

Specifications 技术参数

Ratings & Features Applications 电气参数/功能应用领域:

- ◇ Volts 电压: 1000Vdc;
- ◇ Amps 电流: 10A-35A;
- ◇ Breaking Capacity 分断能力;
Max BC 30kA 1000Vdc;
Min BC 135% I_n;
- ◇ Time Constant: ≤2±0.5 ms;
时间常数: ≤2±0.5 ms;
- ◇ It has a low I²t value;
低I²t值, 焦耳积分放通量小;
- ◇ Low voltage drop;
低功率损耗;
- ◇ Excellent DC Performance;
卓越的直流分断能力;
- ◇ Variety of mounting options for flexibility;
安装灵活多样式;
- ◇ Capable of interrupting low over currents associated with faulted PV strings;
能够中断于故障关联的低过电流;

Standards / Approvals 认证/标准:

- ◇ Refer To UL-248-19/IEC 60269-1/6; 性能参考UL-248-19/IEC 60269-1/6;
- ◇ Reach Declaration Available Upon Request; 可根据要求提供REACH声明;
- ◇ RoHS Compliant. 符合RoHS。

Features & benefits 产品特性:

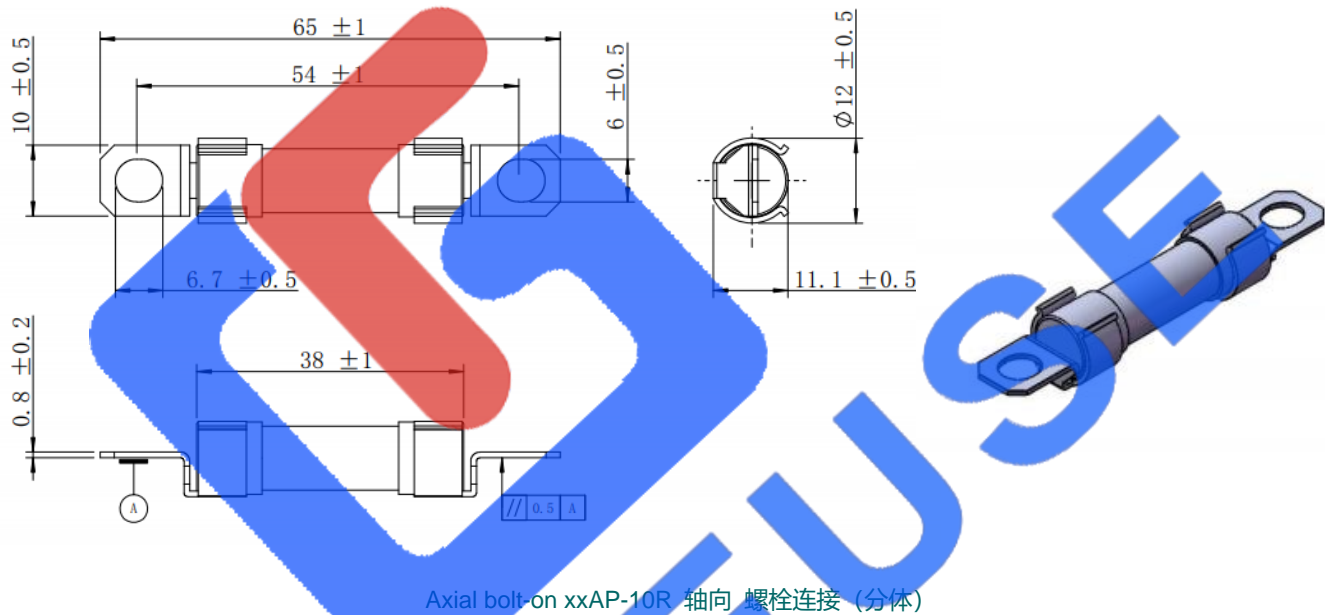
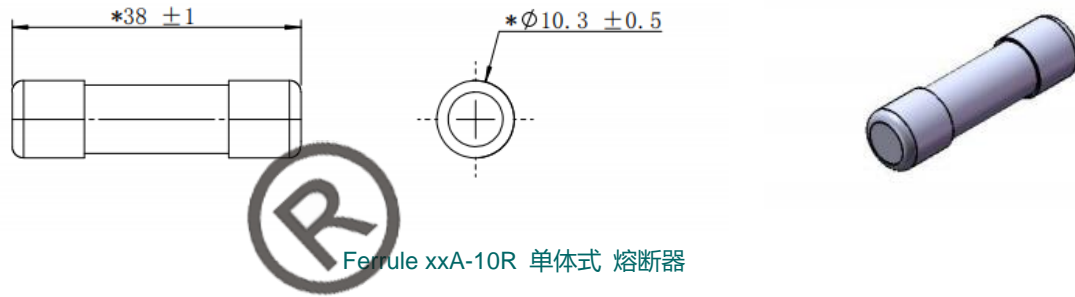
The GFPVT1000 solar fuse is designed to integrate into an in-line assembly within a wire harness. The fuse provides photovoltaic (PV) protection that meets UL 248-19 for photovoltaic applications. The Can be electrically insulated by either over molding or using heat-shrink. Same time Meets IEC 60269-6 electrical performance requirements.

GFPVT1000 太阳能 (光伏) 系列保险丝设计为集成或到线束内的组件中。熔断器提供符合UL 248-19光伏应用要求的光伏 (PV) 保护。可以通过二次成型或使用热缩进行电气绝缘。同时满足IEC 60269-6电气性能要求。

Product Model 产品型号说明:

GF	PV	T	1000	:	20	A	:	10R
GF: Company Code								
PV: Photovoltaic								
F: Fiberglass		T: Ceramics						
Rated Voltage: 1000: 1000V								
Rated Current: 20: 20A								
x: Connect: A, AP, B, C, H								
Type Series Code: 10R								

Dimensions (mm) 尺寸



Standard recommended bolts 推荐使用螺栓	Installation torque 推荐螺栓扭矩
M5	4.5±1.0(N.m)

Product Characteristics 产品特性

Item	Test condition/Methods	Standard	Performance
Time/Current	100% of current rating	IEC 60269/UL248-19	No Fusing; 4 hours Min.
	113% of current rating *IEC	IEC 60269	60 Minutes Min.
	145% of current rating *IEC	IEC 60269	60 Minutes Max.
	105% of current rating *UL	UL-248.19	60 Minutes Min.
	135% of current rating *UL	UL-248.19	60 Minutes Max.
	200% of current rating	IEC 60269/UL248-19;1-30A IEC 60269/UL248-19;31-60A	4 Minutes Max. 6 Minutes Max.
Endurance Test	100% of rating current for 4 hours and testing Temperature rise at the last 5min.	IEC 60269-6 UL248-19	≤65K

◇ Loading 100% Rated Current (1.0In A) for flowing, and it's available to let current keep on flowing at least 4 hour without any melting.

Fuse Ratings 额定参数

Part No.	Fuse Amps	Average @30KA/1000Vdc		Power Loss (W)		Approvals
		A ² s Melting	A ² s Clearing	80%	100%	UL
GFPVT1000-10A-10R	10	210	1175	1.1	1.5	○ Pending
GFPVT1000-12A-10R	12	252	1405	1.3	1.7	○ Pending
GFPVT1000-15A-10R	15	315	1757	1.6	2.3	○ Pending
GFPVT1000-16A-10R	16	326	1780	1.6	2.3	○ Pending
GFPVT1000-20A-10R	20	420	2340	2.1	2.9	○ Pending
GFPVT1000-25A-10R	25	525	2929	2.7	3.5	○ Pending
GFPVT1000-30A-10R	30	630	3515	3.2	4.2	○ Pending
GFPVT1000-32A-10R	32	890	3995	4	5.3	○ Pending
GFPVT1000-35A-10R	35	975	4545	4.6	6.2	○ Pending

Ferrule xxA-10R

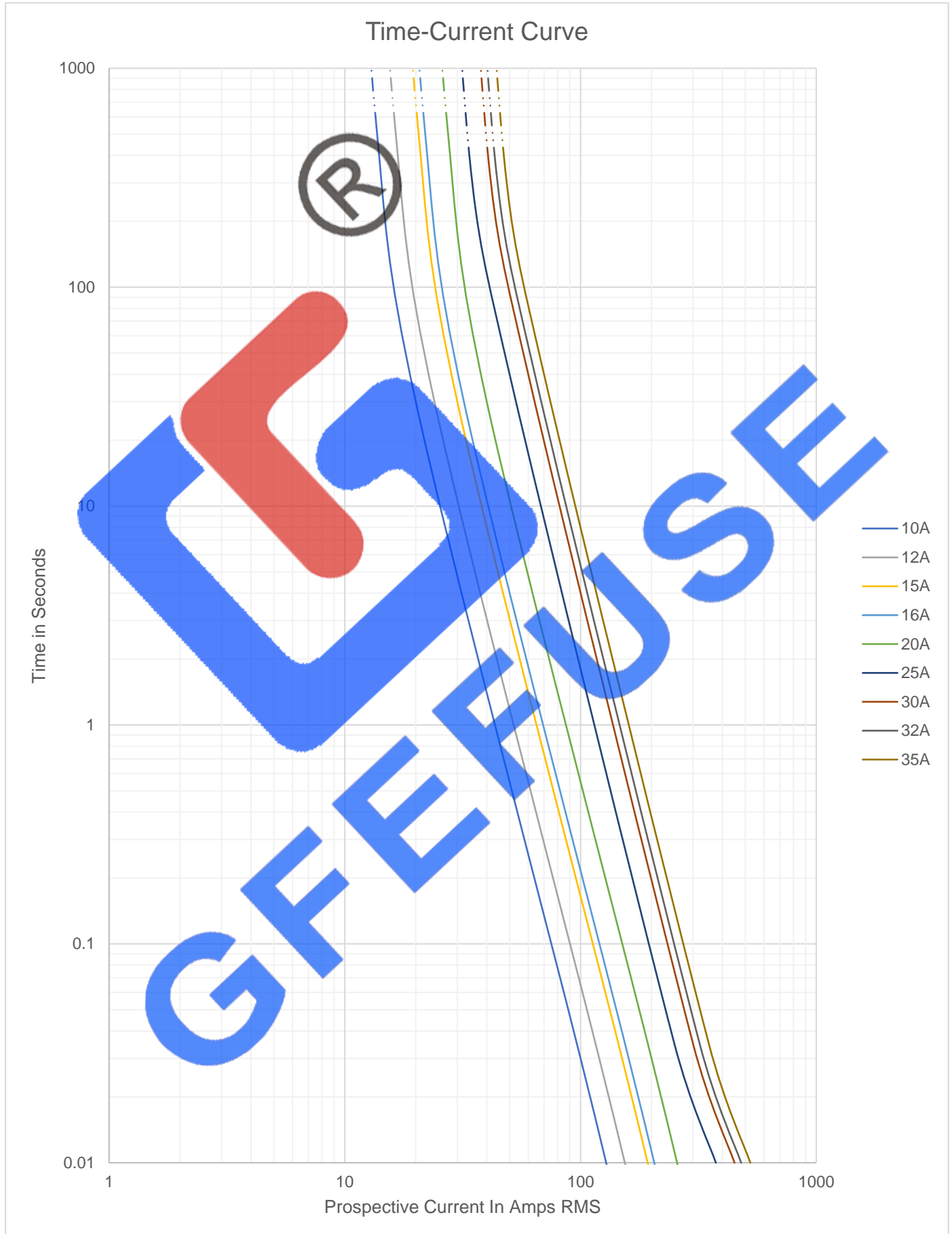
◇ DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C ;

Part No.	Fuse Amps	Average @30KA/1000Vdc		Power Loss (W)		Approvals
		A ² s Melting	A ² s Clearing	80%	100%	UL
GFPVT1000-10AP-10R	10	210	1175	1.1	1.5	○ Pending
GFPVT1000-12AP-10R	12	252	1405	1.3	1.7	○ Pending
GFPVT1000-15AP-10R	15	315	1757	1.6	2.3	○ Pending
GFPVT1000-16AP-10R	16	326	1780	1.6	2.3	○ Pending
GFPVT1000-20AP-10R	20	420	2340	2.1	2.9	○ Pending
GFPVT1000-25AP-10R	25	525	2929	2.7	3.5	○ Pending
GFPVT1000-30AP-10R	30	630	3515	3.2	4.2	○ Pending
GFPVT1000-32AP-10R	32	890	3995	4	5.3	○ Pending
GFPVT1000-35AP-10R	35	975	4545	4.6	6.2	○ Pending

Axial bolt-on xxAP-10R

◇ DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C ;

Time-Current Curve 时间电流曲线图



Operating conditions 使用条件

- ◇ Product storage Temperature: $-40^{\circ}\text{C}\sim 120^{\circ}\text{C}$ ($-40^{\circ}\text{F}\sim 248^{\circ}\text{F}$);
产品存储温度: $-40^{\circ}\text{C}\sim 120^{\circ}\text{C}$, 在 40°C 时相对湿度不大于70%;
- ◇ Product storage Humidity: $T=40^{\circ}\text{C}$ RH \leq 70%, $T\leq 30^{\circ}\text{C}$ RH \leq 80%, $T\leq 20^{\circ}\text{C}$ RH \leq 90%;
在 30°C 以下, 产品相对湿度不大于80, 在 20°C 以下, 相对湿度不大于90%;
- ◇ Package storage Temperature: $-40^{\circ}\text{C}\sim 80^{\circ}\text{C}$ ($-40^{\circ}\text{F}\sim 176^{\circ}\text{F}$);
包装存储温度: $-40^{\circ}\text{C}\sim 80^{\circ}\text{C}$;
- ◇ Fuses can perform regularly under the flowing conditions without corrections;
熔断器在下述的正常使用条件下工作, 不需要额外的修正;
- ◇ Regular current flow should $\leq 75\%$ of recommended rated current;
推荐长期通流的电流值不大于额定电流的75%;
- ◇ High frequency vibration resistance: $\geq 20\text{g}$;
本系列熔断器有良好的抗振动和冲击的耐受能力, 可承受20g以上的加速度;
- ◇ Intense vibration and shocking conditions need more tests.
振动较为强烈的应用环境, 可商议进行对应测试, 一般要经过较长的周期。
- ◇ Replacing fuses if damaging facilities;
对有机损伤的熔断器必须进行更换;
- ◇ DO NOT change fuses while loading unless MUST.
除非使用要求允许, 如熔断器式负荷开关, 否则请勿带负载更换熔断器。
- ◇ Operating temperature: $-5^{\circ}\text{C}\sim 40^{\circ}\text{C}$ ($23^{\circ}\text{F}\sim 104^{\circ}\text{F}$);
正常使用条件: $-5^{\circ}\text{C}\sim 40^{\circ}\text{C}$;
- ◇ Allowable operating temperature: $-40^{\circ}\text{C}\sim 125^{\circ}\text{C}$ ($-40^{\circ}\text{F}\sim 257^{\circ}\text{F}$);
允许使用条件: $-40^{\circ}\text{C}\sim 125^{\circ}\text{C}$;
- ◇ Temperature correction factors: when below -5°C (23°F), low overload (L.O.) pre-arcing time will slightly extend, rated current will slightly increase;
周围空气温度变化的参数修正: 在低于 -5°C 下工作, 熔断器的低倍过载电流的弧前时间略有延长, 额定电流略有增大, 但是除非 -5°C 以上不是工作范围, 一般不参考增加熔断器额定电流;
- ◇ If operating above 40°C (104°F), rated current need extra corrections, factors: $-Kt$ ①.
熔断器在 40°C 以上工作, 额定电流需要额外的修正, 修正系数为 $-Kt$ 。

*Note①: Kt value has already considered the safety current allowance under regular operating scenarios.

*注1: Kt 的取值已考虑熔断器在正常工作条件下的额定电流安全余量的影响。

