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CNAS

TESTING CNAS L0116

China Compulsory Certification Report

☐ New application ☒ Alteration ☐ Supervision ☐ Recheck ☐ Others:

Application No.: A2019CCC0308-3191975

Product Name: Low-voltage fuse (blade-type contact fuse)

Model: RT20-4

Testing institution: Zhejiang Fangyuan Test Group Co., Ltd.


(Zhejiang Fangyuan Electrical Equipment Testing Co., Ltd.)

Special Seal for Inspection and Testing of Zhejiang Fangyuan Test Group Co., Ltd. (Seal)



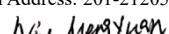
I, Niu Mengyuan, translator of E-TRANSTAR (Beijing) Information Technology Co., Ltd., confirm this is a true and accurate translation of the original document.
CATTI Certificate No.: 20201100937000000097 Organization: E-TRANSTAR (Beijing) Information Technology Co., Ltd.
Tel: 010-60537024 Email: zhuliye@57trans.com
Organization Address: 201-212057, Zone 6, Pinggu Park, Zhongguancun Science and Technology Park, Pinggu District, Beijing
Signature: *Niu Mengyuan* Date of Translation: October 27, 2025



Application No.: A2019CCC0308-3191975 Sample Name: Low-voltage fuse (blade-type contact fuse) Product Name: RT20-4 Trademark:  Sample Quantity: 83 Fuse-element 32 Fuse support Sample Source: Sent by Manufacturer: Sample Receipt Date: June 5, 2019 Completion Date: June 21, 2019	Principal: Ningbo Switchgear Manufacturing Co., Ltd. Address of the Principal: Changfeng Industrial Development Zone, Zhonggongmiao Street, Yinzhou District, Ningbo City, Zhejiang Province Manufacturer: Ningbo Switchgear Manufacturing Co., Ltd. Manufacturer Address: Changfeng Industrial Development Zone, Zhonggongmiao Street, Yinzhou District, Ningbo City, Zhejiang Province Manufacturing Enterprise: Ningbo Switchgear Manufacturing Co., Ltd. Address of the Manufacturing Enterprise: No. 76, Lane 238, Beihai Road, Jiangbei District, Ningbo City, Zhejiang Province		
Test Conclusion: Qualified according to GB/T 13539.2-2015			
Descriptions of product models & specifications covered by this application unit and relevant information: RT20-4; Fuse-element: Un: AC400V (800A, 1000A, 1250A, 1600A) AC690V (800A, 1000A, 1250A) DC440V (800A, 1000A, 1250A) In: 800A, 1000A, 1250A, 1600A; Rated breaking capacity (I1): 100kA (AC400V), 50kA (AC690V, DC440V); Breaking range and usage category: gG; Fuse support: Un: AC400V, AC690V, DC440V; In: 1600A; Number of poles: IP; Peak withstand current: 100kA (AC400V), 50kA (AC690V, DC440V);			
Tested by: Wang Linfeng	Signature: Wang Linfeng	Date: 2019-06-28	(Name and seal of testing organization) Special Seal for Inspection and Testing of Zhejiang Fangyuan Test Group Co., Ltd. (Seal) June 28, 2019
Reviewed by: Lu Linlin	Signature: Lu Linlin	Date: 2019-06-28	
Issued by: Wang Guozhong	Signature: Wang Guozhong	Date: 2019-06-28	
Notes: This application is a change application. Please see the attached page for details of the change and the original 3C certification:			

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Composition of report

Report content	Yes/No	Page	No.
Cover	√	1	02401-1911901107
Homepage	√	1	02401-1911901107
Attached page	√	1	02401-1911901107
Composition of report	√	1	02401-1911901107
Safe Type Test Report	√	90	02401-1911901107-S
Electromagnetic compatibility type test report	/	/	/
Back Cover	√	1	02401-1911901107

The report consists of all contents with √ in the table.

- Determination:
- P Test results meet the requirements;
 - F Test results does not meet the requirements;
 - N The requirement does not apply to the product, or not to proceed with the trial

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Sample description and explanation

1. Description of product composition and structural features (structural summary):

Including the main components of the product, the mode of operation, installation method, wiring method, etc., and also including the following content:

The fuse element is composed of blade-type contacts, a cover plate, a copper fuse wire, a porcelain tube, a fuse indicator, and arc-extinguishing filler.

The fuse element support consists of the socket, socket spring ring, wiring terminals, steel base plate, ceramic blocks, and other components.

Installation method: Screw installation;

The wiring method uses plate-type bolt-connected terminals;

1) Product specifications and features

Product model and name:	RT20-4 Low-Voltage Fuse (Blade-Contact Type Fuse)
Breaking range:	g
Usage category:	G

2). Provide drawings and corresponding identification numbers:

General assembly drawing:	3NK2.225.445.1~4
Support component assembly drawing:	3NK5.022.547
Support component outline drawing:	3NK5.022.547
Fuse-element component assembly drawing:	3NK5.594.770.1~4; 3NK5.594.773.1~4
Outline dimension drawing of fuse-element:	3NK5.594.769.1~4; 3NK5.594.774.1~4

3) Main structural data:

NH fuse link

Contact materials and coating materials:	(8x50) mm copper busbar TMY; D.Ag
Name and PTI of plastic parts:	/
Whether it has an insulated metal buckle:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Whether it has a striker:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

2. Fuse holder

Wiring terminal material and plating material:	(8x50) mm copper busbar TMY; D.Ag
Name and PTI of plastic parts:	DCM-1; PTI≥400
Whether the fuse base has a threadless type terminal for connecting external copper conductors:	<input type="checkbox"/> Yes, <input checked="" type="checkbox"/> No

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Sample description and explanation

2. Main technical parameters: (Inapplicable items are indicated by "/")

1) Fuse holder:

Rated voltage:	<i>AC400V</i> , AC690V, <i>DC440V</i>
Rated current:	1600A
Rated receiving power dissipation:	≥160W
Rated impulse withstand voltage:	6kV
Number of poles (if more than one):	/
Protection grade:	/

2) Fuse:

Rated voltage:	AC400V (800A, 1000A, 1250A, 1600A), <i>AC690V (800A, 1000A, 1250A),</i> <i>AC440V (800A, 1000A, 1250A);</i>
Rated current:	800A, 1000A, 1250A, 1600A
Rated power dissipation:	≤160W
Rated breaking capacity:	100kA (AC400V), 50kA (AC690V, DC440V)
Overload current:	3040A(800A), <i>4000A(1000A)</i> , <i>5600A(1250A)</i> , <i>11000A(1600A)</i>
Operating time of the overload test:	14~140s(800A), <i>9~150s(1000A)</i> , <i>8~180s(1250A)</i> , <i>5~200s(1600A)</i>

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Sample description and explanation

3. Description of series and explanation of model:

3.1. Products in this application unit:

1) For fuse elements with different rated currents, only the contacts of the fuse elements differ; the shape and structure of the casing are completely the same, and the dimensions of the casing are also completely identical (excluding the fuse element): ☒Yes ☐No

2) Fuse elements with different rated currents have the same arc-extinguishing medium and the same degree of filling: ☒Yes ☐No

3) For fuse elements with different rated currents, the fuse material is completely identical, and the length and shape of the fuse are also the same: ☒Yes ☐No

4) The cross-sectional area of the fuse element (which may vary along its length) and the number of fuse elements shall not exceed those of the fuse element with the maximum rated current.

Cross-sectional area and number of fuse elements: ☒Yes ☐No

5) The minimum distance between adjacent fuse elements and between a fuse element and the inner surface of the fuse tube shall not be less than the corresponding distance in the fuse with the maximum rated current: ☒Yes ☐No

3.2. Description of the series (differences and similarities between different models and current levels of this application unit):

This series of low-voltage fuses (knife-blade contact fuses) is designed for use in low-voltage distribution systems in industrial enterprises and power plants, providing protection against circuit overloads and short circuits.

The rated voltages of products with rated currents of 800A, 1000A, and 1250A are AC400V, AC690V, and DC440V;

The rated voltage of the product with rated current of 1600A is AC400V;

The only differences between fuses of different rated currents are the number and thickness of the fuse elements, while their length and width remain the same.

3.3. Explanation of the model:

RT 20 - 4

(1) (2) (3)

(1) Filled sealed tube fuse

(2) Design code

(3) Size of fuse element or base

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Sample description and explanation

4. Special structure description (if necessary):

None

5. Product certification:

3C Certificate No.: 2011010308517874, Date of first issuance of certificate: December 20, 2011

6. Safety-critical components list:

S/N	Component/part name	Component/material name	Model specification/brand	Manufacturer (manufacturing plant)
1	Insulating base of the support	Unsaturated polyester plastic	DMC-1	Wenzhou Mingfan Plastic Co., Ltd. Ninghai County Hongda Hardware Manufacturing Co., Ltd.
2	Fuse tube	Grade A electrical porcelain	Grade A electrical porcelain NK0.587.507	Handan Rongqiang Industrial Ceramics Co., Ltd. Xinxing Electric Ceramics Co., Ltd.
3	Fuse- element	Oxygen-free copper strip	Oxygen-free copper strip TU2Y2 NK0.501.505	Shanghai Husheng Precision Alloy Co., Ltd.
4	Filler	Quartz sand	Quartz sand NK0.503.404	Jingheng Silica Sand Co., Ltd.
5	Filler curing agent	/	/	/
6	Spring	/	/	/

Note 1: If the safety components involve more than one manufacturer (manufacturing plant), the manufacturer (manufacturing plant) listed first shall be the one that provides the safety components for the type test samples.

Note 2: This company declares: If the safety components involve more than one manufacturer (manufacturing plant), the safety components provided by the manufacturer (manufacturing plant) used for the type test samples shall have no performance differences from those provided by other manufacturers (manufacturing plants) listed by the enterprise.

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Summary Table of Inspection Items

S/N	Test Item	According to standard terms	Sample No.	Test Result
Fuse-element Model/Specifications: RT20-4 /In: 1600A Fuse support model/specifications: RT20-4 /In: 1600A				
1	Dimensions	8.1.4	/	See report for details C009-A2010CCC0308-1 010067
2	Resistance	8.1.5.1		
3	Insulation performance and isolation suitability	8.2		
4	Tracking resistance	8.2.5		
5	Temperature rise, power dissipation	8.3		
6	Conventional non-fusing current	8.4.3.1a)		
7	Conventional fusing current	8.4.3.1b)		
8	Rated current	8.4.3.2		
9	Threshold	8.4.3.3.2		
10	Overload	8.4.3.4		
11	Actuation of the striker	8.4.3.6		
12	No.5 Breaking capacity (I5)(AC)	8.5		
13	No.4 Breaking capacity (I4)(AC)	8.5		
14	No.3 Breaking capacity (I3)(AC)	8.5		
15	No.2 Breaking capacity (I2)(AC)	8.5		
16	No.1 Breaking capacity (I1)(AC)	8.5		
17	Overcurrent selectivity	8.7.4		
18	Protection grade:	8.8		
19	Heat resistance	8.9		
20	Contacts do not deteriorate	8.10		
21	Mechanical Strength	8.11.1		
22	Resistance to stress corrosion cracking	8.11.2.1		
23	Rust resistance	8.11.2.3		
24	The fuse element and fuse insulation do not deteriorate	8.11.2.4		

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Summary Table of Inspection Items (Continued)

S/N	Test Item	According to standard terms	Sample No.	Test Result
Fuse-element Model/Specifications: RT20-4 /In: 1250A Numbering example: 1#... Fuse support model/specifications: RT20-4 /In: 1600A Numbering example: D1#...				
22	Dimensions	8.1.4	1#~3#, D1#~D18#, D25#	P
23	Resistance	8.1.5.1	1#~33#	Provides the data
24	Insulation performance and isolation suitability	8.2	D25#	P
25	Conventional non-fusing current	8.4.3.1a)	1#(DC)	P
26	Conventional fusing current	8.4.3.1b)		P
27	Rated current	8.4.3.2	2#(DC)	P
28	Threshold	8.4.3.3.2	26#~29#(DC)	P
29	Overload	8.4.3.4	23#~25#(DC)	P
30	No.5 Breaking capacity (I ₅)(AC)	8.5	4#(AC690V)/D1#	P
31	No.4 Breaking capacity (I ₄)(AC)	8.5	5#(AC690V)/D2#	P
32	No.3 Breaking capacity (I ₃)(AC)	8.5	6#(AC690V)/D3#	P
33	No.2 Breaking capacity (I ₂)(AC)	8.5	7#~9#(AC690V)/D4#~D6#	P
34	No.1 Breaking capacity (I ₁)(AC)	8.5	10#~12#(AC690V)/D7#~D9#	P
35	No.5 Breaking capacity (I ₅)(AC)	8.5	13#(DC440V)/D10#	P
36	No.4 Breaking capacity (I ₄)(AC)	8.5	14#(DC440V)/D11#	P
37	No.3 Breaking capacity (I ₃)(AC)	8.5	15#(DC440V)/D12#	P
38	No.2 Breaking capacity (I ₂)(AC)	8.5	16#~18#(DC440V)/D13#~D15#	P
39	No.1 Breaking capacity (I ₁)(AC)	8.5	19#~21#(DC440V)/D16#~D18#	P
40	Overcurrent selectivity	8.7.4	30#~33#(AC690V)	P
41	Heat resistance	8.9	D26#	P
42	Resistant to abnormal heat and fire	8.11.2.2	D25#	P
Fuse-element Model/Specifications: RT20-4 /In: 1000A				
43	Dimensions	8.1.4	34#,36#	P
44	Resistance	8.1.5.1	34#~41#	P
45	Conventional non-fusing current	8.4.3.1a)	35#(DC)	P
46	Rated current	8.4.3.2	34#(DC)	P
47	Threshold	8.4.3.3.2	38#~41#(DC)	P

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