SIRCO UL 98

Non-fusible switches standards UL and CSA

100 to 1200 A

SIRCO
3 x 600 A

SIRCO
3 x 200 A

Function

SIRCO non-fusible disconnect switches are heavy duty switches that break and make power circuits on and off load and provide safety isolation.

These switches are extremely durable and are tested and approved for use in the most demanding applications.

General characteristics

- Positive break indication.
- Fully visualized disconnection.
- High thermal and dynamic withstand.
- Severe utilization categories.
- High electrical and mechanical endurance.

The solution for

> Power distribution

Strong points

> Reliability
> Safety of property and personnel
> Simplicity
> Easy assembling

Conformity to standards(1)

> UL 98, Guide WHTY, file E201138
> CSA 22.2#4, Class 4652-04, file 112964
> IEC 60947-3

(1) Product reference on request.

Customized solutions

> Please consult us

socomec
Innovative Power Solutions

References

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Auxiliary contacts	Terminal protection screens	Terminal Lugs kits
100 A	3 P	**2700 3011**	Black **2699 5052**	S2 type Black 1, 3R, 12 **142F 2111**(1) Red/Yellow 1, 3R, 12 **142G 2111**(1) Black 4, 4X **142D 2111**(1) Red/Yellow 4, 4X **142E 2111**(1)	200 mm 7.9 inches **1400 1020** 320 mm 12.6 inches **1400 1032** 400 mm 15.7 inches **1400 1040**	1st contact NO/NC **2799 0021** 2nd contact NO/NC **2799 0022**	3 P **2798 3021**(2) 3 P **2798 8021**(3) 4 P **2798 4021**(4)	3 P **3954 3020**(4) 4 P **3954 4020**(4)
	4 P	**2700 4011**						
200 A	3 P	**2700 3021**						
	4 P	**2700 4021**						
400 A	3 P	**2700 3041**					3 P **2798 3041**(2) 3 P **2798 8041**(3) 4 P **2798 4041**(4)	3 P **3954 3040**(4) 4 P **3954 4040**(4)
	4 P	**2700 4041**						
600 A	3 P	**2700 3060**	Black **3799 6012**	S3 type Black 4, 4X **143D 3111**(1) Red/Yellow 4, 4X **143E 3111**(1)	200 mm 7.9 inches **1401 1520** 320 mm 12.6 Inches **1401 1532** 400 mm 15.7 Inches **1401 1540**		3 P **2798 3060**(4) 4 P **2798 4060**(4)	3 P **3954 3060** 4 P **3954 4060**
	4 P	**2700 4060**						
800 A	3 P	**2700 3080**						
	4 P	**2700 4080**						
1000 A	3 P	**2700 3100**					3 P **2798 3120**(4) 4 P **2798 4120**(4)	3 P **3954 3120** 4 P **3954 4120**
	4 P	**2700 4100**						
1200 A	3 P	**2700 3120**						
	4 P	**2700 4120**						

Common accessories - more available on next pages
(1) Defeatable handle.
(2) Top.
(3) Bottom.
(4) Top or bottom.
(5) Max. 4 ACs.

Accessories

Direct operation handle

Rating (A)	Color	Handle type	Reference
100 ... 400	Black	B	**2699 5052**
600 ... 1200	Black	H	**3799 6012**

H type handle

B type handle

Accessories (continued)

External operation handle

Function

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

S2 type handle

S3 type handle

S4 type handle

Heavy duty S2 type handle

Front handle I - 0

Rating (A)	Handle type	Color	Nema type	Reference
100 ... 400	S2	Black	1, 3R, 12	**142F 2111**
100 ... 400	S2	Red/Yellow	1, 3R, 12	**142G 2111**
100 ... 400	S2	Black	4, 4X	**142D 2111**
100 ... 400	S2	Red/Yellow	4, 4X	**142E 2111**
600 ... 1200	S3	Black	4, 4X	**143D 3111**
600 ... 1200	S3	Red/Yellow	4, 4X	**143E 3111**
600 ... 1200	S4	Black	4, 4X	**144D 3111**
600 ... 1200	S4	Red/Yellow	4, 4X	**144E 3111**

Front handle heavy duty I - 0 with metallic lever

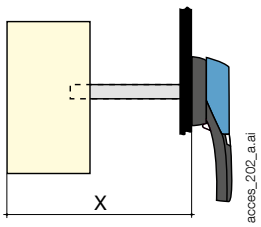
Rating (A)	Handle type	Color	Nema type	Reference
100 ... 400	S2	Black	4, 4X	**142D 2911**
100 ... 400	S2	Red/Yellow	4, 4X	**142E 2911**
600 ... 1200	S3	Black	4, 4X	**143D 3911**
600 ... 1200	S3	Red/Yellow	4, 4X	**143E 3911**
600 1200	S4	Black	4, 4X	**144D 3911**
600 ... 1200	S4	Red/Yellow	4, 4X	**144E 3911**

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.



Rating (A)	Dimension X (in)	Dimension X (mm)	Handle type	Length (inches)	Length (mm)	Reference
100 ... 400	5.31 ... 10.43	135 ... 265	S2	7.9	200	**1400 1020**
100 ... 400	5.31 ... 15.16	135 ... 385	S2	12.6	320	**1400 1032**
100 ... 400	5.31 ... 18.31	135 ... 465	S2	15.7	400	**1400 1040**
100 ... 400	5.31 ... 22.25	135 ... 565	S2	19.7	500	**1400 1050**
600 ... 1200	8.70 ... 13.50	221 ... 343	S3, S4	7.9	200	**1401 1520**
600 ... 1200	8.70 ... 18.23	221 ... 463	S3, S4	12.6	320	**1401 1532**
600 ... 1200	8.70 ... 21.38	221 ... 543	S3, S4	15.7	400	**1401 1540**
600 ... 1200	8.70 ... 26.73	221 ... 679	S3, S4	19.7	536	**1401 1554**(1)

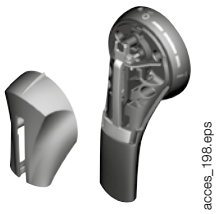
(1) UL pending, please consult us.

Alternative color S-type handle cover

Use

For single lever handles type S1, S2, S3 and double lever handle, type S4.

Other colors: please consult us.



Handle color	Pack qty	Handle type	Reference
Light grey	50	S2, S3	**1401 0001**
Dark grey	50	S2, S3	**1401 0011**
Light grey	50	S4	**1401 0031**
Dark grey	50	S4	**1401 0041**

S-type handle raiser

Use

Enables S-type handles to be fitted in place of existing older style Socomec handles. Adapter can also be utilized as a spacer to increase the distance between the panel door and the handle lever.

Dimensions

Adds 0.47 in /12 mm to the depth.

Handle color	Pack qty	Nema type	Reference
Black	10	1, 3R, 12	**1493 0000**

Shaft guide for external handle

Function

Use

This accessory makes shaft introduction easier with up to 0.59 in / 15 mm misalignment.

Required for a shaft length over 12.6 in / 320 mm.

Description	Reference
Shaft guide	**1429 0000**

Auxiliary Contacts

Use

Pre-break and color of positions 0 and I.
To have 2 NO/NC contacts per switch, please order 1st and 2nd auxiliary contacts per switch. 1st contact is mandatory to operate the 2nd one.

Electrical characteristics

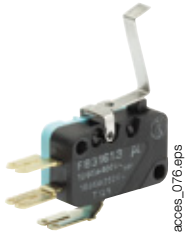
A300 for 100 to 400 A.
A600 for 600 to 1200 A.

NO/NC contact for 100 to 1200 A

Rating (A)	No. of AC	Reference
100 ... 1200	1st	**2799 0021**
100 ... 1200	2nd	**2799 0022**

Low level NO/NC contact for 100 to 1200 A

Rating (A)	No. of AC	Reference
100 ... 1200	1st	**2799 0121**
100 ... 1200	2nd	**2799 0122**



Terminal screens

Use

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

Rating (A)	No. of poles	Position	Reference
100 ... 200	3 P	top	**2798 3021**
100 ... 200	3 P	bottom	**2798 8021**
100 ... 200	4 P	top / bottom	**2798 4021**
400	3 P	top	**2798 3041**
400	3 P	bottom	**2798 8041**
400	4 P	top / bottom	**2798 4041**
600	3 P	bottom	**2798 3060**(1)
600	4 P	bottom	**2798 4060**(1)
800 ... 1200	3 P	bottom	**2798 3120**(1)
800 ... 1200	4 P	bottom	**2798 4120**(1)

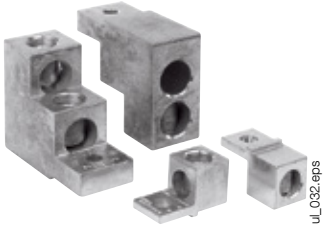
(1) Load side screen, the line side is included with the switch.

Terminal lugs

Use

Connection of bare copper cables onto the lugs (without lugs).

Rating max (A)	Wires range	No wires per lug	Lugs per kit	Wires	Reference
100 ... 200	#6 - 300MCM	1	2	Cu / Al	**3954 2020**
100 ... 200	#6 - 300MCM	1	3	Cu / Al	**3954 3020**
100 ... 200	#6 - 300MCM	1	4	Cu / Al	**3954 4020**
400	#4 - 600MCM	1	2	Cu / Al	**3954 2040**
400	#4 - 600MCM	1	3	Cu / Al	**3954 3040**
400	#4 - 600MCM	1	4	Cu / Al	**3954 4040**
400	2x (#6 - 350MCM)	2	2	Cu / Al	**3954 2041**
400	2x (#6 - 350MCM)	2	3	Cu / Al	**3954 3041**
400	2x (#6 - 350MCM)	2	4	Cu / Al	**3954 4041**
600	2x (#2 - 600MCM)	1	2	Cu / Al	**3954 2060**
600	2x (#2 - 600MCM)	2	3	Cu / Al	**3954 3060**
600	2x (#2 - 600MCM)	2	4	Cu / Al	**3954 4060**
800 ... 1200	4x (#2 - 600MCM)	2	6	Cu / Al	**3954 3120**
800 ... 1200	4x (#2 - 600MCM)	2	8	Cu / Al	**3954 4120**



Characteristics

Characteristics according to UL 98/CSA 22.2#4

	SIRCO UL 98 - 100 to 1200 A						
General use rating (A)	**100 A**	**200 A**	**400 A**	**600 A**	**800 A**	**1000 A**	**1200 A**
Short circuit rating at 600 VAC (kA)	200	200	200	200	100	100	100
Type of fuse	J	J	J	J	L	L	L
Max. fuse rating (A)	100	200	400	600	800	1000	1200
Max. motor hp / FLA 3 ph motor max.							
220-240 VAC	30 / 80	75 / 196	125 / 312	200 / 480	200 / 480	200 / 480	200 / 480
440-480 VAC	75 / 96	150 / 180	250 / 302	400 / 477	500 / 590	500 / 590	500 / 590
600 VAC	100 / 99	200 / 192	350 / 336	350 / 336	500 / 472	500 / 472	500 / 472
Max. motor hp / FLA 1 ph motor max.							
220-240 VAC	10/50	10/50					
Max. motor hp / DC FLA motor max.							
125 VDC(1)	10 / 76	15 / 112	20 / 148	20 / 148			
250 VDC(2)	15 / 55	15 / 55	50 / 173	50 / 173			
Connection terminals							
Min. connection section / AWG	#6	#6	2x #6 / #4	2x #2	4x #2	4x #2	4x #2
Max. connection section / AWG	300MCM	300MCM	2x 350 / 600MCM	2x 600MCM	4x 600MCM	4x 600MCM	4x 600MCM
Mechanical characteristics							
Endurance (number of operating cycles)	10000	8000	6000	6000	3500	3500	3500
Operating torque (lbs.in/Nm)	88.5/10	88.5/10	128.3/14.5	327.5/37	442.5/50	442.5/50	442.5/50
Auxiliary contacts							
Electrical characteristics	A300	A300	A300	A600	A600	A600	A600

(1) 2 pole in series.
(2) 3 pole in series.

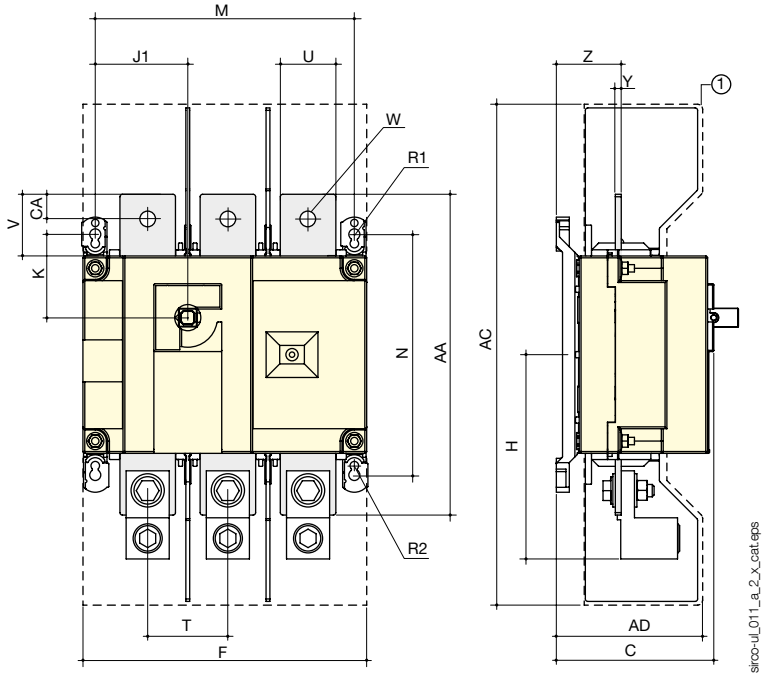
Characteristics according to IEC 60947-3

		SIRCO UL 98 - 600 to 1200 A			
Thermal current I_{th} (40°C)		**600 A**	**800 A**	**1000 A**	**1200 A**
Rated insulation voltage U_i (V)		1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)		12	12	12	12
Rated operational currents I_e (A)					
Rated voltage	**Utilization category**	**A(1)**	**A(1)**	**A(1)**	**A(1)**
400 VAC	AC-22 A	630	800	1000	1200
400 VAC	AC-23 A	630	800	1000	1000
690 VAC	AC-22 A	500	630	630	630
690 VAC	AC-23 A	200	400	400	400
Connection					
Min. Cu cable cross section (mm²)		2 x 150	2 x 185	2 x 240	
Min. Cu busbar section (mm²)		2 x 30 x 5	2 x 40 x 5	2 x 50 x 5	2 x 60 x 5
Operational power in AC-23 (kW)					
At 400 VAC without prebreaking AC in AC23 (kW)(2)(3)		355	450	560	560
At 500 VAC without prebreaking AC in AC23 (kW)(2)(3)		450	560	560	560
At 690 VAC without prebreaking AC in AC23 (kW)(2)(3)		185	400	400	400
Overload capacity (U_e 415 VAC)					
Rated short-circuit making capacity I_{cm} (kA peak)(4)		48	75	48	75

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

Dimensions (in/mm)

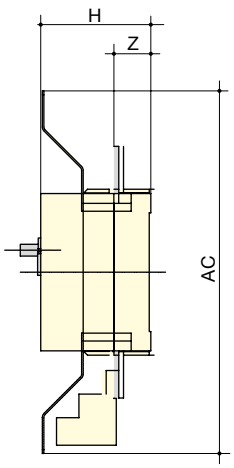
100 to 400 A

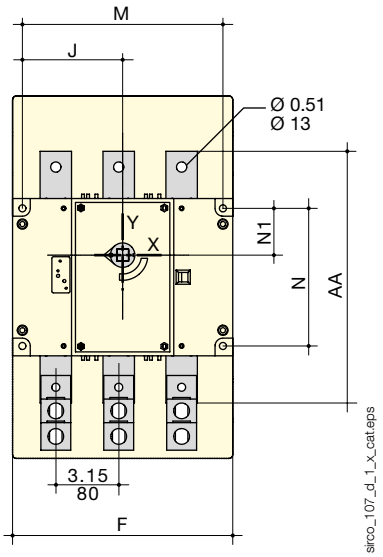


1. Terminal shrouds

Rating (A)	Unit	Overall dimensions	Terminal shrouds		Switch body						Switch mounting					Connection							
		C	AC	AD	F 3p.	F 4p.	H	J1 3p.	J1 4p.	K	M 3p.	M 4p.	N	R1	R2	T	U	V	W	Y	Z	AA	CA
100	in	3.72	10.1	3.05	7.09	9.06	4.22	2.17	4.13	1.8	6.3	8.27	5.31	0.35	0.27	1.97	0.98	1.18	0.43	0.14	1.35	6.3	0.6
	mm	94.6	256	77.5	180	230	107	55	105	45.6	160	210	135	9	7	50	25	30	11	3.5	34.4	160	15
200	in	3.72	10.1	3.05	7.09	9.06	4.22	2.17	4.13	1.8	6.3	8.27	5.31	0.35	0.27	1.97	0.98	1,18	0,43	0,14	1,35	6,3	0,6
	mm	94.6	256	77.5	180	230	107	55	105	45.6	160	210	135	9	7	50	25	30	11	3,5	34,4	160	15
400	in	4.92	16	4.15	9.05	11.4	6.53	2.95	5.31	2.65	8.26	10.6	7.67	0.35	0.27	2.56	1.77	1.97	0.43	0.2	2.08	10.2	0.8
	mm	128	406	115	230	290	166	75	135	67,5	210	270	195	9	7	65	45	50	13	5	53	260	20

600 A

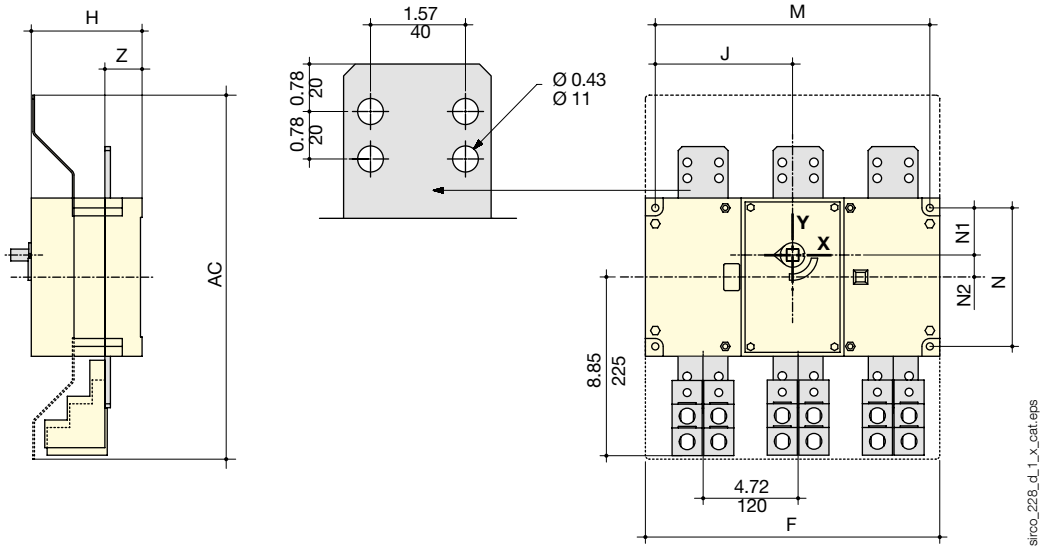




Rating (A)	Unit	Terminal shrouds	Switch body					Switch mounting				Connection	
		AC	F 3p.	F 4p.	H	J 3p.	J 4p.	M 3p.	M 4p.	N	N1	AA	Z
600	in	18.12	11	14.17	5.5	5	6.59	10.03	13.19	6.88	2.34	12.6	1.85
	mm	460	280	360	140	127.5	167.5	255	335	175	59.5	320	47

Dimensions (in/mm) (continued)

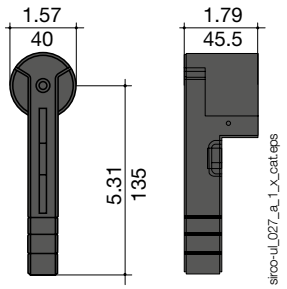
800 to 1200 A



Rating (A)	Unit	Terminal shrouds	Switch body					Switch mounting			
		AC	F 3p.	F 4p.	H	J 3p.	J 4p.	M 3p.	M 4p.	N	N1
800	in	18.12	14.64	19.37	5.5	6.83	9.19	13.66	18.38	6.88	2.34
	mm	460	372	492	140	173.5	233.5	347	467	175	59.5
1 000	in	18.12	14.64	19.37	5.5	6.83	9.19	13.66	18.38	6.88	2.34
	mm	460	372	492	140	173.5	233.5	347	467	175	59.5
1 200	in	18.12	14.64	19.37	5.5	6.83	9.19	13.66	18.38	6.88	2.34
	mm	460	372	492	140	173.5	233.5	347	467	175	59.5

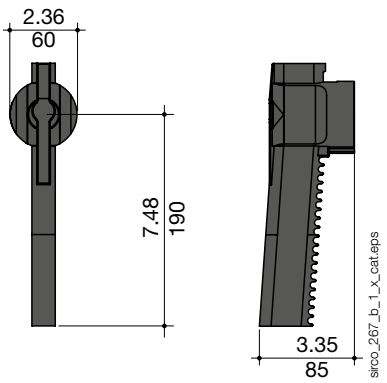
100 to 400 A

Front direct handle



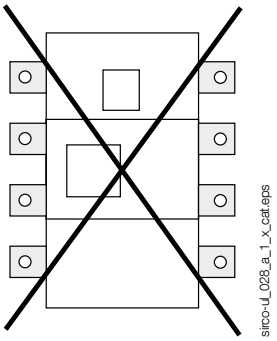
600 to 1200 A

Front direct handle



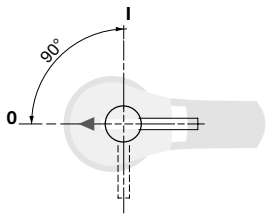
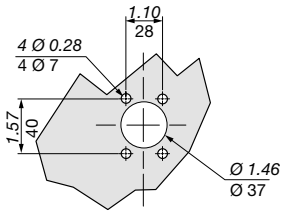
Mounting orientation

3/4 pole

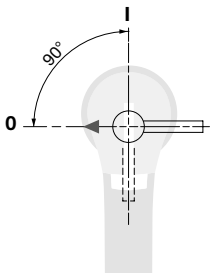
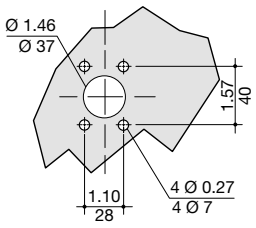


External handles dimensions (in/mm)

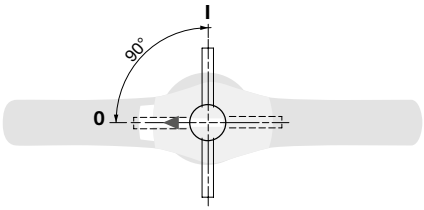
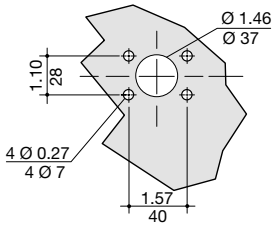
100 to 400 A

Handle type	Front operation Direction of operation	Door drilling
S2 type		

600 to 1200 A

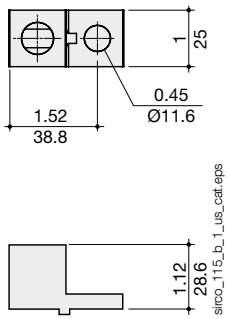
Handle type	Front operation Direction of operation	Door drilling
S3 type		

600 to 1200 A

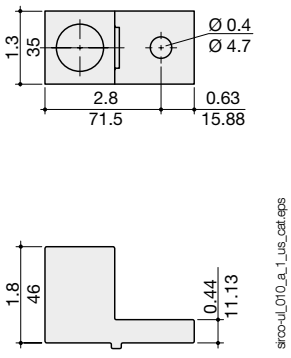
Handle type	Front operation Direction of operation	Door drilling
S4 type		

Terminal lugs (in/mm)

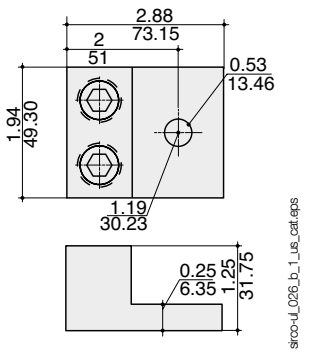
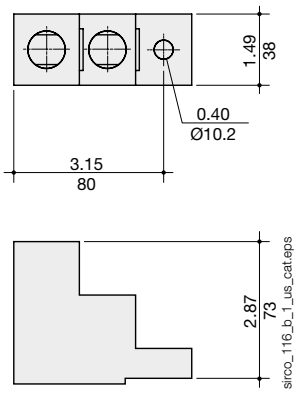
100 to 200 A



400 A



400 A



600 to 1200 A