Superior Protection for Solar Power Applications

New Cooper Bussmann® PV Fuse Protects Photovoltaic Systems up to 1000Vdc



The demand for alternative energy has led to another innovation from Cooper Bussmann, the industry leader in circuit protection. Developing sophisticated solar panel systems have accelerated the demand for high performance fuses. The short-circuit conditions associated with solar panels do not allow for sufficient current to open a standard fuse in a way that effectively isolates faulted photovoltaic (PV) strings. The new Cooper Bussmann® PV Fuse line provides a full range of protection that traditional fuses cannot.

Low Level Fault Protection

- PV Fuses are full range fuses and can clear faults as low as 1.3 x $I_{(fuse\ rating)}$ @ 1000Vdc. They are designed specifically for thin film cell and 4″, 5″ and 6″ crystalline silicon cell based panels.

Superior Cycling Withstand

- PV Fuses are tested to withstand cycling conditions associated with solar panel system operation and environmental influences.

1000Vdc Capacity

- PV Fuses are designed with a maximum 1000Vdc operating voltage based on typical solar panel systems with L/R of 1ms and below.

Globally Accepted 10x38mm Dimension

- All PV Fuse amp ratings are available with standard ferrule, bolt and versatile PCB mount options.

Specifications

Ratings

Volts:	1000Vdc
Amps:	1 - 15A
Breaking Capacity:	33kA dc
Min Interrupting:	1.3 x I_n
PV Fuse Coordination with:	4”, 5”, & 6” thin film cells and crystalline silicon cells
Time Constant (L/R):	Under 1ms

Technical Ratings

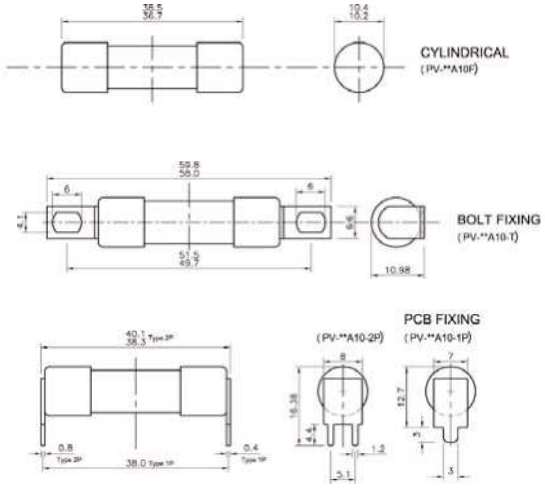
Part Number	Current Rating (Amps)	Energy Integrals (A^2s/I^2t)		Power Loss (Watts)	
		Pre-Arcing	Total @ 1000Vdc	0.8In	In
PV-1A10F	1A	0.15	0.4	0.2	1.5
PV-2A10F	2A	1.2	3.4	0.2	1.0
PV-3A10F	3A	4	11	0.3	1.3
PV-4A10F	4A	9.5	26	0.4	1.3
PV-5A10F	5A	19	50	0.4	1.6
PV-6A10F	6A	30	90	0.4	1.8
PV-8A10F	8A	3	32	1.2	2.1
PV-10A10F	10A	7	70	1.2	2.3
PV-12A10F	12A	12	120	1.5	2.7
PV-15A10F	15A	22	220	1.7	2.9

Recommended Cooper Bussmann® Fuse Blocks and Holders*

Cat. No.	Type	Max. Amps	Poles
BM6031PQ	Open Fuse Block**	30	1
BM6032PQ	Open Fuse Block**	30	2
BM6033PQ	Open Fuse Block**	30	3
CHM1D	Finger-Safe Fuse Holder***	30	1
CHM2D	Finger-Safe Fuse Holder***	30	2
CHM3D	Finger-Safe Fuse Holder***	30	3

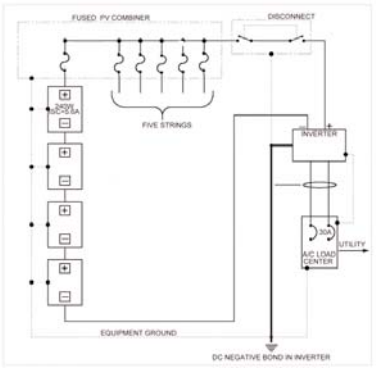
* Self-certified to 1000Vdc
** See Data Sheet 1104 for details.
*** See Data Sheet 2143 for details.

Dimensions - mm





PV Fuses are specifically designed to work in solar panel systems using 4”, 5” and 6” cells.



Typical solar panel wiring diagram.



BM6033PQ Fuse Block and CHM1D Fuse Holder



Ferrule versions of the PV Fuse easily mount in conventional BM6031 fuse blocks.

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