



NH SERIES SPECIFICATIONS

NH SERIES Square pipe knife-shaped Contact

Product specification

1、Application

This series of fuses is suitable for AC 50Hz-60Hz, rated voltage 500V-690V, rated current up to 1250A, and is used for overload and short circuit protection (gG/gL) in electrical wiring. Due to the different melting plates, it may also be used to protect semiconductor devices and their complete equipment from short circuits (aR/gR/gS/gtr), as well as to protect motors from short circuits (aM). The rated breaking capacity is 80kA for 500V and 50kA for 690V. Compliant with GB13539.2 and IEC60269-2 standards.

2、Construction Feature

This series fuse consists of fuse link, fuse base and carrier fuse. The variable cross-section fuse body made by pure copper piece(or copper wire,silver wire,silver piece) is sealed in the fusion tube which is made by the high strength porcelain or epoxy glass cloth pipe, there is full of the high-purity quartz sand processed after chemistry to take the extinguishing of arc medium in the tube,the two sides of fuse The is welded and connected with the end plate (or connecting plate) firmly and electrically, forming square knife shaped contact structure. A fuse may have a fuse indicator or an impactor, when fuse is blowing, a fuse (indicator) can be displayed or converted to various signals and an automatic switching circuit (impactor). The fuse base is composed of a high temperature resistant resin base plate/ high strength porcelain base plate and a wedge static contact, open structure, supporting for fuse of corresponding size. This series fuse has the advantages of good heat dissipation condition, high mechanical strength, reliable contact and easy operation.

3、Classification of products

The structure of the fuse is related to the operator, mainly divided into:

Fuses for full-time personnel;

Fuses used by unskilled persons.

Sort by breaking range and using categories:

①. Sort by breaking range

a. “g” fuse

②. Sort by using categories

a. “G/L” fuse

4、Range of breaking capacity and using categories:

4.1. Range of breaking capacity

“g” fuse - full range breaking capacity fuse;

4.2. Using categories

“gG/gL “ - fuse for general use, full range breaking capacity;

5、Normal working conditions

5.1. Ambient air temperature:

The ambient air temperature shall not exceed 40℃;

The average ambient air temperature 24h shall not exceed 35℃;

The ambient air temperature shall not less than —5℃.

5.2. Altitude:

The installation site shall be no more than 2000m above sea level

3. 5.Atmospheric condition

The relative humidity of the atmosphere is not exceed 50% when the ambient air temperature is 40℃; At lower temperatures, there can be a higher relative humidity(For example: the relative humidity can reach 90% at 20℃); the maximum monthly relative humidity of the wettest month is not exceed 90%,and the average temperature not exceed 25℃,and consider condensation on the products because of the changed temperature.

6、Characteristic

6.1. Rated Voltage

The rated voltage of AC fuse is recommended 690V.

6.2. Basic parameter

Table 1 Basic parameter

Model specification	Rated voltage (V)	Rated Current (A)		Rated power consumption (W)	
		base	fuse link	base	fuse link
NH00C	500V/690V	100A	2、4、6、10、16、20、25、32、40、50、63、80、100、	≥ 7.5	≤ 7.5
NH00		160A	2、4、6、10、16、20、25、32、40、50、63、80、100、125、160	≥ 12	≤ 12
NH0		160A	2、4、6、10、16、20、25、32、40、50、63、80、100、125、160	≥ 16	≤ 16
NH1		250A	80、100、125、160、200、250	≥ 23	≤ 23
NH2		400A	250、300、315、350、400	≥ 34	≤ 34
NH3		630A	400、450、500、550、630	≥ 48	≤ 48
NH4		1250A	800、1000、1250	≥ 110	≤ 110

6.3. Rated current of fuse base

Unless otherwise specified, the rated current of the fuse base shall be selected from the rated current of the fuse, for fuse “gG” and “aM”, the rated current of the fuse base represents the maximum rated current of the fuse to be used

Rated dissipation power of fuse and rated acceptance power of fuse base:

If there is no standard for the fuse, the rated dissipation power of the fuse shall be determined by the manufacturer, the rated dissipation power of the fuse shall not exceed 5W under specified test conditions.

If the standard of the fuse does not specify, the rated acceptance power of the fuse base shall be specified by the manufacturer, rated acceptance power shall not exceed the prescribed temperature rise under specified test conditions, the maximum dissipated power that the fuse support can withstand, that is, the temperature rise of tin contacts is not exceed 60℃; the temperature rise of nickel plated contact shall not exceed 75℃; the temperature rise of the silver contact is limited only to not to damage the adjacent parts.

7、Installation size

Figure-NH00-NH3 Fuse Link

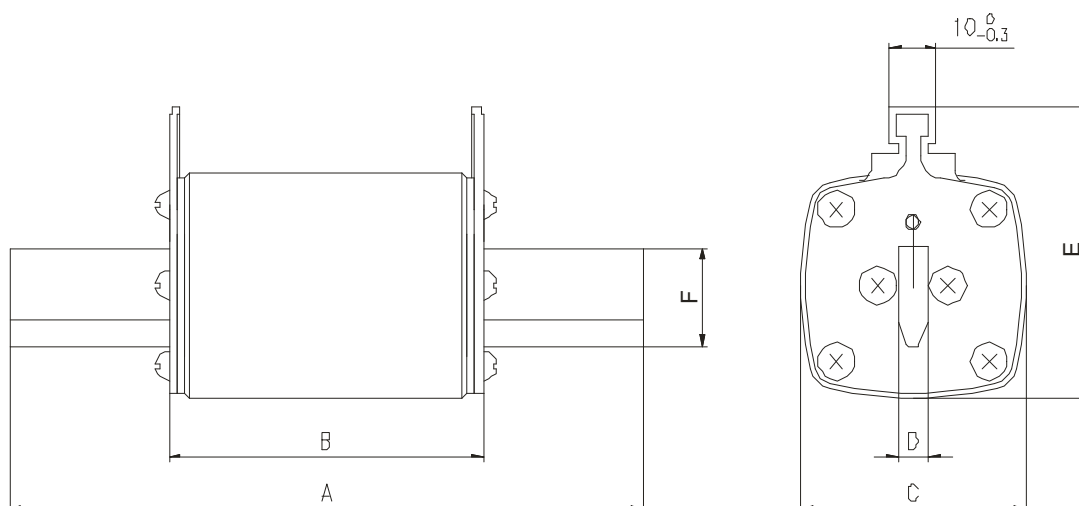


Figure -NH4 Fuse Link

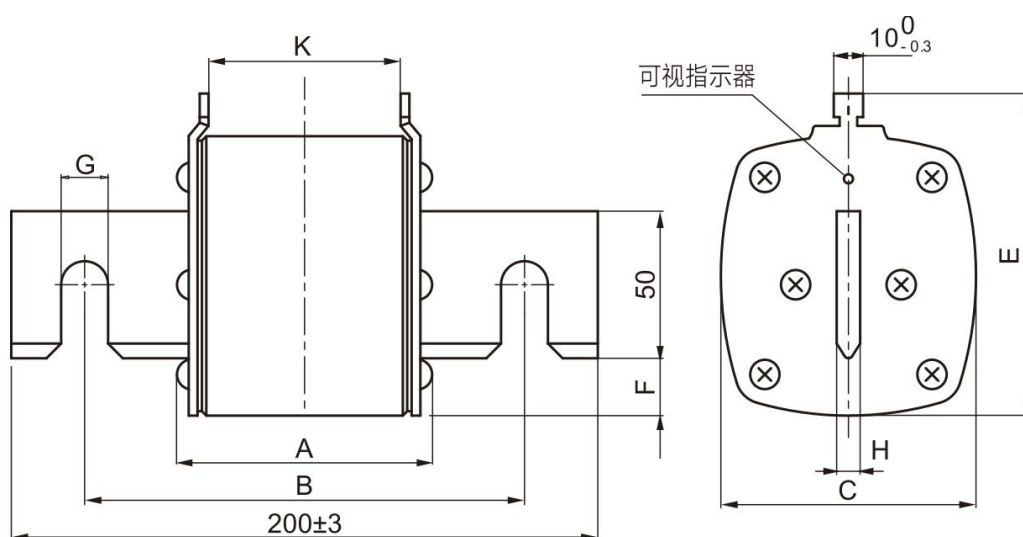


Table 2 Fuse dimension

Product model	Model of similar products/Model of fast fuse	Current level	A	B	C	D	E	F
NH00	NT00、R031、NGTC00、RS31	2-160	78.5	54	30	6	61	15
NH1	NT1、R032、NGTC1、RS32	80-250	135	72	48	6	61	20
NH2	NT2、R033、NGTC2、RS33	125-400	150	74	60	6	71	25
NH3	NT3、R034、NGTC3、RS34	315-630	150	74	68	6	83	32
NH4	NT4、R039A、NGTC4、RS39	800-1250	200	97	100	6	112	50

Figure 3 Fuse NH00-3 base

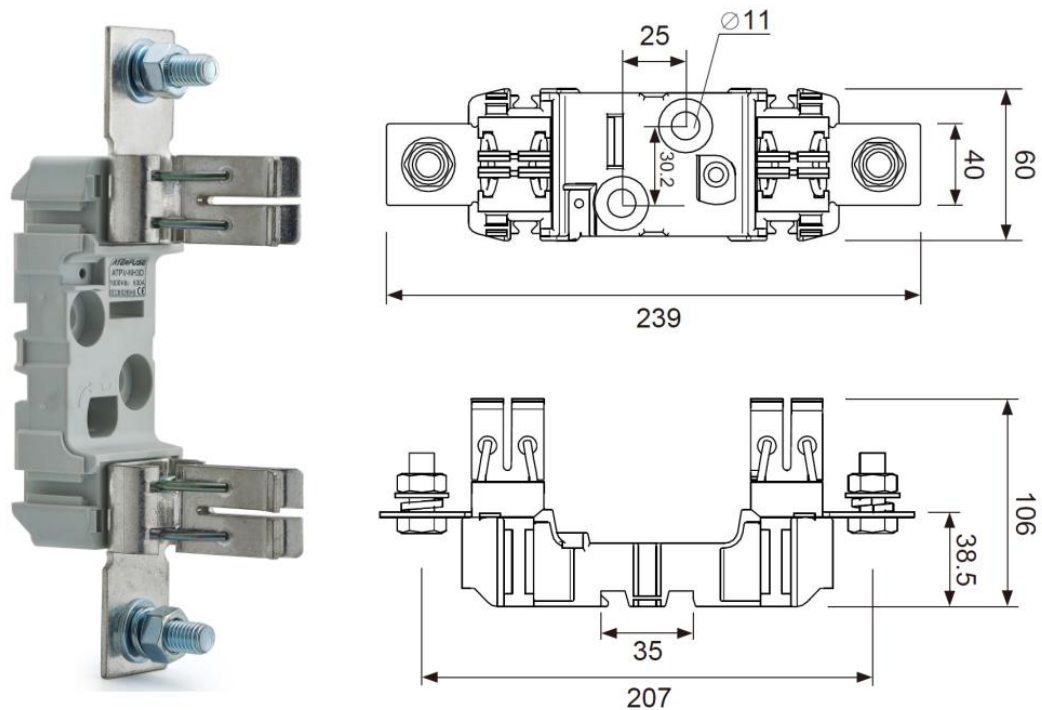
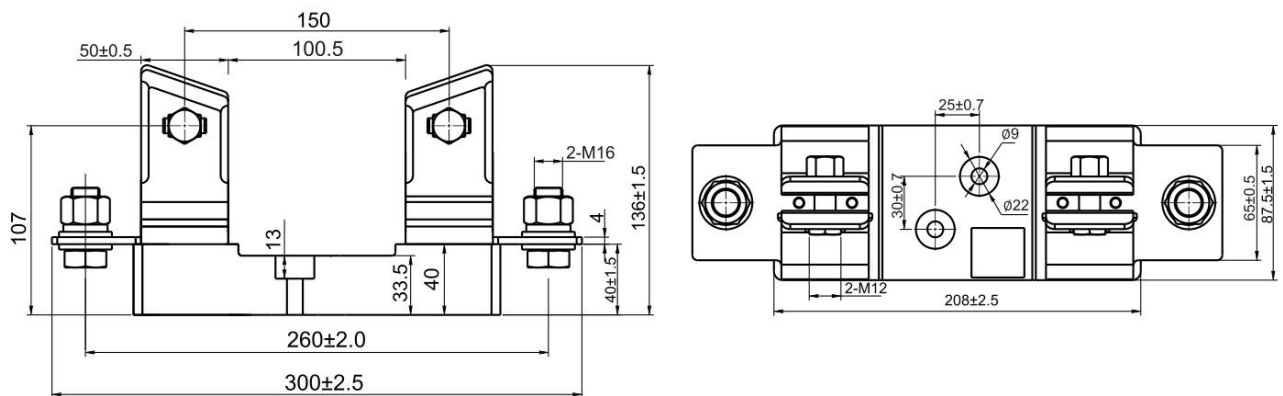


Figure 3 Fuse NH4 base



Model of fuse base	Rated voltage (V)	Rated Current (A)	overall dimension/size (mm)							
			A	B	C	D	E	F	G	H
NH00	500V/690V	160	120	100	30	7.5	25	60	25	—
NH1		250	200	175	58	10.5	38	82	25	30
NH2		400	225	200	60	10.5	40	100	25	30
NH3		630	250	215	60	10.5	40	105	25	30
NH4		1250	See Figure 3 Fuse NH4base							

8、Fuse cold resistance and power dissipation

Serial number	Model	Rated current (A)	Pre-arcing I ² t	Total I ² t	1In (W)
1	NH00	6	14	134	1.7
2		10	59	274	2.0
3		16	274	941	3.0
4		20	568	2156	3.2
5		25	1029	3822	3.4
6		32	2009	5782	4.0
7		40	3724	9506	4.8
8		50	5096	13230	5.2
9		63	6468	20090	6.2
10		80	10290	29890	6.8
11		100	19110	57820	8.3
12		125	38710	116620	9.3
13		160	70560	188160	11.3
14	NH1	80	9702	29204	7.6
15		100	18620	53900	9.4
16		125	38220	115640	11.3
17		160	67620	181300	12.5
18		200	116620	254800	14.7
19		224	165620	382200	16.7
20		250	235200	488040	19.6
21	NH2	125	38220	115640	11.8
22		160	66640	171500	13.2
23		200	97020	245000	15.7
24		224	151900	372400	17.2
25		250	215600	475300	20.6
26		300	333200	735000	23.5
27		315	372400	842800	24.5
28		355	514500	1146600	27.4
29		400	705600	1519000	30.4
30	NH3	315	372400	842800	24.5
31		355	499800	1127000	28.4
32		400	705600	1617000	30.4
33		425	867300	1940400	33.3
34		500	1215200	2891000	37.2
35		630	1783600	5194000	43.1

9、Test mode:

9.1、Contract time and current

Table 5 Contract time and current of fuse “gG”and“gM

Rated current of fuse “gG”	Contract time h	Contract current	
		Inf	If
$I_n \leq 4$	1	$1.5I_n$	$2.1I_n$
$4 < I_n < 16$	1	$1.5I_n$	$1.9I_n$
$16 \leq I_n \leq 63$	1	$1.25I_n$	$1.6I_n$
$63 < I_n \leq 160$	2		
$160 < I_n \leq 400$	3		
$I_n > 400$	4		

9.2、Fuse performance test

a. Regular trials are generally not available over 5 years,not less than 10 pcs,it contains fuse dimension,appearance,nameplate, measurement of internal resistance, installation size, conventional non fusing test, inspection test of prescribed fuse, test for rated dissipation power of fuse and fuse base;

b. The routine test is that each batch of fuses has to be checked for 100%,it contains measurements of dimensions, appearance, nameplate marks, internal resistance, and mounting dimensions.

The sampling test of out of the factory is no less than 5 pcs per batch, make adjustment of the two type test according to GB2828, inspection of dimensions, appearance, nameplates, conventions non fusing tests, tests for prescribed fuses, tests for rated dissipation power of fuse and fuse base.

10、Marking, packaging, transportation and storage

10.1. Marking

The markings should be clear, easy to recognize, and not too vague for too long. The mark should not be marked on removable parts, the mark shall be visible when the fuse is in the normally installed position.

10.2. Packaging

The outer packing of the fuse must be able to prevent damage during transit and to prevent rain and moisture. The packing case shall be accompanied by a packing list, a certificate of conformity, and necessary instructions for transportation, installation, use and maintenance

10.3. Transportation and storage

By product standards.