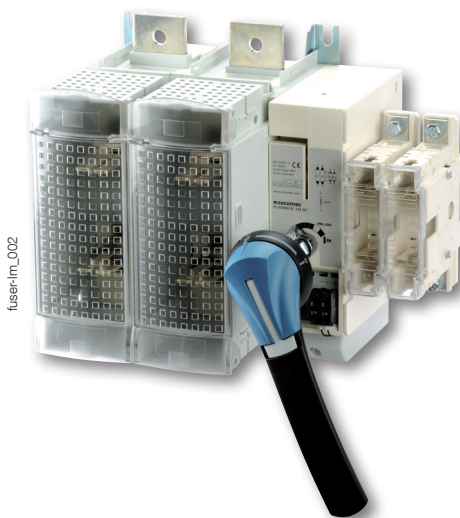


FUSERBLOC *DRIVE*

Fuse combination switches with 2 pre-charge poles
for variable speed drives

for high-speed fuses up to 1600 A



The solution for

- > Energy
- > Industry

Strong points

- > Simple and compact
- > Automatic pre-charge
- > Optimised maintenance
- > Optimum safety

Conformity to standards

- > IEC 60947-3

Function

FUSERBLOC DRIVE units with manual front operation are multipole DC fuse combination switches.

They guarantee overcurrent protection for any low voltage electrical circuit with capacitive loads by limiting the high inrush current during circuit power-up and are designed to allow maintenance work on DC/AC variable speed drives or PV inverters without shutting down the entire installation.

The range is available in direct and external operation, with 2 power poles + 2 pre-charge poles*, up to 1600 A.

*Contact us for version with 1 pre-charge pole and/or UL version.

Advantages

Simple and compact

The FUSERBLOC Drive is the most compact and simplest solution on the market for variable speed drives under a common DC bus. This product combines 3 functions: disconnection, protection and pre-charging in a single device.

Automatic pre-charge

After maintenance operations, the pre-charging of the inverter capacitors is managed automatically via a coil. In addition, the opening of the pre-charge poles and the closing of the power poles is also done automatically.

Optimised maintenance

This multifunction device enables maintenance work to be done on part of the power system while leaving the rest of the equipment powered on.

Optimum safety

Double phase isolation (upstream-downstream of the fuse), disconnection, and padlocking guarantee total operator safety during fuse replacement. The device is capable of maintaining the OFF, pre-charge or ON position in the event of power failure.

General characteristics

- Range 125 to 1600 A.
- Up to 1250 VAC, 1000 VDC.
- Up to 100 kA.
- Utilisation category DC-20 B.
- 2 power poles + 2 pre-charge poles.

References

Direct / external operation 125 to 1600 A

Rating (A)	No. of poles	Fuse size power pole	Pre-charge pole (DIN 43620)	Reference	Handle, front external	Handle, front direct	Shaft for handle, front ext.	Auxiliary contact	Terminal shroud ⁽⁵⁾ power pole	Terminal shroud pre-charge pole
125 A	2	DIN 43620 00	2 x 160 A Size 00	38DR 2012 ⁽¹⁾⁽²⁾	S3 type Black IP65 1433 3111	Black 3899 6011	200 mm 1400 1220	U type 1 NC contact 3999 0701 ⁽³⁾ 1 NO contact 3999 0702 ⁽³⁾	3998 2016 ⁽⁴⁾	3998 2016
160 A	2	DIN 43620 1	2 x 160 A Size 00	38DR 2016 ⁽¹⁾⁽²⁾					3998 2025 ⁽⁴⁾	
250 A	2	DIN 43620 2	2 x 160 A Size 00	38DR 2025 ⁽¹⁾⁽²⁾					3898 2080	
400 A	2	DIN 43620 3	2 x 160 A Size 00	38DR 2040 ⁽¹⁾⁽²⁾	Red/Yellow IP65 1434 3111	Black 3899 7011	320 mm 1400 1232			
630 A	2	DIN 43620 3	2 x 160 A Size 00	38DR 2063 ⁽¹⁾⁽²⁾	S4 type Black IP65 1443 3111		500 mm 1400 1250	3898 2080		
900 A	2	KN/110	2 x 160 A Size 00	38DR 2090 ⁽¹⁾⁽²⁾				3898 2120		
1100 A	4 (2 //)	DIN 43620 3	2 x 160 A Size 00	38DR 4110 ⁽¹⁾⁽²⁾	Red/Yellow IP65 1444 3111			3898 2150		
1600 A	4 (2 //)	KN/110	2 x 160 A Size 00	38DR 4160 ⁽¹⁾⁽²⁾				3898 2160		

1) The coil must be ordered separately.

2) Standard protection cover included. If utilising fuses fitted with a fuse blown auxiliary contact, use a specific protective cover.

3) Maximum 8 contacts (4 contacts supplied with the device).

4) IP20 kit, please contact us.

5) 2 pieces.

Characteristics according to IEC 60947-3

Products	125 A	160 A	250 A	400 A	630 A	900 A	1100 A	1600 A
Frame size	00	1	2	3	3	3	3	3
Number of poles	2	2	2	2	2	2	4 (2 //)	4 (2 //)
Fuse size	000 / 00	1	1 / 2	2 / 3	3	K / 110	3	K / 110

Power pole

Rated operating current I _{th} at 40 °C (A)	125	160	250	400	630	900	1100	1600
Rated operating voltage U _e (V)	1000	1000	1000	1250	1250	1250	1250	1250
Rated impulse withstand voltage U _{imp} (kV)	8	8	8	12	12	12	12	12
Utilisation category	DC-20	DC-20	DC-20	DC-20	DC-20	DC-20	DC-20	DC-20

Short-circuit characteristics

Peak current value: withstand and closing (kA peak)	50	50	50	50	50	50	50	50
Prospective short-circuit current (kA rms.) ⁽¹⁾	22.7	32.5	40	70	70	90	70	90

Dissipated power (W / pole)

Power dissipated by fuse	7.7	15.3	29.3	56.9	70	108	70	108
Dissipated power, switch body	6.3	6.5	10.6	30	46	60	52	54

Pre-charge pole

Rated operating current I _{th} at 40 °C (A)	160	160	160	160	160	160	160	160
Fuse size (DIN 43620)	00	00	00	00	00	00	00	00
Number of poles	2	2	2	2	2	2	2	2
Rated operating voltage U _e (V)	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U _{imp} (kV) (control circuit)	8	8	8	8	8	8	8	8

Short-circuit characteristics

Peak current value: withstand and closing (kA peak)	100	100	100	100	100	100	100	100
Prospective short-circuit current (kA rms.) ⁽¹⁾	20	20	20	20	20	20	20	20

Dissipated power (W / pole)

Power dissipated by fuse	12	12	12	12	12	12	12	12
Dissipated power, switch body	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3

Mechanical characteristics

Endurance (number of operations) ⁽²⁾	1500	1500	1500	1500	1500	1500	1500	1500
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(1) U_e = 400 VAC with gG fuses (AC value for information).

(2) 300 max./hour.

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Accessories

Coil kits

Use

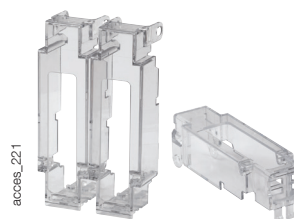
Mandatory accessory for the correct functioning of the product.

Voltage	Reference
24 VDC	38DR C024
230 VAC	38DR A230



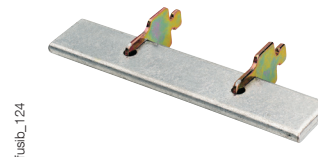
Protection covers for fuses fitted with a fuse blown auxiliary contact.

Product	NFC/DIN fuse size	No. of poles	Reference
125 A	00	2	3990 7015
160 A	1	2	3990 7024
250 A	2	2	3990 7039
400 A	3	2	3890 7063
630 A	3	2	3890 7064
900 A	3	2	standard
1100 A	3	4 (2 //)	3890 9063
1600 A	3	4 (2 //)	standard

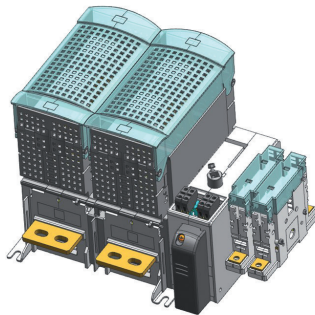


Solid neutral links

Product	NFC/DIN fuse size	No. of poles	Reference
125 A	00	2	6420 0000
160 A	1	2	6421 0001
250 A	2	2	6421 0002
400 A	3	2	6421 0003
630 A	3	2	6421 0003
900 A	3	2	contact us
1100 A	3	4 (2 //)	6421 0003
1600 A	3	4 (2 //)	contact us

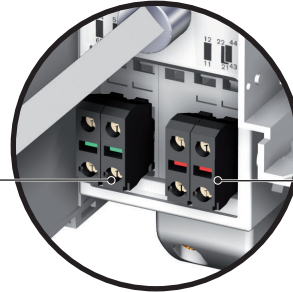


Operating diagram



Auxiliary contacts

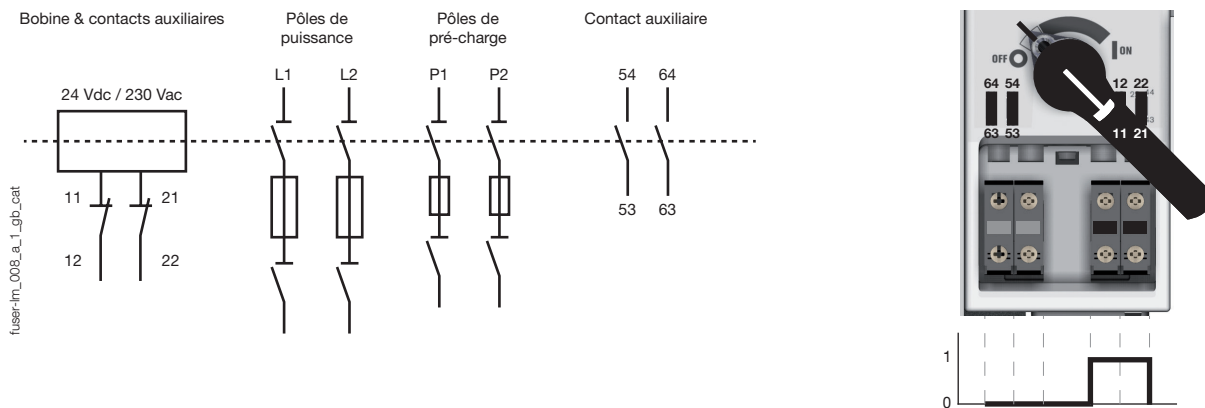
54 - 53
64 - 63



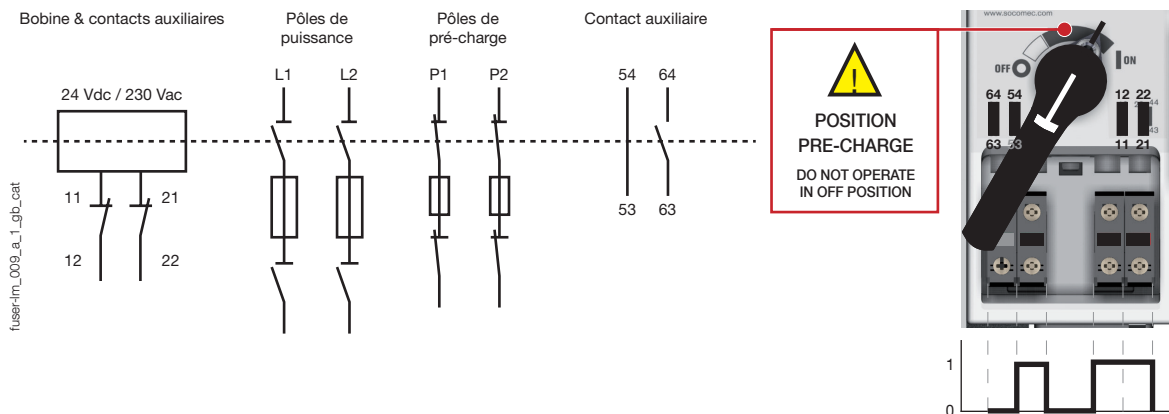
Coil contact

11 - 12
21 - 22

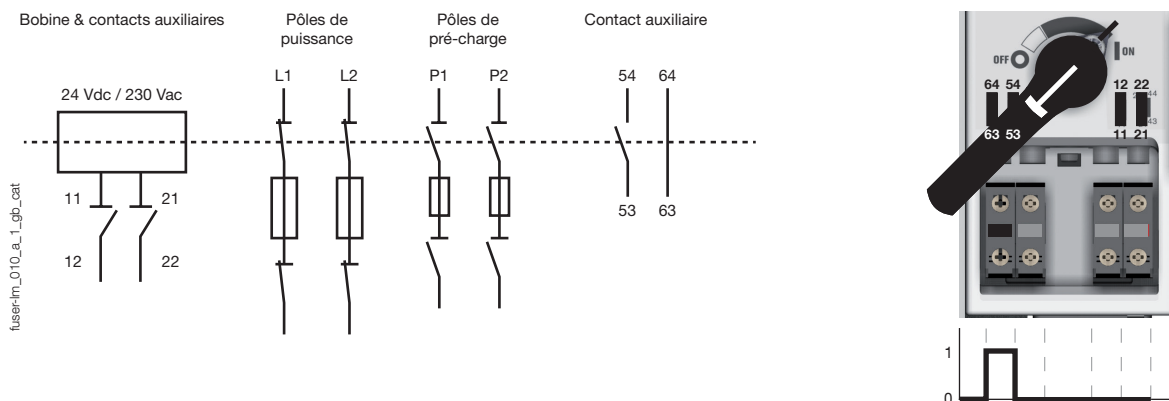
Step 1 - MANUAL



Step 2 - MANUAL



Step 3 - AUTO

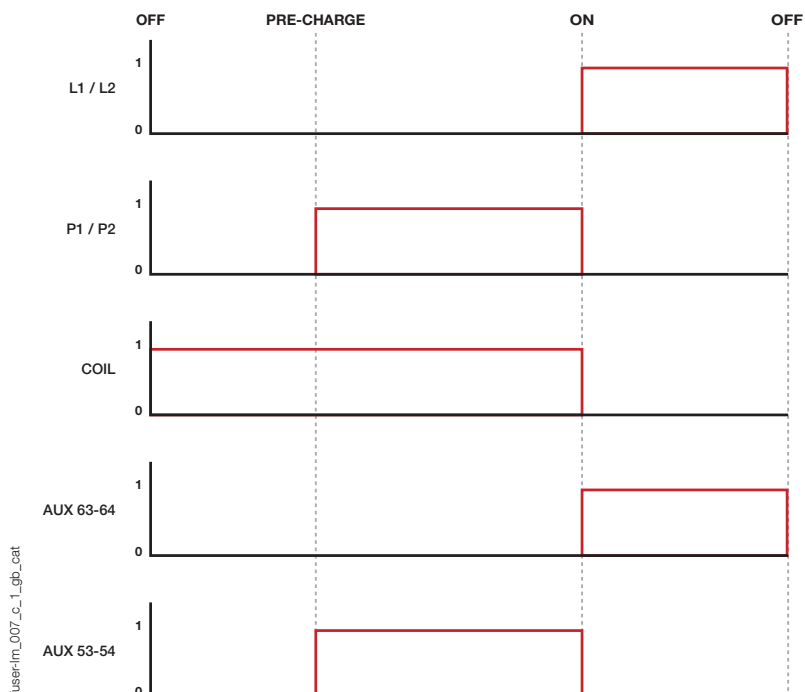


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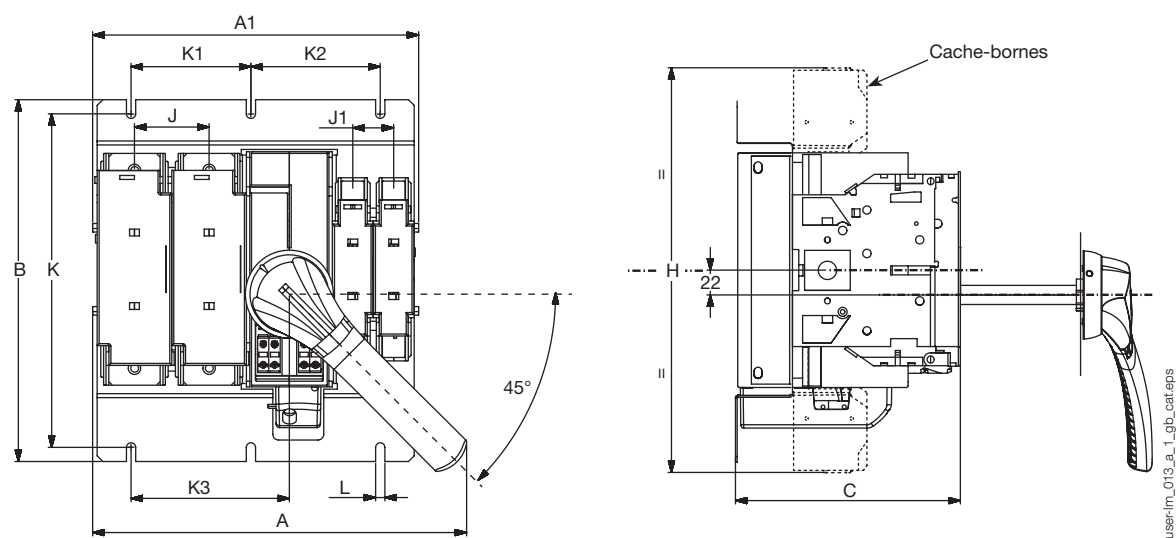
Operating diagram (continued)

Power poles and auxiliary contacts



Dimensions

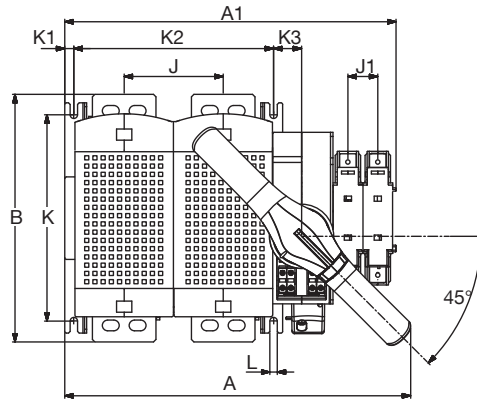
DC switches 125 to 250 A



Rating (A)	Unit	A	A1	B	C	H	J	J1	K	K1	K2	K3	L
125	in	36	48	12.59	7	10.55	1.41	1.41	11.61	6.35	-	3.18	0.32
	mm	271	229	320	178	268	36	36	295	161.5	-	81	8.2
160	in	12.87	11.20	12.59	7.73	13.58	2.36	1.41	11.61	4.17	4.05	5.51	0.32
	mm	327	284.5	320	196.5	345	60	36	295	106	114.5	140	8.2
250	in	13.03	11.35	12.59	7.85	14.13	2.59	1.41	11.61	4.17	4.05	5.51	0.32
	mm	331	288.5	320	199.5	359	66	36	295	106	114.5	140	8.2

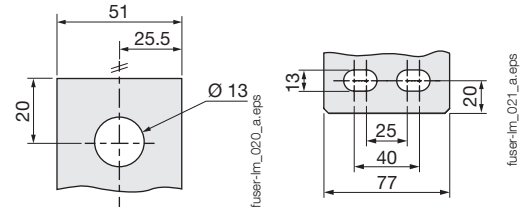
DC switches 400 to 1600A

400 to 900 A

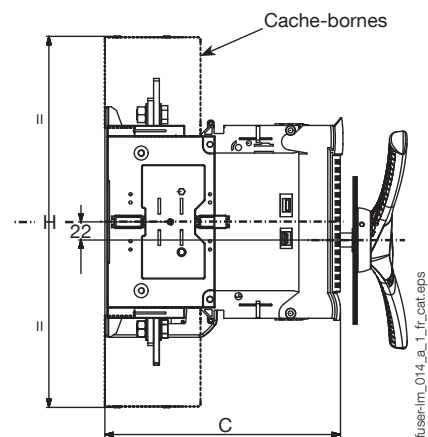
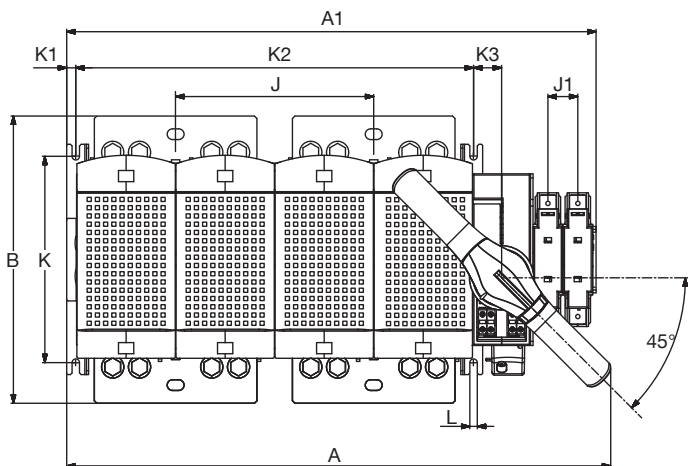


Connection terminals 400 to 630 A

900 A



1100 to 1600 A



Rating (A)	Unit	A	A1	B	C	H	J	J1	K	K1	K2	K3	L
400 ... 630	in	14.44	13.75	11.81	9.84	18.54	3.70	1.41	9.84	0.43	7.48	1.33	0.35
	mm	367	349.5	300	250	471	94	36	250	11	190	34	9
900	in	16.49	15.80	11.81	11.25	17.73	4.72	1.41	9.84	0.43	9.52	1.33	0.35
	mm	419	401.5	300	286	450.5	120	36	250	11	242	34	9
1100	in	21.85	21.16	13.70	9.84	18.54	7.40	1.41	9.84	0.43	14.88	1.33	0.35
	mm	555	537.5	348	250	471	188	36	250	11	378	34	9
1600	in	25.94	25.25	13.70	11.25	17.73	9.44	1.41	9.84	0.43	18.97	1.33	0.35
	mm	659	641.5	348	286	450.5	240	36	250	11	482	34	9