

16 to 80 A

### ⇒ Function

**SIRCO M** load break disconnect switches allow safe control and safe disconnect of any motor applications or to isolate circuit within the panel.

These switches are extremely compact and offer a wide variety of mounting options like 4<sup>th</sup> pole, auxiliary contacts, door mounting or 6/8 pole kit.

### ⇒ General characteristics

- Touch safe.
- DIN rail or base mount standard.
- Direct or external handle.
- Toggle operation available.

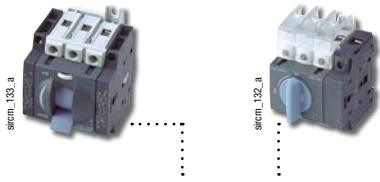
### ⇒ Specific characteristics

- Suitable as motor disconnect.
- Contact point technology.
- Door mounting option.

### ⇒ Conformity to standards

- UL508, Guide NLRV, file E173959
- CSA C22.2#14, Class 3211-05, file 702154
- IEC 60947-3

References



UL508 front and side operated

Rating (A)	No. of poles	Toggle switch (direct handle included)	Rotary switch	Direct handle	Door interlocked external front and right side handle	Shaft extensions for external front and side handle	Switched fourth pole module	Auxiliary contacts	Terminal shrouds	Door mounting kit
16 A	3 P	2205 3000	2200 3000	Blue 2299 5012	S00 type I - 0 Black 3R, 12 <sup>(1)</sup>		1 P 2200 1000			2299 3409
20 A	3 P	2205 3001	2200 3001		1473 1111 Red/Yellow 3R, 12 <sup>(1)</sup>		1 P 2200 1001			
25 A	3 P	2205 3002	2200 3002		1474 1111 Black 4, 4X <sup>(1)</sup>	S00 and S0 type 150 mm 5.9 in	1 P 2200 1002			
32 A	3 P	2205 3003	2200 3003		147D 1111 Red/Yellow 4, 4X <sup>(1)</sup>	1407 0515	1 P 2200 1003	M type 1 AC NO + NC 2299 0001 1 AC 2 NC 2299 0011	1 P 2294 1005 <sup>(3)</sup> 3 P 2294 3005 <sup>(3)</sup>	
40 A	3 P	2205 3004	2200 3004	Blue 2299 5012	S0 type I - 0 Black 1, 3R, 12 <sup>(1)</sup>	200 mm 7.9 in	1 P 2200 1004			
63 A	3 P	2205 3006	2200 3006		1483 1111 Red/Yellow 1, 3R, 12 <sup>(1)</sup>	1407 0532 <sup>(2)</sup>	1 P 2200 1006			
80 A	3 P	2205 3008	2200 3008		1484 1111 Black 4, 4X <sup>(1)</sup> 148D 1111 Red/Yellow 4, 4X <sup>(1)</sup>		1P 2200 1008		1 P 2294 1009 <sup>(3)</sup> 3 P 2294 3009 <sup>(3)</sup>	

(1) Nema type.

(2) Please order the shaft guide: 1419 0000 with the shaft.

(4) Top and bottom.

# UL508 non-metallic polycarbonate 4, 4X enclosed SIRCO M



## Function

Enclosed **SIRCO M** switches allow safe control and safe disconnect of any motor applications.

## Conformity to standards

- UL508, Guide NLRV, file E173959
- CSA C22.2#14, Class 3211-05, file 702154
- IEC 60947-3

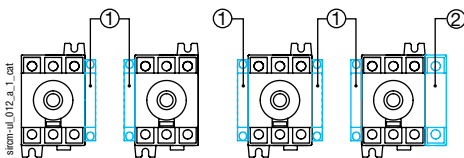
## General characteristics

- Grey enclosure with red handle.
- Equipped with a 3 pole SIRCO M.
- 1 removable earth terminal.
- Possibility of adding 1 power pole and 1 auxiliary contact.
- Nema type 1, 3R, 12, 4, 4X.

Rating (A)	No. of poles	Enclosed switches	Enclosure size	Switched fourth pole module	Unswitched neutral pole	Unswitched protective earth module	Auxiliary contacts	Terminal shrouds
32 A	3 P	2214 <b>3503</b>	Size 1	1 P 2200 <b>1003</b>	1 P 2200 <b>5005</b>	1 P 2200 <b>9005</b>	M type 1 AC NO + NC 2299 <b>0001</b>	1 P 2294 <b>1005<sup>(1)</sup></b>
	3 P	2224 <b>3503</b>	Size 2					3 P 2294 <b>3005<sup>(1)</sup></b>
63 A	3 P	2224 <b>3506</b>	Size 2	1 P 2200 <b>1006</b>	1 P 2200 <b>5009</b>	1 P 2200 <b>9009</b>	1 AC 2 NC 2299 <b>0011</b>	1 P 2294 <b>1009<sup>(1)</sup></b> 3 P 2294 <b>3009<sup>(1)</sup></b>

(1) Top and bottom.

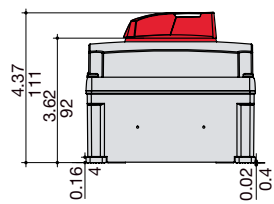
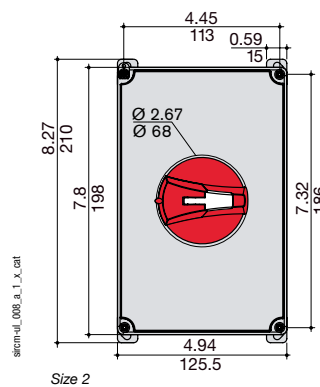
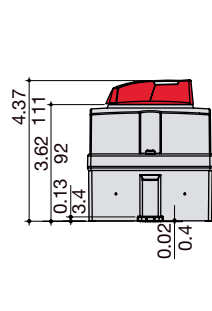
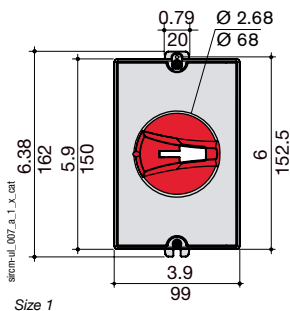
## Configuration



Configuration of the auxiliary contacts for enclosed SIRCO M.

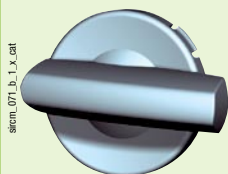
1. M type auxiliary contacts.
2. Additional pole

## Dimensions (in / mm)



➔ Accessories

Direct handle



siem\_071\_b\_1\_x\_cat

Rating (A)	Handle colour	Handle	Reference
16 ... 80	Blue	M00 type	2299 5012

Door interlocked external handle



siem\_043\_a\_1\_x\_cat

S00 handle

Use

The handle locking function prevents the user from opening the door of the enclosure when the switch is in the "ON" position. Opening the door when the switch is in the "ON" position is possible by defeating the locking function with the use of a tool (authorized persons only). The locking function is restored when the door is closed back. The handle is padlockable with 3 padlocks.



siem\_044\_a\_1\_x\_cat

S0 handle

Front and right side operation I - 0

Rating (A)	Handle colour	Handle	Nema type	Reference
16 ... 80	Black	S00 type	3R, 12	1473 1111
16 ... 80	Red/Yellow	S00 type	3R, 12	1474 1111
16 ... 80	Black	S00 type	4, 4X	147D 1111
16 ... 80	Red/Yellow	S00 type	4, 4X	147E 1111
16 ... 80	Black	S0 type	1, 3R, 12	1483 1111
16 ... 80	Red/Yellow	S0 type	1, 3R, 12	1484 1111
16 ... 80	Black	S0 type	4, 4X	148D 1111
16 ... 80	Red/Yellow	S0 type	4, 4X	148E 1111

Front operation for changeover switches I - 0 - II

Rating (A)	Handle colour	Handle	Nema type	Reference
16 ... 80	Black	S00 type	4, 4X	1473 1113

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

Rating (A)	Handle colour	Handle	Nema type	Reference
16 ... 80	Black	S00 type	4, 4X	1473 1114

Shaft extensions for external handle



siem\_045\_a\_2\_x\_cat

Use

Standard lengths:

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

Other lengths: please 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.

For 3/4 pole

Rating (A)	Handle	Length (inches)	Length (mm)	Reference
16 ... 80	S00 type	5.9 in	150 mm	1407 0515
16 ... 80	S00 type	7.9 in	200 mm	1407 0520
16 ... 80	S00 type	12.6 in	320 mm	1407 0532

For 6/8 poles

Rating (A)	Handle	Length (inches)	Length (mm)	Reference
16 ... 80	S00 type	5.9 in	150 mm	1407 0515
16 ... 80	S00 type	7.9 in	200 mm	1407 0520
16 ... 80	S00 type	12.6 in	320 mm	1407 0532

**Shaft guide for external operation**



access\_260\_a\_2\_cat

**Use**

This accessory enables handle to engage extension shaft with a misalignment of up to 15 mm. Required for a shaft length from 320 mm.

**Handle type**

S00 and S0

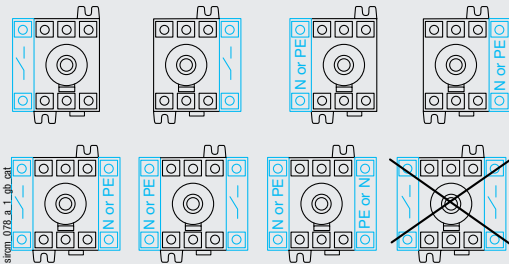
**Reference**

1419 **0000**

**Additional pole for SIRCO M**



siem\_072\_b\_1\_x\_cat



siem\_076\_a\_1\_gh\_cat

**4<sup>th</sup> pole**

**Use**

Transforms:

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

Rating (A)	No. of poles	Type	Reference
16	1 P	switched	2200 <b>1000</b>
20	1 P	switched	2200 <b>1001</b>
25	1 P	switched	2200 <b>1002</b>
32	1 P	switched	2200 <b>1003</b>
40	1 P	switched	2200 <b>1004</b>
63	1 P	switched	2200 <b>1006</b>
80	1 P	switched	2200 <b>1008</b>

**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 <b>5005</b>
63 ... 80	1 P	unswitched	2200 <b>5009</b>

**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 <b>9005</b>
63 ... 80	1 P	unswitched	2200 <b>9009</b>

**Terminal shrouds**



siem\_048\_a\_1\_cat

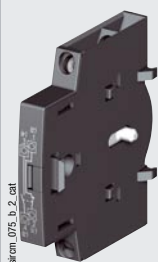
**Use**

Top and bottom additional protection against direct contact with the terminals or connection parts. 1 or 3 pole are available.

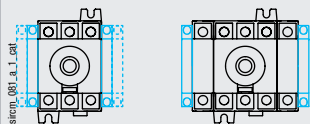
Perforation on each terminal cover enables remote thermographic inspection without dismantling.

Rating (A)	No. of poles	Position	Reference
16 ... 40	1 P	top and bottom	2294 <b>1005</b>
16 ... 40	3 P	top and bottom	2294 <b>3005</b>
63 ... 80	1 P	top and bottom	2294 <b>1009</b>
63 ... 80	3 P	top and bottom	2294 <b>3009</b>

### M type auxiliary contacts



siem\_075\_b\_2\_cat



siem\_081\_a\_1\_cat

Auxiliary contacts configurations for SIRCO M

#### Use

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

#### Characteristics

A300.

Rating (A)	Nb de CA	AC type	Reference
16 ... 80	1 AC	NO + NC	2299 0001
16 ... 80	1 AC	2 NC	2299 0011

### Conversion kit



siem\_060\_c\_2\_cat

Conversion kit for 6 or 8 pole load break switches



siem\_087\_b\_2\_cat

Conversion kit for 3 and 4-pole changeover switches (I - 0 - II) or (I - I+II - II)



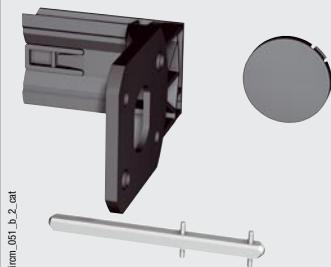
siem\_086\_b\_1\_cat

#### Use

This accessory enables the assembly of 2 switches in order to achieve:  
- 6 or 8 pole switches  
- 3 or 4 pole open or close transition changeover switches.

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



siem\_061\_b\_2\_cat

#### Use

This kit enables a direct mounting of the switch on the door panel, on the right or left side of the panel. The external handle is quick and easy to install due to an internal locking nut mounted on the inside of the enclosure.

Rating (A)	No. of poles	Reference
16 ... 80	3/4 P	2299 3409

⇒ SIRCO M - Characteristics according to UL508/CSA22.2#14 suitable as motor disconnect

16 to 80 A

General use rating	16	20	25	32	40	63	80
Short circuit rating at 600 VAC (kA)	65	65	65	65	10/65	50/65	50/65
Type of fuse	J	J	J	J	J	J	J
Max fuse rating (A)	30	30	30	30	60/30	100/60	100/60

**Max. motor hp / FLA 3 ph motor max.**

208 VAC	3 / 10.6	5 / 16.7	7.5 / 24.2	7.5 / 24.2	7.5 / 24.2	15 / 46.2	15 / 46.2
220-240 VAC	5 / 15.2	5 / 15.2	7.5 / 22	7.5 / 22	7.5 / 22	20 / 54	20 / 54
440-480 VAC	10 / 14	10 / 14	15 / 21	20 / 27	20 / 27	40 / 52	40 / 52
600 VAC	10 / 11	15 / 17	20 / 22	25 / 27	25 / 27	40 / 41	40 / 41

**Connection terminals**

Solid - 1 wire	#14 - #10	#14 - #10	#14 - #10	#14 - #10	#14 - #10	#14 - #10	#14 - #10
Solid - 2 wires	2x #12	2x #12	2x #12	2x #12	2x #12	2x #12	2x #12
Stranded - 1 wire	#14 - #4	#14 - #4	#14 - #4	#14 - #4	#14 - #4	#14 - #1	#14 - #1
Stranded - 2 wires	2x (#14 - #12)	2x (#14 - #12)	2x (#14 - #12)	2x (#14 - #12)	2x (#14 - #12)	2x (#10 - #6)	2x (#10 - #6)

**Auxiliary contacts**

Electrical characteristics	A300	A300	A300	A300	A300	A300	A300
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**Mechanical characteristics**

Endurance (number of operating cycles)	7/0.8	7/0.8	7/0.8	7/0.8	7/0.8	8.9/1	8.9/1
Operating torque (lbs.in/Nm)	0.16	0.8	0.8	0.8	0.8	1	1

## ⇒ Characteristics according to IEC 60947-3

## 16 to 80 A

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

**Rated operational currents  $I_o$  (A)**

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

**Operational power in AC-23 (kW)**

At 400 VAC without prebreaking AC in AC-23 (kW) <sup>(1)(2)</sup>	7.5	9	11	15	18.5	30	37
At 500 VAC without prebreaking AC in AC-23 (kW) <sup>(1)(2)</sup>	7.5	9	11	15	15	30	37
At 690 VAC without prebreaking AC in AC-23 (kW) <sup>(1)(2)</sup>	7.5	11	15	18.5	18.5	30	37

**Fuse protected short-circuit withstand (kA rms prospective)**

Prospective short-circuit current (kA rms) <sup>(3)</sup>	50	50	50	50	50	50	50
Associated fuse rating (A) <sup>(3)</sup>	16	20	25	32	40	63	80

**Overload capacity ( $U_o$  415 VAC)**

Rated short-time withstand current 0.3 s. $I_{cw}$ (kA rms) <sup>(3)</sup>	2.5	2.5	2.5	2.5	2.5	3	3
Rated short-circuit making capacity $I_{cm}$ (kA peak) <sup>(3)</sup>	6	6	6	6	6	9	9

**Connection**

Minimum Cu cable cross section (mm <sup>2</sup> )	1.5	1.5	1.5	1.5	1.5	2.5	2.5
Maximum Cu cable section (mm <sup>2</sup> )	16	16	16	16	16	35	35
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

(1) A/B: 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.

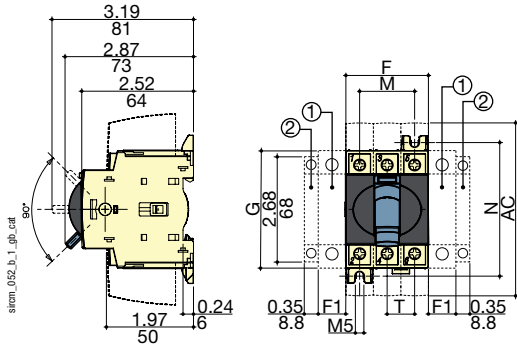
(3) For a rated operating voltage  $U_o = 400$  VAC.



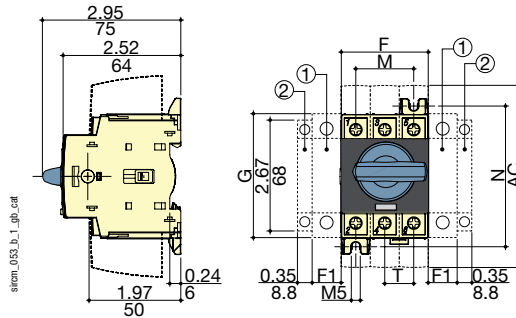
➔ **Dimensions (in / mm)**

**SIRCO M 16 to 80 A**

Toggle operation



Direct operation with handle

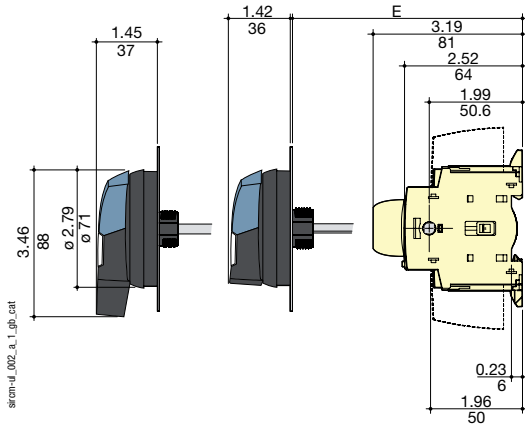


1. Position for 1 switched fourth pole module (1 per device max.) or 1 unswitched neutral pole or 1 protective earth module or 1 auxiliary contact.

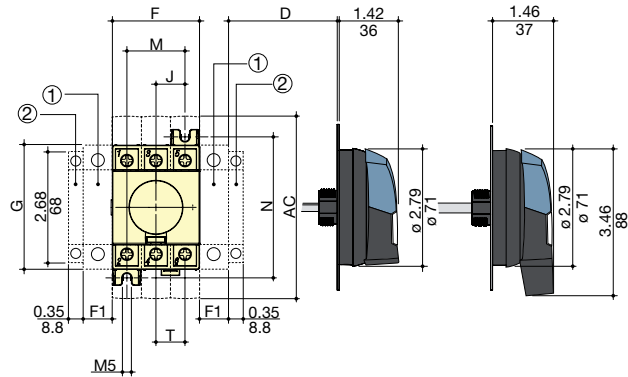
2. Position for 1 auxiliary contact only.

**Note: Maximum of 4 additional blocks.**

External front operation



External side operation



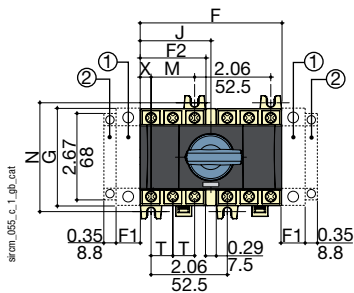
1. Position for 1 switched fourth pole module (1 per device max.) or 1 unswitched neutral pole or 1 protective earth module or 1 auxiliary contact.

2. Position for 1 auxiliary contact only.

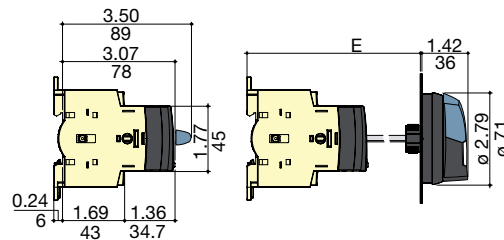
**Note: Maximum of 4 additional blocks.**

Rating (A)	Units	Overall dimensions				Terminal shrouds AC	Switch body			Switch mounting		Connection T	
		D min	D max	E min	E max		F	F1	G	J	M		N
16 to 40	in	1.18	9.25	3.94	14.64	110	4.33	0.59	2.67	0.59	1.18	2.95	0.59
	mm	30	235	100	372	110	45	15	68	15	30	75	15
63 to 80	in	1.18	9.25	3.93	14.64	4.33	2.06	0.69	2.99	0.69	1.38	3.35	0.69
	mm	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



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



1. Position 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: Maximum of 4 additional blocks.**

Rating (A)	Units	Overall dimensions				Switch body				Switch mounting		Connection	
		E min	E max	F	F1	F2	G	J	M	N	T	X	
16 to 40	in	4.13	14.64	3.83	0.59	1.77	2.67	1.92	1.18	2.95	0.59	0.29	
	mm	105	372	97.5	15	45	68	48.75	30	75	15	7.5	
63 to 80	in	4.13	14.65	4.13	0.69	2.06	2.99	2.06	1.38	3.35	0.69	0.34	
	mm	105	372	105	17.5	52.5	76	52.5	35	85	17.5	8.75	

⇒ Dimensions for external handles (in / mm)

SIRCO M 16 to 80 A

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling template
<p><b>S00 type</b></p>			<p>With 4 fixing screws</p> <p>With fixing nut</p>
<p><b>S00 / S0 type</b></p>			<p>With 4 fixing screws</p> <p>With fixing nut</p>
<p><b>Typ S00</b> Changeover switches I 0 II and I - I+II - II</p>		<p>With 4 fixing screws</p> <p>With fixing nut</p>	