Complete and reliable solar circuit protection

Contents

Description				Section page
Fuses	**Fuse size**	**Volts**	**Amps**	
PVM	13/32" x 1-1/2"	600	4-30	2
PVS-R	RK5	600	20-400	
PV-_A10_	10x38mm	1000	1-20	3
HPV	In-line assembly	1000/1500	1-20	4
PV-_A14F	14x51mm	1000/1100	15-32	
PV-_ANH_	NH1, 2, 3	1000	32-400	5
PV-_A10F85L	10x85mm	1500	2.25-25	6
PV15M-4A-CT	Crimp terminal	1500	4	
PV-_A-_XL	XL 01, 1, 2, 3	1000/1500	50-600	7
Holder	**Fuse size**	**Volts**	**Amps**	
CHPV_	10x38mm	1000	30	8
Blocks	**Fuse size**	**Volts**	**Amps**	
BPVM-_	10x38mm	1000	30	9
CHPV15L85	10x85 and 14x85mm	1500	32	10
SD_-S-PV	01XL to 3L	1500	Up to 630	
SD_-D-PV and TD_D-PV	NH1, 2, 3	1500	Up to 630	11

PVM 600 Vdc 13/32" x 1-1/2" midget PV fuses

A range of UL 248-19 fast-acting 600 Vdc 13/32" x 1-1/2" (10x38mm) midget fuses specifically designed to protect solar power systems in extreme ambient temperature, high cycling and low level fault current conditions (reverse current, multi-array fault).

Ratings

- Volts 600 Vdc
- Amps 4-30 A
- IR 50 kA DC (4-30 A)

Agency information

- UL Listed 248-19, Guide JFGA, File E335324, CSA Component Certified C22.2, RoHS compliant, CE

Watts loss

		Power loss (watts)	
Catalog no.	Amps	0.8 I_n	I_n
PVM-10	10	1.0	1.9
PVM-15	15	1.0	1.7
PVM-30	30	1.6	2.9

Catalog no. (amps)			
PVM-4	PVM-7	PVM-10	PVM-20
PVM-5	PVM-8	PVM-12	PVM-25
PVM-6	PVM-9	PVM-15	PVM-30

Features

- Specifically designed to protect photovoltaic systems in extreme ambient temperature per UL 248-19 listed
- Capable of withstanding high cycling and low level fault current conditions

Typical applications

- Combiner boxes
- String protectors

Recommended fuse holders and blocks, see pages 6-8 and 6-9.

PVS-R 600 Vac/dc Class RK5 PV fuse

A range of UL 248-19 fast-acting 600 Vdc Class RK5 fuses specifically designed to protect photovoltaic power systems in extreme ambient temperature, high cycling and low level fault current conditions (reverse current, multi-array fault).

Ratings

- Volts
  - 600 Vac to UL 248-12
  - 600 Vdc to UL 248-19
- Amps 20-400 A
- IR
  - 200 kA RMS Sym. AC
  - 20 kA DC (20-60 A)
  - 10 kA DC (70-400 A)

Agency information

- UL Listed, Std. 248-12, Class RK5, Guide JFGA, File E335324. Photovoltaic to UL 248-19, CSA Component Certified C22.2, CE

Catalog no. (amps)			
PVS-R-20	PVS-R-60	PVS-R-125	PVS-R-300
PVS-R-25	PVS-R-70	PVS-R-150	PVS-R-350
PVS-R-30	PVS-R-80	PVS-R-175	PVS-R-400
PVS-R-35	PVS-R-90	PVS-R-200	
PVS-R-40	PVS-R-100	PVS-R-225	
PVS-R-50	PVS-R-110	PVS-R-250	

Features

- Current limitation for non-inductive circuits provides Class RK5 current-limiting response to ground fault and short-circuit conditions
- Designed for the protection and isolation of photovoltaic systems

Typical applications

- Photovoltaic systems
- Inverters
- Photovoltaic system DC safety switches
- Recombiner boxes

Recommended fuse blocks, see page 8-19.

Data sheet no. 2153

Data sheet no. 4203

PV 1000 Vdc 10x38mm PV fuses

A range 10x38mm, 1000 Vdc PV fuses for the protection and isolation of photovoltaic strings that 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. For application flexibility, the PV 10x38mm fuse is available as a cylindrical fuse as well as bolt-on, single and dual PCB tab and in-line crimp terminal versions.

Ratings

- Volts 1000 Vdc
- Amps 1-20 A
- IR 50 kA

Terminals and conductors

- Crimp connection for single, 75°C/90°C Cu Stranded 12-8 AWG PV wire

Agency information

- UL Listed to 248-19†, Guide JFGA, File E335324, IEC 60269-6 (gPV), CSA File 53787, Class 1422-30 (1-15A), 20 A Pending, CCC (1-20 A), RoHS Compliant

† Except crimp terminal version that is UL Recognized to UL 248-19, Guide JFGA2, File E335324.

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
- Inverters
- PV wire harnesses

Recommended fuse blocks, holders and fuseclips

- BPVM modular fuse block with optional cover, see page 6-9
- CHPV 1- and 2-pole modular fuse holders with optional open fuse indication, see page 6-8
- 1A3400-09 PCB fuseclip, see page 3-16
- HPV in-line fuse holder assembly, see page 6-4

Catalog no. (amp)						I^2t (A^2s)		Watts loss	
Cylindrical	Bolt-on	PCB single pin	PCB double pin	Crimp terminal	Amps	Pre-arcing	Total @rated volts	0.8 I_n	I_n
PV-1A10F	PV-1A10-T	PV-1A10-1P	PV-1A10-2P	PV-1A10F-CT	1	0.15	0.4	0.8	1.5
PV-2A10F	PV-2A10-T	PV-2A10-1P	PV-2A10-2P	PV-2A10F-CT	2	1.2	3.4	0.6	1.0
PV-3A10F	PV-3A10-T	PV-3A10-1P	PV-3A10-2P	PV31A10F-CT	3	4	11	0.8	1.3
PV-3-5A10F	PV-3-5A10-T	PV-3-5A10-1P	PV-3-5A10-2	PV-3.5A10F-CT	3.5	6.6	18	0.9	1.4
PV-4A10F	PV-4A10-T	PV-4A10-1P	PV-4A10-2P	PV-4A10F-CT	4	9.5	26	1.0	1.5
PV-5A10F	PV-5A10-T	PV-5A10-1P	PV-5A10-2P	PV-5A10F-CT	5	19	50	1.0	1.6
PV-6A10F	PV-6A10-T	PV-6A10-1P	PV-6A10-2P	PV-6A10F-CT	6	30	90	1.1	1.8
PV-8A10F	PV-8A10-T	PV-8A10-1P	PV-8A10-2P	PV-8A10F-CT	8	3	32	1.2	2.1
PV-10A10F	PV-10A10-T	PV-10A10-1P	PV-10A10-2P	PV-10A10F-CT	10	7	70	1.2	2.3
PV-12A10F	PV-12A10-T	PV-12A10-1P	PV-12A10-2P	PV-12A10F-CT	12	12	120	1.5	2.7
PV-15A10F	PV-15A10-T	PV-15A10-1P	PV-15A10-2P	PV-15A10F-CT	15	22	220	1.7	2.9
PV-20A10F	PV-20A10-T	PV-20A10-1P	PV-20A10-2P	PV-20A10F-CT	20	34	350	2.1	3.6

HPV 1000 Vdc in-line PV fuse assembly

A single-pole, non-serviceable photovoltaic in-line fuse holder and fuse assembly in an IP67 dust tight, submersible insulating boot for use in photovoltaic wire harnesses.

Ratings

- Volts
  - 1000 Vdc
  - 1500 Vdc (HPV-D15V-4A only)
- Amps 1-20 A
- IR 33 kA

Agency information

- UL Listed to 4248-1 and 4248-19, File E 348242, CSA Component Acceptance, Class 6225 30, File # 47235, IP67 submersible, RoHS compliant, CE

Terminals and conductors

- Crimp connection for single, 75°C/90°C Cu Stranded 12-8 AWG PV wire

Boot material

- UL 5VA flammability resistant rated elastomer, UV resistant to UL F1 suitable for outdoor use.

Operating and storage temperature range

- -40°C to +90°C

Packaging

- Bulk packed in cartons, 180 fuse assemblies per carton. Carton weight 19.3 lbs (8.7543 kg).
- Fuse assemblies poly bagged with PV fuse element, two insulating boots (for lineside and loadside), and one pressure sensitive label to be applied on outside after complete assembly to the wire harness.

Catalog no. (amps)*			
1000 Vdc			
HPV-DV-1A	HPV-DV-3.5A	HPV-DV-8A	HPV-DV-20A
HPV-DV-2A	HPV-DV-4A	HPV-DV-10A	
HPV-DV-2.5A	HPV-DV-5A	HPV-DV-12A	
HPV-DV-3A	HPV-DV-6A	HPV-DV-15A	
1500 Vdc			
HPV-D15V-4A			

* For PV-(amp)A10F-CT fuse specifications and derating curves see data sheet no. 10121 at Eaton.com/bussmannseries.

Recommended tools

- Sta-Kon™ terminal crimping tool, catalog no. ERG4002
- Multi-Contact assembly tool, catalog no, PV-RWZ with PV-KOI+II and PV-KOIII tapered spindles

PV 1000/1100 Vdc 14x51mm PV fuses

A range of 14x51mm PV fuses specifically designed for protecting and isolating photovoltaic strings. These fuses are capable of interrupting low overcurrents associated with faulted PV systems (reverse current, multi-array fault).

Ratings

- Volts
  - 1000 Vdc (25 and 32 A)
  - 1100 Vdc (15 and 20 A)
- Amps 15-32 A
- IR 10 kA

Agency information

- UL Listed, Guide JFGA, File E335324. Photovoltaic to, UL 248-19, IEC 60269-6 gPV, CSA Pending, CCC Pending, RoHS compliant

		I^2t (A^2s)		Watts loss	
Catalog no.	**Amps**	**Pre-arcing**	**Total @ rated volts**	**0.8 I_n**	**I_n**
PV-15A14F	15	14	265	2.1	4
PV-20A14F	20	27	568	2.7	5
PV-25A14F	25	65	943	2.7	5.1
PV-32A14F	32	120	1740	3.3	6.2

Features

- Specifically designed to provide fast-acting protection under low fault current conditions associated with PV systems
- High DC voltage rating
- Demonstrated performance in extreme temperature cycling conditions

Typical applications

- Combiner boxes
- Inverters

Recommended fuse holder

- CH141B-PV DIN-Rail modular fuse holder, see data sheet no. 720148 for more information.

Data sheet no.: 2157

Data sheet no. 720132

NH 1000 Vdc blade and bolt-on PV fuses

A range of 1000 Vdc NH size Photovoltaic (PV) fuses specifically designed for protecting and isolating array combiners/ re-combiners, disconnects and inverters.

RoHS 2011/65/EU

Ratings

- Volts 1000 Vdc
- Amps 32-400 A
- IR 50 kA

Agency information

- UL Listed, Guide JFGA, File E335324, Photovoltaic to UL 248-19, IEC 60269-6 gPV, CSA Class 1422-30, File 53787 (32-160 A), UL Listed, IEC gPV, CSA, CCC Pending, RoHS compliant

Features

- Compact size saves panel space and extends design flexibility
- Bolt-on versions have common hole centers for standardizing busbar designs across 63-400 amp range
- Low power loss for greater efficiency and lower operating temperature
- Global agency standards simplifies design considerations for worldwide markets
- Dual indication feature and optional microswitches make system monitoring easier

Typical applications

- Recombiner boxes
- Inverters

Recommended fuse blocks

- SD_ and TD_, see page 6-11

Optional microswitches†

Catalog no.	Tab size - mm (inch)	Connection	Volts	Amps
170H0236	250/6.3 (1/4)	Quick connect	250	2
170H0238	110/2.8 (0.11)			2
BVL50	187/4.8 (3/16)			6

† For use with bladed version.

Catalog no.	NH size	Amps	I^2t (A^2S) Pre-arcing	I^2t (A^2S) Total @ 1000V	Watts loss 0.8 I_n	Watts loss I_n
Blade versions						
PV-32ANH1	1	32	80	720	4	8
PV-40ANH1		40	185	1670	5	9
PV-50ANH1		50	400	3600	6	11
PV-63ANH1		63	470	4300	6	12
PV-80ANH1		80	640	5760	8	15
PV-100ANH1		100	1300	11,700	8	16
PV-125ANH1		125	2600	23,400	9	17
PV-160ANH1		160	5200	46,800	14	27
PV-200ANH1		200	10,200	82,000	13	25
PV-250ANH2	2	250	17,000	136,000	19	38
PV-300ANH3	3	300	32,000	260,000	24	40
PV-315ANH3		315	32,000	260,000	26	44
PV-350ANH3		350	44,500	370,000	27	45
PV-355ANH3		355	44,500	370,000	28	46
PV-400ANH3		400	67,500	550,000	30	50
Bolt-on versions						
PV-63ANH1-B	1	63	470	4300	6	12
PV-80ANH1-B		80	640	5760	8	15
PV-100ANH1-B		100	1300	11,700	8	16
PV-125ANH1-B		125	2600	23,400	9	17
PV-160ANH1-B		160	5200	46,800	14	27
PV-200ANH1-B		200	10,200	82,000	13	25
PV-250ANH2-B	2	250	17,000	136,000	19	38
PV-315ANH3-B	3	315	32,000	260,000	26	44
PV-355ANH3-B		355	38,000	310,000	29	48
PV-400ANH3-B		400	61,000	490,000	32	50

Blade versions mount in fuse blocks

Bolt-on versions mount directly to busbas and conductor terminals

PV 1500 Vdc 10x85mm PV fuses

A range of 10x85mm PV fuses specifically designed for protecting and isolating photovoltaic strings. These fuse links are capable of interrupting low overcurrents associated with faulted PV systems (reverse current, multi-array fault).

Mounts in Bussmann series CHPV15L85 DIN-Rail holder. See page 6-10.

Ratings

- Volts 1500 Vdc
- Amps 2.25-30 A
- IR 30 kA, 1 ms

Operating class

- gPV

Agency information

- UL 248-19
- IEC 60269
- RoHS compliant

Features

- Designed for fast-acting protection under low fault current conditions associated with PV systems
- UL and IEC photovoltaic standards for global product acceptance
- Low watts loss for greater PV system efficiency

Typical applications

- Combiner boxes, wire harnesses

		I^2t (A^2s)		Watts loss (W)	
Catalog no.	Amps	Pre-arcing	Total at 1500 Vdc	0.8 I_n	I_n
PV-2.25A10F85L	2.25	3	10	1.4	2.4
PV-2.5A10F85L	2.5	4	10	1.3	2.1
PV-3A10F85L	3	7	20	1.3	2.2
PV-3-5A10F85L	3.5	10	20	1.6	2.6
PV-4A10F85L	4	15	30	1.7	2.8
PV-5A10F85L	5	33	60	1.7	2.8
PV-12A10F85L	12	19	240	2.1	3.5
PV-15A10F85L	15	42	300	2.2	3.6
PV-16A10F85L	16	48	350	2.1	3.5
PV-20A10F85L	20	108	800	2.7	4.5
PV-25A10F85L	25	190	1400	3.4	5.6
PV-30A10F85L	30	268	1090	4.0	6.6

Data sheet no. 10658

PV15M-4A-CT 1500 Vdc in-line PV fuse with crimp terminals

Bussmann series PV15M-4A-CT is a 1500 Vdc in-line photovoltaic fuse with crimp terminals for use in wire harnesses and other applications where an in-line PV fuse is desirable.

This in-line fuse can be electrically insulated with customer-supplied overmolding or approved heat-shrink.

Ratings

- Volts 1500 Vdc
- Amps 4 A
- IR 15 kA DC
- Time constant 3 ms max.

Agency information

- UL Recognized, 248-19, File E484317 Vol. 1 Sec. 1, CSA pending, RoHS compliant

Data sheet no. 10639

Catalog number

- PV15M-4A-CT

Conductor

- Single PV stranded 75/90°C Cu

Operating temperature range

-40°C to 90°C

Materials

- Copper terminals with ceramic fuse body

Features

- Crimp terminals eliminate the need for a fuse holder or block
- 1500 Vdc rating is ideally suited for today's efficient, higher-voltage PV systems

Recommended tools

Sta-Kon® terminal crimping tool, catalog no. ERG4002

XL 1000 Vdc and 1500 Vdc PV fuses

A range of XL size PV fuses specifically designed for protecting and isolating photovoltaic array combiners and disconnects. These fuses are capable of interrupting low overcurrents associated with faulted PV systems (reverse current, multi-array fault). Optional microswitches available for use in monitoring systems.

Ratings

- Volts
  - 1000 Vdc (63-600 A)
  - 1500 Vdc (50-500 A)
- Amps (see table)
- IR (see table)

Agency information

- UL 248-19, Guide JFGA, File E335324, IEC 60269-6 gPV, CSA Class 1422-30, File 53787, RoHS Compliant

Features

- High DC voltage rating with fast-acting protection under low fault current conditions for PV systems
- Blade or bolt-on mounting for application flexibility
- Demonstrated performance in extreme temperature cycling conditions

Typical applications

- Recombiner boxes, Inverters

Recommended fuse blocks

- SD_-S-PV blocks, see page 6-10

Optional microswitches

- Blade: 170H0235 or 170H0237 for size 01XL, 70H0236 or 170H0238 for sizes 1XL, 2XL and 3L
- Bolt-on: 170H0069 for all sizes

XL size	Catalog no. Bladed version	Catalog no. Bolt-on version	Amps	IR (kA)	I^2t (A^2s) Pre-arcing	I^2t (A^2s) Total @ rated volts	Watts loss $0.8I_n$	Watts loss I_n
1000 Vdc								
01	PV-63A-01XL	PV-63A-01XL-B	63	50	260	1900	13	24
	PV-80A-01XL	PV-80A-01XL-B	80	50	490	3600	17	29
	PV-100A-01XL	PV-100A-01XL-B	100	50	870	6300	18	32
	PV-125A-01XL	PV-125A-01XL-B	125	50	1930	13,900	20	40
	PV-160A-01XL	PV-160A-01XL-B	160	50	3900	28,100	22	44
1	PV-200A-1XL	PV-200A-1XL-B	200	33	9400	27,260	31	60
2	PV-160A-2XL	PV-160A-2XL-B	160	33	2780	21,000	25	44
	PV-200A-2XL	PV-200A-2XL-B	200	33	4950	37,000	28	50
	PV-250A-2XL	PV-250A-2XL-B	250	33	9450	70,000	34	60
	PV-315A-2XL	PV-315A-2XL-B	315	33	16,600	123,000	40	66
	PV-355A-2XL	PV-355A-2XL-B	355	33	26,000	192,000	42	68
	—	PV-160A-2XL-3B*	160	33	2780	21,000	25	44
	—	PV-200A-2XL-3B*	200	33	4950	37,000	28	50
	—	PV-250A-2XL-3B*	250	33	9450	70,000	34	60
	—	PV-315A-2XL-3B*	315	33	16,600	123,000	40	66
	—	PV-355A-2XL-3B*	355	33	26,000	192,000	42	68
3	PV-350A-3L	PV-350A-3L-B	350	50	31,000	161,200	40	65
	PV-400A-3L	PV-400A-3L-B	400	50	44,500	231,400	48	82
	PV-500A-3L	PV-500A-3L-B	500	50	85,000	442,000	50	85
	PV-600A-3L	PV-600A-3L-B	600	50	137,000	712,400	80	108
1500 Vdc								
01	PV-50A-01XL-15	PV-50A-01XL-B-15	50	30	175	1000	14	25
	PV-63A-01XL-15	PV-63A-01XL-B-15	63	30	362	2250	15	26
	PV-80A-01XL-15	PV-80A-01XL-B-15	80	30	565	3300	19	35
	PV-100A-01XL-15	PV-100A-01XL-B-15	100	30	1100	6600	22	40
	PV-125A-01XL-15	PV-125A-01XL-B-15	125	30	2200	10500	23	42
	PV-160A-01XL-12	PV-160A-01XL-B-12	160	30	5000	24000	26	52
1	PV-100A-1XL-15	PV-100A-1XL-B-15	100	30	1250	6000	24	43
	PV-125A-1XL-15	PV-125A-1XL-B-15	125	30	1950	9360	25	52
	PV-160A-1XL-15	PV-160A-1XL-B-15	160	30	4200	20,160	30	58
	PV-200A-1XL-15	PV-200A-1XL-B-15	200	30	9400	45,120	31	61
2	PV-125A-2XL-15	PV-125A-2XL-B-15	125	30	2200	15,000	25	44
	PV-160A-2XL-15	PV-160A-2XL-B-15	160	30	5000	32,000	29	48
	PV-200A-2XL-15	PV-200A-2XL-B-15	200	30	8800	51,000	32	57
	PV-250A-2XL-15	PV-250A-2XL-B-15	250	30	16,600	85,000	40	70
	—	PV-125A-2XL-3B-15*	125	30	2200	15,000	25	44
	—	PV-160A-2XL-3B-15*	160	30	5000	32,000	29	48
	—	PV-200A-2XL-3B-15*	200	30	8800	51,000	32	57
	—	PV-250A-2XL-3B-15*	250	30	16,600	85,000	40	70
3	PV-250A-3L-15	PV-250A-3L-B-15	250	100	74,000	263,000	28	49
	PV-315A-3L-15	PV-315A-3L-B-15	315	100	150,000	533,000	30	52
	PV-350A-3L-15	PV-350A-3L-B-15	350	100	195,000	693,000	34	59
	PV-355A-3L-15	PV-355A-3L-B-15	355	100	195,000	693,000	34	59
	PV-400A-3L-15	PV-400A-3L-B-15	400	100	296,000	1,060,000	35	61
	PV-450A-3L-15	PV-450A-3L-B-15	450	100	412,000	1,470,000	39	67
	PV-500A-3L-15	PV-500A-3L-B-15	500	100	532,000	1,890,000	42	73

* These fuses have revised bolting patterns that are identical to size 3L bolting pattern to allow using both size 2XL and size 3L fuses without changing the dimensional layout of the inverter, combiners and disconnects.

Data sheet no. 10201

CHPV Modular, IP20 finger-safe DIN-Rail holders for 10x38mm fuses

Bussmann series CHPV DIN-Rail fuse holders are for 10x38mm IEC and UL photovoltaic fuses rated up to 1000 Vdc. They are available with and without indication in 1- and 2-pole IP20 finger-safe versions. A variety of accessories extends their application flexibility and they may be ganged together to meet specific application requirements.

RoHS 2011/65/EU

Ratings

- Volts 1000 Vdc (or less)
- Amps 30 A
- SCCR 33 kA DC

Agency information

- UL Listed to 4248-19, Guide IZMR, File E348242
- CSA, Class 6225-30, File 47235
- IEC 60269-2
- CCC
- RoHS compliant
- CE

Mounting 35mm DIN-Rail

Wire range - AWG (mm²)

- 75°C and 90°C* Cu
- 18-4 (0.8-21.1)
- Solid, stranded, fine stranded

* May be used with higher temperature rated conductors with appropriate derating.

Terminals

- Single or dual conductors
- Comb busbar

Torque 30 lb-in (3.4 N•m) maximum

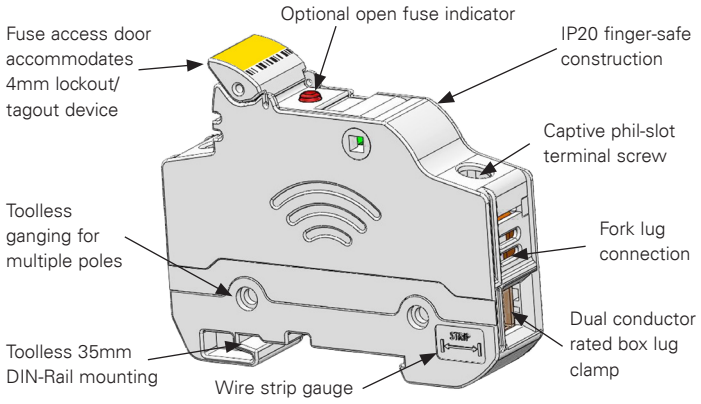
Flammability UL 94V0, self-extinguishing

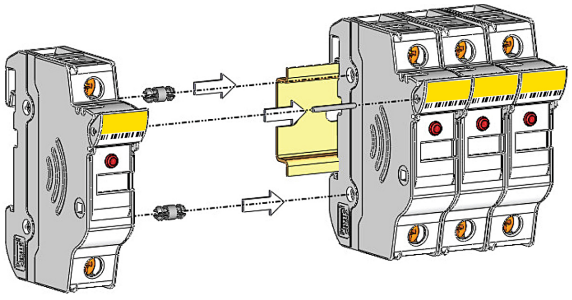
Storage and operating temperature

- -4°F (-20°C) to 194°F (90°C) indicating
- -4°F (-20°C) to 248°F (120°C) non-indicating

Features

- Enhanced safety with IP20 finger-safe construction
- Wiring flexibility with terminals rated for use with 75°C or 90°C solid, stranded and fine stranded wire, and spade terminals and comb busbars. (Use any higher temperature insulations at the 90°C ampacity with appropriate derating.)
- Complete range of UL Listed and high SCCR rated one- and three-phase finger-safe comb busbars and power feed lugs





Gang multiple poles to meet application requirements using kit catalog number **JV-L** (gangs up to four poles).

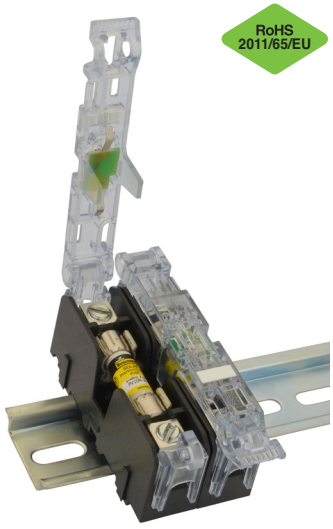
Catalog no.						Recommended
With indication*	**Without indication**	**Volts / amps**	**Agency marks**	**Poles**	**SCCR**	**Bussmann series fuses**
CHPV1IU	CHPV1U	1000 Vdc/30 A	UL, CSA, , UL 4248-18, IEC 60269-1, CCC	1	33 kA DC	PV-(amp)A10F, PV10M-(amp)
CHPV2IU	CHPV2U			2		

* All models require 90 V minimum for illumination.

Data sheet no. 10430

BPVM modular blocks for 10x38mm fuses

The Bussmann series BPVM modular style 1000 Vdc fuse blocks for use with 10x38mm (13/32" x 1-1/2") photovoltaic fuses up to 30 amps contain multiple features to add versatility, reduce labor and enhance safety of any panel design. Optional IP20 finger-safe covers enhance safety with a lockout/tagout feature along with optional open fuse indication to speed troubleshooting.



BPVM-2C with CVRI-CCM covers

Ratings

- Volts 1000 Vdc
- Amps 30 A
- SCCR 33 kA

Agency information

- Blocks
  - UL Listed, Guide IZMR, File E348242
  - CSA Component Acceptance, Class 6225-01, File 47235
  - RoHS compliant
  - CE
- Covers
  - Covers are included in the overall UL Listing and CSA Acceptance
  - IP20 finger-safe
  - RoHS Compliant

Poles

- 1-, 2-pole units factory assembled
- Single-pole units snap together to create desired number of poles

Flammability ratings

- Blocks — UL 94V0, self-extinguishing
- Covers — UL 94HB, self-extinguishing

Operating and storage temperature range

- Blocks -40°C to +120°C
- Non-Indicating covers -40°C to +120°C
- Indicating covers -20°C to +90°C*

* Indication requires minimum 90 Vac/dc and closed circuit to illuminate.

Recommended Bussmann series fuses

- 10x38mm PV fuses
- Fast-acting 600 Vdc PVM fuses
- Class gPV 1000 Vdc PV fuses

Recommended DIN-Rail end stops

- Catalog no. BRKT-ND or BRKT-NDSCRW2

Features

- Available in 1- and 2-pole configurations to meet stocking requirements
- Blocks are fully modular with a snap-together design that provides tool-less assembly of multiple pole blocks at point-of-use to reduce inventory and save assembly time and labor
- DIN-Rail and panel mount versatility allows one product to be used for multiple applications, lowering inventory cost
- Compact footprint consumes minimal panel space
- Optional see-through cover enhances safety with IP20 finger-safe protection, lockout/tagout capability and open circuit indication
- Easy circuit identification with available universal marker labels for fuse block covers
- Tin-plated bimetallic copper fuse clips deliver superior fatigue resistance compared to traditional spring brass
- Listed to UL 4248-18 for photovoltaic application

Terminal specifications for 75/90°C Cu and Al wire

Terminal type	AWG range	Torque lb-in (N•m)
Box lug ("CR" Option)	Cu 2-14, Al 2-8	Cu 2-3 — 50 (5.6)
		Cu 4-6 — 45 (5.1)
		Cu 8-14 — 35 (4.0)
		Al 2-6 — 50 (5.6)
		Al 8 — 40 (4.5)
Screw (S)	Cu 10-18	10-18 — 20 (2.3)

Catalog no.			
Terminal type			
#10-32 Phil-slot screw	Box lug	Poles	Fuse size/class
BPVM-1S	BPVM-1C	1	10x38mm (13/32" x 1-1/2") gPV and PV
BPVM-2S	BPVM-2C	2	

Recommended covers*

Cover part numbers	
Indicating	Non indicating
CVRI-CCM	CVR-CCM

* For use with 4 AWG max conductors.

PV fuses, holders, blocks and SPDs

Data sheet no. 10265

CHPV15L85 holder for 10x85mm and 14x85mm fuses

CHPV15L85 fuse holder can be used with 10x85mm and 14x85mm cylindrical gPV fuses.

The unique design offers a high degree of safety with no possibility of any accidental contact with live parts during fuse replacement. When the fuse carrier is extracted, it continues to cover the live parts.

RoHS 2011/65/EU

Ratings

- Volts 1500 Vdc
- Amps 32 A (UL and IEC)
- SCCR 50 kA
- Impulse withstand U_{imp} 12 kV (tested at 18.5 kV)

Agency information

- cULus 4248-1 Edition 1, File E384242
- cULus 4248-19 Edition 1, File E14853
- IEC 60269-1
- RoHS compliant

Poles 1

Fuse rated power dissipation

- Up to 8.5 W max

Protection level

- IP20

Storage and operating temperature range

- Minimum permitted ambient temperature: -40°C (installation only at temperatures > -5°C). Service conditions as per IEC 61439-1, maximum pollution degree 3.

Mounting

- 35mm DIN-Rail

Terminals

- Box terminal, Cu 4-10mm² flexible, directly clamped or with wire-end ferrules (flexible + wire-end ferrule may not be possible with maximum cross-section)

To order

- Specify catalog number **CHPV15L85**

Features

- Global accreditation
- 32 amp current rating for UL and IEC

Compatible Bussmann series fuses

- PV-xA10F85 10x85mm fuses
- PV-xxA14LF10F 14x85mm fuses

SD blocks for XL size PV fuses

SD XL PV fuse blocks are available with integral shields specifically designed to be fitted with Bussmann series XL photovoltaic fuses (see data sheet 10201).

Ratings

- Volts 1500 Vdc
- Amps
  - 250 A
  - 400 A
  - 630 A

RoHS 2011/65/EU

Agency information

- IEC 60269-1
- UL Listed, File E348242
- RoHS complaint

Poles

- 1

- **Power acceptance**
- Sizes 01XL and 1XL: 56 W
- Size 2XL: 70 W
- Size 3L: 96 W

Protection level

- IP20 with terminal covers and gripping lug cover in place and shielding of any exposed part of the terminal lugs

Operating temperature range

- -45°C to 80°C (with fuse derating above 40°C)

Mounting

- Panel

UL94 Flammability rating

- Block V-2
- Terminal cover V-0

Catalog no.	Description	XL fuse size	Amps
SD1XL-S-PV	1-pole PV fuse block	01XL and 1XL	250
SD2XL-S-PV		2XL	400
SD3L-S-PV		3L	630

Accessory

Catalog no.	Description
FEH1500	Fuse extraction handle available for sizes 01XL to 3L

Data sheet no. 10628

Data sheet no. 10066

SD and TD blocks for NH size PV fuses

SD PV fuse blocks for NH fuse sizes 1 to 3 NH are available in 1- and 3-pole versions and are specifically designed for use with Bussmann series bladed NH photovoltaic fuses (see data sheet 720133).

Ratings

- Volts
  - 1500 Vdc (IEC)
- Amps
  - 250 A (SD1)
  - 400 A (SD2)
  - 630 A (SD3)
- SCCR 50 kA

Agency information

- IEC 60269-1
- UL Listed, File E348242
- CSA File 47235
- RoHS compliant

Poles

- 1 and 3

Power acceptance

- SD1 - 32 W
- SD2 - 45 W
- SD3 - 60 W

Protection level

- IEC - IP20 with shroud kit installed and shielding of any exposed terminal lugs
- UL - Installation of shroud kit decreases the likelihood of incidental terminal contact. To ensure compliance to IP20 specifications per UL the installer must make additional provisions.

Operating temperature range

- IEC Standards -20°C to 70°C
- UL -20°C to 90°C Max*

* Dependant upon rating of customer supplied lugs.

Storage temperature range

- IEC and UL -40°C to 90°C

Mounting

- 35mm DIN-Rail
- Panel

RoHS 2011/65/EU

Shown with optional shroud kit

Flammability rating

- UL 94V0

Catalog no.	Poles	Description	NH fuse size	Amps
SD1--D-PV	1	NH PV fuse block	1	250
TD1--D-PV	3			
SD2-D-PV	1		2	400
TD2-D-PV	3			
SD3-D-PV	1		3	630
TD3-D-PV	3			

Accessories

Fuse extraction handle

Catalog no.	Size	Amps
FEH	NH1 to 3	250 to 630

Shroud kits

Catalog no.*	Fuse block	Fuse size	Amps	Description
SD12-SK	SD1 and TD1	NH1	250	Includes 2 shrouds and 1 fuse cover
SD12-SK	SD2 and TD2	NH2	400	
SD3-SK	SD3 and TD3	NH3	630	

* Order one kit per pole.

Phase barrier kits

Catalog no.†	Fuse block	Fuse size	Amps	Description
SD12-PB	SD1 and TD1	NH1	250	2 phase barriers and 2 ganging links
SD12-PB	SD2 and TD2	NH2	400	
SD3-PB	SD3 and TD3	NH3	630	

† Order one kit per pole.

Microswitches

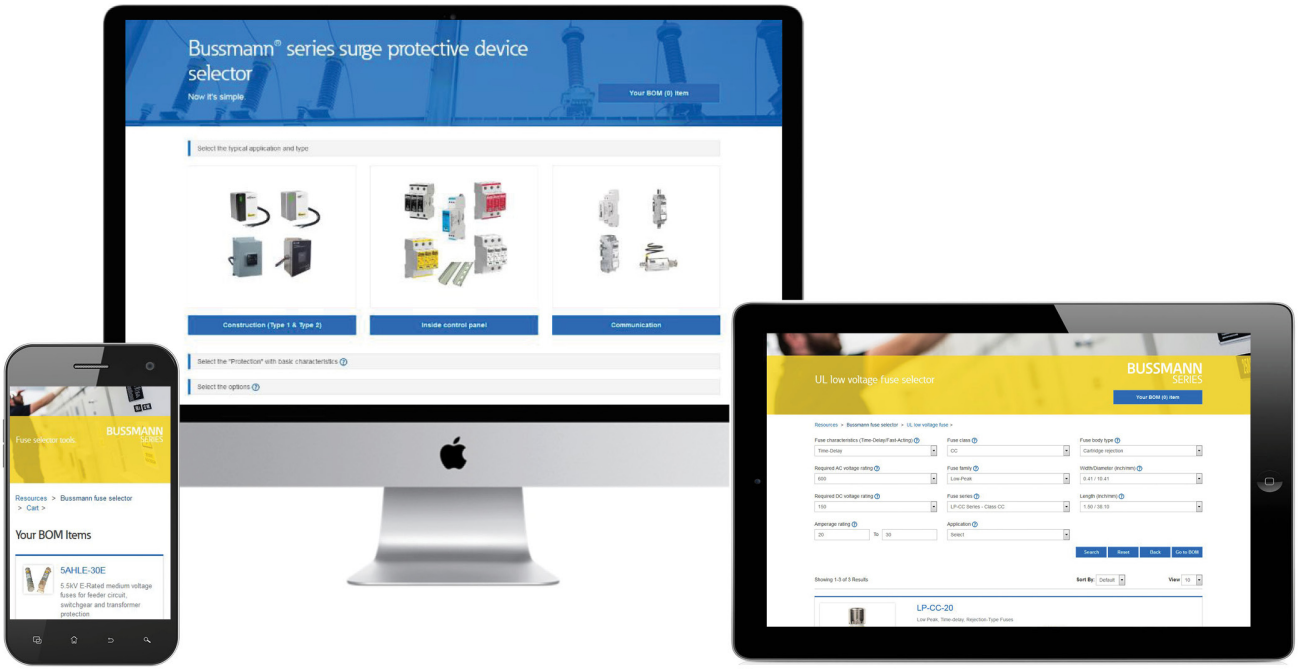
Catalog no.	Ratings
BVL50	6 A 250 Vac
170H0236	2 A 250 Vac
170H0238	2 A 250 Vac

Neutral links

Catalog no.	Fuse block	Fuse size	Amps
SDL-1	SD1 and TD1	NH1	250
SDL-2	SD2 and TD2	NH2	400
SDL-3	SD3 and TD3	NH3	630

Data sheet no. 720149

BUSSMANN
SERIES



Bussmann series products at your fingertips

We make searching for and selecting Bussmann™ series products easy with four unique product selector tools:

Surge Protective Device Selector
Low Voltage Fuses Selector
Medium Voltage Fuse Selector
Connector Selector

Each tool allows you to select from available attributes to find the product that best meets your needs. Results are then displayed with links to product detail webpages for more information. Quick access to our team of experts for additional assistance is also made available. And with a responsive design, the tools can be used anytime, anywhere.

Find these selector tools and more at **toolbox.bussmann.com**.

EATON
Powering Business Worldwide

Follow us on social media to get the latest product and support information.