



SIRCO PV IEC 60947-3

Load break switches for photovoltaic applications
from 100 to 3200 A, up to 1500 VDC

new



Function

SIRCO PV are manually operated multipolar load break switches, dedicated to photovoltaic application, able to make and break under load up to 500 VDC per poles.

These switches are extremely durable and are tested and approved for use in the most demanding applications.

They are available in 2, 3, 4, 6 and 8 poles for all configurations from one to 4 circuits, in order to suit all your requirements.

Advantages

Optimise your investment

High switching performances means less poles in series to reach the operating voltage, consequently:

- Less bridging bars required, limiting installation costs and time.
- Less heat dissipation, making it possible to be installed in a smaller enclosure.

Guarantee safety over time

SIRCO PV are extremely robust products, with all casings made from fiber glass reinforced polyester materials that allows:

- High mechanical withstand.
- High stability to temperatures (RTI of 130 °C).
- High dielectric performance (high CTI / tested according to ASTM D 2303).

Take advantage of an innovative design

The Sirco PV are able to operate on and off load up to 500 VDC per poles, providing extremely compact solutions:

- 1500 VDC on a 3 poles switch.
- Up to 4 circuits each at 1000 VDC on an 8 poles switch.

Reliability and performance

Our range of SIRCO PV load break switches is compliant with UL98B and IEC 60947-3 standards and have been tested above standards expectation, ensuring no critical current.

They are as well able to withstand 10 kA, 50 ms, allowing the use of any overcurrent protection device for line protection.

The solution for

- > Combiner box
- > Recombiner box
- > Inverter



Strong points

- > Patented switching technology up to 1500 VDC/pole
- > Positive break indication
- > Up to 1500 VDC as per IEC 60947-3
- > Up to 4 circuits on a single switch

Conformity to standards

- > IEC 60947-3
- > IEC 60364-7-712
- > UL 98B⁽¹⁾



(1) See page 58.

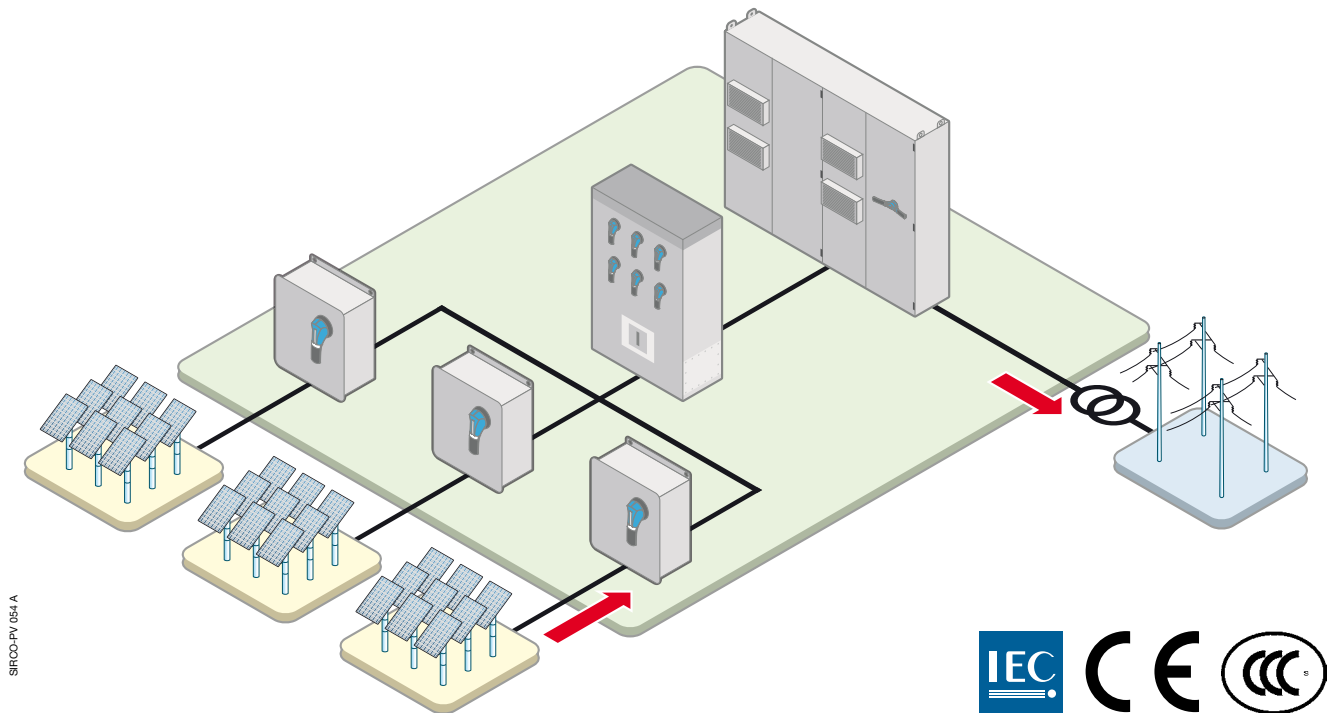
Approvals and certifications⁽¹⁾



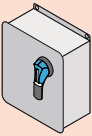
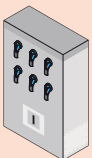
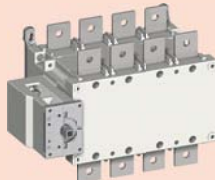
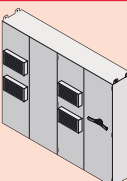
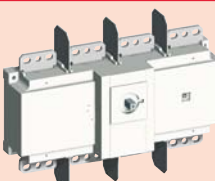
(1) Product reference on request.

Typical PV architecture

The SIRCO PV range provides safe disconnection and isolation at all levels of your PV installation.



The SOCOMEC solutions

LEVEL OF INSTALLATION	SOCOMEK SOLUTIONS	
Combiner box		
		SIRCO PV One circuit up to 500 A at 1500 VDC
Recombiner box		
		SIRCO PV 4 circuits up to 500 A at 1000 VDC 2 circuits up to 500 A at 1500 VDC
Inverter		
		SIRCO PV One circuit up to 3200 A at 1000 VDC up to 2000 A at 1500 VDC

SIRCO PV IEC 60947-3

Load break switches for photovoltaic applications

from 100 to 3200 A, up to 1500 VDC

References

1000 VDC - Back plate mounting

Rating (A)	Frame size	Number of poles	Switch body	Direct handle	External handle	Shaft for external handle	Quantity to be ordered to connect 2 poles in series	
1 PV circuit								
100 A	B4	2 P	26PV 2010	J1 type Black 1112 1111 Red 1113 1111	S2 type ⁽¹⁾ Black IP55 1421 2111 Black IP65 1423 2111 Red IP65 1424 2111	200 mm 1400 1020 320 mm 1400 1032 400 mm 1400 1040	-	
160 A	B4	2 P	26PV 2016					
250 A	B4	2 P	26PV 2025					
315 A	B4	2 P	26PV 2031				2x 2609 0025	
400 A	B4	4 P	26PV 4040					
500 A	B4	4 P	26PV 4050					
630 A	B5	4 P	26PV 4063					
800 A	B5	4 P	26PV 4080	1x 2609 0080				
1250 A	B6	4 P	26PV 4120		C2 type Black 2799 7012 Red 2799 7013	S4 type ⁽¹⁾ Black IP65 1443 3111 Red IP65 1444 3111	200 mm 1401 1520 320 mm 1401 1532 400 mm 1401 1520	1x 2609 1100
2000 A	B7	4 P	26PV 4200					2x 2609 1200
3200 A	B8	4 P	please consult us		V1 type Black IP65 2799 7145	320 mm 2799 3018 450 mm 2799 3019	please consult us	
2 PV circuits								
100 A	B4 _{DS}	4 P	26PV 5010	J2 type Black 1122 1111 Red 1123 1111	S2 type ⁽¹⁾ Black IP55 1421 2111 Black IP65 1423 2111 Red IP65 1424 2111	200 mm 1400 1020 320 mm 1400 1032 400 mm 1400 1040	-	
160 A	B4 _{DS}	4 P	26PV 5016					
250 A	B4 _{DS}	4 P	26PV 5025					
315 A	B4 _{DS}	4 P	26PV 5031				J1 type Black 1112 1111 Red 1113 1111	1x 2709 0045
400 A	B5	4 P	27PV 4032					
500 A	B5	4 P	27PV 4039	J2 type Black 1122 1111 Red 1123 1111			1x 2609 0080	
630 A	B5 _{DS}	8 P	26PV 8063					
800 A	B6 _{DS}	8 P	26PV 8080		C2 type Black 2799 7012 Red 2799 7013	V1 type Black IP65 2799 7145		320 mm 4199 3018
1250 A	B6 _{DS}	8 P	26PV 8120	1x 2609 1200				
2000 A	B7 _{DS}	8 P	26PV 8200					
4 PV circuits								
275 A	B5 _{DS}	8 P	27PV 8026	J2 type Black 1122 1111 Red 1123 1111	S2 type ⁽¹⁾ Black IP55 1421 2111 Black IP65 1423 2111 Red IP65 1424 2111	200 mm 1400 1020 320 mm 1400 1032 400 mm 1400 1040	4x 2709 0045	
400 A	B5 _{DS}	8 P	27PV 8032					
500 A	B5 _{DS}	8 P	27PV 8039					

(1) With deflectable door interlock.

1500 VDC - Back plate mounting

Rating (A)	Frame size	Number of poles	Switch body	Direct handle	External handle	Shaft for external handle	Quantity to be ordered to connect 2 poles in series
1 PV circuit							
275 A	B5	3 P	27PV 3026	J2 type Black 1122 1111 Red 1123 1111	S2 type ⁽¹⁾ Black IP55 1421 2111	200 mm 1400 1020	1x 2709 0027
400 A	B5	3 P	27PV 3032		Black IP65 1423 2111	320 mm 1400 1032	1x 2709 0045
500 A	B5	3 P	27PV 3039			400 mm 1400 1040	1x 2609 0080
630 A	B5 _{DS}	8 P	26PV 8063	C2 type Black 2799 7012 Red 2799 7013	Red IP65 1424 2111		
800 A	B6 _{DS}	8 P	26PV 8080		V1 type Black IP65 2799 7145	320 mm 4199 3018	1x 2609 1100
1250 A	B6 _{DS}	8 P	26PV 8120				1x 2609 1200
2000 A	B7 _{DS}	8 P	26PV 8200				
2 PV circuits							
275 A	B5 _{DS}	6 P	27PV 6026	J2 type Black 1122 1111 Red 1123 1111	S2 type ⁽¹⁾ Black IP55 1421 2111	200 mm 1400 1020	1x 2709 0027
400 A	B5 _{DS}	6 P	27PV 6032		Black IP65 1423 2111	320 mm 1400 1032	1x 2709 0045
500 A	B5 _{DS}	6 P	27PV 6039		Red IP65 1424 2111	400 mm 1400 1040	

(1) With defeatable door interlock.

Accessories

Direct operation handle

Frame size	Handle type	Handle colour	Reference
B4 ... B7	J1 type	Black	1112 1111
B4 ... B5	J1 type	Red	1113 1111
B6 ... B7	C2 type	Black	2799 7012
B6 ... B7	C2 type	Red	2799 7013
B4 _{DS} ... B5 _{DS}	J2 type	Black	1122 1111
B4 _{DS} ... B5 _{DS}	J2 type	Red	1123 1111
B4 _{DS} ... B7 _{DS}	C2 type	Black	2799 7012
B4 _{DS} ... B7 _{DS}	C2 type	Red	2799 7013



Door interlocked external operation handle

Use

Door interlocked external operation handles include an escutcheon, are padlockable and must be utilised with an extension shaft. In a combiner box, located close to the solar cell strings, or located close to the inverter, we recommend to use a door interlocked external handle for its safety features.

Example

The locking function of the enclosure in the "ON" position will force the operator to safely disconnect and isolate the solar cell strings prior to any intervention. Opening the door when the switch is on "ON" position is possible by defeating the locking function using a tool (authorised persons only). The interlocking function is restored when the door is closed back.



Front operation

Frame size	Handle type	Handle colour	Degree of protection	Reference
B4 ... B5 - B4 _{DS}	S2	Black	IP55	1421 2111
B4 ... B5 - B4 _{DS}	S2	Black	IP65	1423 2111
B4 ... B5 - B4 _{DS}	S2	Red	IP65	1424 2111
B5 _{DS} - B6 ... B7	S4	Black	IP65	1443 3111
B5 _{DS} - B6 ... B7	S4	Red	IP65	1444 3111
B8 - B6 _{DS} - B7 _{DS}	V1	Black	IP65	2799 7145

Accessories (continued)

Shaft for external handle

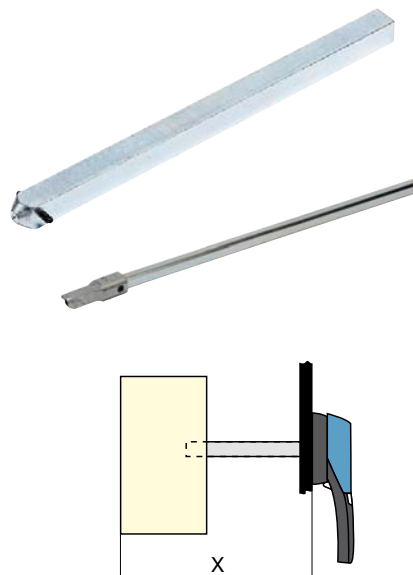
Use

Standard lengths:

- 200 mm,
- 320 mm,
- 400 mm.

Other lengths: please consult us.

Frame size	Handle type	Dimension Y (mm)	Length (mm)	Reference
B4	S2	150 ... 295	200	1400 1020
B4	S2	150 ... 415	320	1400 1032
B4	S2	150 ... 495	400	1400 1040
B5	S2	203 ... 328	200	1400 1020
B5	S2	203 ... 448	320	1400 1032
B5	S2	203 ... 525	400	1400 1040
B6	S4	220 ... 343	200	1401 1520
B6	S4	220 ... 463	320	1401 1532
B6	S4	220 ... 543	400	1401 1540
B7	S4	305 ... 366	200	1401 1520
B7	S4	305 ... 485	320	1401 1532
B7	S4	305 ... 564	400	1401 1540
B4 _{DS}	S2	305 ... 363	200	1400 1020
B4 _{DS}	S2	305 ... 485	320	1400 1032
B4 _{DS}	S2	305 ... 561	400	1400 1040
B5 _{DS}	S4	406 ... 467	200	1401 1520
B5 _{DS}	S4	406 ... 589	320	1401 1532
B5 _{DS}	S4	406 ... 668	400	1401 1540
B6 _{DS}	V1	508 ... 714	320	4199 3018
B6 _{DS}	V1	508 ... 795	400	4199 3019
B7 _{DS}	V1	508 ... 714	320	4199 3018
B7 _{DS}	V1	508 ... 795	400	4199 3019
B8	V1	415...690	320	2799 3018
B8	V1	415...820	450	2799 3019



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access_369_a_1_cat

access_202_a_1_x_cat

Shaft guide for external operation

Use

To guide the shaft extension into the external handle.

Required for shaft lengths over 320 mm.

This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm.

Description	Reference
Shaft guide	1429 0000



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S-type handle adapter

Use

Enables S-type handles to be fitted in place of existing older style Socomec handles. Adapter can also be utilised as a spacer to increase the distance between the panel door and the handle lever.

Dimensions

Adds 12 mm to the depth.

Handle colour	External IP ⁽¹⁾	To be ordered in multiples of	Reference
Black	IP65	1	1493 0000

(1) IP: protection degree according to IEC 60529 standard.



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Alternative S-type handle cover colours

Use

For single lever handles type S1, S2, S3.

Other colours: please consult us.

Handle colour	Handle	To be ordered in multiples of	Reference
Light grey	S1, S2, S3 type	50	1401 0001
Dark grey	S1, S2, S3 type	50	1401 0011
Light grey	S4 type	50	1401 0031
Dark grey	S4 type	50	1401 0041



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Auxiliary contact

Use

Pre-break and signalling of positions 0 and I:

- 1 to 2 NO/NC auxiliary contacts,
- 1 to 4 NO + NC auxiliary contacts,
- 1 to 2 low level NO/NC auxiliary contacts.

Characteristics

NO/NC AC: IP2 with front operation.

Connection to the control circuit

By 6.35 mm fast-on terminal.

Electrical characteristics

30 000 operations.

NO/NC changeover auxiliary contacts

Frame size	Position AC	Type	Reference
B4 ... B8	1 contact	NO/NC	2699 0031
B4 ... B8	2 contacts	NO/NC	2600 0032
B4 _{DS} ... B7 _{DS}	1 contact	NO/NC	2699 0061
B4 _{DS} ... B7 _{DS}	2 contacts	NO/NC	2699 0062

Low level NO/NC auxiliary contacts

Frame size	Position AC	Type	Reference
B4 ... B7	1 contact	NO/NC	2699 0301
B4 ... B7	2 contacts	NO/NC	2600 0302

NO+NC contact

Frame size	Position AC	Type	Reference
B4 ... B7	1 contact	NO + NC	2699 0061
B4 ... B7	2 contacts	NO + NC	2699 0062



access_076_a_1_cat

Terminal screen

Use

Top and bottom protection against direct contact with terminals or connection parts.

Frame size	No. of poles	Position	Pack	Reference
B4	2 P	top or bottom	1 unit	2698 3020
B4	4 P	top or bottom	1 unit	2698 4020
B5	3 P	top or bottom	1 unit	2698 3050
B5	4 P	top or bottom	1 unit	2698 4050
B6	4 P	top or bottom	1 unit	2698 4080
B7	4 P	top or bottom	1 unit	2698 4120
B8	4 P	top or bottom	1 unit	2698 4200
B4 _{DS}	2 P	top or bottom	1 unit	1509 3025
B5 _{DS}	6 P	top and bottom	2 units	1509 3063
B5 _{DS}	8 P	top and bottom	2 units	1509 4063
B6 _{DS}	8 P	top and bottom	2 units	1509 4080
B7 _{DS}	8P	top and bottom	2 units	1509 4199



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from 100 to 3200 A, up to 1500 VDC

Accessories (continued)

Bridging bars for connecting poles in series

Use

The bridging bars will make easy the connection of the poles in series, allowing the following configurations⁽¹⁾.

⁽¹⁾ Other connections: refer to mounting instructions.

1000 VDC

Frame size	Rating (A)	Quantity to be ordered to connect 2 poles in series	Fig.	Reference
1 PV circuit				
B4	100	— ⁽¹⁾	—	— ⁽¹⁾
B4	160	— ⁽¹⁾	—	— ⁽¹⁾
B4	250	— ⁽¹⁾	—	— ⁽¹⁾
B4	315	— ⁽¹⁾	—	— ⁽¹⁾
B4	400	2	1	2609 0025
B4	500	2	1	2609 0025
B5	630	1	2	2609 0080
B5	800	1	2	2609 0080
B6	1250	1	3	2609 1100
B7	2000	1	3	2609 1200
B8	3200			please consult us
2 PV circuits				
B4 _{DS}	100	— ⁽¹⁾	—	— ⁽¹⁾
B4 _{DS}	160	— ⁽¹⁾	—	— ⁽¹⁾
B4 _{DS}	250	— ⁽¹⁾	—	— ⁽¹⁾
B4 _{DS}	315	— ⁽¹⁾	—	— ⁽¹⁾
B5	400	1	4	2709 0045
B5	500	1	4	2709 0045
B5 _{DS}	630	1	2	2609 0080
B6 _{DS}	800	1	3	2609 1100
B6 _{DS}	1250	1	3	2609 1100
B7 _{DS}	2000	1	3	2609 1200
4 PV circuits				
B5 _{DS}	500	1	4	2709 0045

1500 VDC

Frame size	Rating (A)	Quantity to be ordered to connect 2 poles in series	Fig.	Reference
1 PV circuit				
B5	275	1	5	2709 0027
B5	315	1	5	2709 0027
B5	400	1	4	2709 0045
B5	500	1	4	2709 0045
B5 _{DS}	630	1	2	2609 0080
B6 _{DS}	800	1	3	2609 1100
B6 _{DS}	1250	1	3	2609 1100
B7 _{DS}	2000	1	3	2609 1200
2 PV circuits				
B5 _{DS}	275	1	5	2709 0027
B5 _{DS}	400	1	4	2709 0045
B5 _{DS}	500	1	4	2709 0045

⁽¹⁾ Bridging bars not needed.

Bridging bars for connecting poles in series (continued)

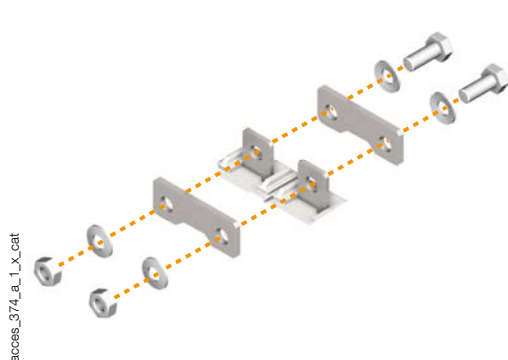


Fig. 1

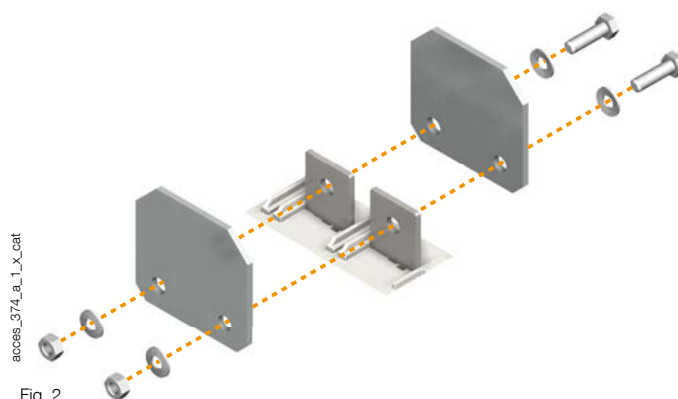


Fig. 2

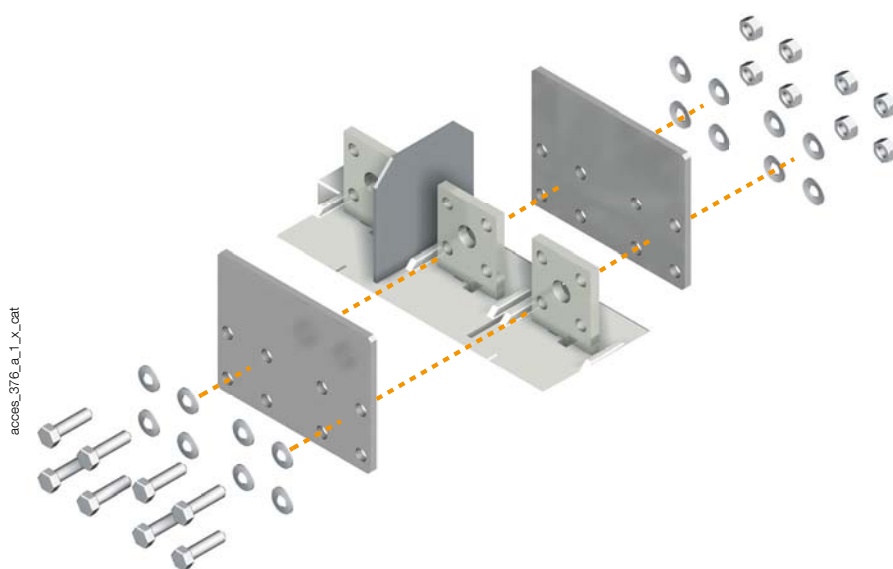


Fig. 3

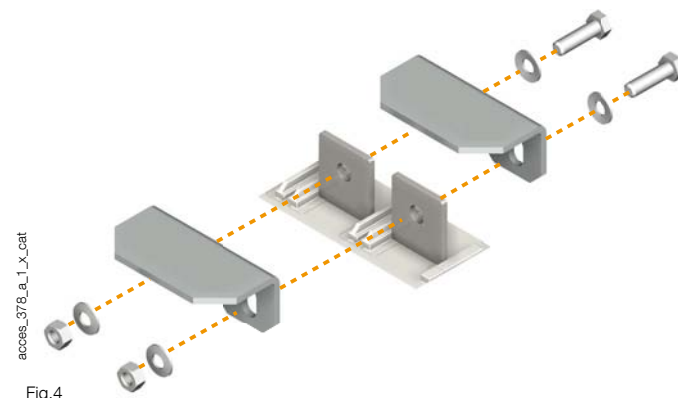


Fig. 4

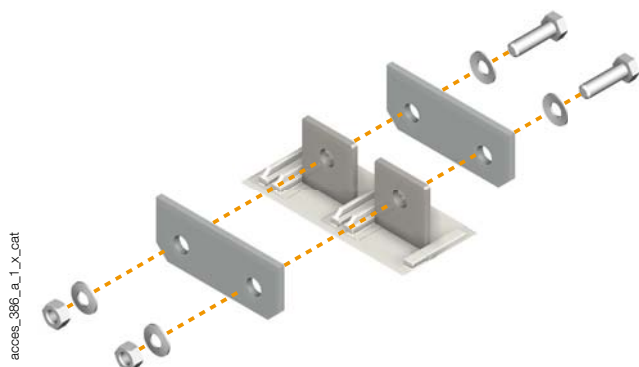


Fig. 5

Characteristics

Characteristics according to IEC 60947-3

Rated current In			100 A			160 A		
Thermal current at 40°C (A)			100			160		
Thermal current at 50°C (A)			100			160		
Thermal current at 60°C (A)			100			160		
Rated insulation voltage U _i (V)			1500			1500		
Rated impulse withstand voltage U _{imp} (kV)			12			12		

Number of circuits	Rated voltage	Utilisation category	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size
1 circuit	1000 VDC	DC-21 B	100	1 P + ; 1 P	2 P	B4	160	1 P + ; 1 P	2 P	B4
1 circuit	1500 VDC	DC-21 B	100	3 P + ; 1 P -	4 P	B4 _{DS}	160	3 P + ; 1 P -	4 P	B4 _{DS}
2 circuits	1000 VDC	DC-21 B	100	1 P + ; 1 P	4 P	B4 _{DS}	160	1 P + ; 1 P	4 P	B4 _{DS}

Short-circuit capacity (without protection)

Rated short-time withstand current 0.3 s. (kA eff)	10	10
Rated short-time withstand current 1 s. (kA eff)	5	5
Rated short-circuit making capacity I _{cm} (kA peak) - 50ms	10	10

Connection

Maximum Cu rigid cable cross-section (mm²)	35	70
Maximum Cu busbar width (mm)	32	32
Tightening torque min (Nm)	20	20
Tightening torque max (Nm)	26	26

Mechanical characteristics

Durability (number of operating cycles)	10 000	10 000
Tightening torque (Nm)	10	10
Weight of a 2 pole device (kg)	1.8	1.8
Weight of a 4 pole device (kg)	4.3	4.3

Rated current In			250 A			275 A		
Thermal current at 40°C (A)			250			275		
Thermal current at 50°C (A)			250			275		
Thermal current at 60°C (A)			250			275		
Rated insulation voltage U _i (V)			1500			1500		
Rated impulse withstand voltage U _{imp} (kV)			12			12		

Number of circuits	Rated voltage	Utilisation category	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size
1 circuit	1000 VDC	DC-21 B	250	1 P + ; 1 P	2 P	B4	275	1 P + ; 1 P -	3 P	B5
1 circuit	1500 VDC	DC-21 B	250	3 P + ; 1 P -	4 P	B4 _{DS}	275	2 P + ; 1 P -	3 P	B5
2 circuits	1000 VDC	DC-21 B	250	1 P + ; 1 P -	4 P	B4 _{DS}	275	1 P + ; 1 P -	6 P	B5 _{DS}
2 circuits	1500 VDC	DC-21 B	-	-	-	-	275	2 P + ; 1 P -	6 P	B5 _{DS}
4 circuits	1000 VDC	DC-21 B	-	-	-	-	275	1 P + ; 1 P -	8 P	B5 _{DS}

Short-circuit capacity (without protection)

Rated short-time withstand current 0.3 s. (kA eff)	10	10
Rated short-time withstand current 1 s. (kA eff)	5	5
Rated short-circuit making capacity I _{cm} (kA peak) - 50ms	10	10

Connection

Maximum Cu rigid cable cross-section (mm²)	120	185
Maximum Cu busbar width (mm)	32	32
Tightening torque min (Nm)	20	20
Tightening torque max (Nm)	26	26

Mechanical characteristics

Durability (number of operating cycles)	10 000	10 000
Tightening torque (Nm)	10	10
Weight of a 2 pole device (kg)	1.8	-
Weight of a 3 pole device (kg)	-	6
Weight of a 4 pole device (kg)	4.3	-
Weight of a 6 pole device (kg)	-	12.3
Weight of an 8 pole device (kg)	-	15

Characteristics according to IEC 60947-3 (continued)

Rated current In			315 A				400 A			
Thermal current at 40°C (A)			315				400			
Thermal current at 50°C (A)			315				400			
Thermal current at 60°C (A)			315				400			
Rated insulation voltage U _i (V)			1500				1500 ⁽¹⁾			
Rated impulse withstand voltage U _{imp} (kV)			12				12			
Number of circuits	Rated voltage	Utilisation category	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size
1 circuit	1000 VDC	DC-21 B	315	1 P + ; 1 P -	2 P	B4	400	2 P + ; 2 P -	4 P	B4
1 circuit	1500 VDC	DC-21 B	315	2 P + ; 1 P -	3 P	B5	400	2 P + ; 1 P -	3 P	B5
2 circuits	1000 VDC	DC-21 B	315	1 P + ; 1 P -	4 P	B4 _{DS}	400	1 P + ; 1 P -	4 P	B5
2 circuits	1500 VDC	DC-21 B	-	-	-	-	400	2 P + ; 1 P -	6 P	B5 _{DS}
4 circuits	1000 VDC	DC-21 B	-	-	-	-	400	1 P + ; 1 P -	8 P	B5 _{DS}

Short-circuit capacity (without protection)

Rated short-time withstand current 0.3 s. (kA eff)	10	-
Rated short-time withstand current 1 s. (kA eff)	5	10
Rated short-circuit making capacity I _{cm} (kA peak) - 50ms	10	10

Connection

Maximum Cu rigid cable cross-section (mm²)	185	240
Maximum Cu busbar width (mm)	32	32
Tightening torque min (Nm)	20	20
Tightening torque max (Nm)	26	26

Mechanical characteristics

Durability (number of operating cycles)	10 000	5 000
Tightening torque (Nm)	10	10
Weight of a 2 pole device (kg)	1.8	-
Weight of a 3 pole device (kg)	6	6 (B4) / 3.8 (B5)
Weight of a 4 pole device (kg)	4.3	2.3
Weight of a 6 pole device (kg)	-	12.3
Weight of an 8 pole device (kg)	-	15

Rated current In			500 A				630 A			
Thermal current at 40°C (A)			500				630			
Thermal current at 40°C (A)			500				630			
Thermal current at 60°C (A)			B4: 475 / B5: 500				560			
Rated insulation voltage U _i (V)			1500 ⁽¹⁾				1500			
Rated impulse withstand voltage U _{imp} (kV)			12				12			
Number of circuits	Rated voltage	Utilisation category	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size
1 circuit	1000 VDC	DC-21 B	500	2 P + ; 2 P -	4 P	B4	630	2 P + ; 2 P -	4 P	B5
1 circuit	1500 VDC	DC-21 B	500	2 P + ; 1 P -	3 P	B5	630	4 P + ; 4 P -	8 P	B5 _{DS}
2 circuits	1000 VDC	DC-21 B	500	1 P + ; 1 P -	4 P	B5	630	2 P + ; 2 P -	8 P	B5 _{DS}
2 circuits	1500 VDC	DC-21 B	500	2 P + ; 1 P -	6 P	B5 _{DS}	-	-	-	-
4 circuits	1000 VDC	DC-21 B	500	1 P + ; 1 P -	8 P	B5 _{DS}	-	-	-	-

Short-circuit capacity (without protection)

Rated short-time withstand current 1 s. (kA eff)	10	10
Rated short-circuit making capacity I _{cm} (kA peak) - 50ms	10	10

Connection

Maximum Cu rigid cable cross-section (mm²)	2x150	2x185
Maximum Cu busbar width (mm)	32	40
Tightening torque min (Nm)	20	40
Tightening torque max (Nm)	26	40

Mechanical characteristics

Durability (number of operating cycles)	5 000	5 000
Tightening torque (Nm)	10	14.5
Weight of a 3 pole device (kg)	6 (B4) / 3.8 (B5)	-
Weight of a 4 pole device (kg)	2.3	3.8
Weight of a 6 pole device (kg)	12.3	-
Mass of a 8 pole device (kg)	15	15

(1) For B4 frame, the delivered spacers have to be installed.

Characteristics (continued)

Characteristics according to IEC 60947-3 (continued)

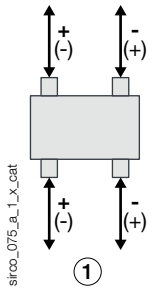
Rated current In			800 A				1250 A			
Thermal current at 40°C (A)			800				1250			
Thermal current at 50°C (A)			800				1250			
Thermal current at 60°C (A)			B5: 650 / B6: 800				1125			
Rated insulation voltage Ui (V)			1500				1500			
Rated impulse withstand voltage Uimp (kV)			12				12			
Number of circuits	Rated voltage	Utilisation category	Ie (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size	Ie (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size
1 circuit	1000 VDC	DC-21 B	800	2 P + ; 2 P -	4 P	B5	1250 A	2 P + ; 2 P -	4 P	B6
1 circuit	1500 VDC	DC-21 B	800	4 P + ; 4 P -	8 P	B6DS	1250 A	4 P + ; 4 P -	8 P	B6DS
2 circuits	1000 VDC	DC-21 B	800	2 P + ; 2 P -	8 P	B6DS	1250 A	2 P + ; 2 P -	8 P	B6DS
Short-circuit capacity (without protection)										
Rated short-time withstand current 1 s. (kA eff)			10				10			
Rated short-circuit making capacity Icm (kA peak) - 50ms			10				10			
Connection										
Maximum Cu rigid cable cross-section (mm²)			2x240				2x240			
Maximum Cu busbar width (mm)			50				63			
Tightening torque min (Nm)			40				40			
Tightening torque max (Nm)			45				45			
Mechanical characteristics										
Durability (number of operating cycles)			5 000				4 000			
Tightening torque (Nm)			14.5				37			
Weight of a 4 pole device (kg)			3.8				3.8			
Weight of an 8 pole device (kg)			15				15			

Rated current In			2000 A				3200 A			
Thermal current at 40°C (A)			2000				3200			
Thermal current at 50°C (A)			1850				3200			
Thermal current at 60°C (A)			1600				2700			
Rated insulation voltage U _i (V)			1500							
Rated impulse withstand voltage U _{imp} (kV)			12							
Number of circuits	Rated voltage	Utilisation category	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size	I _e (A)	Number of pole(s) in series per circuit	Number of pole(s) of the device	Frame size
1 circuit	1000 VDC	DC-21 B	2000 A	2 P + ; 2 P -	4 P	B7	3200 A	2 P + ; 2 P -	4 P	B8
1 circuit	1500 VDC	DC-21 B	2000 A	4 P + ; 4 P -	8 P	B7 _{DS}	-	-	-	-
2 circuits	1000 VDC	DC-21 B	2000 A	2 P + ; 2 P -	8 P	B7 _{DS}	-	-	-	-
Short-circuit capacity (without protection)										
Rated short-time withstand current 1 s. (kA eff)			10				10			
Rated short-circuit making capacity I _{cm} (kA peak) - 50ms			10				10			
Connection										
Maximum Cu busbar width (mm)			100				4 x 100 x 5			
Tightening torque min (Nm)			40				40			
Tightening torque max (Nm)			45				45			
Mechanical characteristics										
Durability (number of operating cycles)			4000				2000			
Tightening torque (Nm)			56				75			
Weight of a 4 pole device (kg)			22				25			
Mass of a 8 pole device (kg)			50				-			

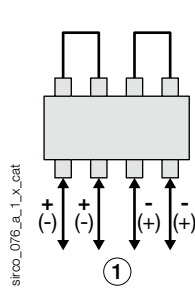
Pole connection in series

1 PV circuit - 1000 VDC

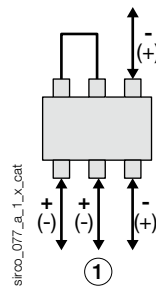
B4 - 2P



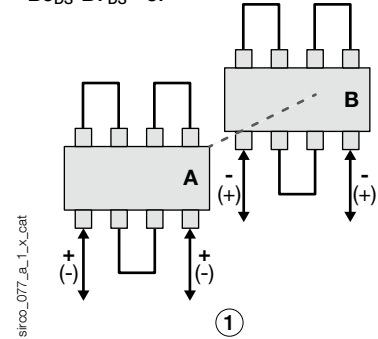
B4-B8 - 4P



B5 - 3P

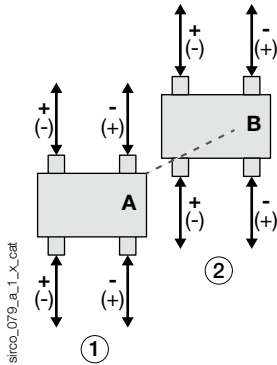


B5_{DS}-B7_{DS} - 8P

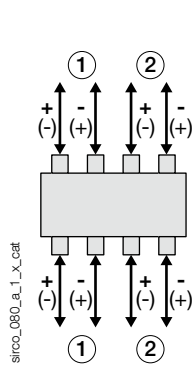


2 PV circuits - 1000 VDC

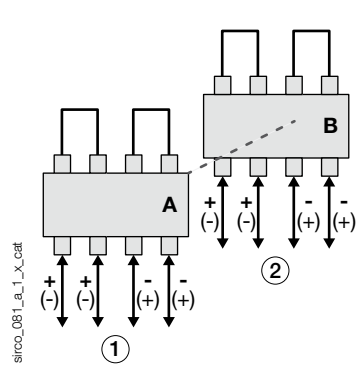
B4_{DS} - 4P



B5 - 4P

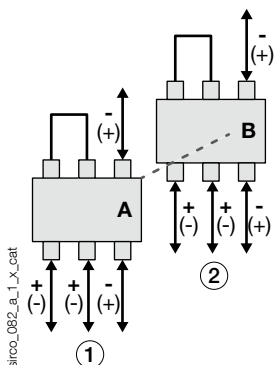


B5_{DS}-B7_{DS} - 8P



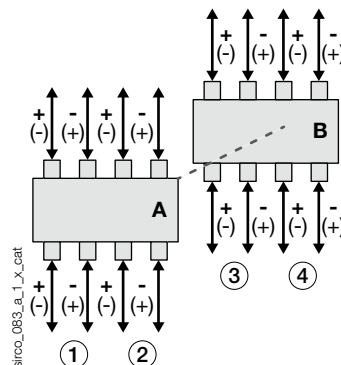
2 PV circuits - 1500 VDC

B5_{DS} - 6P



4 PV circuits- 1000 VDC

B5_{DS} - 8P



A. Front switch.
B. Rear switch.

1. Circuit 1
2. Circuit 2

3. Circuit 3
4. Circuit 4

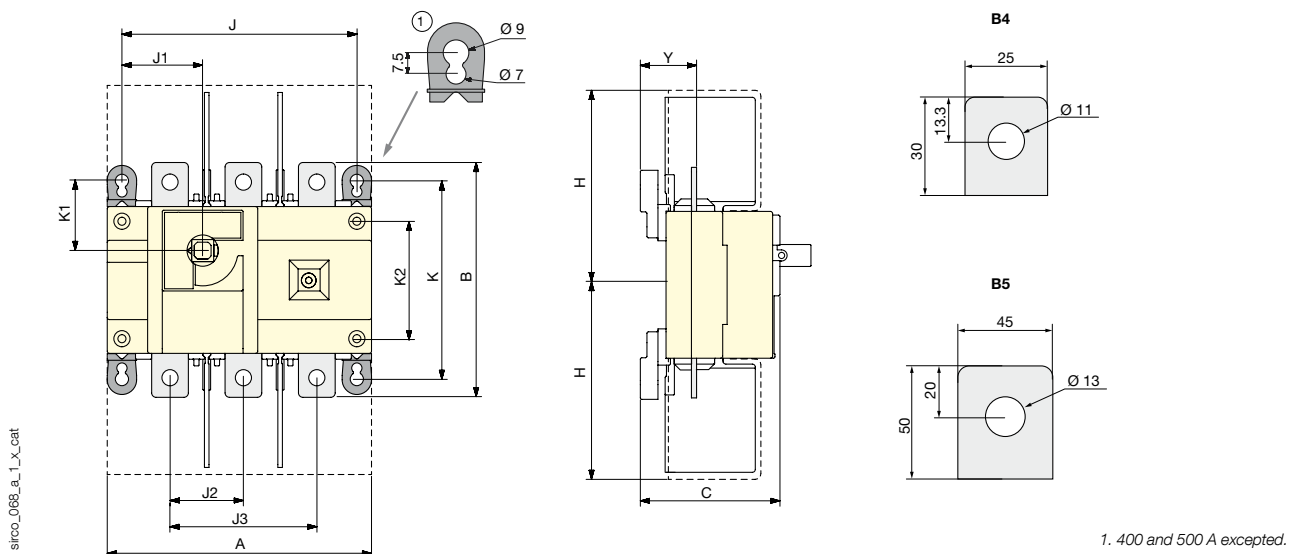
SIRCO PV IEC 60947-3

Load break switches for photovoltaic applications

from 100 to 3200 A, up to 1500 VDC

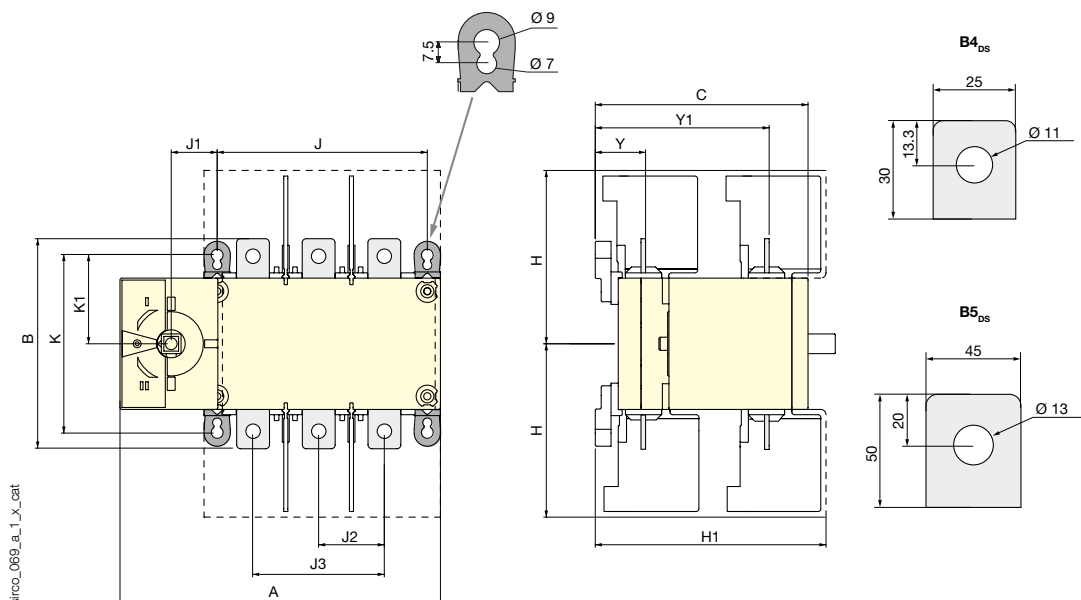
Dimensions (mm)

Frame size B4-B5



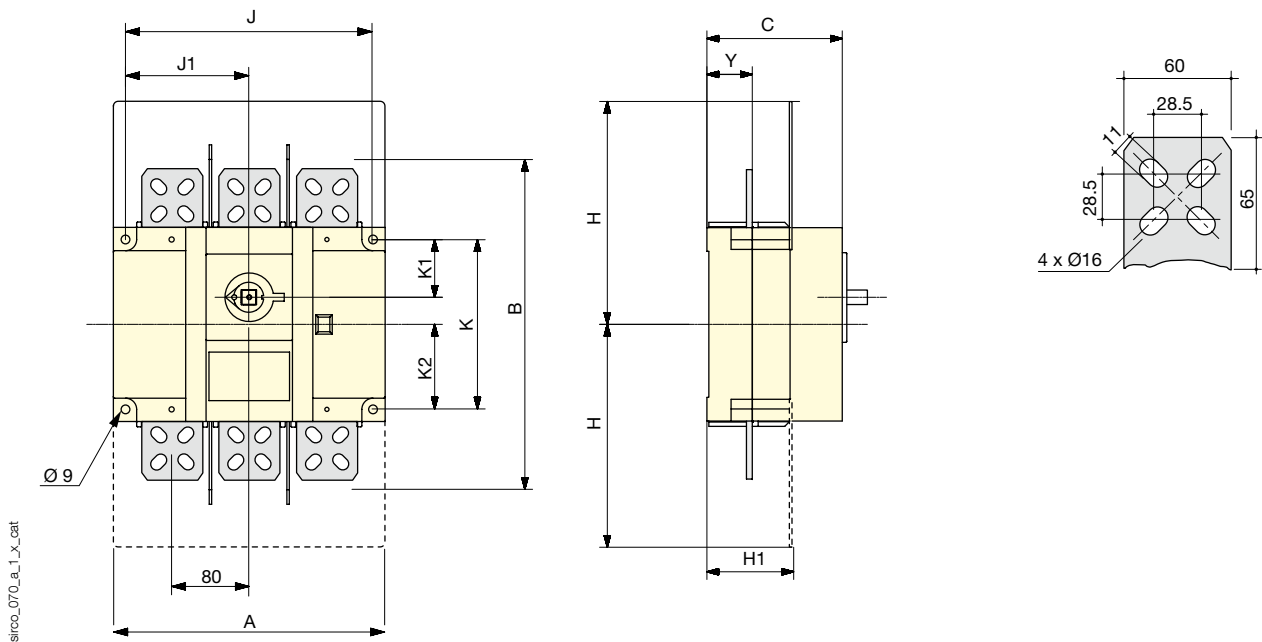
Frame size	No. of poles	A	B	C	H	J	J1	J2	J3	K	K1	K2	Y
B4	2 P	180	160	95	132.5	160	55	-	100	135	48	80	38.5
B4	4 P	230	170	79	132.5	210	105	50	-	-	-	80	22.5
B5	2 P	230	260	128	203	210	75	-	130	195	67.5	80	53
B5	3 P	230	260	126.5	203	210	75	65	-	195	67.5	80	51.5
B5	4 P	290	260	126.5	203	270	135	65	-	195	67.5	80	51.5

B4_{DS} - B5_{DS}



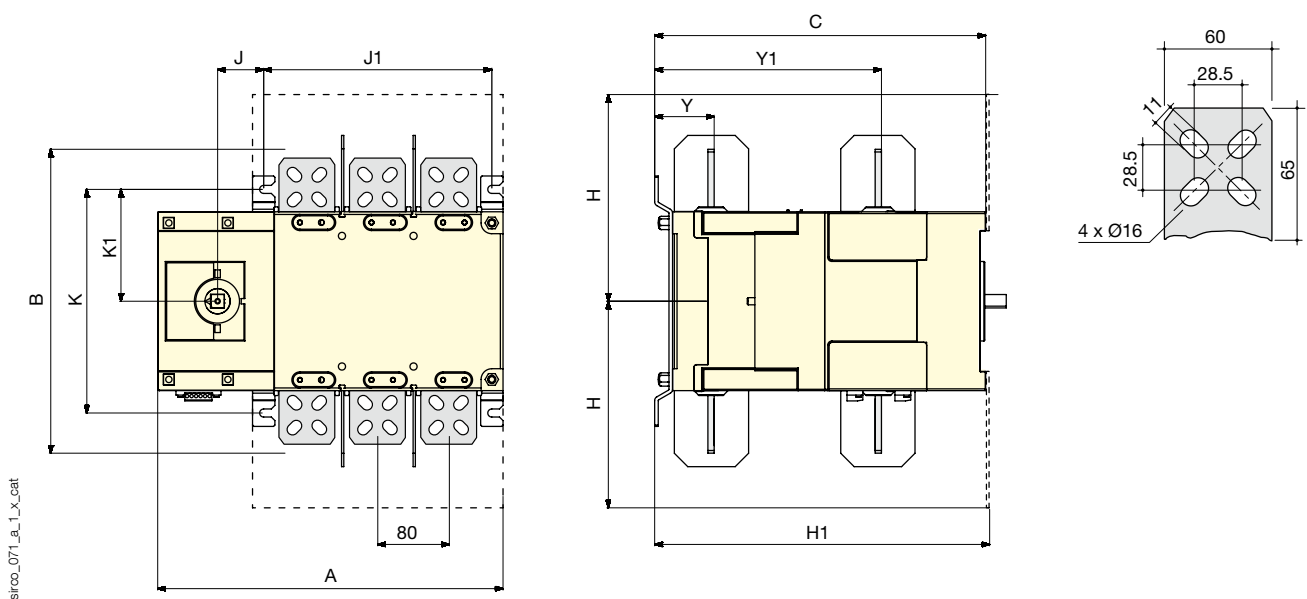
Frame size	No. of poles	A	B	C	H	H1	J	J1	J2	J3	K	K1	Y	Y1
B4 _{DS}	4 P	244	160	162	129	176	160	35	-	100	135	67.5	38.5	132.5
B5 _{DS}	6 P	301	260	238.5	203	165.5	210	35	65	-	195	68.5	51.5	189
B5 _{DS}	8 P	361	260	238.5	203	165.5	270	35	65	-	195	68.5	51.5	189

Frame size B6



Frame size	No. of poles	A	B	C	H	H1	J	J1	K	K1	K2	Y
B6	4 P	630	340	139	270	145	335	167.5	175	59.5	28	46.5

Frame size B6_{DS}



Frame size	No. of poles	A	B	C	H	H1	J	J1	K	K1	Y	Y1
B6 _{ds}	8 P	466	340	370	270	347	335	51.5	250	125	66.5	253.5

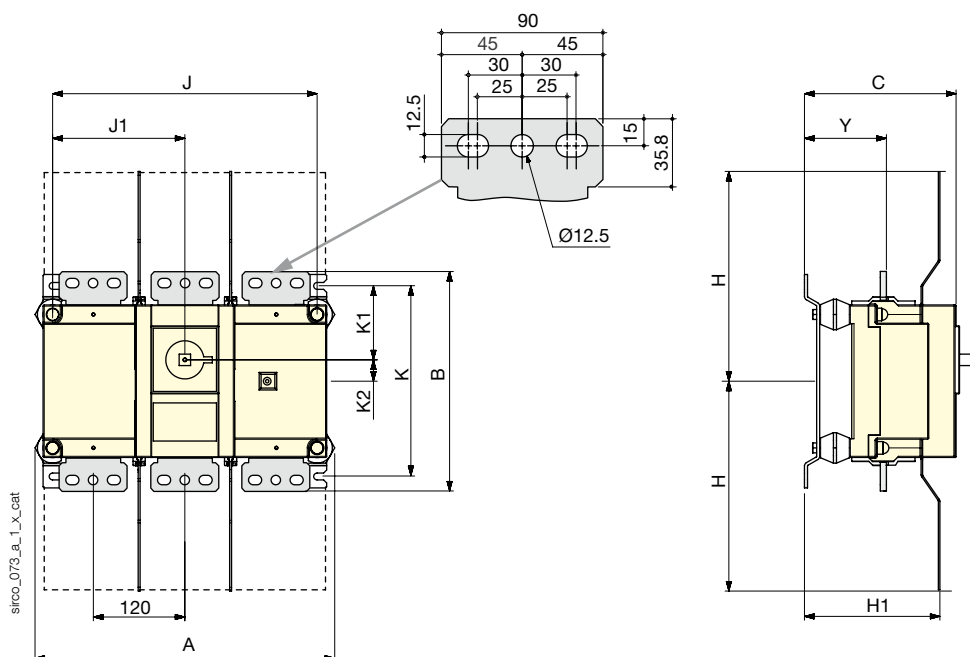
SIRCO PV IEC 60947-3

Load break switches for photovoltaic applications

from 100 to 3200 A, up to 1500 VDC

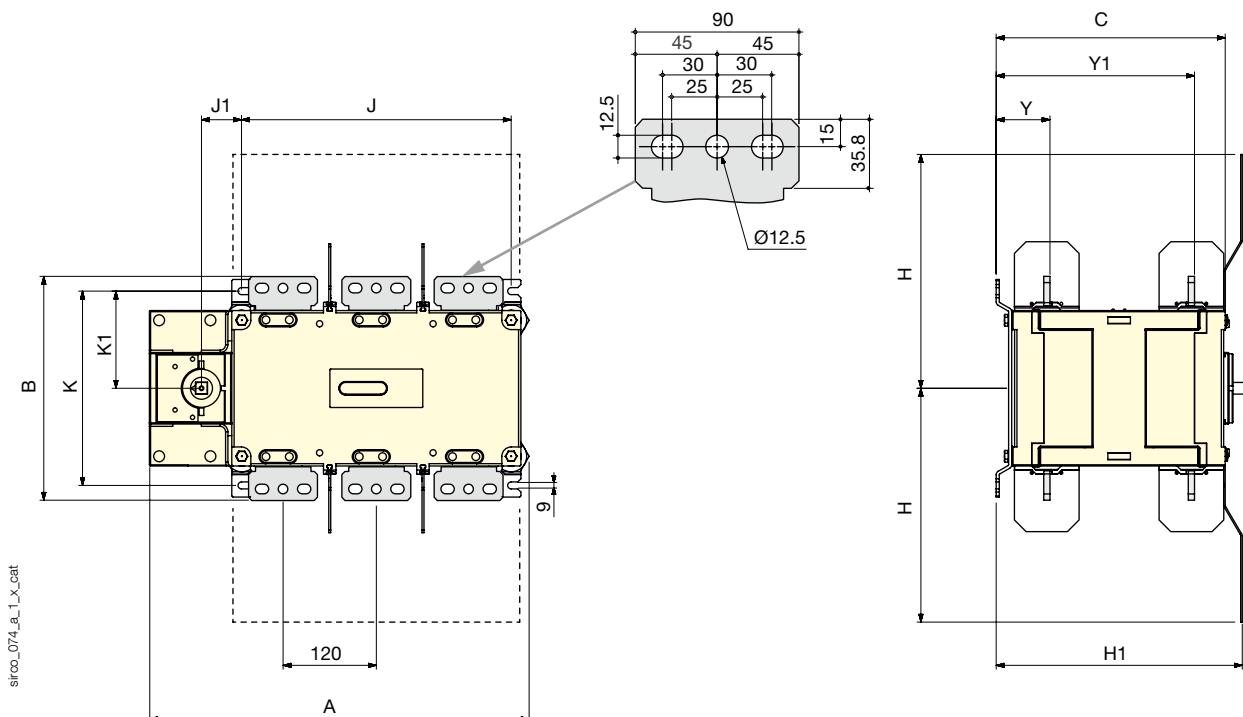
Dimensions (mm) (continued)

Frame size B7



Frame size	No. of poles	A	B	C	H	H1	H2	J	J1	K	K1	K2	Y
B7	4 P	513	288	200	302	211	203.5	467	233.5	250	97	28	107.5

Frame size B7_{DS}

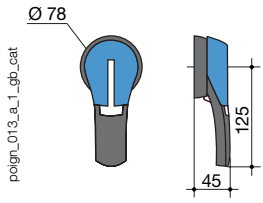
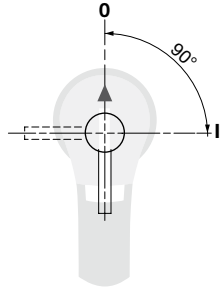
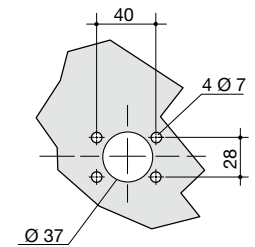


Frame size	No. of poles	A	B	C	H	H1	J	J1	K	K1	Y	Y1
B7 _{DS}	8 P	608.5	288	333	301	389	467	51.5	250	125	107.5	293.5

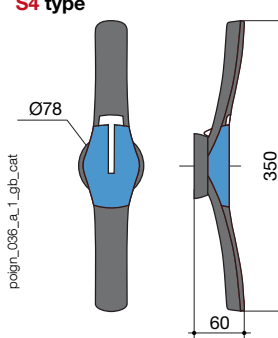
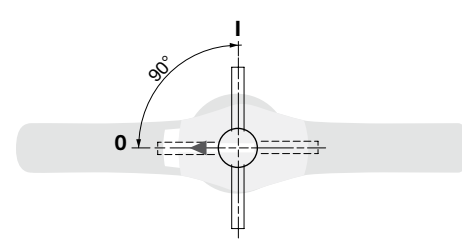
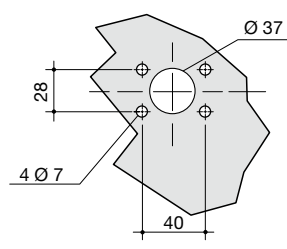
Pour les dimensions du SIRCO PV 3200A - 1000 VDC - B8, veuillez nous consulter.

Dimensions for external handles (mm)

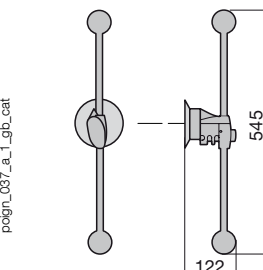
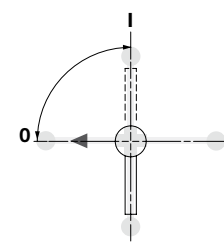
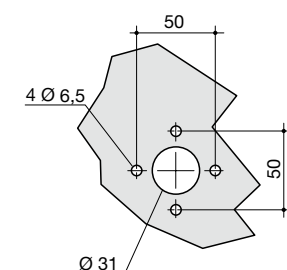
B4 - B4_{DS} - B5

Handle type	Front operation Direction of operation	Door drilling
S2 type 		

B5_{DS} - B6 - B7

Handle type	Front operation Direction of operation	Door drilling
S4 type 		

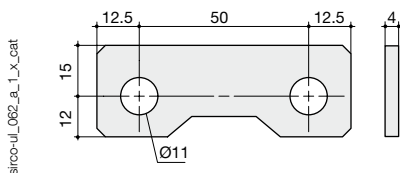
B8 - B6_{DS} - B7_{DS}

Handle type	Front operation Direction of operation	Door drilling
V1 type 		

Bridging bars (mm)

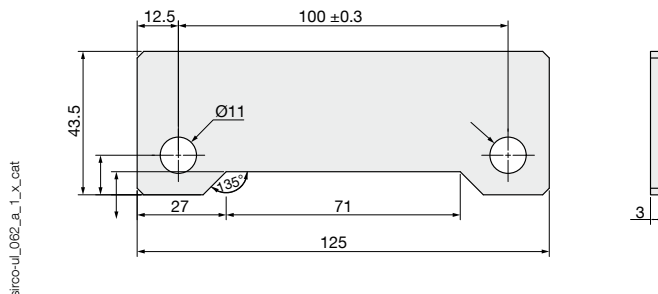
B4

2609 0025



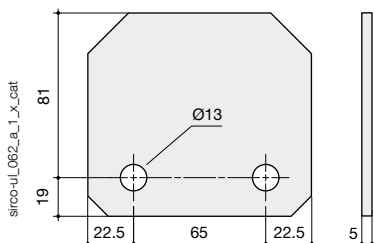
B4 - B4_{DS}

2709 0045

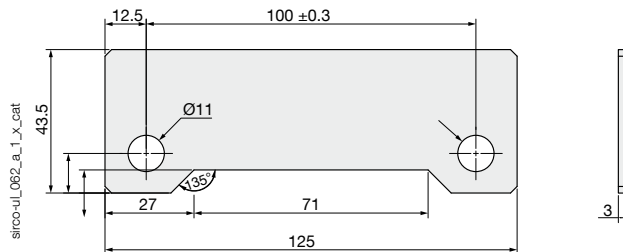


B5

2609 0080

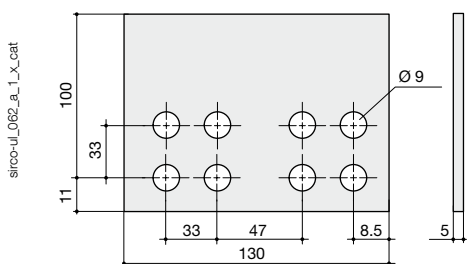


2709 0027



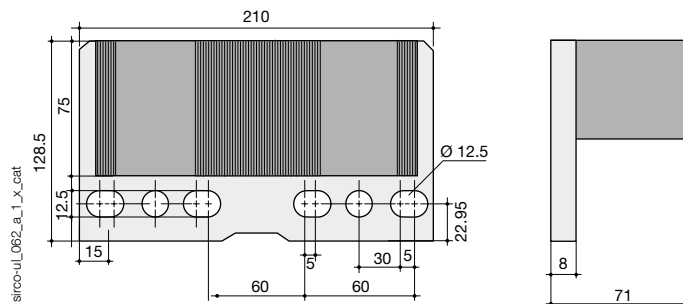
B6

2609 1100



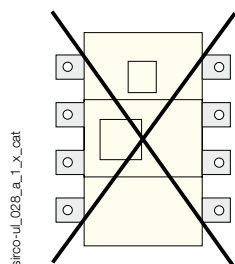
B7

2609 1200

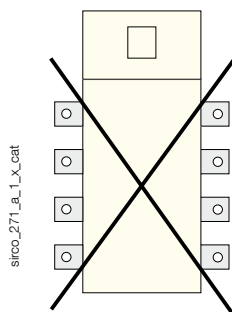


Mounting orientation

All frames



B4_{DS} - B5_{DS}



B6_{DS} - B7_{DS}

