



SIRCO VM1

Manual changeover switches
from 63 to 125 A

Changeover
switches



SIRCO VM1 I-0-II 4P 100 A

The solution for

- > Energy production.
- > Critical buildings.



Strong points

- > Safety isolation.
- > Modular device.
- > Reduced depth.

Conformity to standards

- > IEC 60947-3



Function

SIRCO VM1 changeover switches are manually operated three or four pole changeover switches with visible breaking.

They provide changeover, source inversion or switching under load between two low voltage power circuits, as well as their safety isolation.

Advantages

Safety isolation

SIRCO VM1 changeovers enable completely secure switching thanks to positive break indication and double visible breaking. The user can assess the condition of the device either during a preventive check or before an operation.

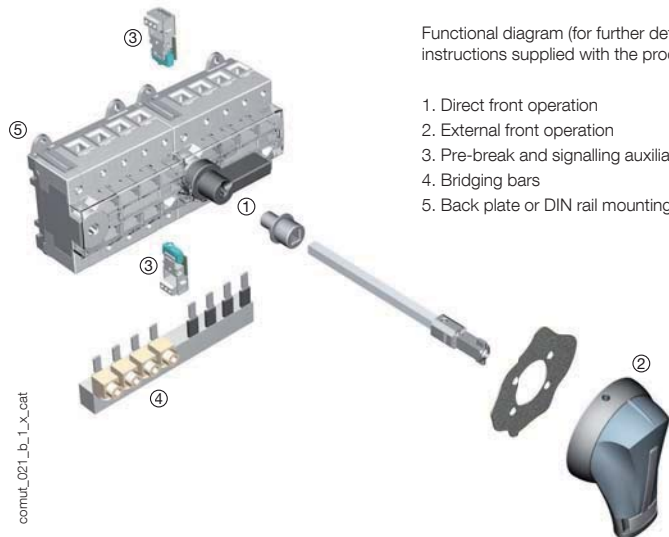
Modular device

SIRCO VM1 changeover switches offer a range of installation configurations: DIN rail, backplate or modular panel.

Reduced depth

With its side-by-side switch arrangement, the SIRCO VM1 changeover can be utilised in panels with a reduced depth.

Configurations



Functional diagram (for further details see the installation instructions supplied with the product).

1. Direct front operation
2. External front operation
3. Pre-break and signalling auxiliary contacts
4. Bridging bars
5. Back plate or DIN rail mounting

References

VM1 changeover switches I-0-II

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	IP20 bridging bars ⁽²⁾	Auxiliary contact
63 A	3 P	4430 3006 ⁽¹⁾	Black 4439 5012	S1 type Black IP65 1413 2113	200 mm 1402 0820 320 mm 1402 0832	3 P 4499 3006 4 P 4499 4006	1 auxiliary contact NO/NC 4439 0001
	4 P	4430 4006 ⁽¹⁾					
80 A	3 P	4430 3008 ⁽¹⁾					
	4 P	4430 4008 ⁽¹⁾					
100 A	3 P	4430 3010 ⁽¹⁾					
	4 P	4430 4010 ⁽¹⁾					
125 A	3 P	4430 3012					
	4 P	4430 4012					

(1) Available enclosed (see "Enclosed changeover switches" page 600).

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

VM1 changeover switches I - I+II - II

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	IP20 bridging bars ⁽¹⁾
63 A	3 P	4440 3006	Black 4449 5012	S1 type Black IP65 1413 2114	200 mm 1403 0820 320 mm 1403 0832	3 P 4499 3006 4 P 4499 4006
	4 P	4440 4006				
80 A	3 P	4440 3008				
	4 P	4440 4008				
100 A	3 P	4440 3010				
	4 P	4440 4010				
125 A	3 P	4440 3012				
	4 P	4440 4012				

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

Accessories

Direct operation handle

Rating (A)	Switching type	Reference
63 ... 125	I - 0 - II	4439 5012
63 ... 125	I - I+II - II	4449 5012



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External operation handle

Use

Door interlocked external front operation handles include an escutcheon, are padlockable and must be utilised with an extension shaft.

Rating (A)	Switching type	padlockable	External IP ⁽¹⁾	Reference
63 ... 125	I - 0 - II	1 Position	IP55	1411 2113
63 ... 125	I - 0 - II	1 Position	IP65	1413 2113
63 ... 125	I - 0 - II	3 Positions	IP65	1413 2813
63 ... 125	I - I+II - II	1 Position	IP65	1413 2114
63 ... 125	I - I+II - II	3 Positions	IP65	1413 2814



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

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Accessories (continued)

Alternative S-type handle cover colours

Use

For single lever type S1 handles.

Other colours: Please consult us.

Colour	To be ordered in multiples of	Reference
Light grey	50	1401 0001
Dark grey	50	1401 0011



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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.

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

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



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Shaft for external handle

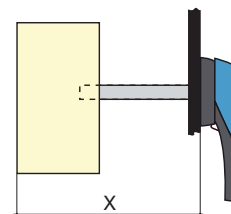
Use

Standard lengths:

- 200 mm,
- 320 mm.

Other lengths: Please consult us.

Switching type I - 0 - II			
Rating (A)	Dimension X (mm)	Shaft length (mm)	Reference
63 ... 125	128 ... 290	200 mm	1402 0820
63 ... 125	128 ... 410	320 mm	1402 0832
Switching type I - I + II - II			
Rating (A)	Dimension X (mm)	Shaft length (mm)	Reference
63 ... 125	128 ... 290	200 mm	1403 0820
63 ... 125	128 ... 410	320 mm	1403 0832



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access_202_a_1_X_cat

IP20 bridging bar

Use

For creating a common connection between switches I & II, on the top or bottom side of the SIRCO VM1

changeover, to enable, for example, the load to be fed from either incoming source (I or II).

Rating (A)	No. of poles	Reference
63 ... 125	3 P	4499 3006
63 ... 125	4 P	4499 4006



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NO/NC changeover auxiliary contacts

Use

Pre-breaking and signalling of positions I and II:

- 1 NO/NC auxiliary contact for each position.

Characteristics

- Snaps on and is secured by a screw.
- Connector block with a maximum capacity of up to 2 x 1.5 mm² per terminal.

Rating (A)	Switching type	Contact(s)	Reference
63 ... 125	I - 0 - II	1	4439 0001 ⁽¹⁾

⁽¹⁾ Not available for the make before break changeover switch (I-I+II-II).

Characteristics according to IEC 60947-3

63 to 125 A

Thermal current I_{th} (40 °C)	63 A	80 A	100 A	125 A
Rated insulation voltage U_i (V)	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV)	8	8	8	8

Rated operational currents I_e (A) according to IEC 60947-3

Rated voltage	Utilisation category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-21 A / AC-21 B	63/63	80/80	100/100	125/125
415 VAC	AC-21 A / AC-21 B	63/63	80/80	100/100	125/125
415 VAC	AC-22 A / AC-22 B	63/63	80/80	100/100	125/125
415 VAC	AC-23 A / AC-23 B	63/63	63/63	63/63	63/63
690 VAC ⁽²⁾	AC-20 A / AC-20 B	63/63	80/80	100/100	125/125
690 VAC ⁽²⁾	AC-21 A / AC-21 B	63/63	80/80	80/80	80/80
690 VAC ⁽²⁾	AC-22 A / AC-22 B	40/40	40/40	40/40	40/40
690 VAC ⁽²⁾	AC-23 A / AC-23 B	25/25	25/25	25/25	25/25
220 VDC ⁽³⁾	DC-20 A / DC-20 B	63/63	80/80	100/100	125/125
220 VDC ⁽³⁾	DC-21 A / DC-21 B	63/63	80/80	100/100	125/125
220 VDC ⁽³⁾	DC-22 A / DC-22 B	63/63	80/80	100/100	100/100
220 VDC ⁽³⁾	DC-23 A / DC-23 B	63/63	63/63	63/63	63/63

Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC-23 ⁽⁴⁾	30/30	30/30	30/30	30/30
At 690 VAC without pre-break in AC-23 ⁽⁴⁾	22/22	22/22	22/22	22/22

Reactive power (kvar)

At 400 VAC ⁽⁴⁾	28	37	45	55
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Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit (kA rms) ⁽⁵⁾	100	100	100	50
Associated fuse rating (A) ⁽⁵⁾	63	80	100	125

Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s⁽⁶⁾

Rated short-time withstand current 0.3s. I_{cw} (kA rms)	4.5	4.5	4.5	4.5
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Short-circuit capacity (without protection)

Rated short-time withstand current 1s. I_{cw} (kA rms)	2.5	2.5	2.5	2.5
Rated short-circuit making capacity I_{cm} (kA peak)	3.55	3.55	3.55	3.55

Connection

Minimum Cu cable cross-section (mm ²)	4	4	4	4
Maximum Cu cable cross-section (mm ²)	50	50	50	50
Tightening torque mini / maxi (Nm)	6	6	6	6

Mechanical characteristics

Durability (number of operating cycles)	10 000	10 000	10 000	10 000
Weight of 3 P switch (kg)	1.2	1.2	1.4	1.4
Weight of 4 P switch (kg)	1.4	1.4	1.6	1.6

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or phase barrier.

(3) 4-pole device with 2 poles in series per polarity.

(4) The power value is given for information only, the current values vary from one manufacturer to another.

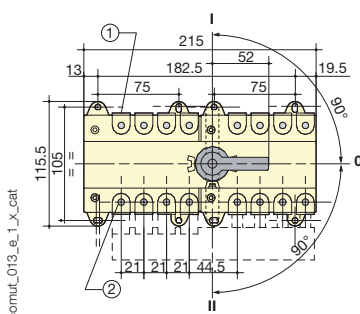
(5) For a rated operational voltage $U_e = 400$ VAC.

(6) Value for coordination with any circuit-breaker ensuring tripping in less than 0.3s. For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please consult us.

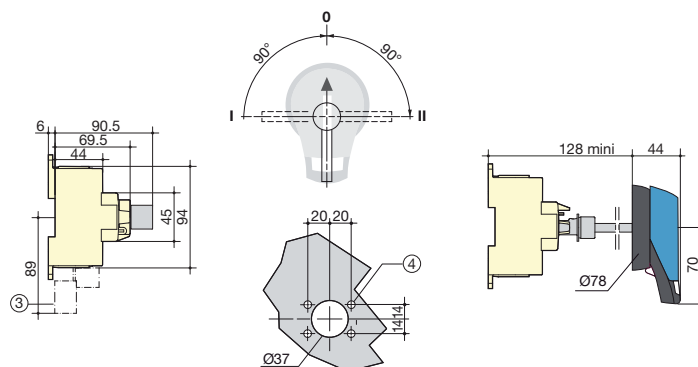
Dimensions

63 to 125 A

Direct front operation



External front operation



1. Max connection
- Rigid: 50 mm²
- Flexible: 35 mm²
2. 6-sided 5 - Pozidriv no. 1
slot 4.5 mm.
3. Bridging bar
4. Handle mounting with
2 or 4 screws Ø 7 mm.