

# 10x38mm photovoltaic fuses 1000Vdc, 1-30A



## Catalog symbols / mounting style:

- 1-20A\*
  - PV-(amp)A10F (cylindrical)
  - PV-(amp)A10-T (bolt mounting)
  - PV-(amp)A10-1P (single PCB tab)
  - PV-(amp)A10-2P (dual PCB tab)
  - PV-(amp)10F-CT (in-line with crimp terminals)
- 25-30A\*\* PV10M-(amp) (cylindrical)

\* Ceramic tube construction.  
\*\* Melamine tube construction.

## Description:

Eaton's Bussmann® series of 10x38mm, 1000Vdc PV fuses are for protecting and isolating photovoltaic strings. The fuses are specifically designed for use in PV systems with extreme ambient temperature, high cycling and low fault current conditions (reverse current, multi-array fault) string arrays.

Four styles available for application flexibility.

## Specifications:

### Basic fuse size

- 10x38mm

### Ratings

- Volts 1000Vdc
- Amps 1-30A
- Interrupting Rating
  - 50kA (1-20A)
  - 20kA (25-30A)
- Time Constant:- 1-3ms

## Operating class

- gPV and UL PV fuse links

## PV fuse coordination

- With thin film cells and 4", 5" and 6" crystalline silicon cells

## Agency information

- UL® Listed to 2579\*, Guide JFGA, File E335324
- IEC® 60269-6 (gPV)
- CSA® File 53787, Class 1422-30 (1-15A), 20-30A pending
- CCC® (1-20A) (25-30A pending)
- RoHS compliant

\* Except crimp terminal version that is UL Recognized to UL 2579, Guide JFGA2, File E335324.

## Packaging (carton quantity)

- PV-(amp)A10F, PV-(amp)A10T, PV-(amp)A10-\_P and PV10M-(amp): 10
- PV-(amp)10F-CT & PV10M-(amp)-CT in-line: 180

## Features:

- Meets UL and IEC photovoltaic standards for global acceptance
- Low watts loss performance for energy efficiency
- Low temperature rise performance for more precise sizing
- In-line crimp terminal version is easy to apply in wire harness construction

## Typical applications:

- Combiner boxes
- PV wire harnesses



Powering Business Worldwide

**Specifications:**

Catalog numbers / configurations										
Cylindrical ferrule	PCB fixing				Current rating (amps)	Voltage rating (Vdc)	Energy integrals I <sup>2</sup> t (A <sup>2</sup> s)		Watts loss (W)	
	Bolt fixing	Single pin	Double pin	In-line with crimp terminal			Pre-arcing	Total @ 1000V	0.8I <sub>n</sub>	I <sub>n</sub>
PV-1A10F	PV-1A10-T	PV-1A10-1P	PV-1A10-2P	PV-1A10F-CT	1	1000	0.15	0.4	0.8	1.5
PV-2A10F	PV-2A10-T	PV-2A10-1P	PV-2A10-2P	PV-2A10F-CT	2	1000	1.2	3.4	0.6	1.0
PV-3A10F	PV-3A10-T	PV-3A10-1P	PV-3A10-2P	PV-3A10F-CT	3	1000	4	11	0.8	1.3
PV-3-5A10F	PV-3-5A10-T	PV-3-5A10-1P	PV-3-5A10-2P	PV-3-5A10F-CT	3.5	1000	6.6	18	0.9	1.4
PV-4A10F	PV-4A10-T	PV-4A10-1P	PV-4A10-2P	PV-4A10F-CT	4	1000	9.5	26	1.0	1.5
PV-5A10F	PV-5A10-T	PV-5A10-1P	PV-5A10-2P	PV-5A10F-CT	5	1000	19	50	1.0	1.6
PV-6A10F	PV-6A10-T	PV-6A10-1P	PV-6A10-2P	PV-6A10F-CT	6	1000	30	90	1.1	1.8
PV-8A10F	PV-8A10-T	PV-8A10-1P	PV-8A10-2P	PV-8A10F-CT	8	1000	3	32	1.2	2.1
PV-10A10F	PV-10A10-T	PV-10A10-1P	PV-10A10-2P	PV-10A10F-CT	10	1000	7	70	1.2	2.3
PV-12A10F	PV-12A10-T	PV-12A10-1P	PV-12A10-2P	PV-12A10F-CT	12	1000	12	120	1.5	2.7
PV-15A10F	PV-15A10-T	PV-15A10-1P	PV-15A10-2P	PV-15A10F-CT	15	1000	22	220	1.7	2.9
PV-20A10F	PV-20A10-T	PV-20A10-1P	PV-20A10-2P	PV-20A10F-CT	20	1000	34	350	2.1	3.6
PV10M-25	—	—	—	—	25	1000	325	1860*	1.65	2.91
PV10M-30	—	—	—	—	30	1000	536	3360*	1.65	3.31

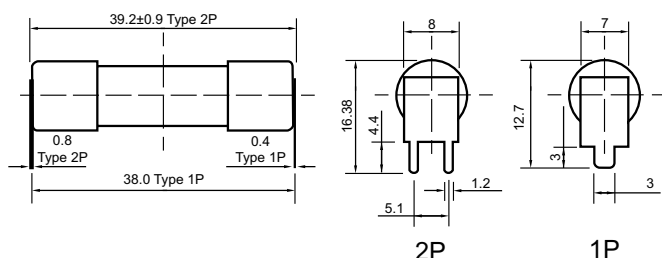
\* Total I<sup>2</sup>t @ 20kA IR.

**Dimensions/configurations - mm:**

**Cylindrical PV-(amp)A10F, PV10M-(amp)**



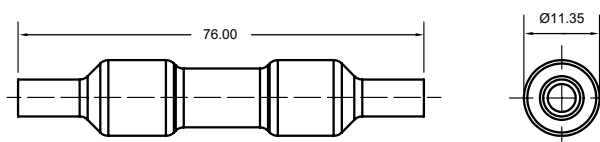
**Cylindrical with PCB tabs PV-(amp)A10-1P (single pin), PV-(amp)A10-2P (double pin)**



**Cylindrical with bolt fixings PV-(amp)A10-T**



**In-line with crimp terminals PV-(amp)A10F-CT (1-20A)**



The in-line crimp terminal version can be electrically insulated with customer supplied overmolding or approved heat-shrink.

**Operating temperature range**

- 40°C to 90°C

**Wire range and type**

- Single conductor, 12-10AWG 75°C/90°C Cu stranded PV

**Overmolding temperature parameters**

- 233°C for 180 sec Max

**Terminals**

- Crimp terminal for 12-10AWG PV copper conductors

**Recommended tools**

- Sta-Kon® terminal crimping tool, catalog # ERG4002

**Recommended fuse holders and fuseclips:**

Part number	Description and date sheet/brochure No.
CHPV1IU	1-Pole modular fuse holder with indication 3185
CHPV1U	1-Pole modular fuse holder without indication 3185
CHPV2IU	2-Pole modular fuse holder with indication 3185
CHPV2U	2-Pole modular fuse holder without indication 3185
1A3400_	PCB Fuseclips 2131
HPV-DV_A	In-line fuse holder assembly 2157

**Time-current characteristics — 1-20A:**

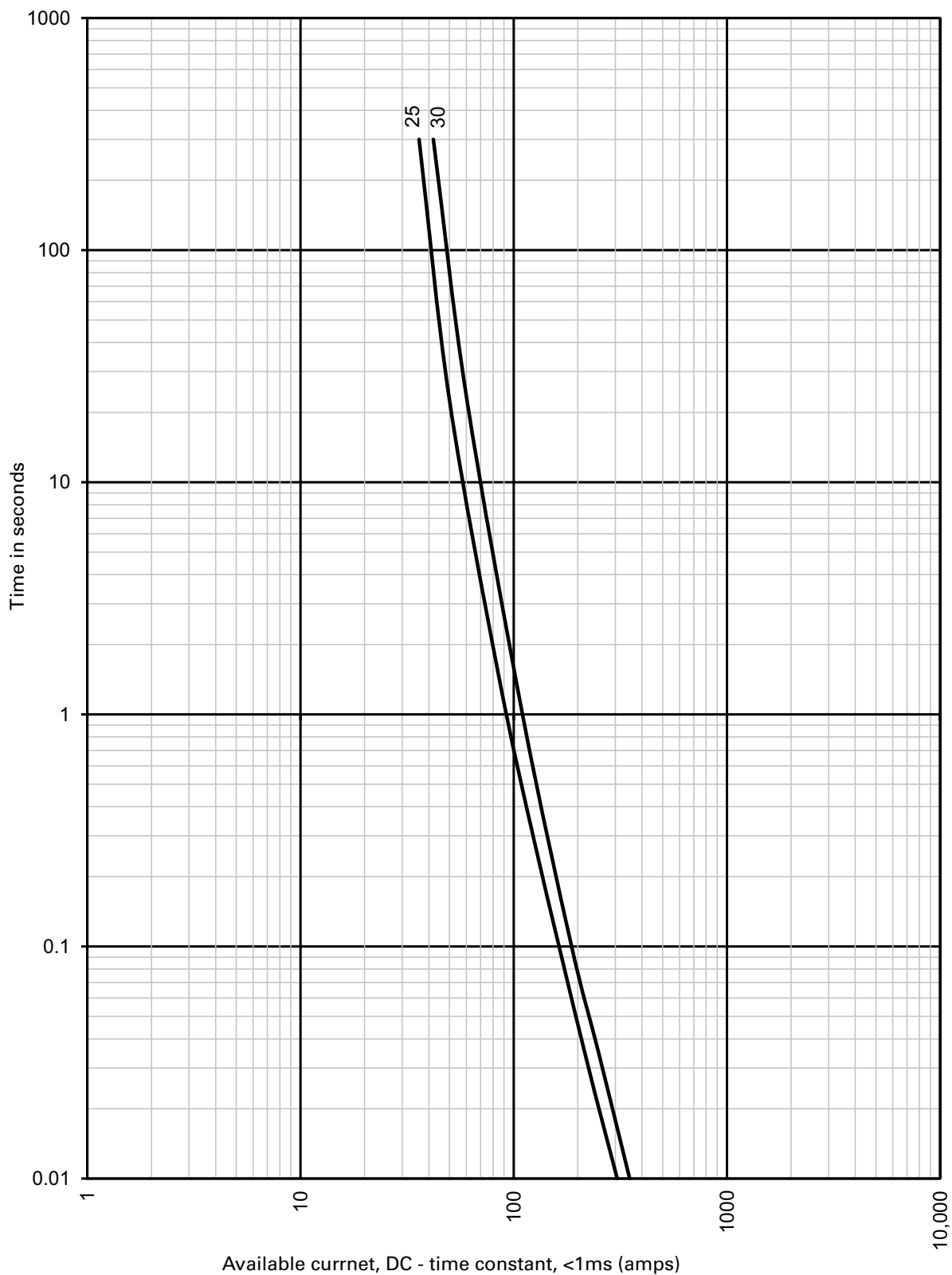


**Temperature derating curves — 1-20A:**



No additional derating is required for PV fuse links installed in ganged modular fuse holders without spacing between units, provided that the rating used is  $>1.56 \times I_{sc}$ .

**Time-current characteristics — 25-30A:**



Temperature derating curves — 25-30A:



The only controlled copy of this data sheet is the electronic read-only version located on the Eaton network drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

**Eaton**  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
Eaton.com

Bussmann Division  
114 Old State Road  
Ellisville, MO 63021  
United States  
Eaton.com/bussmannseries

© 2015 Eaton  
All Rights Reserved  
Printed in USA  
Publication No. 10121 — BU-SB14107  
October 2015

Eaton and Bussmann are valuable trademarks of Eaton in the US and other countries. You are not permitted to use the Eaton trademarks without prior written consent of Eaton.

The CCC mark is administered by the Certification and Accreditation Administration of the People's Republic of China.

CSA is a registered trademark of the Canadian Standards Group.

IEC is a registered trademark of the International Electrotechnical Commission. Sta-Kon is a registered trademark of Thomas & Betts.

UL is a registered trademark of the Underwriters Laboratories, Inc

For Eaton's Bussmann series product information, call 1-855-287-7626 or visit: [Eaton.com/bussmannseries](http://Eaton.com/bussmannseries)

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9