

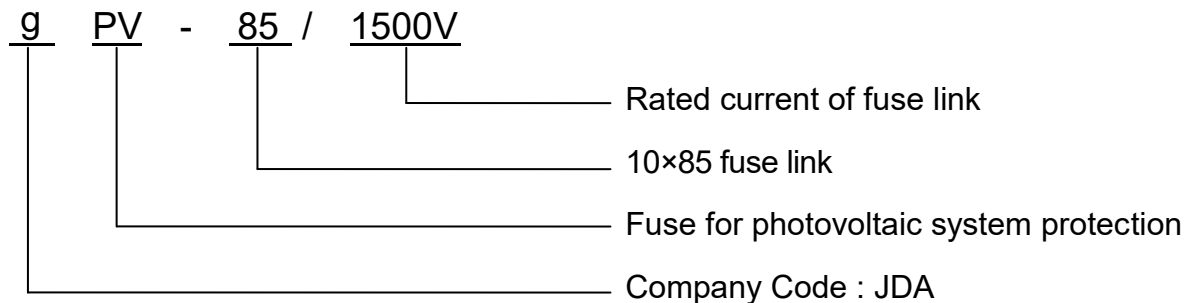


日燭科技有限公司
JD Auspice Co., Ltd

gPV-85 FUSE LINK SPECIFICATION 1500V



DC Fuse For Portecting Solar Photovoltaic System



1 · Application

This serie fuse is suitable for rated voltage to DC1500V, rated current to 32A. Be connected with photovoltaic panels and batteries in parallel, to protect Charging variable flow system from short circuit ; also protect photovoltaic power station 、confluence inverter commutation system and Short circuit fault breaking ; Meanwhile protect photovoltaic power generation systems surge current 、Short circuit fault overvoltage rapid breaking. Rated breaking capacity up to 50kA. Fuses conform to international electrical committee standard IEC60269.

2 · Normal operating conditions

2.1 Influence of rated current

The storage temperature of unopened products should between -50°C and 90°C

The ambient temperature should between -50°C and 90°C ;

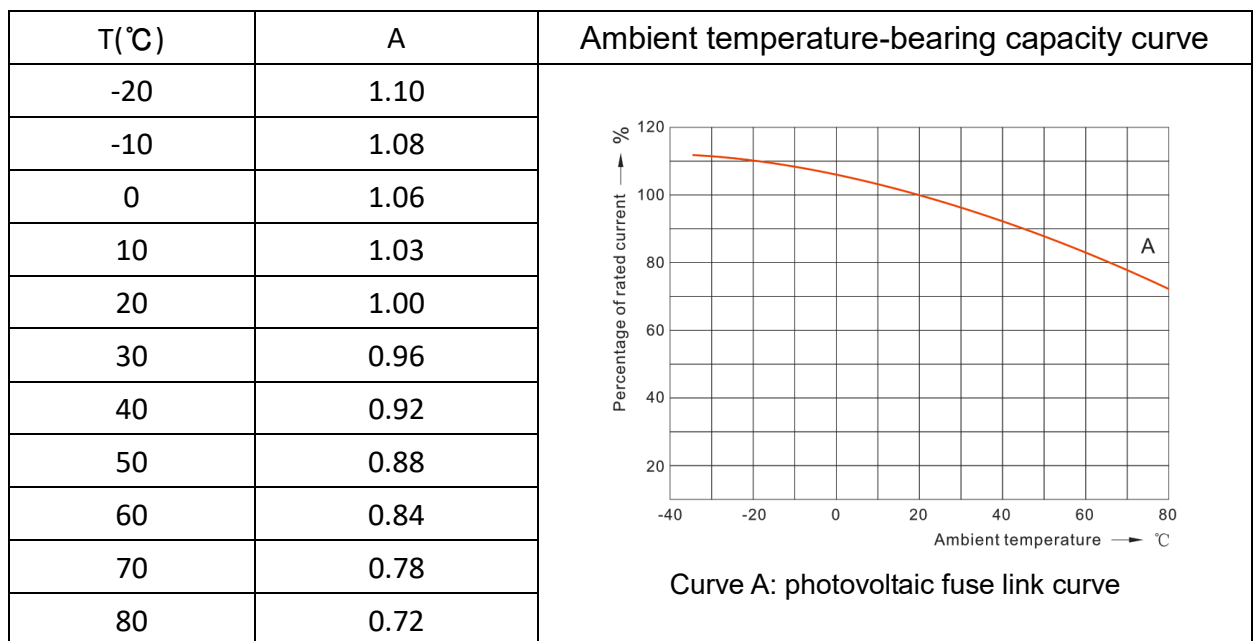
The installation site's altitude should not exceed 2000m(If you want to exceed 2000m, please indicate the requirements, we can design and develop according to clients' special requirements).

Installation altitude (m)	Percentage of current derating (A)	Insulation performance (V)
2000	100%	100%
3000	95%	90%
4000	90%	80%
5000	85%	70%

E.g : The rated current is 12A, and the Installation altitude is 5000m, the actual selection is $2 \times 85\% \approx 10A$

2.2 Influence of ambient temperature

The following figure shows a typical curve of the influence of ambient temperature on current carrying capacity :



E.g : In a certain use occasion, the ambient temperature is 20°C, and the rated current of ordinary (gG type) fuse-links is selected to be 63A. Now the above-mentioned fuse-links are used in a high temperature environment of 70°C, and the operating current must be additionally reduced. The graph Ambient temperature-bearing capacity curve A shows that the percentage of the rated value of operation at 70°C is 0.78, that is, the rated current value of the fuse-link should be reselected :

$$I'_N = \frac{63A}{0.78} = 80.77A$$

Select 80A according to the standard current level of the fuse

3. Operation category

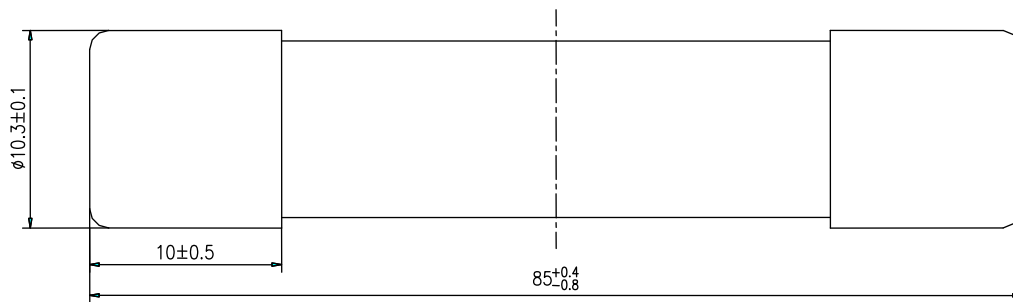
“gPV” means full range breaking capacity DC Fuse for portecting in solar photovoltaic system.

4 · Construction Feature

The variable cross-section fuse body made by pure silver strip which sealed in fuse tube made by high strength porcelain, there is full of high-purity quartz sand processed after chemistry and special processed chemical materials as arc-extinguishing medium. The two sides of the fuse spot welding to connect with caps firmly.

5. Principle Technical Parameter

Drawing 1



Fuse model	Rated voltage	Rated current (A)	Overall dimension (mm)		Wasted power
			Drawing NO.	D×L	
gPV-85-1500V	DC1500V	1、2、3、4、5、6、8、10、12、15、16、20、25、30、32	1	10×85	≤6.5 W
Fuse body contact material: coated with silver Fuse link : 50pcs/box , 1200pcs/ctn , 25kgs/ctn					

0.7In and 1In dissipative power table of fuse link

Serial number	Rated current (A)	Pre-arcing I ² t	Total I ² t	0.7In (W)	1In (W)
1	1	2.3	3.1	0.89	2.1
2	2	7.4	10	0.95	2.3
3	3	13	18	1.1	2.5
4	4	27	37	1.1	2.5
5	5	41	56	1.1	2.5
6	6	58	79	1.2	2.6
7	8	11	82	1.2	2.8
8	10	19	144	1.3	3.0
9	12	33	246	1.6	3.1
10	15	59	432	1.8	3.5
11	16	63	460	2.0	4.0
12	20	112	822	2.1	4.5
13	25	197	1440	2.3	4.6
14	30	304	2220	2.5	5.4
15	32	325	2370	2.6	6.2

6. Test method

Fusing time & Test current

“gPV” fuse body’s fusing time & test current

“gPV” fuse rated current A	Fusing time h	Test current	
		Inf	If
$I_n \leq 63$	1	1.13In	1.45In

7 · Fusing characteristic curve

Selection guide

1. Voltage selection

When selecting the rated voltage of the fuse-link, the VOC of the PV modules string used at the lowest temperature should be considered.

For example: at -25°C, the open circuit voltage rises to 1.2 times VOC STC, so the rated voltage of the fuse link should be $\geq 1.2V_{OC\ STC}$.

2. Current selection

When selecting the rated current of the fuse-link, the ISC at the ambient temperature and the cyclic load should be considered.

For example: at 45°C and the peak irradiance rate of 1 200Wm⁻², the rated current of the fuse link should be $\geq 1.4I_{SC}$ °

In the case of high ambient temperature or multiple fuses in the case, you can discuss with the manufacturer for derating.

JDA fuse retains the right to change the dimensions, specifications, materials or design of its products at any time with or without notice.

