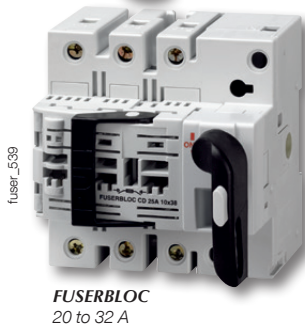




FUSERBLOC

Fuse combination switches
for industrial fuses up to 1250 A

Fuse protection



Function

FUSERBLOC are manually operated multipolar fuse combination switches. They make and break on load and provide safety isolation and protection against overcurrent for any low voltage electrical circuit.

Advantages

Improved safety

- Complete isolation of the fuse with double breaking per pole (top and bottom of fuse).
- Positive break indication.

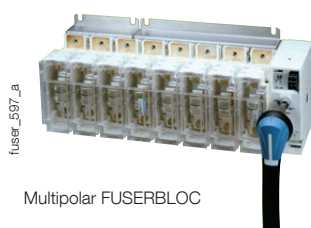
High breaking capacity

Protection against overloads and short-circuits thanks to high breaking capacity fuses (100 kA rms).

Specific functionalities for simplified use

- TEST position for testing control circuits without energising the power poles using U-type auxiliary contacts. In TEST position, the enclosure door can be opened.
- Mechanical or electronic fuse melting detection system (see DDMM or FMD)

Customised solutions



The solution for

- > Motor load break
- > Protection of industrial processes



Strong points

- > Improved safety
- > High breaking capacity
- > Specific functionalities for simplified use

A complete range

- > Centred or left side operation, rear connections, plug-in connections. Please consult us.

Conformity to standards

- > IEC 60947-3
- > EN 60947-3
- > BS EN 60947-3
- > NBN EN 60947-3
- > IEC 60269-1
- > DIN EN 60269-1
- > NF EN 60269-1
- > IEC 60269-2
- > VDE 0636-1
- > VDE 0660-107
- > Standards UL: see FUSERBLOC UL



Approvals and certifications⁽¹⁾



LOVAG



(1) Product reference on request.

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References

BS 88 - External front and side operation - 20 to 160 A

Rating (A) Fuse size Frame size	Number of poles	Reference Switch I - 0 - TEST	Reference Changeover I - 0 - II	External front handle I - 0	TEST External front handle I - 0 - TEST	External right side handle I - 0	Changeover external front handle I - 0 - II	Shaft extensions for handle	Terminal shrouds ⁽³⁾	U type A/C ⁽²⁾	Integrated solid neutral link
CD 20 A A1 0	3 P	3641 3000	3680 3000					320 mm 1401 0532			
	3 P + switched neutral	3641 4000	3680 4000								
	3 P+solid neutral	3641 5000									
CD 32 A A1 0	3 P	3641 3001	3680 3001	S1 type Black IP65 1413 2111 ⁽¹⁾	S1 type Black IP65 1413 2115 ⁽¹⁾	S1 type Black IP65 1417 2111 ⁽¹⁾	S1 type Black IP65 1413 2113 ⁽¹⁾				
	3 P + switched neutral	3641 4001	3680 4001								
	3 P + solid neutral	3641 5001									
32 A A1 11	2 P	3841 2003		Red/Yellow IP65 1414 2111	Red/Yellow IP65 1414 2115	Red/Yellow IP65 1418 2111	Red/Yellow IP65 1414 2113				
	3 P	3841 3003	3880 3003								
	4 P	3841 6003	3880 6003								
63 A A2-A3 12	2 P	3841 2006								1 contact NO 3999 0701	3829 9310
	3 P	3841 3006	3880 3006								
	4 P	3841 6006	3880 6006								
100 A A4 ⁽⁴⁾ 13	2 P	3841 2010						320 mm 1400 1032		1 contact NC 3999 0702	
	3 P	3841 3010	3880 3010								
	4 P	3841 6010	3880 6010								
CD 160 A A3-A4 ⁽⁴⁾ 13 A	2 P	3841 2014		S2 type Black IP65 1423 2111 ⁽¹⁾	S2 type Black IP65 1423 2115 ⁽¹⁾	S2 type Black IP65 1427 2111 ⁽¹⁾	S2 type Black IP65 1423 2113 ⁽¹⁾		2 P 3998 2016 3 P 3998 3016 4 P 3998 4016		
	3 P	3841 3014	3880 3014								
	4 P	3841 6014	3880 6014								
160 A A4 14	2 P	3841 2015		Red/Yellow IP65 1424 2111	Red/Yellow IP65 1424 2115	Red/Yellow IP65 1428 2111	Red/Yellow IP65 1424 2113				3829 9320
	3 P	3841 3015	3880 3015								
	4 P	3841 6015	3880 6015								
160 A B1-B2 14	2 P	3841 2016									
	3 P	3841 3016	3880 3016								
	4 P	3841 6016	3880 6016								

(1) Standard.

(2) 4 auxiliary contacts as standard; additional auxiliary contact holder provides capacity for 4 more.

(3) Top or bottom; to shroud incoming and outgoing side order quantity 2.

(4) For fuse size A4: max diameter 31 mm.

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Characteristics according to IEC 60947-3

20 to 100 A

Thermal current I_{th} (40°C)	20 A	25 A	CD 32 A	CD 32 A	32 A	50 A	63 A	100 A
BS88/DIN fuse size	A1/-	-/10 x 38	-/10 x 38	A1/14 x 51	A1/-	-/14 x 51	A2-A3/00C	A4*/22 x 58
Frame size for direct operation	0	0	0	0	1	1	2	3
Switch body size for front and side operation	0	0	0	0	11	11	12	13
Rated insulation voltage U_i (V)	800	800	800	800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV)	8	8	8	8	8	8	8	8
Rated operational currents I_e (A)								
Rated voltage	Utilisation category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
400 VAC	AC-22 A / AC-22 B	20/20	25/25	32/32	32/32	32/32	50/50	63/63
400 VAC	AC-23 A / AC-23 B	20/20	25/25	32/32	32/32	32/32	50/50	63/63
690 VAC	AC-22 A / AC-22 B	20/20	25/25	32/32	32/32	32/32	50/50	63/63
690 VAC	AC-23 A / AC-23 B	20/20	25/25	32/32	32/32	32/32	50/50	63/63
220 VDC	DC-20 A / DC-20 B			-/32		32/32	50/50	63/63
220 VDC	DC-21 A / DC-21 B		-/25 ⁽⁴⁾			32/32	40/40	40/40
440 VDC	DC-20 A / DC-20 B					32 ⁽³⁾ /32 ⁽³⁾	50 ⁽³⁾ /50 ⁽³⁾	63 ⁽³⁾ /63 ⁽³⁾
440 VDC	DC-21 A / DC-21 B					32 ⁽³⁾ /32 ⁽³⁾	40 ⁽³⁾ /40 ⁽³⁾	40 ⁽³⁾ /40 ⁽³⁾
Operational power in AC-23 (kW)								
At 400 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾		9/9	11/11	15/15	15/15	15/15	25/25	30/30
At 690 VAC without pre-break in AC ⁽¹⁾⁽⁵⁾		15/15	22/22	25/25	25/25	25/25	45/45	55/55
Reactive power (kvar)								
At 400 VAC ⁽⁵⁾		8	11	15	15	15	23	28
Fuse protected short-circuit withstand BS88/DIN (kA rms prospective)								
Prospective short-circuit (kA rms) ⁽⁶⁾		80/-	-/100	-/100	80/100	80/100	-/100	80/100
Associated fuse rating (A) ⁽⁶⁾		20/-	-/25	-/32	32/32	32/32	-/50	63/63
Short-circuit capacity								
Rated peak withstand current (kA peak) ⁽⁶⁾		5.5	5.5	5.5	5.5	9	7.6	10.6
Fuse selection (maximum fuse size)**								
SOCOMECS BS88 - Standard max	6A10 0020	6012 0025	6012 0032	6A10 0032	6A10 0032		6A30 0063	6A40 0100
SOCOMECS BS88 - Motor max	6A1M 0032	6013 0025	6013 0032	6A1M 0063	6A1M 0032		6A3M 0080	6A4M 0125
SOCOMECS DIN - Distribution (gl - gG)						6022 0050	6600 0063	6032 0100
SOCOMECS DIN - Motor (aM)						6023 0050	6601 0063	6033 0100
BUSSMANN - Standard max	NITD 20			NITD 32	NITD 32		BAO 63	CEO 100
BUSSMANN - Motor max	NITD 20M32			NITD 32M63	NITD 32M63		BAO 63M80	CEO 100M125
LAWSON - Standard max	NIT 20			NIT 32	NIT 32		TIS 63	TCP 100
LAWSON - Motor max	NIT 20M32				NIT 20M32		TIS 63M80	CTFP 100M125
GE - Standard max	NIT 20			NET 32	NET 32		TIS 63	TCP 100
GE - Motor max	NIT 20M32			NET 32M63	NET 32M63		TIS 63M80	OCP 100M125
Connection								
Minimum Cu cable cross-section (mm ²)	2.5	2.5	2.5	2.5	6	6	10	25
Maximum Cu cable cross-section (mm ²)	16	16	16	16	25	25	25	95
Maximum busbar width (mm)								20
Min. / Max. tightening torque min (Nm)	2/-	2/-	2/3	2	2.5/3	2.5/3	2.5/3	8.3/13
Mechanical characteristics								
Durability (number of operating cycles)	20 000	20 000	20 000	20 000	10 000	10 000	10 000	10 000
Weight of 3 P switch (kg)	0.48	0.48	0.48	0.50	0.80	0.80	1	1.5
Weight of 4 P switch (kg)	0.50	0.50	0.50	0.52	1	1	1.3	2
Weight of 1 P extra (kg)					0.2	0.2	0.3	0.5
Frame pitch (mm)					32	27	32	36

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) With terminal shrouds or terminal screen.

(3) 4-pole device with 2 pole in series by polarity.

(4) 3-pole device with 2 poles "+" in series and 1 pole "-".

(5) The power value is given for information only, the current values vary from one manufacturer to another.

(6) For a rated operational voltage $U_o = 400$ VAC.

* For fuse size A4: max diameter 31 mm.

** Please ensure that fuse let through current does not exceed short-circuit capacity of the switch (kA peak).

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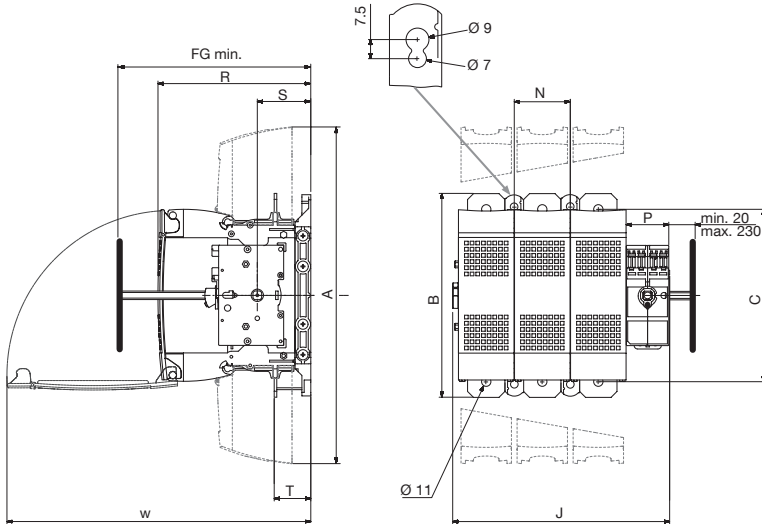
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Dimensions (continued)

External operation

BS88 32 to 250 A - NFC and DIN 50 to 250 A

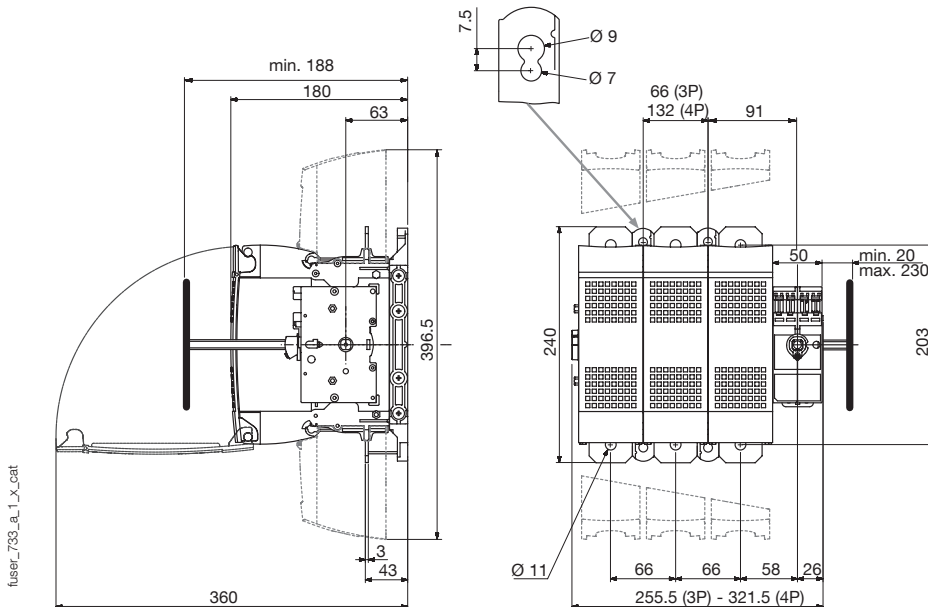


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1. Position TEST.
2. Rear connection (option)
3. 1 or 2 CA type DDMM
4. 1 or 8 CA NO/NC pre-break.
5. Terminal shrouds.

Rating (A)	NFC/DIN Fuse size	BS88 Fuse size	Frame size	Overall dimensions E min	Terminal shrouds AC	Switch body								Switch mounting					Connection						
						F 3p.	F 4p.	H	J	J1	BC	DA	DB	M	N	P	R	T	T1	U	W	Y	Z	AA	BA
32		A1	11	100	-	121	148	87	45	18	70	85	153	27	106	31	6	27	59	12	-	2	-	118	-
50	14 x 51	-	11	100	-	121	148	87	45	18	70	85	153	27	106	31	6	27	59	12	-	2	-	118	-
63	00C	A2-A3	12	125	-	136	168	116	50	18	70	159	145	32	106	36	5.4	32	59	12	-	2	-	118	-
100 125	22x58	A4	13	135	268	148	184	116	54	18	125	141	179	36	127	40	5.4	36	62	20	8.5	2.5	19.5	162	141
125 160	00	-	13	135	268	148	184	126	54	18	125	141	189	36	127	40	5.4	36	62	20	8.5	2.5	19.5	162	141
CD 160 CD 200	-	A3-A4	13A	145	268	148	184	139	54	18	125	141	-	36	130	40	5.4	36	78	18	8.5	3	20	162	141
160	0	A4-B1-B2	14	145	268	190	240	136	64	18	125	174	229	50	140	54	5.4	50	62	20	8.5	2.5	19.5	162	141
200	-	B1-B2	15	154	345	234	294	146	86	25	125	185	251	60	162	64	6.4	60	84	32	11	2.5	19.5	195	166
250	1	B1-B2-B3	15	154	345	234	294	146	86	25	125	185	251	60	162	64	6.4	60	84	32	11	2.5	19.5	195	166

BS88 315 to 400 A (size B1-B2-B3-B4) - DIN 400 A (size 2)



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