



Load break switches
for PV applications

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PV load break switches from 100 to 2000A

The 55PV load break switch disconnecter family covers a wide power range (from 100 A to 2000 A), designed to provide maximum safety at operating voltages of up to 1000 V. An innovative load breaking technology allows you to achieve these performances with especially compact size switches.

Functions

Switch disconnectors in photovoltaic circuits perform a critical function in guaranteeing the isolation of the circuit even in systems with elevated operating voltage values.

The switches are built to withstand continual temperature changes, characteristic of photovoltaic applications, without their circuit breaking capacity being affected. Long-term insulation is guaranteed, even in the presence of external elements (dust, condensation) which increase the electrical risk.

According to standards

- IEC 60947-3

General characteristics

- Wide range of currents (100-2000A) in 4 different sizes.
- 2-pole model up to 315 A, fast installation and lower heating.
- Extra-quick circuit-breaking technology.
- Positive break indication.
- High thermal and dynamic strength.
- High insulating distances (>50mm)
- High resistance to moist heat.
- Auxiliary contact accessory enables for control circuits.

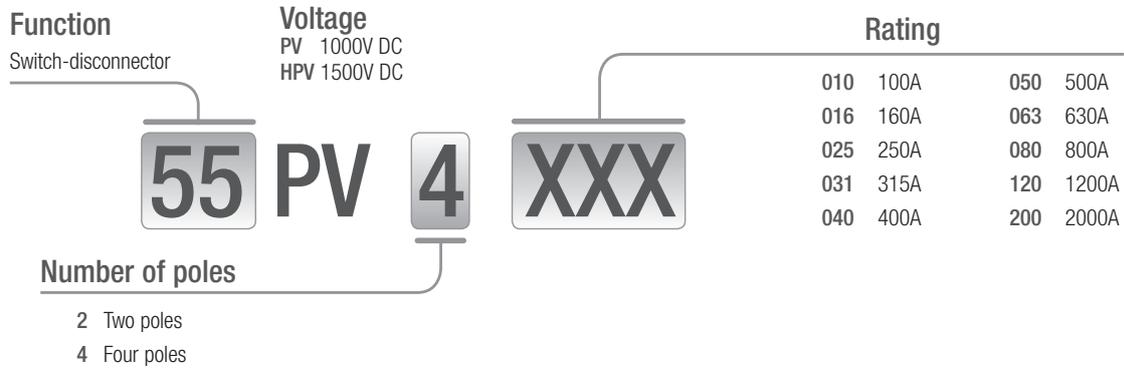
Applications

Connection and disconnection of photovoltaic generation circuits on industrial roofs, trackers or PV plants.

Design

The housing has been designed with increased leakage distances (>50mm) on the live parts to guarantee long-term safety against electrical risk. A particular circuit -breaking technology for elevated operating voltages allows quick arc suppression. Up to 315A there is no need for contacts in series. The outstanding characteristics of the production materials with high thermal stability and dielectric performance guarantee the set durability.

Reference system



Technical characteristics

Nominal rating	
Thermal rating at 40°C	Ith A
Insulating voltage	Ui (V)
Impulse voltage	Uimp (kV)
Operating voltage	Ue (V)
Operating ratings DC21B -1000VDC	A
Rated short-time withstand current 0,3s	(kA ef)
Rated short-time withstand current 1s	(kA ef)
Maximum Cu cable cross-section	mm ²
Maximum Cu busbar width	mm ²
Min/max tightening torque	Nm

Size B4 (2 P)			
100A	160A	250A	315A
100	160	250	315
1500	1500	1500	1500
12	12	12	12
1000	1000	1000	1000
100	160	250	315
10	10	10	10
5	5	5	5
35	70	120	185
32	32	32	32
10	10	10	10

Nominal rating	
Thermal rating at 40°C	Ith A
Insulating voltage	Ui (V)
Impulse voltage	Uimp (kV)
Operating voltage	Ue (V)
Operating ratings DC21B -1000VDC (4 pole devices 2P per polarity)	A
Rated short-time withstand current 0,3s	(kA ef)
Rated short-time withstand current 1s	(kA ef)
Maximum Cu cable cross-section	mm ²
Maximum Cu busbar width	mm ²
Min/max tightening torque	Nm

Size B4 (4 P)		Size B5 (4 P)		Size B6 (4 P)	Size B7 (4 P)
400A	500A	630A	800A	1250A	2000A
400	500	630	800	1250	2000
1500	1500	1500	1500	1500	1500
12	12	12	12	12	12
1000	1000	1000	1000	1000	1000
400	500	630	800	1250	2000
-	-	-	-	-	-
10	10	10	10	10	10
185	2x185	2x185	2x185	2x240	-
32	32	40	50	63	100
10	10	14,5	14,5	37	

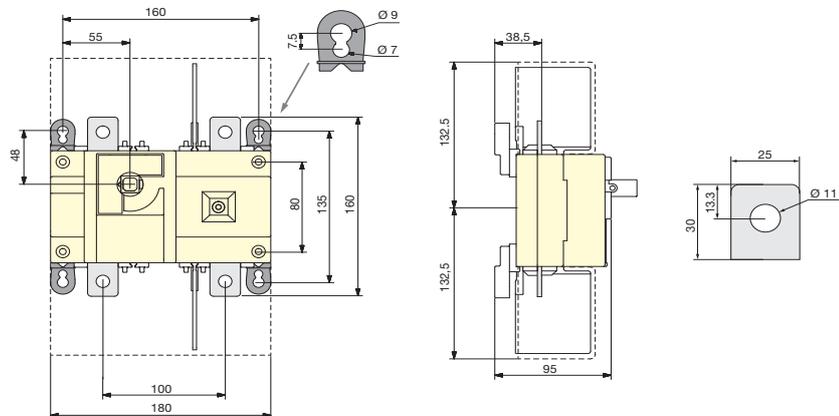
References and dimensions



Size B4 - 2 Poles

References	Poles in serie	Rating	Voltage (VDC)	Weight (Kg)	Connection
55PV2010	1P+ / 1P	100A	1000	1,8	Screw M6(x4)
55PV2016	1P+ / 1P	160A	1000	1,8	Screw M6(x4)
55PV2025	1P+ / 1P	250A	1000	1,8	Screw M6(x4)
55PV2031	1P+ / 1P-	315A	1000	1,8	Screw M6(x4)

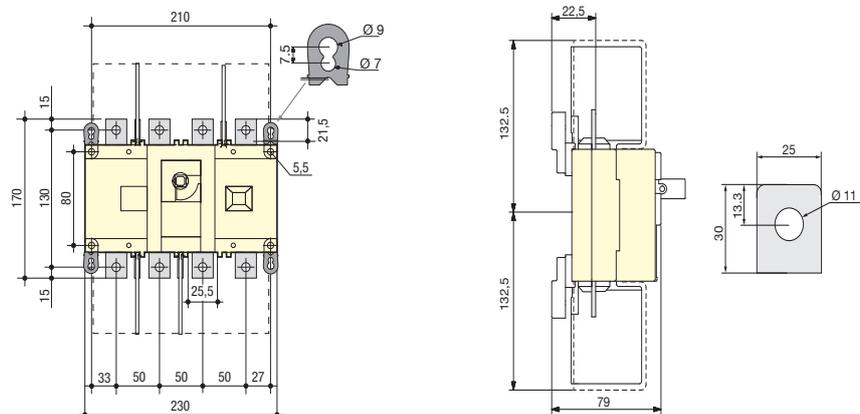
Dimensions



Size B4 - 4 Poles

References	Poles in serie	Rating	Voltage (VDC)	Weight (Kg)	Connection
55PV4040	2P+ / 2P-	400A	1000	2	M6(x8)+2 bridges
55PV4050	2P+ / 2P-	500A	1000	2	M6(x8)+2 bridges

Dimensions

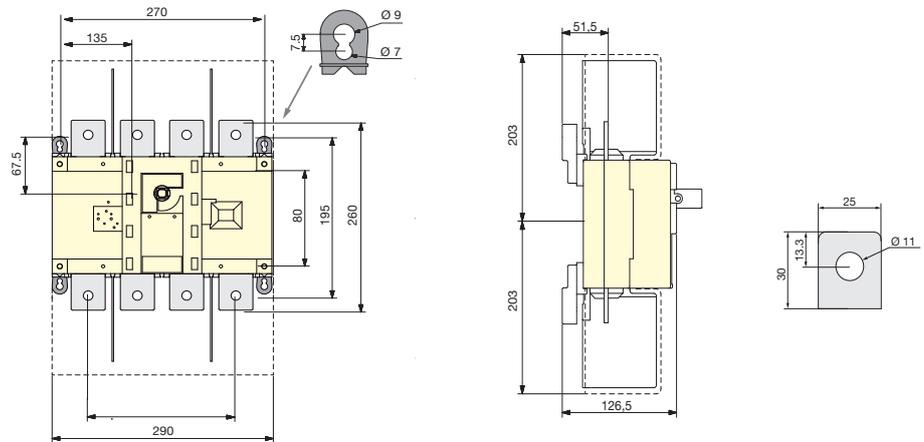




Size B5

References	Poles in serie	Rating	Voltage (VDC)	Weight (Kg)	Connection
55PV4063	2P+ / 2P-	630A	1000	4	M8(x8)+2 bridges
55PV4080	2P+ / 2P-	800A	1000	4	M8(x8)+2 bridges

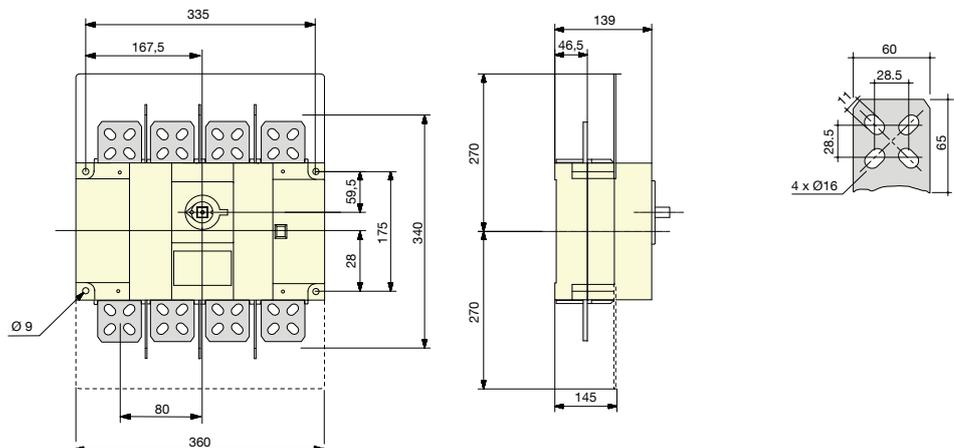
Dimensions



Size B6

References	Poles in serie	Rating	Voltage (VDC)	Weight (Kg)
55PV4120	2P+ / 2P-	1200A	1000	8

Dimensions



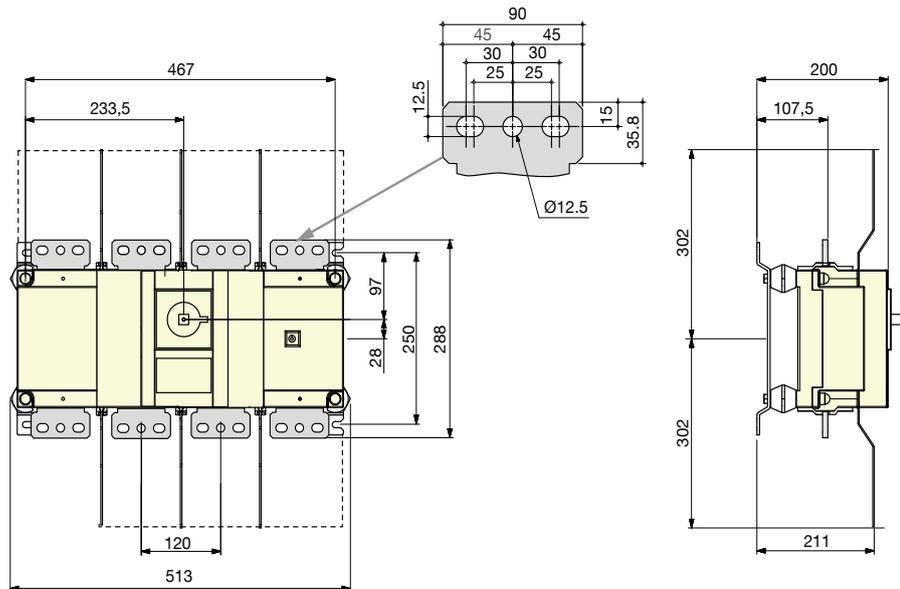
References and dimensions



Size B7

References	Poles in serie	Rating	Voltage (VDC)	Weight (Kg)
55PV4200	2P+ / 2P-	2000A	1000	14

Dimensions



Accessories scheme

Switch type	Direct handle	External handle	Prolongued shaft	Bridging bars	Auxiliary contact	Protection screens
100A / B4 2P	Handle J1 S11J1	Handle S2 S13S2	200 mm S081020	-	1 st NO/NC contact 2699 0031 2 nd NO/NC contact 2699 0032	S063B4
160A / B4 2P						
250A / B4 2P						
315A / B4 2P						
400A / B4 4P			S04P0500			
500A / B4 4P						
630A / B5						
800A / B5						
1250A / B6	Handle J4 S11J4	Handle S4 S13S4	200 mm S081520	S04P0800	S064B	
2000A / B7			320 mm S081532	S04P1100	S064B6	
			400 mm S081540	S04P1200	S064B7	

References accessories



Operation handles

References	Size	Type	Description
S11J1	B4 - B5	J1	Mounting with frontal screw Padlockable.
S11J4	B6 - B7	J4	
S13S2	B4 - B5	S2	Mounting from outside or inside the panel. Material highly resistant to UV rays and aggressive environments. Padlockable handle.
S13S4	B6 - B7	S4	

Prolongued shafts



References	Size	Length	Handle	Description
S081020	B4 - B5	200mm	S2	Interlocking tip in Zamak material of high robustness. Shafts surface chemically treated against corrosion. Several standard lengths.
S081032		320mm		
S081050		500mm		
S081520	B6 - B7	200mm	S4	
S081532		320mm		
S081540		400mm		

Protection screens



References	Size	Poles	Position	Description
S063B4	B4	2P	Top or bottom	Easy to install. Transparent plastic material allows the inspection of the connections. Top or bottom installation.
S064B4		4P		
S064B5	B5	4P		
S064B6	B6	4P		
S064B7	B7	4P		

Bridging bars



References	Size	Rating	Bridges	Description
S04P0500	B4	400 - 500A	1	
S04P0800	B5	630 - 800A	2	
S04P1100	B6	800 - 1250A	1	
S04P1200	B7	2000A	1	consult

gave electro, s.l.

c/ Alfred Nobel, nr 16, P.O. Box 12
Pl. Valldoríolf. 08430 La Roca del Vallès
Barcelona (SPAIN)
www.gave.com - gave@gave.com
Tel. +34 93 842 22 12
Fax +34 93 842 22 27



+31 (0)180 33 05 22
sales@controlin.nl
www.controlin.nl