



RS306-01-T5Z&S5P 1250V High Speed Fuse

Specification

ZR/YC-0018-02 A5

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AC1250V(IEC)/DC1000V(UL) 32-400A**Content**

Basics	1
RS306-01-T5Z Specification	1
RS306-01-T5Z Outline Dimensions	1
RS306-01-S5P Specification	2
RS306-01-S5P Outline Dimensions	2
Characteristic Curves	3
Transport and Storage	4
Usage Conditions.....	4

AC1250V(IEC)/DC1000V(UL) 32-400A

Basics

- Conform to: UL248.13/IEC60269-4
- Rated Voltage: AC1250V(IEC)/DC1000V(UL)
- Utilization Category: aR
- Breaking Capacity: AC 100kA/DC 50kA (Time constant:10ms)
DC 150kA (Time constant≤4ms)
- Conform to IEC60269 /UL248
- RoHS Compliant, CE, UL Certified

• Rated Current: 32A~400A

Features in low I^2t , high current limitation, high breaking capacity. Suitable for rail transport, electric vehicles, ships and other industrial applications. Used for energy storage system, power system, conductor, and short - circuit overcurrent devices and equipment, as well as backup protection.

Note: All test data are measured in a DC environment with test parameters and connector in accordance with IEC 60269.

	Part Number	Size	Current t	I^2t (A ² s)		Loss (W)		Weight (g)	Min Package (pcs)	Max Package (pcs)	Mounting
				Prearc	Clear	$0.5I_n$	I_n				
1	RS306-01-T5Z-32A1250V	01	32	73	450	2	10	490× (1±10%)	30	30	Bolt M8 Torque 11N·m
2	RS306-01-T5Z-40A1250V		40	138	850	2.3	12				
3	RS306-01-T5Z-50A1250V		50	255	1580	2.7	14				
4	RS306-01-T5Z-63A1250V		63	435	2660	3.5	18				
5	RS306-01-T5Z-80A1250V		80	770	4730	4.2	22				
6	RS306-01-T5Z-100A1250V		100	1250	7620	5.4	28				
7	RS306-01-T5Z-125A1250V		125	2220	13600	6.3	33				
8	RS306-01-T5Z-160A1250V		160	4200	25600	7.6	40				
9	RS306-01-T5Z-200A1250V		200	6800	42000	9.5	50				
10	RS306-01-T5Z-250A1250V		250	12500	76500	11.5	60				
11	RS306-01-T5Z-315A1250V		315	25200	155000	13	68				
12	RS306-01-T5Z-350A1250V		350	35200	216000	14	73				
13	RS306-01-T5Z-400A1250V		400	50500	309000	15	82				

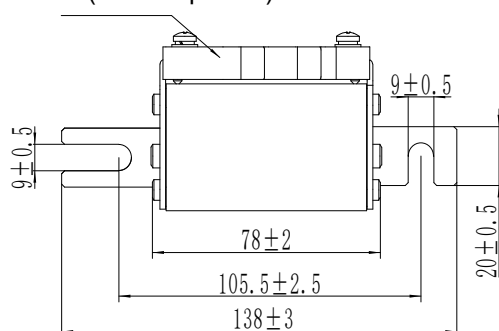
Note: 1. The nominal conditions for the above I^2t data are AC1390V, 50kA;

2. If visual indicator needed, add "-T" e.g. RS306-01-T5Z-400A1250V-T;

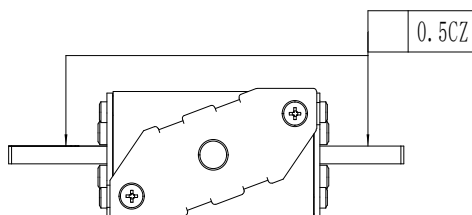
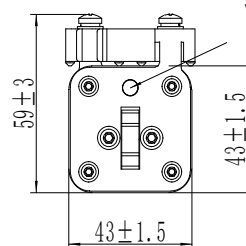
3. If no visual indicator needed, add "-N" e.g. RS306-01-T5Z-400A1250V-N (No visual indicator and base).

Outline Dimensions (mm)
Outline Mounting

Base (switch optional)



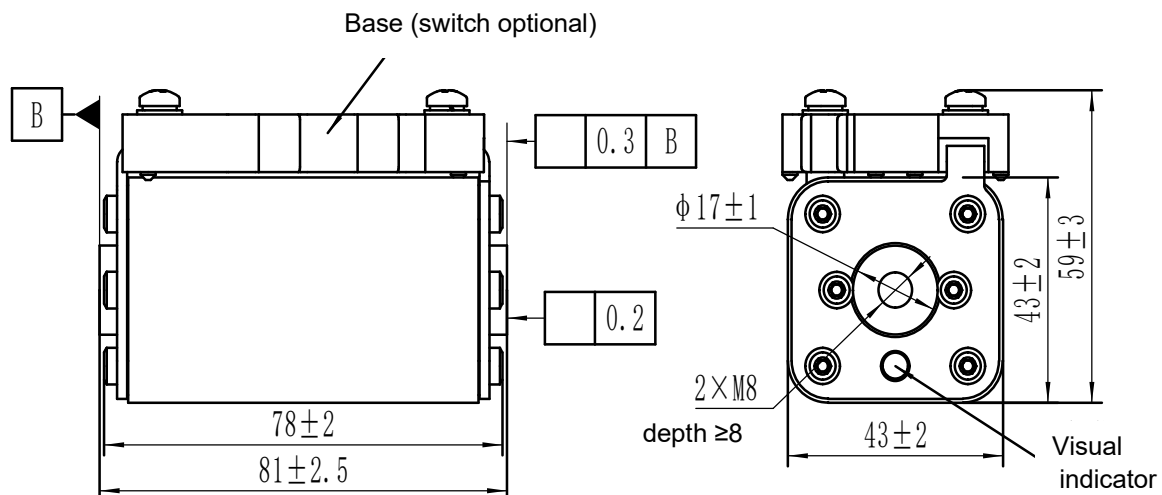
Visual indicator



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	Part Number	Size	Current (A)	I ² t (A ² s)		Loss (W)		Weight (g)	Min Package (pcs)	Max Package (pcs)	Mounting
				Prearc	Clear	0.5I _n	I _n				
1	RS306-01-S5P-32A1250V	01	32	73	450	2	10	465× (1±10%)	1	36	
2	RS306-01-S5P-40A1250V		40	138	850	2.3	12				
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- Note: 1. The nominal conditions for the above I²t data are AC1390V, 50kA;
 2. If visual indicator needed, add "-T" e.g. RS306-01-S5P-400A1250V-T;
 3. If no visual indicator needed, add "-N" e.g. RS306-01-S5P-400A1250V-N (No visual indicator and base).

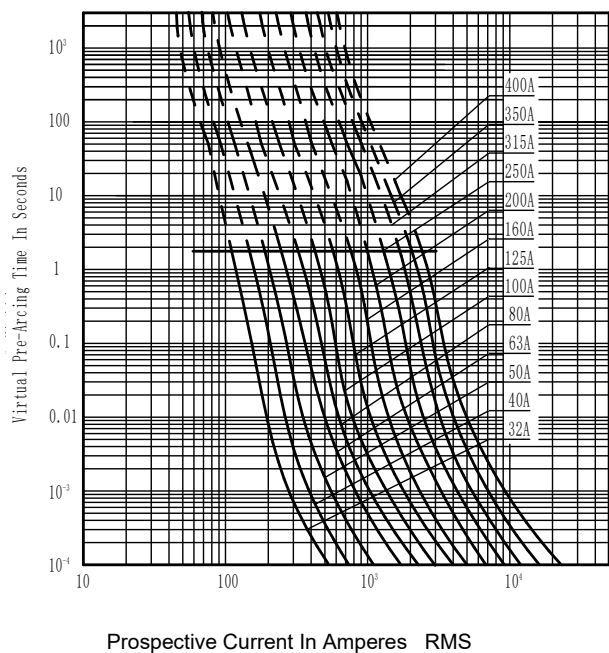
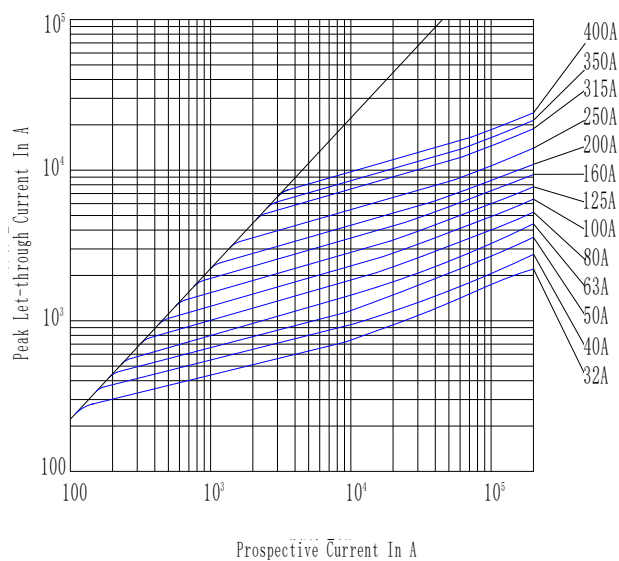
Outline Dimensions (mm)
Outline Mounting


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RS306-01-S5P Mounting

- While installing, the screw-in size of the stud should not exceed 9mm (Recommended 8mm);
- While tightening the nut, keep the stud from rotating;
- When the stud is screwed in, there is no recommended torque, and the depth of screw-in is 1mm below the thread.

Nut	Nut tightening torque
M8	10±1N.m

Characteristic Curves:
01-Time Current Characteristic Curves:

01-Cut-off Current Characteristic Curves:


- Note: 1. Curves: current tolerance $\pm 10\%$;
 2. Minimum protection range $\geq 8I_n$.

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Transport and Storage

Transport

Avoid rain/snow or mechanical damage during transportation.

Storage

Storage temp: $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$, 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 Condition and Corrections

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.

Long-term operation current is recommended to be $<80\%$ of rated current.

Ambient Temperature

Normal Condition

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

Tolerable Range

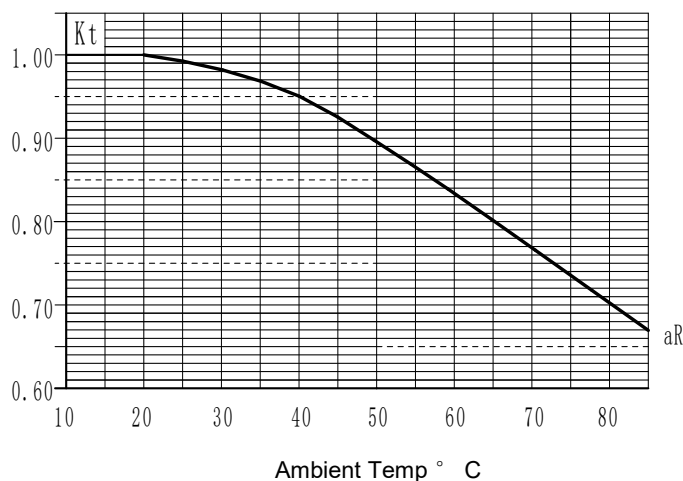
$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

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

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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%.

Vibration

Conform to rail transport vibration grade II.

The withstand to anti-vibration and mechanical shock conforms to requirements of GB/T 28046.3 for vehicles.

For severe vibration application, please consult our team for evaluation and testing.

Pollution Class

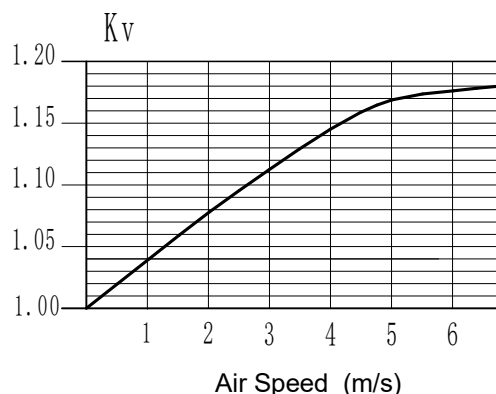
Grade 3 pollution withstand

Mounting 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.

Forced Air and Liquid Cooling

Current carrying capacity of fuse can be improved by implementing forced air or liquid cooling.



AC1250V(IEC)/DC1000V(UL) 32-400A**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 (e.g. 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.