Photovoltaic Fuses

R10A SERIES

10x38mm Photovoltaic Fuses

PV 1000 1~32A 1000Vdc

Class of Operation 保护特性：gPV

Rating 电气参数

- Amps: 1~32A
- Volts: 1000Vdc

Breaking Capacity 分断能力

- 30kA @1000 dc

Standards / Approvals 标准及认证

- Designed to: UL248-19/IEC60269-6 GB/T13539-6
- REACH declaration available upon request
- CE
- RoHS compliant

Features & benefits 产品特性

- Compact design
- Low power loss
- Excellent DC performance
- Low arc voltage and low energy let-through (I2t)

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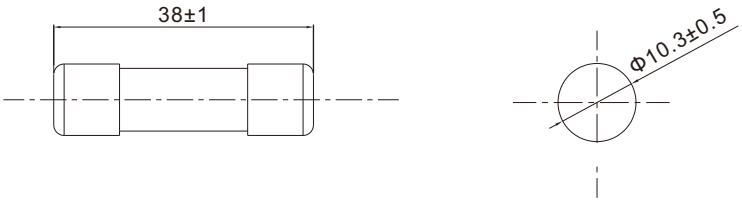
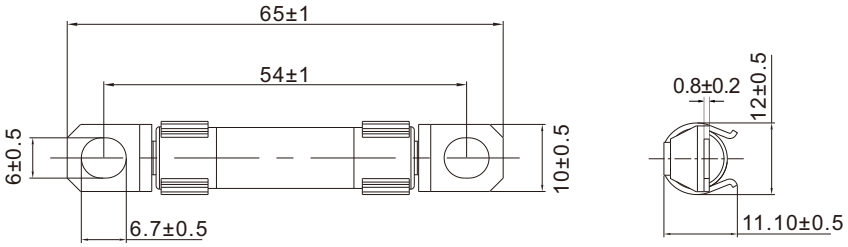
Dimensions尺寸 (Unit: mm)

R10A-A



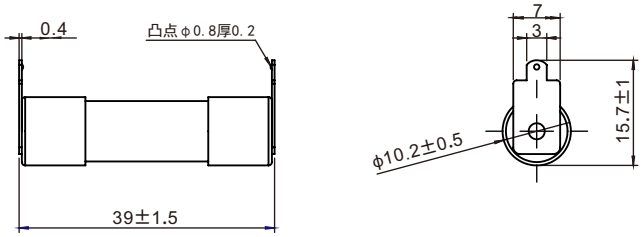
R10A-AP



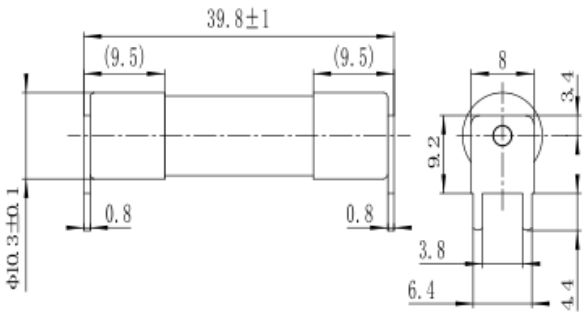
Note:
1. Fuse clip: Brass with Tin plating.
2. The clips were soldered on the fuse cap with lead-free solder.

注意:
1. 保险丝夹头：黄铜镀锡
2. 夹头用无铅焊料焊接

R10A-AH



R10A-AM



R10A SERIES PV 1000 1~32A 1000Vdc

Electrical Characteristics 电气特性

Serial number 序号	Part Number 料号	Rated Current 额定电流 (A)	Energy Integrals I^2t		Watts Loss 功耗 (W)		Use bolts 使用螺栓	Installation torque 安装扭矩
			Pre-Arcing 弧前	Clearing at 1000V 熔断	0.8In	1In		
1	R10A.1A	1	0.15	0.4	0.6	1.0	-	-
2	R10A.2A	2	1.3	3.4	0.7	1.1	-	-
3	R10A.3A	3	4	12	0.8	1.3	-	-
4	R10A.3.5A	3.5	6.5	20	0.9	1.4	-	-
5	R10A.4A	4	10	28	1.1	1.4	-	-
6	R10A.5A	5	19	50	1.1	1.4	-	-
7	R10A.6A	6	28	85	1.2	1.8	-	-
8	R10A.8A	8	32	93	1.2	2.2	-	-
9	R10A.10A	10	57	100	1.3	2.3	-	-
10	R10A.12A	12	60	150	1.5	2.8	-	-
11	R10A.15A	15	149	230	1.8	3	-	-
12	R10A.16A	16	155	260	2.0	3.2	-	-
13	R10A.20A	20	230	360	2.5	3.8	-	-
14	R10A.25A	25	400	500	3.2	4	-	-
15	R10A.30A	30	550	780	3.3	4.5	-	-
16	R10A.32A	32	612	940	3.5	5.5	-	-

*:请咨询原厂

Serial number 序号	Part Number 料号	Rated Current 额定电流 (A)	Energy Integrals I^2t		Watts Loss 功耗 (W)		Use bolts 使用螺栓	Installation torque 安装扭矩
			Pre-Arcing 弧前	Clearing at 1000V 熔断	0.8In	1In		
1	R10A.1AP	1	0.15	0.4	0.6	1.0	M6	6.0±1.0（N.m）
2	R10A.2AP	2	1.3	3.4	0.7	1.1	M6	6.0±1.0（N.m）
3	R10A.3AP	3	4	12	0.8	1.3	M6	6.0±1.0（N.m）
4	R10A.3.5AP	3.5	6.5	20	0.9	1.4	M6	6.0±1.0（N.m）
5	R10A.4AP	4	10	28	1.1	1.4	M6	6.0±1.0（N.m）
6	R10A.5AP	5	19	50	1.1	1.4	M6	6.0±1.0（N.m）
7	R10A.6AP	6	28	85	1.2	1.8	M6	6.0±1.0（N.m）
8	R10A.8AP	8	32	93	1.2	2.2	M6	6.0±1.0（N.m）
9	R10A.10AP	10	57	100	1.3	2.3	M6	6.0±1.0（N.m）
10	R10A.12AP	12	60	150	1.5	2.8	M6	6.0±1.0（N.m）
11	R10A.15AP	15	149	230	1.8	3	M6	6.0±1.0（N.m）
12	R10A.16AP	16	155	260	2.0	3.2	M6	6.0±1.0（N.m）
13	R10A.20AP	20	230	360	2.5	3.8	M6	6.0±1.0（N.m）
14	R10A.25AP	25	400	500	3.2	4	M6	6.0±1.0（N.m）
15	R10A.30AP	30	550	780	3.3	4.5	M6	6.0±1.0（N.m）
16	R10A.32AP	32	612	940	3.5	5.5	M6	6.0±1.0（N.m）

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Serial number 序号	Part Number 料号	Rated Current 额定电流 (A)	Energy Integrals I^2t		Watts Loss 功耗 (W)		Use bolts 使用螺栓	Installation torque 安装扭矩
			Pre-Arcing 弧前	Clearing at 1000V 熔断	0.8In	1In		
1	R10A.1AH/M	1	0.15	0.4	0.6	1.0	-	-
2	R10A.2AH/M	2	1.3	3.4	0.7	1.1	-	-
3	R10A.3AH/M	3	4	12	0.8	1.3	-	-
4	R10A.3.5AH/M	3.5	6.5	20	0.9	1.4	-	-
5	R10A.4AH/M	4	10	28	1.1	1.4	-	-
6	R10A.5AH/M	5	19	50	1.1	1.4	-	-
7	R10A.6AH/M	6	28	85	1.2	1.8	-	-
8	R10A.8AH/M	8	32	93	1.2	2.2	-	-
9	R10A.10AH/M	10	57	100	1.3	2.3	-	-
10	R10A.12AH/M	12	60	150	1.5	2.8	-	-
11	R10A.15AH/M	15	149	230	1.8	3	-	-
12	R10A.16AH/M	16	155	260	2.0	3.2	-	-
13	R10A.20AH/M	20	230	360	2.5	3.8	-	-
14	R10A.25AH/M	25	400	500	3.2	4	-	-
15	R10A.30AH/M	30	550	780	3.3	4.5	-	-
16	R10A.32AH/M	32	612	940	3.5	5.5	-	-

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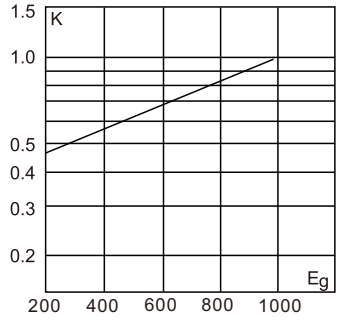
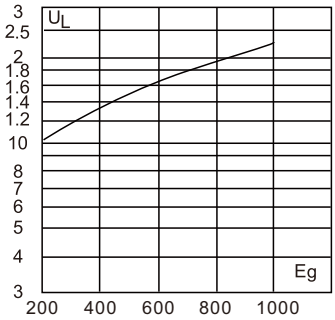
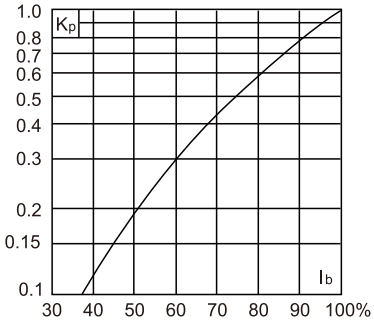
Total clearing I^2t



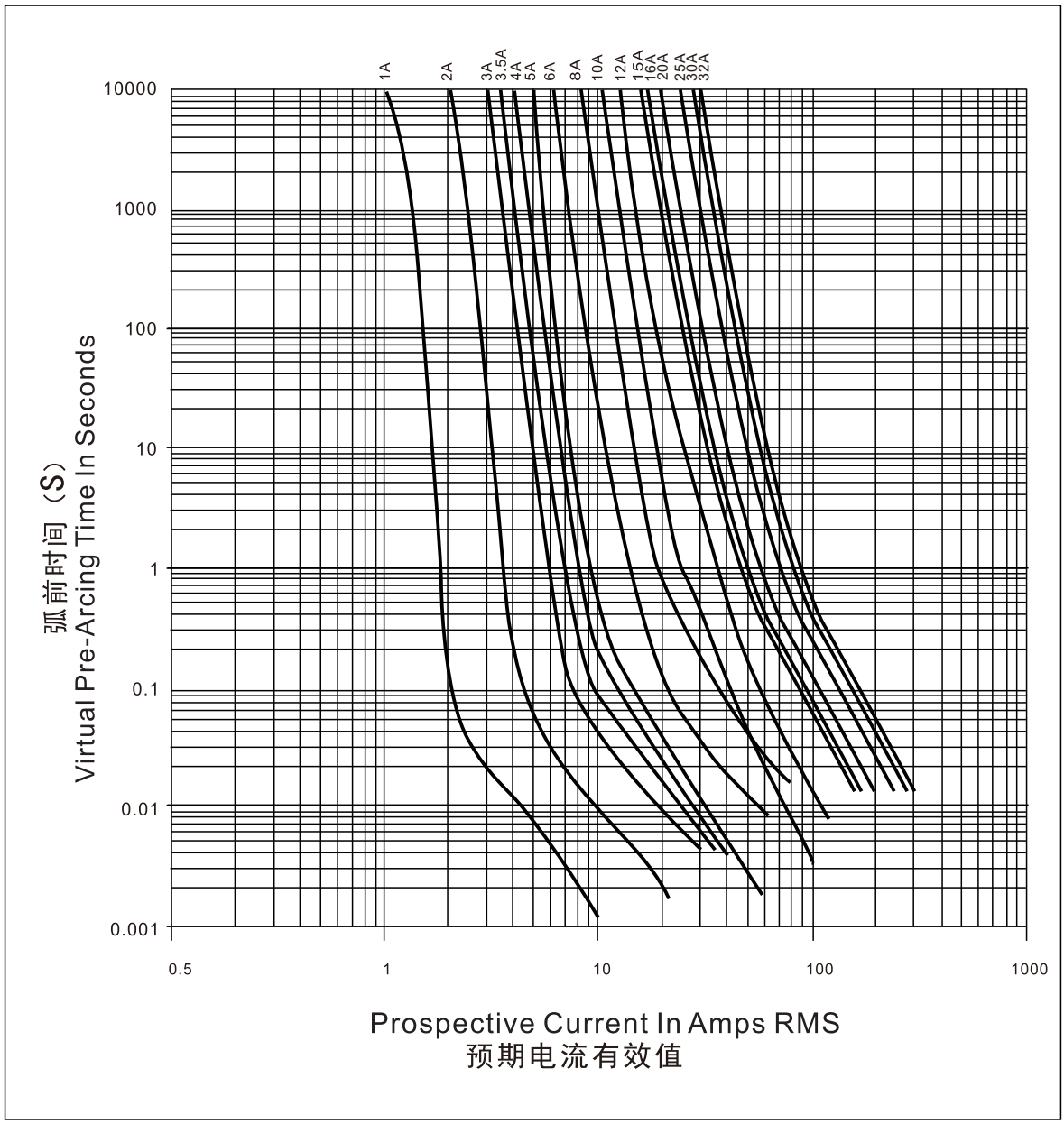
Arc Voltage



Power Losses



Time-Current Curve 时间-电流曲线



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Transportation and Storage

Transportation

- Avoid heavy weather attack and mechanical damage.

Storage conditions

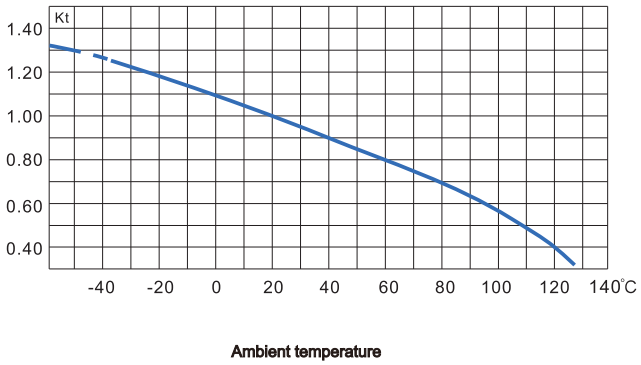
- Product storage T&H
  Temperature :-40° C~120° C(-40° F~248° F).
  Humidity: T=40° C RH≤70%, T≤30° C RH≤80%, T≤20° C RH≤90%
- Package storage T&H
  Temperature :-40° C~80° C(-40° F~176° F)
  Humidity: RH≤90%, condensation free

Operating Conditions

Operating conditions and correction factors

- Fuses can perform regularly under the flowing conditions without corrections
- If over the regular operating conditions but still in allowable operating area, fuses may need corrections andextra consult. If the operating conditions is not matching the allowable area, please contact our company for more applicability tests and analysis
- Regular current flow should ≤ 75% of recommended rated current
- Operating temperature: -5° C~40° C（23° F~104° F）
- Allowable operating temperature:-40° C~125° C（-40° F~176° F）
- Temperature correction factors: when below -5° C（23° F）, low overload pre-arcing time will slightly extend, rated current will slightly increase.
- If operating above 40° C（104° F）, rated current need extra corrections, correction factors: -Kt

Note: Kt value has already considered the safety current allowance under regular operating scenarios.



Altitude

Operating conditions

- Altitude≤2500m

Allowable operating conditions

- 2000m-4500m
- 2000-4500m
- Altitude correction factors: high altitude will decrease the dielectric strength/ heat dissipation, and affect the pressure force.

a) Fuses' T-rise increase 0.1-0.5k from every 100m altitude increased.

b) Average environment temperature decrease 0.5k from every 100m altitude increased.

c) If operating in opening environment, ignore the altitude affect to rated current.

d) If operating in enclosed environment, and the environment temperature can still top 40° C（104° F）, then rated current should be derated. Derating fators:2%-5% from every 1000m altitude increase.

Note: In same series, highest rated current refers to the maximum derating factors,lowest rated current refers to the minimum derating factors.

- Dielectric strength affect by high altitude

a) Between 2000m-4500m altitude, dielectric strength will decrease 12%-15% from every 1000m. quote GB/T16935.1, orrecting from different dielectric gaps.

b) Fuses' dielectric distance are normally much longer then GB/T16935.1, unless specific mini-sizes, ignore the dielectric gaps.

c) Dielectric distance between fuses and other electronic structures or the ground differs from altitude heights.

Vibration and Shock Resistance

- High frequency vibration resistance: ≧20g
- High frequency vibration resistance can satisfied track transportation/ motor vehicles.
- Intense vibration and shocking conditions needs more tests.

Maintenance and Safety Instructions

- To use insulating board if needed for preventing shorting out.
- Maintain facilities regularly, Dusting/Antioxidation/etc.
- Replacing fuses if damaging facilities.
- DO NOT change fuses while loading unless MUST.