

Specifications 技术参数

10x85mm Cylindrical Fuses

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

Photovoltaic Fuses

- ◇ Volts 电压: 1500Vdc;
- ◇ Amps 电流: 1-32A;
- ◇ Breaking Capacity 分断;
 - Max BC 30kA 1500Vdc;
 - Min BC 135% In;
- ◇ Time Constant: $\leq 2 \pm 0.5$ ms;
 - 时间常数: $\leq 2 \pm 0.5$ ms;
- ◇ It has a low I^2t value;
 - 低 I^2t 值,焦耳积分放通量小;
- ◇ Strong current limiting capability;
 - 强限流能力;
- ◇ Low voltage drop;
 - 低功率损耗;
- ◇ Excellent DC Performance;
 - 卓越的直流分断能力;
- ◇ Capable of interrupting low over currents associated with faulted PV strings;
 - 能够中断与故障光伏串相关的低过电流;



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:

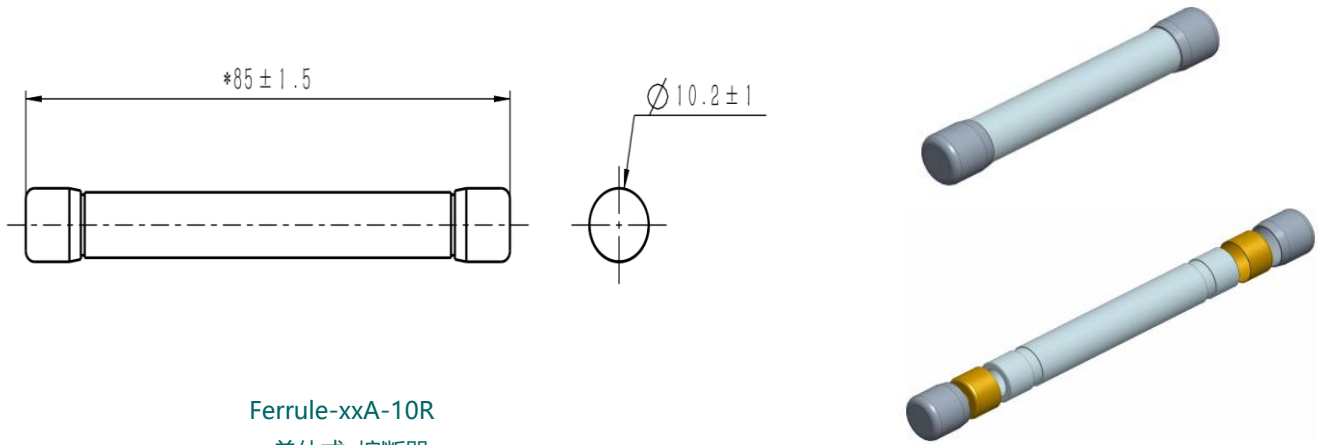
The HCPVF1500 solar fuse is designed to integrate into an in-line assembly within a wire harness. The fuse provides photovoltaic (PV) protection that meets UL 248-19 for photovoltaic applications. The Can be electrically insulated by either overmolding or using heat-shrink. Same time Meets IEC 60269-6 electrical performance requirements.

HCPVF1500太阳能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:

	HC	PV	F	1500	:	20	A	:	10R
HC:	Company Code								
PV:	Photovoltaic								
HV:	High Speed								
F:	Fiberglass								
T:	Ceramics								
Rated Voltage:	1500: 1500V								
Rated Current:	20: 20A								
x: Connect:	A, AP								
Type Series Code:	10R								

Dimensions (mm) 尺寸



Ferrule-xxA-10R
单体式 熔断器

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	4 Minutes Max.
IEC 60269/UL248-19;31-60A		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

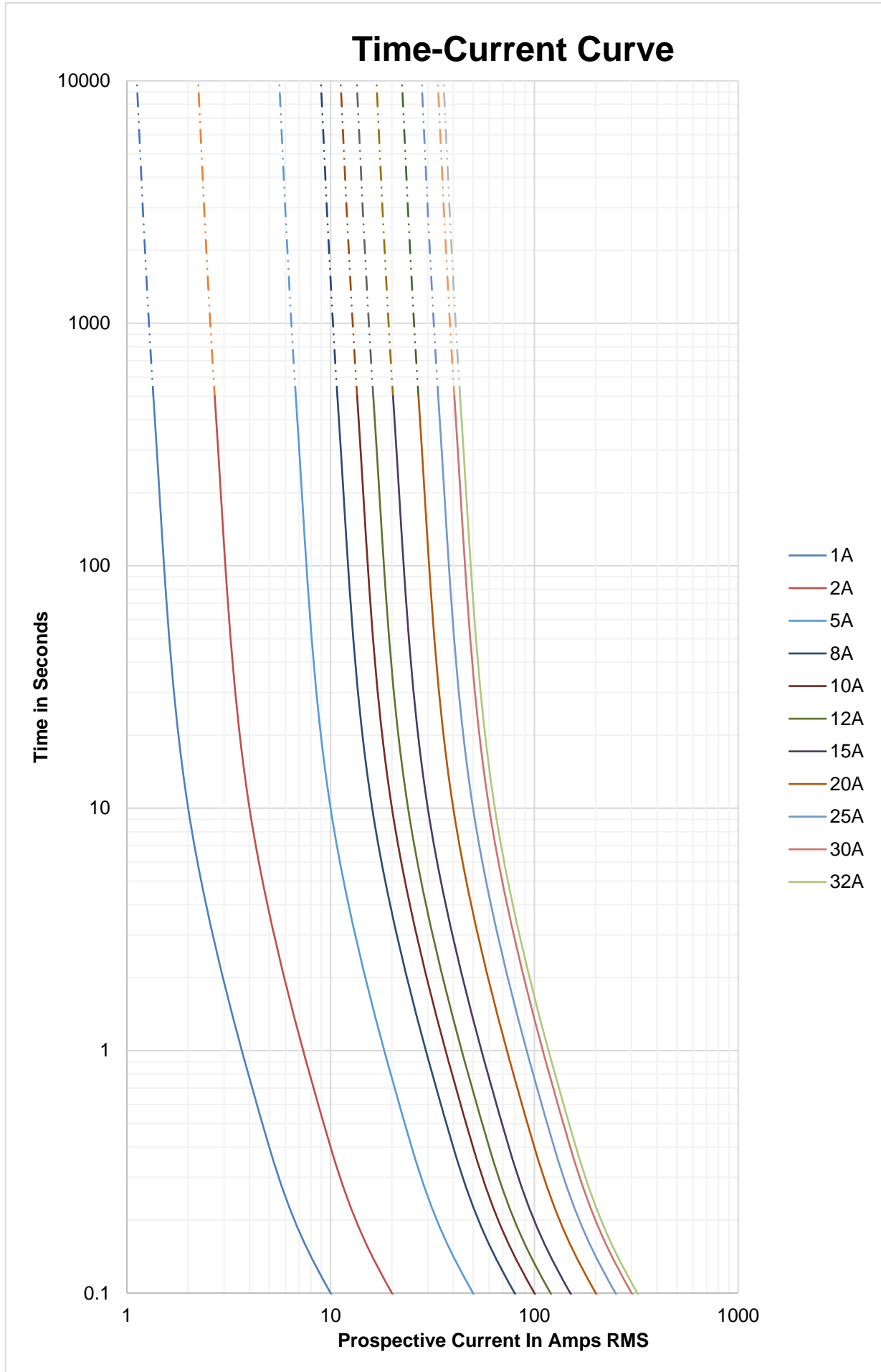
◇ Loading 100% Rated Current (1.0In A) for flowing, and it's available to let current keep on flowing at least 4 hour without any melting.

Fuse Ratings 额定参数

Part No.	Fuse Amps	Average @30KA/1500Vdc		Power Loss (W)		Approvals	
		A ² s Melting	A ² t Clearing	80%	100%	UL	TUV
HCPVF1500-1A-10R	1	60	129	0.8	1.7	○ Pending	○ Pending
HCPVF1500-2A-10R	2	119	258	1.4	2.3	○ Pending	○ Pending
HCPVF1500-5A-10R	5	299	644	2.9	3.7	○ Pending	○ Pending
HCPVF1500-8A-10R	8	478	1030	3.1	4.2	○ Pending	○ Pending
HCPVF1500-10A-10R	10	606	1290	2.9	3.7	○ Pending	○ Pending
HCPVF1500-12A-10R	12	728	1548	3.2	4.7	○ Pending	○ Pending
HCPVF1500-15A-10R	15	910	1935	2.9	4.7	○ Pending	○ Pending
HCPVF1500-20A-10R	20	728	1548	3.3	6.1	○ Pending	○ Pending
HCPVF1500-25A-10R	25	918	1969	3.5	6.3	○ Pending	○ Pending
HCPVF1500-30A-10R	30	1224	2625	3.8	7.2	○ Pending	○ Pending
HCPVF1500-32A-10R	32	1820	3308	4.7	7.4	○ Pending	○ Pending

◇ 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。

