Anbote.	And Pek
Ar. potek	Documentation includes:	ek abotek Anbotes	And
VII.	a) Intended use	cis All botek Anboten	P
yk k	b) Technical specification	Anbore Anti-	P Anb
Y Bir.	c) Name and address of manufacturer or supplier	Anbore An hotek An	ofer P
ofe. I	d) Information specified in 5.4.2 to 5.4.6	Anbore And borek	Anbote P
Anborek	e) Information about how to mitigate risks remaining	ek abotek Anbotek	Anb Pek
Anbore	f) accessories for safe operation of the equipment specified	nbotek Anbotek Anbote	k Pup
otek Anb	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	Anbotek Anbotek Anb	nbotek N
wotek.	h) Instructions for lifting and carrying (see 7.5)	k hotek Anboten	And N Tek
Anbotek	Warning statements and a clear explanation of warning symbols:	Potek Pupotek Vilpotei	Anbo.
k Anbo	Provided in the documentation; or	obotek Anbote And	N N
Hek A	Information is marked on the equipment	abotek Anbote And	-oteKN
5.4.2	Equipment ratings	abotek Anbote A	Up - Olek
botek	Documentation includes:	ek abotek Anbote	Ann - Nek
Al. hotek	a) Supply voltage or voltage range	AC 220V	A <sup>n</sup> P
bir.	Frequency or frequency range	hor An botek Anboten	N
Pr.	Power or current rating	Inboth Ambo	b W
ipotek bil	b) Description of all input and output connections in accordance to 6.6.1 a)	Anbotek Anbotek Ar	lootek hotek
Anbotek	c) Rating of insulation of external circuits as required by 6.6.1b)	Anborek Anborek	Anbotek Anbotek
Anbo.	d) Statement of the range of environmental conditions	Ambient temperature: 5°C~40°C	Pupot ek an
ak an	e) Degree of ingress protection (IP, IEC 60529)	IP20	wek P
otek	f) Impact rating less than 5 J	No impact rating less than 5 J	N
morek.	IK code in accordance to IEC 62262 marked or	k hotek Anbotek	Anton Nek
And niek	symbol 14 of table 1 marked, with	And anbotek	Anbore N
Villa	RATED energy level and test method stated	cler Wign stek Wholey	N
5.4.3	Equipment installation	No special safety installation instructions deemed required	PUL

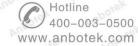
# Shenzhen Anbotek Compliance Laboratory Limited



Page 10 of 54

	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
potek	Anbor Anbores And	anbotel Anboy A	potek
abotek	Documentation includes instructions for:	w abotek Anbote	Ann
botek.	a) Assembly, location and mounting requirements	ek botek Anboten	AMN N
Air. hote	b) Protective earthing	ok hotek Ambotek	N
Prince	c) Connections to supply	hor k wotek Anbor	N Ant
r Vien	d) Permanently connected equipment:	Anbore And	otek I
ote. b	1) Supply wiring requirements	Anbores Ans otek	nboteN
Anborek	If external switch or circuit-breaker, requirements and location recommendation	ek potek Vupotek	Arrib Nek
hotel	e) ventilation requirements	ok hotek Anbotes	N
K PLAN	f) special services (e. g. air, cooling liquid)	poors And Morek Anbore	Name
kuo.	g) Instructions relating to sound level	Anboise Anb	otel N P
5.4.4	Equipment operation	Anboren Anbo	nbotek-
hpotok	Instructions for use include:	Anbotek Anbo	abotek
Anborek	a) identification and description of operating controls	(see user manual)	A.Boteh
Anbo	b) Positioning for disconnection	boten And stek Anbotel	Nupe
Anbo	c) Instructions for interconnection	Anbotek Anbo stek anbo	rek P M
HEK MI	d) Specification of intermittent operation limits	(see user manual)	obotekP
hotek	e) Explanations of symbols used	Anbotek Anbo	N <sup>K</sup>
Upotek	f) Replacement of consumable materials	ek nobotek Anbor	Notek
anbotek	g) Cleaning and decontamination	stek anbotek Anbotek	N wo
Anbot	h) Listing of anypoisonous or injurious gases and quantities	No hazards gases	rek N
ret An	i) RISK reduction procedures relating to flammable liquids (see 9.5)	No such flammable liquids provided	botek N
Anbotek	j) RISK reduction procedures relating burn from surfaces permitted to exceed limits of 10.1	Anbotek Anbotek	Anbotek Anbotek
Anbore	Additional precautions for IEC 60950 conforming equipment in regard to moistures and liquids	itek Wupover Wupovek	Nabot
ok Ant	A statement about protection impairment if used in a manner not specified by the manufacturer	hotek Anbotek Anbot	ek N An
5.4.5	Equipment maintenance and service	Ann Anbotek An	00
o-	Instructions for responsible body include:	And nick anhotek	Anbor-
Aupotek	Instructions sufficient in detail permitting safe maintenance and inspectionand continued safety:	Anbotek Anbotek	AU/Pre-
h' nbote	Instruction against the use of detachable MAINS supply cord with inadequate rating	nek sobotek Anbotes	P
k -n	Specific battery type of user replaceable batteries	hoo, Andorek Anborr	P Ant
D.1.	Any manufacturer specified parts	Anbo, Air tok out	o <sup>jen</sup> P

**Shenzhen Anbotek Compliance Laboratory Limited** 



Page 11 of 54

	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Anbor W Lotek Anbore And	abotell Anbo	-otek
	Rating and characteristics of fuses	horek Anbore	Ant Prek
Anbotek	Instructions include following subjects permitting safe servicing and continued safety:	rek Anbotek Anbotek	And P nbotek
	a) product specificRISKSmay affect service personnel	potek Anbotek Anbo	k P
E. Aug	b) protective measures for theseRISKS	Anbotel And	otek P A
poter P	c) verification of the safe state after repair	Anbotek Anto	nboteP
5.4.6	Integration into systems or effects resulting from special conditions	No such special conditions used	Aup Nek
Vien Vien	Aspects described in documentation	And otek anbotek	N

6	Protection against electric shock	Anbore And Otek Anborek - Ank
6.1	General	Anbores Anne stek inbotes-
6.1.1	Requirements	Anbore Anti tek nabatek
Anbotek Anbot	Protection against electric shock maintained in NORMAL CONDITION and SINGLE FAULT CONDITION	Comply with requirement P
sk Anl	ACCESSIBLE parts not HAZARDOUS LIVE	nbotek Anbote Anbote P Anb
anbotek Anbotek	Voltage, current, charge or energy below the limits in NORMAL CONDITION and in SINGLE FAULT CONDITION between:	Anbotek Anbotek Anbotek
Anbotek	ACCESSIBLE parts and earth	ek Anbotek Anbo tek Notek
Anbore	Two ACCESSIBLE parts on same piece of the equipment within a distance of 1,8 m	cotek Anbotek Anbotek Anbotek
otek Aur	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.11	Anbotek Anbotek Anbotek P Anbo
6.1.2	Exceptions	Anbotek Anbotek Arts
Anbotek	Following HAZARDOUS LIVE parts may be accessible to an OPERATOR:	Anbotek Anbotek Anbotek
Anboro	a) parts of lamps and lamp sockets after lamp removal	stek Anbotek Anbotek Mootek
Hek h.	b) parts to be replaced by operator only by the use of tool and warning marking	Anbotek Anbotek Anbotek N Anbotek N Anbotek An
nbotek otek	Those parts not hazardous live 10 s after interruption of supply	Anbotek Anbotek AnboteN
Anbotek	Capacitance test if charge is received from internal capacitor	otek Anbotek Anbotek Antin
6.2	Determination of accessible parts	notek Anbores Anb Tilk nbot
6.2.1	General	ontek onbotek Anbe sek P

# **Shenzhen Anbotek Compliance Laboratory Limited**



is do	Die Miller Market Market	10/c No. 15.	0.00
Clause	Requirement – Test	Result - Remark	Verdict
ooten	Tup, Mark Whole Will Park	And And	abotek
<b>Aupolek</b>	Unless obviously determination of accessible parts as specified in 6.2.2 to 6.2.4	Anbotek Anbotek	Anbotek Anbotek
5.2.2	Examination	lek Aupor Air potek	Phot
Anbore	- with jointed test finger (as specified B.2)	botek Anbors Ar.	K P AN
k Anb	- with rigid test finger (as specified B.1) anda force of 10 N	Anbotek Anbotek An	jotek P
5.2.3	Openings above parts that are hazardous live	Anbo tek abotek	AupoteN
Anbotek	- test pin with length of 100 mm and 4 mm in diameter applied	ek Anbotek Anbotek	AntoN
6.2.4	Openings for pre-set controls	stek Anbotek Anbot	N
4 Anbo	- test pin with length of 100 mm and 3mm in diameter applied	Anbotek Anbotek Anbot	otek N
6.3	Limit values for accessible parts	Anboten Anbo	nbotek_
5.3.1	Levels in normal condition	Aupolek Aupo	$^{ab}$ $\mathbf{P}^{k}$
Anbotek Anbotek	a) Voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.	Accessible enclosure voltage limits less than 46,7 V peak or 70 V d.c.	Pore Anbore
Aupo,	for wet locations voltage limits less than 16 V r.m.s. and 22,6 V peak or 35 V d.c.	Anbotek Anbotek Anb	N Yes
rok br	Voltages are not HAZARDOUS LIVE the levels of:	Anbo, Ak abotek A	obote
Anbotek Anbotek	b) Current less than 0,5 mA r.m.s. for sinusoidal, 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	Measure: 0.15mA r.m.s.	Anborel
Anboth	for wet locations measuring circuit A.4 used	botek Anboten Anb	N N
ek ant	c) Levels of capacitive charge or energy less:	hotek Anborek Anbe	N N
ootek	1) 45 µC for voltages up to 15 kV peak or d.c. or line A of Figure 3	Anbotek Anbotek Ar	N. Anbores
Anbore	2) 350 mJ stored energy for voltages above 15 kV peak or d.c.	Anborek Amborek	An Nach
5.3.2	Levels in single fault condition	ok hotek Anbotek	P
and And	a) Voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.	Accessible enclosure voltage less than limit value	P A
otek l	for wet locations voltage limits less than 16 V r.m.s. and 22,6 V peak or 35 V d.c.	Anbotek Anbotek	AnboteN AnboteN
Anbor	Voltages are notHAZARDOUS LIVEthe levels of:	Aupor Ar spotek	Anboien
Anbotel	b) Current less than 0,5 mA r.m.s. for sinusoidal, 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	Measure: 0.15mA r.m.s.	jk № ₩





Clause	Requirement – Test	Result - Remark	Verdict
notek	Anboter Anbo	All Motels Antotek Ar	otek.
, orek	for wet locations measuring circuit A.4 used	Anbotek Anbotek	Anto Nok
Anos	c) Levels of capacitive charge or energy less:	And work anbotek	Ampair N .al
Anborr	1) 45 μC for voltages up to 15 kV peak or d.c. or line A of Figure 3	botek Anbotek Anbotek	N N Anb
ek Au	2) 350 mJ stored energy for voltages above 15 kV peak or d.c.	Anbotek Anbotek An	potek N p
6.4	Primary means of protection	Anbo tek abotek	Yupote-
6.4.1	ACCESSIBLE parts prevented from being HAZARDOUS LIVE by one or more of following means:	ek Anbotek Anbotek	Anbotek Anbotek
anb Anb	a) ENCLOSURES or PROTECTIVE BARRIERS (see 6.4.2)	botek Anbotek Anbot	otek Panbo
otek p	b) BASIC INSULATION(see 6.4.3)	Anboten Ant	P
notek	c) Impedance (see 6.4.4)	Anborek Anboren	Nx
6.4.2	Enclosures and protective barriers	k hotek Anbotek	And P rek
Am	- meet rigidity requirements of 8.1	k hotek Anbotek	N
k Aup	- meet requirements for BASICINSULATION, if protection is provided by insulation	otek Ambotek Ambote	Nanbo
otek A	- 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	hbotek N Ambotek
6.4.3	Basic insulation	And otek Anbotek	P.P
Anbo	- meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7	botek Anbotek Anbotel	kek vul
6.4.4	Impedance	hotek Anboten Anb	iek N
hotek	Impedance used as primary means of protection meets all of following requirements:	Anbotek Anbotek A	Anbotel
Anbore	a) limits current or voltage to level of 6.3.2	Anbore Ans botek	AnNiek
Anbore	b) RATED for maximum WORKING VOLTAGE and the amount of power it will dissipate	tek Anbotek Anbotek	Nabote
iek An	c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of BASICINSULATION of 6.7	Anbotek Anbotek Anbo	potek N An
6.5	Additional means of protection in case of single fault condition	Anbotek Anbotek	Vupotek
6.5.1	ACCESSIBLE parts are prevented from becoming HAZARDOUS live by the primary means of protection and supplemented by one of:	otek Anbotek Anbotek	Anborel Anb





An	IEC 61010-1	Tupor Au Tek "po	tor Aut
Clause	Requirement – Test	Result - Remark	Verdict
boten	And Anton Anton Anton Anton	Ant Ant	totek
abotek	b) SUPPLEMENTARYINSULATION (see 6.5.3)	s aborek Anbore	Arr Prek
Anbotek.	c) automatic disconnection of the supply (see 6.5.5)	lek Anbotek Anbotek	Anbote
Aupor	d) current-or voltage-limiting device (see 6.5.6)	botek Anbore k wol	or N and
ek Au	Alternatively one of the single means of protection is used:	Anbotek Anbotek An	potek N
Po.	e) REINFORCED INSULATION(see 6.5.3)	Anbo Lek abotek	Yupose N
Aupor	f) PROTECTIVE IMPEDANCE (see 6.5.4)	Aupon Au potek	AnbN
6.5.2	Protective bonding	ootek Anbotek Anbotek	Arbotel
6.5.2.1	ACCESSIBLE conductive parts, may become HARZARDOUSLIVE in SINGLE FAULT CONDITION:	Anbotek Anbotek Ant	otek - A
Anbotek tek	Bonded to the PROTECTIVE CONDUCTOR TERMINAL; or	Anbotek Anbotek	Aupo NK
Anborel	Separated by conductive screen or barrier bonded to PROTECTIVE CONDUCTOR TERMINAL	otek Anbotek Anbotek	Novo
6.5.2.2	Integrity of protective bonding	otek Anbotek Anbot	- ok
otek A	a) Protective bonding consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses	Anbotek Anbotek Anb	hotek N Anbotek
Aupor	b) Soldered connections:	k Aupon k hin otek	Anhotek
Anboten	Independently secured against loosening	otek Anboien Anbu	Nabot
k Anbo	Not used for other purposes	hotek Anborek Anbo	ek N ad
rek A	c) Screw connections are secured	Potek Aupotok Aup	ae N
-otek	d) Protective bonding not interrupted	Anborek Anborek A	N
Aupotek	exempted as removable partcarries MAINS SUPPLY INPUT connection	Anbotek Anbotek	Anborek Anborek
Anbora	e) Any moveable PROTECTIVE BONDING connection specifically designed, and meets 6.5.2.4	Thotak Aupotek Aupotek	N pos
Potek Vi	f) No external metal braid of cables used (not regarded as PROTECTIVE BONDING)	Anborek Anborek Ar	potek N
hotek	g) If mains supply passes through:	Are Hotek Anbotek	Anbo
Americk	Means provided for passing protective conductor	Am untek anbotek	Ambal M
Alion	Impedance meets 6.5.2.4	and Andrek	N
rek Anho.	h) Protective conductors bare or insulated, if insulated, green-and-yellow	botek Anbotek Anbot	N Pup
	The Mayor Mr. Mayor	AU. SIEK MI	40.





Clause	Requirement – Test	Result - Remark	
20.	VUD. VK POLE DILL	Arter Antotek Ar	Verdict
	Exceptions:	Aupo, wek vupotek	Antore.
Aupo.	1) earthing braids	Aupo, W. upotek	AUPOSE.
bupo,	internal protective conductors etc.	ciek Aupo, Wi.	Noote
Pupo,	Green/yellow not used for other purposes	upotek Arbor Ar.	N Ant
otek Ant	TERMINAL suitable for connection of a PROTECTIVE CONDUCTOR, and meets 6.5.2.3	Anborek Anborek An	otek N
5.5.2.3	Protective conductor terminal	Anborek Anborek	Yupo.
notek	a) Contact surfaces are metal	k hotek Anbotek	P. P. P.
purp "Otel	b) Appliance inlet used	k sotek Anbotek	P
tek Vup.	c) For rewireable cords and permanently connected equipment, protective conductor terminal is close to mains supply terminals	Anbotek Anbotek Anbotek Anto	otek P
nbotek	d) If no mains supply is required, any protective conductor terminal:	Anbotek Anbotek	nbotek
Anbotek	Is near terminals of circuit for which protective earthing is necessary	Anborek Anborek	More
Pun	External if other terminals external	pores Ann otek Anbote	Namb
iek Wil	e) Equivalent current-carrying capacity to mains supply terminals	Anbotek Anbotek Anb	rek N A
botek	f) If plug-in, makes first and breaks last	potek Anbore.	N
Anbotek	g) If also used for other bonding purposes, protective conductor:	ek Anbotek Anbotek	Anbotek
Anbois	Applied first	cotek Anborn An hotel	Panbo
Anbo	Secured independently	abotek Anbore Ant	ek P A
ek pr	Unlikely to be removed by servicing	abotek Anbote And	work P
ootek	h) Protective conductor of measuring circuit:	Anbore A	P
Anbotek	Current RATING equivalent to measuring circuit TERMINAL;	Anbotek Anbotek	Anbotek Anbotek
Anbon	2) PROTECTIVE BONDING:	otek Anbor ok hotek	Pupo,
Anbor	Not interrupted; or	abotek Anbote Am	ek N An
K PUI	i) Functional earth terminals allow independent connection	Anbotek Anbotek An	potek N
anbotek	j) If a binding screw used for PROTECTIVE CONDUCTOR TERMINAL:	Anbotek Anbotek	Anbotek P
upotek	Suitable size for bond wire	dek Anbotek Anbote	Poor
anbote	Not smaller than 4,0mm (No. 6)	otek Anbotek Anbote	Р
الم	At least 3 turns of screw engaged	abotek Anbot	Р





Clause	Requirement – Test	Result - Remark	Verdict
Clause	Requirement – Test	Result - Remark	verdict
Anborek	k) Contactpressure not capable being reduced by deformation of materials	Anborek Anborek	N N
6.5.2.4	Impedance of protective bonding of plug- connected equipment	tek Aupolay Aupolek	Noore
ootek Anb	Impedance between PROTECTIVE CONDUCTOR TERMINAL and each ACCESSIBLE part where PROTECTIVE BONDING is specified, is:	Anbotek Anbotek Anbotek Anbotek	anbotek
Aupore	less than 0,1 Ohm; or	Anbore And Lotek	Amb Non
Anbore	less than 0,2 Ohm if equipment is provided with non detachable cord	ak Anborek Anborek	Noore
6.5.2.5	Bonding impedance of PERMANENTLY CONNECTED EQUIPMENT	anbotek Anbotek Anbot	N <sup>Amb</sup>
6.5.2.6	Transformer protective bonding screen	Aupotek Aupote Au	hote/N
unbotek Lek	Transformer provided with screen for protective bonding:	Anbotek Anbotek	Aupo'N's
Anbotek Anbotek	screen bonding consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses (see6.5.2.2 a)	notek Anbotek Anbotek	N Anbo
otek Ar	screen bonding with soldered connection (see 6.5.2.2 b ) is:	Anbotek Anbotek An	nbotekN
,nbo	- Independently secured against loosening	Anbo sek abotek	Amboli
Aupo.	- Not used for other purposes	anbound Anbotek	ATNO TE
6.5.3	Supplementary insulation and reinforced insulation	otek Anbotek Anbotek	Panbol
Hek An	- meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7	Anbotek Anbotek Anbo	potek P A
6.5.4	Protective impedance	Anbotek Anbo	nbo'N
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	Andrek
rek Anborr	CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of DOUBLE or REINFORCE DINSULATION of 6.7	anbotek Anbotek Anbo	ek N Ant
botek	The protective impedance consists of one or more of the following:	Anbotek Anbotek	Anbot N
Anbotek	a) appropriate single component suitable for safety and reliability for protection, it is:	ek Anbotek Anbotek	Anto
Anbote	1) RATED twice the maximum WORKING     VOLTAGE	botek Anboten Anbo	ik N Anb





Dur	IEC 61010-1	inbote Att nbo	ion Aut
Clause	Requirement – Test	Result - Remark	Verdict
poten	Tubor William Make	poter Anti-	potek
	resistor RATED for twice the power dissipation for maximum WORKING VOLTAGE	Anborek Anborek	Amborek Amborek
Anboro	b) combination of components	lek Aupon ak motek	Noote
ek Anbore	Single electronic device not used as PROTECTIVE IMPEDANCE	botek Anborek Anbor	N And
6.5.5	Automatic disconnection of the supply	No such device	N
anbotek	a) RATED to disconnect the load within time specified in Figure 2	Anbotek Anbotek	Anbore N
Anborek	b) RATED for the maximum load conditions of the equipment	ak Anbotek Anbotek	N <sub>Dorek</sub>
6.5.6	Current- or voltage-limiting device	No such device	NAMPO
Anb.	Device complies with all of:	Anboten Anti-	otel <sup>k</sup> N pr
potek A	a) RATED to limit the current or voltage to the level of 6.3.2	Anborek Anborek	inbote <sup>N</sup> N
Pur Potek	b) RATED for the maximum working voltage; and	k sotek Anbotek	Amb N wek
Anbotek	RATED for the maximum operational current if applicable	otek Anbotek Anbotek	N4 anbo
otek Anbo	c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of SUPPLEMENTARY INSULATION of 6.7	Anbotek Anbotek Anb	hotek N An
6.6	Connections to external circuits	And tek anbotek	Aupor P
6.6.1	Connections do not cause ACCESSIBLE parts of the following to become HAZARDOUS LIVE in NORMAL CONDITION or SINGLE FAULT CONDITION:	otek Anbotek Anbotek	ArP <sup>o</sup> Anboh
orek An	- the external circuits	abotek Anboten Anti-	otek P
aborek	- the equipment	Anboiek Anboien An	P
abotek	Protection achieved by separation of circuits; or	L abotek Anboton	Prek
Anbotek	short circuit of separation does not cause a HAZARD	tek Aupotek Aupotek	An P Anbore
Aupon	Instructions or markings for each terminal include:	upotek Aupon ek apot	ek P Ant
tek Pup	a) Rated conditions for terminal	Anbotek Anbote Ant	otek P
botek	b) Required rating of external circuit insulation	Aupotek Aupote Au	N <sub>FOCI</sub>
6.6.2	Terminals for external circuits	anbotek Anbot	bu. notek
Anbotek	TERMINALS which receive a charge from an internal capacitor are not HAZARDOUS LIVE after 10 s of interrupting supply connection	ek Anbotek Anbotek	Anborel Anborel
6.6.3	Circuits with terminals which are hazardous live	No such hazardous live terminals	otek - P

Hotline 400-003-0500 www.anbotek.com



IEC 61010-1 Clause Requirement - Test Result - Remark Verdict These circuits are: Not connected to accessible conductive parts; or Ν Connected to accessible conductive parts, but are N not mains circuits and have one terminal contact at earth potential No accessible conductive parts are hazardous live Ν 6.6.4 Accessible terminals for stranded conductors No RISK of accidental contact because: N Located or shielded Self-evident or marked whether or not N connected to ACCESSIBLE conductive parts ACCESSIBLE TERMINALS will not work loose Ν 6.7 Insulation requirements 6.7.1 The nature of insulation 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** 6.7.1.2 Clearances Required CLEARANCES reflecting factors of Equipment rated for operating altitude greater than 2000 m correction factor of Table 3 of 61010-1 applied 6.7.1.3 Creepage distances Required CLEARANCES reflecting factors of 6.7.1.1 CTI material group reflected by requirements CTI test performed 6.7.1.4 Solid insulation Required CLEARANCES reflecting factors of 6.7.1.1 6.7.1.5 Requirements for insulation according to type of a) In 6.7.2 for mains circuits of overvoltage Ν category II with a nominal supply voltage up to 300V b) In 6.7.3 for secondary circuits separated from the circuits in a) only by means of a transformer

**Shenzhen Anbotek Compliance Laboratory Limited** 





IEC 61010-1 Clause Requirement - Test Result - Remark Verdict c) In K.1 for mains circuits of overvoltage category Ν III or IV or for overvoltage category II over 300V d) In K.2 for secondary circuits separated from the circuits in c) only by means of a transformer e) In K.3 for circuits that have one or more of: 1) maximum TRANSIENT OVERVOLTAGE is limited to known level below the level of MAINS CIRCUIT 2) maximum TRANSIENT OVERVOLTAGE above the level of MAINS CIRCUIT 3) WORKING VOLTAGE is the sum of more Ν than one circuit or a mixed voltage 4) WORKING VOLTAGE includes recurring peak voltage, may include non-sinusoidal or non-periodic waveform 5) WORKING VOLTAGE with a frequency N above 30 kHz 6.7.2 Insulation for mains circuits of overvoltage II with a Ν nominal supply voltage up to 300V 6.7.2.1 CLEARANCES and CREEPAGE DISTANCES Values for MAINS CIRCUITS of table 4 are met Coatings to achieve reduction to POLLUTION DEGREE I comply with requirements of Annex H 6.7.2.2 Solid insulation N 6.7.2.2.1 Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4 Equipment passed voltage tests of 6.8.3 with Ν values of Table 5 Complies as applicable: a) ENCLOSUREor PROTECTIVE BARRIER Clause8 b) moulded and potted parts requirements of N 6.7.2.2.2 c) inner layers of printed wiring boards Ν requirements of 6.7.2.2.3 d) thin-film insulation requirements of 6.7.2.2.4 6.7.2.2.2 Moulded and potted parts N Conductors between same two layers are separated by at least 0,4 mm after moulding is completed

#### Shenzhen Anbotek Compliance Laboratory Limited



Clause	Danisan and Tital hotel Antoles	Descrit Description	A/ P - 1
Clause	Requirement – Test	Result - Remark	Verdict
6.7.2.2.3	Inner insulation layers of printed wiring boards	anbor Ar.	Antoren Nak
Anbotek	Separated by at least 0,4 mm between same two layers	tek Anbotek Anbotek	Ambore Ambore
ek Aupon	REINFORCE DINSULATION have adequate electric strength; one of following methods used:	botek Anboisek Anbot	ek N pup
*ek	a) thickness at least 0,4 mm	Anbo sek abotek An	N
Anbotek Anbotek	b) insulation is assembled of minimum two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION	Anbotek Anbotek	Anbotek
Anbore Anbore	c) insulation is assembled of minimum two separate layers, where the combination is rated for test voltage of Table 5 for REINFORCED INSULATION	potek Anbotek Anbotek Anbotek Anbotek Anbot	t Noon
6.7.2.2.4	Thin-film insulation	Vupotek Vupo, WK	abote N
Anbotek Anbotek	Conductors between same two layers are separated by applicable CLEARANCES and CREEPAGE DISTANCES	Anbotek Anbotek	Anbolek Anbolek
Anbotel M	REINFORCE DINSULATION have adequate electric strength; one of following methods used:	otek Anbotek Anbote	N Anbo
Arra Arra	a) thickness at least 0,4 mm	Anbore All hotek Anb	Ofen N VL
upotek A	b) insulation is assembled of min two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION	Anbotek Anbotek	hbotek Anbotek
Anbotek Anbotek	c) insulation is assembled of min three separate layers, where the combination of two layers passed voltage tests of 6.8.3 with values of Table 5 for REINFORCED INSULATION	otek Anbotek Anbotek	ArNote Anbot
6.7.3	Insulation for secondeary circuits derived from mains circuits of overvoltage II with a nominal supply voltage up to 300V	Anbotek Anbotek Anb	botek N
6.7.3.1	Secondary circuits where separation from MAINS CIRCUITS is achieved by a transformer providing:	Anbotek Anbotek	Anboyek
Vupo,	- REINFORCED INSULATION	otek Aupon tek upotek	Napore
Anbo	- DOUBLE INSULATION	upotek Aupor Auro	ek N Ant
tek An	- screen connected to the PROTECTIVE CONDUCTOR TERMINAL	Anbotek Anbotek Ar	botek N
6.7.3.2	CLEARANCES	Ann otek Anbotek	Anbore P. ok
Anbotek	a) meet the values of Table 6 for BASIC INSULATION and SUPPLEMENTARY INSULATION; or	ek Anbotek Anbotek	Anbore
ek Ant	twice the values of Table 6 for REINFORCED INSULATION	anbotek Ambotek Ambot	P And
	The state of the s		4

Hotline 400-003-0500 www.anbotek.com



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**



IEC 61010-1 Clause Requirement - Test Result - Remark Verdict 6.9.2 Material not to be used for safety relevant Ν insulation: Easily damaged materials not used N Non-impregnated hydroscopic materials not used Ν 6.9.3 Colour coding Green-and-yellow insulation shall not be used a) protective earth conductors; N b) protective bonding conductors; c) potential equilization conductors; Ν d) functional earth conductors Ν 6.10 Connection to mains supply source and connections between parts of equipment 6.10.1 Mains supply cords Rated for maximum equipment current P Cable complies with IEC 60227 or IEC 60245 Heat-resistant if likely to contact hot parts Ν Temperature rating (cord and inlet) Ν Green-and-yellow used only for connection to protective conductor terminals Detachable cords with IEC 60320 mains connectors: Conform to IEC 60799; or Ν Have the current rating of the mains connector Ν 6.10.2 Fitting of non-detachable mains supply cords 6.10.2.1 Cord entry Inlet or bushing smoothly rounded; or N Insulated cord guard protruding >5D N 6.10.2.2 Cord anchorage: Protective earth conductor is the last to take the Ν a) Cord is not clamped by direct pressure from a Ν screw b) Knots are not used N c) Cannot push the cord into the equipment to cause a hazard

#### **Shenzhen Anbotek Compliance Laboratory Limited**



IEC 61010-1 Clause Requirement - Test Result - Remark Verdict d) No failure of cord insulation in anchorage with Ν metal parts e) Not to be loosened without a tool N f) Cord replacement does not cause a HAZARD and method of strain relief is clear Push-pull and or torque test 6.10.3 Plugs and connectors Mains supply plugs, connectors etc., conform with N relevant specifications If equipment supplied at voltages below 6.3.2.a) or from a sole source: Plugs of supply cords do not fit mains sockets Ν above rated supply voltage Mains-type plugs used only for connection to N mains supply Plug pins which receive a charge from an internal N capacitor Accessory MAINS socket outlets: N a) Marking if accepts a standardMAINSplug (see Ν b) Input has a protective earth conductor if outlet has EARTH TERMINAL CONTACT 6.11 Disconnection from supply source 6.11.1 Disconnects all current carrying conductors 6.11.2 Exceptions 6.11.3 Requirements according to type of equipment 6.11.3.1 Permanently connected equipment and multi-N phase equipment Employs switch or circuit-breaker N If switch or circuit-breaker is not part of the equipment, documentation requires: a) Switch or circuit-breaker must be included in Ν the installation b) Suitable location easily reached N c) Marking as disconnecting for the equipment N 6.11.3.2 Single-phase cord-connected equipment Equipment is provided with: a) Switch or circuit-breaker; or

#### **Shenzhen Anbotek Compliance Laboratory Limited**

Page 25 of 54

Anbore	IEC 61010-1	wołek Anborek Anbore	ek abo
Clause	Requirement – Test	Result - Remark	Verdict
abotek	into Anbott Anbott An	abote And	-otek
bolek	b) Appliance coupler (disconnectable without tool);	botek Anbote	Ans Nek
hotek hotek	c) Separable plug (without locking device)	ok Hotek Anboten	And N stek
6.11.4	Disconnecting devices	ok hotek Anboten	PUPPO.
N DUIN	Electrically close to the SUPPLY	bole And Motek Anbot	N Anbo
6.11.4.1	Switches and circuit-breakers	Anboren Am Motek Ant	ofer N An
pote. b	When used as disconnection device:	Anbore And Lotek	anboreN
Anbore	Meets IEC 60947-1 and IEC 60947-3	Anbores And work	anb Nek
Aupore	Marked to indicate function	ek Anbore And	Notek
Aupole	Not incorporated in MAINS cord	ootek Anbore And	K Nanbore
ek Aupo	Does not interrupt PROTECTIVE EARTH CONDUCTOR	Anbotek Anbotek Anb	otek N Ant
6.11.4.2	Appliance couplers and plugs	Anboth Am botek	nboten
Anborek	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 Anbotek Anbote	Anbore'
otek Aupo	Single-phase portable equipment cord length not more than 3 m	Anbotek Anbotek Anb	kek N Aup
Anbotek	Protective earth conductor connected first and disconnected last	Anbotek Anbotek A	upotek

Vu.	notek anbo kak shor	And worker	rupo
7 Anbore	Protection against mechanical hazards	sotek Anbote. And otek	-nbotel
7.1 Anbol	Equipment does not cause a mechanical HAZARD in NORMAL nor in SINGLE FAULT CONDITION	Inbotek Anbotek Anbo	rek Anbo
abotek	Conformity is checked by 7.2 to 7.7	abotek Anbote At	P-
7.2	Sharp edges	Smooth and rounded	Amb Prek
hotek	Easily-touched parts are smooth and rounded	ek abotek Anbote	And P otek
br.	Do not cause an injury in normal use and	ok abotek Anboter	P
of but	Do not cause an injury in single fault condition	nbo Anbotak Anbot	P And
7.3	Moving parts	Anbor An Motek An	poter Ar
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
Anbore	RISK assessment in accordance with 7.3.3 carried out	hotek Anbotek Anbotek	Noone k anbot
7.3.2	Exceptions:	notek anbotek Anbo	ak - K

# Shenzhen Anbotek Compliance Laboratory Limited





\$9.77	IEC 61010-1	aupo, by sok upo	ier Vur
Clause	Requirement – Test	Result - Remark	Verdict
boles	And Andrew Andrew Andrew	Ant Ant	- wotek
	Access to HAZARDOUS moving parts permitted under following circumstances:	Anborek Anbore	Anborek
Anbor	a) obviously intended to operate on parts or materials outside of the equipment	tek Anborek Anborek	Noote
ek An	inadvertent touching of moving parts minimized by equipment design (e .g. guards or handles)	Anbotek Anbotek Anbot	otek N A
Anbotek Anbotek	b) If operator access is unavoidable outside normal use following precautions have been taken:	Anbotek Anbotek	Anbotek
Anbore	1) Access requires TOOL	lek Anbote And Sotek	Notek
Anbore	2) Statement about training in the instructions	botek Anbore Ann	k N <sub>amb</sub> o
ek Ant	Warning markings on covers prohibiting access by untrained operators	Ambotek Ambotek Amb	otek N
0010	or symbol 14 with full details in documentation	Anbor An hotek	inpose N
7.3.3	Risk assessment for mechanical HAZARDS to body parts	Anbotek Anbotek	Anb Per Motek
Anbore	RISK is reduced to a tolerable level by protective measures as specified in Table 12	Totek Anbotek Anbote	P
k Aup	Minimum protective measures:	Inpotek Aupor Am	orek An
olek b	A. Low level measures	anbotek Anbote Ant	hotelP
nbotek	B. Moderate measures	anbotek Anbote	N.
abotek	C. Stringent measures	ek upotek Anbore	Notek
7.3.4	Limitation of force and pressure	sek abotek Anbotes	Pur Post
Anbo	Following levels are met in normal and single fault condition:	nbotek Anbotek Anbote	ek Phil
itek Ar	Continuous contact pressure below 50 N / cm² with force below 150 N	Anbotek Anbotek A	botek 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
7.3.5	Gap limitations between moving parts	otek Anbotek Anbo	-nbote
7.3.5.1	Access normally allowed	hotek Anbotel Anton	ek - ~ ~
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 Anbotek Anbotek	potek N
7.3.5.2	Access normally prevented	Yupo, by spotek	Anboles
Anboro	Maximum gap as specified in Table 14 assured in NORMAL and in SINGLE FAULT CONDITION	tek Vupotek Vupotek	Noore
7.4	Stability	Tho wotek Aubot	- PUD



Page 27 of 54

	tek popo, by, sk pope,	Aug Tek Popo	by
Clause	Requirement – Test	Result - Remark	Verdict
potek	Vinna Publish Vinna Vinn	upotek Anbo. A.	totek
Anborek	Equipment not secured to the building structure is physical stable	Anborek Anborek	Anbotek Anbotek
Anbor	Stability maintained after opening of drawers, etc. By automatic means, or	tek Aupon Aupotek	Noon
JK An'	Warning marking requires the application of means	Anbotek Anbotek Anbot	otek N
otek	Compliance checked by following tests as applicable:	Anbotek Anbotek	upotek.
Ann	a) 10° tilt test for other than handheld equipment	And otek anbotek	Amb P
Anbore	b) multi-directional force test for equipment exceeds height of 1 m and mass of 25 kg	potek Anbotek Anbotek	P
ik Aug	c) downward force test for floor-standing equipment	Ambotek Ambotek Anti	otek N
nbotek	d) overload test with 4 times maximum load for castor or support that supports greatest load	Anbotek Anbotek	inbote N
Anbotek	e) castor or support that supports greatest load removed from equipment	ak Anbotek Anbotek	Anbotel Anbotel
7.5 A <sup>nbo</sup>	Provisions for lifting and carrying	botek Anbo sek shotel	- Panb
7.5.1	Equipment more than 18 kg:	Equipmentmass is way less than 18 kg	rek P p
*ek	Has means for lifting or carrying; or	And tek upotek A	nbox P
upo,	Directions in documentation	Antion tek obotek	Aupole I
7.5.2	Handles or grips	ak Anboy by Apotek	N
Anbol	Handles or grips withstand four times weight	otek Anbor An botek	Nupc
7.5.3 Anios	Lifting devices and supporting parts	inbotek Anbors Arr	e <sup>N</sup> N №
lek b	Rated for maximum load; or	Anbotek Anbore An	notel N
bolek	tested with four times maximum static load	Anborek Anbore Ar	N N
7.6	Wall mounting	Not a wall mounting equipment	Anbotek
Anbo	Mounting brackets withstand four times weight	oter And tek abotek	Nypo
7.7 Ambo	Expelled parts	No such expelled parts	ek bu
PLL PLL	Equipment contains or limits the energy	Aupotek Aupon Ali	otel <sup>k</sup> N
otek	Protection not removable without the aid of a tool	- otek Anbert An	"«Ň

8 Ambotell	Resistance to mechanical stresses	otek Anbr	Hek Anbo	*ek	abotek
8.1 Mark	Equipment does not cause a hazard when subjected to mechanical stresses in normal use	Albotek A	hotek Anb	nbotek	P Anbot
ie. Vu,	Normal protection level is 5J	Considered	5J	aborek	P An

#### Shenzhen Anbotek Compliance Laboratory Limited





IEC 61010-1 Clause Requirement - Test Result - Remark Verdict Levels below 5 J but not less than 1 J are No acceptable if all the following criteria are met a) lower level be justified by manufacturer b) cannot easily be touched by unauthorzed persons or the general public c) only occasional access during NORMAL USE d) IK code in accordance to IEC 62262 marked or symbol 14 used with full information in the documentation For non-metallic ENCLOSURES rated below 2 °C ambient temperature value chosen for minimum rated temperature Impact energies between IK values, the IK code N marked for nearest lower value Conformity is checked by performing following 1) the static test of 8.2.1 2) impact test of 8.2.2 with 5J except for handheld equipment If impact energy not selected to 5J alternate Ν method of IEC 62262 used 3) drop test of 8.3.1 or 8.3.2 except for fixed and equipment with mass over 100kg Equipment rated with an impact rating of Ik 08 by that clearly meets the criteria After the tests inspection with following results: - Hazardous live parts above the limits of 6.3.2 not accessible - insulation pass the voltage tests of 6.8 i) no leaks of corrosive and harmful substances ii) Enclosure shows no cracks resulting in hazard iii) CLEARANCES not less than their permitted Р values iv) the insulation of internal wiring remains undamaged; V) Protective barriers necessary for safety have not been damaged or loosened vi) No moving parts exposed, except permitted Ν vii) no damage which could cause spread of fire Р 8.2 Enclosure rigidity tests Ρ 8.2.1 Static test P - 30N with 12mm rod to each part of enclosure - in case of doubt test conducted at maximum N rated ambient temperature

#### **Shenzhen Anbotek Compliance Laboratory Limited**



Anbor	IEC 61010-1	Anbotek Anbotek Anbo	tek Anbr
Clause	Requirement – Test	Result - Remark	Verdict
abotek	Anco, Andrew Auborem And	abotek Anto	Lotek
8.2.2	Impact test	k botek Anbote	And Pek
Anbotek	Impact applied to any part of enclosure causing a hazard if damaged	tek Anbotek Anbotek	Anbotek Anbotek
Anbore	Impact energy level and corresponding IK code:	botek Anbote An	ek P <sub>Anbo</sub>
tek Anb	Non-metallic enclosure cooled to minimum rated ambient temperature if below 2℃	Anbotek Anbotek An	otek P Ar
8.3	Drop test	Anbo. stek snbotek	Anbore P
8.3.1	Equipment other than HAND-HELD EQUIPMENT and DIRECT PLUG-IN EQUIPMENT	ak Anbotek Anbotek	Anb P botek
nbotel	Test conducted with a drop height or angle of:	rek anborek Anbor	P not
8.3.2	HAND-HELD EQUIPMENT and DIRECT PLUG-IN EQUIPMENT	nbotek Anbotek Anbot	otek Name
potek A	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C	Anbotek Anbotek Anti	inbote/N
Anbo	Drop test conducted with an height of 1 m	Anbore	and N

9.1 No spread of fire in normal and single fault condition  Mains supplied equipment meets requirement of 9.6 additionally	Anbotek Anb	N And
	Anbotek A	hbote N P
3.0 additionally	· 0/2	- 170
Conformity for each source of HAZARD or area of the equipment is checked by one of the following:		P Potek
a) Fault test of 4.4; or	otek Anbotek	P.nbo
b) Application of 9.2 (eliminating or reducing the sources of ignition); or	Anbotek Anbo	iek N Aupr
c) Application of 9.3 (containment of fire within the equipment)	ak Anboten A	Anbotek
9.2 Eliminating or reducing the sources of ignition within the equipment	botek Anbotek	Antotek hotek
a) 1) Limited-energy circuit (see 9.4); or	aborek Anbore	N
Insulation meets the requirements for BASIC INSULATION; OR	Anbotek Anbo	Dotek Ar
Bridging the insulation does not cause ignition	Aupo	Netoda
b) Any ignition HAZARD related to flammable liquids (see 9.5)	used	Nek Anbolek
c) No ignition in circuits designed to produce heat	stek Anborek	N <sub>poor</sub>
9.3 Containment of the fire within the equipment, should it occur	Anbotek Anbot	ek - Aupor



Page 30 of 54

Clause	Requirement – Test	Result - Remark	Verdict
solo la constantina de la constantina della cons	The second secon	hotek Andrew An	po vordiot
Anbotek Anbotek	a) Energizing of the equipment is controlled by an operator held switch	Anborek Anborek	Anborek Anborek
Anbore	b) ENCLOSURE is conform with constructional requirements of 9.3.1; and	tek Aupolek Aupolek	Room
ek at	Requirements of 9.5 are met	the the spotek William	N
9.3.1	Constructional requirements	Anbor Andorek And	010
Aupotek	a) Connectors and insulating material have flammability classification V-2 or better	Fire enclosure is made of metal and plastic flame rated V-0	Anbore P Anborek
Anbote	b) Insulated wires and cables are flame retardant (VW-1 or equivalent)	notek Anbotek Anbotek	P
ik Aup	c) ENCLOSURE meets following requirements:	hotek Anbotes Anbo	rek P
otek p	1) Bottom and sides in arc of 5 ° (see Figure 13) to non-limited circuits (9.4) meets:	Anbotek Anbotek Ant	nbotel/P
<sup>Tupo<sub>lo</sub>,</sup>	i) no openings; or	Aupoies Aur Potek	Anb Per
Anboren	ii) perforated as specified in Table 16; or	k Aupores Andrek	Note:
Anbore	iii) metal screen with a mesh; or	otek Anborea Anbo	- N <sub>mb</sub>
k Anbo	iv) baffles as specified in Figure 12	botek Anbores Anbe	N Yes
otek Ar	Material of ENCLOSURE and any baffle or flame barrier is made of:	Anbotek Anbotek Anb	nbotekP
nbore	Metal (except magnesium); or	Ambore Ame Morek	Aupo P
Anborsk	Non-metallic materials have flammability classification V-1 or better	kek anbotek Anbotek	ArPoter
Anbo	ENCLOSURE and any baffle or flame barrier have adequate rigidity	nbotek Anbotek Anbote	lek b
9.4	Limited-energy circuit	Anbotek Anboss An	boiek
hotek	a) Potential not more than 30 r.m.s. and 42.4 V peak, or 60 V dc	Anbotek Anbotek	Anbo N
Augs atek	b) Current limited by one of following means:	And otek Anbotek	Aupore
AUD	1) Inherently or by impedance;	tek Anbotek	Napo
VUD	2) Over current protective device;	abotek Anbo tek anbot	ek N An
en Au	A regulating network limits also in SINGLE FAULT CONDITION	Anborek Anborek An	ootek N
Lotek	c) Is separated by at least BASIC INSULATION	Anbotek Anbotek	Anber Nek
Anbotek	Fuse or a nonadjustable electromechanical device is used	ek Anbotek Anbotek	Anbor Anbor
9.5	Requirements for equipment containing or using flammable liquids	No flammable liquids used	k N <sub>An</sub> i

# **Shenzhen Anbotek Compliance Laboratory Limited**



Page 31 of 54 Report No. 18250SC00074301

	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Anbore Aribek Anborek Aribe	abotek Anbor A	-otek
	Flammable liquids contained in or specified for use with equipment do not cause spread of fire	Anborek Anborek	Anborek Anborek
Aupor	Risk is reduced to a tolerable level :	lek Aupoli ak hotek	Aribote.
ek Anbore	a) The temperature of surface or parts in contact with flammable liquids is 25 °C below fire point	botek Anbotek Anbot	W N Anbe
rok Pro	b) The quantity of liquid is limited	No such liquid used	N
Po. N	c) Flames are contained within the equipment	Anbou All abotek	Aupore N
Aupon	Detailed instructions for risk-reduction provided	Anbore An botek	AnbN
9.6	Overcurrent protection	sk Aupon bolek	Nootes
9.6.1	Mains supplied equipment protected	potek Aupon Au	4 Nanbo
sk Aup	Basic insulation between mains parts of opposite polarity provided	Ambortek Ambortek Amb	otek N pr
rek.	Devices not in the protective conductor	Anbo rek aboyek	upole N
Anbotek Anbotek	Fuses or single pole circuit-breakers not fitted in neutral (multi-phase)	Anbotek Anbotek	Arib N abotek
9.6.2	Permanently connected equipment	otek unbotek Anbore	N N
k vupo	Overcurrent device:	otek Anbotek Anbote	N
Jek .	Fitted within the equipment; or	Anbotek Anbotek	N
-tek	Specified in manufacturer's instructions	Auporek Vipolek V	N
9.6.3	Other equipment	Hupo, W. Wolek	Anboton N
Vupo,	Protection within the equipment	Aupon by wotek	PLN OFFER

10 And	Equipment temperature limits and resistance to	heat	iek Aup
10.1	Surface temperature limits for protection against burns	Anbotek Anbotek A	botek P p
Anbotek	Easily touched surfaces within the limits in NORMAL and in SINGLE FAULT CONDITION:	(see appended table)	Anbotek Anbotek
Anbore	- at an specified ambient temperature of 40 °C	otek Anboter Anb	Nabotek
Anbot Anbot	- for equipment rated above 40 °C ambient temperature limits not exceeded raised by the difference to 40 °C	Anbotek Anbotek Anbo	ok P Anbo
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	AnN
anbore	Are marked with symbol 13	otek anbotek Anbo	N N
lek vul	Guards are not removable without TOOL	otek Anbotek Anbot	N
10.2	Temperatures of windings	Anti-	1000 Pu

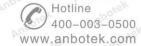
Shenzhen Anbotek Compliance Laboratory Limited





	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Anbo Anbore And	upotek Nupo, W	-otek
botek	Limits not exceeded in:	abotek Anbote	Aur - Olek
Ai.	NORMAL CONDITION	ok hotek Anboter	Ant P otek
	SINGLE FAULT CONDITION	ok hotek Anboten	P
10.3	Other temperature measurements	(see appended table)	P Anb
Au-	Following measurements conducted if applicable:	Anbore An	Dojen bi
poten P	a) Value of 60 °C of field-wiring terminal box not exceeded	Anborek Anborek	anboteN
Anborek	b) Surface of flammable liquids and parts in contact with this liquids	ak abotek Anbotek	Amb N arek
	c) Surface of non-metallic enclosures	ok Anboter	P
ek anbi	d) Parts made of insulating material supporting parts connected to mains supply	ootek Anbotek Anbot	Name
10.4	Conduct of temperature test	And otek Anbotek Ant	P P
10.4.1	Tests conducted under reference test conditions and manufacturer's instructions	Anborek Anborek	inbox P
10.4.2	Temperature measurement of heating equipment	ak shotek Anbote	And N stek
bu. Potek	Tests conducted in test corner	k hotek Anbotes	ÞŇ
10.4.3	Equipment intended for installation in a cabinet or wall	orek Anbotek Anbote	Nanbo
otek bi	Equipment built in as specified in installation instructions	and abotek Anbotek Anb	N N
10.5	Resistance to heat	abotek Anbote A	Pk
10.5.1	Integrity of CLEARANCE and CREEPAGE DISTANCES	Anbotek Anbotek	Anbotek
10.5.2	Non-metallic ENCLOSURES	otek Anboten Anb	Ranbote
k Anbot	Within 10 min after treatment:	abotek Anbotek Anb	rek Anb
10.5.3	Insulating material	(see appended table)	orek N
upojek	a) Parts supporting parts connected to MAINS supply	Anbotek Anbotek A	AnborN
Aupor	b) TERMINALS carrying a current more than 0.5 A	Anbos Amborek	ANN
Anbore	Examination of material data; or	tek Aupon Au	Nabore
Anbot	in case of doubt::	spotek Aupore Aur	lek - Aupr
tek Aut	1) Ball pressure test; or	Anborek Anbores Anb	notek N
hotek	2) Vicat softening testof ISO 306	botek Anbotes Ar	N

11 abotek	Protection against hazards from fluids	*ek	anborek	Aupor	Prin-Potek
11.1 Anbote	Protection to OPERATORS and surrounding area provided by EQUIPMENT	abotek	Aupotek	Anboro	P Anbot
lek bup	All fluids specified by manufacturer considered	anbotek	Aupo.	k - ak	otek P An



Page 33 of 54 Report No. 18250SC00074301

Anb	IEC 61010-1	Anbotek Anbo sek nbo	rek Anb
Clause	Requirement – Test	Result - Remark	Verdict
botek	Anna Anhor Anhor Anna Mak	Pupoten Pupp	spotek
11.2	Cleaning	ak abotek Anbor	N. Nek
11.3	Spillage	ok shotek Anbote	An P otek
11.4	Overflow	ock abotek Anboten	N
11.5	Battery electrolyte	Albora All botek Anbot	- Anb
K Vin	Battery electrolyte leakage presents no hazard	Ambore Am	ooten N N
11.6	Specially protected equipment	IP20	Anbore P
11.7	Fluid pressure and leakage	k Anbores Ans	anbatek
11.7.1	Maximum pressure	o'ek Anbores Anbo	Vubolek.
k Aupoles	Maximum pressure of any part does not exceed $P_{\mathtt{RATED}}$	mootek Ambotek Ambot	K N <sub>Anbo</sub>
11.7.2	Leakage and rupture at high pressure	Anbot An Motek Ant	oter N An
olo, Al	Fluid containing parts subjected to hydraulic test if:	Anborek Anborek	inbote N
Anbotek	a) product of pressure and volume > 200 kPal; and	Anbotek Anbotek	Anbotek Anbotek
Aupo	b) pressure > 50 kPa	hotek Anbo sek abote	Napos
yek Yupo	Parts of refrigerating systems meets pressure- related requirements of IEC 60335-24 or IEC 60335-24	Anbotek Anbotek Anb	hek N And
11.7.3	Leakage from low-pressure parts	Anbores Anb	ngbo'N <sup>k</sup>
11.7.4	Overpressure safety device	tek Anborek Anbo	abotek.
anbotek	Does not operate in NORMAL USE	otek Anbotek Anbo	N
Anbot	a) Connected as close as possible to parts intended to be protected	upotek Aupotek Aupo	iek N Anb
polek bu	b) Easy access for inspection, maintenance and repair	Anborek Anborek A	botek N
hotek	c) Adjustment only with TOOL	of Morek Anbores	And Nek
notek	d) No discharge towards person	ok hotek Aupotek	And N
Pur	e) No HAZARD from deposit of discharged material	of the Anbotek Anbotek	N
bulo.	f) Adequate discharge capacity	Anboten Anbo	N And
otek bup	No shut-off valve between overpressure safety device and protected parts	Anborek Anborek Ar	potek N P

12 Amborek	Protection against radiation, including laser so ultrasonic pressure	ources, and	d against so	nic and	PU	Anbotek
12.1 Maria	Equipment provides protection	Motek	Aupor	Mr. Mote	J.	N Anbot
12.2	Equipment producing ionizing radiation	nbotek	Anboro	bur.	orek	N pri

# **Shenzhen Anbotek Compliance Laboratory Limited**



Clause 500	Designment Test votes Amb	Desuit Demont	Manallat
Clause	Requirement – Test	Result - Remark	Verdict
12.2.1	Ionizing radiation	Auport Ali	Amboten Nak
12.2.1.1	Equipment meets the following requirements:	Pupote Vur	Aupolek
12.2.1.1	The sport of the	ok Anboter Anu	node
Anbote	a) if intended to emit radiation meets requirements of 12.2.1.2; or	botek Anbotek Anbo	N Ant
	tested, classified and marked in accordance to IEC 60405	Anbotek Anbot An	otek N
anbotek	b) if only emits stray radiation meets requirements of 12.2.1.3	Anbotek Anbotek	Anbote N
12.2.1.2	Equipment intended to emit radiation	ek Anbotek Anbote	Note
abotek	Effective dose rate of radiation measured	stek anbotek Anbotes	N
k Vupo	If dose rate exceeds 5 µSv/h marked with the following:	Arbotek Anbotek Anbot	otek b
otek pr	a) Symbol 17 (ISO 361)	Anborek Anbo	abote <sup>N</sup> N
nbotek	b) Abbreviations of the radionuclides:	Anbotek Anbo	N. Y
Anbotek	c) With maximum dose at 1 m;or	k Anbotek Anbor	Note
Anbotek	with dose rate value between 1 μSv/h and 5 μSv/h in m	lotek Anbotek Anbote	N
12.2.1.3	Equipment not intended to emit radiation	Aupotek Aupo	orsk N b
rotek bu	Limit for unintended stray radiation of 1 µSv/h at any easily reached point kept	Anbotek Anbotek	nbotek N
12.2.2	Accelerated electrons	Anbo otek Anbotek	Anboro N .ok
Anbe	Compartments opened only by the use of a TOOL	Anbotek anbotek	MAN
12.3	Ultra-violet (UV) radiation	Conformity test under consideration	ek vi
rek Ant	No unintentional and HAZARDOUS escape of UV radiation:	Anbotek Anbotek Anbotek A	botek N
pote	- checked by inspection; and	Anbore An Hotek	Anboie
Aupore.	- evaluation ofRISKassessment documentation	Aupore Pur Motek	ALC N THE
12.4	Microwave radiation	Jek Aupore. Aur	anboha.
Anbore	Power density does not exceed 10 W/m <sup>2</sup> :	abotek Anbores Anos	ek N an
12.5	Sonic and ultrasonic pressure	abotek Anbotes Anbo	otek
12.5.1	Sound level	abotek Anboten Ar	N
botek	No HAZARDOUS sound emission	abotek Anbotek	Nek
Anbotek	Maximum sound pressure level measured and calculated for maximum sound power level as specified in ISO 3746 or ISO 9614-1	lek Anbotek Anbotek	Anbor Anbor
br.	Instruction describes measures for protection	bo. W. Photek Wupot	N
12.5.2	Ultrasonic pressure	anbor ari	N

Hotline 400-003-0500 www.anbotek.com



Anbore	IEC 61010-1	inbotek Anbotes Anbo	tek Aupo,
Clause	Requirement – Test	Result - Remark	Verdict
abotek I	Lipon And Colek Wildows Will	abotel Anbo	Lotek
Anbotek	Equipment not intended to emit ultrasound does not exceed limit of 110 dB between 20 kHz and 100 kHz	ek Anbotek Anbotek	Anborek Anborek
nbotel	Equipment intended to emit ultrasound:	stek shotek Anbor	k bi.
tek Aup	Outside useful beam does not exceed limit of 110 dB between 20 kHz and 100 kHz	Anbotek Anbotek Anbot	otek N An
Potek b	If inside useful beam above values exceeded:	anbotek Anbo	abotek.
anboyek	Marked with Symbol 14 of Table 1	Anbotek Anbo	Nok
* upolek	and following information in the documentation:	ek vupotek Aupo.	- hotek
aborek	a) dimensions of useful beam	rek aborek Anbor	N
ek abo	b) area where ultrasonic pressure exceed 110 dB	tek abotek Anbot	N
relt h	c) maximum sound pressure inside beam area	Anbo sek abotek Ant	N Am
12.6	Laser sources	Anbore Ak shorek	inbote N
Aupon	Equipment meets requirements of IEC 60825-1	Anbore And hotek	Anb N
07	26 20 10	460, 140A	

13 Anbo	Protection against liberated gases, explosion a	nd implosion	-		upor
13.1	Poisonous and injurious gases and substances	No injurious gases	Net	N	Anb
otek	No poisonous or injurious gases or substances liberated in NORMAL CONDITION	Anbotek Anbotek	nbote	<sup>K</sup> N	1
Yun Utek	Attached data/test reports demonstrate conformity	And otek anbotek	Anb	N	-A
13.2	Explosion and implosion	And tek anbotek	P	upo	
13.2.1	Components	otek Anti-		- <u>P</u> X	100,
k And	Components liable to explode:	Inpotek Anbo tek nbc	lek.		Anbo
orek p	Pressure release device provided; or	Anbotek Anbo. Anbo.	boje	N	P
inpotekotek	Apparatus incorporates OPERATOR protection (see also 7.7)	Anbotek Anbotek	Anb	N	e/k
Anto	Pressure release device:	Ant otek anbotek	P	upo.	Nos
AUD	Discharge without danger	ore And orek anborek		N	00.
VUp.	Cannot be obstructed	hbotes Anbo	ek	N	Anbo
13.2.2	Batteries and battery charging	Anbotek Anb	potek		PL
hotek	If explosion or fire hazard could occur:	Anbotek Anbo. tek	200	18x	
Anbotek	Protection incorporated in the equipment; or	Anbotek Anbo	par-	N	.K
Anbotek	Instructions specify batteries with built-in protection	lek Anbotek Anbotek	P.3	N	otek
Pupo	In case of wrong type of battery used:	bores And Anbor	3/4		Aupo
le, VL	No HAZARD; or	Anbores Anbo	Otek	N	PU



Page 36 of 54

br.	IEC 61010-1	inbo. Air atek anbo	ie. Vup
Clause	Requirement – Test	Result - Remark	Verdict
botel	Anboth Anboth Ant	abotel Ant	Hatek
potek	Warning by marking and within instructions	abotek Anbote	And Nek
	Equipment with means to charge rechargeable batteries:	lek Anbotek Anbotek	Anbotek
ak Anbore	Warning against the charging of non-rechargeable batteries; and	botek Anborek Anbor	K N Anbo
rek h	Type of rechargeable battery indicated; or	Anbo tek abotek An	N
bo. I	Symbol 14 used	Anbo tek abotek	Aupose N
Aupor	Battery compartment design	Anbore An abotek	AUDN .
Anbor	Single component failure	sk Aupore Winner	Noore
Aupo	Polarity reversal test	potek Anbour At hote	K Nanbo
13.2.3	Implosion of cathode ray tubes	No such device used	otek An
otek b	If maximum face dimensions > 160 mm:	abotek Anbote Am	notel-
abotek	Intrinsically protected and correctly mounted; or	abotek Anbotes	N
botek	ENCLOSURE provides protection:	k abotek Anbores	N vek
photek was	If non-intrinsically protected:	tek abotek Anbores	Aug
r Pro	Screen not removable without TOOL	or kin potek Aupote	N
pa	If glass screen, not in contact with surface of tube	Aupor Aup	N An

14	Components and subassemblies	Anbor ok Ar. botok	Anbore
14.1	Where safety is involved, components meet relevant requirements	Components used in accordance with their specified ratings and comply with relevant IEC standard	Anbote Anbote
14.2	Motors	hotek Anbotek Anbo	-rek
14.2.1	Motor temperatures	Annotek Anbotek Ar	loo tek
Anbotek	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	otek Anbotek Anbotek	Nahotel
14.2.2	Series excitation motors	Anbor Anborek Anbor	- Anu
hotek	Connected direct to device, if overspeeding causes a HAZARD	Anbotek Anbotek An	poter N A
14.3	Overtemperature protection devices	k nbotek Anbote	Nek
abotek	Devices operating in a SINGLE FAULT CONDITION	ek nbotek Anbote	Notek
n'ootel	a) Reliable function is ensured	tek abotek Anbore	N
lek Yup	b) RATED to interrupt maximum current and voltage	Anbotek Anbotek Anbot	otek N Ans

# **Shenzhen Anbotek Compliance Laboratory Limited**





	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
botek	Inpose Min Stek Auposen Aupo	abotek Anbol A	-otek
hotek	c) Does not operate in NORMAL USE	botek Anbote	And Nek
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	tek anbotek Anbot	N Part
rek .	No access to HAZARDOUS LIVE parts	Anbo tek anbotek An	N
14.5	Mains voltage selecting devices	No selecting devices used	YUPOLO N
Anbo	Accidental change not possible	Anbo. Ak abotek	AIN'S N
14.6	Mains transformers tested outside equipment	ek Anbo. Ak Abotek	Noore
14.7	Printed wiring boards	potek Anboy Ar bote	K PAnbol
ek Aupo	Data shows conformity with V-1 of IEC 60695-11-10 or better; or	Anbotek Anbotek Ant	otek P Ari
anbotek	Test shows conformity with V-1 of IEC 60695-11-10 or better	Anbotek Anbotek	inbot N
Anbotek	Not applicable for printed wiring boards with limited-energy circuits (9.4)	ok Anbotek Anbotek	Notek
14.8	Circuits or components used as TRANSIENT OVERVOLTAGE limiting devices	otek Anbotek Anbote	NARDO ARI
otek Ari	Test conducted between each pair of MAINS SUPPLY TERMINALS	Anbotek Anbotek Anb	nbotekN
hupotek .	No HAZARD resulting from rupture or overheating of the component:	k Vupotek Vupotek	Anbo'N
anbotek	- no bridging of safety relevant insulation	tek anbotek Anbotes	N
k Vupoy	- no heat to other parts above the self-ignition points	nbotek Anbotek Anbote	iek N

15	Protection by interlocks	Anbotek Anbo. Lek	Majode
15.1	Interlocks are designed to remove a hazard before OPERATOR exposed	Anbotek Anbotek	Nrek Anburek
15.2	Prevention of reactivating	tek Anbourek	Napose
15.3	Reliability	hotek Anto tek anbot	ek Aupo
Non b	Single fault unlikely to occur; or	Anbotek Anbo	ootek N Ar
hotek	Cannot cause a HAZARD	Aupotek Aupo. W.	N <sup>2</sup> to de

16 Mbotel	HAZARDS resulting from application	ntelk	anbotek	Aupor	Potek
16.1 Market	REASONABLY FORESEEABLE MISUSE	-otek	anbotek	Anbo	P abot
rek Ant	No hazards arising from setting not intended and not described in the instructions	Anbotek	Anbotek	ek Anbo	otek P An

# **Shenzhen Anbotek Compliance Laboratory Limited**

Hotline 400-003-0500 www.anbotek.com

Page 38 of 54

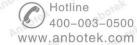
	IEC 61010-1		
Clause	Requirement – Test	Result - Remark	Verdict
borek	Intone Area andorse Area rolk	abotel Anboy A	Lotek
	Other cases of reasonable foreseeable misues addressed by risk assessment	Anborek Anborek	Anbotek
16.2	Ergonomic aspects	lek Anbore Ane	Phote
Aupoie	Factors giving rise to a HAZARD the RISK assessment is reflecting those aspects:	botek Anbotan Antoh	k P Anh
	a) Limitation of body dimensions	Anborer Ann stek and	otek P
oter p	b) Displays and indicators	Anbotek Anbotek	nbote P
Anborek	c) Accessibility and conventions of controls	anbotek Anbo.	Rek
Anborek	d) Arrangements of TERMINALS	ek Aupotek Aupon	Note
Anboter	And sek abotek Anboy An	botek Anboter And	y one
17 <sub>anb</sub> o	Risk assessment	Lotek Anbotek Anbo	- 100
otek Ar	Rish assessment conducted, if hazard might arise and not covered by claused 6 to 16	Fully covered by clauses 6 to 16	nbotekN
inboter hotek	Tolerable rish achieved by iterative documented process covering the following:	Anborek Anborek	Anb N.k
Vu.	a) RISK analysis	k hotek Anbotek	PN
Pur	identify HAZARDS and estimate RISKS	ore And otek andote	Namb
Anbo	b) RISK evaluation	Imposes Augustaly Talk	N P
upotek Yu	plan to judge acceptability of resulting risk level based on the estimated severity and likelihood of a rish	Anbotek Ambotek A	hbotek Anbotek
Aupore	c) Rish reduction	k Anbores And	Ar Notek
Anboren	Initial risk reduced by counter measures:	otek Anbotek Anbotek	Nabo
Anbor	Repeated risk evalution without new risks introduced	inbotek Anbotek Anbo	rek N pr
ipojek bu	Risks remaining after risk assessment addressed in instruction to responsible body:	Anbotek Anbotek Ar	potek
anbotek	Information contained how to mitigate these rishs	anbotek Anbot	Nek
Anbotek	Following principles in methods of risk reduction applied by manufactuer in giver order:	tek Anbotek Anbotek	N Anbot
Anbo	1) RISKS eliminated or reduced as far as possible	Upolek Vupo, ek Proj	ek N pri
ek Anb	Protective measures taken for risks that cannot be eliminated	Anbotek Anbotek An	ootek N
Anbotek	User information about residual risk due to any defect of the protective measure	Ambotek Ambotek	Anbotek
Anborek	Indication of particular training is required	lek Anborek Anbo.	Noot
Anbore	Specification of the need for personal protective equipment	botek Anbotek Anbote	k N

# **Shenzhen Anbotek Compliance Laboratory Limited**

Page 39 of 54

Aupo,	IEC 61010-1							
Clause	Requirement – Test	Result - Remark	Verdict					
botek	And Anbotte Anton	upotek Yupo, W	potek					
	Conformity checked by evaluation of the risk assessment documentation	Anborek Anborek	Amborek Amborek					
Anbois	And rak abotet Anba.	stek Auport Aug	abote					
101 mbote	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 Anbot	otek P Am					
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 internal protection	ak Anbotek Anbotek	Amb Pek Amborel					
ootek Anb	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 Anbotek Anbotek	PATH otek 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 prohibit the interconnection while the equipment is used for measurement purposes	otek Anbotek Anbotek	Anbotek Anbotek					
k Pupe	d) For measuring circuits that include one or more	unbotek Anbo Ar	N P					
	FUNCTIONAL EARTH TERMINALS	abotek Anbor An	. otek					
inpotek otek	e) Other HAZARDS that could result from REASONABLY FORESEEABLE MISUSE shall be	Anbotek Anbotek	Anbo Pr					
Aupo.	addressed by RISK assessment	K Anbo. A. Botek	Aupore					
101.2	Current measuring circuits	otek Anbore Ans	Pobo					
k Anbo	Current measuring circuits shall be so designed that, when range changing takes place, there shall	nbotek Anbotek Anbo	iek b					
Her An	be no interruption which could cause a HAZARD	anboten And	poiek					
nbotek 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 Anbotek					
101.3	Protection against mismatches of inputs and ranges	botek Anbotek Anbotek	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	Anbotek Anbotek An	potek P					
	applied to any other compatible TERMINAL, with	And otek anbotek	Anbore					
Anbo	any combination of function and range settings	ier Aug Wetek	Anbore					
101.3.2	Protection by a certified overcurrent protection device	botek Anbote Anbot	ik P Anb					
101.3.3	Protection by uncertified current limitation devices or by impedances	Anbores And aborek An	orek N					

Shenzhen Anbotek Compliance Laboratory Limited





## Page 40 of 54

Anborn	IEC 61010-1	Anbotek Anbotek Anbo
Clause	Requirement – Test	Result - Remark Verdic
101.3.4	Test leads for the tests of 101.3.2 and 101.3.3	Anborek Anborek Antorek
ANNEX F	ROUTINE TESTS	thek aupotok Wipotok Vulpa
Anbore	Manufacturer's declaration	botek Anbotek Anbote N



4.4.2	Table: Summary of single fault condtions			Ana otek 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	Х	otek br	Anbotek Anbotek
4.4.2.2	Protective impedance	X	abotek	Anbore L hotel
4.4.2.3	Protective conductor	-ve/k	X	Anbore An
4.4.2.4	Equipment or parts for short-term or intermittent operation	X	Anbore	k Anbote And
4.4.2.5	Motors	X	Ant	o. h. botek
4.4.2.6	Capacitors	X	Hek.	upo, Ar polek
4.4.2.7	Mains transformers	48	X	Aupor - An boiek
4.4.2.8	Outputs	potek hotek	X Anborek	Short-circuit were applied to all outputs. No hazard.
4.4.2.9	Equipment for more than one supply	Vote <sub>k</sub>	X <sub>M</sub>	Her Aup rek
4.4.2.10	Cooling	Х	lex o	hbotek Anbourek
4.4.2.11	Heating devices	Х	-otek	Anborek - Anboy
4.4.2.12	Insulation between circuits and parts	Χ	- Otek	Anbotek Anbo
Note:	k unbotek Anbour A wotek Ant	Over	Aug	abotek Anbor

Page 41 of 54

5.1.3 c)	TABLE: N	TABLE: MAINS supply							
abotek	Marked rating (V)								
abotek	Number o	f phases	hotek l	'upo.	k be-	botek - Anb	O.C.		
A botek	Frequency	y (Hz)	ankotek	Aupo,	rak bu	Notek P	Anbote.		
- 700	Current (A)					bu.	Anbote		
Pr.	Power (W	)	otek Mootel	upo,	Air.	Anbo			
ok bi	Power (V/	٩)		itek.	Vupo,	ak hotel	r DZ		
Test No	Voltage (V)	Frequency (Hz)	Current (A)		wer in (W)	Power in (VA)	Cor	nments	
VUD.	- wotek	VIDO,	A. Tek	"upote,	- An		notek	Aupo,	
Note(s):									

5.3 TABLE: Durability of markings	<sub>rek</sub> P
Marking method (see note)	Agent
1) Adhesive label	A Water
2) Ink printed	B Isopropyl alcohol 70%
3) Laser marked	C (specify agent)
4) Filmcoated (plastic foil control panel)	D (specify agent)





Page 42 of 54 Report No. 18250SC00074301 5) Imprint on plastic (moulded in)

E (specify agent) Note(s): Where applicable include print method, label material, ink or paint type, fixing method, adhesive and surface to which marking is fixed. Marking location Marking method (see above) - Identification (5.1.2) ...... 1 Mains supply (5.1.3)..... 1 - Fuses (5.1.4) .....: Terminals, connections and operating devices (5.1.5) ..... Switches and circuit-breakers (5.1.6) Double/reinforced equipment (5.1.7) .....: Field-wiring TERMINAL boxes (5.1.8) .....: - Warning markings (5.2) ......1 Label loose Curled edges Remains legible Method Test agent Comments Verdict Verdict Verdict A, B Ρ P

Aupo	u.	-otek	Anbore	Ville	No.	abotel	P.	ip.	r ofek	Anbore
6	TABLE: Protection against electric shock						- Panbote			
k Auto	BI	Block diagram of the system								
otek t	Po	Pollution degree 3								
notek	O	vervoltage ir	stallation	category	Anb		III not	ek Ant	oter	
Location		1 t/na 1					yoltage		Test voltage	Comments
descript	ion			PWB	CTI	Other	СТІ	3) mm	(note 2)	
· priloc	Of Co.	VUr.	N - 20	potek	Vupo.		hotek_	Anbore.	Ann	lek - vup
BI = BASI	IC IN	e of insulation SULATION INSULATIO	oter	NOTE 2 – Peak impu		oltage (p	ulse) (	NOTE 3 – I CATEGORI CATEGORI	ES (OVER	VOLTAGE

PI = PROTECTIVE IMPEDANCE DEGREES which differ from these d.c. RI = Reinforced INSULATION should be shown under peak SI = Supplementary INSULATION Comments".

6.2 **TABLE: Determination of accessible parts** Description Item **Determination method** Exception under 6.2.1 The jointed test finger Examination (see figure B.2) is applied in every possible position

Note(s):

Note(s):

#### Shenzhen Anbotek Compliance Laboratory Limited

Note(s): Power supply approved adapter





6.5.2.4	TABLE: Imper	dance of p	rotective bond	ding of plug	-connected e	equipment	-ote.	N ,	nbo
ACCESSIB	LE part under to	est Te	est current (A)		attained after min (V)		Result	,	
botek Ar	upo.	abotek	Aupole.	Arr	Anbotek	kupo.	h. 2/0	otek	
Noto(s):	Aupo. b	You	abole	ALL	Major	Aupo	100	10	(-

Page 43 of 54

6.5.2.5 TABLE: Impedance of protective bonding of permanently connected equipment									
ACCESSIBLE part under test			Voltage attained (s)	Voltage attained (s) Time for voltage to drop below allowable levels(s)			Result		
60. b	bolek	Anbore	Ano otek	anbotek ant	o Pok	abotek	Anbore		
Note(s):	hotek.	Anb	ote. And otek	Anbotek	Vupo,	hotek.	Anbore		

6.7	TABLE:	Insulation	requireme	ents			k P <sub>Ambo</sub>
8 Anbo	Resistan	ice to mec	hanical stre	sses	tek spotek	Anbore	Motel P An
10.5.1	Integrity	of CLEARAI	NCES and C	REEPAGE DI	STANCES	Aupor	Motel P
	Location			REEPAGE ICE (mm)	Initial CLEARANCE (mm)	Maximum working voltage (V)	Comments
An. hotek	Anbo	ler b	ip.	- nbotek	Aupor-	botek Anbo	ter Aup
Note(s): Power supply approved adapter			hobotel	Anbore	hotek Ar	hotek Anbo	
Mechanic force		Static	: [	Dynamic	Drop test, normal	Drop test, hand- held	Comments
tek -	abotek	Aupor	-/c	otek A	- And	ek anbotek	Anbor-
Note(s):	botek	Anbo	io. Piu	stek	anbotek Anbo	ok botok	Anbore

6.8 TABLE:	Dielectric strength	tests for protection	against the spre	ad of fire	Rabole
Location	Working voltage (V)	Test voltage (V)	Result	Comm	ents
Input to accessible part	Anbotek Ar	DC 500V	Anbotek Anbotek	Aupotek B	Anbotek
Note(s):	ak Anbotek	Anbo sek abo	ek Aupore	Am	Anbotek

6.10.2	TABL	.E: Cord	anchora	ge tests				N
	Location		Mass kg	Pull N	Verdict	Torque Nm	Verdict	Comments
botek	Arthorem	AUD	Of B.K.	npotek	-Pupo,	An. botel	Ai-boler	And
Note(s)	: No cord pi	rovided	iups stek	anboi	lek Vul	or Am	rek Anboten	Anbo

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





Page 44 of 54 Report No. 18250SC00074301

	0,00	11/2	40-	200.	Dr.	-016.	7	
100	Enclosure	· Asia	Pass	P21.	28104	Pass	400	
	- V	1-01	Direction	181		No.	-0	D11.

- 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 Т	ABLE: Protection against the spread of fire			Pipo
Item	Source of hazard or area of the equipment considered (circuit, component, liquid etc.)	Protection method (9a, 9b, 9c)	Protection details	Comments
Plastic parts	tek abotek - Inbore Am	9a	Anbo	nborek
Note(s):	ibo kek abotek Anbore Anb	ek Anbotek	Anbo	hotek

9.3.1	TABLE: Containment of fire within the equipment	nt	N bot
14.7	Printed wiring boards	nbotek Anbotek Anbo	N
nek .	Material tested:	Anto tek anbotek Anb	
rek	Generic name	And otek anbotek	
inbo etek	Material manufacturer	Anbo stek Anbotek	
Anbo	Type designation	arek anborek	
Anbo	Colour:	otek Anbutek Anbotel	
Anb.	Conditioning details:	Imposer Ambo sek ambi	
nbotek notek	Thickness (mm):	1 – 2 – 3 -	
Anbotek	Duration of flaming after first application (s):	1 – 2 – 3 -	
ipojek Vek 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 -	
ek Ar	Cotton ignited (Yes/No):	1 - 2 - 3	
Note(s):	Anb. tek nbotek Anbote Antonia Antonia	Anbotes Anb	abotek





Report No. 18250SC00074301



9.4	TABLE: Limited	-energy circuit				N Am
botek A	Test details: 1 –L current (A); 4 – r circuit separation	naximum power	r(VA); 4 – overloa	ad protection a		Anbotek Anbotek
1	2	3	4	5	6	7
Yun - Otek	anbotek	Aupo	abotek A	Pu.	Lotek Anboti	-Vupo
Note(s):	tek kupotek	Anbo.	-botek	Anbore	And otek out	Josek Anb

Test details: 1 –Type of liquid; 2 –flammable liquids (b. quantity); 3 – flammable liquids (containment); 4 – comments  1 2 3 4	9.5	TABLE: Requirements for	equipment containing or using flammable li	quids
1 2 3 4	Anbotek			nable
Air ok hoter And tek napor Air ok hoter	1	2	3	4
w hote and ak abo had a mote and	b11.	tek Anboten - Anbo	ek obotek Anbou k hotek	Anboten Ant

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	s- 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 so <sup>tok</sup>	ok bush	Anbore	TUP.
hotek	Frequenc	y (Hz)	Will Otek V.	upor An	tek Anboten	Ρ'
notek	12/2	-70-0		VII.	hour 30 min	
Ar. hotek	Voltage (	V)	ek Mosek	Pupor - V	botek Anbote	
An.			ı (°C)		Pur Polek Pup.	
stek bu	maximum		Tm + Ta – Tc (°C);		Tm (°C); 3 – correcte ved temperature (°C)	
1	1	2	3	4	5	6
PCB	Anbote	anbor bot	61.3	100	inbotek P Anbotek	anbo.
Terminal	ek Aup	Polek - Vu	59.1	120	Anbotek Anbo	hotek - Anbo
Enclosure	oote.	nbotok	48.7	120	Anbore. Ar	Anbotek A
Note(s):	Andrek	Anbotek	Aupon stek	Anborek Anborr	ek Anto	Anbotek

10.2	TABLE: Temperature of resist	ance method te	mperature n	neasurement	s	N	oter
4.4.2.7	MAINS Transformers	And	anbotek	Aupor	bi.	N	Aupore
14.2.1	Motor temperatures	Anboatek	anborek	Anbore	br.	stek N	Ank

## **Shenzhen Anbotek Compliance Laboratory Limited**

Hotline 400-003-0500 www.anbotek.com

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

Report No. 18250SC00074301

Operating	conditions:						·- 0 <sup>8</sup>		
iek An'	Frequency (	Hz)	ootek An	100, N	abotek	Anbore. P	ur.		
botek	Duration (h,	min)	arbotek	Anbo.	: hour min				
abotek	Voltage (V)	Anth	anbotek	Anbo	N hotek	Aupore			
hi. społek	Ambient tem	perature Ta <sub>1</sub>	/Ta <sub>2</sub> (°C)	Anbo.	ek / aboti	°C(initial/fina	al)		
Anbote		nts: 1 – part/d 7 – result; 8 -		– R <sub>cold</sub> ; 3 – R	warm; 4 – Tr (K)	; 5 – T <sub>c</sub> (°C);	hotek Anbo		
1	2	3	4	5	6	7	8		
potek I	Anbo. P.	-bolek	Pupote	Pure Cherr	anbotek	Anbok	P. Opolok		

Page 46 of 54

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	nbotelP
hotek	Test method used:	Anbore K Air wotek	See below	
Anbotek	Non operative treatmer	nt	. [√]	Pore
Anbotek	Empty ENCLOSURE	stek kopole Aug	. [√]	P
anbo	Operative treatment	Voge <sub>k</sub> bopo <sub>le</sub> M	. Lorek Anbotek Anbot	N
	Part	Test temperature (°C)	Duration (h, min)	Verdict
riek	Enclosure	125	And otek 1h unbotek P	obot P.
be	Dielectric strength test	(6.8)	. 500 V r.m.s./peak/d.c	Who b
Note(s): No	hazardous live parts sha	Il be accessible	ek Anbotek Anbotek	Anbore
10.5.3	TABLE: Insulating mate	rials		Pinn
10.5.3a)	Ball pressure test	otek Anbotek	Aupo, W. Wolsk Wupo	P
ok br	Max. allowed impression	on diameter	2 mm	poier -
	Part	Test temperature (°C)	Impression Diameter (mm)	Verdict
Vuposo	Terminal	125	Anbort 1.0	Pier
	Tommai	1000	N. Dolo	An
Anborok	PCB	125	nek And 1.2	Pho
Anborek Anbor	VIIIO, by.	ak boten And	i sick vipo,	pa-
Note(s): No	PCB	125 125	1.2	Pho
	PCB Enclosure	125 125 Il be accessible	1.2	Pho
Note(s): No 10.5.3 10.5.3b)	PCB Enclosure hazardous live parts sha	125 125 Il be accessible	1.2	Profession
10.5.3	PCB Enclosure hazardous live parts sha TABLE: Insulating mate	125 125 Il be accessible	1.2	P P





11	TABLE: Pro	tection aga	inst hazar	ds from flui	ds			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					botek	Ar		
1	2	3	4	5	6	7	8	9	
Vupo.	Po Potek	Anbore.	Aur	rek - da	otek Muc	0. b	note)	Aupore	200
Note(s): No	such fluid use	d. Anbore	AUD	*ek	nbotek	Aupore.	hun potek	Ant	otel

	No.	Di.	401	VUD	Yo.	100	Die.
11.7.2	TABLE: Leakag	ge and rupture at	t high pressure			0	ek N An
Part	Maximum permissible working pressure (Mpa)	Test pressure (Mpa)	Leakage test Yes / No	Burst test Yes / No		Comments	5
Vupo.	ok -botek	Anbore	Anto otek	upotek	Tupo,	bu.	Anboh
Note(s):	rak proje	K Anboren	Antonotek	anbotek	Aupor	bir spot	ak Ant
11.7.3	TABLE: Leakag	ge from low-pres	sure parts				o <sup>tel</sup> N
unbotek	Measurements:	1 - ; 2 – (Pa); 3 –	; 4 -	arborel	k Aupo	rolf by	-botek
	Part	Test press	ure Leal	kage (Yes/No)		Comment	S
abotek	Aupor	Motek	Anboten Ant	otok v	abolek	Aupor	VII.
Note(s):	ek Anbore	Pili	Anborek	Aup	abotek	Anbore	r bu

12.2.1	TABLE: Ioniz	ing radiat	ion						d	oo'e N
Lo	ocation	Measure	ed values µS	v/h	Ve	rdict		С	omme	ents
Aupo.	bojek	Anbore	Anu	tek	anbotek	Anb	o.	b.,	rek	Anbore
Note(s):	ak wotek	Anbot	Anb.	atek	Anbotek	P	upo.	Pr.	ystod.	Anbore
12.5.1	TABLE: Sour	nd level m	easuremen	ts					(e	K N Anb
	Location		Meas	ured value	es dBA		Calc	ulated ma pressur		
in otok	vupate <sub>K</sub>	Aupor	A. potek	<sub>Anb</sub>	oter	Ano.	rek	anbotek	-	Yupo,
Note(s):	anbotek	Aupore	k 200	iek l	nboten	AUD	rek	nbot	ek	Anbor
12.5.2	TABLE: Ultra	sonic pre	ssure meas	urements	•					Nupore
Lo	Location			Measured values			Comments			
		d	В	k	Hz					
botek	Aupo rek	abotek -	- Aupore	Vu.	-rek	Anbotek		AUDO SOK	la.	abotek
Note(s):	Anbo	bolek	Anbore	Pilip	-otek	Anbo	1814	Aupo	. Y.	abotek

13.2.2	TABLE: Batteries tests				k N abot
itek vup	Battery load and charging circuit diagram	no otek	Anborek	Vupo,	
rek	Battery type	And	abotek	Ank	

**Shenzhen Anbotek Compliance Laboratory Limited** 





Page 48 of 54 Report No. 18250SC00074301

Note(s):	mhotek- Anbote	Anbotek Anbotek Anbo	bork Arbotek - Anbote Ar
Component		Open circuit, result	Short circuit, result
Single	component failures	,	Verdict
Pr. Posek	Reverse polarity insta	alment test	Ann Antorek Ann Ann Arek
hotek	Battery ratings	A Alpo, A	hořek Anboře
botek	Battery catalogue No	Anbor Anbor	abotek Anbotes An
lek Pup	Battery model	Albotek Anbo, tel abo	tek Anbotes Anb
Vupo,	Battery manufacturer		Anbo, Air

14.1	TABL	E: Components	i		Phote
Object/pai	t No.	Manufac- turer/trademark	Type/model	Technical data	Mark(s) of conformity
rek k	botek	Anbois	hotek anbotek	Anbo, rek abotek	Albore A
rek b	abotel	Anbores	Anti-	anbound All abotek	Anbore
po.	700	lek Aupole	And Lotek Ant	lotek Anbo sek abotek	Aupore
Vupo.	Pr.	hotek Anbot	And	nbotek Anbourek hotel	K Aupole

14.3	TABLE: Overtemperature protection devices					
Reliability te	st:			·		
Com	ponent	Type(see note)	Verdict	Comments		
hotek	Anbore	Arthur Anbotek	Anbo tek-	Anbore An		
Note(s):	k Aupore	Ann otek anbotel	Anbo. ak abo	lek Aupore Am		
NSR = non-	self-resetting (1	10 times)				
NR = non-re	esetting (1 time)	Josek Anbore An				
SR = self-re	setting (200 tim	nes)				

14.6	TABLE: Mains transformers tested outside equi	pment		N otek
bu.	Type	otek Anbotek	Anboye	
ek M	Manufacturer	hotek Anbotek	Vupo,	
lootek K	Temperature protection class of the lowest RATED winding (class or maximum RATED temperature):		otek An	
Aupore A	Winding identification:	Anbore And	hotek.	
Anbore	Type of protector for winding:	tek Anbore p	, botek	
		Short circuit	Over	load
SK PL	Elapsed time	anbotek 1s Anbot	1:	sk pr





Page 49 of 54

Anbore	Current, primary (A):	botek Anbotek	Aupo, viet-
ek Anb	Current, secondary (A):	abotek Anbotes	Augs
ootek P	Winding temperature, primary (°C)	Protek - Vupote	Andotek
borek	Winding temperature, secondary (°C)	bus pourk Aut	ore. And
VII.	Tissue paper/cheesecloth test:	W. Potek	inboten And
bu. Potek	Voltage test	Ar Polek	Anboten Anb
Note(s): No	any transformer used.	upora Am	Anbotek Anbo





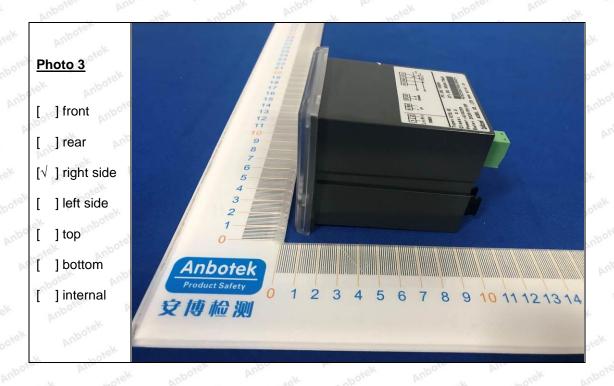


# Shenzhen Anbotek Compliance Laboratory Limited

Report No. 18250SC00074301



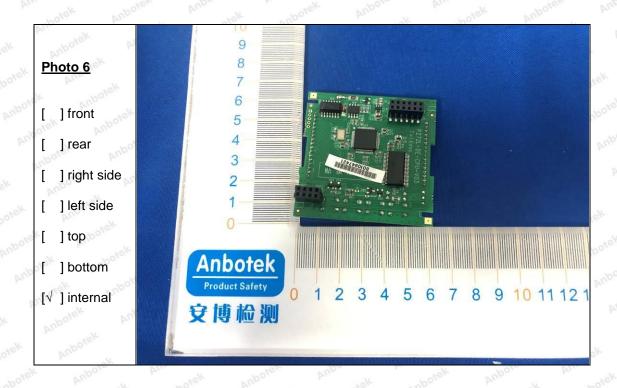
#### PHOTO DOCUMENTATION











# Shenzhen Anbotek Compliance Laboratory Limited





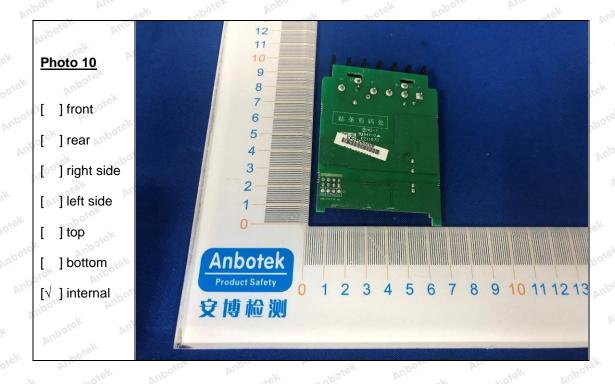




## Shenzhen Anbotek Compliance Laboratory Limited







\*\*\*End of report\*\*

### **Shenzhen Anbotek Compliance Laboratory Limited**