



RS306

AC1250V/DC1000V High Speed Fuse

Low I^2t , Current Limiting, HRC

Specification

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AC1250V (IEC) /DC1000V (UL)

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AC1250V(IEC)/DC1000V(UL) 32-400A (T5Z)
Basics

- Rated Voltage: AC1250V/DC1000V
- Rated Current: 32~1400A ● Type: aR (UL)
- Interrupting Rating: AC 100kA /DC 50kA (L/R=10~15ms)
- AC Frequency: 45~62Hz
- Conform to IEC60269 /UL248, and GB/T 31465 for road vehicle safety and environment reliability.
- CE and RoHS Compliant, Size 01 (50A-400A、DC1000V)is UL certified

With super strong terminal connection, the design satisfies usage condition on road and rail conditions. Suitable for traction system, power converter, power storage, capacitor, charger etc. This fuse functions as short circuit and backup protection.

	Model	Size	Current A	I ² t (A ² s)		Loss W	Mounting
				Prearc	Melt		
1	RS306-01-T5Z-32A1250V	01	32	48	340	14	Mounting M8 Bolt Torque: 11N.m
2	RS306-01-T5Z-40A1250V		40	90	640	16	
3	RS306-01-T5Z-50A1250V		50	168	1180	18	
4	RS306-01-T5Z-63A1250V		63	285	2050	22	
5	RS306-01-T5Z-80A1250V		80	505	3560	26	
6	RS306-01-T5Z-100A1250V		100	815	5730	33	
7	RS306-01-T5Z-125A1250V		125	1450	10200	38	
8	RS306-01-T5Z-160A1250V		160	2690	18950	49	
9	RS306-01-T5Z-200A1250V		200	5090	35800	53	
10	RS306-01-T5Z-250A1250V		250	9000	63700	61	
11	RS306-01-T5Z-315A1250V		315	18200	128000	68	
12	RS306-01-T5Z-350A1250V		350	24200	171000	73	
13	RS306-01-T5Z-400A1250V		400	33000	232000	82	
14	RS306-1-T5Z-160A1250V-D	1	160	1850	15000	45	Mounting M10 Bolt Torque: 21N.m
15	RS306-1-T5Z-200A1250V-D		200	3600	29800	50	
16	RS306-1-T5Z-250A1250V-D		250	7700	61000	58	
17	RS306-1-T5Z-315A1250V-D		315	14800	118000	64	
18	RS306-1-T5Z-350A1250V-D		350	19000	160000	70	
19	RS306-1-T5Z-400A1250V-D		400	29000	230000	75	
20	RS306-1-T5Z-450A1250V-D		450	41800	330000	79	
21	RS306-1-T5Z-500A1250V-D		500	69000	430000	85	
22	RS306-1-T5Z-550A1250V-D		550	94800	585000	95	
23	RS306-1-T5Z-630A1100V-D		*630	128000	658000	100	
24	RS306-2-T5Z-250A1250V-D	2	250	6400	51000	63	Mounting M10 Bolt Torque: 21N.m
25	RS306-2-T5Z-280A1250V-D		280	9300	74000	68	
26	RS306-2-T5Z-315A1250V-D		315	12850	104500	73	
27	RS306-2-T5Z-350A1250V-D		350	16000	134500	78	
28	RS306-2-T5Z-400A1250V-D		400	22800	178500	83	
29	RS306-2-T5Z-450A1250V-D		450	33000	268500	88	
30	RS306-2-T5Z-500A1250V-D		500	47500	378500	93	
31	RS306-2-T5Z-550A1250V-D		550	61500	490000	98	
32	RS306-2-T5Z-630A1250V-D		630	110000	728000	108	
33	RS306-2-T5Z-700A1250V-D		700	158000	1048500	115	

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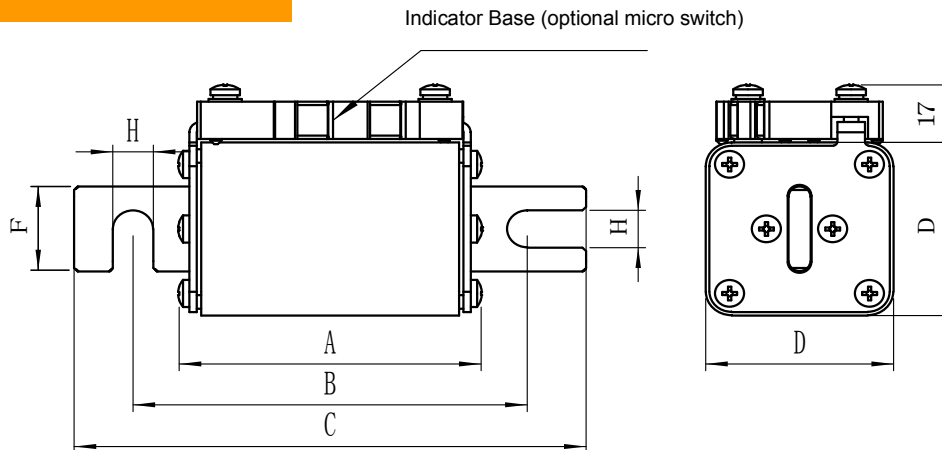
AC1250V(IEC)/DC1000V(UL) 32A-1400A (T5Z)


	Model	Size	Current A	I^2t (A ² s)		Loss W	Mounting
				Prearc	Melt		
34	RS306-2-T5Z-800A1250V-D	3	800	244800	1548000	119	Mounting M10 Bolt Torque: 21N.m
35	RS306-2-T5Z-900A1100V-D		*900	358000	1698000	124	
36	RS306-2-T5Z-1000A1100V-D		*1000	478000	2348000	134	
37	RS306-3-T5Z-315A1250V-D		315	9700	56000	83	
38	RS306-3-T5Z-350A1250V-D		350	14000	80000	88	
39	RS306-3-T5Z-400A1250V-D		400	20000	110000	94	
40	RS306-3-T5Z-450A1250V-D		450	31500	175000	98	
41	RS306-3-T5Z-500A1250V-D		500	40000	220000	103	
42	RS306-3-T5Z-550A1250V-D		550	55000	310000	108	
43	RS306-3-T5Z-630A1250V-D		630	84000	480000	114	
44	RS306-3-T5Z-700A1250V-D		700	118000	680000	118	
45	RS306-3-T5Z-800A1250V-D		800	210000	980000	123	
46	RS306-3-T5Z-900A1250V-D		900	308000	1400000	130	
47	RS306-3-T5Z-1000A1250V-D		1000	455000	2000000	134	
48	RS306-3-T5Z-1100A1250V-D		1100	580000	2650000	139	
49	RS306-3-T5Z-1250A1100V-D		*1250	805800	3948550	144	
50	RS306-3-T5Z-1400A1100V-D		*1400	1249800	5980000	149	

Note: * rated voltage reduced to AC1100V/DC800V.

Note: default with indicator base; Add-N for no indicator base, e.g. RS306-1-T5Z-200A1250V-DN

T-With visual indicator, e.g.: RS306-1-T5Z-200A1250V-DT

Dimension (mm)
Outline Size


Size	A±2	B±2.5	C±3	D±1.5	H±0.5	F±0.5
01	78	105.5	138	43	9	20
1	81	107	139	51	11	25
2	81	107	139	60	11	32
3	81	107	139	74	11	32

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AC1250V(IEC)/DC1000V(UL) 50A-1400A (S5P)


	Model	Size	Current A	I ² t (A ² s)		Loss W	Mounting
				Prearc	Melt		
1	RS306-01-S5P-50A1250V-D	01	50	140	1050	15	Mounting M8 Bolt Torque: 10N.m
2	RS306-01-S5P-63A1250V-D		63	220	1700	18	
3	RS306-01-S5P-80A1250V-D		80	420	3300	22	
4	RS306-01-S5P-100A1250V-D		100	760	5900	28	
5	RS306-01-S5P-125A1250V-D		125	1500	11400	32	
6	RS306-01-S5P-160A1250V-D		160	2600	20800	39	
7	RS306-01-S5P-200A1250V-D		200	5200	40000	44	
8	RS306-01-S5P-250A1250V-D		250	9200	72500	49	
9	RS306-01-S5P-315A1250V-D		315	18600	150000	58	
10	RS306-01-S5P-350A1250V-D		350	27100	209000	63	
11	RS306-01-S5P-400A1250V-D		400	52000	305000	70	
12	RS306-1-S5P-160A1250V-D	1	160	1850	15000	45	Mounting M8 Bolt Torque: 10N.m
13	RS306-1-S5P-200A1250V-D		200	3600	29800	50	
14	RS306-1-S5P-250A1250V-D		250	7700	61000	58	
15	RS306-1-S5P-315A1250V-D		315	14800	118000	64	
16	RS306-1-S5P-350A1250V-D		350	19000	160000	70	
17	RS306-1-S5P-400A1250V-D		400	29000	230000	75	
18	RS306-1-S5P-450A1250V-D		450	41800	330000	79	
19	RS306-1-S5P-500A1250V-D		500	69000	430000	85	
20	RS306-1-S5P-550A1250V-D		550	94800	585000	95	
21	RS306-1-S5P-630A1100V-D		*630	128000	658000	100	
22	RS306-2-S5P-250A1250V-D	2	250	6400	51000	63	Mounting M10 Bolt Torque: 15 N.m
23	RS306-2-S5P-280A1250V-D		280	9300	74000	68	
24	RS306-2-S5P-315A1250V-D		315	12850	104500	73	
25	RS306-2-S5P-350A1250V-D		350	16000	134500	78	
26	RS306-2-S5P-400A1250V-D		400	22800	178500	83	
27	RS306-2-S5P-450A1250V-D		450	33000	268500	88	
28	RS306-2-S5P-500A1250V-D		500	47500	378500	93	
29	RS306-2-S5P-550A1250V-D		550	61500	490000	98	
30	RS306-2-S5P-630A1250V-D		630	110000	728000	108	
31	RS306-2-S5P-700A1250V-D		700	158000	1048500	115	
32	RS306-2-S5P-800A1250V-D		800	244800	1548000	119	
33	RS306-2-J5P-900A1100V-D		*900	358000	1698000	124	
34	RS306-2-J5P-1000A1100V-D	*1000	478000	2348000	134		
35	RS306-3-S5P-315A1250V-D	3	315	9700	56000	83	Mounting M12 Bolt Torque: 26 N.m
36	RS306-3-S5P-350A1250V-D		350	14000	80000	88	
37	RS306-3-S5P-400A1250V-D		400	20000	110000	94	
38	RS306-3-S5P-450A1250V-D		450	31500	175000	98	
39	RS306-3-S5P-500A1250V-D		500	40000	220000	103	
40	RS306-3-S5P-550A1250V-D		550	55000	310000	108	
41	RS306-3-S5P-630A1250V-D		630	84000	480000	114	
42	RS306-3-S5P-700A1250V-D		700	118000	680000	118	
43	RS306-3-S5P-800A1250V-D		800	210000	980000	123	

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AC1250V(IEC)/DC1000V(UL) 50A-1400A (S5P)



Model	Size	Current A	I ² t (A ² s)		Loss W	Mounting
			Prearc	Melt		
44 RS306-3-S5P-900A1250V-D		900	308000	1400000	130	
45 RS306-3-S5P-1000A1250V-D		1000	455000	2000000	134	
46 RS306-3-S5P-1100A1250V-D		1100	580000	2650000	139	
47 RS306-3-J5P-1250A1100V-D		*1250	805800	3948550	144	
48 RS306-3-J5P-1400A1100V-D		*1400	1249800	5980000	149	

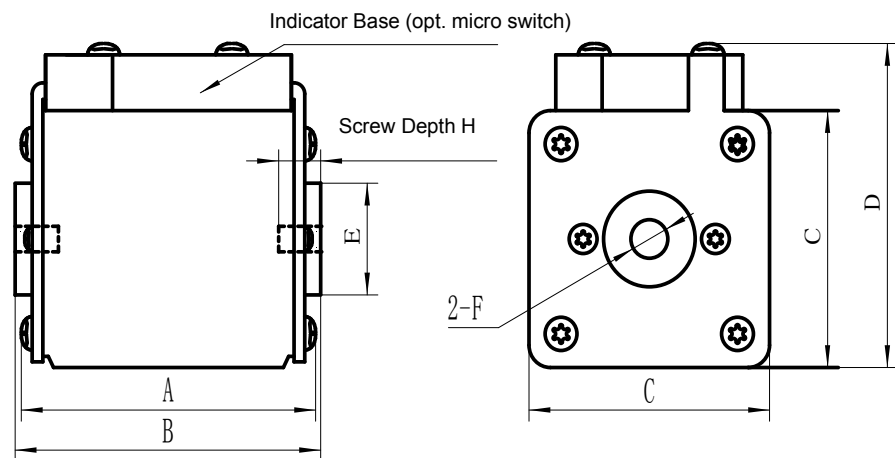
Note: * rated voltage reduced to AC1100V/DC800V.

Note: default with indicator base; Add-N for no indicator base, e.g. RS306-01-S5P-200A1250V-DN

T-With visual indicator, e.g.: RS306-01-S5P-200A1250V-DT

Dimension (mm)

Note: Size 2 900A-1000A
B 91
Size 3 1250A-1400A
B 91
H: depth



Size	A±2	B±2.5	C±2	D±3	E±1	F	H±1
01	78	81	43	59	φ17	M8	7
1	80	81	51	69	φ20	M8	9
2	80	81(91)	60	77	φ24.5	M10	11
3	80	82(91)	74	92	φ30	M12	12

Recommended Installation

Mounting	Description	Bolt Type	Nut Max Torque
	Bus connect: as illustrated, directed perpendicular to socket	M8×30 & M8×35	13.5
		M10×30 & M10×50	26
		M12×35 & M12×50	46
		M8×30 & M8×35	13.5
		M10×30 & M10×50	26
		M12×35 & M12×50	46

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AC1250V(IEC)/DC1000V(UL) 160A-1400A (Q5Z)


	Model	Size	Current A	I ² t (A ² s)		Loss W	Mounting
				Prearc	Melt		
1	RS306-1-Q5Z-160A1250V-D	1	160	1850	15000	45	Mounting M10 Bolt Torque: 21 N.m
2	RS306-1-Q5Z-200A1250V-D		200	3600	29800	50	
3	RS306-1-Q5Z-250A1250V-D		250	7700	61000	58	
4	RS306-1-Q5Z-315A1250V-D		315	14800	118000	64	
5	RS306-1-Q5Z-350A1250V-D		350	19000	160000	70	
6	RS306-1-Q5Z-400A1250V-D		400	29000	230000	75	
7	RS306-1-Q5Z-450A1250V-D		450	41800	330000	79	
8	RS306-1-Q5Z-500A1250V-D		500	69000	430000	85	
9	RS306-1-Q5Z-550A1250V-D		550	94800	585000	95	
10	RS306-1-Q5Z-630A1100V-D		*630	128000	658000	100	
11	RS306-2-Q5Z-250A1250V-D	2	250	6400	51000	63	Mounting M12 Bolt Torque: 38 N.m
12	RS306-2-Q5Z-280A1250V-D		280	9300	74000	68	
13	RS306-2-Q5Z-315A1250V-D		315	12850	104500	73	
14	RS306-2-Q5Z-350A1250V-D		350	16000	134500	78	
15	RS306-2-Q5Z-400A1250V-D		400	22800	178500	83	
16	RS306-2-Q5Z-450A1250V-D		450	33000	268500	88	
17	RS306-2-Q5Z-500A1250V-D		500	47500	378500	93	
18	RS306-2-Q5Z-550A1250V-D		550	61500	490000	98	
19	RS306-2-Q5Z-630A1250V-D		630	110000	728000	108	
20	RS306-2-Q5Z-700A1250V-D		700	158000	1048500	115	
21	RS306-2-Q5Z-800A1250V-D		800	244800	1548000	119	
22	RS306-2-Q5Z-900A1100V-D		*900	358000	1698000	124	
23	RS306-2-Q5Z-1000A1100V-D	*1000	478000	2348000	134		
24	RS306-3-Q5Z-315A1250V-D	3	315	9700	56000	83	Mounting M12 Bolt Torque: 38 N.m
25	RS306-3-Q5Z-350A1250V-D		350	14000	80000	88	
26	RS306-3-Q5Z-400A1250V-D		400	20000	110000	94	
27	RS306-3-Q5Z-450A1250V-D		450	31500	175000	98	
28	RS306-3-Q5Z-500A1250V-D		500	40000	220000	103	
29	RS306-3-Q5Z-550A1250V-D		550	55000	310000	108	
30	RS306-3-Q5Z-630A1250V-D		630	84000	480000	114	
31	RS306-3-Q5Z-700A1250V-D		700	118000	680000	118	
32	RS306-3-Q5Z-800A1250V-D		800	210000	980000	123	
33	RS306-3-Q5Z-900A1250V-D		900	308000	1400000	130	
34	RS306-3-Q5Z-1000A1250V-D		1000	455000	2000000	134	
35	RS306-3-Q5Z-1100A1250V-D		1100	580000	2650000	139	
36	RS306-3-Q5Z-1250A1100V-D		*1250	805800	3948550	144	
37	RS306-3-Q5Z-1400A1100V-D		*1400	1249800	5980000	149	

Note: * rated voltage reduced to AC1100V/DC800V.

Note: default with indicator base; Add-N for no indicator base, e.g. RS306-1-Q5Z-200A1250V-DN

T-With visual indicator, e.g.: RS306-1-Q5Z-200A1250V-DT

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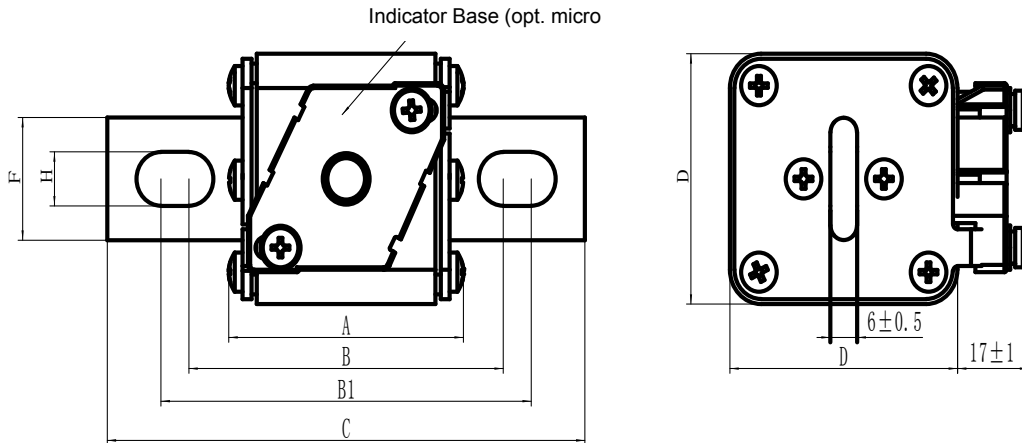
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AC1250V (IEC) /DC1000V(UL) 160A-1400A (Q5Z)



Dimension (mm)

Outline Dimension



Size	A±2	B±2	B1±2	C±2.5	D±2	H±0.5	F±0.5
1	80	101	139	165	51	11	25
2	80	105	140	165	60	14	32
3	80	105	140	166	74	16	38

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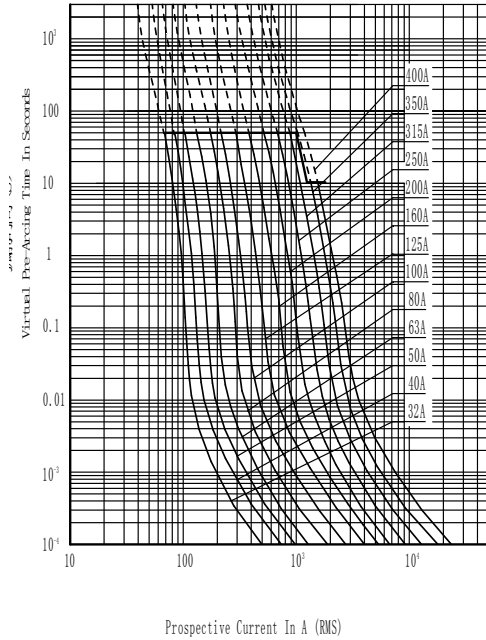
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AC1250V(IEC)/DC1000V(UL)

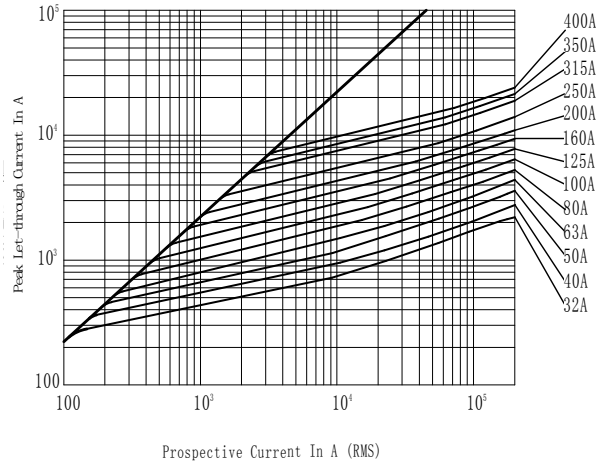


Characteristic Curves

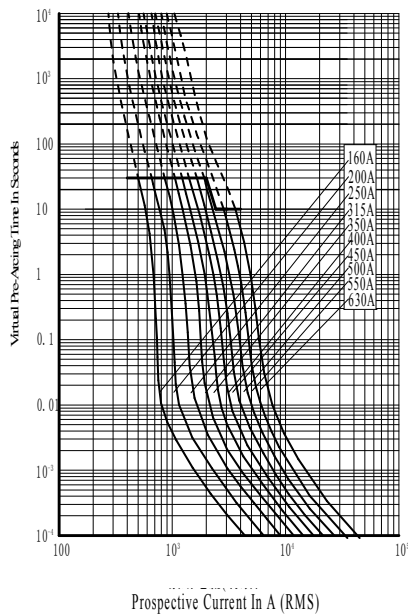
Size 01 Time Current



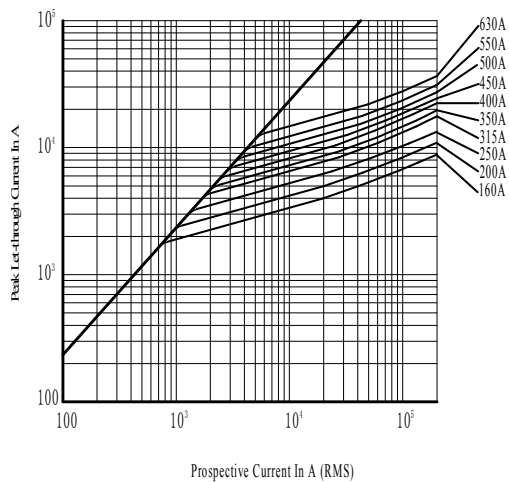
Size 01 Peak Let Thru



Size 1 Time Current



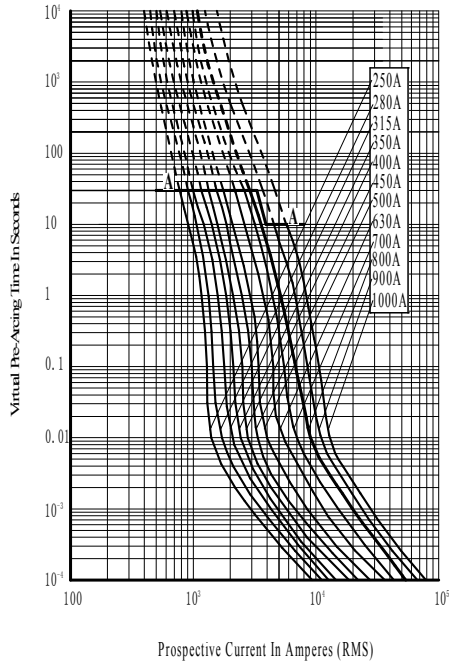
Size 1 Peak Let Thru



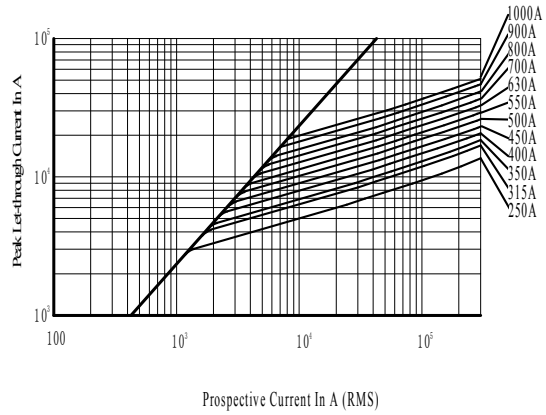
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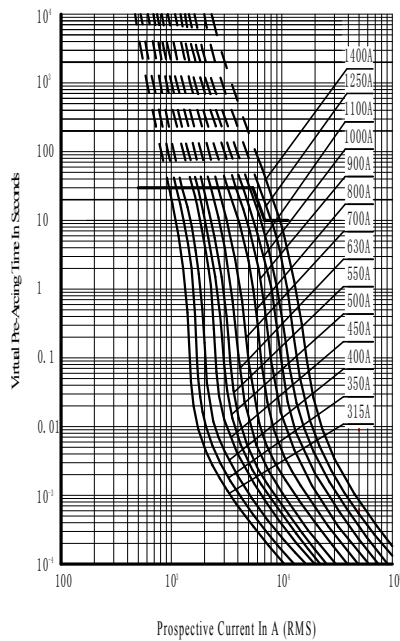
Size 2 Time Current



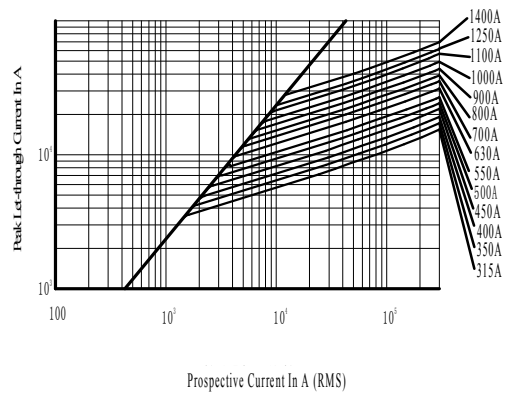
Size 2 Peak Let Thru



Size 3 Time Current



Size 3 Peak Let Thru



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AC1250V(IEC)/DC1000V(UL)

Micro Switch

Model	Voltage	Current	Min Volt	Min Current
WDK-Y (default)	250V	5A	10V	10mA
WDK-J(specified)	125V	0.1A	10V	1mA

Transport and Storage
Transport

Avoid rain/snow or mechanical damage during transportation

Storage

Storage temp: -40 °C ~ 120°C. Maximum 70% RH at 40°C;
 Maximum 80% RH at 30°C; Maximum 90% RH at 20°C;
 Package storage : -40°C ~ 70°C, max 90% RH, no dewing

Usage Condition
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.

Long term operation current is recommended to be **maximum 80% of rated current**.

Ambient Temp

Normal Condition

-5°C ~ 40°C

Tolerable Range

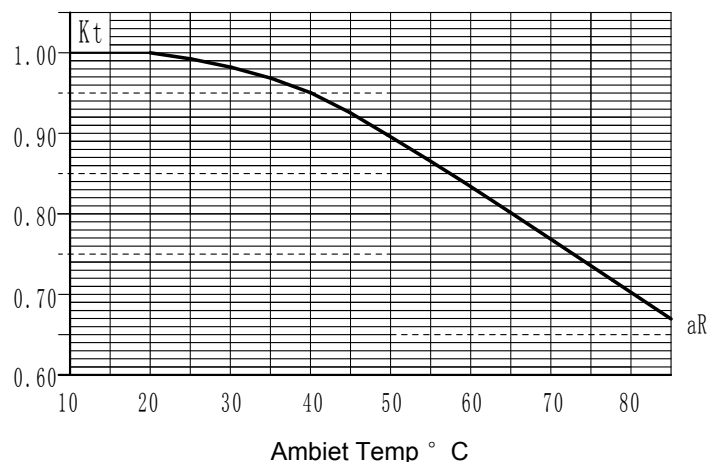
-40°C ~ 85°C

Ambient temperature correction: operating below -5°C, resulting longer pre-arc time under small overcurrent and slightly increased rated current. In this case, often there is no need to enlarge rated current

If above 40°C, rated current is corrected as per factor -Kt

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

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


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AC1250V(IEC)/DC1000V(UL)**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 any 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. At 2000-4500m, insulation drop by 12-15% for every 1000m. 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 Condition

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 and Seismic

This family of fuses has superior vibration, shock performance. Able to withstand over 10g acceleration.

Conform to rail transport vibration grade II

This family of fuses satisfy vehicle usage condition

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

Pollution Class

Class 3 pollution withstand

Mounting Condition

Normal Condition

- a) Installed in open air without any ventilation.
No heat source within 1m except for conducting wires.
- 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

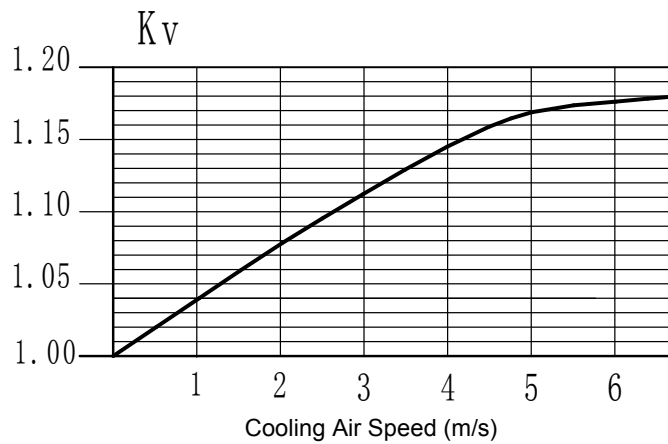
Forced Air Cooling

Heat dissipation can be improved by adopting forced air cooling. In this case rated current may be increased. For correction factor -kv please see relationship curve in next page.

Low I^2t , Current Limiting, HRC

Please visit www.sinofuse.com for latest product information

AC1250V(IEC)/DC1000V(UL)



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.

Low I^2t , Current Limiting, HRC

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