

Load break switches from 16 to 160 A

⇒ Function

SIRCO M and **MV** are manually operated modifiable and modular multipolar load break switches.

They make and break under load conditions and provide safety isolation for any low voltage circuit, particularly for machine control circuits.

⇒ Specific characteristics

SIRCO M

- Fully visualised breaking.
- Contact point technology.
- For panel mounting device, use the "Door mounting kit" (see accessories).

SIRCO MV

- Visible double breaking based on contact carriers equipped with sliding contacts (type SIRCO, see page 38).
- Fully visualised breaking.

⇒ General characteristics

- Double break per phase.
- DIN rail mounting, panel or modular panel with 45 mm front cut out.
- IP20 devices and accessories.
- Severe load duty categories (AC-22 and AC-23).

⇒ Conformity to standards

- IEC 60947-3
- EN 60947-3
- IS13947-3
- Standard UL: see SIRCO M UL

⇒ Approvals and certifications⁽¹⁾

- KEMA
- RINA (Registre Naval Italien)

⁽¹⁾ Product reference on request.

⇒ Other products

- The changeover switches are composed of two 3 poles SIRCO M switches and conversion kit.
- They ensure switching, transfer of sources or transfer of two low voltage circuits on load as well as their safety disconnection.



➤ **What you need to know**

SIRCO M

- SIRCO M can be operated in different ways:



Complete switch body
toggle operation



Direct operation with
handle



External operation
front, left side or right side

- The SIRCO M is a **3 pole** device available from **16 to 125 A**, complete with an unswitched neutral or PE pole and type M auxiliary pre-break and signalling contacts. The basic 3 pole device is available in a polyester enclosure from 16 to 100 A (see page 492).

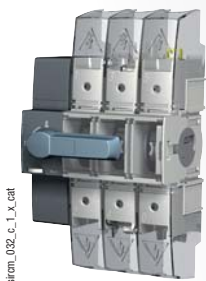
- From **16 to 80 A**, it is possible to mount the device on a door and transform a 3 pole switch into a **6 or 8 pole switch** or a **3 or 4 pole changeover switch**, by adding a conversion kit and a switched 4th pole.



Compact enclosure: see page 492

SIRCO MV

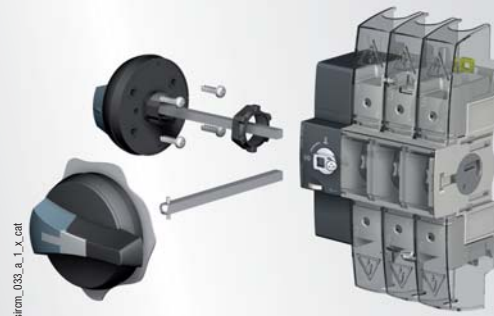
- 3 operations are available:



Direct operation



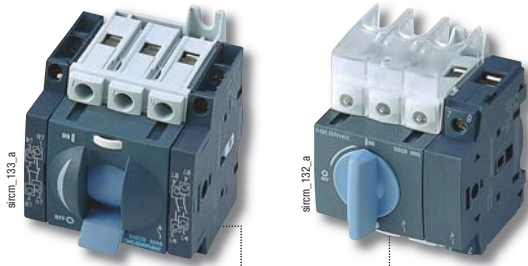
External **right side** operation



External **front and left side** operation

- SIRCO MV can be ordered in **3 or 4 pole** from **100 to 160 A**. Two types of auxiliary contacts are available:
 - U type pre-break,
 - M type signalisation.

➔ SIRCO M and MV - References



SIRCO M

Rating (A)	No. of poles	Complete switch body toggle operation	Switch body	Direct handle	External front and right side handle	External left side handle	External front handle for changeover switches	Shaft extensions for external front and side handle	4 ^o pole
16 A	3 P	2205 3000	2200 3000 ⁽¹⁾⁽²⁾⁽³⁾	Blue 2299 5012 Red 2299 5013	S00 type I - 0 Black IP55 1471 1111 ⁽⁴⁾ Black IP65 1473 1111 ⁽⁴⁾ Red/Yellow IP65 1474 1111 ⁽⁴⁾	S00 type I - 0 Black IP65 147A 5111 Red/Yellow IP65 147B 5111	S00 type I - 0 - II Black IP65 1473 1113 ⁽⁴⁾ I - I+II - II Black IP65 1473 1114 ⁽⁴⁾	150 mm 1407 0515 200 mm 1407 0520 320 mm 1407 0532	1 P 2200 1000
20 A	3 P	2205 3001	2200 3001 ⁽¹⁾⁽²⁾⁽³⁾						1 P 2200 1001
25 A	3 P	2205 3002	2200 3002 ⁽¹⁾⁽²⁾⁽³⁾						1 P 2200 1002
32 A	3 P	2205 3003	2200 3003 ⁽¹⁾⁽²⁾⁽³⁾						1 P 2200 1003
40 A	3 P	2205 3004	2200 3004 ⁽¹⁾⁽²⁾⁽³⁾						1 P 2200 1004
63 A	3 P	2205 3006	2200 3006 ⁽¹⁾⁽²⁾⁽³⁾						1 P 2200 1006
80 A	3 P	2205 3008	2200 3008 ⁽¹⁾⁽²⁾⁽³⁾						1 P 2200 1008
100 A	3 P		2200 3010 ⁽²⁾	Blue 2299 5032	S0 type I - 0 Black IP55 1481 1111 ⁽⁴⁾ Black IP65 1483 1111 ⁽⁴⁾ Red/Yellow IP65 1484 1111 ⁽⁴⁾	S0 type I - 0 Black IP65 148A 5111 Red/Yellow IP65 148B 5111		1 P 2200 1010	
125 A	3 P		2200 3011 ⁽²⁾					1 P 2200 1011	

Rating (A)	No. of poles	Complete switch body toggle operation	Switch body	Unswitched neutral pole	Unswitched protective earth module	Auxiliary contacts	Terminal shrouds	Conversion kit	Door mounting kit
16 A	3 P	2205 3000	2200 3000 ⁽¹⁾⁽²⁾⁽³⁾	1 P 2200 5005	1 P 2200 9005	M type 1 contact NO + NC 2299 0001 1 contact 2 NC 2299 0011	1 P 2294 1005 ⁽⁵⁾ 3 P 2294 3005 ⁽⁵⁾	Switch 6 / 8 P 2269 6009 ⁽⁶⁾ Changeover switches I - 0 - II 2209 6009 ⁽⁶⁾ Changeover switches I - I+II - II 2299 6009 ⁽⁶⁾	3/4 P Complete protection IP2X 2299 3309 ⁽⁷⁾⁽⁸⁾ Overall dimensions reduce 2299 3409 ⁽⁷⁾⁽⁸⁾
20 A	3 P	2205 3001	2200 3001 ⁽¹⁾⁽²⁾⁽³⁾						
25 A	3 P	2205 3002	2200 3002 ⁽¹⁾⁽²⁾⁽³⁾						
32 A	3 P	2205 3003	2200 3003 ⁽¹⁾⁽²⁾⁽³⁾						
40 A	3 P	2205 3004	2200 3004 ⁽¹⁾⁽²⁾⁽³⁾	1 P 2200 5009	1 P 2200 9009	1 P 2294 1009 ⁽⁵⁾ 3 P 2294 3009 ⁽⁵⁾			
63 A	3 P	2205 3006	2200 3006 ⁽¹⁾⁽²⁾⁽³⁾						
80 A	3 P	2205 3008	2200 3008 ⁽¹⁾⁽²⁾⁽³⁾	1 P 2200 5011	1 P 2200 9011	1 P 2294 1011 ⁽⁵⁾ 3 P 2294 3016 ⁽⁵⁾			
100 A	3 P		2200 3010 ⁽²⁾						
125 A	3 P		2200 3011 ⁽²⁾						

(1) For 8 pole device in direct operation, order 2 x 3 pole device + 2 main poles + conversion kit (for external operation, add the shaft + the handle).
 (2) Front and side operation.
 (3) For 6-pole device in direct operation, order 2 x 3-pole device + conversion kit (for external operation, add the shaft + the handle).

(4) Defeatable handle.
 (5) Top and bottom.
 (6) Delivered with a direct handle.
 (7) Available for SIRCO M only.
 (8) Delivered with a shaft.



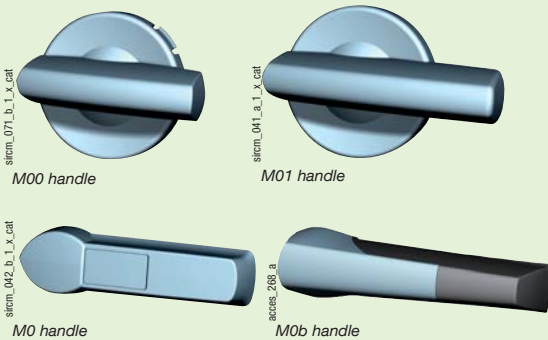
SIRCO MV

Rating (A)	No. of poles	Switch body	Direct handle	External front handle	External right side handle	External left side handle	Shaft extensions for external front and side	Auxiliary signal contact	Auxiliary contacts for pre-break	Terminal shrouds	Voltage sensing and power supply kit	
100 A	3 P	2200 3110	Blue 2299 5042 ⁽¹⁾ Blue 2299 5022	S0 type I - 0 Black IP55 1491 0111 ⁽²⁾ Black IP65 1493 0111 ⁽²⁾	S0 type I - 0 Black IP55 1491 0111 ⁽²⁾ Red/Yellow IP65 1494 0111 ⁽²⁾	S0 type I - 0 Black IP65 149A 9111 Red/Yellow IP65 149B 9111	S0 type 150 mm 1409 0615 200 mm 1409 0620 320 mm 1409 0632	M type 1 contact NO + NC 2299 0001 1 contact 2 NC 2299 0011	U type NC contact 3999 0701 1 contact NO 3999 0702	3 P 2294 3016 ⁽³⁾ 4 P 2294 4016 ⁽³⁾	2 pieces 1399 4006	
	4 P	2200 4110		Red/Yellow IP65 1494 0111 ⁽²⁾	S1 type I - 0 Black IP55 1415 2111 Red/Yellow IP65 1418 2111	S1 type I - 0 Black IP65 141A 2111 Red/Yellow IP65 141B 2111	S1 type 200 mm 1401 0620 320 mm 1401 0632 400 mm 1401 0640					
125 A	3 P	2200 3012			S1 type 0 I - 0 Black IP55 1411 2111 ⁽²⁾ Red/Yellow IP65 1414 2111 ⁽²⁾							
	4 P	2200 4012										
160 A	3 P	2200 3016										
	4 P	2200 4016										

(1) Standard.
(2) Defeatable handle.
(3) Top and bottom.

➤ Accessories

Direct operation handle



For SIRCO M

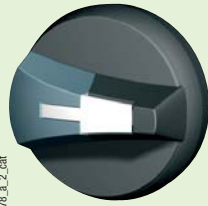
Rating (A)	Handle colour	Handle	Reference
16 ... 80	Blue	M00 type	2299 5012
16 ... 80	Red	M00 type	2299 5013
100 ... 125	Blue	M01 type	2299 5032

For SIRCO MV

Rating (A)	Handle colour	Handle	Reference
100 ... 160	Blue	M0B type	2299 5042 ⁽¹⁾
100 ... 160	Blue	M0 type	2299 5022

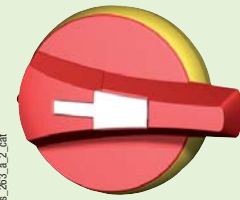
(1) Standard.

External handle operation - SIRCO M



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S00 handle



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S0 handle

Front and right side operation I - 0

Rating (A)	Handle		External IP	Reference
	colour	Handle		
16 ... 80	Black	S00 type	IP55	1471 1111
16 ... 80	Black	S00 type	IP65	1473 1111
16 ... 80	Red/Yellow	S00 type	IP65	1474 1111
100 ... 125	Black	S0 type	IP55	1481 1111 ⁽¹⁾
100 ... 125	Black	S0 type	IP65	1483 1111 ⁽¹⁾
100 ... 125	Red/Yellow	S0 type	IP65	1484 1111 ⁽¹⁾

(1) Defeatable handle.

Left side operation I - 0

Rating (A)	Handle		External IP	Reference
	colour	Handle		
16 ... 80	Black	S00 type	IP65	147A 5111
16 ... 80	Red/Yellow	S00 type	IP65	147B 5111
100 ... 125	Black	S0 type	IP65	148A 5111
100 ... 125	Red/Yellow	S0 type	IP65	148B 5111

Front operation for changeover switches I - 0 - II

Rating (A)	Handle		External IP	Reference
	colour	Handle		
16 ... 80	Black	S00 type	IP65	1473 1113

Front operation for changeover switches I - I+II - II

Rating (A)	Handle		External IP	Reference
	colour	Handle		
16 ... 80	Black	S00 type	IP65	1473 1114

External handle operation - SIRCO MV



access_279_a_2_cat

S0 handle



access_284_a_2_cat

S1 handle

S0 type handle - Front and right side operation I - 0

Rating (A)	Handle colour	External IP	Reference
100 ... 160	Black	IP55	1491 0111 ⁽¹⁾
100 ... 160	Black	IP65	1493 0111 ⁽¹⁾
100 ... 160	Red/Yellow	IP65	1494 0111 ⁽¹⁾

(1) Defeatable handle.

S0 type handle - Left side operation I - 0

Rating (A)	Handle colour	External IP	Reference
100 ... 160	Black	IP65	149A 9111 ⁽¹⁾
100 ... 160	Red/Yellow	IP65	149B 9111 ⁽¹⁾

(1) Defeatable handle.

S1 type handle - Front operation I - 0

Rating (A)	Handle colour	External IP	Reference
100 ... 160	Black	IP55	1411 2111 ⁽¹⁾
100 ... 160	Black	IP65	1413 2111 ⁽¹⁾
100 ... 160	Red/Yellow	IP65	1414 2111 ⁽¹⁾

(1) Defeatable handle.

S1 type handle - Right side operation I - 0

Rating (A)	Handle colour	External IP	Reference
100 ... 160	Black	IP55	1415 2111
100 ... 160	Black	IP65	1417 2111
100 ... 160	Red/Yellow	IP65	1418 2111

S1 type handle - Left side operation I - 0

Rating (A)	Handle colour	External IP	Reference
100 ... 160	Black	IP65	141A 2111
100 ... 160	Red/Yellow	IP65	141B 2111

Shaft for external handle



Use

Standard lengths:

- 150 mm,
- 200 mm,
- 320 mm.

Other lengths: consult us.

For 3/4 pole switches, shaft extensions for external front and side handle.
For 6/8 pole switches and SIRCOVER M changeover switches, shaft extensions for front operation only.

For SIRCO M

Rating (A)	Handle	Shaft length (mm)	Reference
16 ... 125	S00 type	150 mm	1407 0515
16 ... 125	S00 type	200 mm	1407 0520
16 ... 125	S00 type	320 mm	1407 0532

For SIRCO MV

Rating (A)	Handle	Shaft length (mm)	Reference
100 ... 160	S0 type	150 mm	1409 0615
100 ... 160	S0 type	200 mm	1409 0620
100 ... 160	S0 type	320 mm	1409 0632
100 ... 160	S1 type	200 mm	1401 0620
100 ... 160	S1 type	320 mm	1401 0632
100 ... 160	S1 type	400 mm	1401 0640

Shaft guide for external operation



Use

To guide the extension shaft into the external handle.
This accessory enables handle to engage extension shaft with a misalignment of up to 15 mm.
Required for a shaft length over 320 mm.

Description	Handle type	Reference
Shaft guide	S00 and S0	1419 0000
Shaft guide	S1	1429 0000

Additional pole for SIRCO M



4° pole

Use

Adds one or two poles and transforms:

- 3 pole load break switches into a 4 pole,
- 6 pole load break switches into a 8 pole,
- 3 pole changeover switches into a 4 pole.

Rating (A)	No. of poles	Type	Reference
16	1 P	switched	2200 1000
20	1 P	switched	2200 1001
25	1 P	switched	2200 1002
32	1 P	switched	2200 1003
40	1 P	switched	2200 1004
63	1 P	switched	2200 1006
80	1 P	switched	2200 1008
100	1 P	switched	2200 1010
125	1 P	switched	2200 1011

Neutral pole

Use

Transforms the 3-pole switch into a 3-pole + solid neutral.

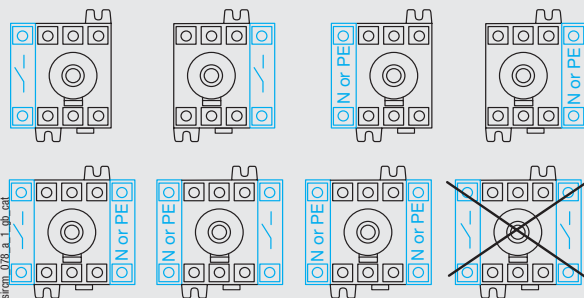
Rating (A)	No. of poles	Type	Reference
16 ... 40	1 P	unswitched	2200 5005
63 ... 80	1 P	unswitched	2200 5009
100 ... 125	1 P	unswitched	2200 5011

Protective earth module

Use

Adds 1 protective earth module pole to the switch-disconnector.

Rating (A)	No. of poles	Type	Reference
16 ... 40	1 P	unswitched	2200 9005
63 ... 80	1 P	unswitched	2200 9009
100 ... 125	1 P	unswitched	2200 9011



Additional pole configuration

Terminal shrouds



Use

Top and bottom protection against direct contact with the terminals or connection parts.
Available in 1 or 3 pole versions for SIRCO M and 3 or 4 pole for SIRCO MV.
An opening on each terminal cover makes it possible to insert a probe to measure temperature.

For SIRCO M

Rating (A)	No. of poles	Position	Reference
16 ... 40	1 P	top / bottom	2294 1005
16 ... 40	3 P	top / bottom	2294 3005
63 ... 80	1 P	top / bottom	2294 1009
63 ... 80	3 P	top / bottom	2294 3009
100 ... 125	1 P	top / bottom	2294 1011⁽¹⁾
100 ... 125	3 P	top and bottom	2294 3016⁽¹⁾

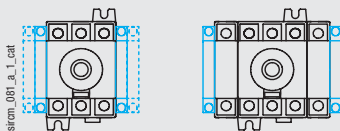
(1) Reference composed of 2 pieces.

For SIRCO MV

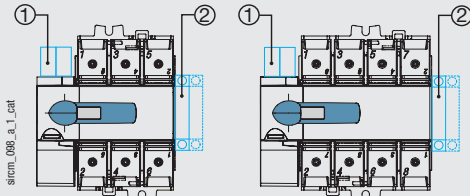
Rating (A)	No. of poles	Position	Reference
100 ... 160	3 P	top / bottom	2294 3016
100 ... 160	4 P	top / bottom	2294 4016

Auxiliary contacts

M type



Auxiliary contacts configurations for SIRCO M



Auxiliary contacts configurations for SIRCO MV

1. Maximum 2 "U" type auxiliary contacts.
2. Maximum 4 "M" type auxiliary contacts

U type



Use

Pre-break and signalisation of positions 0 and I by NO+NC or 2 NO auxiliary contacts.
They allow to anticipate the switching of the main poles. They can be mounted on the left or on the right side of the device.
Max 4 auxiliary contacts (2 modules).

Pre-break is not guaranteed on the **SIRCO MV**.

Characteristics
NO+NC auxiliary contacts: IP2 with front operation.

For SIRCO M

Rating (A)	Number of AC	Type of AC	Reference
16 ... 125	1 AC	NO + NC	2299 0001
16 ... 125	1 AC	2 NC	2299 0011

For SIRCO MV

Rating (A)	Number of AC	Type of AC	Reference
100 ... 160	1 AC	NO + NC	2299 0001
100 ... 160	1 AC	2 NC	2299 0011

Characteristics

Contact type	Nominal current (A)	Operating current I _o (A)	
		230 VAC	AC-13
NO + NC	10	10	6

Use

Pre-break and signalisation by NO or NC auxiliary contact.
Maximum 2 auxiliary contacts.
For use only with SIRCO MV switches.

For SIRCO MV

Rating (A)	Number of AC	Type of AC	Reference
100 ... 160	1 AC	NC	3999 0701
100 ... 160	1 AC	NO	3999 0702

Conversion kit



Conversion kit for 6/8 pole load break switches



Escutcheon for 3/4-pole changeover switches (I - 0 - II) or (I - I+II - II)



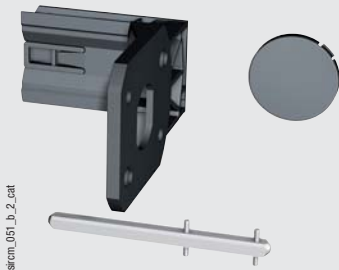
Use

It must be ordered at the same time as the handle for external control.
This accessory enables the assembly of two 3 pole switches and additional poles in order to achieve:
- 6 or 8-pole SIRCO M load break switches,
- 3 or 4-pole SIRCOVER M changeover switches.

SIRCOVER M changeover switches ensure switching, transfer of sources (I - 0 - II) or transfer of two low voltage circuits on load (I - I+II - II), with the continuity of power supply.

Rating (A)	Type	Reference
16 ... 80	Load break switches 6 / 8 P	2269 6009
16 ... 80	Changeover switch 3/4 pole (I - 0 - II)	2209 6009
16 ... 80	Changeover switch 3/4 pole (I - I+II - II)	2299 6009

Door mounting kit



sircm_051_d_2_cat

Use

This kit enables direct mounting of the switch on the door panel, on the right or left side of the panel. Moreover, the connection clamps of the switch are always accessible.

The external handle is quick and easy to install due to an internal locking nut mounted on the inside of the enclosure. 2 kits are available:
- one for complete protection IP2X
- one with overall dimensions reduced.

For SIRCO M

Rating (A)	No. of poles	Description	Reference
16 ... 80	3/4 P	Complete protection IP2X	2299 3309
16 ... 80	3/4 P	Overall dimensions reduce	2299 3409

Cap for side operation mounting



sircm_126_a_2_cat

Use

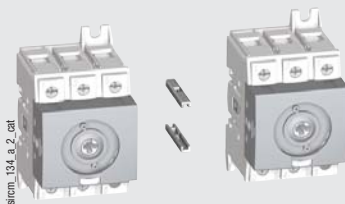
Accessory for capping the front face of the **SIRCO M** when utilising in side operation, 20 units per pack.

This piece can be snapped on the switch body directly.

For SIRCO M

Rating (A)	Pack	Reference
16 ... 80	20 pieces	2299 9409

6/8 pole joining accessory



sircm_134_a_2_cat

Use

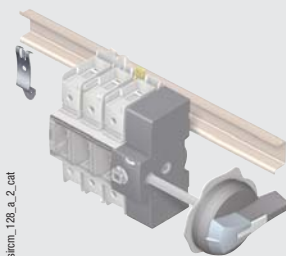
40 units per pack, they allow the joining of two 3 pole switches (+ additional pole) in order to form a 6 or 8 pole switch for external side operation.

For multi-pole switches, please consult us.

For SIRCO M

Rating (A)	Pack	Reference
16 ... 80	40 pieces	2299 9909

DIN rail locking clip



sircm_128_a_2_cat

Use

This locking clip prevents the **SIRCO MV** from sliding when DIN rail mounted.

For SIRCO MV

Rating (A)	Type	Reference
100 ... 160	M4	5000 0041
100 ... 160	M5	5000 0051

Voltage sensing and power supply tap



atym_026_a_1_cat

Use

It allows connection of 2 x $\leq 1.5 \text{ mm}^2$ voltage sensing or power cables.

For SIRCO MV

Rating (A)	Pack	Reference
100 ... 160	2 pieces	1399 4006

➤ Characteristics according to IEC 60947-3

SIRCO M - 16 to 125 A

Thermal current I_{th} (40°C)	16 A	20 A	25 A	32 A	40 A	63 A	80 A	100 A	125 A
Rated insulation voltage U_i (V)	800	800	800	800	800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV)	8	8	8	8	8	8	8	8	8

Rated operational currents I_e (A)

Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-21 A / AC-21 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
415 VAC	AC-22 A / AC-22 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
415 VAC	AC-23 A / AC-23 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
500 VAC	AC-21 A / AC-21 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
500 VAC	AC-22 A / AC-22 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
500 VAC	AC-23 A / AC-23 B	16/16	20/20	25/25	25/25	25/25	63/63	63/63	80/80	100/100
690 VAC	AC-21 A / AC-21 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
690 VAC	AC-22 A / AC-22 B	16/16	20/20	25/25	32/32	32/40	40/63	63/80	80/100	100/125
690 VAC	AC-23 A / AC-23 B	16/16	20/20	25/25	25/25	25/25	40/40	40/40	63/63	63/63

Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC-23 (kW) ⁽¹⁾⁽²⁾	7.5	9	11	15	18.5	30	37	45	55
At 500 VAC without pre-break in AC-23 (kW) ⁽¹⁾⁽²⁾	7.5	9	11	15	18.5	30	37	45	55
At 690 VAC without pre-break in AC-23 (kW) ⁽¹⁾⁽²⁾	7.5	11	15	15	15	30	37	45	55

Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit (kA rms) ⁽³⁾	50	50	50	50	50	50	50	25	25
Associated fuse rating (A) ⁽³⁾	16	20	25	32	40	63	80	100	125

Short-circuit capacity (U_n 415 VAC)

Rated short-time withstand current 0.3 s. I_{cw} (kA eff.)	2.5	2.5	2.5	2.5	2.5	3	3	5	5
Rated peak withstand current (kA peak) ⁽³⁾	6	6	6	6	6	9	9	12	12

Connection

Minimum Cu cable section (mm ²)	1.5	1.5	1.5	1.5	1.5	2.5	2.5	10	10
Maximum Cu cable section (mm ²)	16	16	16	16	16	35	35	70	70
Tightening torque min/max (Nm)	2 / 2.2	2 / 2.2	2 / 2.2	2 / 2.2	2 / 2.2	3.5 / 3.85	3.5 / 3.85		

Mechanical characteristics

Durability (number of operating cycles)	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000
Operating effort (Nm)	0.8	0.8	0.8	0.8	0.8	1	1		
Weight of a 3 pole device (kg)	0.16	0.16	0.16	0.16	0.16	0.26	0.26	0.7	0.7

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

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

(3) For a rated operational voltage $U_n = 400$ VAC.

➔ Characteristics according to IEC 60947-3

SIRCO MV - 100 to 160 A

Thermal current I_{th} (40°C)	100 A	125 A	160 A
Rated insulation voltage U_i (V)	800	800	800
Rated impulse withstand voltage U_{imp} (kV)	8	8	8

Rated operational currents I_e (A)				
Rated voltage	Load duty category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 VAC	AC-21 A / AC-21 B	100/100	125/125	160/160
415 VAC	AC-22 A / AC-22 B	100/100	125/125	160/160
415 VAC	AC-23 A / AC-23 B	100/100	125/125	125/160
500 VAC	AC-21 A / AC-21 B	100/100	125/125	160/160
500 VAC	AC-22 A / AC-22 B	100/100	125/125	125/160
500 VAC	AC-23 A / AC-23 B	80/80	100/100	100/100
690 VAC	AC-20 A / AC-20 B	100/100	125/125	160/160
690 VAC	AC-21 A / AC-21 B	100/100	125/125	160/160
690 VAC	AC-22 A / AC-22 B	63/80	80/100	100/125
690 VAC	AC-23 A / AC-23 B	63/63	80/80	80/80

Reactive power (kvar)			
At 400 VAC (kvar) ⁽²⁾	45	55	75

Operational power in AC-23 (kW)			
At 400 VAC without pre-break in AC-23 (kW) ⁽¹⁾⁽²⁾	45	55	75
At 500 VAC without pre-break in AC-23 (kW) ⁽¹⁾⁽²⁾	45	55	75
At 690 VAC without pre-break in AC-23 (kW) ⁽¹⁾⁽²⁾	45	75	75

Fuse protected short-circuit withstand (kA rms prospective)			
Prospective short-circuit (kA rms) ⁽³⁾	100	65	50
Associated fuse rating (A) ⁽³⁾	100	125	160

Short-circuit capacity (U_n 415 VAC)			
Rated short-time withstand current 0.3 s. I_{cw} (kA eff.)	7	7	7
Rated peak withstand current (kA peak) ⁽³⁾	12	12	12

Connection			
Minimum Cu cable section (mm ²)	10	10	10
Maximum Cu cable section (mm ²)	70	70	70
Tightening torque min/max (Nm)	4 / 4.4	4 / 4.4	4 / 4.4

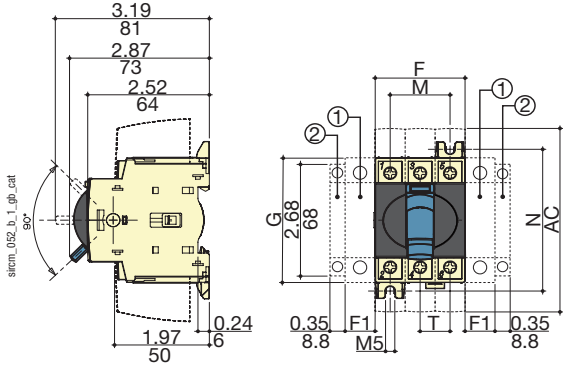
Mechanical characteristics			
Durability (number of operating cycles)	50 000	50 000	50 000
Operating effort (Nm)	4	4	4
Weight of a 3 pole device (kg)	0.7	0.7	0.7
Weight of a 4 pole device (kg)	0.9	0.9	0.9

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
 (2) The power value is given for information only, the current values vary from one manufacturer to another.
 (3) For a rated operational voltage $U_n = 400$ VAC.

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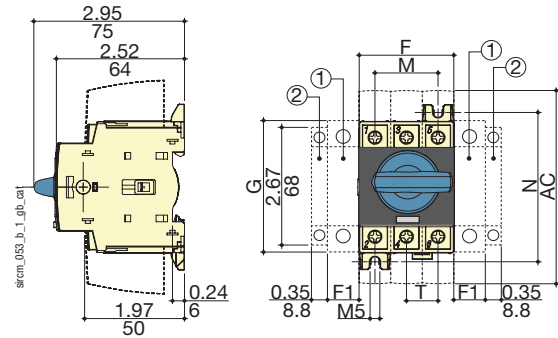
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Toggle operation



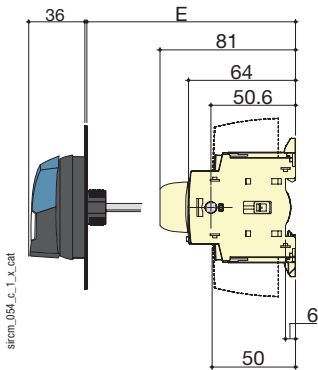
1. Location for: 1 switched fourth pole module (1 per device max.) or 1 unswitched neutral pole or 1 protective earth module or 1 auxiliary contact.
2. Position for 1 auxiliary contact only.
Note: max 4 additional blocks

Direct operation with handle

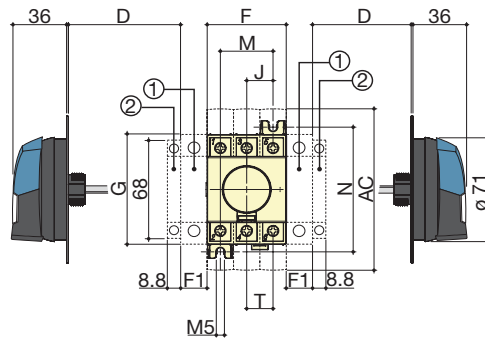


1. Location for: 1 switched fourth pole module (1 per device max.) or 1 unswitched neutral pole or 1 protective earth module or 1 auxiliary contact.
2. Position for 1 auxiliary contact only.
Note: max 4 additional blocks

External front operation



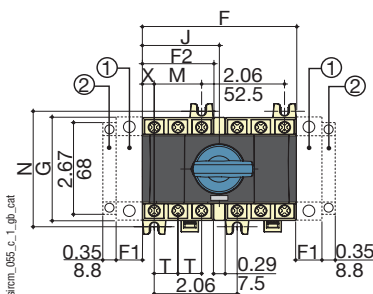
External side operation



1. Location for: 1 switched fourth pole module (1 per device max.) or 1 unswitched neutral pole or 1 protective earth module or 1 auxiliary contact.
2. Position for 1 auxiliary contact only.
Note: max 4 additional blocks

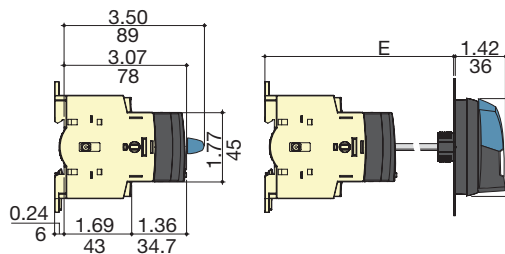
Rating (A)	Overall dimensions				Terminal shrouds		Switch body			Switch mounting		Connection
	D min	D max	E min	E max	AC	F	F1	G	J	M	N	
16...40	30	235	100	372	110	45	15	68	15	30	75	15
63...80	30	235	100	372	110	52.5	17.5	76	17.5	35	85	17.5

Direct front operation for 6/8-pole load break switches or 3/4-pole changeover switches



1. Location for: 1 switched fourth pole module (1 per device max.) or 1 unswitched neutral pole or 1 protective earth module or 1 auxiliary contact.
2. Position for 1 auxiliary contact only.
Note: max 4 additional blocks

External front operation for 6/8-pole load break switches or 3/4-pole changeover switches

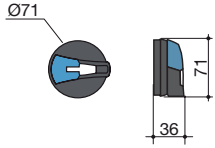
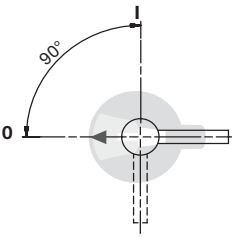
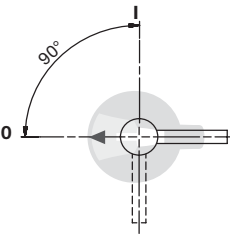
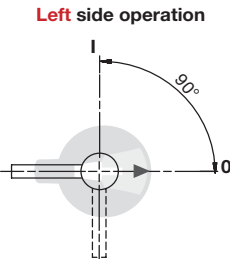
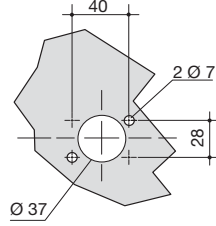
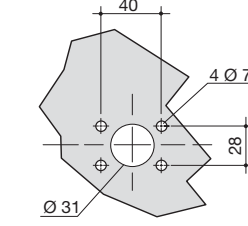
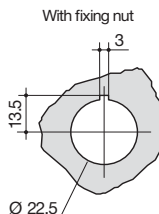
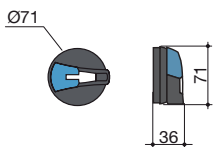
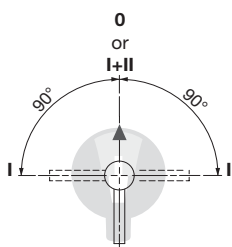
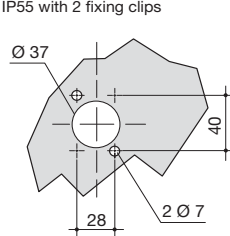
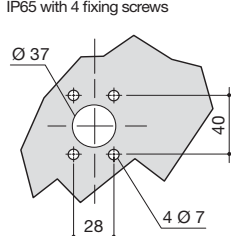
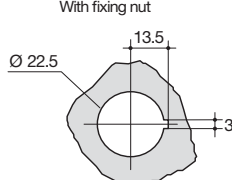


Rating (A)	Overall dimensions		Switch body				Switch mounting		Connection		
	E min	E max	F	F1	F2	G	J	M	N	T	X
16...40	105	372	97.5	15	45	68	48.75	30	75	15	7.5
63...80	105	372	105	17.5	52.5	76	52.5	35	85	17.5	8.75

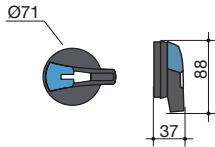
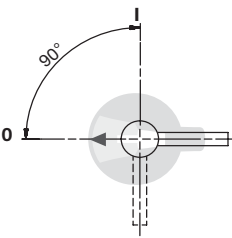
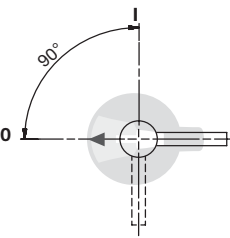
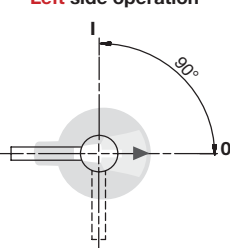
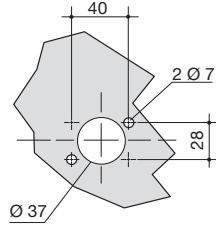
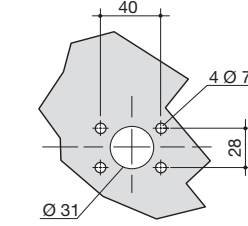
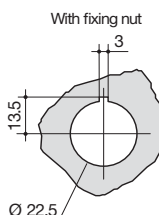
⇒ Dimensions for external handles

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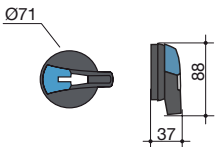
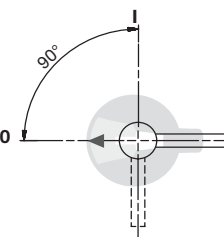
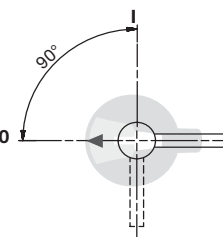
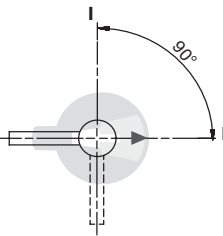
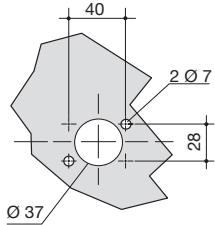
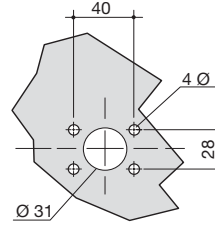
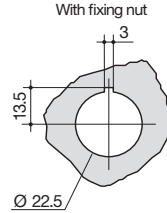
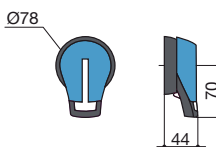
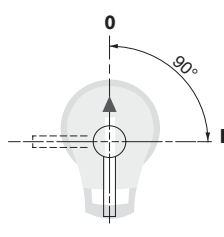
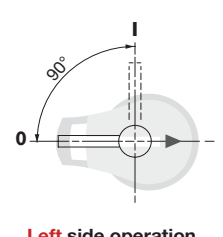
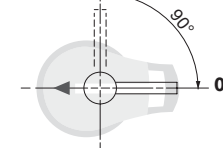
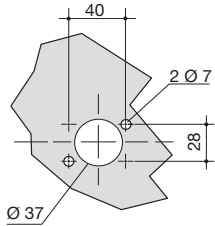
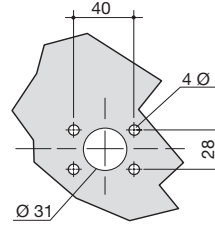
Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling	
S00 type Load break switches 		Right side operation  Left side operation 	IP55 with 2 fixing clips 	IP65 with 4 fixing screws  With fixing nut 
Typ S00 Changeover switches I 0 II and I - I+II - II 		IP55 with 2 fixing clips 	IP65 with 4 fixing screws 	With fixing nut 

SIRCO M 100 to 125 A

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling	
S0 type Load break switches 		Right side operation  Left side operation 	IP55 with 2 fixing clips 	IP65 with 4 fixing screws  With fixing nut 

SIRCO MV

SIRCO MV 100 to 160 A

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling	
<p>S0 type Load break switches</p>  <p>Ø71 88 37</p>	<p>Front operation Direction of operation</p>  <p>90° 0</p>	<p>Side operation Direction of operation</p> <p>Right side operation</p>  <p>90° 0</p> <p>Left side operation</p>  <p>90° I</p>	<p>Door drilling</p> <p>IP55 with 2 fixing clips</p>  <p>40 2 Ø 7 28 Ø 37</p> <p>IP65 with 4 fixing screws</p>  <p>40 4 Ø 7 28 Ø 31</p> <p>With fixing nut</p>  <p>3 13.5 Ø 22.5</p>	
<p>S1 type Load break switches</p>  <p>Ø78 70 44</p>	<p>Front operation Direction of operation</p>  <p>90° 0</p>	<p>Side operation Direction of operation</p> <p>Right side operation</p>  <p>90° 0</p> <p>Left side operation</p>  <p>90° 0</p>	<p>Door drilling</p> <p>IP55 with 2 fixing clips</p>  <p>40 2 Ø 7 28 Ø 37</p> <p>IP65 with 4 fixing screws</p>  <p>40 4 Ø 7 28 Ø 31</p>	

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