

SIRCO PV

Manual load break and isolation switches for photovoltaic applications
from 100 to 3200 A, up to 1500 VDC

2017



your energy
our expertise





SIRCO PV IEC 60947-3

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

Load break &
isolation switches

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sirco-pv_0125_a_1_cat



The solution for

- > Combiner box
- > Inverter



Strong points

- > Patented switching technology up to 500 VDC/pole
- > Positive break indication
- > Up to 1500 VDC as per characteristics by IEC 60947-3

Conformity to standards

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



⁽¹⁾ Consult us.

Function

SIRCO PV are manually operated multipolar load break switches. Making and breaking capacity under load conditions up to 1500 VDC.

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

They have been designed and tested for all types of applications: earthing, floating or bipolar.

Advantages

Optimise your investment

- Thanks to a reduced number of bridging bars, you can limit your costs and save mounting time.
- A 2 pole SIRCO PV will reduce warming and can be placed in a smaller enclosure.

Reliability and performance

Our range of SIRCO PV load break switches is compliant to standards IS/IEC 60947-3.

SIRCO PV have been tested to break critically low currents and withstand 10 kA short-circuit during 300 ms without any specific protection.

High quality materials

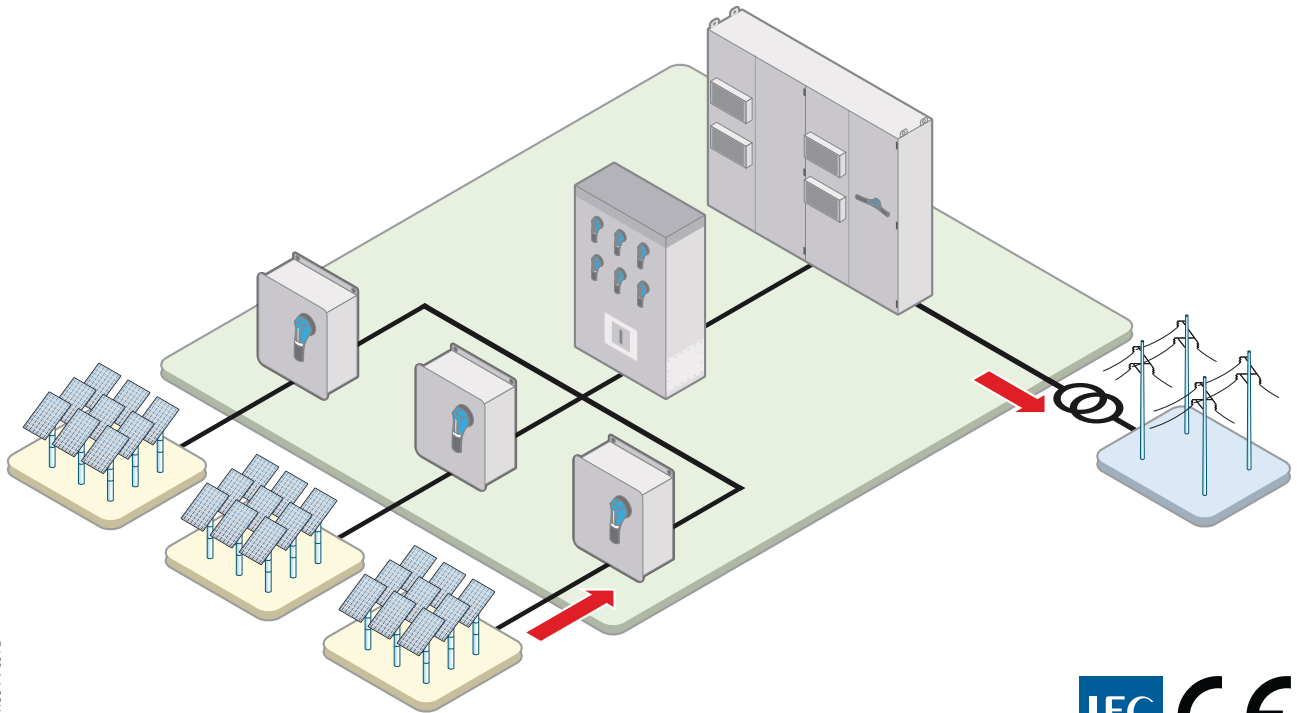
SIRCO PV is an extremely robust device in a glass fibre reinforced polyester frame.

This material provides:

- high mechanical strength,
- stability to temperature variations (RTI of 130°C),
- high dielectric strength (high CTI / tested as per standard ASTM D 2303).

Typical PV architecture

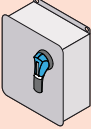

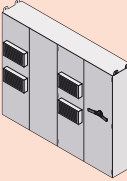
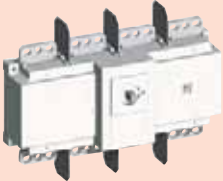
The SIRCO PV range provides safe load break and isolation at all levels within your PV installation.



SIRCO-PV 064 B



The SOCOMEC solutions

| LEVEL OF INSTALLATION | SOCOMEK SOLUTIONS | |
|-----------------------|---|---|
| Combiner box |  |  |
| Inverter |  |  |

SIRCO PV
 One circuit
 up to 500 A at 1500 VDC

SIRCO PV
 One circuit
 up to 2000 A at 1000 VDC
 up to 2000 A at 1500 VDC

SIRCO PV IEC 60947-3

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

References - SIRCO PV kits and accessories

1000 VDC

| Rating (A) / Frame size | No. of poles | Kit 1 with direct handle ⁽¹⁾ | Kit 2 with external handle ⁽²⁾ | Auxiliary contacts | Terminal screens | Interphase barriers | Bridging bars for connecting 2 poles in series |
|---------------------------|--------------|---|---|--|--|---------------------|--|
| 1 circuit PV | | | | | | | |
| 100 A / B4 | 2 P | 26P1 2010A | 26P2 2010A | 1 st NO/NC contact 2699 0031A 2 nd NO/NC contact 2699 0032A | 2 P 2698 3020A 4 P 2698 4020A | | |
| 160 A / B4 | 2 P | 26P1 2016A | 26P2 2016A | | | | |
| 250 A / B4 | 2 P | 26P1 2025A | 26P2 2025A | | | | |
| 315A / B4 | 2 P | 26P1 2031A | 26P2 2031A | | | | |
| CD 400A / B4 | 2 P | 26P1 2039A | 26P2 2039A | | | | |
| 400 A / B4 | 4 P | 26P1 4040A | 26P2 4040A | | 2x 2609 0025A | | |
| 500 A / B4 | 4 P | 26P1 4050A | 26P2 4050A | | 4 P 2698 4050A | Included | 1x 2609 0080A |
| 630 A / B5 | 4 P | 26P1 4063A | 26P2 4063A | | | | |
| 800 A / B5 | 4 P | 26P1 4080A | 26P2 4080A | | | | |
| 1250 A / B6 | 4 P | 26P1 4120A | 26P2 4120A | | 4 P 2698 4080A | 1x 2609 1100A | |
| 2000 A / B7 | 4 P | 26P1 4200A | 26P2 4200A | 4 P 2698 4120A | 1x 2609 1200A | | |
| 2 circuit PV | | | | | | | |
| 630 A / B5 _{DS} | 8 P | 26P1 8063A | 26P2 8063A | 1 st NO/NC contact 2699 0061A 2 nd NO/NC contact 2699 0062A | 1509 4063A | - | 1x 2609 0080A |
| 800 A / B6 _{DS} | 8 P | 26P1 8080A | 26P2 8080A | | 1509 4080A | | Included |
| 1250 A / B6 _{DS} | 8 P | 26P1 8120A | 26P2 8120A | | 2698 4199A | 1x 2609 1200A | |
| 2000 A / B7 _{DS} | 8 P | 26P1 8200A | 26P2 8200A | | | | |

(1) Kit 1 includes: Switch body + direct handle.

(2) Kit 2 includes Switch body + external handle + 200 mm shaft.

1500 VDC

| Rating (A) / Frame size | No. of poles | Kit 1 with direct handle ⁽¹⁾ | Kit 2 with external handle ⁽²⁾ | Auxiliary contacts | Terminal screens | Interphase barriers | Bridging bars for connecting 2 poles in series |
|---------------------------|--------------|---|---|--|----------------------|---------------------|--|
| 275 A / B5 | 3 P | 27P1 3026A | 27P2 3026A | 1 st NO/NC contact 2699 0031A 2 nd NO/NC contact 2699 0032A | Top 2798 3041A | - | 1x 2709 027A |
| 400 A / B5 | 3 P | 27P1 3032A | 27P2 3032A | | Bottom 2798 8041A | | 1x 2709 0045A |
| 500 A / B5 | 3 P | 27P1 3039A | 27P2 3039A | 1 st NO/NC contact 2699 0061A 2 nd NO/NC contact 2699 0062A | 1509 4063A | Included | 1x 2609 0080A |
| 630 A / B5 _{DS} | 8 P | 26P1 8063A | 26P2 8063A | | 1509 4080A | | 1x 2609 1100A |
| 800 A / B6 _{DS} | 8 P | 26P1 8080A | 26P2 8080A | | 2698 4199A | | 1x 2609 1200A |
| 1250 A / B6 _{DS} | 8 P | 26P1 8120A | 26P2 8120A | | | | |
| 2000 A / B7 _{DS} | 8 P | 26P1 8200A | 26P2 8200A | | | | |

(1) Kit 1 includes: Switch body + direct handle.

(2) Kit 2 includes Switch body + external handle + 200 mm shaft.

Also available

> For 3200 A rating consult us.

References - Spares and accessories

1000 VDC

| Rating (A) / Frame size | No. of poles | Switch body | Direct handle | External handle | Shaft for external handle | Auxiliary contacts | Terminal screens | Interphase barriers | Bridging bars for connecting 2 poles in series |
|----------------------------|-----------------|-------------|-----------------------|-------------------------------------|--|--|--|------------------------|--|
| 1 circuit PV | | | | | | | | | |
| 100 A / B4 | 2 P | 26PV 2010A | B2 type 2699 5052A | S2 type Black IP55 1421 2111A | 200 mm 1400 1020A 320 mm 1400 1032A | 1 st NO/NC contact 2699 0031A 2 nd NO/NC contact 2699 0032A | 2 P 2698 3020A 4 P 2698 4020A | | |
| 160 A / B4 | 2 P | 26PV 2016A | | | | | | | |
| 250 A / B4 | 2 P | 26PV 2025A | | | | | | | |
| 315A / B4 | 2 P | 26PV 2031A | | | | | | | |
| CD 400 A / B4 | 2 P | 26PV 2039A | | | | | | | |
| 400 A / B4 | 4 P | 26PV 4040A | | | | | | | |
| 500 A / B4 | 4 P | 26PV 4050A | | | | | | | |
| 630 A / B5 | 4 P | 26PV 4063A | | | | | | | |
| 800 A / B5 | 4 P | 26PV 4080A | C2 type 2799 7012A | S4 type Black IP65 1443 3111A | 200 mm 1401 1520A 320 mm 1401 1532A | 4 P 2698 4080A 4 P 2698 4120A | Included | 1x 2609 1100A | |
| 1250 A / B6 | 4 P | 26PV 4120A | | | | | | | |
| 2000 A / B7 | 4 P | 26PV 4200A | | | | | | 1x 2609 1200A | |
| | | | | | | | | | 1x 2609 1200A |
| 2 circuit PV | | | | | | | | | |
| 630 A / B5 _{DS} | 8 P | 26PV 8063A | B2 type 2699 5052A | S2 type Black IP55 1421 2111A | 200 mm 1400 1020A 320 mm 1400 1032A | 1 st NO/NC contact 2699 0061A 2 nd NO/NC contact 2699 0062A | 1509 4063A 1509 4080A | / | 1x 2609 0080A |
| 800 A / B6 _{DS} | 8 P | 26PV 8080A | | | | | | | |
| 1250 A / B6 _{DS} | 8 P | 26PV 8120A | C2 type 2799 7012A | V1 type Black IP65 2799 7145A | 320 mm 4199 3018A | 2 nd NO/NC contact 2699 0062A | Included | Included | 1x 2609 1100A |
| 2000 A / B7 _{DS} | 8 P | 26PV 8200A | | | | | | | 1x 2609 1200A |

1500 VDC

| Rating (A) / Frame size | No. of poles | Switch body | Direct handle | External handle | Shaft for external handle | Auxiliary contacts | Terminal screens | Interphase barriers | Bridging bars for connecting 2 poles in series |
|----------------------------|-----------------|-------------|-----------------------|-------------------------------------|--|--|----------------------|------------------------|--|
| 275 A / B5 | 3 P | 27PV 3026A | B2 type 2699 5052A | S2 type Black IP55 1421 2111A | 200 mm 1400 1020A 320 mm 1400 1032A | 1 st NO/NC contact 2699 0031A | Top 2698 3041A | Included | 1x 2709 0027A |
| 400 A / B5 | 3 P | 27PV 3032A | | | | 2 nd NO/NC contact 26990032A | Bottom 2698 8041A | | 1x 2709 0045A |
| 500 A / B5 | 3 P | 27PV 3039A | | | | 1 st NO/NC contact 2699 0061A | 1509 4063A | | 1x 2609 0080A |
| 630 A / B5 _{DS} | 8 P | 26PV 8063A | | | | | | | |
| 800 A / B6 _{DS} | 8 P | 26PV 8080A | C2 type 2799 7012A | V1 type Black IP65 2799 7145A | 320 mm 4199 3018A | 2 nd NO/NC contact 2699 0062A | 1509 4080A | Included | 1x 2609 1100A |
| 1250 A / B6 _{DS} | 8 P | 26PV 8120A | | | | | | | |
| 2000 A / B7 _{DS} | 8 P | 26PV 8200A | | | | | | | 1x 2609 1200A |

SIRCO PV IEC 60947-3

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

Accessories

Direct operation handle

| Frame size | Handle type | Handle colour | Reference |
|---|-------------|---------------|------------|
| B4 ... B5 - B5 _{DS} | B2 type | Black | 2699 5052A |
| B6 ... B7 - B6 _{DS} ... B7 _{DS} | C2 type | Black | 2799 7012A |



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 only possible by defeating the locking function using a tool (authorised persons only). The interlocking function is restored when the door is re-closed.

Front operation

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



Shaft for external handle

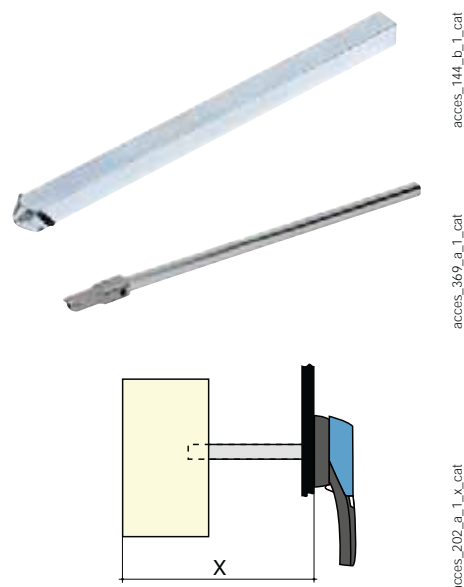
Use

Standard lengths:

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

Other lengths: Please consult us.

| Frame size | Handle type | Dimension X (mm) | Length (mm) | Reference |
|------------------|-------------|------------------|-------------|------------|
| B4 | S2 | 150 ... 295 | 200 | 1400 1020A |
| B4 | S2 | 150 ... 415 | 320 | 1400 1032A |
| B5 | S2 | 203 ... 328 | 200 | 1400 1020A |
| B5 | S2 | 203 ... 448 | 320 | 1400 1032A |
| B6 | S4 | 220 ... 343 | 200 | 1401 1520A |
| B6 | S4 | 220 ... 463 | 320 | 1401 1532A |
| B7 | S4 | 305 ... 366 | 200 | 1401 1520A |
| B7 | S4 | 305 ... 485 | 320 | 1401 1532A |
| B5 _{DS} | S2 | 406 ... 467 | 200 | 1400 1020A |
| B5 _{DS} | S2 | 406 ... 589 | 320 | 1401 1032A |
| B6 _{DS} | V1 | 508 ... 714 | 320 | 4199 3018A |
| B7 _{DS} | V1 | 508 ... 714 | 320 | 4199 3018A |



Accessories (continued)

Auxiliary contact

Use

Pre-break and signalling of positions 0 and I:
- 1 to 2 NO/NC auxiliary contacts.

Characteristics

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 ... B7 | 1 contact | NO/NC | 2699 0031A |
| B4 ... B7 | 2 contacts | NO/NC | 2699 0032A |
| B5 _{DS} ... B7 _{DS} | 1 contact | NO/NC | 2699 0061A |
| B5 _{DS} ... B7 _{DS} | 2 contacts | NO/NC | 2699 0062A |



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 | No of pieces | Reference |
|------------------|--------------|----------------|--------------|------------|
| B4 | 2 P | top or bottom | 1 | 2698 3020A |
| B4 | 4 P | top or bottom | 1 | 2698 4020A |
| B5 | 3 P | top | 1 | 2698 3041A |
| B5 | 3 P | bottom | 1 | 2698 8041A |
| B5 | 4 P | top or bottom | 1 | 2698 4050A |
| B6 | 4 P | top or bottom | 1 | 2698 4080A |
| B7 | 4 P | top or bottom | 1 | 2698 4120A |
| B5 _{DS} | 8 P | top and bottom | 2 | 1509 4063A |
| B6 _{DS} | 8 P | top and bottom | 2 | 1509 4080A |
| B7 _{DS} | 8 P | top and bottom | 2 | 2698 4199A |



access_469_a_eps

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 0025A |
| B4 | 500 | 2 | 1 | 2609 0025A |
| B5 | 630 | 1 | 2 | 2609 0080A |
| B5 | 800 | 1 | 2 | 2609 0080A |
| B6 | 1250 | 1 | 3 | 2609 1100A |
| B7 | 2000 | 1 | 3 | 2609 1200A |

⁽¹⁾ Bridging bars not needed.

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 0027A |
| B5 | 315 | 1 | 5 | 2709 0027A |
| B5 | 400 | 1 | 4 | 2709 0045A |
| B5 | 500 | 1 | 4 | 2709 0045A |
| B5 _{DS} | 630 | 1 | 2 | 2609 0080A |
| B6 _{DS} | 800 | 1 | 3 | 2609 1100A |
| B6 _{DS} | 1250 | 1 | 3 | 2609 1100A |
| B7 _{DS} | 2000 | 1 | 3 | 2609 1200A |

access_374_a_1_x_cat

Fig. 1

access_374_a_1_x_cat

Fig. 2

access_376_a_1_x_cat

Fig. 3

access_378_a_1_x_cat

Fig. 4

access_386_a_1_x_cat

Fig. 5

Characteristics

Characteristics according to IEC 60947-3

| | | |
|---|--------------|--------------|
| Rated current I_n | 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) | No. of pole(s) in series per circuit | No. of pole(s) of the device | Frame size | I _e (A) | No. of pole(s) in series per circuit | No. 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 |

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 |

Connection

| | | |
|---|----|----|
| Maximum Cu rigid cable cross-section (mm ²) | 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 |
| Operating effort (Nm) | 10 | 10 |
| Weight of a 2 pole device (kg) | 1.8 | 1.8 |

| | | |
|---|--------------|--------------|
| Rated current I_n | 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) | No. of pole(s) in series per circuit | No. of pole(s) of the device | Frame size | I _e (A) | No. of pole(s) in series per circuit | No. 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 | - | - | - | - | 275 | 2 P + ; 1 P - | 3 P | B5 |

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 |

Connection

| | | |
|---|-----|-----|
| Maximum Cu rigid cable cross-section (mm ²) | 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 |
| Operating effort (Nm) | 10 | 10 |
| Weight of a 2 pole device (kg) | 1.8 | - |
| Weight of a 3 pole device (kg) | - | 6 |

SIRCO PV IEC 60947-3

Load break and isolation switches for photovoltaic applications
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Characteristics according to IEC 60947-3 (continued)

| Rated current I_n | | | 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 | | | |
| Rated impulse withstand voltage U_{imp} (kV) | | | 12 | | | | 12 | | | |
| Number of circuits | Rated voltage | Utilisation category | I_e (A) | No. of pole(s) in series per circuit | No. of pole(s) of the device | Frame size | I_e (A) | No. of pole(s) in series per circuit | No. 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 | - | - | - | - | 400 | 2 P + ; 1 P - | 3 P | B5 |
| 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 peak withstand current (kA peak) ⁽¹⁾ | | | 30 | | | | 30 | | | |
| Connection | | | | | | | | | | |
| Maximum Cu rigid cable cross-section (mm ²) | | | 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 | | | |
| Operating effort (Nm) | | | 10 | | | | 10 | | | |
| Weight of a 2 pole device (kg) | | | 1.8 | | | | - | | | |
| Weight of a 3 pole device (kg) | | | - | | | | 3.8 (B5) | | | |
| Weight of a 4 pole device (kg) | | | - | | | | 2.3 | | | |

(1) For a rated operational voltage $U_e = 400$ VAC.

| Rated current I_n | | | 500 A | | | | 630 A | | | |
|---|---------------|----------------------|-------------------|--------------------------------------|------------------------------|------------|-----------|--------------------------------------|------------------------------|------------------|
| Thermal current at 40°C (A) | | | 500 | | | | 630 | | | |
| Thermal current at 50°C (A) | | | 500 | | | | 630 | | | |
| Thermal current at 60°C (A) | | | B4: 475 / B5: 500 | | | | 560 | | | |
| 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) | No. of pole(s) in series per circuit | No. of pole(s) of the device | Frame size | I_e (A) | No. of pole(s) in series per circuit | No. 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 | - | - | - | - | 630 | 2 P + ; 2 P - | 8 P | B5 _{DS} |
| Short-circuit capacity (without protection) | | | | | | | | | | |
| Rated short-time withstand current 1 s. (kA eff) | | | 10 | | | | 10 | | | |
| Connection | | | | | | | | | | |
| Maximum Cu rigid cable cross-section (mm ²) | | | 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 | | | |
| Operating effort (Nm) | | | 10 | | | | 14.5 | | | |
| Weight of a 3 pole device (kg) | | | 3.8 (B5) | | | | - | | | |
| Weight of a 4 pole device (kg) | | | 2.3 | | | | 3.8 | | | |
| Weight of an 8 pole device (kg) | | | - | | | | 15 | | | |

Characteristics (continued)

Characteristics according to IEC 60947-3 (continued)

| Rated current I _n | | 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 U _i (V) | | 1500 | | | | | 1500 | | | | |
| Rated impulse withstand voltage U _{imp} (kV) | | 12 | | | | | 12 | | | | |
| Number of circuits | Rated voltage | Utilisation category | I _e (A) | No. of pole(s) in series per circuit | No. of pole(s) of the device | Frame size | I _e (A) | No. of pole(s) in series per circuit | No. 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 | B6 _{DS} | 1250 A | 4 P + ; 4 P - | 8 P | B6 _{DS} | |
| 2 circuits | 1000 VDC | DC-21 B | 800 | 2 P + ; 2 P - | 8 P | B6 _{DS} | 1250 A | 2 P + ; 2 P - | 8 P | B6 _{DS} | |
| Short-circuit capacity (without protection) | | | | | | | | | | | |
| Rated short-time withstand current 1 s. (kA eff) | | 10 | | | | | 10 | | | | |
| Connection | | | | | | | | | | | |
| Maximum Cu rigid cable cross-section (mm ²) | | 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 | | | | |
| Operating effort (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 I _n | | 2000 A | | | | |
|---|---------------|----------------------|--------------------|--------------------------------------|------------------------------|------------------|
| Thermal current at 40°C (A) | | 2000 | | | | |
| Thermal current at 50°C (A) | | 1850 | | | | |
| Thermal current at 60°C (A) | | 1600 | | | | |
| 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) | No. of pole(s) in series per circuit | No. of pole(s) of the device | Frame size |
| 1 circuit | 1000 VDC | DC-21 B | 2000 A | 2 P + ; 2 P - | 4 P | B7 |
| 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 | | | | |
| Connection | | | | | | |
| Maximum Cu busbar width (mm) | | 100 | | | | |
| Tightening torque min (Nm) | | 40 | | | | |
| Tightening torque max (Nm) | | 45 | | | | |
| Mechanical characteristics | | | | | | |
| Durability (number of operating cycles) | | 4000 | | | | |
| Operating effort (Nm) | | 56 | | | | |
| Weight of a 4 pole device (kg) | | 22 | | | | |
| Weight of an 8 pole device (kg) | | 50 | | | | |

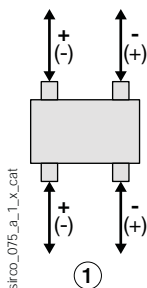
SIRCO PV IEC 60947-3

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

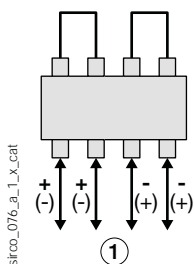
Pole connections in series

1 PV circuit - 1000 VDC

B4 - 2P

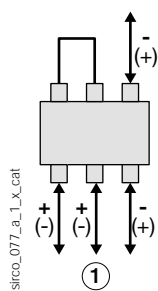


B4-B7 - 4P

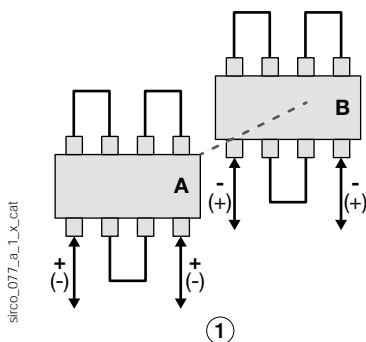


1 PV circuit - 1500 VDC

B5 - 3P

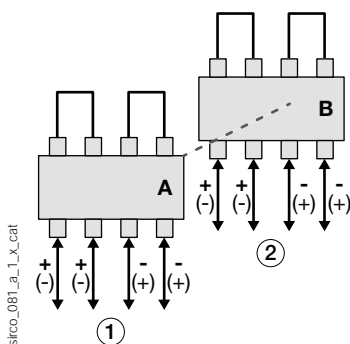


B5_{DS}-B7_{DS} - 8P



2 PV circuits - 1000 VDC

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

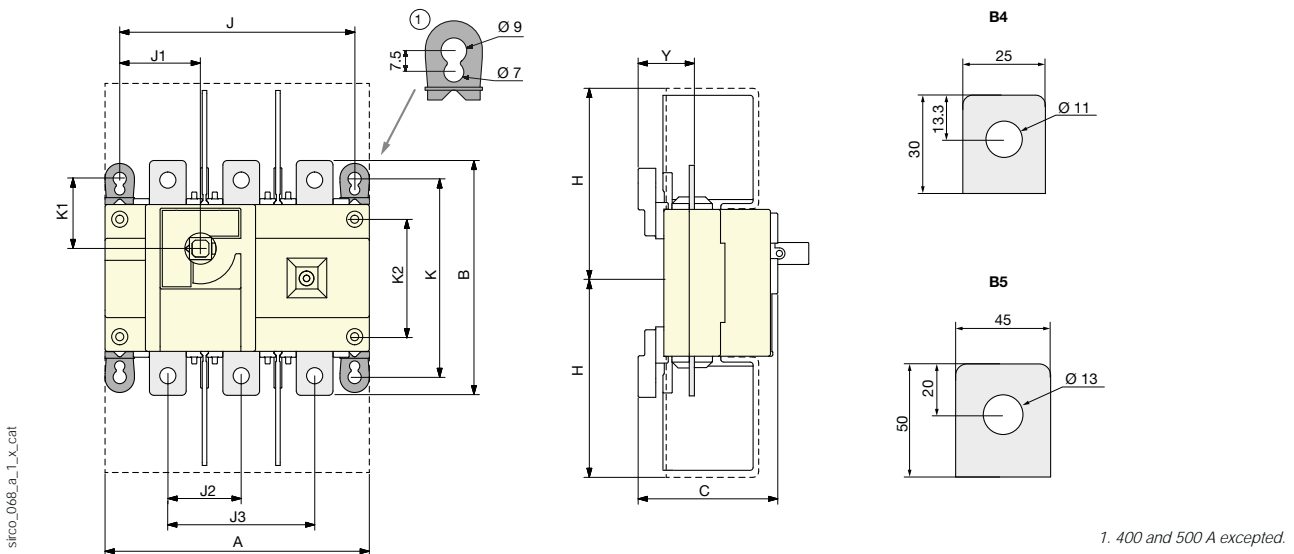


A. Front switch.
B. Rear switch.

1. Utility 1
2. Utility 2

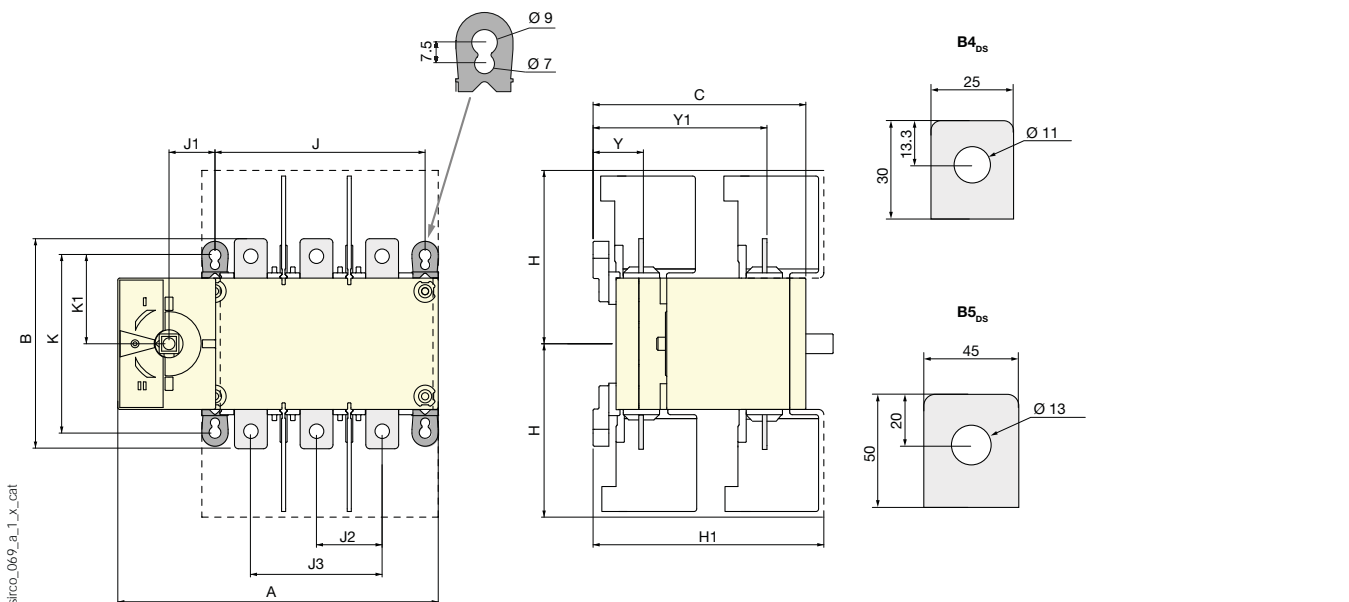
Dimensions (mm)

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 | 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 |

B5_{DS}

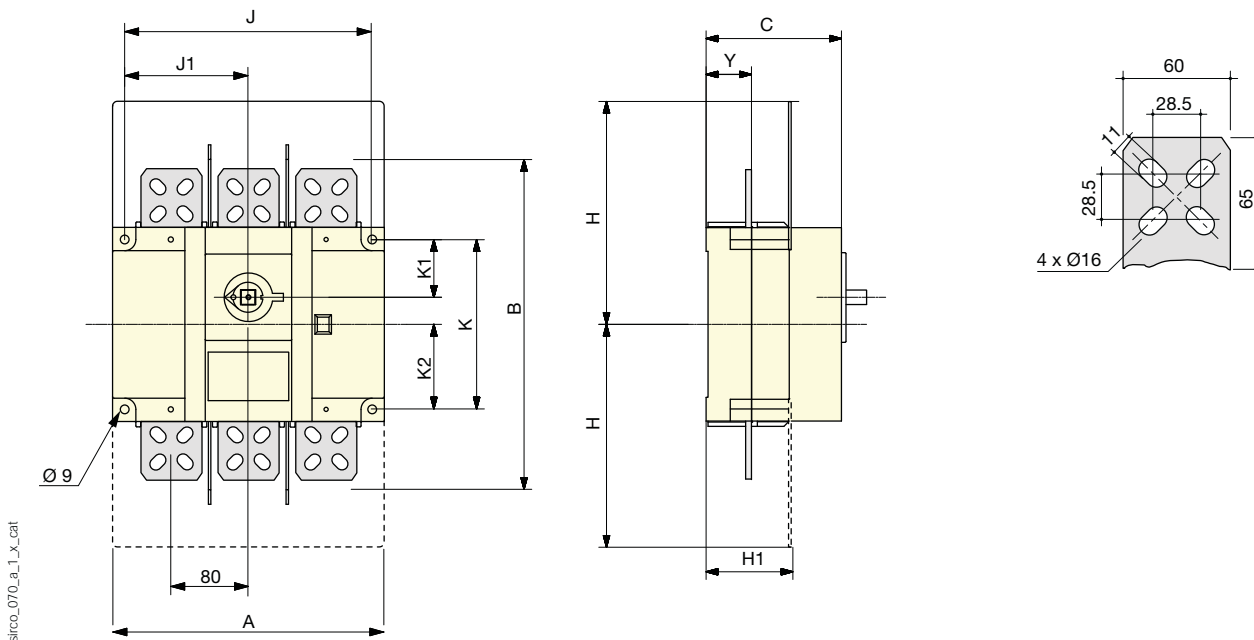


| Frame size | No. of poles | A | B | C | H | H1 | J | J1 | J2 | J3 | K | K1 | Y | Y1 |
|------------------|--------------|-----|-----|-------|-----|-------|-----|----|----|----|-----|------|------|-------|
| B5 _{DS} | 8 P | 361 | 260 | 239.2 | 203 | 165.5 | 270 | 35 | 65 | - | 195 | 97.5 | 52.7 | 189.6 |

SIRCO PV IEC 60947-3

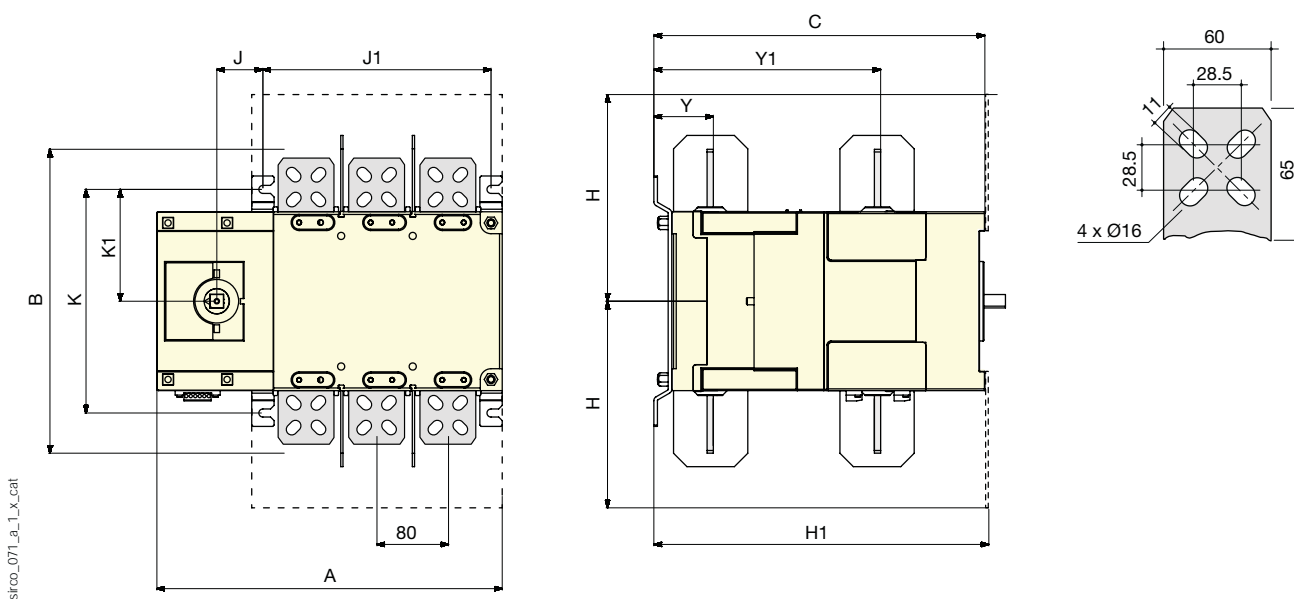
Load break and isolation switches for photovoltaic applications
from 100 to 3200 A, up to 1500 VDC

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 |

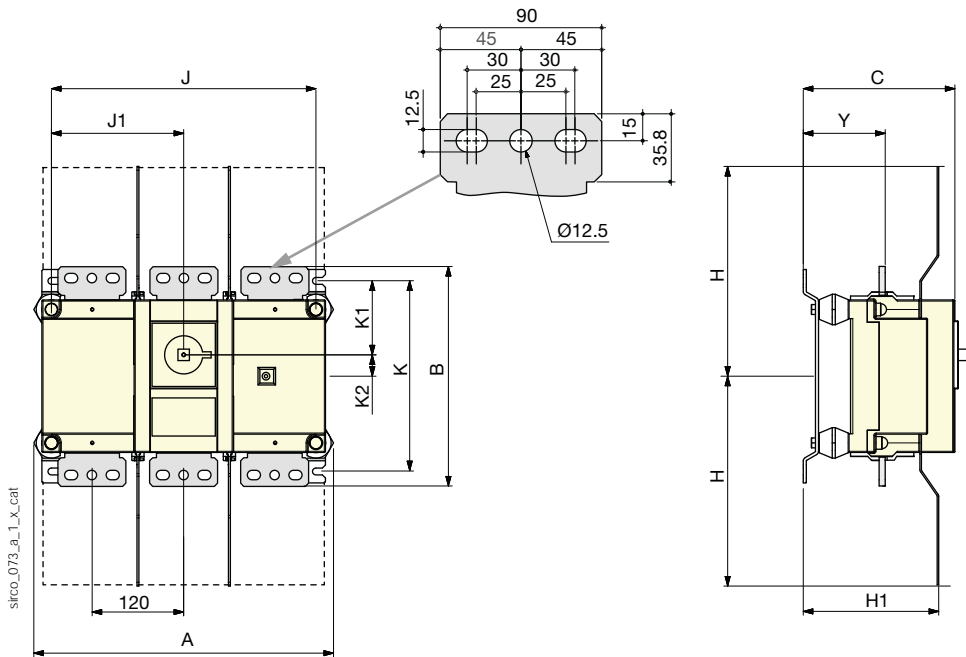
B6_{DS}



| 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 |

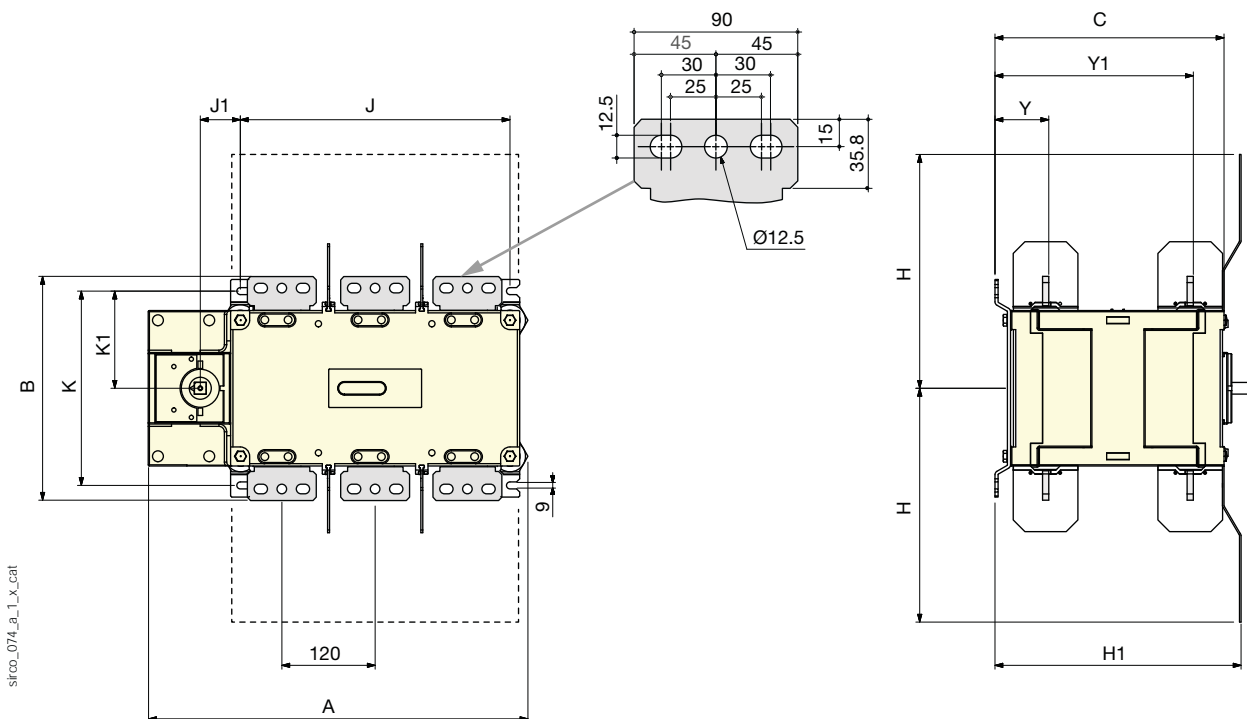
Dimensions (mm) (continued)

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 |

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 |

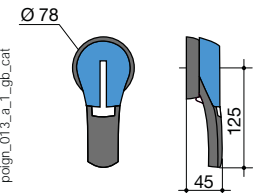
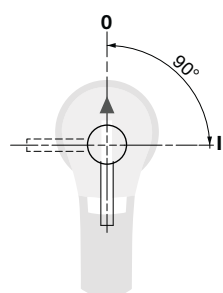
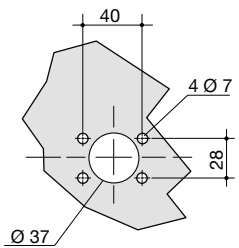
Dimensions of SIRCO PV 3200A - 1000 VDC - B8, please consult us.

SIRCO PV IEC 60947-3

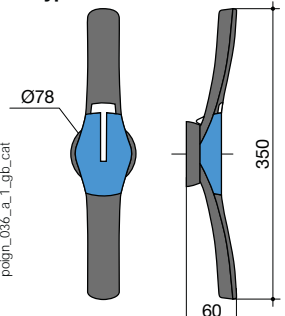
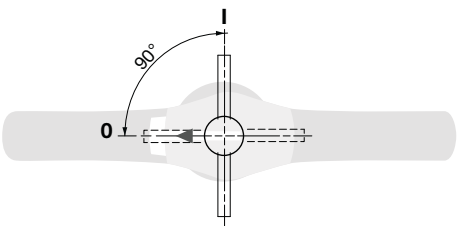
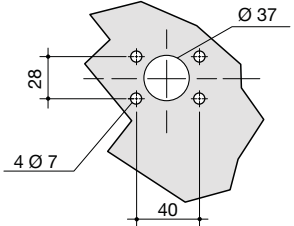
Load break and isolation switches for photovoltaic applications
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Dimensions for external handles (mm)

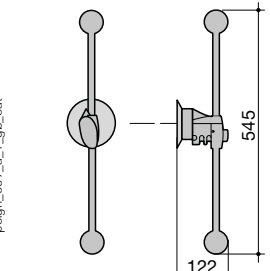
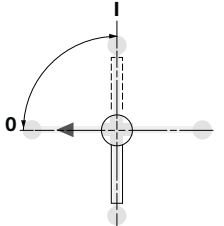
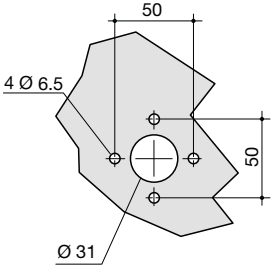
B4 - B5

| Handle type | Front operation Direction of operation | Door drilling |
|---|---|---|
| <p>S2 type</p>  <p>poign_013_a_1_gb_cat</p> |  |  |

B5_{DS} - B6 - B7

| Handle type | Front operation Direction of operation | Door drilling |
|--|---|---|
| <p>S4 type</p>  <p>poign_036_a_1_gb_cat</p> |  |  |

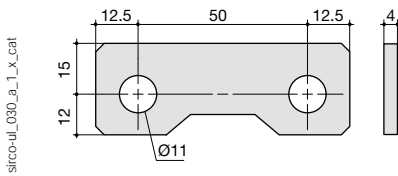
B6_{DS} - B7_{DS}

| Handle type | Front operation Direction of operation | Door drilling |
|---|---|---|
| <p>V1 type</p>  <p>poign_037_a_1_gb_cat</p> |  |  |

Bridging bars (mm)

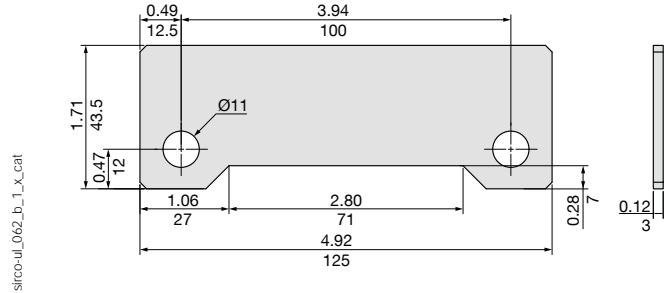
B4

2609 0025A



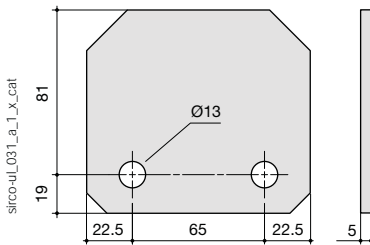
B5

2709 0045A



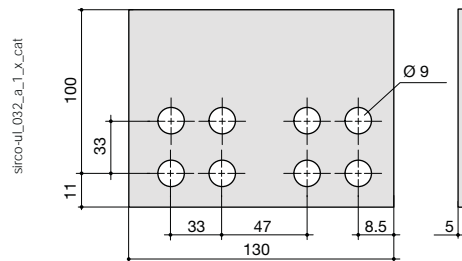
B5 - B5_{DS}

2609 0080A



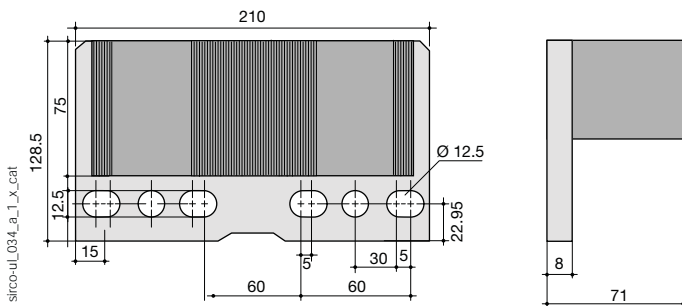
B6 - B6_{DS}

2609 1100A



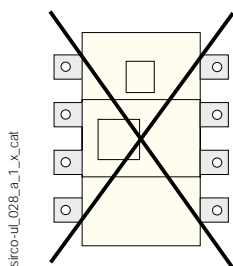
B7 - B7_{DS}

2609 1200A

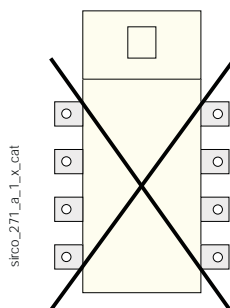


Mounting orientation

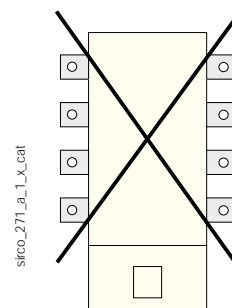
All frames



B5_{DS}



B6_{DS} - B7_{DS}



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