

Eaton Bussmann Series

High speed fuses - IEC standard



Alltid tillgänglig - Alltid öppen!
www.chscontrols.se
Always available - Always open!

Contents

Cylindrical fuses	2	Fuse holders for square body solid blade fuses, DIN 43620	36
Square body solid blade fuses, DIN 43620	6	Fuse holders for square body DIN80/110 fuses, DIN 43653	38
Square body DIN80 slotted L-blade fuses, DIN 43653	10	Micro switches, trip indicators	39
Square body DIN80 slotted blade fuses, DIN 43653	12	Application guide, high speed fuses	41
Square body DIN110 slotted blade fuses, DIN 45653	14	Installation guidance	43
Square body flush end contact, size 1*-3	20		
Square body flush end contact, size 4	26		
BS 88 fuses	28		
Neozed and Diazed fuses	32		
Fuse disconnectors for cylindrical fuses	34		

The catalogue contains only the most common high speed fuses from Eaton Bussmann Series, contact us for other fuses.

6x32 mm cylindrical fuses 500 V class aR

Technical data

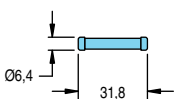


Material	Ceramic body, tin plated copper/copper alloy ferrules
Rated voltage, Un	500-1000 VAC/600 VDC
Operating class	aR
Rated breaking capacity Standard	50 kA at 500 VAC, 25-30 A: 20 kA at 500 VAC, 30 kA at 1000 VDC, 50 kA at 600 VDC IEC 60269-4, UL 248-13
Certificate, approvals	CE, UR file E91958, CSA file 053787-C-000

Catalogue numbers - 6x32 mm cylindrical fuses class aR

Rated Current In, A	Rated voltage, Un VAC	Rated voltage, Un VDC	I ² t Pre-arc 1 ms, A ² s	I ² t Total 500 V, A ² s	Power loss W at In	Catalogue number Fuse without indicator	Weight each, g	Packing size
0,25	500		0,01	0,05	2,7	CBFWH-250A6F	3	10
0,5	500		0,05	0,25	1,2	CBFWH-500A6F	3	10
1	500	600	0,4	2	1,7	CBFWH-001A6F	3	10
2	1000	600	1,3	3,5	3,2	CBFWH-002A6F	3	10
3,15	500	600	3,1	7,7	2,9	CBFWH-3-15A6F	3	10
4	500	600				CBFWH-004A6F	3	10
5	500	600	15	40	2,1	CBFWH-005A6F	3	10
6,3	500		36	90	2,3	CBFWH-6-30A6F	3	10
7	500		50	125	2,5	CBFWH-007A6F	3	5
10	500		9,9	139	2,86	CBFWH5-010A6FR	3	5
12,5	500		20	60	3,53	CBFWH5-012-5A6FR	3	5
15	500		44	146	3,08	CBFWH5-015A6FR	3	5
16	500		48	177	4,48	CBFWH5-016A6FR	3	5
20	500		75	259	4,26	CBFWH-020A6FR	3	5
25	500		126	345		CBFWH-025A6FR	3	5
30	500		145	430		CBFWH-030A6FR	3	5

Dimensions, mm



10x38 mm cylindrical fuses

600-700 V class aR, 690 V class gR

Technical data



Material		Ceramic body, tin plated copper/copper alloy ferrules
Rated voltage, Un	aR gR	600-700 VAC, 1-25 A: 700 VDC 690 VAC
Operating class		aR/gR
Rated breaking capacity	aR gR	200 kA at 600-700 VAC, 10 kA at 700 VDC 200 kA
Standard		IEC 60269-4, UL 248-13
Certificate, approvals	aR gR	CE, UR file E91958, CSA file 053787-C-000 CE, UR file E91958

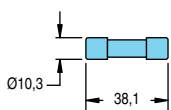
Catalogue numbers - 10x38 mm cylindrical fuses class aR

Rated current In, A	Rated voltage, Un VAC	Un VDC	I ² t Pre-arc 1 ms, A ² s	I ² t Total 600 V, A ² s	Power loss W at In	Catalogue number Fuse without indicator	Weight each, g	Packing size
1	700	700	0,2	1,2	0,5	CBFWC-1A10F	9	10
2	700	700	0,5	3	1,2	CBFWC-2A10F	9	10
3	700	700	1,6	11	1,5	CBFWC-3A10F	9	10
4	700	700	5,2	32	1,5	CBFWC-4A10F	9	10
6	600	700	4	30	1,5	CBFWC-6A10F	9	10
8	600	700	6	50	2	CBFWC-8A10F	9	10
10	600	700	9	70	2,5	CBFWC-10A10F	9	10
12	600	700	15	120	3	CBFWC-12A10F	9	10
16	600	700	25	150	3,5	CBFWC-16A10F	9	10
20	600	700	34	260	4,8	CBFWC-20A10F	9	10
25	600	700	60	390	6	CBFWC-25A10F	9	10
32	600	700	95	600	7,5	CBFWC-32A10F	9	10

Catalogue numbers - 10x38 mm cylindrical fuses class gR

4	690		5,6	17	2,05	CBFWP-4G10F	9	10
6	690		16	48	3	CBFWP-6G10F	9	10
8	690		4,3	38	1,68	CBFWP-8G10F	9	10
10	690		6,6	59	2,09	CBFWP-10G10F	9	10
12	690		9,6	84	2,99	CBFWP-12G10F	9	10
16	690		17	150	4,27	CBFWP-16G10F	9	10
20	690		23,5	200	5,35	CBFWP-20G10F	9	10
25	690		60,2	512	5,52	CBFWP-25G10F	9	10
32	690		94	800	7,43	CBFWP-32G10F	9	10

Dimensions, mm



14x51 mm cylindrical fuses

690 V class aR/690 V class gR

Technical data



Material		Ceramic body, tin plated copper/copper alloy ferrules
Rated voltage, Un	IEC	690 VAC
	UL, aR	700 VAC, fuse without indicator 700/800 VDC, fuse with indicator 600 VDC
Operation class		aR/gR
Rated breaking capacity	aR	200/50 kA at 700 VAC/VDC, 50 kA at 800 VDC
	gR	200 kA
Standard		IEC 60269-4, UL 248-13
Certificate, approvals	aR	CE, UR file E91958, CSA file 053787-C-000, fuse without indicator
	gR	CE, UR file E91958

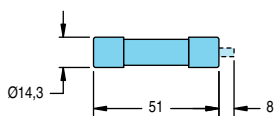
Catalogue numbers - 14x51 mm cylindrical fuses class aR

Rated current In, A	Rated voltage Un		I ² t Pre-arc 1 ms, A ² s	I ² t Total Un, A ² s	Power loss W at In	Catalogue number		Weight each, g	Packing size
	VAC	VDC				Fuse without indicator	Fuse with striker indicator		
1	700		0,04	0,41	5,7	CBFWP-1A14F		25	10
2	700		0,08	0,11	8,7	CBFWP-2A14F		25	10
3	700		0,11	0,26	2,8	CBFWP-3A14F		25	10
4	700		0,1	0,23	3	CBFWP-4A14F		25	10
5	700	800	2	11	1,5	CBFWP-5A14F		25	10
10	700	800/600	4	22	4/2	CBFWP-10A14F	CBFWP-10A14FI	25	10
15	700	800/600	10	70	5,5/4	CBFWP-15A14F	CBFWP-15A14FI	25	10
20	700	800/600	26	180	6,5/4	CBFWP-20A14F	CBFWP-20A14FI	25	10
25	700	800/600	49	320	7/4	CBFWP-25A14F	CBFWP-25A14FI	25	10
30	700	800/600	58	400	9/6	CBFWP-30A14F	CBFWP-30A14FI	25	10
32	700	800/600	68	600	8/8	CBFWP-32A14F	CBFWP-32A14FI	25	10
40	700	800/600	84	750	8/8	CBFWP-40A14F	CBFWP-40A14FI	25	10
50	700	800/600	200	1800	9/9	CBFWP-50A14F	CBFWP-50A14FI	25	10

Catalogue numbers - 14x51 mm cylindrical fuses class gR

4	690		5,6	17	2,94	CBFWP-4G14F		25	10
6	690		16	48	4,2	CBFWP-6G14F		25	10
8	690		3,8	30	2	CBFWP-8G14F	CBFWP-8G14FI	25	10
10	690		5,9	47	2,52	CBFWP-10G14F	CBFWP-10G14FI	25	10
12	690		8,4	68	3,54	CBFWP-12G14F	CBFWP-12G14FI	25	10
16	690		15	120	4,83	CBFWP-16G14F	CBFWP-16G14FI	25	10
20	690		27	170	5,4	CBFWP-20G14F	CBFWP-18G14FI	25	10
25	690		53	333	6	CBFWP-25G14F	CBFWP-25G14FI	25	10
32	690		108	679	6,93	CBFWP-32G14F	CBFWP-32G14FI	25	10
40	690		211	1331	7,52	CBFWP-40G14F	CBFWP-40G14FI	25	10
50	690		350	2200	9,8	CBFWP-50G14F	CBFWP-50G14FI	25	10

Dimensions, mm



22x58 mm cylindrical fuses

690 V class aR/690 V class gR

Technical data



Material		Ceramic body, tin plated copper/copper alloy ferrules
Rated voltage, Un	IEC UL, aR	690 VAC 700 VAC/VDC, fuse with indicator 700 VAC/500 VDC
Operating class		aR/gR
Rated breaking capacity	aR gR	200 kA at 700 VAC, 50 kA at 700/500 VDC, L/R=5 ms 200 kA
Standard		IEC 60269-4, UL 248-13
Certificate, approvals	aR gR	CE, UR file E91958, CSA file 053787-C-000, fuses without indicator CE, UR file E91958

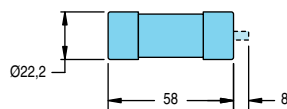
Catalogue numbers - 22x58 mm cylindrical fuses class aR

Rated current In, A	Rated voltage, Un		I ² t Pre-arc 1 ms, A ² s	I ² t Total Un, A ² s	Power loss W at In	Catalogue number		Weight each, g	Pacing size
	VAC	VDC				Fuse without indicator	Fuse with striker indicator		
20	700	700/500	23	330	5	CBFWP-20A22F	CBFWP-20A22FI	45	10
25	700	700/500	37	530	6	CBFWP-25A22F	CBFWP-25A22FI	45	10
32	700	700/500	55	780	8	CBFWP-32A22F	CBFWP-32A22FI	45	10
40	700	700/500	68	960	12	CBFWP-40A22F	CBFWP-40A22FI	45	10
50	700	700/500	155	2200	12,5	CBFWP-50A22F	CBFWP-50A22FI	45	10
63	700	700/500	280	4000	15	CBFWP-63A22F	CBFWP-63A22FI	45	10
80	700	700/500	600	7800	15	CBFWP-80A22F	CBFWP-80A22FI	45	10
100	700	700/500	1100	15600	16,5	CBFWP-100A22F	CBFWP-100A22FI	45	10

Catalogue numbers - 22x58 mm cylindrical fuses class gR

20	690		24	154	6	CBFWP-20G22F	CBFWP-20G22FI	45	10
25	690		43	274	6,65	CBFWP-25G22F	CBFWP-25G22FI	45	10
32	690		97	616	9,21	CBFWP-32G22F	CBFWP-32G22FI	45	10
40	690		180	899	8,24	CBFWP-40G22F	CBFWP-40G22FI	45	10
50	690		273	1362	11,85	CBFWP-50G22F	CBFWP-50G22FI	45	10
63	690		516	2575	13,8	CBFWP-63G22F	CBFWP-63G22FI	45	10
80	690		1092	5448	14	CBFWP-80G22F	CBFWP-80G22FI	45	10
100	690		2065	10300	17,7	CBFWP-100G22F	CBFWP-100G22FI	45	10

Dimensions, mm



Square body solid blade fuses DIN 43620, size 000-0, 1-3

660-690 V class aR/gR

Technical data



Material	Ceramic body, silver plated contact blade of copper/copper alloy
Rated voltage, Un	690 VAC, size 0: 660 VAC, UL 700 VAC
Operation class	aR/gR
Rated breaking capacity	200 kA, size 0: 100 kA
Indicator	Size 0: Mechanical indicator type T, others visual and mechanical indicator type D
Standard	IEC 60269-4, DIN 43620, UL 248-13
Certificate, approvals	CE, UR file E125085, CSA file 053787-C-000 except size 1, 700 A Size 0 only CE

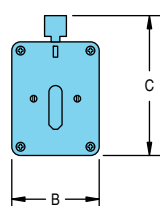
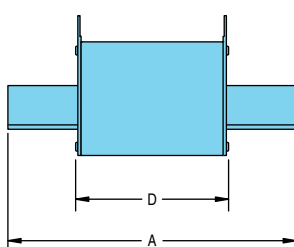
Catalogue numbers - Square body solid blade fuses class aR/gR, size 000-0

Size	Rated current In, A	Rated voltage IEC, Un, VAC	Operating class	Max permissible load current, A	I ² t Pre-arc 1 ms, A ² s	I ² t Total Un V, A ² s	Power loss W at In	Catalogue number Fuse with mechanical indicator	Weight each, g	Packing size
000	10	690	gR	10	4	27	2,5	CB170M1558D	135	3
000	16	690	gR	16	7	51	4	CB170M1559D	135	3
000	20	690	gR	20	11,5	82,5	5	CB170M1560D	135	3
000	25	690	gR	25	19	140	6	CB170M1561D	135	3
000	32	690	gR	32	40	285	7	CB170M1562D	135	3
000	40	690	gR	40	65	490	8,5	CB170M1563D	135	3
000	50	690	gR	50	115	815	9,5	CB170M1564D	135	3
000	63	690	gR	63	215	1550	11,5	CB170M1565D	135	3
000	80	690	aR	80	380	2700	15	CB170M1566D	135	3
000	100	690	aR	100	695	4950	16,5	CB170M1567D	135	3
000	125	690	aR	125	1180	8250	21,5	CB170M1568D	135	3
000	160	690	aR	160	2300	16500	25	CB170M1569D	135	3
000	200	690	aR	200	4350	31000	29,5	CB170M1570D	135	3
000	250	690	aR	250	7900	56000	35,5	CB170M1571D	135	3
00	315	690	aR	315	12000	84500	45	CB170M1572D	200	3
0	16	660	aR	13	3,8	25,5	5	CB170M7908	270	3
0	20	660	aR	16	7,2	48	6	CB170M7909	270	3
0	25	660	aR	20	11,5	78	7	CB170M7910	270	3
0	32	660	aR	26	23,5	160	8	CB170M7911	270	3
0	40	660	aR	32	40	270	9	CB170M7912	270	3
0	50	660	aR	40	77	515	11	CB170M7913	270	3
0	63	660	aR	50	115	770	14	CB170M7914	270	3
0	80	660	aR	64	185	1250	18	CB170M7915	270	3
0	100	660	aR	80	360	2450	21	CB170M7916	270	3
0	125	660	aR	100	550	3700	26	CB170M7917	270	3
0	160	660	aR	128	1100	7500	30	CB170M7918	270	3
0	200	660	aR	160	2200	15000	35	CB170M7919	270	3

Catalogue numbers - Square body solid blade fuses class aR, size 1-3

Size	Rated current In, A	Rated voltage IEC, Un, VAC	Oper. class	Max permissible load current, A	I ² t Pre-arc 1 ms, A ² s	I ² t Total Un V, A ² s	Power loss W at In	Catalogue number Fuse with mechanical indicator	Weight each, g	Packing size
1	40	690	aR	25	40	285	4	CB170M3808D	409	3
1	50	690	aR	30	78	550	4,5	CB170M3809D	409	3
1	63	690	aR	38	120	850	6,5	CB170M3810D	409	3
1	80	690	aR	50	185	1350	8,5	CB170M3811D	409	3
1	100	690	aR	60	360	2600	10	CB170M3812D	409	3
1	125	690	aR	75	550	3900	11	CB170M3813D	409	3
1	160	690	aR	95	1150	8250	12	CB170M3814D	409	3
1	200	690	aR	120	2300	16500	12,5	CB170M3815D	409	3
1	250	690	aR	150	4350	31000	16	CB170M3816D	409	3
1	315	690	aR	190	7300	52000	20	CB170M3817D	409	3
1	350	690	aR	210	10000	73000	21,5	CB170M3818D	409	3
1	400	690	aR	240	16000	115000	23	CB170M3819D	409	3
1	450	690	aR	270	21500	155000	26,5	CB170M4863D	409	3
1	500	690	aR	300	27000	190000	28,5	CB170M4864D	409	3
1	550	690	aR	330	33500	240000	33	CB170M4865D	409	3
1	630	690	aR	380	48500	345000	37,5	CB170M4866D	409	3
1	700	690	aR	420	69500	495000	39	CB170M4867D	409	3
2	400	690	aR	240	11000	79000	29	CB170M5808D	647	3
2	450	690	aR	270	16000	115000	32	CB170M5809D	647	3
2	500	690	aR	300	21500	155000	34	CB170M5810D	647	3
2	550	690	aR	330	29000	215000	36	CB170M5811D	647	3
2	630	690	aR	380	41000	295000	42	CB170M5812D	647	3
2	700	690	aR	420	60500	430000	43	CB170M5813D	647	3
2	800	690	aR	480	86000	610000	48	CB170M5814D	647	3
2	900	690	aR	540	125000	895000	52	CB170M5820D	647	3
2	1000	690	aR	600	180000	1300000	53	CB170M5816D	647	3
2	1100	690	aR	660	245000	1750000	56	CB170M5817D	647	3
3	500	690	aR	300	14000	99500	43	CB170M6808D	1113	1
3	550	690	aR	330	19500	140000	44	CB170M6809D	1113	1
3	630	690	aR	380	31000	222000	45	CB170M6810D	1113	1
3	700	690	aR	420	45000	320000	46	CB170M6811D	1113	1
3	800	690	aR	480	69500	490000	48	CB170M6812D	1113	1
3	900	690	aR	540	100000	720000	50	CB170M6813D	1113	1
3	1000	690	aR	600	140000	985000	56	CB170M6814D	1113	1
3	1100	690	aR	660	190000	1400000	57	CB170M6892D	1113	1
3	1250	690	aR	750	300000	2150000	61	CB170M8554D	1113	1
3	1400	690	aR	840	380000	2700000	70	CB170M8555D	1113	1
3	1500	690	aR	900	470000	3350000	72	CB170M8556D	1113	1
3	1600	690	aR	960	585000	4150000	74	CB170M8557D	1113	1

Dimensions, mm



Fuse size	A	B	C	D
Size 000	78,5	20,5	52	53
Size 00	78,5	30	59	53
Size 0	125	35	60	68
Size 1	135	40	64	71,4
Size 2	150	54	72	71,4
Size 3	150	71	87	72,4

Square body solid blade fuses DIN 43620, size 00, 1-3

690 V class gR

Technical data



Material	Ceramic body, tin plated contact blade of copper/copper alloy
Rated voltage, Un	690 VAC
Operation class	gR
Rated breaking capacity	200 kA
Standard	IEC 60269-4, DIN 43620
Certificate	CE

Catalogue numbers - Square body solid blade fuses size 00, 1-3

Size	Rated current In, A	Rated voltage Un, VAC	I ² t Pre-arc 1 ms, A ² s	I ² t Total 690 V, A ² s	Power loss W at In	Catalogue number Fuse with mechanical indicator type T	Weight each, g	Packing size
00	10	690	3,8	20	3,5	CB170M2691	182	3
00	16	690	7,2	38	5,5	CB170M2692	182	3
00	20	690	13	70	6	CB170M2693	182	3
00	25	690	24	125	8	CB170M2694	182	3
00	32	690	53	275	9	CB170M2695	182	3
00	40	690	95	490	10	CB170M2696	182	3
00	50	690	185	1000	11	CB170M2697	182	3
00	63	690	345	1800	14	CB170M2698	182	3
00	80	690	695	3600	16	CB170M2699	182	3
00	100	690	1250	6650	19	CB170M2700	204	3
00	125	690	2300	12000	23	CB170M2701	204	3
00	160	690	4350	22500	29	CB170M2702	204	3
1	50	690	135	705	12	CB170M4176	593	3
1	63	690	245	1300	15	CB170M4177	593	3
1	80	690	500	2600	17	CB170M4178	593	3
1	100	690	950	4850	20	CB170M4179	593	3
1	125	690	1850	9500	23	CB170M4180	593	3
1	160	690	3450	18000	28	CB170M4181	593	3
1	200	690	6750	34500	31	CB170M4182	593	3
1	250	690	13500	70500	35	CB170M4183	593	3
1	315	690	26000	135000	41	CB170M4184	593	3
1	350	690	34000	175000	45	CB170M4185	593	3
1	400	690	48500	250000	48	CB170M4186	593	3
2	200	690	5650	29000	33	CB170M5881	700	3
2	250	690	10000	52500	40	CB170M5882	700	3
2	315	690	19500	105000	46	CB170M5883	700	3
2	350	690	26000	135000	50	CB170M5884	700	3
2	400	690	39500	205000	53	CB170M5885	700	3
2	450	690	55500	290000	59	CB170M5886	700	3
2	500	690	73000	375000	66	CB170M5887	700	3
2	550	690	100000	515000	70	CB170M5888	700	3
2	630	690	150000	770000	79	CB170M5889	700	3
3	350	690	23000	120000	55	CB170M6080	1115	1
3	400	690	34000	175000	59	CB170M6081	1115	1
3	450	690	48500	250000	62	CB170M6082	1115	1
3	500	690	64000	330000	67	CB170M6083	1115	1
3	550	690	84500	435000	70	CB170M6084	1115	1
3	630	690	125000	645000	85	CB170M6085	1115	1
3	700	690	160000	840000	93	CB170M6086	1115	1
3	800	690	245000	1300000	99	CB170M6087	1115	1

Square body solid blade fuses DIN 43620, size 00

900-1000 V class aR

Technical data



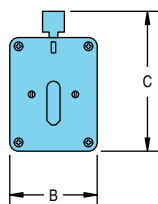
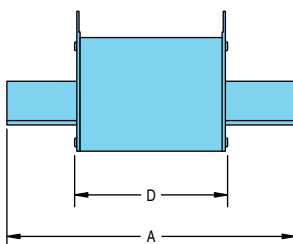
Material	Ceramic body, tin plated contact blade of copper/copper alloy
Rated voltage, Un	900-1000 VAC
Operating class	aR
Rated breaking capacity	125 kA
Standard	IEC 60269-4, DIN 43620, UL 248-13
Certificate, approvals	CE, 20-160A: UR file E125085, CSA file 053787-C-000

Catalogue numbers - Square body solid blade fuses size 00

Size	Rated current In, A	Rated voltage Un, VAC	I ² t Pre-arc 1 ms, A ² s	I ² t Total 690 V, A ² s	Power loss W at In	Catalogue number Fuse with mechanical indicator type T	Weight each, g	Packing size
00	20	1000	15	110	8,5	CB170M2673	200	6
00	25	1000	28,5	210	9,5	CB170M2674	200	6
00	32	1000	53	390	11	CB170M2675	200	6
00	35	1000	69	500	12	CB170M2676	200	6
00	40	1000	105	760	13	CB170M2677	200	6
00	50	1000	215	1550	14	CB170M2678	200	6
00	63	1000	380	2750	16	CB170M2679	200	6
00	80	1000	815	5900	18	CB170M2680	200	6
00	100	1000	1550	11500	21	CB170M2681	200	6
00	125	1000	3000	22000	23	CB170M2682	200	6
00	160	1000	6250	45000	26	CB170M2683	200	6
00	200	900	12000	86500	31	CB170M2684	200	6
00	225	900	18000	115000	33	CB170M2685	200	6

Square body solid blade fuses 690 VAC class gR and 900-1000 VAC class aR

Dimensions, mm



Fuse size	A	B	C	D
Square body solid blade fuses class gR, 690 VAC				
Size 00	78,5	30	60	49
Size 1	135	52	66	68
Size 2	150	60	74	68
Size 3	150	75	89	68
Square body solid blade fuses class aR, 900-1000 VAC				
Size 00	78,5	30	60	52

Square body DIN80 slotted L blade fuses, DIN 43653, size 0000-00

660-690 V class aR/gR

Technical data



Material	Ceramic body, tin plated slotted L contact blade of copper/copper alloy
Rated voltage, Un	IEC: 660-690, UL: 700 VAC, size 000 700 VDC
Operating class	aR/gR
Rated breaking capacity	200 kA, 50 kA at 700 VDC
Standard	IEC 60269-4, DIN 43653
Certificate, approvals	CE, size 000-00 (100-400 A): UR file E125085, CSA (000) file 053787-C-000, CCC

Catalogue numbers - Square body DIN80 slotted L blade fuses, size 000-00

Size	Rated current In, A	Rated voltage Un, V	Operating class	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660 V, A ² s	Power loss W at In	Catalogue number - Fuse			Weight each, g	Packing size
							without indicator	with visual indicator	with mechanical indicator type T		
0000	16	660 AC	gR	8,5	56,5	4,5				90	10
0000	20	660 AC	gR	15	105	5				90	10
0000	25	660 AC	gR	23,5	160	8				90	10
0000	32	660 AC	gR	43,5	290	9				90	10
0000	40	660 AC	gR	77,5	515	11				90	10
0000	50	660 AC	aR	135	915	12	CB170M0114	CB170M0164		90	10
0000	63	660 AC	aR	260	1750	13	CB170M0115	CB170M0165		90	10
0000	80	660 AC	aR	485	3250	17	CB170M0116	CB170M0166		90	10
0000	100	660 AC	aR	860	5700	18	CB170M0117	CB170M0167		90	10
000	10	700 AC/DC	gR	3,8	25,5	3	CB170M1308	CB170M1358	CB170M1408	135	3
000	16	700 AC/DC	gR	7,2	48	5,5	CB170M1309	CB170M1359	CB170M1409	135	3
000	20	700 AC/DC	gR	11,5	78	7	CB170M1310	CB170M1360	CB170M1410	135	3
000	25	700 AC/DC	gR	19	130	9	CB170M1311	CB170M1361	CB170M1411	135	3
000	32	700 AC/DC	gR	40	270	10	CB170M1312	CB170M1362	CB170M1412	135	3
000	40	700 AC/DC	gR	69	460	12	CB170M1313	CB170M1363	CB170M1413	135	3
000	50	700 AC/DC	gR	115	770	15	CB170M1314	CB170M1364	CB170M1414	135	3
000	63	700 AC/DC	gR	215	1450	16	CB170M1315	CB170M1365	CB170M1415	135	3
000	80	700 AC/DC	aR	380	2550	19	CB170M1316	CB170M1366	CB170M1416	135	3
000	100	700 AC/DC	aR	695	4650	24	CB170M1317	CB170M1367	CB170M1417	135	3
000	125	700 AC/DC	aR	1250	8500	28	CB170M1318	CB170M1368	CB170M1418	135	3
000	160	700 AC/DC	aR	2350	16000	32	CB170M1319	CB170M1369	CB170M1419	135	3
000	200	700 AC/DC	aR	4200	28000	37	CB170M1320	CB170M1370	CB170M1420	135	3
000	250	700 AC/DC	aR	7750	51500	42	CB170M1321	CB170M1371	CB170M1421	135	3
000	315	700 AC/DC	aR	12000	80500	53	CB170M1322	CB170M1372	CB170M1422	135	3
00	25	700 AC	gR	19	130	6		CB170M2608	CB170M2658	215	3
00	32	700 AC	gR	28,5	195	7		CB170M2609	CB170M2659	215	3
00	40	700 AC	gR	50	360	9		CB170M2610	CB170M2660	215	3
00	50	700 AC	gR	95	640	10		CB170M2611	CB170M2661	215	3
00	63	700 AC	gR	170	1200	12		CB170M2612	CB170M2662	215	3
00	80	700 AC	gR	310	2100	15		CB170M2613	CB170M2663	215	3
00	100	700 AC	aR	620	4150	20		CB170M2614	CB170M2664	215	3
00	125	700 AC	aR	1000	6950	25		CB170M2615	CB170M2665	215	3
00	160	700 AC	aR	1900	13000	30		CB170M2616	CB170M2666	215	3
00	200	700 AC	aR	3400	23000	35		CB170M2617	CB170M2667	215	3
00	250	700 AC	aR	6250	42000	45		CB170M2618	CB170M2668	215	3
00	315	700 AC	aR	10000	68500	55		CB170M2619	CB170M2669	215	3
00	350	700 AC	aR	13500	91500	60		CB170M2620	CB170M2670	215	3
00	400	700 AC	aR	18000	125000	70		CB170M2621	CB170M2671	215	3

Square body DIN80 slotted L blade fuses, DIN 43653, size 00

900-1000 V class aR

Technical data



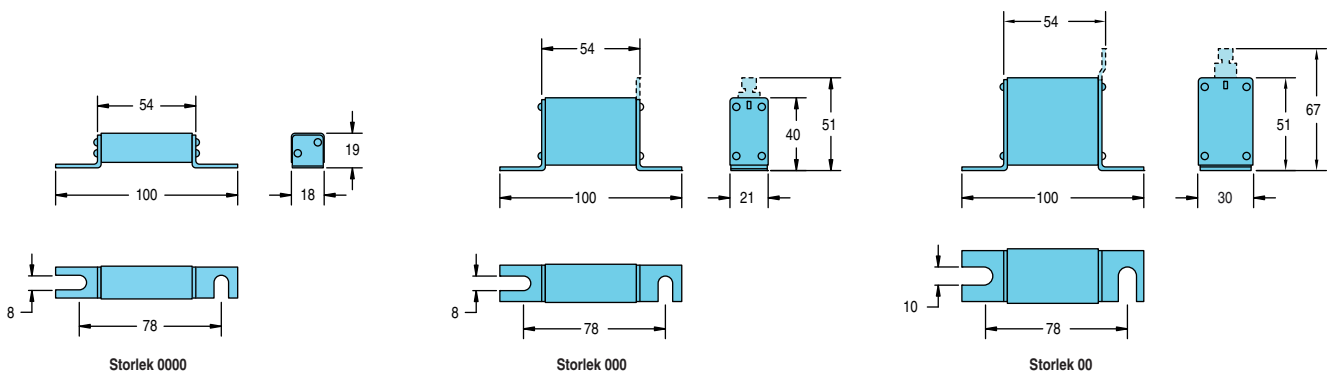
Material	Ceramic body, tin plated slotted L contact blade of copper/copper alloy
Rated voltage, Un	900-1000 VAC
Operating class	aR
Rated breaking capacity	125 kA
Standard	IEC 60269-4, DIN 43653, UL 248-13
Certificate, approvals	CE, 20-250 A UR file E125085, CSA file 053787-C-000

Catalogue numbers - Square body DIN80 slotted L blade fuses, size 00

Size	Rated current In, A	Rated voltage Un, VAC	I ² t Pre-arc 1 ms, A ² s	I ² t Total Un V, A ² s	Power loss W at In	Catalogue number - Fuse		Weight each, g	Packing size
						with visual indicator	with mechanical indicator type T		
00	20	1000	20	140	5	CB170M4802	CB170M4822	215	6
00	25	1000	30	210	7	CB170M4803	CB170M4823	215	6
00	32	1000	55	390	9	CB170M4804	CB170M4824	215	6
00	35	1000	69	500	10	CB170M4805	CB170M4825	215	6
00	40	1000	100	690	11	CB170M4806	CB170M4826	215	6
00	50	1000	170	1200	13	CB170M4807	CB170M4827	215	6
00	63	1000	280	2000	18	CB170M4808	CB170M4828	215	6
00	80	1000	500	3500	22	CB170M4809	CB170M4829	215	6
00	100	1000	950	6850	25	CB170M4810	CB170M4830	215	6
00	125	1000	1500	11500	33	CB170M4811	CB170M4831	215	6
00	160	1000	3000	22000	37	CB170M4812	CB170M4832	215	6
00	200	1000	5600	40500	40	CB170M4813	CB170M4833	215	6
00	250	1000	10000	74000	48	CB170M4814	CB170M4834	215	6
00	315	900	18000	115000	58	CB170M4815	CB170M4835	215	6

Square body DIN80 slotted L blade fuses

Dimensions, mm



Square body DIN80 slotted blade fuses, DIN 43653, size 1*-3

550-690 V class aR,

Technical data



Material	Ceramic body, tin plated slotted contact blade of copper/copper alloy
Rated voltage, Un	IEC: 550-690 VAC, UL: 550-700 VAC
Operation class	aR
Rated breaking capacity	200 kA
Standard	IEC 60269-4, DIN 43653, UL 248-13
Certificate, approvals	CE, UR except size 1 900 A, file E125085, CSA file 053787-C-000, CCC

Catalogue numbers - Square body DIN80 slotted blade fuses, size 1*-1

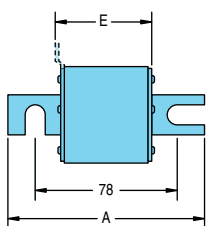
Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Catalogue number - Fuse with visual indicator	Fuse with mechanical indicator type T	mechanical indicator type K	Weight each, g	Packing size
1*	40	690	40	270	9	CB170M3008	CB170M3058	CB170M3108	275	3
1*	50	690	77	515	11	CB170M3009	CB170M3059	CB170M3109	275	3
1*	63	690	115	770	14	CB170M3010	CB170M3060	CB170M3110	275	3
1*	80	690	185	1250	18	CB170M3011	CB170M3061	CB170M3111	275	3
1*	100	690	360	2450	21	CB170M3012	CB170M3062	CB170M3112	275	3
1*	125	690	550	3700	26	CB170M3013	CB170M3063	CB170M3113	275	3
1*	160	690	1100	7500	30	CB170M3014	CB170M3064	CB170M3114	275	3
1*	200	690	2200	15000	35	CB170M3015	CB170M3065	CB170M3115	275	3
1*	250	690	4200	28500	40	CB170M3016	CB170M3066	CB170M3116	275	3
1*	315	690	7000	46500	50	CB170M3017	CB170M3067	CB170M3117	275	3
1*	350	690	10000	68500	55	CB170M3018	CB170M3068	CB170M3118	275	3
1*	400	690	15000	105000	60	CB170M3019	CB170M3069	CB170M3119	275	3
1*	450	690	21000	140000	65	CB170M3020	CB170M3070	CB170M3120	275	3
1*	500	690	27000	180000	70	CB170M3021	CB170M3071	CB170M3121	275	3
1*	550	690	34000	230000	75	CB170M3022	CB170M3072	CB170M3122	275	3
1*	630	690	48500	325000	80	CB170M3023	CB170M3073	CB170M3123	275	3
1	200	690	1650	11500	45	CB170M4008	CB170M4058	CB170M4108	450	3
1	250	690	3100	21000	55	CB170M4009	CB170M4059	CB170M4109	450	3
1	315	690	6200	42000	58	CB170M4010	CB170M4060	CB170M4110	450	3
1	350	690	8500	59000	60	CB170M4011	CB170M4061	CB170M4111	450	3
1	400	690	13500	91500	65	CB170M4012	CB170M4062	CB170M4112	450	3
1	450	690	17000	120000	70	CB170M4013	CB170M4063	CB170M4113	450	3
1	500	690	25000	170000	72	CB170M4014	CB170M4064	CB170M4114	450	3
1	550	690	34000	230000	75	CB170M4015	CB170M4065	CB170M4115	450	3
1	630	690	52000	350000	80	CB170M4016	CB170M4066	CB170M4116	450	3
1	700	690	69500	465000	85	CB170M4017	CB170M4067	CB170M4117	450	3
1	800	690	105000	725000	95	CB170M4018	CB170M4068	CB170M4118	450	3
1	900	550	155000	850000	100	CB170M4019	CB170M4069	CB170M4119	450	3

Catalogue numbers - Square body DIN80 slotted blade fuses, size 2-3

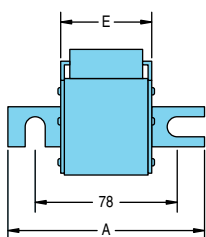
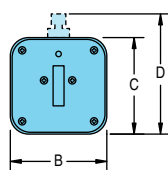
Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Visual indicator	Fuse with mechanical indicator type T	Fuse with mechanical indicator type K	Weight each, g	Packing size
2	400	690	11000	74000	65	CB170M5008	CB170M5058	CB170M5108	650	3
2	450	690	15500	105000	70	CB170M5009	CB170M5059	CB170M5109	650	3
2	500	690	21500	145000	75	CB170M5010	CB170M5060	CB170M5110	650	3
2	550	690	28000	190000	80	CB170M5011	CB170M5061	CB170M5111	650	3
2	630	690	41000	275000	90	CB170M5012	CB170M5062	CB170M5112	650	3
2	700	690	60500	405000	95	CB170M5013	CB170M5063	CB170M5113	650	3
2	800	690	86000	575000	105	CB170M5014	CB170M5064	CB170M5114	650	3
2	900	690	125000	840000	110	CB170M5015	CB170M5065	CB170M5115	650	3
2	1000	690	180000	1250000	115	CB170M5016	CB170M5066	CB170M5116	650	3
2	1100	600	245000	1600000	120	CB170M5017 ¹⁾	CB170M5067 ¹⁾	CB170M5117 ¹⁾	650	3
2	1250	600	365000	2400000	130	CB170M5018 ¹⁾	CB170M5068 ¹⁾	CB170M5118 ¹⁾	650	3
3	500	690	14000	95000	95	CB170M6008	CB170M6058	CB170M6108	910	1
3	550	690	19500	135000	100	CB170M6009	CB170M6059	CB170M6109	910	1
3	630	690	31000	210000	105	CB170M6010	CB170M6060	CB170M6110	910	1
3	700	690	44500	300000	110	CB170M6011	CB170M6061	CB170M6111	910	1
3	800	690	69500	465000	115	CB170M6012	CB170M6062	CB170M6112	910	1
3	900	690	100000	670000	120	CB170M6013	CB170M6063	CB170M6113	910	1
3	1000	690	140000	945000	125	CB170M6014	CB170M6064	CB170M6114	910	1
3	1100	690	190000	1300000	130	CB170M6015	CB170M6065	CB170M6115	910	1
3	1250	690	290000	1950000	140	CB170M6016	CB170M6066	CB170M6116	910	1
3	1400	690	370000	2450000	155	CB170M6017	CB170M6067	CB170M6117	910	1
3	1500	690	460000	3100000	160	CB170M6018	CB170M6068	CB170M6118	910	1
3	1600	690	580000	3900000	160	CB170M6019	CB170M6069	CB170M6119	910	1
3	1800	600	880000	5250000	165	CB170M6020 ²⁾	CB170M6070 ²⁾	CB170M6120 ²⁾	910	1
3	2000	550	1150000	6350000	175	CB170M6021 ³⁾	CB170M6071 ³⁾	CB170M6121 ³⁾	910	1

1) Rated voltage 600 VAC (IEC)/700 VAC (UL)
2) Rated voltage 600 VAC (IEC)/500 VAC (UL)
3) Rated voltage 550 VAC (IEC)/500 VAC (UL)

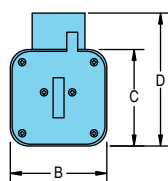
Dimensions, mm



Visual indicator, type T indicator



Type K indicator



Fuse size	A	B	C	D	E
-----------	---	---	---	---	---

Fuses with visual indicator

Size 1*	104	45	45		50
Size 1	108	53	53		50
Size 2	108	61	61		50
Size 3	109	76	76		51

Fuses with mechanical indicator type T

Size 1*	104	45	45	58	50
Size 1	108	53	53	66	50
Size 2	108	61	61	75	50
Size 3	109	76	76	90	51

Fuses with mechanical indicator type K

Size 1*	104	45	45	59	50
Size 1	108	53	53	69	50
Size 2	108	61	61	77	50
Size 3	109	76	76	92	51

Square body DIN110 slotted blade fuses, size 1*-3

550-690 V class aR

Technical data



Material	Ceramic body, tin plated slotted contact blade of copper/copper alloy
Rated voltage, Un	IEC: 550-690 VAC, UL: 550-700 VAC
Operation class	aR
Rated breaking capacity	200 kA
Standard	IEC 60269-4, DIN 43653
Certificate, approvals	CE, UR except size 1 900 A, file E125085, CSA file 053787-C-000, CCC

Catalogue numbers - Square body DIN110 slotted blade fuses, size 1*-1

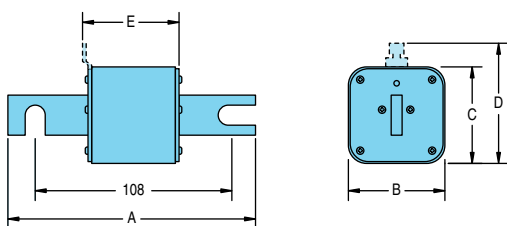
Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Catalogue number - Fuse with			Weight each, g	Packing size
						visual indicator	mechanical indicator type T	mechanical indicator type K		
1*	40	690	40	270	9	CB170M3158	CB170M3208	CB170M3258	310	3
1*	50	690	77	515	11	CB170M3159	CB170M3209	CB170M3259	310	3
1*	63	690	115	770	14	CB170M3160	CB170M3210	CB170M3260	310	3
1*	80	690	185	1250	18	CB170M3161	CB170M3211	CB170M3261	310	3
1*	100	690	360	2450	21	CB170M3162	CB170M3212	CB170M3262	310	3
1*	125	690	550	3700	26	CB170M3163	CB170M3213	CB170M3263	310	3
1*	160	690	1100	7500	30	CB170M3164	CB170M3214	CB170M3264	310	3
1*	200	690	2200	15000	35	CB170M3165	CB170M3215	CB170M3265	310	3
1*	250	690	4200	28500	40	CB170M3166	CB170M3216	CB170M3266	310	3
1*	315	690	7000	46500	50	CB170M3167	CB170M3217	CB170M3267	310	3
1*	350	690	10000	68500	55	CB170M3168	CB170M3218	CB170M3268	310	3
1*	400	690	15000	105000	60	CB170M3169	CB170M3219	CB170M3269	310	3
1*	450	690	21000	140000	65	CB170M3170	CB170M3220	CB170M3270	310	3
1*	500	690	27000	180000	70	CB170M3171	CB170M3221	CB170M3271	310	3
1*	550	690	34000	230000	75	CB170M3172	CB170M3222	CB170M3272	310	3
1*	630	690	48500	325000	80	CB170M3173	CB170M3223	CB170M3273	310	3
1	200	690	1650	11500	45	CB170M4158	CB170M4208	CB170M4258	485	3
1	250	690	3100	21000	55	CB170M4159	CB170M4209	CB170M4259	485	3
1	315	690	6200	42000	58	CB170M4160	CB170M4210	CB170M4260	485	3
1	350	690	8500	59000	60	CB170M4161	CB170M4211	CB170M4261	485	3
1	400	690	13500	91500	65	CB170M4162	CB170M4212	CB170M4262	485	3
1	450	690	17000	120000	70	CB170M4163	CB170M4213	CB170M4263	485	3
1	500	690	25000	170000	72	CB170M4164	CB170M4214	CB170M4264	485	3
1	550	690	34000	230000	75	CB170M4165	CB170M4215	CB170M4265	485	3
1	630	690	52000	350000	80	CB170M4166	CB170M4216	CB170M4266	485	3
1	700	690	69500	465000	85	CB170M4167	CB170M4217	CB170M4267	485	3
1	800	690	105000	725000	95	CB170M4168	CB170M4218	CB170M4268	485	3
1	900	550	155000	850000	100	CB170M4169	CB170M4219	CB170M4269	485	3

Catalogue numbers - Square body DIN110 slotted blade fuses, size 2-3

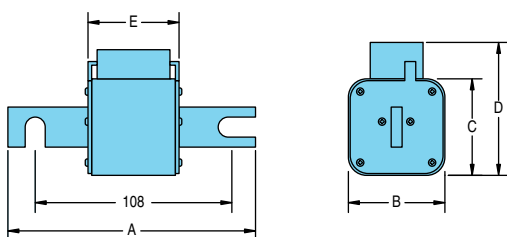
Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Visual indicator	Catalogue number - Fuse with mechanical indicator type T	Catalogue number - Fuse with mechanical indicator type K	Weight each, g	Packing size
2	400	690	11000	74000	65	CB170M5158	CB170M5208	CB170M5258	685	3
2	450	690	15500	105000	70	CB170M5159	CB170M5209	CB170M5259	685	3
2	500	690	21500	145000	75	CB170M5160	CB170M5210	CB170M5260	685	3
2	550	690	28000	190000	80	CB170M5161	CB170M5211	CB170M5261	685	3
2	630	690	41000	275000	90	CB170M5162	CB170M5212	CB170M5262	685	3
2	700	690	60500	405000	95	CB170M5163	CB170M5213	CB170M5263	685	3
2	800	690	86000	575000	105	CB170M5164	CB170M5214	CB170M5264	685	3
2	900	690	125000	840000	110	CB170M5165	CB170M5215	CB170M5265	685	3
2	1000	690	180000	1250000	115	CB170M5166	CB170M5216	CB170M5266	685	3
2	1100	600	245000	1600000	120	CB170M5167 ¹⁾	CB170M5217 ¹⁾	CB170M5267 ¹⁾	685	3
2	1250	600	365000	2400000	130	CB170M5168 ¹⁾	CB170M5218 ¹⁾	CB170M5268 ¹⁾	685	3
3	500	690	14000	95000	95	CB170M6158	CB170M6208	CB170M6258	945	1
3	550	690	19500	135000	100	CB170M6159	CB170M6209	CB170M6259	945	1
3	630	690	31000	210000	105	CB170M6160	CB170M6210	CB170M6260	945	1
3	700	690	44500	300000	110	CB170M6161	CB170M6211	CB170M6261	945	1
3	800	690	69500	465000	115	CB170M6162	CB170M6212	CB170M6262	945	1
3	900	690	100000	670000	120	CB170M6163	CB170M6213	CB170M6263	945	1
3	1000	690	140000	945000	125	CB170M6164	CB170M6214	CB170M6264	945	1
3	1100	690	190000	1300000	130	CB170M6165	CB170M6215	CB170M6265	945	1
3	1250	690	290000	1950000	140	CB170M6166	CB170M6216	CB170M6266	945	1
3	1400	690	370000	2450000	155	CB170M6167	CB170M6217	CB170M6267	945	1
3	1500	690	460000	3100000	160	CB170M6168	CB170M6218	CB170M6268	945	1
3	1600	690	580000	3900000	160	CB170M6169	CB170M6219	CB170M6269	945	1
3	1800	600	880000	5250000	165	CB170M6170 ²⁾	CB170M6220 ²⁾	CB170M6270 ²⁾	945	1
3	2000	550	1150000	6350000	175	CB170M6171 ³⁾	CB170M6221 ³⁾	CB170M6271 ³⁾	945	1

1) Rated voltage 600 VAC (IEC)/700 VAC (UL)
2) Rated voltage 600 VAC (IEC)/500 VAC (UL)
3) Rated voltage 550 VAC (IEC)/500 VAC (UL)

Dimensions, mm



Visual indicator, type T indicator



Type K indicator

Fuse size	A	B	C	D	E
Fuses with visual indicator					
Size 1*	134	45	45		50
Size 1	138	53	53		50
Size 2	138	61	61		50
Size 3	139	76	76		51
Fuses with mechanical indicator type T					
Size 1*	134	45	45	58	50
Size 1	138	53	53	66	50
Size 2	138	61	61	75	50
Size 3	139	76	76	90	51
Fuses with mechanical indicator type K					
Size 1*	134	45	45	59	50
Size 1	138	53	53	69	50
Size 2	138	61	61	77	50
Size 3	139	76	76	92	51

Square body DIN110 slotted blade fuses, size 1*-3

900-1000 V class aR

Technical data



Material	Ceramic body, tin plated slotted contact blade of copper/copper alloy
Rated voltage, Un	900-1000 VAC
Operation class	aR
Rated breaking capacity	125 kA
Standard	IEC 60269-4, DIN 43653, UL 248-13
Certificate, approvals	CE, size 2-3 (315-1100 A) UR file E125085, CSA file 053787-C-000

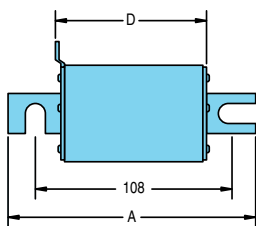
Catalogue numbers - Square body DIN110 slotted blade fuses, size 1*-2

Size	Rated current In, A	Rated voltage Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total Un V, A ² s	Power loss W at In	Catalogue number - fuse with		Weight each, g	Packing size
						mechanical indicator type T	mechanical indicator type K		
1*	50	1000	135	815	20	CB170M3981	CB170M3965	465	3
1*	63	1000	215	1300	25	CB170M3982	CB170M3966	465	3
1*	80	1000	460	2750	30	CB170M3983	CB170M3967	465	3
1*	100	1000	860	5100	35	CB170M3984	CB170M3968	465	3
1*	125	1000	1450	8600	40	CB170M3985	CB170M3969	465	3
1*	160	1000	2850	17500	45	CB170M3986	CB170M3970	465	3
1*	200	1000	4950	29500	50	CB170M3987	CB170M3971	465	3
1*	250	1000	9550	57000	55	CB170M3988	CB170M3972	465	3
1*	315	1000	21500	130000	65	CB170M3989	CB170M3973	465	3
1*	350	1000	29000	175000	70	CB170M3990	CB170M3974	465	3
1*	400	1000	42000	250000	75	CB170M3991	CB170M3975	465	3
1	160	1000	2200	13500	40	CB170M4980	CB170M4965	670	3
1	200	1000	4150	24500	45	CB170M4981	CB170M4966	670	3
1	250	1000	7750	46000	52	CB170M4982	CB170M4967	670	3
1	315	1000	16500	98500	60	CB170M4983	CB170M4968	670	3
1	350	1000	21500	130000	65	CB170M4984	CB170M4969	670	3
1	400	1000	31000	185000	70	CB170M4985	CB170M4970	670	3
1	450	1000	44500	265000	80	CB170M4986	CB170M4971	670	3
1	500	1000	63000	375000	85	CB170M4987	CB170M4972	670	3
1	550	1000	84500	500000	90	CB170M4988	CB170M4973	670	3
1	630	1000	125000	755000	98	CB170M4989	CB170M4974	670	3
2	250	1000	6750	40000	65	CB170M5981	CB170M5966	800	3
2	315	1000	13500	81500	75	CB170M5982	CB170M5967	800	3
2	350	1000	16500	99000	80	CB170M5983	CB170M5968	800	3
2	400	1000	26000	155000	85	CB170M5984	CB170M5969	800	3
2	450	1000	35500	210000	90	CB170M5985	CB170M5970	800	3
2	500	1000	49500	295000	95	CB170M5986	CB170M5971	800	3
2	550	1000	66000	390000	100	CB170M5987	CB170M5972	800	3
2	630	1000	93500	555000	110	CB170M5988	CB170M5973	800	3
2	700	1000	130000	770000	115	CB170M5989	CB170M5974	800	3
2	800	1000	195000	1200000	125	CB170M5990	CB170M5975	800	3

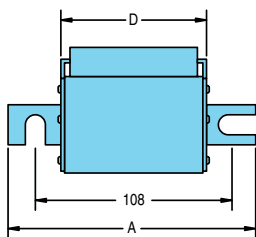
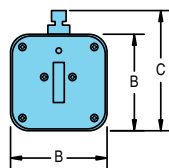
Catalogue numbers - Square body DIN110 slotted blade fuses, size 3

Size	Rated current In, A	Rated voltage Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total Un V, A ² s	Power loss W at In	Catalogue number - fuse with mechanical indicator		Weight each, g	Packing size
						type T	type K		
3	315	1000	9200	54500	90	CB170M8629	CB170M8614	1300	1
3	350	1000	13000	77500	95	CB170M8630	CB170M8615	1300	1
3	400	1000	19000	115000	105	CB170M8631	CB170M8616	1300	1
3	450	1000	27000	160000	107	CB170M8632	CB170M8617	1300	1
3	500	1000	37500	225000	110	CB170M8633	CB170M8618	1300	1
3	550	1000	52000	310000	115	CB170M8634	CB170M8619	1300	1
3	630	1000	82500	490000	120	CB170M8635	CB170M8620	1300	1
3	700	1000	115000	700000	125	CB170M8636	CB170M8621	1300	1
3	800	1000	170000	1050000	135	CB170M8637	CB170M8622	1300	1
3	900	1000	250000	1500000	145	CB170M8638	CB170M8623	1300	1
3	1000	1000	340000	2050000	150	CB170M8639	CB170M8624	1300	1
3	1100	1000	460000	2750000	155	CB170M8640	CB170M8625	1300	1
3	1250	1000	575000	3400000	175	CB170M8641	CB170M8626	1300	1
3	1400	900	795000	4200000	185	CB170M8642	CB170M8627	1300	1

Dimensions, mm



Type T indicator



Type K indicator

Fuse size	A	B	C	D
-----------	---	---	---	---

Fuse with mechanical indication type T

1*	138	43	61	80
1	138	51	69	80
2	138	59	75	80
3	139	74	90	81

Fuse with mechanical indication type T

1*	138	43	61	80
1	138	53	69	80
2	138	61	77	80
3	139	76	92	81

Square body DIN110 slotted blade fuses, size 1*-3

1100-1250 V class aR

Technical data



Material	Ceramic body, tin plated slotted contact blade of copper/copper alloy
Rated voltage, Un	IEC: 1100-1250 VAC, UL: 1100-1300 VAC
Operating class	aR
Rated voltage	100 kA
Standard	IEC 60269-4, DIN 43653
Certificate, approvals	CE, contact CHS Controls for UL/CSA approvals status

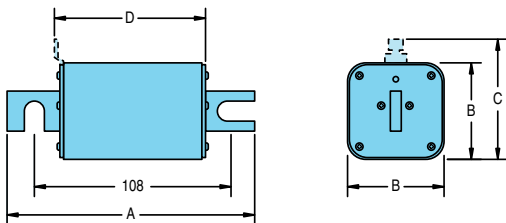
Catalogue numbers - Square body DIN110 slotted blade fuses, size 1*-2

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 1250/Un V, A ² s	Power loss W at In	Catalogue number - fuse with visual indicator	mechanical indicator type T	mechanical indicator type K	Weight each, g	Packing size
1*	50	1250	135	1100	15	CB170M3138	CB170M3188	CB170M3238	465	3
1*	63	1250	215	1750	20	CB170M3139	CB170M3189	CB170M3239	465	3
1*	80	1250	420	3350	25	CB170M3140	CB170M3190	CB170M3240	465	3
1*	100	1250	750	5950	30	CB170M3141	CB170M3191	CB170M3241	465	3
1*	125	1250	1450	11500	35	CB170M3142	CB170M3192	CB170M3242	465	3
1*	160	1250	2600	21000	40	CB170M3143	CB170M3193	CB170M3243	465	3
1*	200	1250	5150	41000	45	CB170M3144	CB170M3194	CB170M3244	465	3
1*	250	1250	9200	73000	55	CB170M3145	CB170M3195	CB170M3245	465	3
1*	315	1250	18500	150000	60	CB170M3146	CB170M3196	CB170M3246	465	3
1*	350	1250	27000	220000	65	CB170M3147	CB170M3197	CB170M3247	465	3
1*	400	1250	53000	335000	70	CB170M3148	CB170M3198	CB170M3248	465	3
1	160	1250	1900	15500	45	CB170M4138	CB170M4188	CB170M4238	685	3
1	200	1250	3800	30000	50	CB170M4139	CB170M4189	CB170M4239	685	3
1	250	1250	7750	61500	60	CB170M4140	CB170M4190	CB170M4240	685	3
1	315	1250	15000	120000	65	CB170M4141	CB170M4191	CB170M4241	685	3
1	350	1250	20000	165000	70	CB170M4142	CB170M4192	CB170M4242	685	3
1	400	1250	29500	235000	75	CB170M4143	CB170M4193	CB170M4243	685	3
1	450	1250	42000	335000	80	CB170M4144	CB170M4194	CB170M4244	685	3
1	500	1250	69500	435000	85	CB170M4145	CB170M4195	CB170M4245	685	3
1	550	1250	95000	590000	95	CB170M4146	CB170M4196	CB170M4246	685	3
1	630	1100	130000	750000	100	CB170M4147	CB170M4197	CB170M4247	685	3
2	250	1250	6500	51500	65	CB170M5138	CB170M5188	CB170M5238	800	3
2	280	1250	9350	74500	70	CB170M5139	CB170M5189	CB170M5239	800	3
2	315	1250	13000	105000	75	CB170M5140	CB170M5190	CB170M5240	800	3
2	350	1250	16500	135000	80	CB170M5141	CB170M5191	CB170M5241	800	3
2	400	1250	23000	180000	85	CB170M5142	CB170M5192	CB170M5242	800	3
2	450	1250	34000	270000	90	CB170M5143	CB170M5193	CB170M5243	800	3
2	500	1250	48000	380000	95	CB170M5144	CB170M5194	CB170M5244	800	3
2	550	1250	62000	495000	100	CB170M5145	CB170M5195	CB170M5245	800	3
2	630	1250	115000	730000	120	CB170M5146	CB170M5196	CB170M5246	800	3
2	700	1250	160000	1050000	125	CB170M5147	CB170M5197	CB170M5247	800	3
2	800	1250	245000	1550000	130	CB170M5148	CB170M5198	CB170M5248	800	3
2	900	1100	360000	2000000	135	CB170M5149	CB170M5199	CB170M5249	800	3
2	1000	1100	480000	2600000	145	CB170M5150	CB170M5200	CB170M5250	800	3

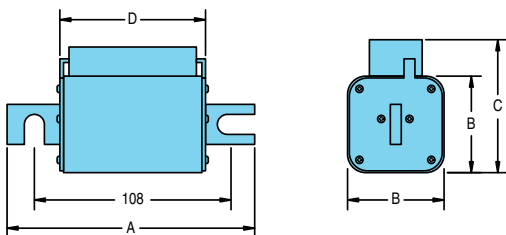
Catalogue numbers - Square body DIN110 slotted blade fuses, size 3

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 1250/Un V, A ² s	Power loss W at In	Catalogue number - fuse with			Weight each, g	Packing size
						visual indicator	mechanical indicator type T	mechanical indicator type K		
3	315	1250	9500	77500	85	CB170M6138	CB170M6188	CB170M6238	1300	1
3	350	1250	13500	110000	90	CB170M6139	CB170M6189	CB170M6239	1300	1
3	400	1250	19500	160000	95	CB170M6140	CB170M6190	CB170M6240	1300	1
3	450	1250	31000	245000	100	CB170M6141	CB170M6191	CB170M6241	1300	1
3	500	1250	39000	310000	105	CB170M6142	CB170M6192	CB170M6242	1300	1
3	550	1250	55000	435000	110	CB170M6143	CB170M6193	CB170M6243	1300	1
3	630	1250	83500	665000	115	CB170M6144	CB170M6194	CB170M6244	1300	1
3	700	1250	115000	940000	120	CB170M6145	CB170M6195	CB170M6245	1300	1
3	800	1250	205000	1300000	125	CB170M6146	CB170M6196	CB170M6246	1300	1
3	900	1250	305000	1900000	130	CB170M6147	CB170M6197	CB170M6247	1300	1
3	1000	1250	450000	2750000	135	CB170M6148	CB170M6198	CB170M6248	1300	1
3	1100	1250	575000	3600000	160	CB170M6149	CB170M6199	CB170M6249	1300	1
3	1250	1100	810000	4500000	170	CB170M6150	CB170M6200	CB170M6250	1300	1
3	1400	1100	1250000	6750000	175	CB170M6151	CB170M6201	CB170M6251	1300	1

Dimensions, mm



Visual indicator, Type T indicator



Type K indicator

Fuse size	A	B	C	D
Fuses with visual indicator				
1*	138	45	45	80
1	138	53	53	80
2	138	61	61	80
3	139	76	76	81
Fuses with mechanical indicator type T				
1*	138	45	58	80
1	138	53	66	80
2	138	61	75	80
3	139	76	90	81
Fuses with mechanical indicator type K				
1*	138	45	60	80
1	138	53	69	80
2	138	61	77	80
3	139	76	92	81

Square body flush end contact fuses, size 00, 1*-3

550-690 V class aR

Technical data



Material Ceramic body, flush end contact of copper/copper alloy
 Rated voltage, Un IEC: 550-690 VAC, UL: 550-700 VAC
 Operating class aR, size 00 25-80 A gR
 Rated breaking capacity 200 kA
 Standard IEC 60269-4

Certificate, approvals CE, UR except size 1 900 A, file E125085, CSA file 053787-C-000
 CCC - contact CHS Controls

Catalogue numbers - Square body flush end contact fuses, size 00, 1* -1

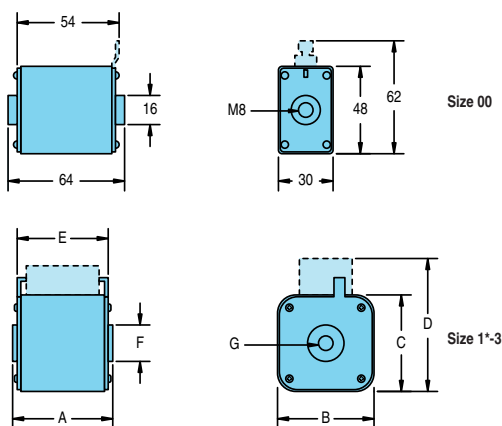
Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Catalogue number - fuse with visual indicator	mechanical indicator type T	mechanical indicator type K	Weight each, g	Packing size
00	25	690	19	130	6	CB170M2708	CB170M2758		195	5
00	32	690	28,5	195	7	CB170M2709	CB170M2759		195	5
00	40	690	50	360	9	CB170M2710	CB170M2760		195	5
00	50	690	95	640	10	CB170M2711	CB170M2761		195	5
00	63	690	170	1200	12	CB170M2712	CB170M2762		195	5
00	80	690	310	2100	15	CB170M2713	CB170M2763		195	5
00	100	690	620	4150	20	CB170M2714	CB170M2764		195	5
00	125	690	1000	6950	25	CB170M2715	CB170M2765		195	5
00	160	690	1900	13000	30	CB170M2716	CB170M2766		195	5
00	200	690	3400	23000	35	CB170M2717	CB170M2767		195	5
00	250	690	6250	42000	45	CB170M2718	CB170M2768		195	5
00	315	690	10000	68500	55	CB170M2719	CB170M2769		195	5
00	350	690	13500	91500	60	CB170M2720	CB170M2770		195	5
00	400	690	18000	125000	70	CB170M2721	CB170M2771		195	5
1*	40	690	40	270	9	CB170M3408		CB170M3458	240	3
1*	50	690	77	515	11	CB170M3409		CB170M3459	240	3
1*	63	690	115	770	14	CB170M3410		CB170M3460	240	3
1*	80	690	185	1250	18	CB170M3411		CB170M3461	240	3
1*	100	690	360	2450	21	CB170M3412		CB170M3462	240	3
1*	125	690	550	3700	26	CB170M3413		CB170M3463	240	3
1*	160	690	1100	7500	30	CB170M3414		CB170M3464	240	3
1*	200	690	2200	15000	35	CB170M3415		CB170M3465	240	3
1*	250	690	4200	28500	40	CB170M3416		CB170M3466	240	3
1*	315	690	7000	46500	50	CB170M3417		CB170M3467	240	3
1*	350	690	10000	68500	55	CB170M3418		CB170M3468	240	3
1*	400	690	15000	105000	60	CB170M3419		CB170M3469	240	3
1*	450	690	21000	140000	65	CB170M3420		CB170M3470	240	3
1*	500	690	27000	180000	70	CB170M3421		CB170M3471	240	3
1*	550	690	34000	230000	75	CB170M3422		CB170M3472	240	3
1*	630	690	48500	325000	80	CB170M3423		CB170M3473	240	3
1	200	690	1650	11500	45	CB170M4408		CB170M4458	430	3
1	250	690	3100	21000	55	CB170M4409		CB170M4459	430	3
1	315	690	6200	42000	58	CB170M4410		CB170M4460	430	3
1	350	690	8500	59000	60	CB170M4411		CB170M4461	430	3
1	400	690	13500	91500	65	CB170M4412		CB170M4462	430	3

Catalogue numbers - Square body flush end contact fuses, size 1-3

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Catalogue number - fuse with visual indicator	mechanical indicator type K	Weight each, g	Packing size
1	450	690	17000	120000	70	CB170M4413	CB170M4463	430	3
1	500	690	25000	170000	72	CB170M4414	CB170M4464	430	3
1	550	690	34000	230000	75	CB170M4415	CB170M4465	430	3
1	630	690	52000	350000	80	CB170M4416	CB170M4466	430	3
1	700	690	69500	465000	85	CB170M4417	CB170M4467	430	3
1	800	690	105000	725000	95	CB170M4418	CB170M4468	430	3
1	900	550	155000	850000	100	CB170M4419	CB170M4469	430	3
2	400	690	11000	74000	65	CB170M5408	CB170M5458	600	3
2	450	690	15500	105000	70	CB170M5409	CB170M5459	600	3
2	500	690	21500	145000	75	CB170M5410	CB170M5460	600	3
2	550	690	28000	190000	80	CB170M5411	CB170M5461	600	3
2	630	690	41000	275000	90	CB170M5412	CB170M5462	600	3
2	700	690	60500	405000	95	CB170M5413	CB170M5463	600	3
2	800	690	86000	575000	105	CB170M5414	CB170M5464	600	3
2	900	690	125000	840000	110	CB170M5415	CB170M5465	600	3
2	1000	690	180000	1250000	115	CB170M5416	CB170M5466	600	3
2	1100	600	245000	1600000	120	CB170M5417 ¹⁾	CB170M5467 ¹⁾	600	3
2	1250	600	365000	2400000	130	CB170M5418 ¹⁾	CB170M5468 ¹⁾	600	3
3	500	690	14000	95000	95	CB170M6408	CB170M6458	850	1
3	550	690	19500	135000	100	CB170M6409	CB170M6459	850	1
3	630	690	31000	210000	105	CB170M6410	CB170M6460	850	1
3	700	690	44500	300000	110	CB170M6411	CB170M6461	850	1
3	800	690	69500	465000	115	CB170M6412	CB170M6462	850	1
3	900	690	100000	670000	120	CB170M6413	CB170M6463	850	1
3	1000	690	140000	945000	125	CB170M6414	CB170M6464	850	1
3	1100	690	190000	1300000	130	CB170M6415	CB170M6465	850	1
3	1250	690	290000	1950000	140	CB170M6416	CB170M6466	850	1
3	1400	690	370000	2450000	155	CB170M6417	CB170M6467	850	1
3	1500	690	460000	3100000	160	CB170M6418	CB170M6468	850	1
3	1600	690	580000	3900000	160	CB170M6419	CB170M6469	850	1
3	1800	600	880000	5250000	165	CB170M6420 ²⁾	CB170M6470 ²⁾	850	1
3	2000	550	1150000	6350000	175	CB170M6421 ³⁾	CB170M6471 ³⁾	850	1

- 1) Rated voltage 600 VAC (IEC)/700 VAC (UL)
- 2) Rated voltage 600 VAC (IEC)/500 VAC (UL)
- 3) Rated voltage 550 VAC (IEC)/500 VAC (UL)

Dimensions, mm



Fuse size	A	B	C	D	E	F	G
1*	51	45	45	59	50	17	M8
1	51	53	53	69	50	20	M8
2, 400-1000 A	51	61	61	77	50	24	M10
2, 1100-1250 A	65	61	61	77	50	24	M10
3, 500-1500 A	53	76	76	92	51	30	M12
3, 1600-2000 A	65	76	76	92	51	30	M12

Square body flush end contact fuses size 1*-3

900-1000 V class aR

Technical data



Material	Ceramic body, flush end contact of copper/copper alloy
Rated voltage, Un	900-1000 VAC
Operating class	aR
Rated breaking capacity	125 kA
Standard	IEC 60269-4, UL 248-13
Certificate, approval	CE, UR file E125085, only size 2 and size 3 up to 1100 A

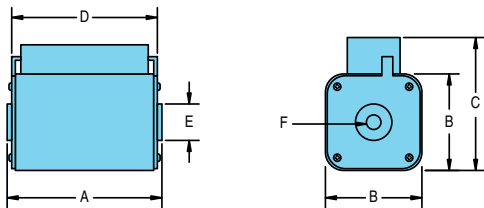
Catalogue numbers - Square body flush end contact fuses size 1*-2

Size	Rated current In, A	Rated voltage Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 1000/Un V, A ² s	Power loss W at In	Catalogue number - fuse with mechanical indicator type K BKN75	Weight each, g	Packing size
1*	50	1000	135	815	20	CB170M3951	395	3
1*	63	1000	215	1300	25	CB170M3952	395	3
1*	80	1000	460	2750	30	CB170M3953	395	3
1*	100	1000	860	5100	35	CB170M3954	395	3
1*	125	1000	1450	8600	40	CB170M3955	395	3
1*	160	1000	2850	17500	45	CB170M3956	395	3
1*	200	1000	4950	29500	50	CB170M3957	395	3
1*	250	1000	9550	57000	55	CB170M3958	395	3
1*	315	1000	21500	130000	65	CB170M3959	395	3
1*	350	1000	29000	175000	70	CB170M3960	395	3
1*	400	1000	42000	250000	75	CB170M3961	395	3
1	160	1000	2200	13500	40	CB170M4951	630	3
1	200	1000	4150	24500	45	CB170M4952	630	3
1	250	1000	7750	46000	52	CB170M4953	630	3
1	315	1000	16500	98500	60	CB170M4954	630	3
1	350	1000	21500	130000	65	CB170M4955	630	3
1	400	1000	31000	185000	70	CB170M4956	630	3
1	450	1000	44500	265000	80	CB170M4957	630	3
1	500	1000	63000	375000	85	CB170M4958	630	3
1	550	1000	84500	500000	90	CB170M4959	630	3
1	630	1000	125000	755000	98	CB170M4960	630	3
2	250	1000	6750	40000	65	CB170M5952	750	3
2	315	1000	13500	81500	75	CB170M5953	750	3
2	350	1000	16500	99000	80	CB170M5954	750	3
2	400	1000	26000	155000	85	CB170M5955	750	3
2	450	1000	35500	210000	90	CB170M5956	750	3
2	500	1000	49500	295000	95	CB170M5957	750	3
2	550	1000	66000	390000	100	CB170M5958	750	3
2	630	1000	93500	555000	110	CB170M5959	750	3
2	700	1000	130000	770000	115	CB170M5960	750	3
2	800	1000	195000	1200000	125	CB170M5961	750	3

Catalogue numbers - Square body flush end contact fuses size 3

Size	Rated current In, A	Rated voltage Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 1000/Un V, A ² s	Power loss W at In	Catalogue number - fuse with mechanical indicator type K		Weight each, g	Packing size
						BKN75	BKN90		
3	315	1000	9200	54500	90	CB170M8600		1190	1
3	350	1000	13000	77500	95	CB170M8601		1190	1
3	400	1000	19000	115000	105	CB170M8602		1190	1
3	450	1000	27000	160000	107	CB170M8603		1190	1
3	500	1000	37500	225000	110	CB170M8604		1190	1
3	550	1000	52000	310000	115	CB170M8605		1190	1
3	630	1000	82500	490000	120	CB170M8606		1190	1
3	700	1000	115000	700000	125	CB170M8607		1190	1
3	800	1000	170000	1050000	135	CB170M8608		1190	1
3	900	1000	250000	1500000	145	CB170M8609		1190	1
3	1000	1000	340000	2050000	150	CB170M8610		1190	1
3	1100	1000	460000	2750000	155	CB170M8611		1190	1
3	1250	1000	575000	3400000	175		CB170M8612	1300	1
3	1400	900	795000	4200000	185		CB170M8613	1300	1

Dimensions, mm



Fuse size	A	B	C _{max}	D	E	F
1*	74	43	61	72,5	17,5	M8
1	74	52	69	73,5	20	M8
2	74,4	59	77	73,2	24,5	M10
3, type BKN/75	75,4	74	92	73,3	30	M12
3, type BKN/90	91,4	74	92	80,3	30	M12

Square body flush end contact fuses size 1*-3

1000-1250 V class aR

Technical data



Material	Ceramic body, flush end contact of copper/copper alloy
Rated voltage, Un	IEC: 1100-1250 VAC, UL: 1100-1300 VAC
Operating class	aR
Rated breaking capacity	100 kA
Standard	IEC 60269-4, UL 248-13
Certificate, approval	CE, contact CHS Controls for UL/CSA approvals status

Catalogue numbers - Square body flush end contact fuses size 1*-1

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 1250/Un V, A ² s	Power loss W at In	Catalogue number - fuse with mechanical indicator type K		Weight each, g	Packing size
						BKN/75	BKN/80		
1*	50	1250	135	1100	15	CB170M3388	CB170M3438	395	3
1*	63	1250	215	1750	20	CB170M3389	CB170M3439	395	3
1*	80	1250	420	3350	25	CB170M3390	CB170M3440	395	3
1*	100	1250	750	5950	30	CB170M3391	CB170M3441	395	3
1*	125	1250	1450	11500	35	CB170M3392	CB170M3442	395	3
1*	160	1250	2600	21000	40	CB170M3393	CB170M3443	395	3
1*	200	1250	5150	41000	45	CB170M3394	CB170M3444	395	3
1*	250	1250	9200	73000	55	CB170M3395	CB170M3445	395	3
1*	315	1250	18500	150000	60	CB170M3396	CB170M3446	395	3
1*	350	1250	27000	220000	65	CB170M3397	CB170M3447	395	3
1*	400	1250	53000	335000	70		CB170M3448	395	3
1	160	1250	1900	15500	45	CB170M4388	CB170M4438	630	3
1	200	1250	3800	30000	50	CB170M4389	CB170M4439	630	3
1	250	1250	7750	61500	60	CB170M4390	CB170M4440	630	3
1	315	1250	15000	120000	65	CB170M4391	CB170M4441	630	3
1	350	1250	20000	165000	70	CB170M4392	CB170M4442	630	3
1	400	1250	29500	235000	75	CB170M4393	CB170M4443	630	3
1	450	1250	42000	335000	80	CB170M4394	CB170M4444	630	3
1	500	1250	69500	435000	85	CB170M4395 ⁴⁾	CB170M4445	630	3
1	550	1250	95000	590000	95	CB170M4396 ⁵⁾	CB170M4446	630	3
1	630	1100	130000	660000	110	CB170M4397 ⁵⁾	CB170M4447 ⁴⁾	630	3

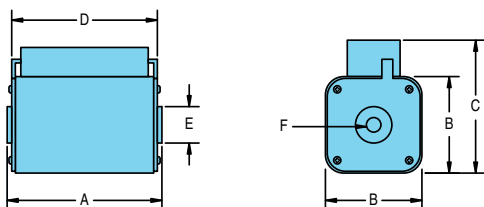
- 1) Rated voltage 1100 VAC (IEC)/1000 VAC (UL)
- 2) Rated voltage 1000 VAC (IEC and UL)
- 3) Rated voltage 1100 VAC (IEC and UL)
- 4) Rated voltage 1100 VAC (IEC)
- 5) Rated voltage 1000 VAC (IEC)

Catalogue numbers - Square body flush end contact fuses size 2-3

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 1250/Un V, A ² s	Power loss W at In	Catalogue number - fuse with mechanical indicator type K			Weight each, g	Packing size
						BKN/75	BKN/80	BKN/90		
2	250	1250	6500	51500	65	CB170M5388	CB170M5438		750	3
2	280	1250	9350	74500	70	CB170M5389	CB170M5439		750	3
2	315	1250	13000	105000	75	CB170M5390	CB170M5440		750	3
2	350	1250	16500	135000	80	CB170M5391	CB170M5441		750	3
2	400	1250	23000	180000	85	CB170M5392	CB170M5442		750	3
2	450	1250	34000	270000	90	CB170M5393	CB170M5443		750	3
2	500	1250	48000	380000	95	CB170M5394	CB170M5444	CB170M5494	750	3
2	550	1250	62000	495000	100	CB170M5395	CB170M5445	CB170M5495	750	3
2	630	1250	115000	730000	110	CB170M5396 ⁴⁾	CB170M5446	CB170M5496	750	3
2	700	1250	160000	1050000	120	CB170M5396 ⁵⁾	CB170M5447 ¹⁾	CB170M5497	750	3
2	800	1250	245000	1550000	125	CB170M5396 ⁵⁾	CB170M5448 ²⁾	CB170M5498	750	3
2	900	1100	360000	2000000	135			CB170M5499 ³⁾	750	3
2	1000	1100	480000	2600000	145			CB170M5500 ³⁾	750	3
3	315	1250	9500	77500	85	CB170M6338	CB170M6538		1190	1
3	350	1250	13500	110000	90	CB170M6339	CB170M6539		1190	1
3	400	1250	19500	160000	95	CB170M6340	CB170M6540		1190	1
3	450	1250	31000	245000	100	CB170M6341	CB170M6541		1190	1
3	500	1250	39000	310000	105	CB170M6342	CB170M6542		1190	1
3	550	1250	55000	435000	110	CB170M6343	CB170M6543		1190	1
3	630	1250	83500	665000	115	CB170M6344	CB170M6544	CB170M6494	1190	1
3	700	1250	115000	940000	120	CB170M6345	CB170M6545	CB170M6495	1190	1
3	800	1250	205000	1300000	125	CB170M6346 ⁴⁾	CB170M6546	CB170M6496	1190	1
3	900	1250	305000	1900000	130	CB170M6347 ⁵⁾	CB170M6547 ¹⁾	CB170M6497	1190	1
3	1000	1250	450000	2750000	135	CB170M6348 ⁵⁾	CB170M6548 ¹⁾	CB170M6498	1190	1
3	1100	1250	575000	3600000	140	CB170M6349 ⁵⁾	CB170M6549 ²⁾	CB170M6499	1190	1
3	1250	1100	810000	4500000	145			CB170M6500 ³⁾	1190	1
3	1400	1100	1250000	6750000	150			CB170M6501 ³⁾	1190	1

- 1) Rated voltage 1100 VAC (IEC)/1000 VAC (UL)
- 2) Rated voltage 1000 VAC (IEC and UL)
- 3) Rated voltage 1100 VAC (IEC och UL)
- 4) Rated voltage 1100 VAC (IEC)
- 5) Rated voltage 1000 VAC (IEC)

Dimensions, mm



Fuse size	A	B	C	D	E	F
1*, type BKN/75	75	45	59	74	17	M8
1*, type BKN/80	81	45	59	80	17	M8
1, type BKN/75	75	53	69	74	20	M8
1, type BKN/80	81	53	69	80	20	M8
2, type BKN/75	75	61	77	74	24	M10
2, type BKN/80	81	61	77	80	24	M10
2, type BKN/95	91	61	77	80	24	M10
3, type BKN/75	76	76	92	74	30	M12
3, type BKN/80	83	76	92	81	30	M12
3, type BKN/95	91	76	92	81	30	M12

Square body flush end contact fuses size 4

600-690 V class aR

Technical data



Material	Ceramic body, flush end contact of copper/copper alloy
Rated voltage, Un	600-690 VAC, UL 600-700 VAC
Operating class	aR
Rated breaking capacity	200 kA
Standard	IEC 60269-4, UL 248-13
Certificate, approval	CE, UR file E125085

Catalogue numbers - Square body flush end contact fuses size 4

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Catalogue number - fuse with visual mechanical indicator indicator type K		Weight each, g	Packing size
4	1000	690	76000	505000	175	CB170M7058	CB170M7078	1975	1
4	1250	690	145000	965000	195	CB170M7059	CB170M7079	1975	1
4	1400	690	205000	1400000	205	CB170M7060	CB170M7080	1975	1
4	1600	690	305000	2050000	220	CB170M7061	CB170M7081	1975	1
4	2000	690	600000	3950000	245	CB170M7062	CB170M7082	1975	1
4	2500	690	1200000	7800000	275	CB170M7063	CB170M7083	1975	1
4	3000	690	2000000	13500000	305	CB170M7064	CB170M7084	1975	1
4	3500	690	3250000	22000000	325	CB170M7065	CB170M7085	1975	1
4	4000	600	4700000	28000000	355	CB170M7066	CB170M7086	1975	1

Square body flush end contact fuses size 4

1000 V class aR

Technical data



Material	Ceramic body, flush end contact of copper/copper alloy
Rated voltage, Un	1000 VAC
Operating class	aR
Rated breaking capacity	200 kA
Standard	IEC 60269-4
Certificate	CE

Catalogue numbers - Square body flush end contact fuses size 4

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Catalogue number - fuse with mechanical indicator type K BKN/95 SBKN/90		Weight each, g	Packing size
4	1000	1000	180000	1100000	195		CB170M7542	-/3200	1
4	1100	1000	250000	1500000	200		CB170M7031	-/3200	1
4	1500	1000	600000	3600000	250	CB170M7636	CB170M7548	1975/3200	1
4	1700	1000	850000	5000000	260	CB170M7639	CB170M7034	1975/3200	1
4	1800	1000	1000000	5950000	265	CB170M7661	CB170M7053	1975/3200	1
4	2000	1000	1450000	8600000	270	CB170M7963	CB170M7544	1975/3200	1
4	2200	1000	2000000	12000000	280	CB170M7090	CB170M7035	1975/3200	1
4	2500	1000	3000000	18000000	295	CB170M7640	CB170M7036	1975/3200	1
4	2700	1000	3700000	22000000	310	CB170M7658	CB170M7037	1975/3200	1
4	3000	1000	4700000	28000000	380	CB170M7962	CB170M7156	1975/3200	1

Square body flush end contact fuses size 4

1250 V class aR

Technical data



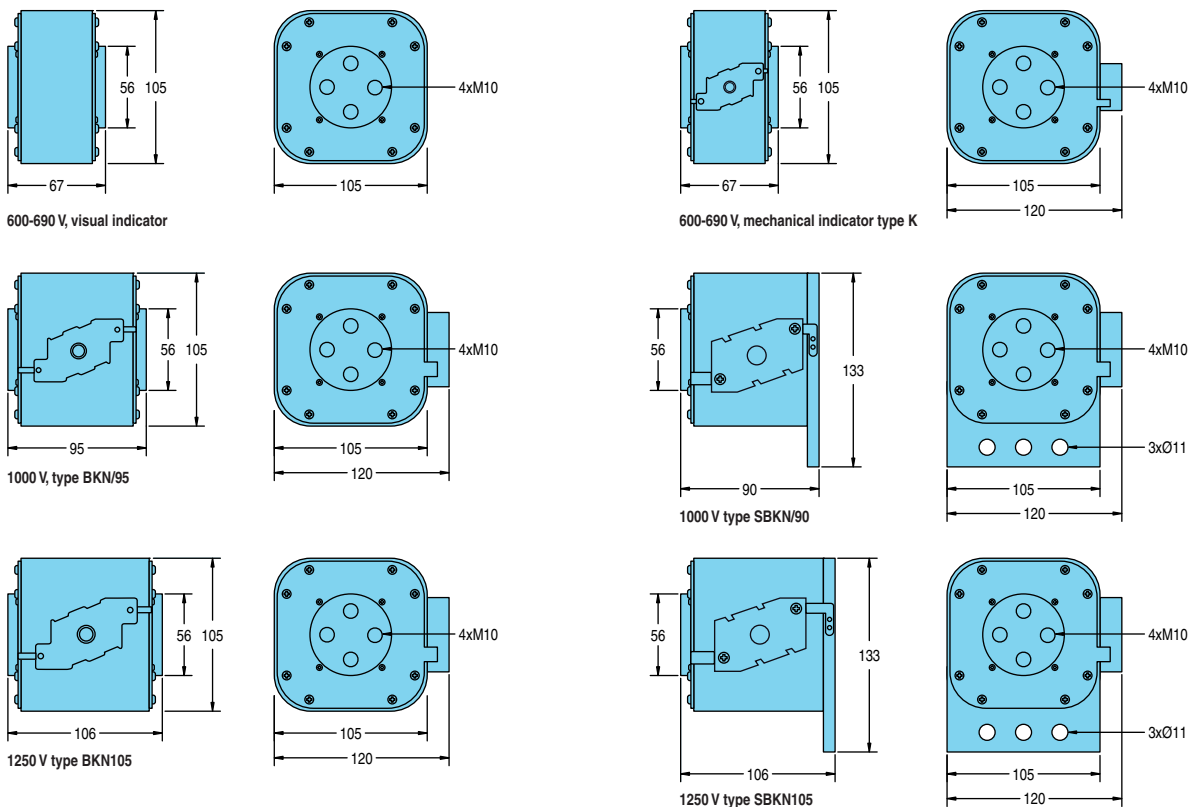
Material	Ceramic body, flush end contact of copper/copper alloy
Rated voltage, Un	1250 VAC, UL 1200 VDC
Operating class	aR
Rated breaking capacity	200 kA, UL 85 kA at 1200 VDC L/R=2 ms
Standard	IEC 60269-4
Certificate, approval	CE, UR file E185025

Catalogue numbers - Square body flush end contact fuses size 4

Size	Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 660/Un V, A ² s	Power loss W at In	Catalogue number - fuse with mechanical indicator type K		Weight each, g	Packing size
						BKN/105	SBKN/105		
4	1400	1250	800000	5000000	250	CB170M7217	CB170M7512	2200/3550	1
4	1500	1250	1000000	6200000	260	CB170M7597	CB170M7510	2200/3550	1
4	1700	1250	1400000	8700000	275	CB170M7676	CB170M7511	2200/3550	1
4	1800	1250	1700000	11000000	280	CB170M7532	CB170M7976	2200/3550	1
4	2000	1250	2300000	14500000	305	CB170M7633	CB170M7513	2200/3550	1
4	2200	1250	3100000	19500000	315	CB170M7592	CB170M7546	2200/3550	1
4	2400	1250	4000000	25000000	330	CB170M7107	CB170M7516	2200/3550	1
4	2500	1250	4500000	28000000	340	CB170M7595	CB170M7978	2200/3550	1

Square body flush end contact fuses size 4

Dimensions mm



BS88 fuses

240 V class aR

Technical data



Material	Ceramic body, tin plated contact blade of copper/copper alloy
Rated voltage, Un	240-280 VAC/150 VDC, UL 250 VAC/150 VDC
Operating class	aR
Rated breaking capacity Standard	200 kA at 240 VAC, 50 kA at 125 VDC (LCT/LET), 40 kA at 150 VDC (LMT/LMMT) IEC 60269-4, BS 88-4
Certificate, approval	CE, UR contact CHS Controls for more information

Catalogue number - LTC size 8x28 mm with L contact blade

Rated current In, A	Rated voltage IEC, Un, V	I ² t Pre-arc 1 ms, A ² s	I ² t Total 120 VAC, A ² s	240 VAC, A ² s	Power loss W at In	Catalogue number	Weight each, g	Packing size
6	240	2	6	9	1	CB6LCT	7	20
10	240	3,8	12	22	2,5	CB10LCT	7	20
12	240	7	22	32	2,5	CB12LCT	7	20
16	240	20	50	100	2,5	CB16LCT	7	20
20	240	25	80	160	4	CB20LCT	7	20

Catalogue number - LET size 18x26 mm with L contact blade

25	280	18	120	250	4	CB25LET	32	10
32	280	32	200	450	5	CB32LET	32	10
35	280	50	320	600	5	CB35LET	32	10
50	280	100	500	1400	7	CB50LET	32	10
63	280	180	1100	2200	9	CB63LET	32	10
80	280	300	1900	3800	10	CB80LET	32	10
100	280	600	3800	7500	10	CB100LET	32	10
125	280	600	3800	7500	16	CB125LET	32	10
160	280	1100	7000	16000	20	CB160LET	32	10
180	250	1600	12000	29000	21	CB180LET	32	10

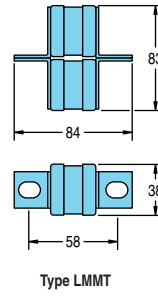
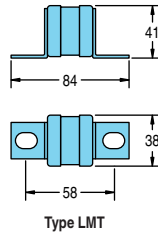
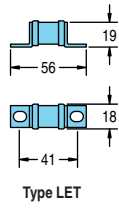
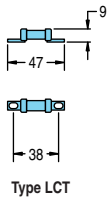
Catalogue number - LMT size 38x31 mm with L contact blade

160	240	1100	7000	16000	17	CB160LMT	185	1
200	240	1500	10000	20000	28	CB200LMT	185	1
250	240	3200	20000	40000	28	CB250LMT	185	1
315	240	6000	35000	75000	35	CB315LMT	185	1
355	240	8000	50000	100000	35	CB355LMT	185	1
400	240	14000	70000	160000	40	CB400LMT	185	1
450	240	18000	100000	220000	42	CB450LMT	185	1

Catalogue number - LMMT double size 38x31 mm with T contact blade

400	240	6000	35000	80000	60	CB400LMMT	360	1
500	240	14000	80000	170000	64	CB500LMMT	360	1
630	240	24000	150000	300000	75	CB630LMMT	360	1
710	240	32000	200000	460000	77	CB710LMMT	360	1
800	240	52000	300000	600000	82	CB800LMMT	360	1
900	240	75000	400000	800000	97	CB900LMMT	360	1

Dimensions, mm



BS88 fuses

690 V class aR

Technical data



Material	Ceramic body, tin plated contact blade of copper/copper alloy
Rated voltage, Un	690 VAC/500 VDC, type MT & MMT: 350 VDC UL 700 VAC/500 VDC, type FMM, MT & MMT AC only
Operating class	aR
Rated breaking capacity	200/50 kA (CT 90/40 kA) at 690 VAC/350-500 VDC
Standard	IEC 60269-4, BS 88-4
Certificate, approval	CE, UR contact CHS Controls for more information

Catalogue number - CT size 9x55 mm with L contact blade

Rated current In, A	I ² t Pre-arc 1 ms, A ² s	I ² t Total 415 VAC, A ² s	660 VAC, A ² s	Power loss W at In	Catalogue number	Weight each, g	Packing size
6	1,8	8,5	12	2	CB6CT	10	20
10	7	30	48	3	CB10CT	10	20
12	10	40	65	3	CB12CT	10	20
16	16	66	110	7	CB16CT	10	20
20	32	150	220	7	CB20CT	10	20

Catalogue number - ET size 17x48 mm with L contact blade

25	25	150	250	7	CB25ET	41	10
32	32	190	350	11	CB32ET	41	10
35	52	310	500	11	CB35ET	41	10
40	103	600	900	9	CB40ET	41	10
45	103	680	1100	11	CB45ET	41	10
56	135	950	1500	14	CB56ET	41	10
63	171	1200	2000	16	CB63ET	41	10
80	360	2500	4000	18	CB80ET	41	10

Catalogue number - FE size 17x48 mm with L contact blade

35	33	130	200	9	CB35FE	41	10
40	52	180	300	9	CB40FE	41	10
45	76	270	450	11	CB45FE	41	10
50	103	380	600	11	CB50FE	41	10
63	135	480	750	12	CB63FE	41	10
71	210	600	950	17	CB71FE	41	10
80	250	900	1500	20	CB80FE	41	10
90	360	1300	2100	20	CB90FE	41	10
100	470	1800	2800	23	CB100FE	41	10

Catalogue number - EET double size 17x46 mm with L contact blade

90	490	3000	4500	19	CB90EET	91	5
110	600	4000	6500	27	CB110EET	91	5
140	1050	7000	12000	35	CB140EET	91	5
160	1500	10000	17000	39	CB160EET	91	5

Type LET, 7/10/12/16 A are available for replacement purposes on existing equipment, not recommended for new applications

Catalogue number - FEE double size 17x46 mm with L contact blade

Rated current In, A	I ² t Pre-arc 1 ms, A ² s	I ² t Total		Power loss W at In	Catalogue number	Weight each, g	Packing size
		415 VAC, A ² s	660 VAC, A ² s				
100	400	1600	2400	24	CB100FEE	91	5
120	540	1900	3100	32	CB120FEE	91	5
140	850	2500	3800	36	CB140FEE	91	5
160	1000	3700	5700	46	CB160FEE	91	5
180	1400	5300	8400	46	CB180FEE	91	5
200	1900	7100	11400	52	CB200FEE	91	5

Catalogue number - FM size 38x50 mm with L contact blade

180	1400	7500	13500	40	CB180FM	230	1
200	2600	10500	18500	40	CB200FM	230	1
225	3700	14500	26500	44	CB225FM	230	1
250	5200	20500	37500	48	CB250FM	230	1
280	7000	30500	55000	48	CB280FM	230	1
315	10000	40000	77000	55	CB315FM	230	1
350	15000	60000	105000	55	CB350FM	230	1

Catalogue number - FMM double size 38x50 mm with T contact blade

400	10000	40000	72500	85	CB400FMM	454	1
450	15000	60000	105000	90	CB450FMM	454	1
500	20000	82000	150000	100	CB500FMM	454	1
550	30000	120000	215000	100	CB550FMM	454	1
630	45000	180000	310000	100	CB630FMM	454	1
700	60000	240000	420000	120	CB700FMM	454	1

Catalogue number - MT size 38x50 mm with L contact blade

160	2400	15000	25000	26	CB160MT	230	1
180	3800	25000	38000	26	CB180MT	230	1
200	6000	40000	58000	27	CB200MT	230	1
250	11500	80000	110000	32	CB250MT	230	1
280	16500	100000	150000	35	CB280MT	230	1
315	19000	125000	180000	42	CB315MT	230	1
355	22000	160000	200000	51	CB355MT	230	1

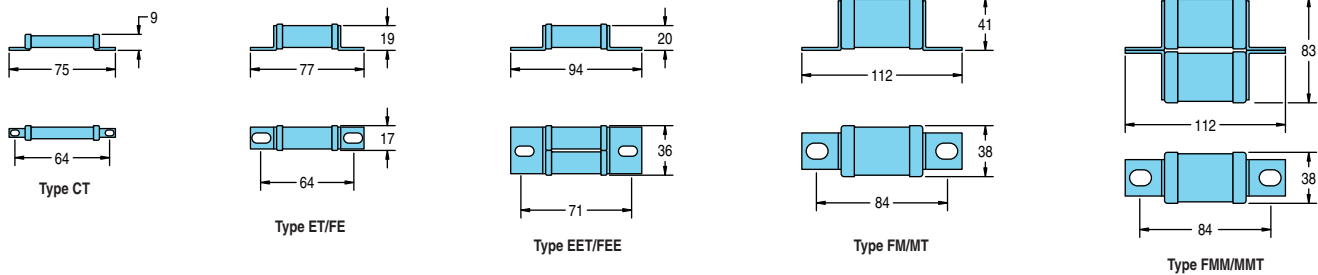
Catalogue number - MMT double size 38x50 mm with T contact blade

180	1650	12000	18000	42	CB180MMT	454	1
200	2200	16000	23000	42	CB200MMT	454	1
225	3700	26000	40000	42	CB225MMT	454	1
280	6600	47000	70000	47	CB280MMT	454	1
315	8600	62000	91000	51	CB315MMT	454	1
355	13500	97000	140000	54	CB355MMT	454	1
400	21000	150000	220000	60	CB400MMT	454	1
450	30000	220000	320000	57	CB450MMT	454	1
500	42000	300000	450000	64	CB500MMT	454	1
560	60000	430000	640000	64	CB560MMT	454	1
630	68500	500000	720000	86	CB630MMT	454	1
710	78000	600000	850000	105	CB710MMT	454	1

BS88 fuses

690 V class aR

Dimensions, mm



Neozed and Diazed fuses

400-500 V class gR

Technical data



Material	Ceramic body, tinned end contacts
Rated voltage, Un	Neozed: 400 VAC, Diazed: 500 VAC
Operating class	gR
Rated breaking capacity	50 kA
Standard	IEC 60269-4, VDE0636
Certificate	CE

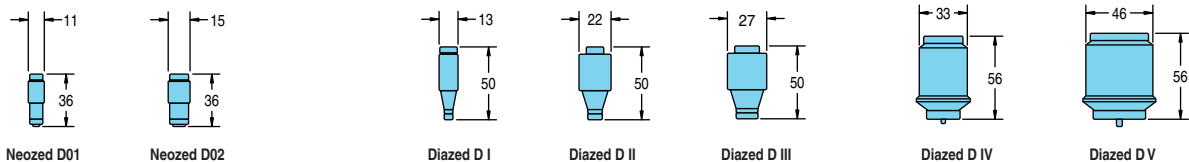
Catalogue numbers - Neozed fuses

Size	Rated current In, A	I ² t Pre-arc 1 ms, A ² s	I ² t Total Un, A ² s	Power loss W at In	Catalogue number	Weight each, g	Packing size
D01	2	1	6,3	2,3	CB2NZ01R	6	10
D01	4	2	13	3,1	CB4NZ01R	6	10
D01	6	5	20	4	CB6NZ01R	6	10
D01	10	12	65	4,2	CB10NZ01R	6	10
D01	16	35	200	5,3	CB16NZ01R	6	10
D02	20	55	275	8	CB20NZ02R	11	10
D02	25	85	480	9	CB25NZ02R	12	10
D02	35	180	1000	10	CB35NZ02R	13	10
D02	50	250	1800	15	CB50NZ02R	13	10
D02	63	550	2500	17	CB63NZ02R	15	10

Catalogue numbers - Diazed fuses

Size	Rated current In, A	I ² t Pre-arc 1 ms, A ² s	I ² t Total Un, A ² s	Power loss W at In	Catalogue number	Weight each, g	Packing size
D I	2	0,7	5,8	2,1	CB2D16R	12	20
D I	4	1,8	11	2,5	CB4D16R	12	20
D I	6	4	18	3,2	CB6D16R	12	20
D I	10	8	40	3,6	CB10D16R	13	20
D I	16	16,2	60	6,3	CB16D16R	14	20
D I	20	35,8	139	7,3	CB20D16R	15	20
D I	25	48,9	205	9	CB25D16R	16	20
D II	2	0,7	5,8	2,1	CB2D27R	27	5
D II	4	1,8	11	2,5	CB4D27R	27	5
D II	6	4	18	3,2	CB6D27R	27	5
D II	10	8	40	3,6	CB10D27R	27	5
D II	16	16,2	60	6,3	CB16D27R	28	5
D II	20	35,8	139	7,3	CB20D27R	29	5
D II	25	48,9	205	9	CB25D27R	30	5
D II	30	85	310	10	CB30D27R	30	5
D III	35	135	539	12	CB35D33R	48	5
D III	50	340	1250	19	CB50D33R	49	5
D III	63	530	1890	23	CB63D33R	52	5
D IV	80	980	4200	33	CB80D125R	105	10
D IV	100	1950	8450	51	CB100D125R	110	10
D V	125	3100	16000	60	CB125D200R	185	10
D V	160	10000	24000	71	CB160D200R	210	10
D V	200	17000	40000	90	CB200D200R	215	10

Dimensions, mm



Off-load fuse disconnectors for cylindrical fuses

10x38 mm fuses

Technical data



Material	Polyester, UL 94V0
Rated voltage, Un	IEC 690 V/1000 VDC, UL 600 V/1000 VDC
Short circuit current, SCCR	690 VAC: 120 kA, 1000 VDC: 33 kA, UL 600 V 200 kA
Terminal	Box terminal, 1-16 mm ²
Ingress protection, IEC 60529	IP 20
Standard	IEC 60269-1&2, UL 4248-1 (1000 VDC UL 4248-19)
Certificate, approval	CE, cUR file E14853, not neutral, 1000 VDC E348242

Catalogue numbers - Off-load fuse disconnectors, DIN-rail mounting

Description	Rated voltage IEC, Un	Rated current In, A	Max power loss/pole, W	Catalogue numbers - fuse disconnector		Weight each, g	Packing size
				without indicator	with lamp indicator		
1 pole	690 V	32	3	CBCHM1DU	CBCHM2DIU	53	1
1 pole	1000 VDC	32	3	CBCHPV1U	CBCHPV1IU	53	1
2 pole	690 V	32	3	CBCHM2DU	CBCHM2DIU	106	1
2 pole	1000 VDC	32	3	CBCHPV2U	CBCHPV2IU	106	1
3 pole	690 V	32	3	CBCHM3DU	CBCHM3DIU	159	1
4 pole	690 V	32	3	CBCHM4DU	CBCHM4DIU	212	1
Neutral	690 V	32	3	CBCHM1DXU		60	1
1 pole + neutral	690 V	32	3	CBCHM1DNU	CBCHM1DNIU	115	1
3 pole + neutral	690 V	32	3	CBCHM3DNU	CBCHM3DNIU	220	1

Off-load fuse disconnectors for cylindrical fuses

14x51 mm fuses

Technical data



Material	Polyester, UL 94V0
Rated voltage, Un	IEC 690 V/750 VDC, 1500 VDC, UL 700 VAC 1500 VDC
Short circuit current, SCCR	690 VAC: 120 kA, 1500 VDC 10 kA, UL 700 VAC 200 kA
Terminal	Box terminal, 1,5-50 mm ²
Ingress protection, IEC 60529	IP 20
Standard	IEC 60269-1&2, UL 4248-1 (1500 VDC UL 4248-19)
Certificate, approval	CE, cUR file E14853, not neutral, 1500 VDC E348242

Catalogue numbers - Off-load fuse disconnectors, DIN-rail mounting/panel mounting

Description	Rated voltage IEC, Un	Rated current In, A	Max power loss/pole, W	Catalogue numbers - fuse disconnector			Weight each, g	Packing size
				without indicator	with lamp indicator	with micro switch		
1 pole	690 V	50	5	CBCH141DU	CBCH141DIU	CBCH141DMSU-F	89	1
1 pole	1500 VDC	50	5	CBCHPV141U	CBPV141IU		89	1
2 pole	690 V	50	5	CBCH142DU	CBCH142DIU		178	1
2 pole	1500 VDC	50	5	CBCHPV142U	CBCHPV142IU		178	1
3 pole	690 V	50	5	CBCH143DU	CBCH143DIU	CBCH143DMSU-F	267	1
4 pole	690 V	50	5	CBCH144DU	CBCH144DIU		356	1
Neutral	690 V	50	5	CBCH141DNXU			100	1
1 pole + neutral	690 V	50	5	CBCH141DNU	CBCH141DNIU		185	1
3 pole + neutral	690 V	50	5	CBCH143DNU	CBCH143DNIU	CBCH143DNMSU-F	365	1

Off-load fuse disconnectors for cylindrical fuses

22x58 mm fuses

Technical data



Material	Polyester, UL 94V0
Rated voltage, Un	IEC 690 V/1000 VDC, UL 700 VAC
Short circuit current, SCCR	690 VAC: 120 kA, 1000 VDC: 50 kA, UL: 200 kA
Terminal	Box terminal, 2,5-70 mm ²
Ingress protection, IEC 60529	IP 20
Standard	IEC 60269-1&2, UL 4248-1
Certificate, approval	CE, cUR file E14853, not neutral

Catalogue numbers - Off-load fuse disconnectors, DIN-rail mounting

Description	Rated voltage IEC, Un	Rated current In, A	Max power loss/pole, W	Catalogue numbers - fuse disconnector			Weight each, g	Packing size
				without indicator	with lamp indicator	with micro switch		
1 pole	690 V	125/100	9,5	CBCH221DU	CBCH221DIU	CBCH221DMSU-F	158	1
2 pole	690 V	125/100	9,5	CBCH222DU	CBCH222DIU		316	1
3 pole	690 V	125/100	9,5	CBCH223DU	CBCH223DIU	CBCH223DMSU-F	488	1
4 pole	690 V	125/100	9,5	CBCH224DU	CBCH224DIU		632	1
Neutral	690 V	125/100	9,5	CBCH221DNXU			168	1
1 pole + neutral	690 V	125/100	9,5	CBCH221DNU	CBCH221DNIU		326	1
3 pole + neutral	690 V	125/100	9,5	CBCH223DNU	CBCH223DNIU	CBCH223DNMSU-F	642	1

Off-load fuse disconnector for cylindrical fuses, accessories

10x38 mm, 14x51 mm and 22x58 mm fuses

Catalogue numbers - 10x38 mm off-load fuse disconnectors accessories

Description	Catalogue number	Weight each, g	Packing size
Single phase busbar 600 VAC/1000 VDC 100 A, 6 pins, SCCR 10 kA	CBBB1P100M6	0,05	1
Single phase busbar 600 VAC/1000 VDC 100 A, 9 pins, SCCR 10 kA	CBBB1P100M9	0,075	1
Single phase busbar 600 VAC/1000 VDC 100 A, 12 pins, SCCR 10 kA	CBBB1P100M12	0,1	1
Single phase busbar 600 VAC/1000 VDC 100 A, 15 pins, SCCR 10 kA	CBBB1P100M15	0,125	1
Single phase busbar 600 VAC/1000 VDC 100 A, 57 pins, cuttable, SCCR 10 kA	CBBB1P100M57	0,45	1
Three phase busbar 600 VAC 100 A, 3x3 pins, SCCR 10 kA	CBBB3P100M9	0,225	1
Three phase busbar 600 VAC 100 A, 4x3 pins, SCCR 10 kA	CBBB3P100M12	0,3	1
Three phase busbar 600 VAC 100 A, 5x3 pins, SCCR 10 kA	CBBB3P100M15	0,375	1
Three phase busbar 600 VAC 100 A, 19x3 pins, cuttable, SCCR 10 kA	CBBB3P100M57	1,35	1
Power feed terminal for single phase busbar, 1 pole 1000 V 115 A, 35 mm ²	CBPWR1PLP	0,03	10
Power feed terminal for three phase busbar, 1 pole 1000 V 115 A, 35 mm ²	CBPWR35MM	0,03	10
Direct feed power terminal for single/three phase busbar, 1 pole 1000 V 115 A, 50 mm ²	CBPWR50MM	0,075	10
Pin safety cover 1000 V, kit for 5 pins	CBFSCVR	0,001	10

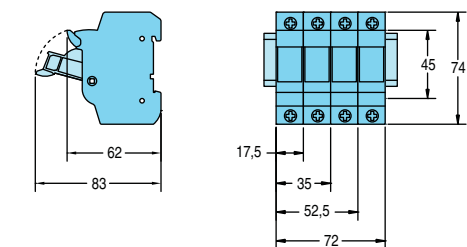
Catalogue numbers - 14x51 mm and 22x58 mm off load fuse disconnectors accessories

Description	Catalogue no, fuse disconnector		Weight each, g	Packing size
	14x51 mm	22x58 mm		
Terminal cover, to be used with conductors < 10 mm ² , 12 pcs	CBCH14-CTP	CBCH22-CTP	20	1
Micro switch for 1 pole fuse disconn. change-over contact, 250 V, 5 A, remote fuse trip ind.	CBCH14-SPS	CBCH22-SPS	40	1
Micro switch for 3 pole fuse disconn. change-over contact, 250 V, 5 A, remote fuse trip ind.	CBCH14-TPS	CBCH22-TPS	170	1

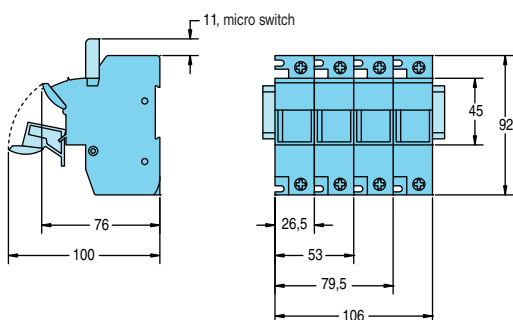
Off-load fuse disconnecter for cylindrical fuses

10x38 mm, 14x51 mm and 22x58 mm fuses

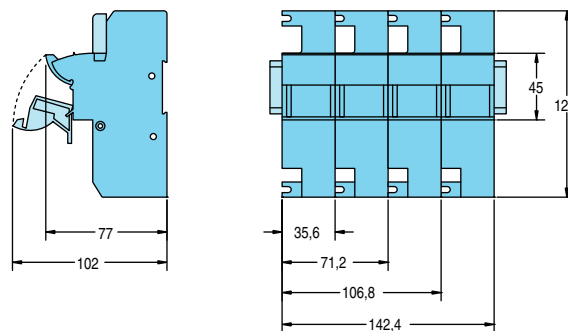
Dimensions, mm



Off-load fuse disconnecter for 10x38 mm fuses



Off-load fuse disconnecter for 14x51 mm fuses



Off-load fuse disconnecter for 22x58 mm fuses

Fuse holders

Square body solid blade fuses

Technical data



Material	Glass filled PBT, silver plate copper contacts
Rated voltage, Un	690 V
Short circuit current, SCCR	120 kA
Terminal	Screw
Installation	DIN-rail mount/panel mount
Ingress protection, IEC 60529	IP 00/20
Standard	IEC 60269-1&2, IEC 60068-2-6, DIN 43620
Certificate	CE

Catalogue numbers - Square body solid blade fuses, IP 00

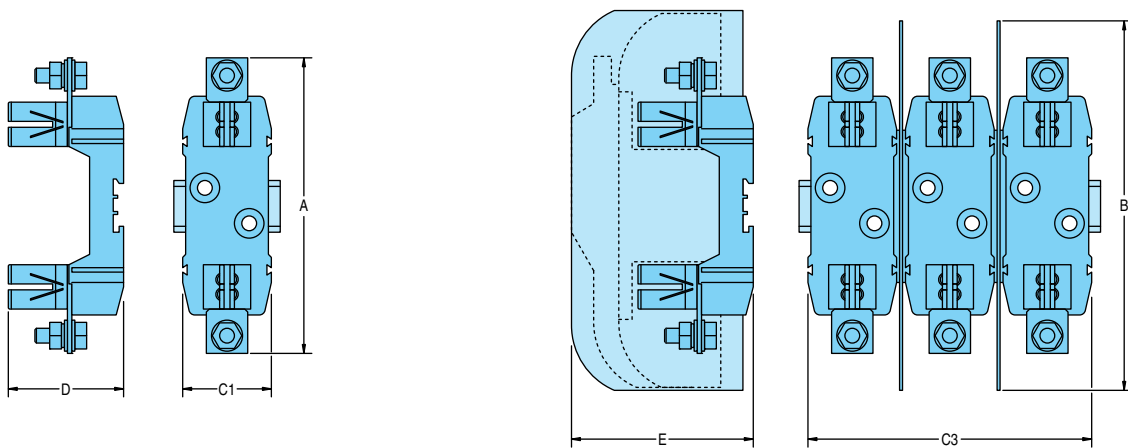
Fuse size	Rated current		Max power loss/pole, W	Catalogue number		Weight each, g		Packing size
	In, A	Terminal		1 pole	3 pole	1 pole	3 pole	
Fuse size 000/00, modular	160	M8 screw	12	CBSD00-D	CBTD00-D	115	390	1
Fuse size 000/00, integrated	160	M8 screw	12		CBTD00-DI		380	1
Fuse size 1	250	M10 screw	32	CBSD1-D	CBTD1-D	320	1190	1
Fuse size 2	400	M10 screw	45	CBSD2-D	CBTD2-D	375	1400	1
Fuse size 2, double contact clips	400	M10 screw	45	CBSD2-DD	CBTD2-DD	430	1600	1
Fuse size 3	630	M12 screw	60	CBSD3-D	CBTD3-D	540	2135	1

2 phase barriers included with 3 pole fuse holders

Catalogue numbers - IP 20 protection kits

Description	Catalogue number	Weight each, g	Packing size
Protection kit, size 000/00 fuse holders, modular, 6 terminal covers, 3 fuse covers, 2 phase barriers	CBTD00-IP20	0,15	1
Protection kit, size 000/00 fuse holders, integrated, terminal covers	CBTD00-IP20I	0,1	1
Protection kit, size 000/00 fuse holders, integrated, terminal covers, fuse covers	CBTD00-IP20IC	0,15	1
Protection kit, size 1 fuse holders, modular, 6 terminal covers, 3 fuse covers, 2 phase barriers	CBTD1-IP20	0,2	1
Protection kit, size 2 fuse holders, modular, 6 terminal covers, 3 fuse covers, 2 phase barriers	CBTD2-IP20	0,2	1
Protection kit, size 3 fuse holders, modular, 6 terminal covers, 3 fuse covers, 2 phase barriers	CBTD3-IP20	0,25	1
Phase barriers for fuse holders size 000/00, 2 pcs	CBSD00-PB	0,1	1
Phase barriers and ganging links for fuse holders size 1/2, 2 pcs	CBSD12-PB	0,2	1
Phase barriers and ganging links for fuse holders size 3, 2 pcs	CBSD3-PB	0,2	1

Dimensions, mm



Fuse size	A	B	C1	C3	D	E
000/00, modular	120	146	35,5	104	51	89
000/00, integrated	120	146		97	51	90
1	199	245	56	188	78	126
2	224	245	56	188	86	126
3	239	260	56	221	88	138

Fuse holders for square body fuses

DIN80/110 slotted contact blade

Technical data

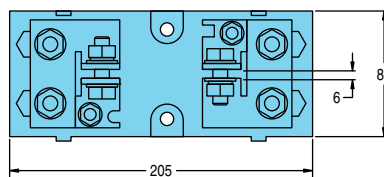
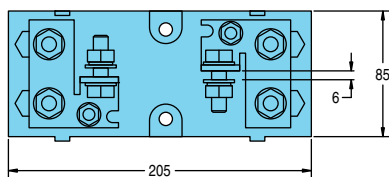
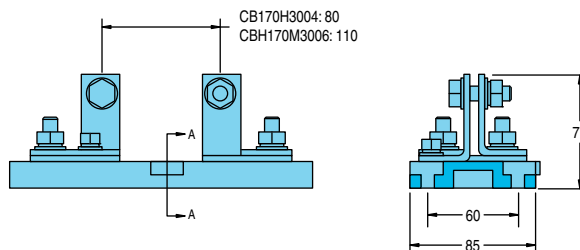
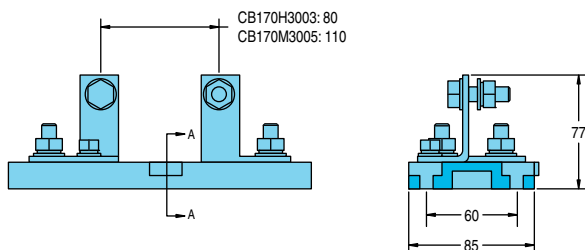
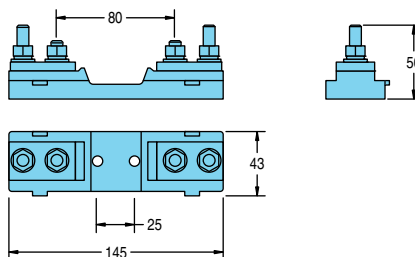
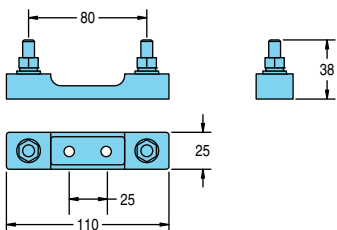


Material	Thermoplastic
Rated voltage, Un	690-1400 V, see catalogue numbers
Short circuit current, SCCR	200 kA
Terminal	Screw terminal
Ingress protection, IEC 60529	IP 00
Standard	IEC 60269, DIN 43653
Certificate	CE

Catalogue numbers - Fuse holders, panel-mount

Fuse size	Rated current		Rated voltage, Un, V		Terminal	Catalogue number		Weight each, g	Packing size
	In, A	DIN80	DIN110	1 pole DIN80		1 pole, DIN110			
Square body fuses with DIN80 slotted L contact blade									
Fuse size 0000/000	200	690			M8 screw	CB170H1013		135	3
Fuse size 000/00	400	1000			M8 screw	CB170H1007		275	3
Square body fuses with DIN80/110 slotted contact blade									
Fuse size 1*-3	630	1000	1400		2xM10 screw	CB170H3003	CB170H3005	1035	1
Fuse size 1*-3	1250	1000	1400		2xM10 screw	CB170H3004	CB170H3006	1300	1

Dimensions, mm



Micro switches for remote trip indication

Square body fuses

Technical data



Rated voltage, Un	250 VAC
Rated current	2 A/6 A
Contact	Change-over contact
Terminal	2,8/6,3 mm quick connectors
Ingress prot., IEC 60529	IP 00
Certificate	CE

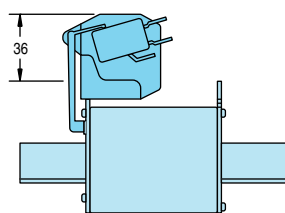
Selection table

Fuse size	Square body solid blade fuses DIN 43620 - installed in fuse holder IP 00		Square body fuses DIN 43653 contact blade, flush end contact	
			Type T indicator	Type K indicator
000	CB170H0236/CB170H0238/CBBVL50	CBBVL50	CB170H0236/CB170H0238	CB170H0069
00	CB170H0236/CB170H0238/CBBVL50	CBBVL50	CB170H0235/CB170H0237	
0	CB170H0236/CB170H0238		CB170H0235/CB170H0237	CB170H0069
1	CB170H0236/CB170H0238/CBBVL50	CBBVL50		
1*			CB170H0235/CB170H0237	CB170H0069
2	CB170H0236/CB170H0238/CBBVL50	CBBVL50	CB170H0235/CB170H0237	CB170H0069
3	CB170H0236/CB170H0238/CBBVL50	CBBVL50	CB170H0235/CB170H0237	CB170H0069
4				CB170H0069

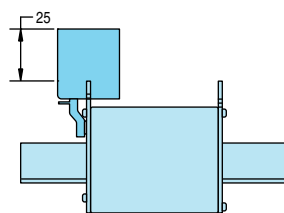
Catalogue numbers - Micro switch

Description	Rated current A	Contact	Catalogue number	Weight each, g	Packing size
Micro switch 6,3 mm quick conn.	2	Change-over	CB170H0235	25	1
Micro switch 2,8 mm quick conn.	2	Change-over	CB170H0236	25	1
Micro switch 6,3 mm quick conn.	2	Change-over	CB170H0237	25	1
Micro switch 2,8 mm quick conn.	2	Change-over	CB170H0238	25	1
Micro switch 6,3 mm quick conn.	2	Change-over	CB170H0069	15	1
Micro switch 2,8 mm quick conn.	6	Change-over	CBBVL50	25	1

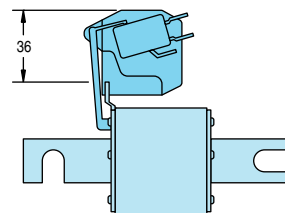
Dimensions, mm



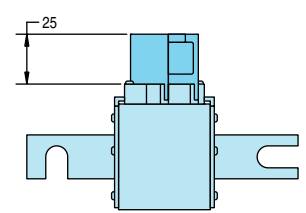
Solid blade fuse DIN 43620
Micro switch type CB170H



Solid blade fuses DIN 4362
Micro switch type CBBVL50



Solid blade fuses DIN 43653/flush end contact
Type T indicator

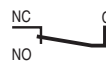


Solid blade fuses DIN 43653/flush end contact
Type K indicator

Schematic diagram



Micro switch type CB170H



Micro switch type CBBVL50

Trip indicators and micro switches

BS88 fuses

Technical data



Some fuses can be equipped with external mechanical trip indicator. The trip indicator is mounted parallel with the fuse or can be mounted separately between fuse clips.

The trip indicator can be equipped with a micro switch for remote fuse trip indication.

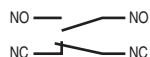
Catalogue numbers - Trip indicator

Fuse type	Catalogue number	Weight each, g	Packing size
Trip indicator for fuses type ET, EET, FE, FEE	CBEC-600	25	1
Trip indicator for fuses type LET	CBEC-250	25	1
Trip indicator for fuses type FM, FMM	CBMC-600	25	1
Trip indicator for fuses type LMT, LMMT	CBMC-250	25	1

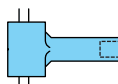
Catalogue number - Micro switch

Micro switch type MAI, 250 VAC, 2 A, NO-NC contact, 2,8 mm quick conn.	CBMAI	23	1
Micro switch type MBI, 250 VAC, 2 A, NO-NC contact, 2,8 mm quick conn.	CBMBI	23	1

Schematic diagram - Micro switch



Mikro switch type MAI



Micro switch type MBI

Application guide

High speed fuses for semiconductor protection

The use of semiconductors is steadily increasing in all industries. Examples of equipment that may contain semiconductors are soft starters, power converters, adjustable frequency drives, voltage converters, UPS systems, power supplies and solid state relays. Since the power semiconductors have low thermal capacity, the protective device must react very quickly. High speed fuses provide the best protection.

Fuse construction

The body consists of an insulating material (ceramic or glass-reinforced plastic). The material has good mechanical properties and resists high temperatures. The terminals are made of materials with good conductivity and designed so that they will have good contact surface towards the fuse holder. The fuse element usually consists of one or more elements. The shape and dimension are decisive for the characteristics of the fuse. The melting elements made of silver, alternatively of Silcu (copper with silver in the melting points) are the most common materials. The fuse body is usually filled with densely packed quartz sand. The grain size of sand affects the fuse characteristics. The purpose of the sand is to act as an insulator, to extinguish the arc during short circuit and to absorb the heat energy delivered.

High speed fuses are available in several versions, the most common are shown in figure 1.

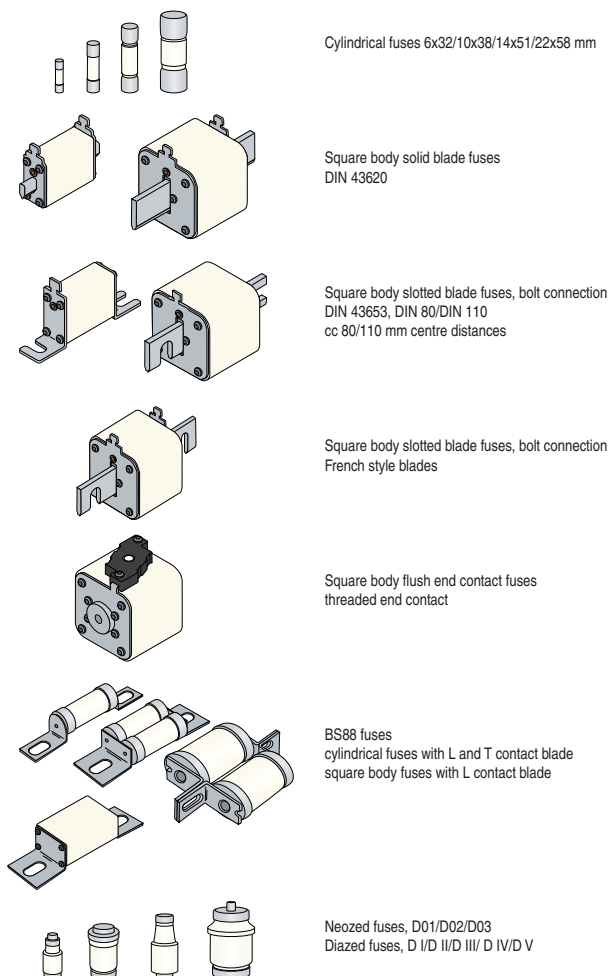


Fig 1. Common high speed fuse types according to IEC standard

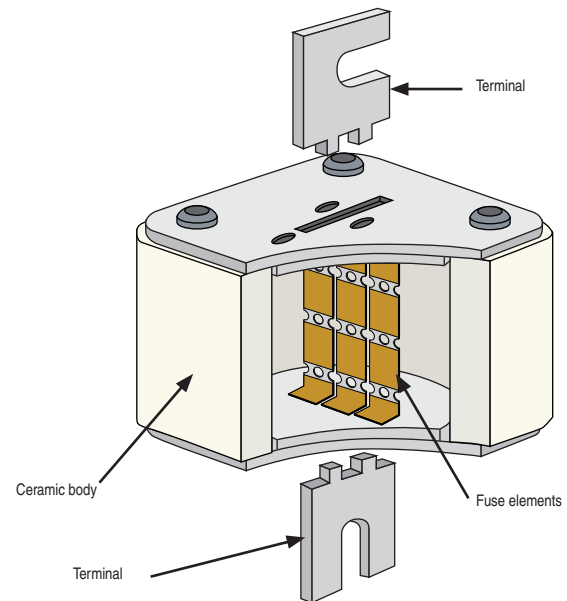


Fig 2. High speed fuse construction

Operation classes according to IEC 60269

IEC 60269 divides fuses in different operation classes, the most common are

- Class aM, partial range protection, motors, short circuit protection
- Class gG, full range protection, cable, line and general protection
- Class aR, high speed, partial range protection, short circuit protection
- Class gR/gS, high speed full range protection
- Class gPV, high speed full range protection for photovoltaic systems

Traditionally, high speed fuses have only been used for short-circuit protection, another device in the circuit provides overload protection. Class aR is a partial range protection fuse and is only intended for short circuit protection. Minimum breaking current is defined by an AA line in the time-current curve for the fuse, the fuse will not protect for faults above this line. Exposing a class aR fuse for overload for a longer time, exceeding the AA line limitation, increases dramatically the operating temperature, which may cause damage to the ceramic body as well on the fuse holder. Even if the fuse survives the overload, it is a high risk that the ceramic body cracks during a later short circuit.

New technology has made it possible to combine both a very fast short-circuit protection and overload protection in the same fuse, the restriction of the AA line disappears, it will be a full range protection fuse, class gR/gS. In a distribution system a class gR/gS fuse may be sized in the same way as a class gG fuse. Discrimination against upstream class gG fuse will be maintained.

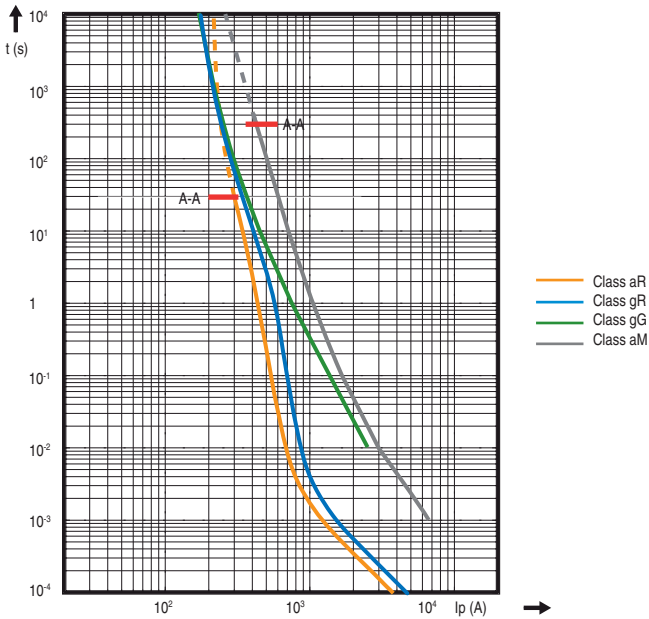


Fig 3. Time/current curves for square body solid blade fuses size 00, 125 A, from left class aR, gR, gG and aM. Class aR and aM are fuses for partial protection, minimum breaking current is defined by the red A-A line, the fuse will not protect for faults above the line, the curve is dashed.

Fuse selection

The following information are required to choose the right fuse to protect semiconductor devices

- Rated voltage of the fuse (U_n) must be equal or larger than the nominal voltage of the circuit.
- Max current (I) in the circuit during normal conditions.
- The energy (I^2t) cleared by the fuse during a short circuit must be less or equal to the withstand energy of the semiconductor, see fig 4. The energy is stated in A^2s .
- The breaking capacity of the fuse must be higher than the prospective circuit short circuit current.
- The fuse max permissible load current must be greater than max current during normal operation.
- Current/voltage peaks, cyclic loads, temporary overloads etc. do also affect the fuse selection.

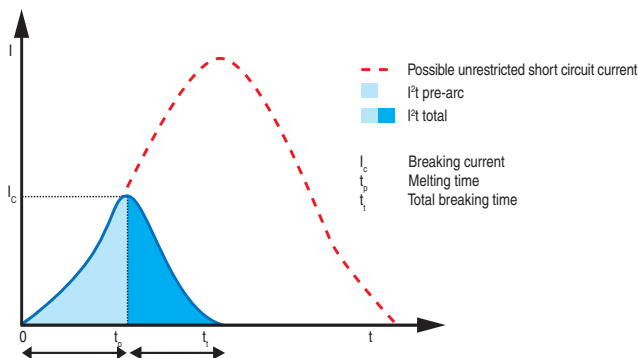


Fig 4. Short circuit interrupting. During the pre-arcing time the fuse elements are heated up until they melt, several arcs occur inside the fuse and the short circuit current begins to be interrupted - the released energy during this stage is called I^2t pre-arc. The arcs inside the fuses are interrupted by the sand and the circuit is interrupted. The total let-through energy is called I^2t total.

Note that the internal voltage for certain products, such as the intermediate section in adjustable frequency drives, may be higher than the supply voltage. Another aspect to consider is that subsystems may change from AC to DC voltage, such as the common DC busbar in a regenerative drive system.

Total clearing correction factors

The total clearing, total I^2t , is stated at a certain voltage, usually at the rated voltage, U_n . For other operating voltages, correction factors can be used to calculate a new I^2t for a fuse. With the help of a curve, a factor for the current operating voltage can be found, see fig 5.

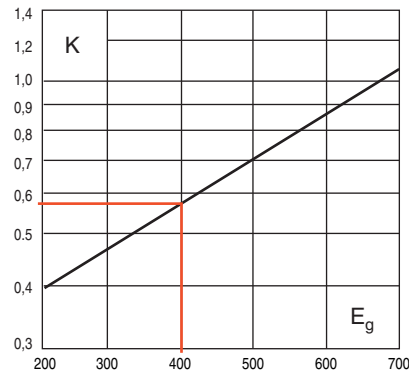


Fig 5. I^2t correction factors - cylindrical fuses 22x58 mm type CBFWP- A22F.

Example: I^2t total for 40 A (690 V) = 750 A^2s . Calculated value for I^2t total at 400 VAC $750 \cdot 0,57 = 428 A^2s$, see red line.

Temperature

Fuses must be cooled. The normal fuse cooling method is convection from the terminals and the fuse body. A fuse may be de-rated for environments with higher ambient temperature than 20°C. It is not uncommon that larger fuses are forced cooled to avoid de-rating. Contact CHS Controls for conversion factors.

High speed fuses usually emit more heat, have higher power losses, compared with fuses for cable or motor protection. This must be considered when selecting a fuse disconnecter/fuse holder/fuse disconnect switch. Fuse disconnecters and fuse holders in the catalogue are designed for high speed fuses. Contact CHS Controls for the appropriate fuse disconnect switches.

Busbars/cables

The minimum current density for busbars or cables on which the fuses are connected to should be 1,3 A/mm². If the busbars carry a current density less than this, then the fuse should be de-rated. Contact CHS Controls for correction factors.

Cyclic loading

Cyclic loading is defined as regular or un-regular overloads, each of a sufficient size and duration to change the temperature of the fuse elements that they will fatigue. For applications including regular cyclic loading, an appropriate safety margin is recommended, contact CHS Controls for more information.

Fuses in parallel

There are many applications that uses fuses in parallel. As the surface area of two smaller fuses is often greater than an equivalently larger fuse, the cooling effect is also improved. Fuses in parallel may also provide lower total I^2t or lower power losses. It is important to only use fuses with the same

catalogue number in parallel. In larger installations, it is best to parallel fuses of as close cold resistance value as possible. Cold resistance value is normally stated on the fuse.

All the fuses should be mounted in a similar way, distance between adjacent parallel fuses shall be at least 5 mm, contact CHS Controls for further information.

DC circuits

Compared to AC circuits, the absence of natural voltage zero in a DC circuit makes it more difficult for a fuse to interrupt the current at fault. It is especially notable in circuits with high time constant. The time constant, which denotes the ratio of inductance/resistance in the circuit, is referred to as L/R and stated in ms. To calculate the time constant in a DC circuits, we need information on the short circuit current, inductance and resistance in the short circuit point. The latter are difficult to measure/calculate and vary depending of environmental factors, such as temperature.

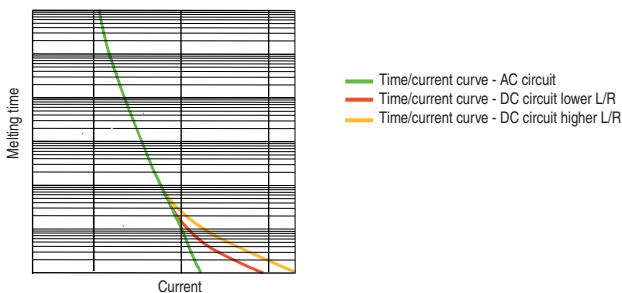


Fig 6. The DC circuit time constant (L/R) influences the fuse melting time in the range below 1 s compared to AC circuits.

In general, fuses that are designed and tested for DC shall be used. Some applications are less complex, have a low time constant, in these cases, an AC fuse usually provides sufficient protection. Note that the time constant also affects the melting time of the fuse compared with published data for AC circuits. In the time range below 1 s, the fuse becomes slower at higher time constant, see fig 6. Published AC data are not applicable for DC applications.

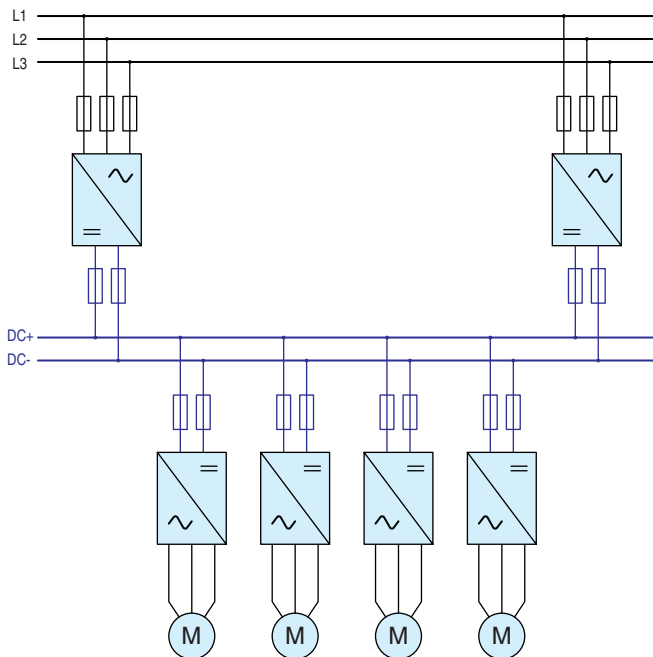


Fig 7. Rectifiers/inverters connected to a common DC bus, fuses protects each unit.

One growing application is then several inverters and rectifiers are connected to a common DC bus. The DC voltage is normally quite high, up to 1000-1200 VDC. High short circuit current levels as well as selectivity between various parts can be a challenge. Most inverter manufacturer have published fuse selection recommendations. If recommendations are not available, Eaton can assist with recommendations but it requires detailed system design information.

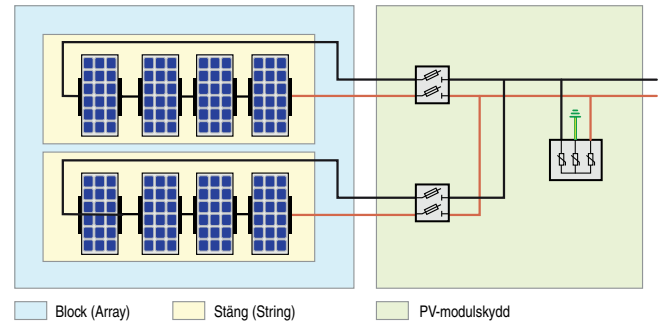


Fig 8. Typical design of a photovoltaic system. The fuses are installed on both sides of the string. A PV combiner box contains overcurrent protection, fuses, surge protection and are used as a interconnection box.

Photovoltaic systems protection

A solar cell/photovoltaic cell converts light into DC. Photovoltaic (PV) systems present special cases for fuse protection. A trend in recent years is that the voltage increases up to 1000 VDC for larger installations.

A PV panel is a sealed unit consisting of a number of interconnected solar/photovoltaic cells. PV panels are connected in series into a string in order to generate the required voltage. A number of strings can then be connected in parallel until the desired effect is achieved.

Normal recommendation is that the fuses are installed on both sides of each string, and on both sides of the parallel connected strings, when un-earthed systems are common, see fig 8.

The fuses should be able to interrupt the low-fault currents resulting from the failure of the solar cells while they cope with high fault currents that may result from failure of an inverter. In addition, the fuse is exposed to cyclic loading, depending on the temperature of the solar module. Appropriate fuses meet utilization class gPV according to IEC 60269-6. See separate catalogue "Photovoltaic system protection" or contact CHS Controls for further information.

Installation guide

High speed fuses usually emit more heat, have higher power losses compared with fuses for cable and motor protection. This must be considered during installation.

High speed fused with flush end contact

Fuses with flush end contact are normally connected direct to busbars. For reliable operation, it is important to have proper contact pressure. Bussmann recommends use of screw-in studs according to DIN 913/ISO 4026. Attach the stud carefully in the fuse with a torque of 5-8 Nm, use a torque wrench. Attach the fuse to the busbar, see fig 7, with the nut, tightening torque according to table. Make sure the busbar is aligned with the fuse.

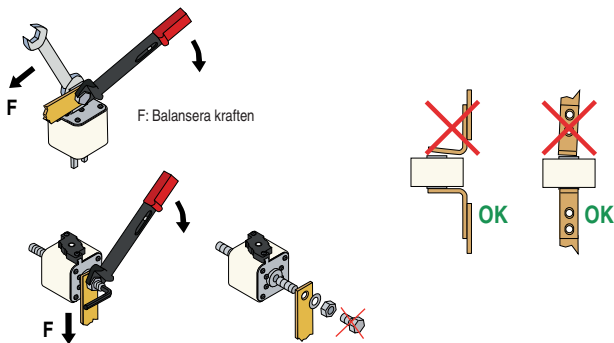


Fig 9. Installation of fuses with flush end contact and DIN80L/DIN80/DIN110 slotted contact blade.

The minimum current density of the busbar is 1,3 A/mm². If the current density is lower, the fuse must be de-rated, contact CHS Controls for correction factors.

High speed fuses, DIN80L/DIN80/DIN110 contact blade

When installing against busbars, use the largest possible bolts, screws, washers and nuts, tightening torque according to the manufacturer's recommendations. For installation in the Bussmann fuseholders, tightening torque according to table. Contact CHS Controls for fuseholders for BS 88 fuses.

Other types of high speed fuses

Cylindrical fuses, NH fuses and Neozed/Diazed fuses can be installed in standard fuseholders/fuse disconnectors/fuse disconnect switches, provided that the fuse power losses do not exceed what the fuseholder/fuse disconnecter/fuse disconnect switch can handle.

Recommended tightening torque

Fuse size	Threaded hole	Tightening torque nut, Nm	
		Greased thread ^{*)}	Ungreased thread
Size 00	M8, depth 6 mm	10	20
Size 1*	M8, depth 5 mm	10	20
Size 1	M8, depth 8 mm	10	20
Size 2	M10, depth 10 mm	20	40
Size 3	M12, depth 10 mm	40	50
Size 4	4xM10, depth 10 mm	20	40

Säkringshållare	Tightening torque nut, Nm	
	Greased thread ^{*)}	
CB170H1007 - CB 170H1013	12	
CB170H3003 - CB170H3006	20	

^{*)} Greased thread with "Rhodorsil Paste 4 - Rhone Poulenc" or equivalent.

CHS Controls AB
 Florettgatan 33
 S-254 67 Helsingborg, Sweden
 Phone +46 42 386100, fax +46 42 386129
 chs@chscontrols.se
 www.chscontrols.se

