



# Safety enclosures

Normal atmospheres

Steel enclosure from 50 to 1600 A

Integrated products  
and solutions

new



## The solution for

- > Iron and steel industry
- > Cement plants
- > Stationery
- > Sawmills
- > Hydraulic power packs
- > Automobile
- > Mining



## Strong points

- > Operator safety
- > Quick and easy implementation
- > Durability
- > Operating continuity
- > Inductive load breaking (AC23)

## Compliance with standards

- > IEC 60364
- > IEC 60947-3
- > IEC 60204-1
- > IEC 61439-2



## Specific requirements

- > SOCOME C can offer you customised solutions to meet your specific requirements. Contact your Socomec office for further information.

## Function

**Safety enclosures** equipped with SOCOME C switches provide emergency breaking, breaking for mechanical maintenance and safety isolation in the vicinity of any low voltage final circuit.

## Advantages

### Operator safety

- Protects operators against accidental start-up of machines.
- Ease of operation without risk of error for unqualified operators.
- Maximum security for all types of simple mechanical and electrical maintenance operations.

### Quick and easy implementation

The space available within the enclosure and the dimension of the closing plates facilitate connection.

### Durability

The product is designed for harsh industrial environments with mechanical risks or non-explosive dust hazards.

### Operating continuity

- Proximity breaking: only the targeted machine is switched off, the rest of the installation can continue operating.
- Reduced costs related to production downtime.

### Inductive load breaking (AC23)

Safety enclosures are designed for use with inductive loads and are able to make and break on load (AC23).

## General characteristics

### Enclosure

The robustness of the safety enclosure is ensured by its 2 mm thick sheet steel construction. Corrosion protection is provided by a 70 µm thick polyester powder coating (RAL 7035 ≤ 160 A, RAL 7032 and 9001 for other sizes). The door is hinge-mounted (120° opening) and is secured with a key lock (8 mm square key). The enclosure has an IP65 degree of protection for sizes ≤ 160 A and IP55 for other sizes.

### Switching device

Safety enclosures are equipped with visible break SOCOMEC load break switches. They make and break under load and provide safety isolation for any low voltage electric circuit. Separation of the contacts is visible through the triplex window, located on the enclosure door, providing guaranteed isolation to the operator. A mechanical indicator, linked directly to the operation of the contacts, is also provided to give clear position indication.



coff\_435\_a

### Operating handle

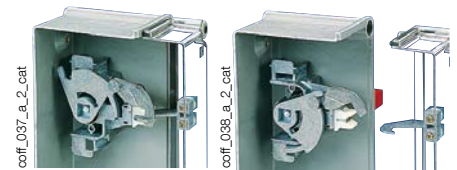
The safety enclosure is equipped with an unpainted metal operating handle which is used for both normal and emergency cut-off operations. The handle can be locked with up to 3 padlocks with a diameter of between 4 and 8 mm.

As an alternative to the standard metallic handle, a red plastic handle with a metal padlocking lever (≤ 160 A), or a red metallic handle, can be factory fitted on request.

### Double locking

Double locking prevents the opening of the enclosure door with the switch in its closed position and the closing of the switch when the door is open; with the use of a tool authorised personnel can bypass this system when the door is open for maintenance purposes.

The locking system comprises a single guard moulded from zamak (aluminium alloy) with a simple and robust mechanism driven directly by the handle's operating shaft.



### Auxiliary control

A removable plate, located below the enclosure's operating handle, is supplied for the installation of auxiliary controls.

Several wiring combinations are available as pre-installed or customer-fit options for enclosures ≤ 160A; for ratings ≥ 200A please contact us.

### Connections

Two removable (top and bottom) gland plates facilitate cable entry and connections.

Cables connect directly onto switch power terminals for enclosures ≤ 160A; for ≥ 200A incoming cables connect to descending copper bars.

### Miscellaneous

A reversible grounding point enables the termination of earth connections inside and/or outside of the enclosure.

All active parts are covered to avoid direct contact.

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Side operation <sup>(1)</sup> safety enclosure with bottom/bottom connection <sup>(2)</sup>.



Rating (A)	Motor power output (kW) <sup>(3)</sup>		No. of poles	Bottom/Bottom
	400 V	690 V		References
50 A	25	-	3 P	3273 3005
			4 P	3273 4005
			6 P	3V71 6005
80 A	30	8	3 P	3273 3008
			4 P	3273 4008
			6 P	3V71 6008
125 A	55	75	3 P	3273 3012
			4 P	3273 4012
			6 P	3V71 6012
160 A	75	75	3 P	3273 3016
			4 P	3273 4016
200 A	100	75	3 P	3V71 3020
			4 P	3V71 4020
			6 P	3V71 6020
400 A	220	75	3 P	3V71 3040
			4 P	3V71 4040
500 A	220	75	3 P	3V71 3050
			4 P	3V71 4050
630 A	355	90	3 P	3V71 3063
			4 P	3V71 4063
800 A	355	110	3 P	3V71 3080
			4 P	3V71 4080
1250 A	560	185	3 P	3V71 3120
			4 P	3V71 4120
1600 A	560	185	3 P	3V71 3160
			4 P	3V71 4160

(1) For front operation please contact us.

(2) For top/bottom connection please contact us.

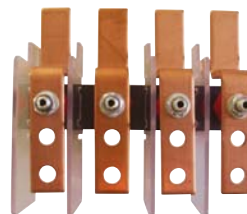
(3) Without pre-break option.

## Accessories

### Terminal connection kit for 125 and 160 A enclosures

#### Use

Power terminal connection kit for 125 and 160 A safety enclosures. Allows you to connect up to 2 x 35 mm<sup>2</sup> cables or 1 x 70 mm<sup>2</sup> cable per pole. Supplied with terminal separation screens and cables for connection to the switch (for onsite installation).



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Designation	No. poles	Customer fit	Factory fitted <sup>(1)</sup>
		References	References
Enclosure terminal block	3 P	3290 1015	3290 1016
Enclosure terminal block	4 P	Contact us	Contact us

(1) Specify the reference of the enclosure to be fitted.

## Accessories (continued)

### Auxiliary contacts

#### Use

For pre-breaking and signalling of positions O and I of the load break switch.

#### Mounting

- On the double-locking system.
- Possibility of factory mounting within the enclosure (please provide enclosure reference when ordering).



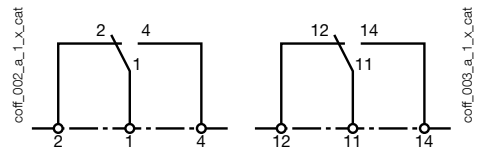
1<sup>st</sup> NO/NC AC for pre-break

2<sup>nd</sup> NO/NC AC for pre-break

Contacts	Customer fit <sup>(2)</sup>	Factory fitted <sup>(1) (2)</sup>
	References	References
2 ACs for pre-break and signalling O and I	2999 <b>0012</b>	2999 <b>1012</b>
2 ACs low level for pre-break and signalling O and I	2999 <b>0112</b>	-
2 ACs for pre-break and signalling O and I, wired	3290 <b>6003</b>	3290 <b>6103</b>
2 ACs low level for pre-break and signalling O and I, wired	3290 <b>6113</b>	3290 <b>6013</b>

(1) Specify the reference of the enclosure to be fitted.

(2) Cannot be fitted in combination with auxiliary control interface options.



### 50 to 160 A auxiliary control interface

#### Use

For machine control.

#### Mounting

- Pushbuttons are wired to terminal block, with 2 onsite connection points.
- 2 NO/NC auxiliary contacts for pre-break are provided with one utilised in all control options; the 2<sup>nd</sup> contact is not pre-wired and is available for use.
- The removable interface plate is mounted on the right side of the enclosure below the operating handle.
- Factory installation or customer fit options are available.



Control diagrams <sup>(1)</sup>	Auxiliary control	Button allocation	Customer fit <sup>(2)</sup>	Factory fitted <sup>(2)(3)</sup>
Start/Stop	2 pushbuttons, 22 mm Ø (1 green/1 red): Identification labels "Start" and "Stop" <sup>(4)</sup>	 coff_470_a_1_cat	3290 <b>2110</b>	3290 <b>2111</b>
Start/Stop and Local/Remote	2 pushbuttons, 22 mm Ø (1 green/1 red): Identification labels "Start" and "Stop" <sup>(4)</sup>  1 selector with 2 positions: Identification label "Local-Remote" <sup>(4)</sup>	 coff_473_a_1_cat	3290 <b>2112</b>	3290 <b>2113</b>
Forward/Reverse	3 pushbuttons, 22 mm Ø (2 green/1 red): Identification labels "Start", "Stop" and "Reverse" <sup>(4)</sup>	 coff_472_a_1_cat	3290 <b>2114</b>	3290 <b>2115</b>
Forward/Reverse and Local/Remote	3 pushbuttons, 22 mm Ø (2 green/1 red): Identification labels "Start", "Stop" and "Reverse" <sup>(4)</sup>  1 selector with 2 positions: Identification label "Local-Remote" <sup>(4)</sup>	 coff_471_a_1_cat	3290 <b>2116</b>	3290 <b>2117</b>

(1) See "Command diagrams" page 7.

(2) Mounting not compatible with an auxiliary contact or key handle interlock.

(3) Specify the reference of the enclosure to be fitted.

(4) Labels are identified in English and French languages.

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## Accessories (continued)

### Enclosure labels

#### Use

Personalise your enclosure. Information to be provided at time of order when factory fit option is requested.

Examples of label types	Customer fit	Factory fitted <sup>(1)</sup>
Set of 10 embossed labels, size 80 x 30 mm with black lettering on a white background. Text according to your requirements. Mounted with plastic rivets.	Contact us	Contact us
Pushbutton label, white lettering on a red background	Contact us	Contact us
Pushbutton label, black lettering on a white background	Contact us	Contact us
Pushbutton label, white lettering on a black background	Contact us	Contact us

(1) Specify the reference of the enclosure to be fitted.



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### Key handle interlocking system

#### Use

When enabled, the lock prevents handle operation.

Type of lock	References
Ronis EL11AP	4409 8511
Serv Trayvou NXOP10	4409 8601

Assembly kit for lock EL11AP (lock not included)	Customer fit <sup>(1)</sup>	Factory fitted <sup>(1)(2)</sup>
Rating (A)	References	References
50 ... 160	3290 7007	3290 7008
> 160	3290 7005	3290 7006

Assembly kit for lock NXOP10 (lock not included)	Customer fit <sup>(1)</sup>	Factory fitted <sup>(1)(2)</sup>
Rating (A)	References	References
50 ... 160	3290 7009	3290 7008
> 160	3290 7015	3290 7006

(1) Mounting not compatible with a control/command interface. Please contact us for more details.

(2) Specify the reference of the enclosure to be fitted.



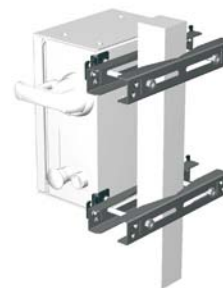
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### Post mounting

#### Use

For mounting the safety enclosure to a round or square post.

Rating (A)	References
50 ... 80	3290 7252
125 ... 160	3290 7254
> 160	Contact us



coff\_463\_a\_1\_cat

### Enclosure canopy

#### Use

To protect your enclosure against extreme weather.

Rating (A)	References
50 ... 80	3290 7212
125 ... 160	3290 7214
> 160 A	Contact us



coff\_464\_a\_1\_cat

## Operating handle

### Use

For switch operation. Factory assembly only.

Rating (A)	Type of handle	Reference <sup>(1)</sup>
50 ... 160	S type handle, red with metal padlocking lever	3261 0090
50 ... 160	Red steel handle	3261 0092
200 ... 500	Red steel handle	3211 0500
630 ... 1600	Red steel handle	3211 1250

(1) Specify the reference of the enclosure to be fitted.

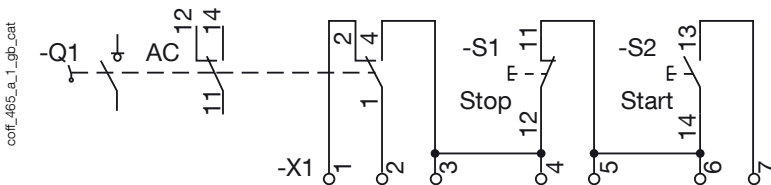


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access\_436\_a\_1\_cat

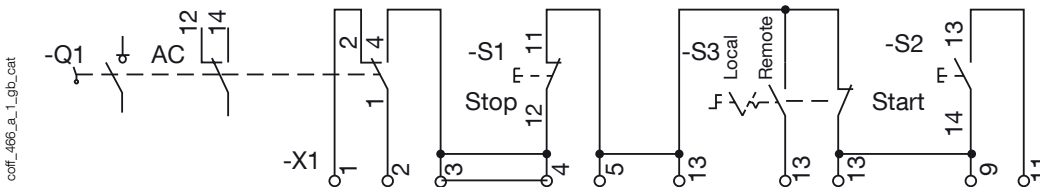
## Control diagrams

### Start/Stop



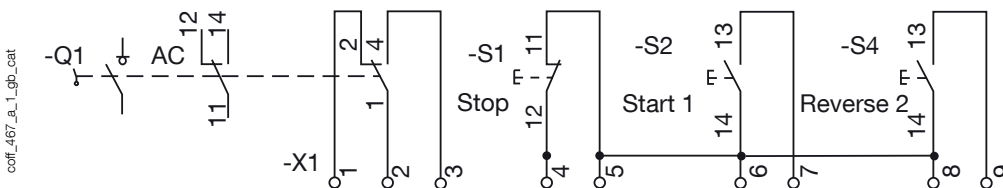
coff\_465\_a\_1\_gb\_cat

### Start/Stop and Local/Remote



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### Forward/Reverse



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### Forward/Reverse and Local/Remote



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## Characteristics

in accordance with IEC 60947-3

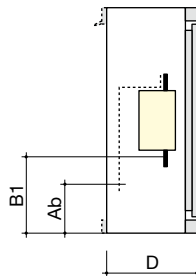
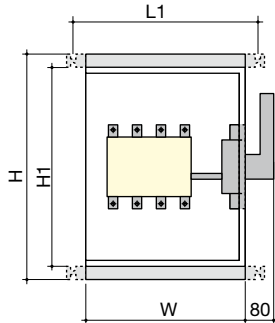
Rating (A)		50 A	80 A	125 A	160 A	200 A	400 A	500 A	630 A	800 A	1250 A	1600 A
Rated operating current $I_e$ (A)												
Rated voltage	Utilisation category	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
400 VAC	AC-21A	50	80	125	160	200	400	500	630	800	1250	1600
400 VAC	AC-22A	50	63	125	160	200	400	400	630	800	1250	1250
400 VAC	AC-23A	32	40	125	125	200	400	400	630	630	1000	1000
690 VAC	AC-21A	40	63	125	160	160	400	400	630	800	1000	1250
690 VAC	AC-22A	25	63	80	100	100	200	200	315	315	400	400
690 VAC	AC-23A	-	10	80	80	80	80	80	100	125	200	200
Motor power output (kW)												
At 400 VAC without pre-break AC		22	30	55	75	90	220	220	355	355	560	650
At 690 VAC without pre-break AC		-	8	75	75	75	75	75	90	110	160	180
At 400 VAC with pre-break AC		22	37	55	75	90	220	250	355	450	650	850
At 690 VAC with pre-break AC		37	55	110	132	132	390	390	580	780	1100	1300

in accordance with IEC 61439-1

Rating (A)	50 A	80 A	125 A	160 A	200 A	400 A	500 A	630 A	800 A	1250 A	1600 A
Operating current max, $I_e$ (A) 400V	50 A	80 A	125 A	160 A	200 A	400 A	500 A	630 A	800 A	1250 A	1600 A
Operating current max, $I_e$ (A) 690V	50 A	80 A	125 A	160 A	200 A	400 A	500 A	630 A	800 A	1250 A	1600 A
Mechanical specifications											
Connection											
Minimum copper cable cross-section (mm <sup>2</sup> )	6	16	10	10	70	185	240	2x150	2x185	-	-
Maximum copper cable cross-section (mm <sup>2</sup> )	16	35	70	70	95	240	240	2x300	3x300	4x185	6x240
Min./max. tightening torque (Nm)	2	2	4 / 4.4	4 / 4.4	8.3/13	20/26	20/26	20/26	20/26	20/26	40/45

## Dimensions

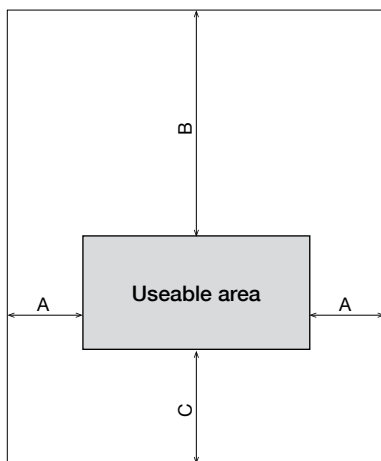
### 50 to 1600 A



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Rating (A)	No. poles	H x W x D (mm)	Mounting		Connection		Weight (kg)
			H1 (mm)	L1 (mm)	Ab (mm)	B1 (mm)	
50	3 P	310 x 215 x 150	258	263	-	168	9
	4 P	310 x 215 x 150	258	263	-	168	9.5
	6 P	300 x 400 x 200	252	448	-	160	10
80	3 P	310 x 215 x 150	258	263	-	168	9
	4 P	310 x 215 x 150	258	263	-	168	9.5
	6 P	300 x 400 x 200	252	448	-	140	10
125	3 P	400 x 275 x 165	348	323	-	200	17
	4 P	400 x 300 x 165	348	348	-	200	18
	6 P	400 x 400 x 200	460	448	240	275	21
160	3 P	400 x 275 x 165	348	323	-	200	17
	4 P	400 x 300 x 165	348	348	-	200	18
200	3 P	400 x 300 x 200	352	348	180	220	21
	4 P	500 x 400 x 200	452	448	250	295	22
	6 P	600 x 500 x 200	552	548	300	345	27
400	3 P	700 x 400 x 250	652	448	345	405	35
	4 P	700 x 400 x 250	652	448	345	405	35
500	3 P	700 x 400 x 250	652	448	340	400	39
	4 P	700 x 400 x 250	652	448	340	400	39
630	3 P	900 x 500 x 300	852	548	455	540	55
	4 P	900 x 500 x 300	852	548	455	540	55
800	3 P	900 x 500 x 300	852	548	445	530	85
	4 P	900 x 500 x 300	852	548	445	530	85
1250	3 P	1200 x 600 x 400	1152	640	670	770	90
	4 P	1200 x 700 x 400	1152	740	670	770	100
1600	3 P	1200 x 600 x 400	1152	640	650	790	100
	4 P	1200 x 700 x 400	1152	740	650	790	110

## Closing plate



coff\_462\_a\_1\_gb\_cat

The useable area can be drilled for gland installation.

Rating (A)	A (mm)	B (mm)	C (mm)
50 ... 80	20	60	30
125 ... 160	20	60	30