



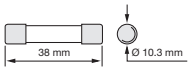


E 90 fuse-disconnectors

E 90 series fuse-disconnectors are designed for connecting and disconnecting circuits under load, providing protection against short circuits and overloads. The case is made of self-extinguishing thermoplastic material resistant to high temperatures (all materials are UL listed) while the contact clips are in silver plated copper.

E 90 fuse-disconnectors can be sealed or padlocked to ensure operator safety during maintenance. Versions with blown fuse indicator allow to check whether the fuse is still working correctly or not. For easy and quick installation E 90 range is fully compatible with connecting bars, terminals and caps of S 200 MCBs

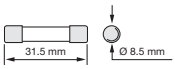
E 90 fuse-disconnectors for 10.3 x 38 mm fuses (AC-22B)



Poles	Rated current	Modules	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In		**Type code**	Order code	**EAN**			kg	pc.
1	32	1	**E 91/32**	2CSM200923R1801	**009238**			0.061	6
1	32	1	**E 91/32s**	2CSM202483R1801	**024835**			0.062	6
1+N	32	2	**E 91N/32**	2CSM200893R1801	**008934**			0.130	3
2	32	2	**E 92/32**	2CSM200883R1801	**008835**			0.122	3
3	32	3	**E 93/32**	2CSM204753R1801	**047537**			0.183	2
3+N	32	4	**E 93N/32**	2CSM204733R1801	**047339**			0.252	1
4	32	4	**E 94/32**	2CSM204723R1801	**047230**			0.244	1
N	32	-	**E 9N**	2CSM277953R1801	**779537**			0.069	6

s: version with blown fuse indicator light

E 90 fuse-disconnectors for 8.5 x 31.5 mm fuses (AC-22B)



1	20	1	**E 91/20**	2CSM200983R1801	**009832**			0.061	6
1	20	1	**E 91/20s**	2CSM202423R1801	**024231**			0.062	6
2	20	2	**E 92/20**	2CSM200953R1801	**009535**			0.122	3
3	20	3	**E 93/20**	2CSM200943R1801	**009436**			0.183	2
N	20	-	**E 9N**	2CSM277953R1801	**779537**			0.069	6

s: version with blown fuse indicator light

Technical features

Type			**E 90/20**	**E 90/32**
Fuse			8 x 32	10 x 38
Kind of current			AC / DC	
Rated frequency		[Hz]	= / 50-60	
Rated current		[A]	20	32
Tightening torque		[Nm]	PZ2 2-2.5	
Protection degree			IP20	
Padlocked (open)			■	
Sealed (closed)			■	
IEC 60947-3				
Rated operational voltage		[V]	400	690
Utilization category			AC-22B / DC-20B	
Power consumption per pole	aM	[W]	0.9	1.2
	gG	[W]	2.5	3.0
IEC 60269-1				
Rated voltage AC		[V]	400	690
Rated voltage DC		[V]	400	690
IEC 60269-2				
Fuse system			F	
Rated voltage AC		[V]	400	690
Rated voltage DC		[V]	250	440
Minimum rated breaking capacity			50 AC – 25 DC	
IEC 60269-3				
Fuse system			B	
Rated voltage AC		[V]	400	

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Materials

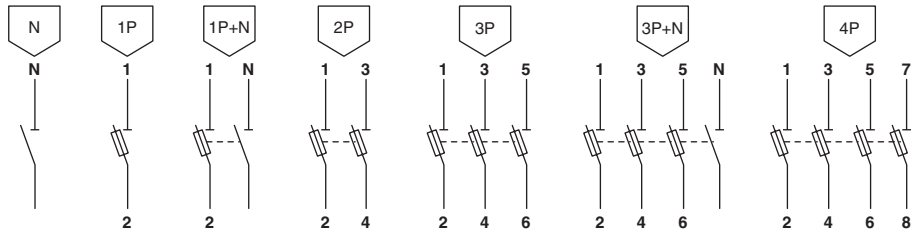
Plastic parts	Case:	Material PA 6 +30% glass fibre
		Self extinguishing class: V2 (UL94)
		Temperature resistance: 130 °C
	Opening handle	Material PA 66 +25% glass fibre
		Self-extinguishing class V0 (UL94)
		Temperature resistance: 140 °C
Metal parts	Clips	Silver plated copper
	Clip spring	Stainless steel
	Terminals	Galvanized steel

Utilization category

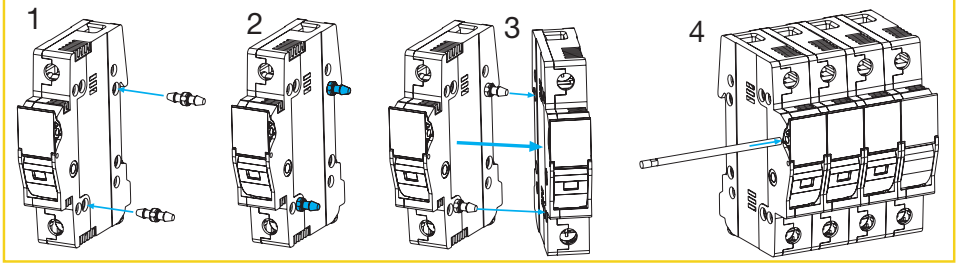
Current type	Utilization category	Typical applications
Alternating current	AC-20A - AC-20B	Connecting and disconnecting under no load (in this case the devices must be marked “Do not disconnect under load”)
	AC-21A - AC-21B	Switching of resistive loads, including moderate overloads
	AC-22A - AC-22B	Switching of mixed resistive/inductive loads, including moderate overloads
	AC-23A - AC-23B	Switching of motors and other highly inductive loads
Direct current	**DC-20A - DC-20B**	Connecting and disconnecting under no load (in this case the devices must be marked “Do not disconnect under load”)
	DC-21A - DC-21B	Switching of resistive loads, including moderate overloads
	DC-22A - DC-22B	Switching of mixed resistive / inductive loads, including moderate overloads
	DC-23A - DC-23B	Switching of motors or other highly inductive loads

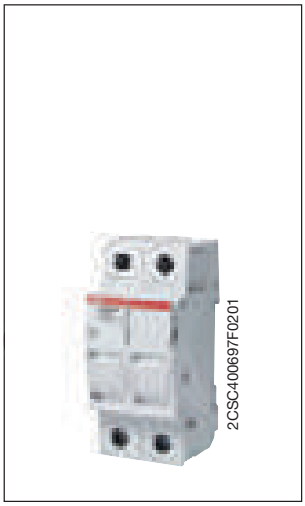
	Suffix A	Frequent use
	Suffix B	Infrequent use

Electrical symbols



Multi-pole coupling



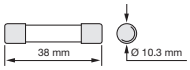


E 90 PV fuse-disconnectors

E 90 PV series fuse-disconnectors, designed for operating voltages of 1000 V d.c. with utilization category DC-20B, are particularly suited for protection against overcurrents of photovoltaic systems.

The single-pole or two-pole E 90 PV disconnectors for 10.3 x 38 mm cylindrical fuse links offer a reliable, compact and affordable solution for photovoltaic installations. Versions with blown fuse indicator allow to check whether the fuse is still working correctly or not.

E 90 PV fuse-disconnectors for 10.3 x 38 mm fuses (DC-20B)



Poles	Rated current	Modules	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In		Type code	Order code	EAN			kg	pc.
1	32	1	**E 91/32 PV**	2CSM204713R1801	**047131**			0,061	6
1	32	1	**E 91/32 PVs**	2CSM204693R1801	**046936**			0,062	6
2	32	2	**E 92/32 PV**	2CSM204703R1801	**047032**			0,122	3

s: version with blown fuse indicator light

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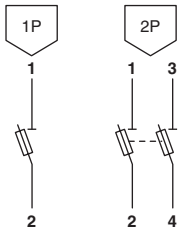
Electrical symbols

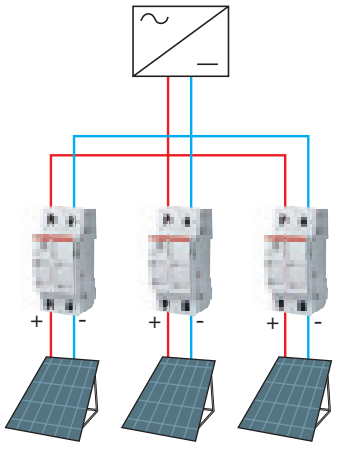


Technical features

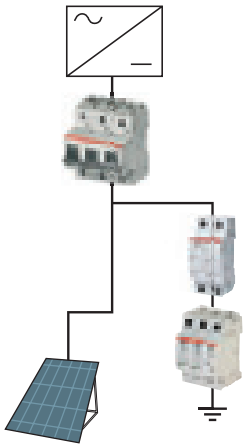
Type			E 90/32 PV
Fuse			10 x 38
Kind of current			DC
Rated frequency		[Hz]	= / 50-60
Rated Current		[A]	32
Tightening Torque		[Nm]	PZ2 2-2.5
Protection degree			IP20
Padlocked (open)			■
Sealed (closed)			■

IEC 60947-3			
Rated operational voltage		[V]	1000
Utilization category			DC-20B
Power consumption	aM	[W]	1.2
per pole	gG	[W]	3.0

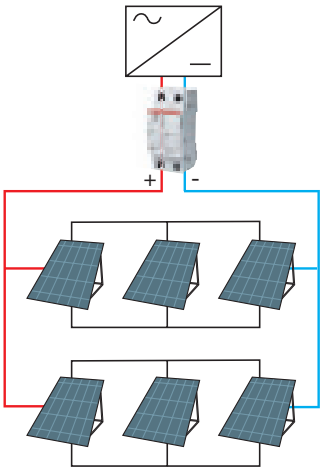
Application example of fuse disconnectors in photovoltaic system



Lines protection
E 90 PV fuse-disconnectors allow overload protection of each line, thus preventing damage of critical plant components.



OVR Surge Protective Device protection
E 90 PV fuse-disconnectors can be installed in field enclosure as back-up protection of Surge Protective Device.



Inverter protection
In small photovoltaic plants, inverter protection against overload and short-circuit is possible by means of E 90 PV.

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