

# Enclosed switches

## Load break switches

20 to 1600 A

como-enc\_002-front.eps



**COMO enclosure 20 to 125 A**  
Polycarbonate - IP65

coff\_584\_front.psd



**SIRCO enclosure 160 to 630 A**  
Polyester - IP65

coff\_581\_front.psd



**SIRCO M enclosure 32 to 100 A**  
Stainless steel - IP65

coff\_600.eps



**SIRCO M enclosure 20 to 100 A**  
Painted steel - IP65

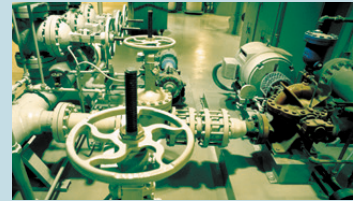
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**SIRCO enclosure 160 to 1600 A**  
Painted steel - IP65

### The solution for

- > Healthcare
- > Energy
- > Industry
- > Building



### Strong points

- > Safe operation
- > Suitable for all kinds of environment
- > Easy installation
- > Range

### Compliance with standards

- > IEC 60947-3
- > IEC 61439
- > IEC 60204-1



### Other products

- > Customised solutions available on request.

## Function

**Enclosed load break switches** ensure the on-load breaking and making of circuits and safely isolate all low-voltage electrical circuits by providing protection against contact with live parts and environmental elements, such as dust, water and other hazards.

They enable the shutdown and lock out of the power supply as close to the equipment as possible.

## Advantages

### Safe operation

- Reliable lockout for safe maintenance procedures.
- On-load breaking.
- Ergonomic operating handle, available in red/yellow or black.
- Triple lock in OFF position.

### Suitable for all kinds of environment

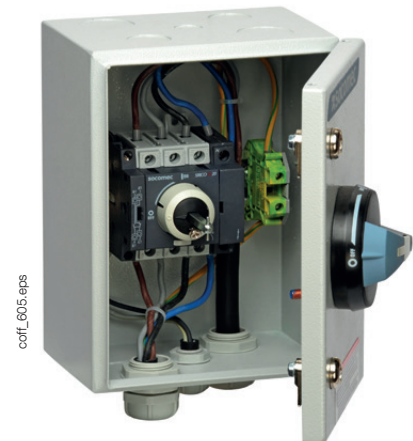
- Insulated enclosure for chemical and food processing applications, indoor or outdoor installation.
- Painted steel enclosure for areas at risk of mechanical impact.
- Stainless enclosure for food processing and pharmaceutical applications.

### Easy installation

- Cable access top and/or bottom.
- Cable gland knockouts ( $\leq 125$  A).
- Removable gland plates at top and bottom for steel enclosures  $\geq 160$ A.
- Plenty of room for cabling.

### Range

- Standard range.
- Customised products on request.



## Load break switch in insulated enclosure

### ■ **COMO** in polycarbonate enclosure



como-enc\_002 - 032 - 026 - 036

#### General characteristics

- From 20 to 125 A.
- 3, 4, 6, 8 poles.
- Yellow/red or grey/blue version.
- Triple lock in OFF position.
- Polycarbonate enclosure.
- Screw-on front.
- Degree of protection: IP65.
- Cable gland knockouts at top, bottom and sides.
- Switch centring system for easy closing.
- Door interlocking when switch is ON.

#### Accessories

- Solid neutral pole (max. 1).
- NO+NC or 2 NO auxiliary contact module for pre-break and signalling of positions 0 and I.
- EMC kit for cables shielding continuity.

## References

Rating (A)	N° of poles	With blue handle	With red handle	Solid neutral pole <sup>(1)</sup>	Auxiliary contacts <sup>(1)</sup>	EMC kit	Enclosure		
							Size	H x W x D (mm)	Cable-in top and bottom (mm)
20	3 P	2115 3301	2115 3401	-	-	-	CPC 0	92 x 64 x 83	2 x Ø 25
	4 P	2115 4301	2115 4401						
25	3 P	2115 3302	2115 3402	2115 5005	-	2110 3301	CPC 1	163 x 100 x 115	2 x Ø 25 <sup>(2)</sup>
	4 P	2115 4302	2115 4402						
32	3 P	2115 3303	2115 3403	2115 5005	-	2110 3302	CPC 2	200 x 146 x 150	2 x Ø 32 / 40 <sup>(2)</sup>
	4 P	2115 4303	2115 4403						
	6 P	2115 6303	2115 6403						
40	3 P	2115 3304	2115 3404	2115 5007	1 AC NO+NC 2113 4001	2110 3301	CPC 1	163 x 100 x 115	2 x Ø 25 <sup>(2)</sup>
	4 P	2115 4304	2115 4404						
63	3 P	2115 3306	2115 3406	2115 5007	1 AC 2 NO 2113 4002	2110 3302	CPC 2	200 x 146 x 150	2 x Ø 32 / 40 <sup>(2)</sup>
	4 P	2115 4306	2115 4406						
	6 P	2115 6306	2115 6406						
80	3 P	2115 3308	2115 3408	2115 5009	-	2110 3303	CPC 3	304 x 214 x 182	2 x Ø 50 / 63 <sup>(2)</sup>
	4 P	2115 4308	2115 4408						
100	3 P	2115 3309	2115 3409	2115 5011	-	2110 3302	CPC 2	200 x 146 x 150	2 x Ø 32 / 40 <sup>(2)</sup>
	4 P	2115 4309	2115 4409						
125	3 P	2115 3312	2115 3412	2115 5011	-	2110 3303	CPC 3	304 x 214 x 182	2 x Ø 50 / 63 <sup>(2)</sup>
	4 P	2115 4312	2115 4412						

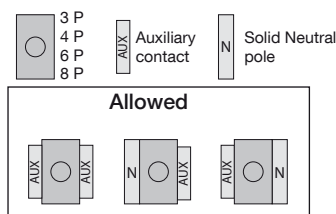
(1) Max. configuration capacity: 1 solid neutral pole + 1 aux contact, or 2 aux contacts.

(2) In addition to top and bottom gland knock-outs, 2 x M20 knock-outs are included on each side of the enclosure for CPC 1 thru CPC 3.

## Configurations

### Neutral pole and auxiliary contact

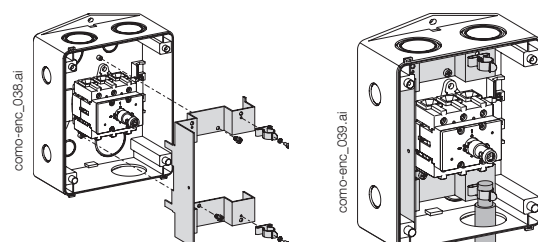
Solid neutral pole and auxiliary contact accessories can be fitted to the left and/or right side of the COMO switch. Note that only one neutral pole can be fitted. See the below table for details.



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### EMC kit

For loads sensitive to electromagnetic interferences, the continuity of the cable shielding can be ensured by this kit, without the need for EMC cable glands.



# Enclosed switches

## Load break switches

20 to 1600 A

### Load break switch in insulated enclosure

#### ■ **SIRCO** in polyester enclosure



#### General characteristics

- From 160 to 630 A.
- 3 poles + unswitched neutral, 4 poles.
- Black handle (red/yellow on request).
- Triple lock in OFF position.
- Polyester enclosure.
- Screw-on front.
- Colour: RAL 7035.
- Degree of protection: IP65.
- Wall-mounted, 4 brackets included.

#### Accessories

- NO/NC auxiliary contact.
- Terminal screen.

### References

Rating (A)	N° of poles	With black handle	Auxiliary contacts	Protective screen	Enclosure	
					Size	H x W x D (mm)
160	3 P + N	3116 <b>5016</b>	1 <sup>st</sup> AC NO/NC 2699 <b>0031</b>	2698 <b>3012</b>	CP 32	360 x 270 x 171
	4 P	3116 <b>4016</b>		2698 <b>4012</b>		
250	3 P + N	3116 <b>5025</b>	2 <sup>nd</sup> AC 2 NO/NC 2699 <b>0032</b>	2698 <b>3020</b>	CP 53	540 x 360 x 171
	4 P	3116 <b>4025</b>		2698 <b>4020</b>		
400	3 P + N	3116 <b>5040</b>		2698 <b>3050</b>	CP 75	720 x 540 x 201
	4 P	3116 <b>4040</b>		2698 <b>4050</b>		
630	3 P + N	3116 <b>5063</b>		2698 <b>3050</b>		
	4 P	3116 <b>4063</b>		2698 <b>4050</b>		

### Load break switch in metallic enclosure

#### ■ **SIRCO M** in painted steel enclosure



#### General characteristics

- From 20 to 100 A.
- 3 poles + solid neutral.
- Red/yellow or black handle.
- Triple lock in OFF position.
- Painted steel enclosure.
- Hinged door or screw-on cover.
- Colour: RAL 7035.
- Pre-punched cable gland knockouts at top and bottom.
- Degree of protection: IP65.

#### Accessories

- Switched 4<sup>th</sup> pole (max. 1).
- NO+NC or 2 NO auxiliary contact (max. 2).
- Terminal shrouds.

### References

Rating (A)	N° of poles	With black handle	With red/yellow handle	Switched 4 <sup>th</sup> pole	Auxiliary contacts	Terminal shroud	Enclosure		
							Size	H x W x D (mm)	Cable-in top and bottom (mm)
20	3 P + N	3032 <b>5202</b>	3032 <b>5302</b>	2200 <b>1001</b>			CT 21	200 x 150 x 120	2 x Ø 25 + 2 x Ø 32 + Ø 16
							CT 21a		
32	3 P + N	3032 <b>5203</b>	3032 <b>5303</b>	2200 <b>1003</b>	1 AC NO + NC 2299 <b>0001</b>		CT 21	200 x 150 x 120	2 x Ø 25 + 2 x Ø 32 + Ø 16
							CT 21a		
63	3 P + N	3032 <b>5206</b>	3032 <b>5306</b>	2200 <b>1006</b>	1 AC 2 NO 2299 <b>0011</b>		CT 21	200 x 150 x 120	2 x Ø 25 + 2 x Ø 32 + Ø 16
							CT 21a		
100	3 P + N	3032 <b>5210</b>	3032 <b>5310</b>	2200 <b>1010</b>			CT 32	300 x 200 x 120	Ø 32 + 2 x Ø 50 + Ø 16
							CT 32a		

## Load break switch in metallic enclosure (continued)

### ■ **SIRCO** in painted steel enclosure



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#### General characteristics

- From 160 to 1600 A.
- 3 poles + solid neutral, 4 poles.
- Black handle (red/yellow on request).
- Triple lock in OFF position.
- Painted steel enclosure.
- Hinged door with double bar locking.
- Colour: RAL 7035
- Cable gland plates: top and bottom.
- Degree of protection: IP65.
- Wall-mounted, 4 brackets included.

#### Accessories

- NO/NC auxiliary contact.
- Terminal screen.

## References

Rating (A)	N° of poles	Handle Black Reference	Auxiliary contacts	Protective screen (top or bottom)	Enclosure		
					Size	H x W x D (mm)	Cable-in top and bottom (mm)
160	3 P + N	3032 5016	1 <sup>st</sup> AC NO/NC 2699 0031  2 <sup>nd</sup> AC 2 NO/NC 2699 0032	2698 3012	CT 43	400 x 300 x 210	180 x 100
	4 P	3032 4016					
250	3 P + N	3032 5025		2698 3020			
	4 P	3032 4025		2698 4020			
400	3 P + N	3032 5040		2698 3050			
	4 P	3032 4040		2698 4050			
630	3 P + N	3032 5063		2698 3050			
	4 P	3032 4063		2698 4050			
800	3 P + N	3032 5080		2698 3080			
	4 P	3032 4080		2698 4080			
1250	3 P + N	3032 5084		2698 3120			
	4 P	3032 4084		2698 4120			
1600	3 P + N	3032 5088	2698 3120				
	4 P	3032 4088	2698 4120				
					CT 66	600 x 600 x 300	380 x 100
					CT 86	800 x 600 x 350	560 x 100
					CT 128	1200 x 800 x 300	660 x 100

# Enclosed switches

## Load break switches

20 to 1600 A

### Load break switch in metallic enclosure (continued)

#### ■ **SIRCO M** in stainless steel enclosure



#### General characteristics

- 32 to 100 A.
- 3 poles + solid neutral, 4th switched pole optional extra (max. 1).
- Black or red/yellow handle.
- Triple lock in OFF position.
- Brushed stainless steel enclosure 304 (please ask for other options).
- Degree of protection: IP65.
- Pre-punched cable gland knockouts at bottom.
- Hinged door with double bar locking.

#### Accessories

- Switched 4<sup>th</sup> pole (max. 1).
- NO+NC or 2 NO auxiliary contact (max. 2).
- Wall mounting brackets.

### References

Rating (A)	N° of poles	With black handle	With red/yellow handle	Switched 4 <sup>th</sup> pole	Auxiliary contacts	Terminal shroud	Set of stainless steel brackets	Enclosure		
								Size	H x W x D (mm)	Cable-in bottom (mm)
32	3 P + N	3032 8003	3032 8103	2200 1003	1 AC NO + NC 2299 0001	2294 3005 (3 P) 2294 1005 (1 P)	3031 0012	Cl 21	200 x 150 x 120	2 x Ø 25 + 2 x Ø 32 + Ø 16
63	3 P + N	3032 8006	3032 8106	2200 1006		2294 3009 (3 P) 2294 1009 (1 P)				
100	3 P + N	3032 8010	3032 8110	2200 1010		2294 3016 (3 P) 2294 1011 (1 P)				
								Cl 32	300 x 200 x 120	Ø 32 + 2 x Ø 50 + Ø 16

## Characteristics

### Electrical features according to IEC 60947-3

		COMO							
Thermal current $I_{th}$ (40°C)		20 A	25 A	32 A	40 A	63 A	80 A	100 A	125 A
Enclosed thermal current $I_{th}$ (35°C) (A)		20	25	32	40	63	80	100	125
Enclosed thermal current $I_{th}$ (50°C) (A)		17	22	28	35	54	69	86	108
Rated insulation voltage $U_i$ (V)		690	690	690	690	690	690	690	690
Rated impulse withstand voltage $U_{imp}$ (kV)		4	6	6	6	6	6	6	6
Rated operational currents $I_e$ (A)									
Rated voltage	Utilisation category								
400 VAC	AC-22 A / AC-22 B	20	25	32	40	63	80	100	125
400 VAC	AC-23 A / AC-23 B	15	20	22	40	44	53	70	84
690 VAC	AC-22 A / AC-22 B		12	13	18	22	23.5	34	41
690 VAC	AC-23 A / AC-23 B		9.5	11.5	13	17.5	22	25.5	35
Operational power in AC-23 (kW) without pre-break auxiliary contact									
400 VAC without pre-break AC (kW) <sup>(1)</sup>		7.5	9.5	11.5	20	22	30	37	45
690 VAC without pre-break AC (kW) <sup>(1)</sup>			12	13	18	22	25.5	34	41
gG DIN <sup>(2)</sup> fuse protected short-circuit withstand									
Prospective short-circuit current (kA rms)		1	8	8	8	8	10	20	20
Associated fuse rating (A)		20	25	32	40	63	80	100	125
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s									
Current rated as short-time withstand $I_{cw}$ 0.3s (kA rms)		0.68	0.68	1.28	1.28	2.52	2.52	4	4
Short-circuit operation (switch only)									
Current rated as short-time withstand $I_{cw}$ 1s (kA rms)		0.34	0.34	0.64	0.64	1.26	1.26	2	2
Connection									
Minimum Cu cable cross-section (mm <sup>2</sup> )		1.5	2.5	2.5	2.5	2.5	2.5	4	4
Maximum Cu cable cross-section (mm <sup>2</sup> )		4	10	10	10	16	25	35	50

(1) The power value is given for information only, the current values vary from one manufacturer to another. (2) For a rated operational voltage  $U_e = 415$  VAC.

		SIRCO M / SIRCO										
Thermal current $I_{th}$ (40°C)		20 A	32 A	63 A	100 A	160 A	250 A	400 A	630 A	800 A	1250 A	1600 A
Frame size		M1	M1	M2	M3	B3	B4	B5	B5	B6	B7	B7
Enclosed thermal current $I_{th}$ (35°C) (A)		20	32	63	100	160	250	400	630	770	1000	1450
Enclosed thermal current $I_{th}$ (50°C) (A)		17	28	54	86	138	216	345	544	665	863	1252
Rated insulation voltage $U_i$ (V)		800	800	800	800	800	800	1000	1000	1000	1000	1000
Rated impulse withstand voltage $U_{imp}$ (kV)		8	8	8	8	8	8	12	12	12	12	12
Rated operational currents $I_e$ (A)												
Rated voltage	Utilisation category											
415 VAC	AC-22 A / AC-22 B	20	32	63	100	160	250	400	630	800	1250	1600
415 VAC	AC-23 A / AC-23 B	20	32	63	100	160	250	400	500	800	1250	1250
500 VAC	AC-22 A / AC-22 B	20	32	63	100							
500 VAC	AC-23 A / AC-23 B	20	25	63	80							
690 VAC	AC-22 A / AC-22 B	20	32	40/63	80/100							
690 VAC	AC-23 A / AC-23 B	20	25	40	63							
Operational power in AC-23 (kW)												
400 VAC without pre-break AC (kW) <sup>(1)</sup>		9	15	30	45	80	132	220	280	450	710	710
500 VAC without pre-break AC (kW) <sup>(1)</sup>		9	15	30	45							
690 VAC without pre-break AC (kW) <sup>(1)</sup>		11	15	30	45							
gG DIN <sup>(2)</sup> fuse protected short-circuit withstand												
Prospective short-circuit current (kA rms)		50	50	50	25	100	50	100	70	50	100	100
Associated fuse rating (A)		20	32	63	100	160	250	400	630	800	1250	2x800
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s												
Current rated as short-time withstand $I_{cw}$ 0.3s (kA rms)		2.5	2.5	3	5	15	17	25	25	50	100	100
Short-circuit operation (switch only)												
Current rated as short-time withstand $I_{cw}$ 1s (kA rms)		1.26	1.26	1.5	2.75	7	9	13	13	35	50	50
Dynamic withstand current in $I_{cc}$ (kA peak) (6)		6	6	9	12	20	30	45	45	55	110	110
Connection												
Minimum Cu cable cross-section (mm <sup>2</sup> )		1.5	1.5	2.5	10	50	95	185	2x150	2x185		
Maximum Cu cable cross-section (mm <sup>2</sup> )		16	16	35	70	95	150	240	2x300	2x300	4x185	6x185

(1) The power value is given for information only, the current values vary from one manufacturer to another. (2) For a rated operational voltage  $U_e = 415$  VAC.

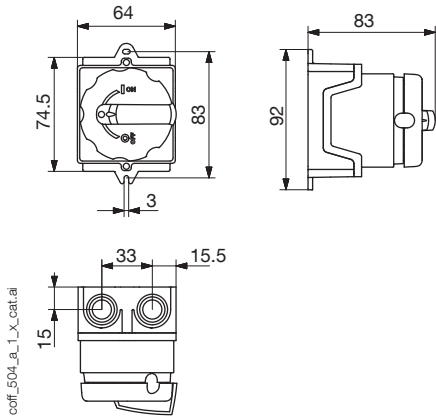
# Enclosed switches

## Load break switches

20 to 1600 A

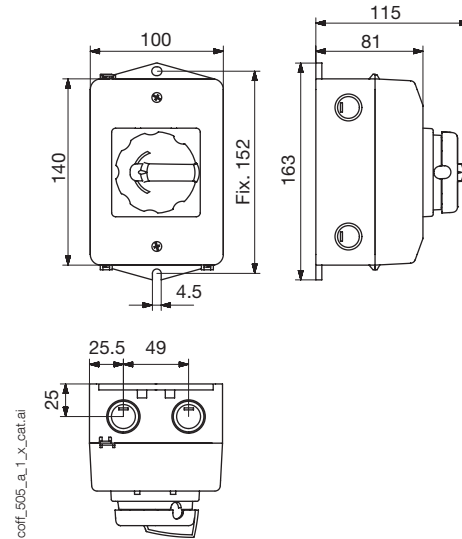
### COMO dimensions

#### Size CPC 0



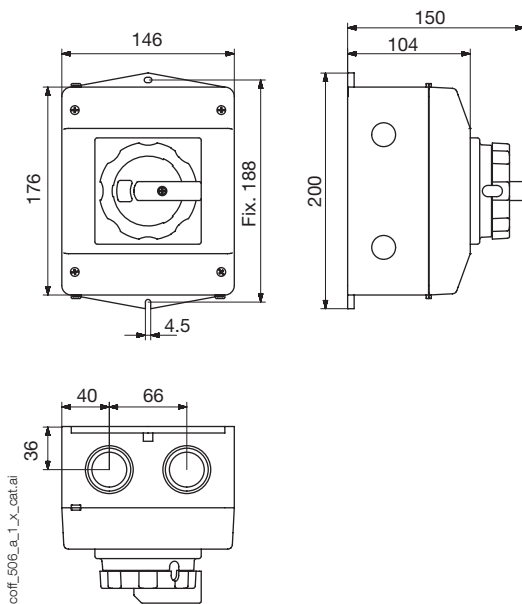
- 2x M25 cable knockouts (top and bottom)

#### Size CPC 1



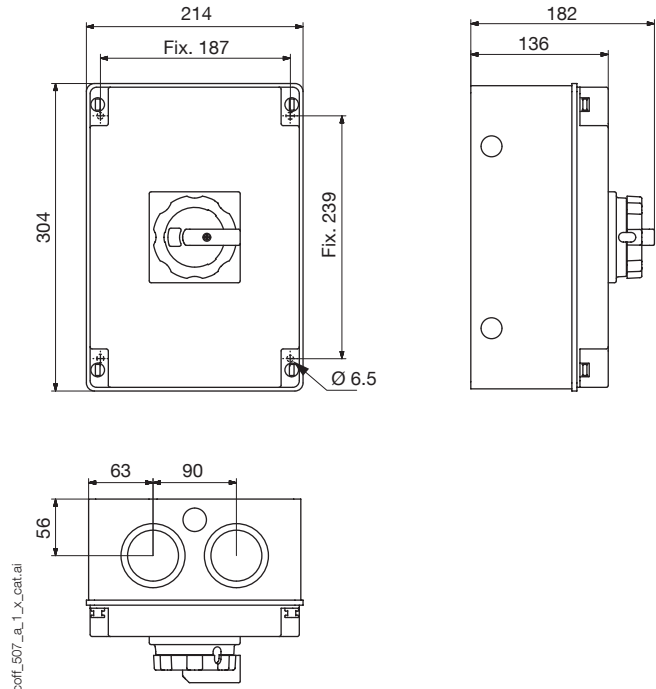
- 2x M20 cable knockouts (on each side)
- 2x M25 cable knockouts (top and bottom)
- 2 pre-drilled holes to expel water

#### Size CPC 2



- 2x M20 cable knockouts (on each side)
- 2x M32/M40 cable knockouts (top and bottom)
- 2 pre-drilled holes to expel water

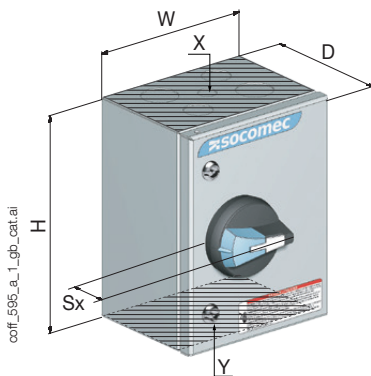
#### Size CPC 3



- 2x M20 cable knockouts (on each side)
- 2x M50/M63 cable knockouts (top and bottom)
- 2 pre-drilled holes to expel water

## SIRCO M and SIRCO dimensions

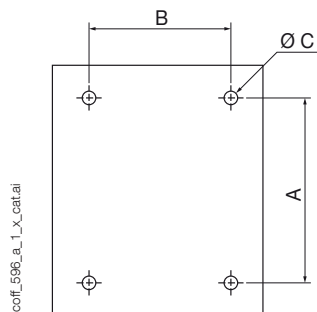
### Enclosures



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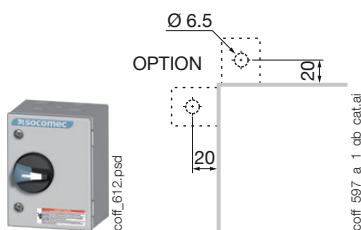
Size	Type	H x W x D (mm)	Sx (mm)	A (mm)	B (mm)	Ø C (mm)	X - Y Cable-in top and bottom <sup>(1)</sup>	
CT 21, CI21, CT 21a	1	200 x 150 x 120	36	135	85	6.5	2 x Ø 25 + 2 x Ø 32 + Ø 16	
CT 32, CI32, CT 32a		300 x 200 x 120		235	135		1 x Ø 32 + 2 x Ø 50 + Ø 16	
CP 32	3	360 x 270 x 171	45	337	247		12.5	-
CP 53		540 x 360 x 171		516	337			
CP 75		720 x 540 x 201		696	516			
CT 43	2	400 x 300 x 210	60	362	262			180 x 100
CT 66		600 x 600 x 300		562	562	380 x 100		
CT 86		800 x 600 x 350		762	562	660 x 100		
CT 128		1200 x 800 x 300		1162	762			

(1) For stainless steel enclosure, cable-in at bottom only



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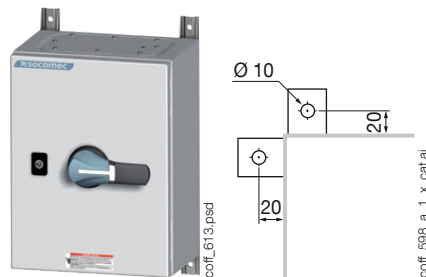
### Type 1



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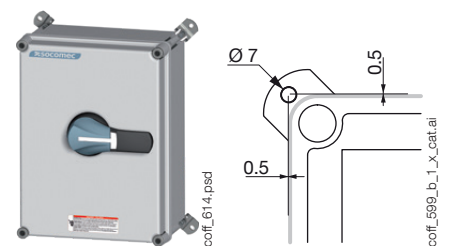
### Type 2



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coif\_598\_a\_1\_x\_catal

### Type 3



coif\_614.psd

coif\_599\_b\_1\_x\_catal