SIRCO MOT PV

Motorised load break switches for photovoltaic applications
for use up to 1000 VDC from 200 to 630 A

SIRCO MOT PV 4x400 A

The solution for

- Buildings.
- Solar parks.

Strong points

- Patented safety disconnection system for firefighters.
- Manual emergency operation.

Conformity to standards

- IEC 60947-3
- IEC 60364-4-410
- IEC 60364-7-712

A complete solution

- **SUNSYS IFB**
(Intelligent Field Box).
Smart connection box to link solar panels to the inverter.

Function

SIRCO MOT PV are three or four pole motorised load break switches.
They make and break under load conditions and provide safety isolation for any low voltage circuit dedicated to photovoltaic applications.

Advantages

Patented safety disconnection system for firefighters
With its remote electrical control, the SIRCO MOT PV can be utilised to provide safety disconnection for firefighters, meeting the remote disconnection requirements of the installation, closing to facilitate periodic tests and short-circuit control for maintenance and cleaning work.

Manual emergency operation
In addition to its motorised operation, the SIRCO MOT PV also includes a manual operation facility, enabling the switch position to be changed directly on the device if required.

General characteristics
- 2 stable positions (I, 0).
- Positive break indication.
- AUTO / MANU selector.
- Padlocking in 0 position (position I with option).
- Up to 1000 VDC.
- IP20 devices and accessories.

socomec Innovative Power Solutions

References

SIRCO MOT PV 750 VDC

Rating (A)	Circuit type	No. of poles	Switch body	Bridging bars for connecting poles in series	Auxiliary contact	Terminal screens	Terminal shrouds
200 A	Single PV circuit	3 P	19PV **3020**	2 P 2609 **0025**(1) 4 P 2609 **2025**(1)	1st contact NO/NC included 2nd contact NO/NC 4109 **0021**	3 P 1509 **3025**(2) 4 P 1509 **4025**(2)	3 P 2694 **3021**(3) 4 P 2694 **4021**(3)
250 A			19PV **3025**				
400 A			19PV **3040**	2 P 2609 **0063**(1) 4 P 2609 **2063**(1)		3 P 1509 **3063** 4 P 1509 **4063**	3 P 2694 **3051**(3) 4 P 2694 **4051**(3)
500 A			19PV **3050**				
630 A			19PV **3063**				

SIRCO MOT PV 1000 VDC

Rating (A)	Circuit type	No. of poles	Switch body	Bridging bars for connecting poles in series	Auxiliary contact	Terminal screens	Terminal shrouds
200 A	Single PV circuit	4 P	19PV **4020**	2 P 2609 **0025**(1) 4 P 2609 **2025**(1)	1st contact NO/NC included 2nd contact NO/NC 4109 **0021**	3 P 1509 **3025**(2) 4 P 1509 **4025**(2)	3 P 2694 **3021**(3) 4 P 2694 **4021**(3)
250 A			19PV **4025**				
400 A			19PV **4040**	2 P 2609 **0063**(1) 4 P 2609 **2063**(1)		3 P 1509 **3063** 4 P 1509 **4063**	3 P 2694 **3051**(3) 4 P 2694 **4051**(3)
500 A			19PV **4050**				
630 A			19PV **4063**				

(1) Connection in series of 2 or 4 poles of the device
(2) 2 pieces: one for top side and another for bottom side
(3) Terminal shrouds cannot be mounted when bridging bars for connecting poles in series are present.

Accessories

Bridging bars for connecting poles in series

Use

The bridging bars facilitate the connection of poles in series, allowing the below configurations:

- Bottom/Bottom
- Top/Top
- Top/Bottom
- Top/Bottom

Connection diagrams: See "Poles connections in serie", page 133.

Rating (A)	Number of poles of the device in series	Pack	Reference
200 ... 250	2	1 piece	2609 **0025**
200 ... 250	4	2 pieces	2609 **2025**
400 ... 630	2	1 piece	2609 **0063**
400 ... 630	4	2 pieces	2609 **2063**

Auxiliary contact

Use

Pre-break and signalisation of position I:
1 to 2 NO/NC auxiliary contacts (1 as standard).
Low level auxiliary contacts:
Please consult us.

Connection to the control circuit

By 6.35 mm fast-on terminal.

Electrical characteristics

30 000 operations.

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Characteristics					
		Operating current Ie (A)			
Rating (A)	Nominal current (A)	250 VAC AC-13	400 VAC AC-13	24 VDC AC-13	48 VDC AC-13
200 ... 630	16	12	8	14	6

References

NO/NC changeover contact		
Rating (A)	Contact(s)	Reference
200 ... 630	2nd	4109 **0021**

Terminal shrouds

Use

Protection against direct contact with terminals or connecting parts.

Not compatible for terminals with bridging bars connected.

Advantage of terminal shrouds

Perforations allow remote thermographic inspection without the need to remove the shrouds.

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Rating (A)	No. of poles	Position	Reference
200 ... 250	3 P	top and bottom	2694 **3021**
200 ... 250	4 P	top and bottom	2694 **4021**
400 ... 630	3 P	top and bottom	2694 **3051**
400 ... 630	4 P	top and bottom	2694 **4051**

Terminal screens

Use

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

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Rating (A)	No. of poles	Position	Reference
200 ... 250	3 P	top and bottom	1509 **3025**
200 ... 250	4 P	top and bottom	1509 **4025**
400 ... 630	3 P	top and bottom	1509 **3063**
400 ... 630	4 P	top and bottom	1509 **4063**

2 position padlocking (I-0)

Use

Enables padlocking in position I (product can be padlocked in position 0 as standard).

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Rating (A)	Reference
200 ... 630	1599 **0003**

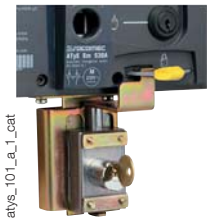
Accessories (continued)

Key handle interlocking system

Use

With the product in manual mode, it enables locking in position 0 using a RONIS EL11AP lock. Factory fitted.

Locking in both positions (I-0) requires, in addition, the “2 position padlocking” accessory.



Rating (A)	Reference
200 … 630	1509 **1006**

Other specific accessories

- Low level auxiliary contacts.

Characteristics according to IEC 60947-3

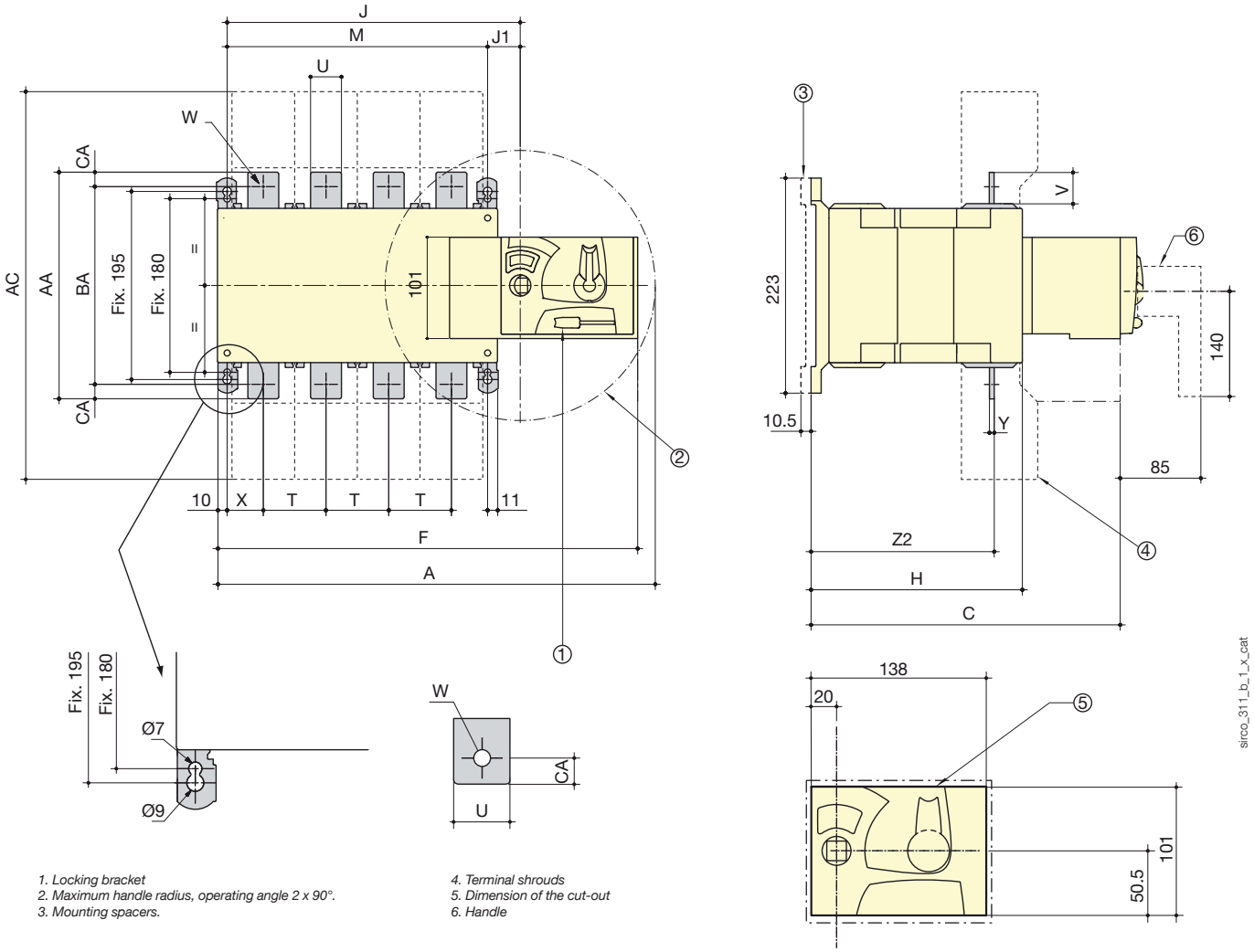
200 to 630 A

Thermal current I_{th} at 40°C					**200 A**	**250 A**	**400 A**	**500 A**	**630 A**
Rated insulation voltage U_i (V)					1200	1200	1200	1200	1200
Rated impulse withstand voltage U_{imp} (kV)					8	8	12	12	12
Rated operational currents I_e (A)									
Rated voltage	**Utilisation category**	**Circuit type**	**Number of poles of the device**	**Number of pole(s) in series per polarity**	**(A)**	**(A)**	**(A)**	**(A)**	**(A)**
750 VDC	DC-21 B	Single PV circuit	3 P	2 P + and 1 P -	200	250	400	500	630
1000 VDC	DC-21 B	Single PV circuit	4 P	2 P + and 2 P -	200	250	400	500	630
Switching time (Standard setting)									
I - 0					0.85	0.85	0.85	0.85	0.85
Power supply									
230 VAC min./max. (VAC)					176/288	176/288	176/288	176/288	176/288
Control supply power demand									
Supply 230 VAC inrush / nominal (VA)					420/100	420/100	420/100	420/110	450/120
Connection									
Rigid Cu cable cross-section (mm^2)					95	120	240	2 x 150	2 x 185
Maximum Cu busbar width (mm)					32	32	40	40	40
Tightening torque min (Nm)					20	20	40	40	40
Mechanical characteristics									
Durability (number of operating cycles)(1)					8000	8000	5000	5000	5000
Weight of a 3 pole device (kg)					5	5	7	7	7
Weight of a 4 pole device (kg)					6	6	8	8	8

(1) Improved endurances: Please consult us.

Dimensions

SIRCO MOT PV 200 to 630 A

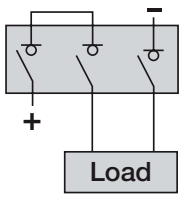


1. Locking bracket
2. Maximum handle radius, operating angle 2 x 90°.
3. Mounting spacers.
4. Terminal shrouds
5. Dimension of the cut-out
6. Handle

Rating (A)	Overall dimensions			Terminal shrouds	Switch body					Switch mounting		Connection										
	A 3p.	A 4p.	C	AC	F 3p.	F 4p.	H	J 3p.	J 4p.	M 3p.	M 4p.	T	U	V	W	X 3p.	X 4p.	Y	Z	Z1	AA	BA	CA
200	345	395	244.5	280	328	378	151	154	184	160	210	50	25	30	11	33	33	3.5	39.5	134.5	160	130	15
250	345	395	244.5	280	328	378	151	154	184	160	210	50	25	30	11	33	33	3.5	39.5	134.5	160	130	15
400	394	459	320.5	400	377	437	221	244	304	210	270	65	45	50	13	42.5	37.5	5	53	190	260	220	20
500	394	459	320.5	400	377	437	221	244	304	210	270	65	45	50	13	42.5	37.5	5	53	190	260	220	20
630	394	459	320.5	400	377	437	221	244	304	210	270	65	45	50	13	42.5	37.5	5	53	190	260	220	20

Pole connections in series (1)

3 poles - bottom / top



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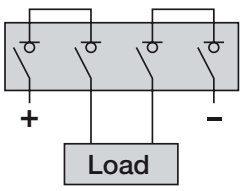
4 poles - bottom / bottom



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(1) Other connections: refer to mounting instructions