

FUSERBLOC DRIVE

2 pre-charge poles fuse combination switch for variable speed drive
from 125 to 1600 A



The solution for

- > Energy
- > Industry

Strong points

- > Simple and compact
- > Automatic pre-charging
- > Optimised maintenance
- > Improved safety

Conformity to standards

- > IEC 60947-3

Function

FUSERBLOC DRIVE units with manual front operation are multipole DC fuse combination switches. They guarantee the overcurrent protection of any low-voltage electrical circuit for capacitive loads (capacitor) by limiting the high inrush current during circuit power-up and are designed for performing maintenance of DC/AC variable speed drives or PV inverters without shutting down the entire installation.

This range is available in direct and external operation, in 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 unit is the most compact and simple solution on the market for variable speed drives under a common DC bus, combining 3 functions: isolation, protection and pre-charging in a single device.

Automatic pre-charging

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

Optimised maintenance

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

Improved safety

The double phase isolator (upstream/ downstream of the fuse), isolation and padlocking ensure complete safety for people when replacing a fuse, and the unit is capable of maintaining the OFF, pre-charge or ON position in the event of power failure.

General characteristics

- For high-speed fuses up to 1600 A.
- Up to 1250 VDC.
- Up to 100 kA.
- Utilisation category DC 20B.
- 2 power poles + 2 pre-charge poles.

References

External / direct operation 125 to 1600 A

Current (A)	No. of poles	Fuse size power pole lax.	Pre-charge pole (DIN 43620)	Reference	External front handle	Direct front handle	Shaft for ext. front handle	Auxiliary contact	Terminal cover ⁽⁵⁾ power pole lax.	Terminal cover 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 contact NC 3999 0701 ⁽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⁾	Red/ Yellow IP65 1434 3111	320 mm 1400 1232	1 contact NO 3999 0702 ⁽³⁾	3898 2080		
400 A	2	DIN 43620 3	2 x 160 A Size 00	38DR 2040 ⁽¹⁾⁽²⁾				3898 2120		
630 A	2	DIN 43620 3	2 x 160 A Size 00	38DR 2063 ⁽¹⁾⁽²⁾	Type S4 Black IP65 1443 3111	500 mm 1400 1250		3898 2150		
900 A	2	KN/110	2 x 160 A Size 00	38DR 2090 ⁽¹⁾⁽²⁾				3898 2160		
1100 A	4 (2 //)	DIN 43620 3	2 x 160 A Size 00	38DR 4110 ⁽¹⁾⁽²⁾	Red/ Yellow IP65 1444 3111					
1600 A	4 (2 //)	KN/110	2 x 160 A Size 00	38DR 4160 ⁽¹⁾⁽²⁾						

1) The coil must be ordered separately.

2) Standard protection cover included. If using micro-switch fuses, use a specific protection cover.

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

4) Contact us for Kit IP20.

5) 2 parts.

Characteristics according to IEC 60947-3

Products	125 A	160 A	250 A	400 A	630 A	900 A	1100 A	1600 A
Housing 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	1,600
Rated operating voltage U _i (V)	1000	1000	1000	1,250	1,250	1,250	1,250	1,250
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 rating and making capacity (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
Power dissipation (W / pole)								
Power dissipated by fuse	7.7	15.3	29.3	56.9	70	108	70	108
Power dissipated by 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 _i (V)	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U _{imp} (kV) (circuit operation)	8	8	8	8	8	8	8	8
Short-circuit characteristics								
Peak current value: withstand rating and making capacity (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
Power dissipation (W / pole)								
Power dissipated by fuse	12	12	12	12	12	12	12	12
Power dissipated by switch body	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Mechanical Characteristics								
Endurance (number of operating cycles) ⁽²⁾	1500	1500	1500	1500	1500	1500	1500	1500

(1) U_e = 400 VAC with gG fuses (AC value for information).

(2) 300 per hour max.

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Accessories

Coil kits

Use

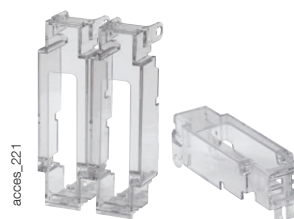
Accessory required for the good functioning of the product.

Premin.	Reference
24 VDC	38DR C024
230 VAC.	38DR A230



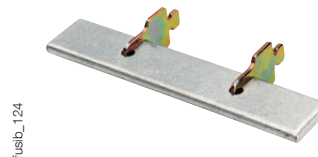
Protection covers for fuse blown auxiliary contacts

Product	NFC/DIN fuse size	N° 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	sockets:
1100 A	3	4 (2 //)	3890 9063
1600 A	3	4 (2 //)	sockets:

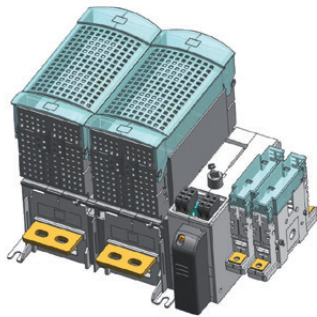


Neutral links

Product	NFC/DIN fuse size	N° 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	consult us
1100 A	3	4 (2 //)	6421 0003
1600 A	3	4 (2 //)	consult us

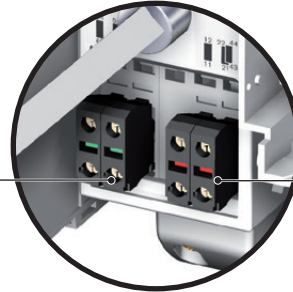


Operating diagram



Auxiliary contacts

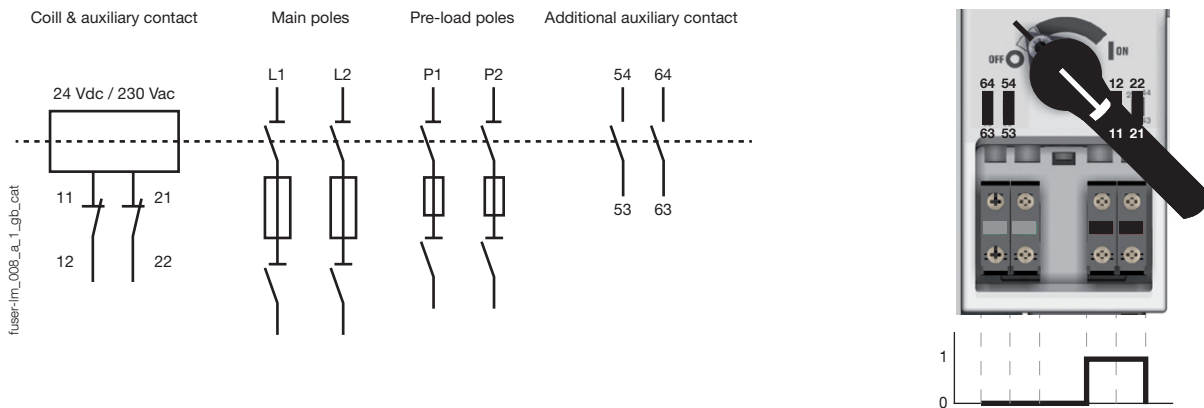
54 - 53
64 - 63



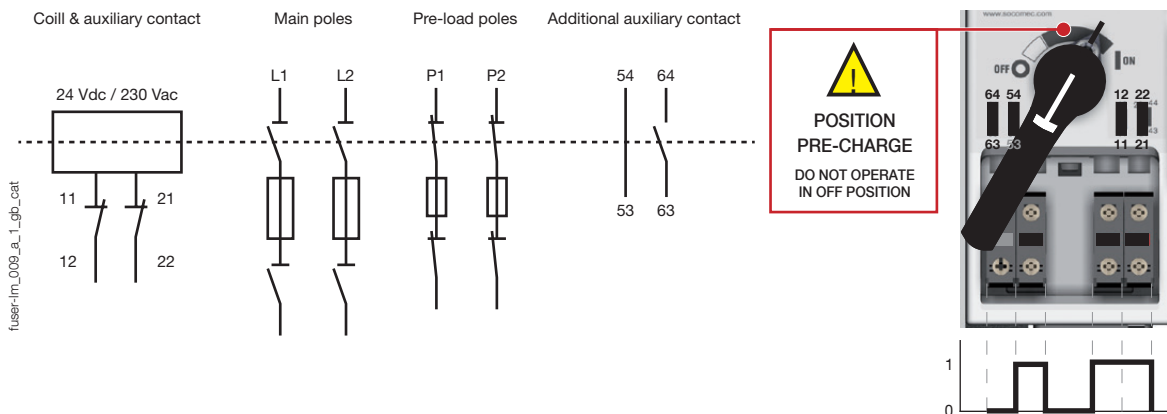
Coil contact

11 - 12
21 - 22

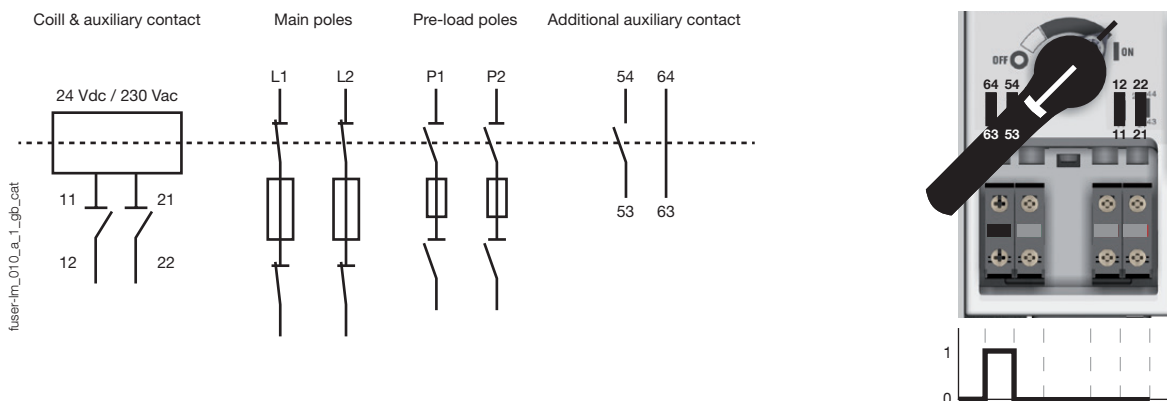
Step 1 - MANUAL



Step 2 - MANUAL



Step 3 - AUTO

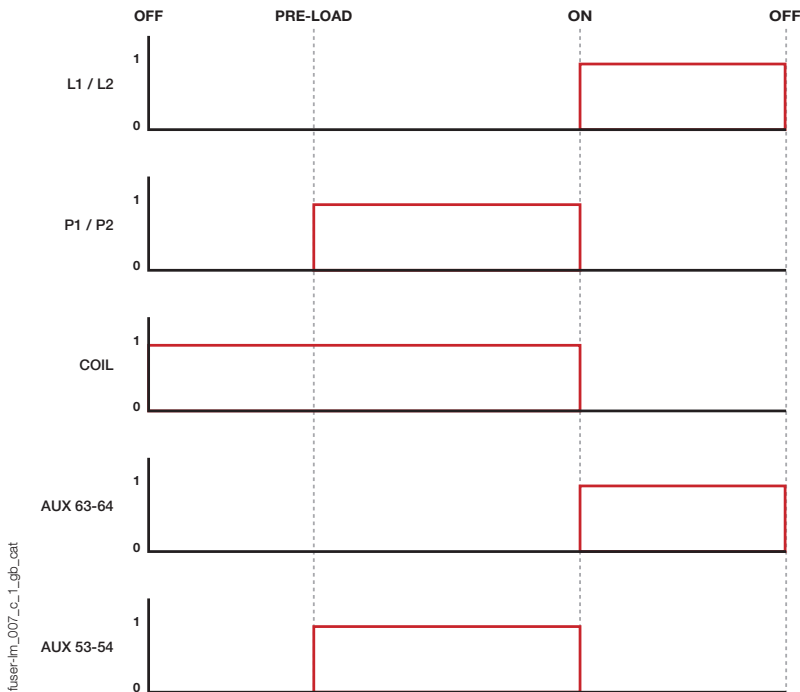


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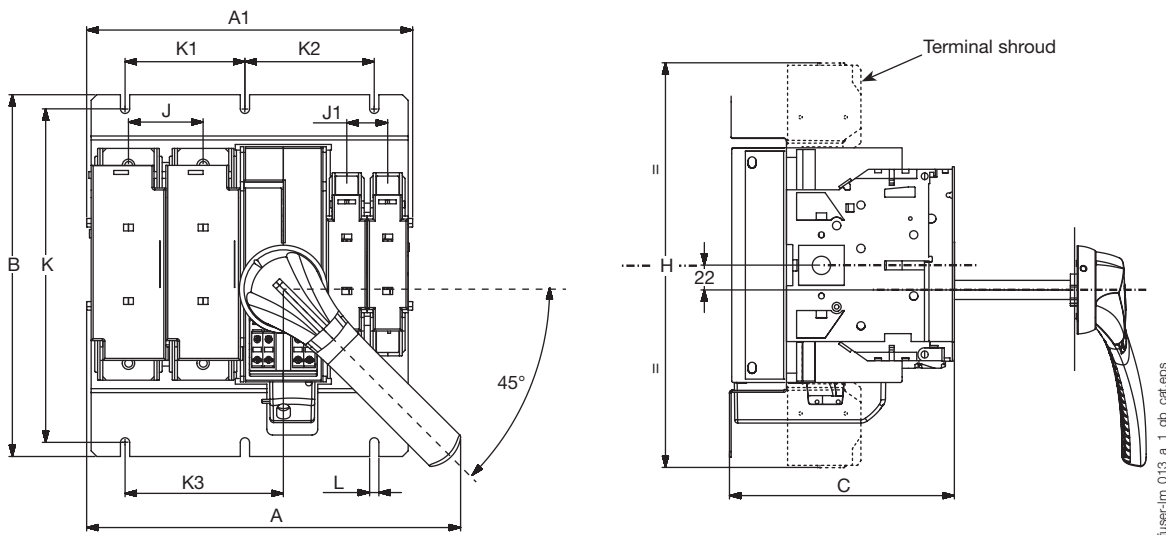
Operating diagram (continued)

Power poles and auxiliary contacts



Dimensions

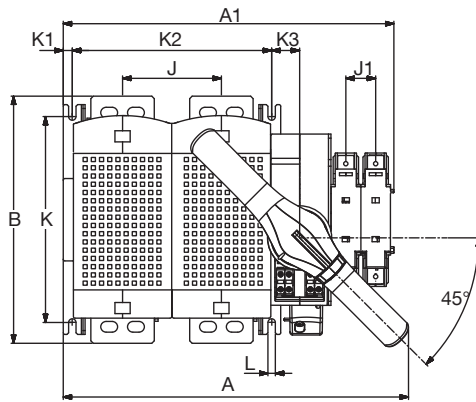
DC Switches 125 to 250 A



Current (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

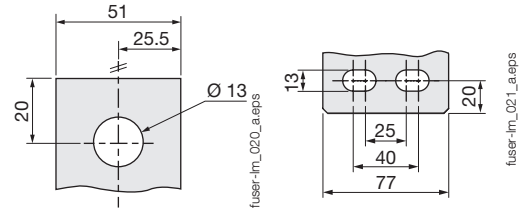
DC Switches 400 to 1600 A

400 to 900 A

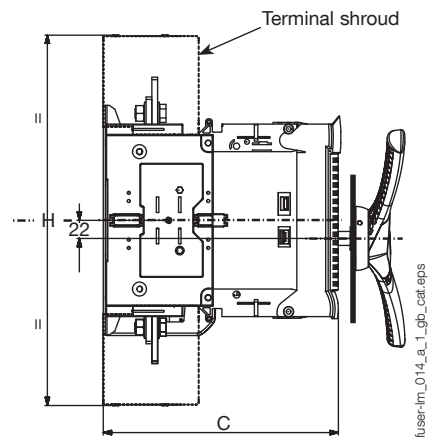
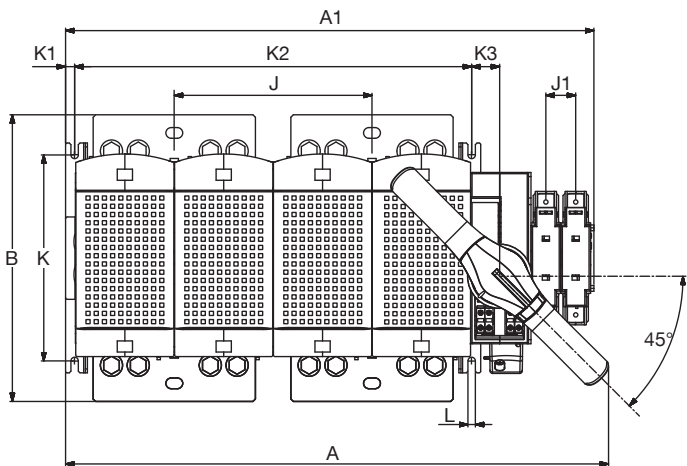


Connection ranges
400 to 630 A

900 A



1100 to 1600 A



Current (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
1,600	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