



NH5KM Series Low Voltage Full Range Protection Fuse

Specification

ZR/YC-0629 S1

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DC250V 500A**Content**

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DC250V 500A

Basics:

- Conform to: GB13539、IEC60269
- Rated Voltage: DC250V
- Rated Current: 500A
- Utilization Category: gS
- Breaking Capacity: 20kA/DC250V
- RoHS Compliant
- Flame Retardant: UL94 V-0

This product is cylindrical bolt-on fuse with full range protection and low consumption characteristics. Meets general and semiconductor protection requirements.

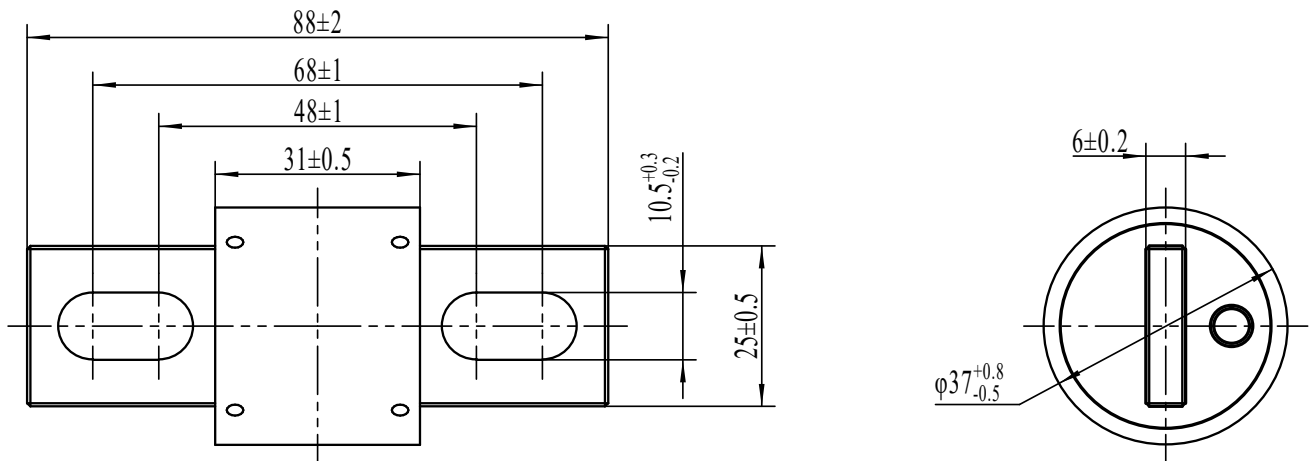
Note: All data are measured under standard environment, test parameters and wiring refer to IEC 60269.

No.	Part Number	Size	Rated Current A	$I^2t (A^2s)$		Loss W In	Weight g	20°C Res. (mΩ)	Note
				Prearc	Clearing				
1	NH5KM-500	5KM	500	173000	320000	37.5	173±1%	0.103±10%	Bolt M10 Torque: 21±1N·m

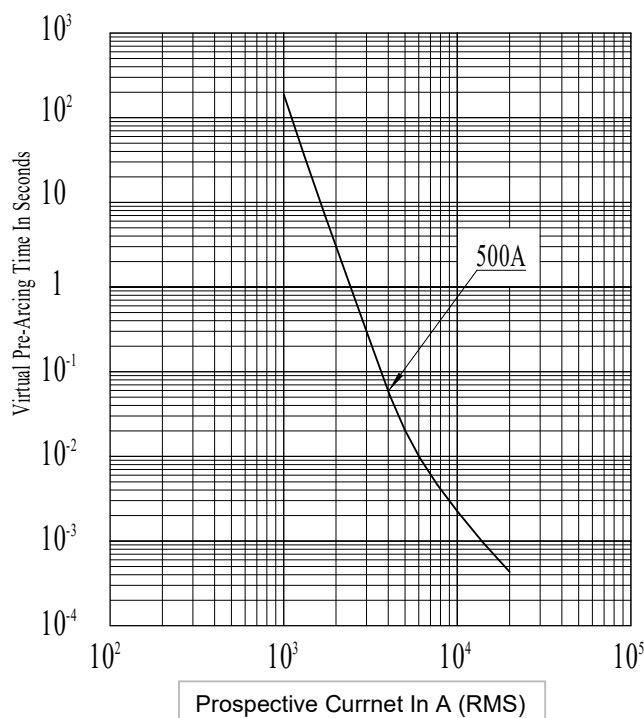
Note: The above I^2t is typical data under 267VDC、20kA、t3.22ms.

Outline and Dimensions (mm)

NH5KM-600 Dimensions



Note: The levelness of two blades ≤ 0.5 .

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Characteristic Curves
Time-current Curve


- Note: 1. The curve time constant 3 ± 0.5 ms.
 2. The tolerance of current curve $\pm 10\%$.
 3. Min breaking current: $\geq 2I_n$.
 4. 100ms or less is the equivalent time.

Transport and Storage
Transport

Avoid rain/snow or mechanical damage during transportation.

Storage

Package storage: $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$, Maximum 70% RH at 40°C ; Maximum 80% RH at 30°C ; Maximum 90% RH at 20°C .

Package and Storage temp: $-40^{\circ}\text{C} \sim 70^{\circ}\text{C}$, Maximum 90% RH, no dewing.

Usage Conditions
Normal Conditions

Correction is not required under normal conditions.

For other conditions, if they are within tolerable range, certain correction measures may be required.

If conditions are beyond tolerable range, please consult our team for evaluation and testing.

Ambient Temperature

Normal Condition

$-5^{\circ}\text{C} \sim 40^{\circ}\text{C}$

Tolerable Range

$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

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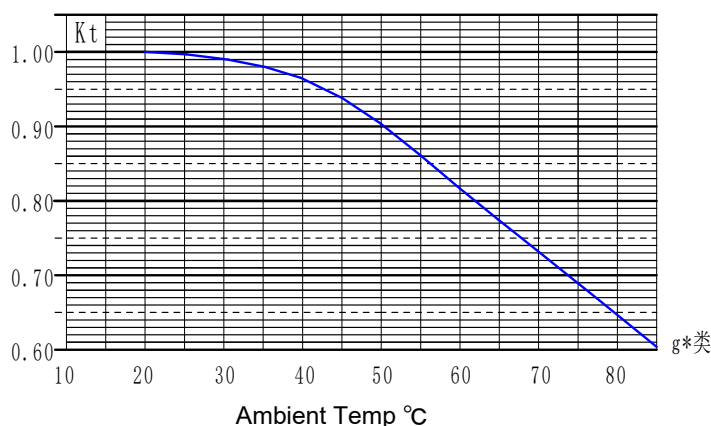


Ambient temperature correction: operating below -5°C , resulting in longer pre-arc time under small overcurrent and slightly increased rated current.

If above 40°C , rated current is corrected as per factor $-K_t$.

Note 1: K_t value has considered safety margin of rated current during normal operation.

Note 2: ambient temperature should last 1-2 hrs. before it has a significant impact on fuse.



Altitude

Normal Condition

Below 2000m

Tolerable Condition

2000-4500m

Correction: higher altitude would affect insulation and dissipation, also changes air pressure.

a) For every 100m higher, fuse temperature rise increases by 0.1-0.5k.

b) For every 100m higher, ambient temperature drops by 0.5k approximately.

c) Normally for fuses in open environment, altitude condition is negligible.

d) For closed environment, if ambient temperature inside remains almost stable under different altitude.

If exceed 40°C , fuse should be degraded. For every 1000m, rated current should be degraded by 2%-5%.

Note: for same series, larger rated fuse should use higher degrade %, and lower degrade % for smaller one.

Air Insulation Strength (Breakdown)

a) Air insulation reduces with higher altitude. For 2000-4500m, insulation decreases by 12-15% for every 1000m as per GB/T16935.1. Thus adjust clearing space.

b) Space between fuse terminals is often much larger than specified value in standard.

c) User should consider altitude impact on spacing between fuse and other electric component, earthing etc.

Atmosphere

Normal Conditions

Clean atmosphere, maximum 50% RH at 40°C .

Higher RH is allowed when temperature is low, e.g. maximum 90% at 20°C .

Moderate dewing may occur under temperature changes.

Tolerable Conditions

If dewing is minor, RH could be up to 95%.

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Vibration

It has great withstand to anti-vibration and mechanical shock, up to at least 3g acceleration.
For severe vibration application, please consult our team for evaluation and testing.

Pollution

Grade 3 pollution withstand

Mounting Condition

Normal Condition

- a) Installed in open air without any ventilation. No heat source within 1m except for conductors
- b) Contact of fuses must be securely connected. Contact resistance should not affect operation.
- c) Fuse can be mounted in any orientation. If spring compression is adopted, make sure it is properly mounted to avoid harmful effect due to gravity or vibration.

Safety and Maintenance

- a) Make sure sufficient clearance between installed fuses. Install insulation if necessary.
This is to avoid possible inter-phase short circuit while replacing fuse.
- b) Periodic maintenance per electric equipment. Remove oxidation, dusts on contacting part.
- c) It is compulsory to replace all mechanically damaged fuses.
- d) Unless permissive (fused load-switch), do not replace fuses while energized.
- e) While servicing, fuse will not generate gas, dust, noise or others that may harm the environment
- f) Metallic part of fuse can be recycled. Non-metal part can be crushed and treated as normal industry waste. It will not cause further pollution to the environment.