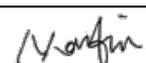




TEST REPORT IEC 61008-1 Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) Part 1: General rules	
Report Number	64.105.23.31016.01 Attachment no.1
Date of issue	2023-09-22
Total number of pages	73
Name of Testing Laboratory preparing the Report	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch 5F, Communication Building, 163 Pingyun Rd, Huangpu West Ave., 510656 Guangzhou, People's Republic of China
Applicant's name	NEXBLUE SRL
Address	RUE DE LONDERS 17, 1050 IXELLES, BRUXELLES, BELGIUM
Test specification:	
Standard	IEC 61008-1:2010 (Third Edition) +A1:2012 +A2:2013 used in conjunction with IEC 61008-2-2:1990 (First Edition)
Test procedure	Test report
Non-standard test method	N/A
Test Report Form No	IEC61008_1H
Test Report Form(s) Originator	OVE
Master TRF	Dated 2015-11
Copyright © 2015 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved.	
This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.	
If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.	
This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.	
General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	



Test item description : Residual direct current detecting device	
Trade Mark : NEXBLUE	
Manufacturer : Same as applicant	
Model/Type reference : RDC-PD of NB1620A	
Ratings : RDC-PD of NB1620A: 32A, 230/400±10% V~ 50Hz, 3P+N+PE, IΔdc: 6mA, IΔn: 30mA, Detail information of product see "general product information"	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):	
<input checked="" type="checkbox"/> Testing Laboratory:	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
Testing location/ address :	TÜV SÜD Testing Center, D1 building, No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, China
<input checked="" type="checkbox"/> Associated Testing Laboratory:	-
Testing location/ address :	-
Tested by (name, function, signature) :	Guihua Yuan (Project handler) 
Approved by (name, function, signature) .. :	Martin Ma (Designated reviewer)  
<input type="checkbox"/> Testing procedure: CTF Stage 1:	-
Testing location/ address :	-
Tested by (name, function, signature) :	-
Approved by (name, function, signature) .. :	-
<input type="checkbox"/> Testing procedure: CTF Stage 2:	-
Testing location/ address :	-
Tested by (name + signature) :	-
Witnessed by (name, function, signature) . :	-
Approved by (name, function, signature) .. :	-
<input type="checkbox"/> Testing procedure: CTF Stage 3:	-
<input type="checkbox"/> Testing procedure: CTF Stage 4:	-
Testing location/ address :	-
Tested by (name, function, signature) :	-
Witnessed by (name, function, signature) . :	-
Approved by (name, function, signature) .. :	-
Supervised by (name, function, signature) :	-



List of Attachments (including a total number of pages in each attachment):

See Attachment no.2 Photo doc. of 64.105.23.31016.01 for details.

Summary of testing:

Tests performed (name of test and test clause):

This report as the attachment of the main report for RCD type A function, just is considered IEC 61008-1:2010+A1:2012+A2:2013 concerning RDC-PD integrated in RCCB function.

The test results in this report are positive.

Detail information of tests, as below:

Test sequence	Clause or subclause	Test (or inspection)	
A	6	Marking	
	8.1.1	General	
	8.1.2	Mechanism	
	9.3	Indelibility of marking	
	8.1.3	Clearance and creepage distances (external parts only)	
	9.15	Trip-free mechanism	
	9.4	Reliability of screws, current-carrying parts and connections	
	9.5	Reliability of terminals for external conductors	
	9.27	Strain on the conductors	
	9.13	Resistance to heat	
	9.14	Resistance to abnormal heat and to fire	
B	9.7	Test of dielectric properties	
	9.8	Temperature rise	
	9.20	Resistance of insulation against impulse voltages	
	9.22.2	Reliability at 40 C	
	9.23	Ageing of components	
C	9.10	Mechanical and electrical endurance	
D	D0	9.9	Residual operating characteristics
	D1	9.17	Behaviour in the case of failure of the line voltage
		9.19	Unwanted tripping, Behaviour in the case of surge currents
		9.21	DC components
		9.11.2.3 a) b)	Performance at Δm
		9.16	Test device
		9.18	Non-operating current under overcurrent conditions
E	9.11.2.4 a)	Coordination at I_{nc}	
	9.11.2.2	Performance at I_m	
F	9.11.2.4 b)	Coordination at I_m	

Testing location:

For clause 9.10, 9.11, 9.19, 9.23, 9.22:

Zhejiang Testing & Inspection Institute for Mechanical and Electrical Products Quality
4F, Building1, No.125 Miaohouwang Road, Binjiang District, Hangzhou, Zhejiang, China

For others:

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

TÜV SÜD Testing Center, D1 building, No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, China



64.105.23.31016.01 Attachment no.1

	9.11.2.4 c)	Coordination at IΔc
G	9.22.1	Reliability (climatic test)

Remark:

The clearances between live parts which are separated when the main contacts are in the open position of RDC-PD in IEC 61008-1 is 4mm, and it will be considered in the standard IEC 62955 as 3mm.

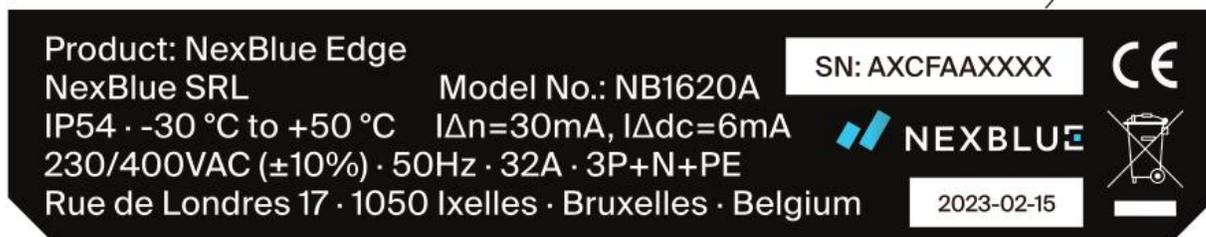
Summary of compliance with National Differences (List of countries addressed):

None

The product fulfils the requirements of IEC 62955:2018.

Remark: In this report, 64.105.23.31016.01 Attachment no.1 is considered IEC 61008-1:2010+A1:2012+A2:2013 concerning RDC-PD integrated in RCCB function.

Copy of marking plate





Test item particulars	RDC-PD
Classification of RCCBs functionally dependent on the line voltage.....	Yes
Opening automatically in case of failure of the line voltage:	
- reclosing automatically when the line voltage is restored.....	N/A
- not reclosing automatically when the line voltage is restored.....	Yes
Not opening automatically in case of failure of the line voltage:	
- able to trip in a hazardous situation arising on failure of line voltage	Yes
- not able to trip in a hazardous situation arising on failure of line voltage.....	N/A
Type of RCCB:	
- type AC.....	No
- type A	Yes
- independent of the line voltage.....	N/A
- dependent on the line voltage	Yes
- without time delay.....	Yes
- with time delay: type S.....	No
- enclosed	No
- unenclosed.....	Yes, integral part of the charging system
- IP number	IP00 (integral part of the charging system)
- for fixed installation	Yes
- for mobile installation	No
Number of poles	3P+N+PE
Ambient air temperature (°C).....	-30 °C ~ +50 °C
Method of mounting.....	Fixed
Method of connection.....	Not associated with the mechanical mounting (integral part of the charging system)
Rated residual operating current (A)	30mA
Rated current (A)	32A
Rated voltage (V).....	400V ~
Rated impulse withstands voltage (U _{imp}).....	4000V
Nature of supply	~
Rated frequency (Hz).....	50Hz
Rated making and breaking capacity (A)	500A
Rated residual making and breaking capacity (A)	500A
Rated conditional short-circuit current (A).....	1000A
Rated conditional residual short-circuit current (A).....	1000A
Type of terminal	Screw-type terminals



Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing	
Date of receipt of test item	2023-06-13
Date (s) of performance of tests.....	2023-06-13 to 2023-08-22
General remarks:	
"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60335-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	SCUD ENERGY TECHNOLOGY CO., LTD Room 44, 23 rd Floor, Building 1, New Drug Innovation Center, Yaoxi Road 10, Nanyu Town, Minhou County, Fuzhou City, Fuzhou Province, China
General product information:	
RDC-PD of NB1620A is an integral part of the charging system. The rating of RDC-PD as following, 230/400(±10%)V~, 50Hz, 3P+N+PE, 32A IΔn=30mA, IΔdc=6mA, Im=500A, IΔm=500A, Inc=1000A, IΔc=1000A	