SIRCO V

Load break switches standards UL and CSA

30 to 400 A

sirco-ul_022

SIRCO
3 x 200 A

Function

SIRCO V is a manually operated multipolar load-break switch for applications that require flange accessories or visible breaking. This switch can break on and off load and provide safety isolation for any low voltage circuit. The SIRCO V switches are extremely durable and are tested and approved for use in the most demanding applications.

General characteristics

- Fully visible breaking.
- Compatible with flange accessories.
- High thermal and dynamic withstand.
- Severe utilization categories.
- High electrical and mechanical endurance.

The solution for

- OEM/Machine Builders
- Industrial Control Panels Manufacturers (UL 508A)
- Switchboards Manufacturers (UL 891)
- Distributors

Strong points

- Reliability
- Safety of property and personnel
- Flange compatible
- Simplicity
- Easy assembling
- Visible breaking

Conformity to standards

- UL 98, Guide WHTY, file E201138
- CSA 22.2 No. 4, Class 4651-02, File 112964
- IEC 60947-3

Customized solutions

- Please consult us

References

Rating (A)	No. of poles	Switch body	Flange handle	Cable flange mechanism	Cable length	Rod operator for 8 to 24 inches enclosure depth	Front external handle	Shaft for external handle	NFPA 79 kit[1]	Auxiliary contacts	Terminal shrouds	Terminal lugs
30 A	3 P	2700 **3003**	Standard handle (NEMA 1, 3, 3R, 4, 12) 3729 **9002** Chrome plated handle (NEMA 1, 3, 3R, 4, 4X, 12) 3729 **9003**	3729 **9903**	36 inches 3729 **9992** 60 inches 3729 **9993** 120 inches 3729 **9994**	3729 **9904**	S1 type Black 1, 3R, 12 141F **2111** Black 4, 4X 141D **2111**	7.9 inches 200 mm 1400 **1020** 12.6 inches 320 mm 1400 **1032** 15.7 inches 400 mm 1400 **1040**	3279 **4532**	1 AC U type NO 3999 **0701** 1 AC U type NC 3999 **0702** 1 AC S type NC+NO 3999 **U041** 2 AC S type NC+NO 3999 **U041**	Integrated	Integrated
	4 P	2700 **4003**										
60 A	3 P	2701 **3006**							3729 **7540**			
	4 P	2701 **4006**										
100 A	3 P	2701 **3010**					S2 Type Black 1, 3R, 12 141F **2111** 4, 4X 141D **2111**					
	4 P	2701 **4010**										
200 A	3 P	2701 **3020**									3798 **3020**	3954 **6020**
	4 P	2701 **4020**									3798 **4020**	3954 **8020**
400 A	3 P	2701 **3039**							3729 **7544**		3798 **3040**	3954 **6060**

(1) Includes mechanism, shaft and internal handle. Please order external handle.
(2) No door interlocking

NFPA 79 accessories

Flange handle for flange operation

Use

Meets both UL 508A and NFPA 79 requirements.

The handle will operate the switch by cable or rod.

Rating (A)	Type	Nema type	Reference
30 ... 400	Standard handle	1, 3, 3R, 4, 12	3729 **9002**(1)
30 ... 400	Chrome plated handle	1, 3, 3R, 4, 4X, 12	3729 **9003**(1)

(1) Defeatable handle.

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Cable operator

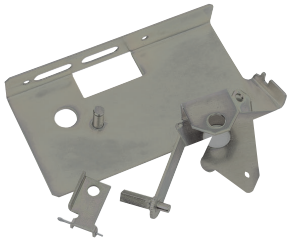
Use

Link between the flange handle and the switch, please order the flange handle, the mechanism and a cable length of your choice.

Rating (A)	Description	Reference
30 ... 400	Cable flange mechanism	3729 **9903**

sirco_247_a_1_cat

Cable length (inches)	Cable length (mm)	Reference
36	900	3729 **9992**
60	1500	3729 **9993**
120	3000	3729 **9994**



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Rod operator

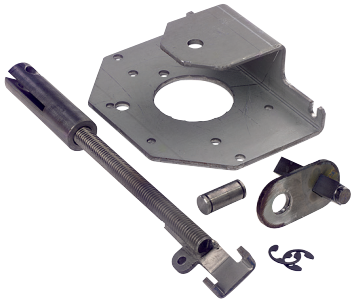
Use

Link between the flange handle and the switch. The rod flange is an economical solution, please order the flange handle and a rod kit.

Rating 30 ... 200 A

For enclosure depth (inches)	For enclosure depth (mm)	Reference
8 ... 24	203 ... 613	3729 **9904**

For 400 A rating, please consult us.



ul_043_a

NFPA 79 "Through the door" kit

Use

Meets both UL 508A and NFPA 79 requirements.

Allows retrofit of your installations for ratings from 30 to 400 A.

Please order an S-type external handle separately.

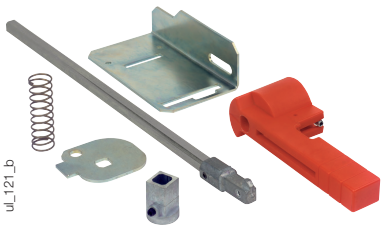
Number of auxiliary contact installed on the switch will be limited to 1 layer (instead of 2).

If more needed please use the S type auxiliary contacts.

Delivered with a 12.6 in / 320 mm shaft.

For longer shafts, please consult us.

Rating (A)	Reference
30	3729 **4532**
60 ... 200	3729 **7540**
400	3729 **7544**



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Accessories (continued)

External operation handle

Use

The interlocking function of the front external handle prevents the user from opening the door of the enclosure when the switch is in the "ON" position or when the switch is padlocked in the "OFF" position (S1, S2, S3 and S4 type handles only).

Opening the door when the switch is in the "ON" position is possible by defeating the interlocking function with the use of a tool (authorized persons only). The interlocking function is restored when the door is closed.

acces_150

S2 type handle

Front handle I - 0

Rating (A)	Handle type	Nema type	Color	Reference
30 A	S1	1, 3R, 12	Black	141F **2111**
		1, 3R, 12	Red/Yellow	141G **2111**
		4, 4X	Black	141D **2111**
		4, 4X	Red/Yellow	141E **2111**
60 ... 400 A	S2	1, 3R, 12	Black	142F **2111**
		1, 3R, 12	Red/Yellow	142G **2111**
		4, 4X	Black	142D **2111**
		4, 4X	Red/Yellow	142E **2111**

acces_236

S2 type handle

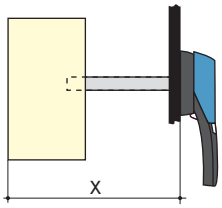
Shaft for external handle

Use

Standard lengths:
- 7.9 in / 200 mm,
- 12.6 in / 320 mm,
- 15.7 in / 400 mm.

Other lengths: please consult us.

acces_369



acces_202_a

Rating (A)	Dimension X (in)	Dimension X (mm)	Handle type	Length (inches)	Length (mm)	Reference
30 A	Consult Us	Consult Us	S1	7.9	200	1401 **0520**
30 A	Consult Us	Consult Us	S1	12.6	320	1401 **0532**
30 A	Consult Us	Consult Us	S1	15.7	400	1401 **0540**
60 ... 400 A	5.31 ... 10.43	135 ... 265	S2	7.9	200	1400 **1020**
60 ... 400 A	5.31 ... 15.16	135 ... 385	S2	12.6	320	1400 **1032**
60 ... 400 A	5.31 ... 18.31	135 ... 465	S2	15.7	400	1400 **1040**
60 ... 400 A	5.31 ... 22.25	135 ... 565	S2	19.7	500	1400 **1050**

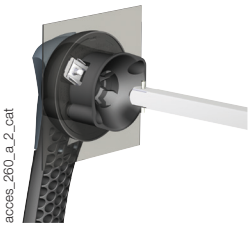
Accessories (continued)

Shaft guide for external handle

Use

This accessory enables handle to engage shaft with a misalignment of up to 0.59 in / 15 mm.
Required for a shaft length over 400 mm for S1 to S2 handles and for a shaft from 12.6 in / 320 mm for S0 handle.

Description	Reference
Shaft guide for S1 to S2 handles	1429 **0000**



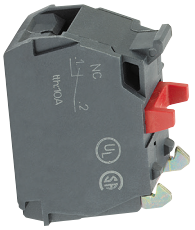
U-type auxiliary contacts

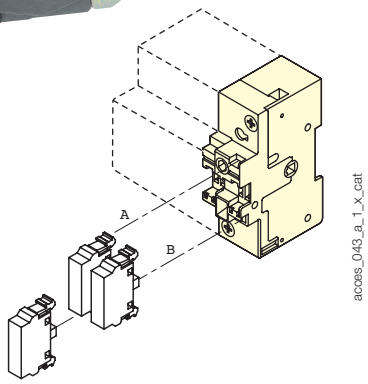
Use

Each slot can accommodate up to 2 interlocked ACs.
- For 400A, maximum 8 ACs.

Electrical characteristics

A600.
When SIRCO V is front operated, ACs are prebreak and signaling position I and 0.
When SIRCO V is side operated, Acs are signaling positions I and 0.





NO auxiliary contacts		
Rating (A)	**Number of contacts**	**Reference**
30 ... 400	1	3999 **0701**

NC auxiliary contacts		
Rating (A)	**Number of contacts**	**Reference**
30 ... 400	1	3999 **0702**

CD 30 : U-type auxiliary contacts cannot be mounted on switches with direct operation handle

S-type auxiliary contacts

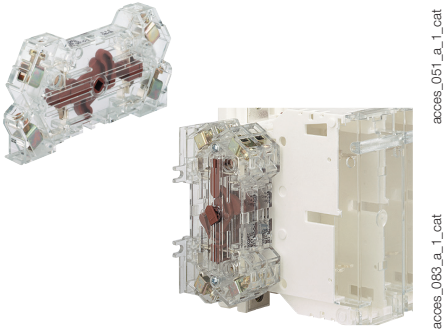
Use

Side operated auxiliary contacts for SIRCO V 30 to 400 A, position OFF and ON signalled by 1 to 4 NO + NC auxiliary contacts.

Electrical characteristics

A600/D600.
S-type auxiliary contacts are signaling position I and 0.

NO+NC auxiliary contacts		
Rating (A)	**Number of contacts**	**Reference**
30 ... 400	1	3999 **U041**
30 ... 400	2	3999 **U042**



Terminal shrouds

Use

Top or bottom protection against direct contact with terminals or connection parts.
2 sets required to fully shroud both line and load terminals.

Front and side operation Rating (A)	No. of poles	Reference[1]
30 ... 100	3/4 P	integrated
200	3 P	3798 **3020**
200	4 P	3798 **4020**
400	3 P	Consult us.

(1) Top or bottom.

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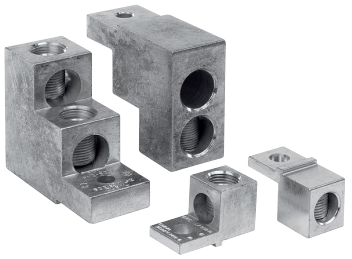
Terminals lugs

Use

Connection of cables to the terminals.

Rating (A)	Wires range	No wires per lug	Lugs per kit	Reference
30	#14 - #10	1		integrated
60 ... 100	#10 - #3	1		integrated
200	#6 - 300MCM	1	6	3954 **6020**
200	#6 - 300MCM	1	8	3954 **8020**
400	2 x (#2 - 600MCM)	2	6	3954 **6060**



ul_032_a

Characteristics

Characteristics according to UL 98 and CSA-C22.2 No. 4

Technical Characteristics	V 30 A	V 60 A	V 100 A	V 200 A	V 400 A
Operating voltage	600	600	600	600	600
Short-circuit rating at 600 VAC (kA)	65	200	200	200	200
Type of fuse	J or CC	J	J	J	J
Max. fuse rating (A)	30	60	100	200	400
Max. horsepower rating / Max. motor FLA current 3 ph					
220-240 VAC	7.5 / 22	15 / 42	30 / 80	60 / 154	125 / 312
440-480 VAC	15 /21	30 / 40	60 / 77	125 / 156	250 / 302
600 VAC	20 / 22	50 / 52	75 / 77	150 / 144	350 / 336
125 VDC	3 / 25(1)	3 / 25(1)	7.5 / 58(1)	15 / 112(1)	20 / 148(1)
250 VDC	5 / 20(1)	10 / 38(2)	20 / 72(2)	40 / 140(2)	50 / 173(2)
Mechanical characteristcis					
Endurance (number of operating cycles)	10,000	10,000	10,000	8,000	6,000
Terminal lugs					
Type	standard	standard	standard	option	option
Min. connection section / AWG(3)	#14	#10	#10	#6	2 x 2
Max. connection section / AWG (3)	#10	#3	#3	3 / 0	2 x 600 kcmil

(1) 2 pole in series.
(2) 3 pole in series.
(3) AWG: cross section of the American cable.

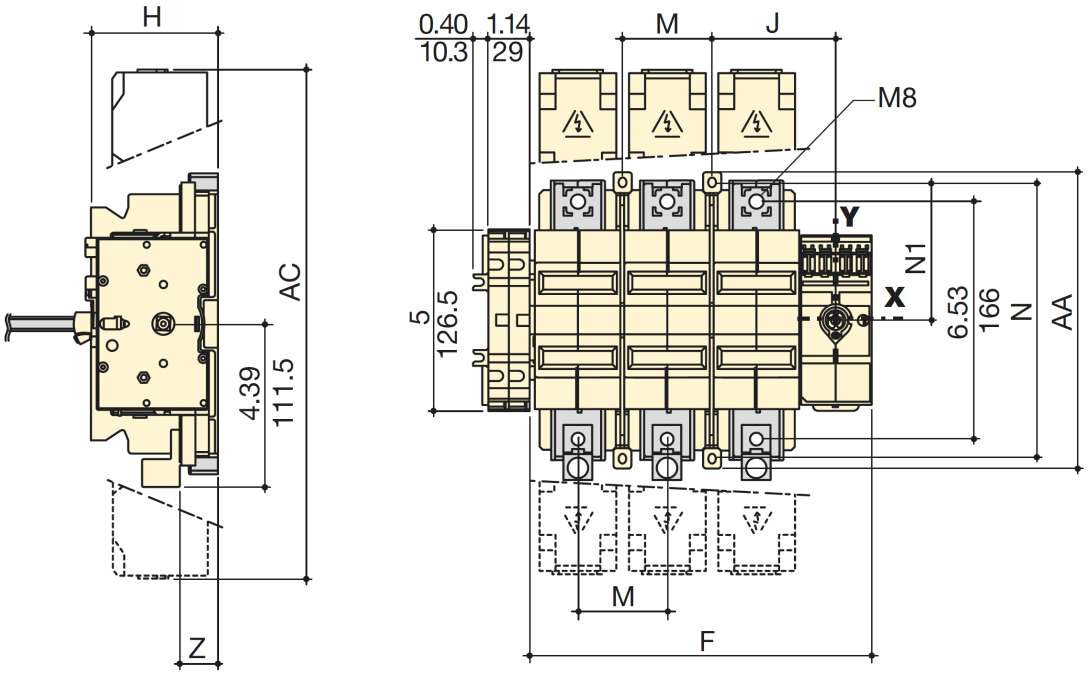
Characteristics according to IEC 60947-3

Technical characteristics		32 A	63 A	100 A	200 A	400 A
Rated insulation voltage U_i (V)		800	750	750	750	750
Rated impulse withstand voltage U_{imp} (kV)		8	8	8	8	8
Rated operational currents I_e (A)						
Rated voltage	**Load duty category**	**A(1)**	**A(1)**	**A(1)**	**A(1)**	**A(1)**
400 VAC	AC-22 A	32	63	100	200	400
	AC-23 A	32	63	100	200	400
690 VAC	AC-22 A	32	63	100	200	400
	AC-23 A	32	63	100	200	315
Operational power in AC-23 A 9kW0(1)(2)						
At 400 VAC without pre-break AC		30	30	51	100	220
At 500 VAC without pre-break AC		18.5	40	63	140	220
At 690 VAC without pre-break AC		25	55	90	185	295
Conditional short-circuit current(3)						
Rated prak withstand current (kA peak)		5.5	17.6	17.6	32	40
Connection						
Minimun Cu cable section (mm^2)		6	10	25	50	186

(1) Category with index A = frequent 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_2 = 400 VAC.

Dimensions (in/mm)

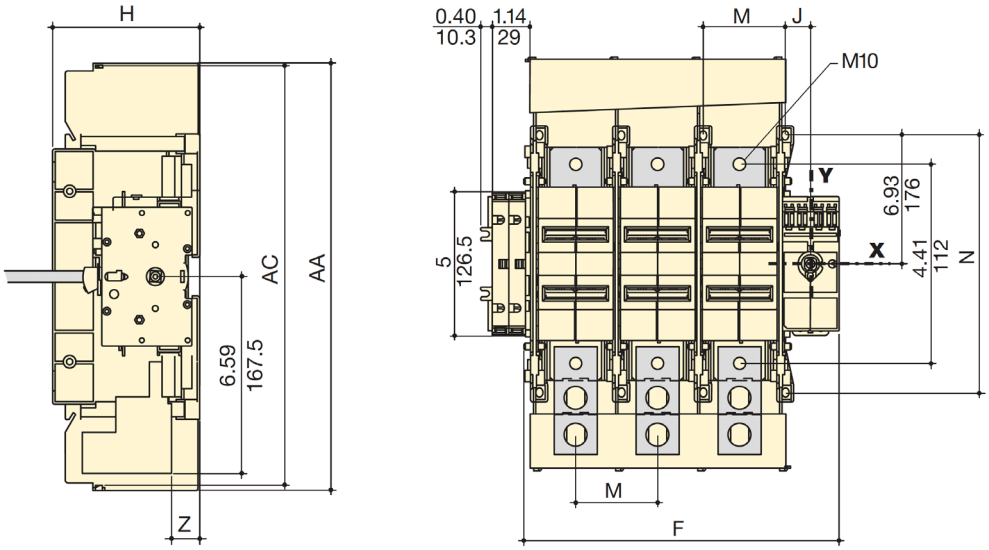
Sirco V 30 A front operation



ul_009_a_1_cat

Switch body								Switch mounting				Connection terminals			
F		H		J		J1		N		N1		AA		Z	
(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
3.78	96	2.59	66	1.47	37.5	0.59	15	3.13	79.5	1	25.5	4.56	116	1.12	28.5

Sirco V 60 and 100 A front operation

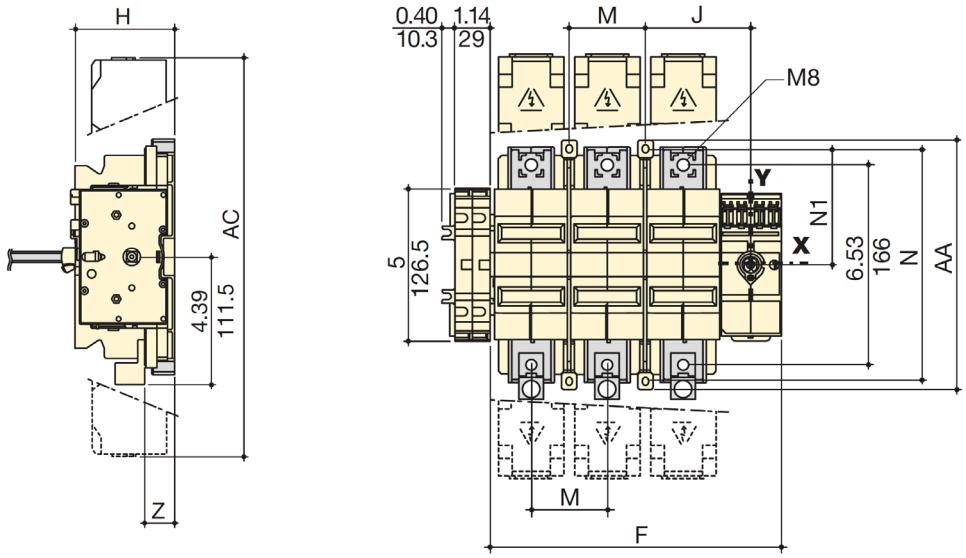


ul_003_a_1_cat

Switch body										Switch mounting				Connection terminals			
F 3p.		F 4p.		H		J		J1		N		N1		AA		Z	
(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
5.98	152	7.48	190	3.89	99	2.12	54	1.5	38	5.25	133.5	2.63	66.5	5.87	149	0.95	24.5

Dimensions (in/mm) (continued)

Sirco V 200A Front Operation



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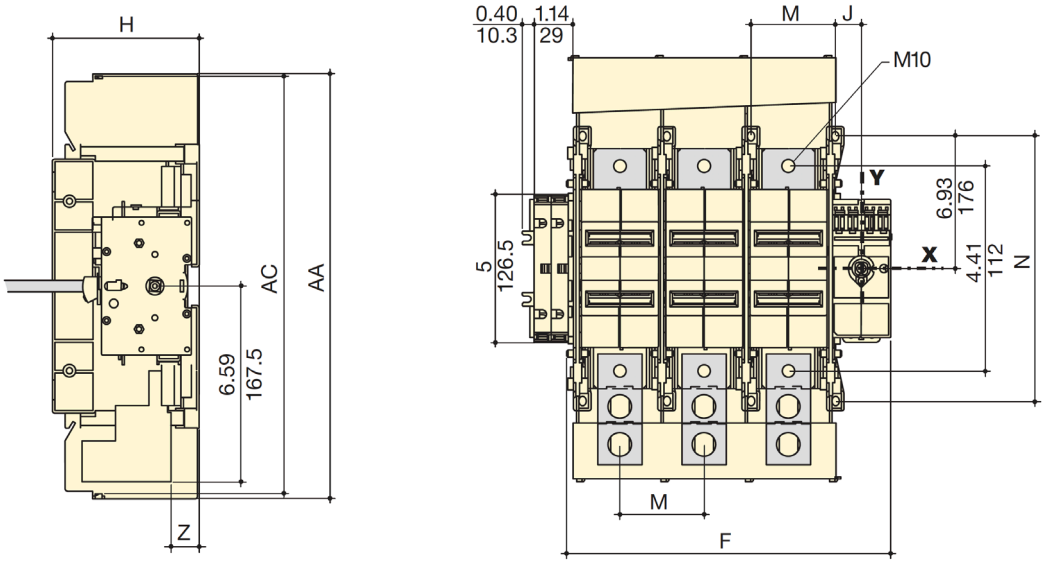
Terminal shrouds		Switch body								Switch mounting						Connection terminals			
AC		F 3p.		F 4p.		H		J		M		N		N1		AA		Z	
(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
13.74	349	9.37	238	11.81	300	3.42	87	3.38	86	2.44	62	7.5	190.5	3.74	96	8.13	206.5	0.95	24.5

Sirco V 400A Front Operation



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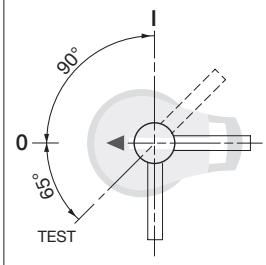
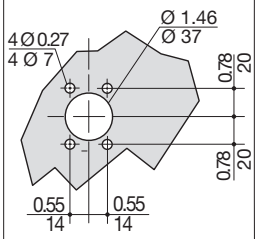
Terminal shrouds		Switch body								Switch mounting				Connection terminals			
AC		F 3p.		F 4p.		H		J		M		N		AA		Z	
(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
14.08	358	10.8	276	13.7	348	4.92	125	0.88	22.5	2.84	72	8.83	224	14.31	363.5	1.06	27

External handles dimensions (in/mm)

30 to 60 A

Handle type	Front operation	
	Direction of operation	Door drilling
S1 type		

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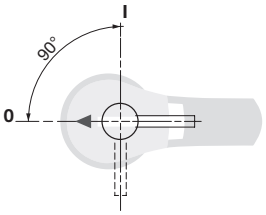
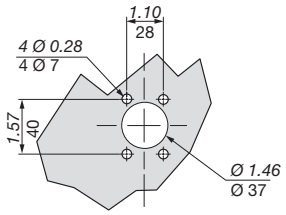
100 to 400 A

Handle type	Front operation	
	Direction of operation	Door drilling
S2 type		

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