



Solutions for photovoltaic applications

Fuse holders E90 PV and fuses E9F PV



- Easy to install on DIN rails in a string combiner box or an inverter, thanks to the compact size of the device.
- Safety and protection during installation and maintenance activity with IP20 standard.
- High temperature performance thanks to venting grooves and cooling chambers.

Fuse holder E90 PV

The E90 PV series of fuse holders have been specifically designed for photovoltaic applications. Thanks to their rated voltage of 1000 and 1500 V DC, they can be a perfect solution for protection of the strings in photovoltaic applications. The compact size of these devices make them easy to be installed on DIN rails in a string combiner box or in an inverter. During maintenance, they ensure isolation of circuits and strings up to 1500 V DC, providing total safety.

The E90 PV can be used in combination with E9F PV 10x38 gPV cylindrical fuses (1000 V DC applications) or in combination with E9F PV1500 10x85 and 10/14x85 gPV cylindrical fuses (1500 V DC applications).

Main benefits

- High temperature performance thanks to venting grooves and cooling chambers that improve heat dissipation also for multipole configurations.
- IP 20 touch proof ensuring no possibility of getting in touch with live parts during operation or maintenance of fuse replacement, ensuring protection of maintenance staff.
- In the case of E90 PV for 1000 V DC applications, safety during maintenance operations can be further ensured by the possibility to seal the handle in the closed position and lock it in the open position.
- Faster identification of faulty strings with fuse holders for 1000 V DC installations thanks to the LED on the fuse holder which indicates the blown fuse.

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E90 PV 1000 V DC
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E90 PV 1500 V DC



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Technical features



E90 PV 1000



E90 PV 1500E

Type		E90/32 PV	E90/32 PV 1500E
Reference standards	-	IEC 60947-3, UL 4248-1, UL 4248-19	IEC 60269-1,-2,-6, UL 4248-19
Rated current	[A]	30	32 (acc. IEC) / 30 (acc. UL)
Rated operational voltage	[V]	1000 V DC	1500 V DC
Fuse size	[mm]	10x30	10x85 and 10/14x85
Max. power dissipation accepted	[W]	3	6
Tightening torque	[Nm]	PZ2 2-2.5 Nm (PZ2 18-22 lb-in)	PZ2 2-2.5 Nm (PZ2 18-22 lb-in)
Protection degree	-	IP20	IP20
Cross section rigid copper conductors (1 wire)	[mm ²]	1.5 - 25 (16-4 AWG)	16-10 AWG
Cross section stranded copper conductors (1 wire)	[mm ²]	1.5 - 16 (16-5 AWG)	0.75 – 25 (18-4 AWG)
Cable temperature	[°C]	CU 60, 75, 90	max 90 (acc. UL)
Operating temperature	[°C]	-5/40	> -5
Storage temperature	[°C]	-25/+70	> -25
Approvals	-	UL, CCC, EAC	UL, CCC

Fuse holder E90 PV

Ordering codes and dimensions



E90 PV 1000

E90 PV 1000 V DC fuse holder for 10x38 mm fuses

Poles	Rated current	Width mm	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
				Type code	Order code		
1	30	17.5	047131	E91/32PV	2CSM204713R1801	0.061	6
1	30	17.5	046936	E91/32SPV	2CSM204693R1801	0.061	6
2	30	35	047049	E92/32PV	2CSM204703R1801	0.122	3
2	30	35	569138	E92/32SPV	2CSM256913R1801	0.122	3

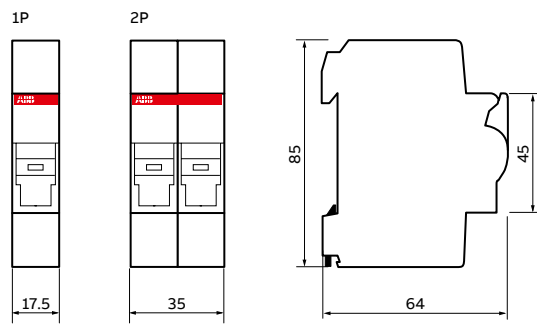


E90 PV 1500E

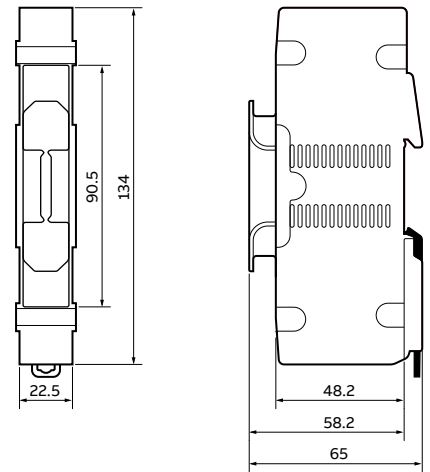
E90 PV 1500 V DC fuse holder for 10x85 and 10/14x85 mm fuses

Poles	Rated current	Width mm	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
				Type code	Order code		
1	32	22.5	020417	E91/32PV1500E	2CSM202041R1801	0.080	5
1	32	22.5	743613	E91/32PV1500E	2CSM274361U1801	0.080	60

Overall dimensions
All measurements in mm



E90 PV 1000 V DC



E90 PV 1500 V DC

Fuse E9F PV

E9F fuses for 1000 V DC



The E9F PV series of cylindrical fuses has been specifically designed for protecting direct current circuits up to 1500 V DC. These fuses are the best way to protect the strings, inverters and surge arresters in photovoltaic installations.

The range of E9F PV fuses is available in the 10.3 x 38 mm size for up to 30 A rated current values at a nominal voltage of 1000 V DC or in the 10x85 mm size up to 32 A rated current at a nominal voltage of 1500 V DC.

Technical features

Type		E9F PV	E9F PV 1500
Reference standards	-	IEC 60269-6; ROHS 2002/98/CE, UL	IEC 60269-6; ROHS 2002/98/CE, UL
Rated current	[A]	1 to 30	4 to 32
Rated operational voltage	[V]	1000 DC	1500 DC
Breaking capacity	[kA]	10	50
Overall dimensions	[mm]	10.3x38	10x85

Fuse E9F PV

Ordering codes and dimensions



E9F PV

E9F PV 1000 V DC 10x38 mm fuses

Rated current	Bbn 8012542	Order details		Weight 1 piece kg	Pack unit pc.
	EAN	Type code	Order code		
1	134568	E9F1PV	2CSM213456R1801	0.007	10
2	134667	E9F2PV	2CSM213466R1801	0.007	10
3	134766	E9F3PV	2CSM213476R1801	0.007	10
4	134865	E9F4PV	2CSM213486R1801	0.007	10
5	134964	E9F5PV	2CSM213496R1801	0.007	10
6	135060	E9F6PV	2CSM213506R1801	0.007	10
7	135169	E9F7PV	2CSM213516R1801	0.007	10
8	135268	E9F8PV	2CSM213526R1801	0.007	10
10	135367	E9F10PV	2CSM213536R1801	0.007	10
12	135466	E9F12PV	2CSM213546R1801	0.007	10
15	135565	E9F15PV	2CSM213556R1801	0.007	10
20	135664	E9F20PV	2CSM213566R1801	0.007	10
25	135763	E9F25PV	2CSM213576R1801	0.007	10
30	135862	E9F30PV	2CSM213586R1801	0.007	10

E9F PV 1500 V DC 10x85 mm fuses

Rated current	Bbn 8012542	Order details		Weight 1 piece kg	Pack unit pc.
	EAN	Type code	Order code		
4	339410	E9F4PV1500	2CSM233941R1801	0.010	5
5	52852	E9F5PV1500	2CSM205285R1801	0.010	5
6	52951	E9F6PV1500	2CSM205295R1801	0.010	5
7	53057	E9F7PV1500	2CSM205305R1801	0.010	5
8	53156	E9F8PV1500	2CSM205315R1801	0.010	5
10	53255	E9F10PV1500	2CSM205325R1801	0.010	5
12	53354	E9F12PV1500	2CSM205335R1801	0.010	5
15	53453	E9F15PV1500	2CSM205345R1801	0.010	5
20	68754	E9F20PV1500	2CSM206875R1801	0.010	5
25	68952	E9F25PV1500	2CSM206895R1801	0.010	5
30	69058	E9F30PV1500	2CSM206905R1801	0.010	5
32	69256	E9F32PV1500	2CSM206925R1801	0.010	5



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