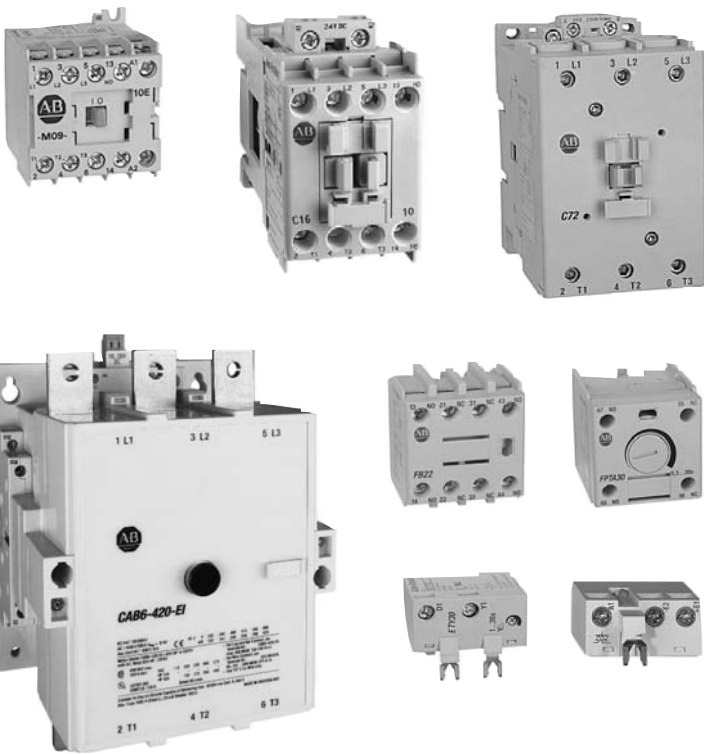


Mini-Contactors and Contactors



- Bulletin 100-M / CA 4 2.5 ... 4.3 kW
- Bulletin 100-C 4 ... 45 kW
- Bulletin CAB6 / CA 6 47 ... 238 kW

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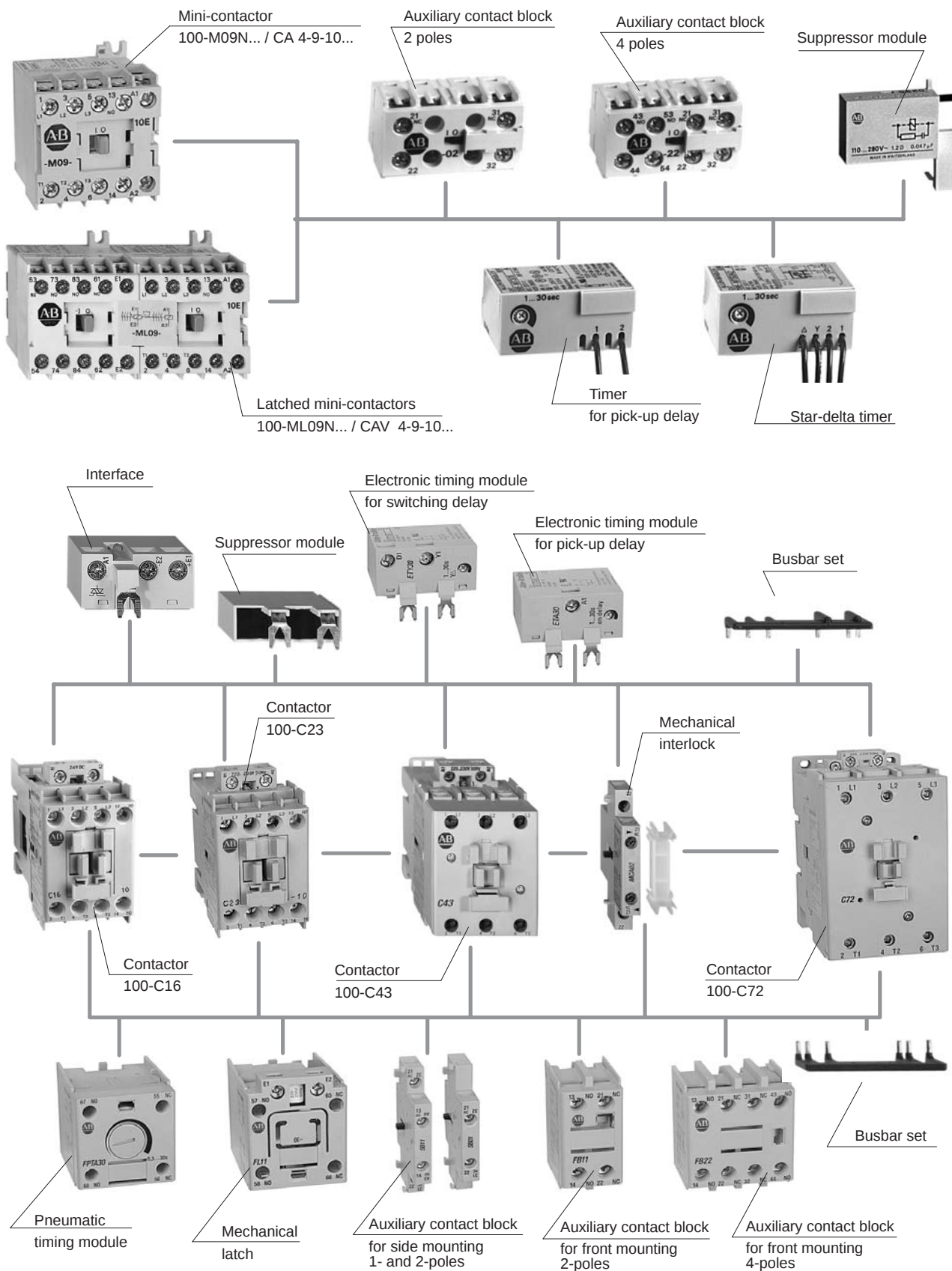
Ordering Advice

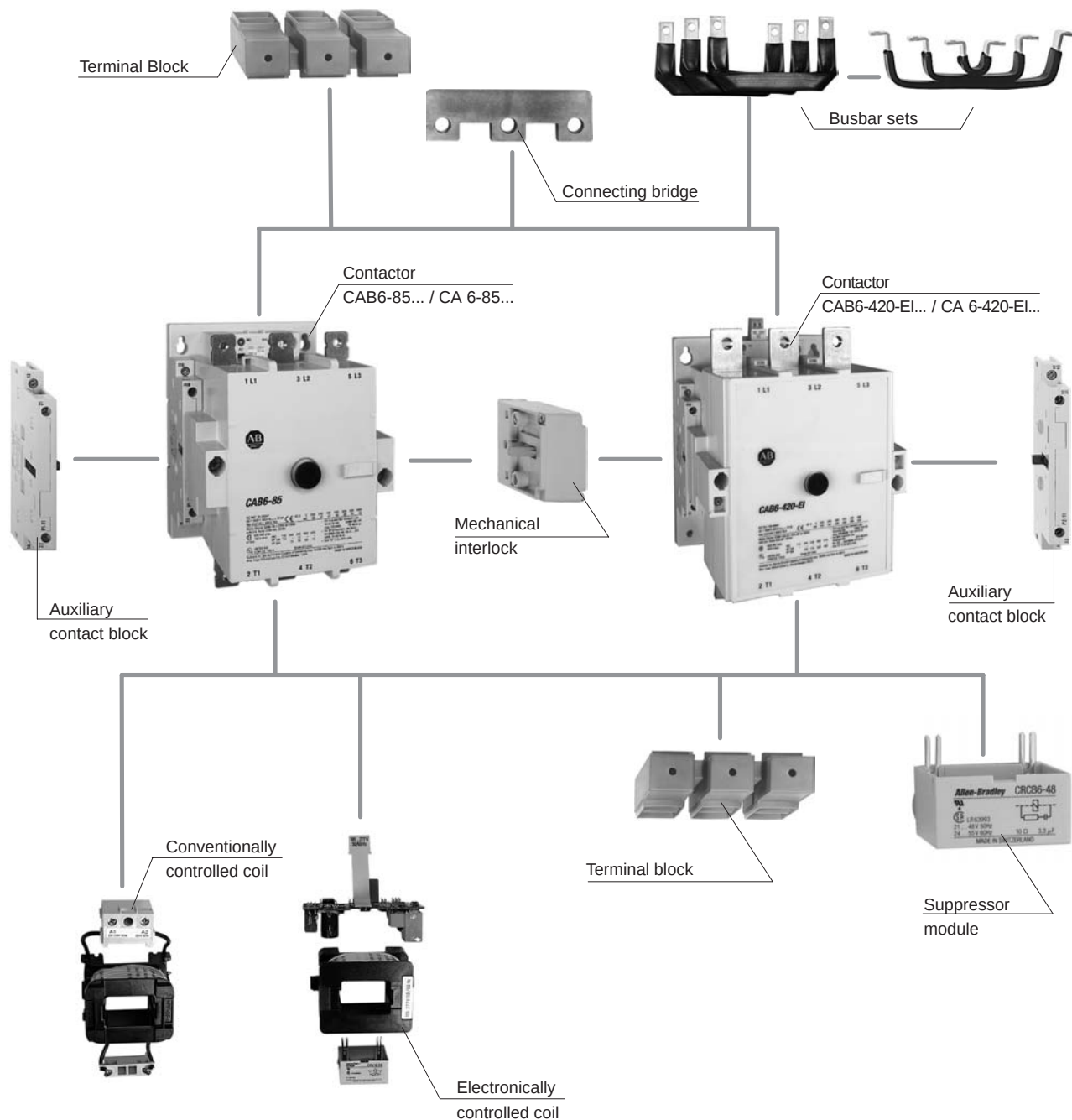
For Allen-Bradley branded products choose the Allen-Bradley Cat. No.

For Sprecher+Schuh branded products choose the Sprecher+Schuh Ref. or Art. No.

Mini-Contactors and Contactors

Overview





Good Reasons for Choosing Allen-Bradley / Sprecher+Schuh Contactors

Allen-Bradley and Sprecher+Schuh contactors are constructed for the world's markets and therefore fulfill all the requirements of the new standard IEC 947.

The world-wide acceptance of the products and the excellent availability of supplies in all countries of the world provide added reliability for the user.

A wide variety of accessories such as auxiliary contact blocks, an electronic interface, suppressor modules and timers make the contactors the ideal low-cost building block for specific user control system.

Mini-Contactors and Contactors

Product Selection



3-poles Contactors

- AC Control
- 3 Main Contacts



100-M / CA 4



100-C



100-C



CAB6 / CA 6

AC-1	Switching 3-phase motors AC-2, AC-3 ratings								Aux. cont. fitted		Allen-Bradley Cat. No.			Sprecher+Schuh Type Ref.		
[A]	[kW]				[A]											
40 °C	230 V	400 / 415 V	500 V	690 V	230 V	400 / 415 V	500 V	690 V	N.O.	N.C.						
20	1.7	2.5 / 2.6	2.3	–	6.5	5.3	4	–	1	0	100-M05N		⊗ 3	CA 4-5-10-1V2		
									0	1	100-M05N		⊗ 31	CA 4-5-01-1V2		
20	3.3	4.3 / 4.5	4.2	–	12	9	7	–	1	0	100-M09N		⊗ 3	CA 4-9-10-1V2		
									0	1	100-M09N		⊗ 31	CA 4-9-01-1V2		
25	3	4	4	4	11.5	9	7	5	1	0	100-C09	⊕	⊗ 10 ☆	—		
									0	1	100-C09	⊕	⊗ 01 ☆	—		
25	4	5.5	5.5	5.5	14.5	12	10	7	1	0	100-C12	⊕	⊗ 10 ☆	—		
									0	1	100-C12	⊕	⊗ 01 ☆	—		
32	5.5	7.5	7.5	7.5	20	16 / 15	13	9.3	1	0	100-C16	⊕	⊗ 10 ☆	—		
									0	1	100-C16	⊕	⊗ 01 ☆	—		
32	7.5	11	11	10	26.5	23 / 22	18	12	1	0	100-C23	⊕	⊗ 10 ☆	—		
									0	1	100-C23	⊕	⊗ 01 ☆	—		
45	10	15	15	15	34	30 / 29	24	17	0	0	100-C30	⊕	⊗ 00 ☆	—		
50	11	18.5	18.5	18.5	37	37 / 36	30	20	0	0	100-C37	⊕	⊗ 00 ☆	—		
63	13	22	22	22	42	43 / 41	34	25	0	0	100-C43	⊕	⊗ 00	—		
90	18.5	30	30	30	62	62 / 58	50	34	0	0	100-C60	⊕	⊗ 00	—		
90	22	37	37	37	72	72 / 69	56	42	0	0	100-C72	⊕	⊗ 00	—		
100	25	45	45	45	85	85 / 82	68	49	0	0	100-C85	⊕	⊗ 00	—		
160	26	47 / 55	59	81	85	85 / 95	85	85	1	1	CAB6-85-11		⊗	CA 6-85-11-1V2		
160	33	58 / 75	75	101	105	105 / 130	105	105	1	1	CAB6-105-11-		⊗	CA 6-105-11-1V2		
											CAB6-105-EI-11-		⊗	CA 6-105-EI-11-1V2		
250	45	78 / 90	98	135	140	140 / 155	140	140	1	1	CAB6-140-EI-11-		⊗	CA 6-140-EI-11-1V2		
250	55	95 / 100	118	167	170	170 / 170	170	170	1	1	CAB6-170-EI-11-		⊗	CA 6-170-EI-11-1V2		
350	67	118 / 132	147	205	210	210 / 227	210	210	1	1	CAB6-210-EI-11-		⊗	CA 6-210-EI-11-1V2		
350	80	140 / 150	177	245	250	250 / 258	250	250	1	1	CAB6-250-EI-11-		⊗	CA 6-250-EI-11-1V2		
500	97	170 / 185	213	293	300	300 / 315	300	300	1	1	CAB6-300-EI-11-		⊗	CA 6-300-EI-11-1V2		
500	135	238 / 250	298	424	420	420 / 425	420	420	1	1	CAB6-420-EI-11-		⊗	CA 6-420-EI-11-1V2		
												⊕	⊗	☆		

Options	Cat. No. suffix	Description	Ordering example
⊕ Position of the coil connection	No entry U	△ Coil connection on the line side (above, standard shipment) △ Coil connection on the load side (below)	100-C09⊗10 100-C09U⊗10
⊗ Control voltage	For example KJ	Enter the standard control voltage code from the table beside	100-C09KJ10
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard shipment) △ Multipacks (20 each)	100-C09⊗10 100-C09⊗10M

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Mini-Contactors and Contactors

Product Selection

Standard Control Voltages for AC Control

100-M / CA 4	② ①	[V]	24	48	110	110-120	220-230	230	230-240	240	380-400	400-415					
	50 Hz	⊗	—	—	D	—	A	—	—	—	KK						
	60 Hz	⊗	—	—	—	D	—	—	A	—	—	KK					
	50/60 Hz	⊗	KD	KH	—	—	—	KF	—	KT	—	—					

100-C	①	[V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	200-230	208	208-240
	50 Hz	⊗	(R)	K	V	(W)	X	Y	KP	—	D	(P)	S	KG	—	—	—	—
	60 Hz	⊗	(Q)	J	—	V	—	X	—	KP	—	D	—	—	KG	—	H	L
	50/60 Hz	⊗	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	—	(KL)	—	—
	①	[V]	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600	
	50 Hz	⊗	F	—	VA	T	—	—	—	N	—	G	B	—	M	(C)	—	
	60 Hz	⊗	—	—	—	A	T	I	(E)	—	—	—	N	B	—	—	(C)	
	50/60 Hz	⊗	—	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—	

CAB6-85...CAB6-105 / CA 6-85...CA 6-105	② ①	[V]	24	28	48	55	110	127	220-230	230	240	260	277	380-400	415	440-460	480	
	50 Hz	⊗	05	—	08	—	10	—	13	—	15	—	—	16	17	—	—	
	60 Hz	⊗	—	05	—	08	—	10	—	—	—	13	15	—	—	16	17	
	50/60 Hz	⊗	—	—	—	—	48	—	—	54	55	—	—	—	—	—	—	

CAB6-105-EI...CAB6-170-EI / CA 6-105-EI...CA 6-170-EI	② ①	[V]	24-28	40-50	43-65	110-130	208-277	380-400										
	50/60 Hz	⊗	05	08	—	10	14	16										

CAB6-210-EI...CAB6-300-EI / CA 6-210-EI...CA 6-300-EI	50/60 Hz	⊗	—	08	—	10	14	16										
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CAB6-420-EI / CA 6-420-EI	50/60 Hz	⊗	—	—	08	10	14	16										
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Surcharge	Type							Available control voltages					no surcharge				
special control voltages	100-M / CA 4							12...500 V 50 Hz / 12...600 V 60 Hz					greater than 25 pcs.				
	100-C							12...600 V 50 Hz / 12...600 V 60 Hz					greater than 20 pcs.				
	CAB6-85...CAB6-105 / CA 6-85...CA 6-105							21...575 V 50/60 Hz					greater than 25 pcs.				
	CAB6-105-EI...CAB6-170-EI / CA 6-105-EI...CA 6-170-EI							24...400 V 50/60 Hz					greater than 25 pcs.				
	CAB6-210-EI...CAB6-300-EI / CA 6-210-EI...CA 6-300-EI							40...400 V 50/60 Hz					greater than 25 pcs.				

	CAB6-420-EI / CA 6-420-EI							43...400 V 50/60 Hz					greater than 25 pcs.				
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() Control voltage identifications in parentheses: Please allow for a delivery time of approximately 4 weeks.

Mini-Contactors and Contactors

Product Selection



3-poles Contactors

- DC Control
- 3 Main Contacts



100-M..Z / CA 4..C



100-C..Z



100-C..Z



CAB6 / CA 6

AC-1	Switching 3-phase motors AC-2, AC-3 ratings								Aux. cont. fitted		Allen-Bradley Cat. No.			Sprecher+Schuh Type Ref.		
[A]	[kW]				[A]											
40 °C	230 V	400 / 415 V	500 V	690 V	230 V	400 / 415 V	500 V	690 V	N.O.	N.C.						
20	1.7	2.5 / 2.6	2.3	–	6.5	5.3	4	–	1	0	100-M05N		3	CA 4-5C-10- 1V2		
									0	1	100-M05N		31	CA 4-5C-01- 1V2		
20	3.3	4.3 / 4.5	4.2	–	12	9	7	–	1	0	100-M09N		3	CA 4-9C-10- 1V2		
									0	1	100-M09N		31	CA 4-9C-01- 1V2		
25	3	4	4	4	11.5	9	7	5	1	0	100-C09			10 ☆	—	
									0	1	100-C09			01 ☆	—	
25	4	5.5	5.5	5.5	14.5	12	10	7	1	0	100-C12			10 ☆	—	
									0	1	100-C12			01 ☆	—	
32	5.5	7.5	7.5	7.5	20	16 / 15	13	9.3	1	0	100-C16			10 ☆	—	
									0	1	100-C16			01 ☆	—	
32	7.5	11	11	10	26.5	23 / 22	18	12	1	0	100-C23			10	—	
									0	1	100-C23			01	—	
45	10	15	15	15	34	30 / 29	24	17	0	0	100-C30			00	—	
50	11	18.5	18.5	18.5	37	37 / 36	30	20	0	0	100-C37			00	—	
63	13	22	22	22	42	43 / 41	34	25	0	0	100-C43			00	—	
90	18.5	30	30	30	62	62 / 58	50	34	0	0	100-C60			00	—	
90	22	37	37	37	72	72 / 69	56	42	0	0	100-C72			00	—	
100	25	45	45	45	85	85 / 82	68	49	0	0	100-C85			00	—	
160	26	47 / 55	59	81	85	85 / 95	85	85	1+1	1+L1	CAB6-85-L22-				CA 6-85-L22- 1V2	
160	33	58 / 75	75	101	105	105 / 130	105	105	1+1	1+L1	CAB6-105-L22-				CA 6-105-L22- 1V2	
									1	1	CAB6-105-EI-11-				CA 6-105-EI-11- 1V2	
250	45	78 / 90	98	135	140	140 / 155	140	140	1	1	CAB6-140-EI-11-				CA 6-140-EI-11- 1V2	
250	55	95 / 100	118	167	170	170 / 170	170	170	1	1	CAB6-170-EI-11-				CA 6-170-EI-11- 1V2	
350	67	118 / 132	147	205	210	210 / 227	210	210	1	1	CAB6-210-EI-11-				CA 6-210-EI-11- 1V2	
350	80	140 / 150	177	245	250	250 / 258	250	250	1	1	CAB6-250-EI-11-				CA 6-250-EI-11- 1V2	
500	97	170 / 185	213	293	300	300 / 315	300	300	1	1	CAB6-300-EI-11-				CA 6-300-EI-11- 1V2	
500	135	238 / 250	298	424	420	420 / 425	420	420	1	1	CAB6-420-EI-11-				CA 6-420-EI-11- 1V2	
														☆		

⊕ ⊗ ☆

Options	Cat. No. suffix	Description	Ordering example
⊕ Position of the coil connection	No entry U	△ Coil connection on the line side (above, standard shipment) △ Coil connection on the load side (below)	100-C09⊗10 100-C09U⊗10
⊗ Control voltage	For example ZJ	Enter the standard control voltage code from the table beside	100-C09J10
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard shipment) △ Multipacks (20 each)	100-C09⊗10 100-C09⊗10M

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Standard Control Voltages for DC Control

100-M..Z / CA 4..C	② ①	[V]	24	48	110	220											
	DC	⊗	Z24	Z48	Z11	Z2											
with diode protection circuit	DC	⊗	D24	—	—	—											

100-C..Z	①	[V]	6-12	12	24	17-30	36	48	60	64	72	80	110	115	125	220	230	250
	DC	⊗	ZR	ZQ	ZJ	ZV	(ZW)	ZY	ZZ	ZB	(ZG)	ZE	ZD	ZP	ZS	ZA	ZF	ZT
with diode protection circuit	DC	⊗	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—	—

CAB6-85...CAB6-105 CA 6-85...CA 6-105	② ①	[V]	24	48	110	220											
	DC	⊗	66	70	76	86											

CAB6-105-EI...CAB6-300-EI / CA 6-105-EI...CA 6-300-EI	② ①	[V]	24-28	48-72	90-135	110-135	170-255	190-255									
	DC	⊗	66	70	76	—	86	—									

CAB6-420-EI / CA 6-420-EI	DC	⊗	—	70	—	76	—	86									
---------------------------	----	---	---	----	---	----	---	----	--	--	--	--	--	--	--	--	--

Surcharge	Type	Available control voltages	no surcharge
special control voltages	100-M..Z / CA 4..C	12...250 VDC	greater than 25 pcs.
	100-C..Z	12...250 VDC	greater than 20 pcs.
	CAB6-85...CAB6-105 / CA 6-85...CA 6-105	24...240 VDC	greater than 25 pcs.
	CAB6-105-EI...CAB6-300-EI / CA 6-105-EI...CA 6-300-EI	24...255 VDC	greater than 25 pcs.
	CAB6-420-EI / CA 6-420-EI	43...255 VDC	greater than 25 pcs.
with diode protection circuit	100-M..Z / CA 4..C	24 VDC	—
	100-C..Z	24 VDC	—

() Control voltage identifications in parentheses: Please allow for a delivery time of approximately 4 weeks.

Mini-Contactors and Contactors

Product Selection



Special Contactor Versions

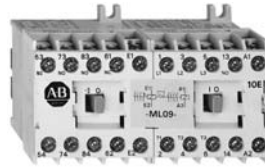
- AC / DC Control
- 4-poles Contactors
- Latched Contactors
- Elevator Contactors



100-M / CA 4



100-C



100-ML / CAV 4



CA 6

4-poles Contactors Bulletin 100-M / CA 4, 100-C

AC-1	Switching 3-phase motors AC-2, AC-3 ratings								Main poles fitted		Control	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
[A]	[kW]				[A]									
40 °C	230 V	400 / 415 V	500 V	690 V	230 V	400 / 415 V	500 V	690 V	N.O.	N.C.				
20	3.3	4.3 / 4.5	4.2	—	12	9	7	—	4	0	AC	100-M09N	⊗ 4	CA 4-9-M40-1V2
									4	0	DC	100-M09N	⊗ 4	CA 4-9C-M40-1V2
32	7.5	11	11	10	26.5	23 / 22	18	12	4	0	AC	100-C23	⊕ ⊗ 400	☆ —
									3	1		100-C23	⊕ ⊗ 300	④ —
									2	2		100-C23	⊕ ⊗ 200	④ —
									4	0		100-C23	⊕ ⊗ 400	☆ —
									3	1	DC	100-C23	⊕ ⊗ 300	④ —
									2	2		100-C23	⊕ ⊗ 200	④ —
												⊕ ⊗	☆	

Latched Mini-Contactors 100-ML / CAV 4

AC-1	Switching 3-phase motors AC-2, AC-3 ratings								Control	Allen-Bradley Cat. No.	Sprecher+ Schuh Type Ref.	
[A]	[kW]				[A]							
40 °C	230 V	400 / 415 V	500 V	690 V	230 V	400 / 415 V	500 V	690 V				
20	3.3	4.3 / 4.5	4.2	–	12	9	7	–	AC	100-ML09N③3	CAV 4-9-10-1V2	
									AC	100-ML09N③31	CAV 4-9-01-1V2	

Elevator Contactors for CA 6

Special versions for elevators, refrigeration units and heating plant according to CSA

Continuous rating	Motor load 3~			Aux. cont.		Allen-Bradley Cat. No.	Sprecher+ Schuh Type Ref.	
[A]	[HP]	[FLA]						
40 °C	575 V	575 V		N.O.	N.C.			
178	60	62		1	1	—	CA 6-85W-11-1V2	
178	75	77		1	1	—	CA 6-105W-11-1V2	
250	75	77		1	1	—	CA 6-140W-EI-11-1V2	
250	100	99		1	1	—	CA 6-170W-EI-11-1V2	

Options	Cat. No. suffix	Description	Ordering example
⊕ Position of the coil connection	No entry U	△ Coil connection on the line side (above, standard shipment) △ Coil connection on the load side (below)	100-C23③400 100-C23③400
⊗ Control voltage	For example KJ	Enter the standard control voltage code from the table beside	100-C23KJ400
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard shipment) △ Multipacks (20 each)	100-C23③400 100-C23③400M

④ Please inquire (minimum ordering quantity, delivery time approximately 3 weeks)

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Standard Control Voltages for AC and DC Control

100-M / CA 4	$\frac{1}{2}$	[V]	24	48	110	110-120	220-230	230	230-240	240	380-400	400-415						
	50 Hz	⊗	—	—	D	—	A	—	—	—	KK							
	60 Hz	⊗	—	—	—	D	—	—	A	—	—	KK						
	50/60 Hz	⊗	KD	KH	—	—	—	KF	—	KT	—	—						
100-M..Z / CA 4..C with diode protection circuit	$\frac{1}{2}$	[V]	24	48	110	220												
	DC	⊗	Z24	Z48	Z11	Z2												
	DC	⊗	D24	—	—	—												
100-C	$\frac{1}{2}$	[V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	200-230	208	208-240
	50 Hz	⊗	(R)	K	V	(W)	X	Y	KP	—	D	(P)	S	KG	—	—	—	—
	60 Hz	⊗	(Q)	J	—	V	—	X	—	KP	—	D	—	—	KG	—	H	L
	50/60 Hz	⊗	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	—	(KL)	—	—
	$\frac{1}{2}$	[V]	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600	
	50 Hz	⊗	F	—	VA	T	—	—	—	N	—	G	B	—	M	(C)	—	
	60 Hz	⊗	—	—	—	A	T	I	(E)	—	—	—	N	B	—	—	(C)	
	50/60 Hz	⊗	—	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—	
100-C..Z with diode protection circuit	$\frac{1}{2}$	[V]	6-12	12	24	17-30	36	48	60	64	72	80	110	115	125	220	230	250
	DC	⊗	ZR	ZQ	ZJ	ZV	(ZW)	ZY	ZZ	ZB	(ZG)	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	DC	⊗	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—	—
CA 6-85...CA 6-105	$\frac{1}{2}$	[V]	24	28	48	55	110	127	220-230	230	240	260	277	380-400	415	440-460	480	
	50 Hz	⊗	05	—	08	—	10	—	13	—	15	—	—	16	17	—	—	
	60 Hz	⊗	—	05	—	08	—	10	—	—	13	15	—	—	16	17		
	50/60 Hz	⊗	—	—	—	—	48	—	—	54	55	—	—	—	—	—	—	
CA 6-105-EI...CA 6-170-EI	$\frac{1}{2}$	[V]	24-28	40-50	43-65	110-130	208-277	380-400										
	50/60 Hz	⊗	05	08	—	10	14	16										
CA 6-85...CA 6-105	$\frac{1}{2}$	[V]	24	48	110	220												
	DC	⊗	66	70	76	86												
CA 6-105-EI...CA 6-300-EI	$\frac{1}{2}$	[V]	23-26	48-72	90-135	110-135	170-255	190-255										
	DC	⊗	66	70	76	—	86	—										
Surcharge	Type							Available control voltages					no surcharge					
special control voltages	100-M / CA 4							12...500 V50Hz / 12...600 V60Hz / 12...250 VDC					greater than 25 pcs.					
	100-C							12...600 V50Hz / 12...600 V60Hz / 12...250 VDC					greater than 20 pcs.					
	CA 6-85...CA 6-105							21...575 V50/60Hz / 24...240 VDC					greater than 25 pcs.					
	CA 6-105-EI...CA 6-170-EI							24...400 V50/60Hz / 24...255 VDC					greater than 25 pcs.					
with diode protection circuit	100-M..Z / CA 4..C							24 VDC					—					
	100-C..Z							24 VDC					—					

() Control voltage identifications in parentheses: Please allow for a delivery time of approximately 4 weeks.

Mini-Contactors and Contactors

Product Selection



Reversing Contactors

- 3 Main Contacts, Coil Connections above
- incl. Mechanical / Electrical Interlock
- incl. Wiring Set of Main Pole Terminals



104-M



104-C



CAUB6

AC-1	Switching 3-phase motors AC-2, AC-3 ratings								Aux. cont. *		Allen-Bradley Cat. No.			With	Without	Surcharge
[A]	[kW]				[A]				N.O.	N.C.				mechanical interlock	mechanical interlock	DC Control
40 °C	230 V	400 / 415 V	500 V	690 V	230 V	400 / 415 V	500 V	690 V								
20	1.7	2.5 7 2.6	2.3	–	6.5	5.3	4	–	1	0	104-M05N	⊗	3	◆		
									0	0	104-M05N	⊗	31	◆		
20	3.3	4.3 / 4.5	4.2	–	12	9	7	–	1	0	104-M09N	⊗	3	◆		
									0	0	104-M09N	⊗	31	◆		
25	3	4	4	4	11.5	9	7	5	1	0	104-C09	⊗	10	-E◆		
									0	0	104-C09	⊗	00	-E◆		
25	4	5.5	5.5	5.5	14.5	12	10	7	1	0	104-C12	⊗	10	-E◆		
									0	0	104-C12	⊗	00	-E◆		
32	5.5	7.5	7.5	7.5	20	16 / 15	13	9.3	1	0	104-C16	⊗	10	-E◆		
									0	0	104-C16	⊗	00	-E◆		
32	7.5	11	11	10	26.5	23 / 22	18	12	1	0	104-C23	⊗	10	-E◆		
									0	0	104-C23	⊗	00	-E◆		
45	10	15	15	15	34	30 / 29	24	17	0	0	104-C30	⊗	00	-E◆		
50	11	18.5	18.5	18.5	37	37 / 36	30	20	0	0	104-C37	⊗	00	-E◆		
63	13	22	22	22	42	43 / 41	34	25	0	0	104-C43	⊗	00	-E◆		
90	18.5	30	30	30	62	62 / 58	50	34	0	0	104-C60	⊗	00	-E◆		
90	22	37	37	37	72	72 / 69	56	42	0	0	104-C72	⊗	00	-E◆		
100	25	45	45	45	85	85 / 82	68	49	0	0	104-C85	⊗	00	-E◆		
											⊗	①	-E◆			
160	33	58 / 75	75	101	105	105 / 130	105	105	1	0	CAU	⊕	B6-105-EI-	10	⊗	
250	45	78 / 90	98	135	140	140 / 155	140	140	1	0	CAU	⊕	B6-140-EI-	10	⊗	
250	55	95 / 100	118	167	170	170 / 170	170	170	1	0	CAU	⊕	B6-170-EI-	10	⊗	
350	67	118 / 132	147	205	210	210 / 227	210	210	1	0	CAU	⊕	B6-210-EI-	10	⊗	
350	80	140 / 150	177	245	250	250 / 258	250	250	1	0	CAU	⊕	B6-250-EI-	10	⊗	
500	97	170 / 185	213	293	300	300 / 315	300	300	1	0	CAU	⊕	B6-300-EI-	10	⊗	
500	135	238 / 250	298	424	420	420 / 425	420	420	1	0	CAU	⊕	B6-420-EI-	10	⊗	
											⊕		①	⊗		

Options	Cat. No. suffix	Description	Ordering example
◆ Mechanical interlock	No entry -X	△ with mechanical interlock (standard shipment) △ without mechanical interlock	104-M05N⊗3 104-M05N⊗3-X
⊕ Mechanical interlock	No entry M	△ without mechanical interlock (standard shipment) △ with mechanical interlock	CAU-B6-105-EI-10⊗ CAUMB6-105-EI-10⊗
⊗ Control voltage	For example KJ	Enter the standard control voltage code from the table beside	104-M05NKKJ3

① The auxiliary contacts used for the electrical interlock (1 N.C. per contactor) are not counted

* Available auxiliary contacts per contactor

E Wiring according to IEC-standard

Accessories – Page 4-12

Technical Information – Page 4-22

Dimensions – Page 4-44

Standard Control Voltages for AC und DC-Control

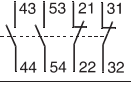
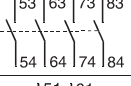
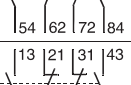
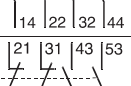
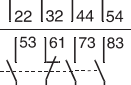
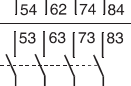
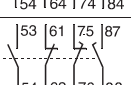
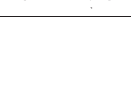
104-M		[V]	24	48	110	110-120	220-230	230	230-240	240	380-400	400-415						
	50 Hz	⊗	—	—	D	—	A	—	—	—	KK							
	60 Hz	⊗	—	—	—	D	—	—	A	—	—	KK						
	50/60 Hz	⊗	KD	KH	—	—	—	KF	—	KT	—	—						
104-M..Z with diode protection circuit		[V]	24	48	110	220												
	DC	⊗	Z24	Z48	Z11	Z2												
	DC	⊗	D24	—	—	—												
104-C		[V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	200-230	208	208-240
	50 Hz	⊗	(R)	K	V	(W)	X	Y	KP	—	D	(P)	S	KG	—	—	—	—
	60 Hz	⊗	(Q)	J	—	V	—	X	—	KP	—	D	—	—	KG	—	H	L
	50/60 Hz	⊗	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	—	(KL)	—	—
		[V]	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600	
	50 Hz	⊗	F	—	VA	T	—	—	—	N	—	G	B	—	M	(C)	—	
	60 Hz	⊗	—	—	—	A	T	I	(E)	—	—	—	N	B	—	—	(C)	
	50/60 Hz	⊗	—	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—	
104-C..Z with diode protection circuit		[V]	6-12	12	24	17-30	36	48	60	64	72	80	110	115	125	220	230	250
	DC	⊗	ZR	ZQ	ZJ	ZV	(ZW)	ZY	ZZ	ZB	(ZG)	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	DC	⊗	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—	—
CAB6-105-EI...CAB6-170-EI		[V]	24-28	40-50	43-65	110-130	208-277	380-400										
	50/60 Hz	⊗	05	08	—	10	14	16										
CAB6-210-EI...CAB6-300-EI	50/60 Hz	⊗	—	08	—	10	14	16										
CAB6-420-EI	50/60 Hz	⊗	—	—	08	10	14	16										
CAB6-105-EI...CAB6-300-EI		[V]	23-26	48-72	90-135	110-135	170-255	190-255										
	DC	⊗	66	70	76	—	86	—										
CAB6-420-EI	DC	⊗	—	70	—	76	—	86										
Surcharge	Type	Available control voltages										No surcharge						
special control voltages	104-M	12...500 V50Hz / 12...600 V60Hz / 12...250 VDC										greater than 25 pcs.						
	104-C	12...600 V50Hz / 12...600 V60Hz / 12...250 VDC										greater than 20 pcs.						
	CAB6-105-EI...CAB6-170-EI	24...400 V 50/60 Hz / 24...255 VDC										greater than 25 pcs.						
	CAB6-210-EI...CAB6-300-EI	40...400 V 50/60 Hz / 24...255 VDC										greater than 25 pcs.						
	CAB6-420-EI	43...400 V 50/60 Hz / 43...255 VDC										greater than 25 pcs.						
with diode protection circuit	104-M..Z	24 VDC										—						
	104-C..Z	24 VDC										—						

() Control voltage identifications in parentheses: Please allow for a delivery time of approximately 4 weeks.

Mini-Contactors and Contactors

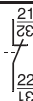
Accessories

Accessories

	Description	Diagram	For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Auxiliary contact blocks - Terminal marking according to EN 50011. - Contacts compatible with electronics, fail-safe linkage - Fitted to contactor without tools		100-M...3, 100-M...4 CA 4...10, CA 4-M40	195-MB02	CA 4-P-02	
			all 100-M / CA 4	195-MB11	CA 4-P-11	
			all 100-M / CA 4	195-MA20	CS 4-P-20	
			100-M...3, 100-M...4 / CA 4...10, CA 4-M40	195-MB22	CA 4-P-22	
			all 100-M / CA 4	195-MA40	CS 4-P-40	
  	Auxiliary contact blocks for front installation 2 and 4 poles - Quick and easy mounting without tools - Contacts compatible with electronics - Mutual positive guidance with the main contactor poles (except for L types) - Models with equal function with several terminal numbering choices L = late break / early make		all 100-C	100-FA02	—	
			all 100-C	100-FA11	☆	—
			C30®00...C85®00	100-FB11	☆	—
			C09®10...C23®10 C09®01...C23®01	100-FC11	☆	—
			all 100-C	100-FA20	—	
			C30®00...C85®00	100-FBL11	—	
			all 100-C	100-FA22	☆	—
			C30®00...C85®00	100-FB22	☆	—
			C09®10...C23®10 C09®01...C23®01	100-FC22	☆	—
			all 100-C	100-FA31	—	
			all 100-C	100-FA40	—	
			all 100-C	100-FAL22	—	

☆

Accessories

	Description	Diagram	For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Auxiliary contact blocks for side mounting ② 1 and 2 poles - Two-way numbering for right or left mounting on the contactor - Quick and easy mounting without tools - Contacts compatible with electronics - Mutual positive guidance with the main contactor poles (except for L types) L = late break / early make		all 100-C	100-SB01	☆ —	
			all 100-C ②	100-SB10	☆ —	
			all 100-C ②	100-SB02	☆ —	
			all 100-C ②	100-SB11	☆ —	
			all 100-C ②	100-SB20	☆ —	
			all 100-C ②	100-SBL11	—	
	Auxiliary contact blocks - Provision for up to 4 auxiliary switch blocks per contactor. P1 and P3 on the left, P2 and P4 on the right. - No change of base dimensions with 1 auxiliary contact block on each side.		all CAB6 / CA 6 for fitting on the left	CAB6-P1-11	CA 6-P1-11	
			all CAB6 / CA 6 for fitting on the right	CAB6-P2-11	CA 6-P2-11	
			all CAB6 / CA 6 for fitting on the left	CAB6-P3-11	CA 6-P3-11	
			all CAB6 / CA 6 for fitting on the right	CAB6-P4-11	CA 6-P4-11	
			all CAB6 / CA 6 for fitting on the right	CAB6-P2-L11	CA 6-P2-L11	
			all CAB6 / CA 6 for fitting on the right	CAB6-P2-B11	CA 6-P2-B11	
			all CAB6 / CA 6 for fitting on the left	CAB6-P3-B11	CA 6-P3-B11	
☆						

Options	Cat. No. suffix	Description	Ordering example
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard shipment) △ Multipacks (10 each)	100-SB10 100-SB10M

② Double numbering

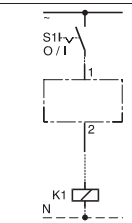
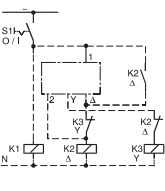
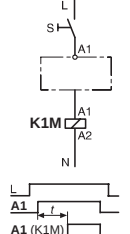
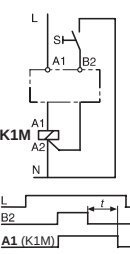
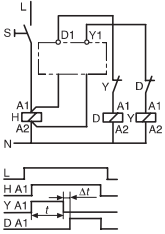
– Left mounting only is recommended for 100-C09 ... 100-C23 due to double numbering

- ② Up to 8 auxiliary contacts may be mounted: **Contacter + front mounting** (AC max. 4 N.C. / DC max. 4 N.C.), **side mounting** (AC max. 2 N.O. / DC max. 2 N.O. and max. 2 N.C.)

Mini-Contactors and Contactors

Accessories

Accessories

	Description	Diagram		For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Pneumatic timing modules Pneumatic timing element contacts switch after the set time; the contacts on the main contactor operate without delay. Continuous adjustment range		Pick-up delay 0.3 ... 30 s 1.8 ... 180 s	100-C with AC control	100-FPTA30 100-FPTA180	— —	
			Dropout delay 0.3 ... 30 s 1.8 ... 180 s	100-C with AC control	100-FPTB30 100-FPTB180	— —	
	Timer After the set time has elapsed, the timer operates and the contactor in series is energised.		Pick-up delay 1 ... 3 s 1 ... 30 s 110 ... 250 V 50/60 Hz / DC	100-M / CA 4	196-MT3S 196-MT30S	CRZE 4-3s CRZE 4-30s	
	Timer for Y-Δ -connection After the set time has elapsed, the contactor K 3 (Y) is de-energised and then after a time of 90 ± 30 ms, the contactor K 2 (D) is energised.		Setting time Y-contactor 1 ... 30 s 110 ... 120 V 50/60 Hz	100-M / CA 4	196-MTSDA1	CRZY 4-30s-120V	
			1 ... 30 s 220 ... 250 V 50/60 Hz	100-M / CA 4	196-MTSDA2	CRZY 4-30s-250V	
	Electronic timing modules Delay of the contactor coil - Continuous adjustment range - High repeat accuracy		Pick-up delay 0.1 ... 3 s 1 ... 30 s 10 ... 180 s 110 ... 240 V 50/60 Hz 110 ... 250 VDC	all 100-C	100-ETA3 100-ETA30 100-ETA180	— — —	
	100-ETB After interruption of the control signal, the contactor is switched off after the end of the set delay time.		Dropout delay 0.3 ... 3 s 1 ... 30 s 10 ... 180 s 110 ... 240 V 50/60 Hz	100-C with AC control	100-ETB3 100-ETB30 100-ETB180	— — —	
	100-ETY Contactor K 3 (Y) is switched off and K 2 (D) is switched on after the set Y time. (Switching delay Δt 90 ms)		Make-time Y contactor 1 ... 30 s 110 ... 240 V 50/60 Hz	100-C with AC control	100-ETY30	—	

Mini-Contactors and Contactors

Accessories

Accessories

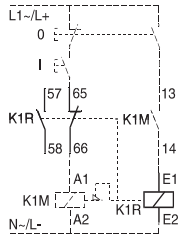
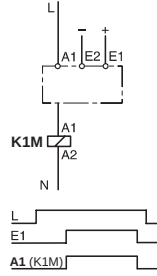
	Description	Diagram		For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	Index
	Mechanical interlock For the mutual interlocking of two adjacent contactors. Mechanical interlock for 2 contactors mounted horizontally Clips onto rear of contactor, no additional space requirement			100-M / CA 4 with AC control	199-MXM1	CM 4	
	Mechanical interlock For the mutual interlocking of two adjacent contactors. - Uniform interlocking for all 100-C contactors - Interlocking of different sizes possible - Mechanical and electrical interlocking possible in one module by means of integrated auxiliary contacts 9 mm connecting piece included in materials provided		without auxiliary contacts	all 100-C	100-MCA00	—	
			with auxiliary contacts 2 N.C.	all 100-C	100-MCA02	☆ —	
	Mechanical interlock For the mutual interlocking of two adjacent contactors. For mounting between two contactors, no additional space requirement.			all CAB6 / CA 6	CMB6	CM 6	
☆							

Options	Cat. No. suffix	Description	Ordering example
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard shipment) △ Multipacks (10 each)	100-MCA02 100-MCA02M

Mini-Contactors and Contactors

Accessories

Accessories

	Description	Diagram	For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Mechanical latch In contactors with latching, the contactor coil is immediately switched off after closing by the contact on the latch (65-66). Consequently, no holding current flows, and it can be used with all contactor models with AC operating mechanism (with AC coil), also for DC operation. Auxiliary contacts 1 N.O. + 1 N.C.		100-C with AC control	100-FL11	⊗	—
	Interface (electronic) Interface between the DC control signal (PLC) and the AC operating mechanism of the contactor. - Control voltage 18 ... 30 VDC (10...15 mA) - For coil voltages of 110 ... 240 VAC - Suitable for all 100-C contactors - Switching capacity 200 VA - Requires no overvoltage protection for the coils 10 each		100-C with AC control	100-JE	☆	—
				⊗	☆	

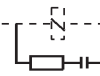
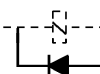
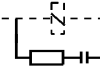
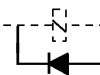
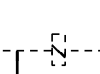
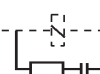
Options	Cat. No. suffix	Description	Ordering example
⊗ Control voltage	For example KJ	Enter the control voltage code from tables below	100-FL11KJ
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard shipment) △ Multipacks (10 each)	100-JEM⊗ 100-JEM⊗M

⊗ Standard Control Voltages

100-FL11		[V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	200-230	208	208-240
	50 Hz	⊗ (R)	K	V	(W)	X	Y	KP	—	D	(P)	S	KG	—	—	—	—	
	60 Hz	⊗ (Q)	J	—	V	—	X	—	KP	—	D	—	—	KG	—	H	L	
	50/60 Hz	⊗	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	—	(KL)	—	—
		[V]	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600	
	50 Hz	⊗	F	—	VA	T	—	—	—	N	—	G	B	—	M	(C)	—	
	60 Hz	⊗	—	—	—	A	T	I	(E)	—	—	—	N	B	—	—	(C)	
	50/60 Hz	⊗	—	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—	
Surcharge		Type							Available control voltages					No surcharge				
Special control voltages		100-FL11							12...500 V 50 Hz / 12...600 V 60 Hz					greater than 20 pcs.				

() **Control voltage identifications in parentheses:** Please allow for a delivery time of approximately 4 weeks.

Accessories

	Description	Diagram		For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Suppressor modules For limiting surge voltage when coil circuits are interrupted.		RC module AC control 24...48 VAC 110...280 VAC 380...480 VAC		199-MSMN48 199-MSMN280 199-MSMN480	CRC 4-N48 CRC 4-N280 CRC 4-N480	
			Diode circuit DC control 12...250 VDC	Two-wire version all 100-M / CA 4	199-MSMD1 199-MSMD2	CRD 4 CRD 4-N250	
			Varistor circuit AC/DC control 12...55 VAC / 12...77 VDC 56...136 VAC / 78...178 VDC 137...277 VAC / 181...350 VDC	all 100-M / CA 4	199-MSMV4 199-MSMV5 199-MSMV6	CRV 4 -N55 CRV 4 -N136 CRV 4 -N277	
	Suppressor modules For limiting of switching overvoltage of the solenoids. - Can be plugged into coil terminals of the 100-C contactors 10 each		RC module AC control 24...48 V 50/60 Hz 110...280 V 50/60 Hz 380...480 V 50/60 Hz	100-C with AC control	100-FSC48 100-FSC280 100-FSC480	☆ ☆ ☆	— — —
			Diode circuit DC control 12...250 VDC	100-C with DC control	100-FSD250	—	
			Varistor circuit AC/DC control 12...55 VAC / 12...77 VDC 56...136 VAC / 78...180 VDC 137...277 VAC / 181...350 VDC 278...575 VAC	all 100-C	100-FSV55 100-FSV136 100-FSV277 100-FSV575	☆ ☆ ☆ ☆	— — — —
			RC module AC control 21...48 V 50 Hz / 24...55 V 60 Hz 95...110 V 50 Hz / 110...127 V 60 Hz 190...240 V 50 Hz / 220...277 V 60 Hz 380...550 V 50 Hz / 440...575 V 60 Hz	CAB6-85/105 CA 6-85/105	CRCB6-48 CRCB6-110 CRCB6-240 CRCB6-550	CRC 6-48 CRC 6-110 CRC 6-240 CRC 6-550	
			Varistor circuit AC/DC control 24...28 VAC / 23...26 VDC 43...65 VAC / 48...72 VDC ≤ 55 VAC 56...136 VAC 137...277 VAC 208...277 VAC ① 380...400 VAC 278...575 VAC	CAB6-85... 420-EI / CA 6-85... 420-EI /	CRVB6-30 CRVB6-75 CRVB6-55 CRVB6-136 CRVB6-277 CRVB6-460 CRVB6-550 CRVB6-575	CRV 6-30 CRV 6-75 CRV 6-55 CRV 6-136 CRV 6-277 CRV 6-460 CRV 6-550 CRV 6-575	
							☆
Options	Cat. No. suffix	Description				Ordering example	
☆ Packing lots (units)	No entry M	△ Single package (1 each, standard shipment) △ Multipacks (10 each)				100-FSC48 100-FSC48M	

Mini-Contactors and Contactors

Accessories

Connecting Components

	Description		For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Adapter For simple mounting of the timers without using tools on top-hat rails EN 50 022-35 and G rails		196-MT... / CRZ...	196-MTM	CR 4-P	
 Cat. No. 100-S9	Connection pieces - To connect contactors into combinations - Packing lots (units) 10 each	Single wedge Wedge-type connector	0 mm 9 mm	all 100-C	100-S0 100-S9	— —
	Terminal blocks Protection class IP2LX acc. IEC 529 and DIN 40 050	Frame terminal blocks (Set of 2 pcs.) For CA(B)6-85 / CA(B)6-105 For CA(B)6-105-EI / CA(B)6-170-EI For CA(B)6-210-EI...CA(B)6-420-EI		CAB6-HB1 CAB6-HB2 CAB6-HB3	CA 6-HB1 CA 6-HB2 CA 6-HB3	
	Control circuit terminals	Additional terminal 2 x 2.5 mm ² For connecting control cables CAB6 / CA 6-85 ... 170-EI and CA 6 / CAB6-210-EI ... 420-EI to main contact terminals		CAB6-AT CAB6-AT2	22.115.247-01 22.115.248-01	
	Shroud for protection against accidental contact Protection class IP10 acc. IEC 529 and DIN 40 050	Single contactor covers (Set of 2 p.) For CA(B)6-85, CA(B)6-105 For CA(B)6-105-EI, CA(B)6-170-EI For CA(B)6-210-EI...CA(B)6-420-EI		CAB6-HA1 CAB6-HA2 CAB6-HA3	CA 6-HA1 CA 6-HA2 CA 6-HA3	
		Full covers For DOL starters CA(B)6-85...CA(B)6-170-EI For reversing starters CA(B)6-85...CA(B)6-170-EI For Y-Δ starters CA(B)6-85...CA(B)6-170-EI		CAB6-GA11 CAB6-GA12 CAB6-GA13	CA 6-GA11 CA 6-GA12 CA 6-GA13	
	Mounting plates Galvanised passivated steel plate for combinations.	For CA(B)6-85...CA(B)6-170-EI For DOL starters For reversing or two stage starters For Y-Δ starters or Dahlander-starters		CAB6-105-PS CAB6-105-PU CAB6-105-PY	CA 6-105-PS CA 6-105-PU CA 6-105-PY	
		For CA(B)6-210-EI...CA(B)6-420-EI For DOL starters For reversing or two stage starters For Y-Δ starters or Dahlander-starters		CAB6-250-PS CAB6-250-PU CAB6-250-PY	CA 6-250-PS CA 6-250-PU CA 6-250-PY	
	Shroud for protection against manual operation - Protection against unintended manual operation - For contactors and auxiliary contacts in safety circuits	100-C09, 100-C85 100-FA, 100-FB, 100-FC, 100-FP, 100-FL		100-SCC 100-SCF	— —	
	Connection modules Connector between a 140-MN / KTA 3-25 and contactor or between reversing busbars and star/delta busbars	see chapter 3 for details	100-M / CA 4			
	Connecting module Connects 140-MN / KTA 3-25 circuit-breaker with 100-C contactors. - The connecting module enables the interconnections to be established safely, quickly and simply. - For DOL- Reversing- und Star-Delta-Starters			140-NW23	—	

Connecting Components

	Description	For use with	Allen-Bradley Cat.-No.	Sprecher+Schuh Type Ref.	
	Connection kits For reversing starters	100-C16...100-C23 100-C30...100-C37 100-C43 100-C60...100-C85	105-PW23 105-PW37 105-PW43 105-PW85	— — — —	
	For Y-Δ starters	100-C16...100-C23 100-C30...100-C37 100-C43 100-C60...100-C85	170-PW23 170-PW37 170-PW43 170-PW85	— — — —	
	Wiring and bridging stes For CA(B)6-85 ... CA(B)6-170-EI Input connections 45 mm ² (for CA(B)6-..HU) Input connections 50 mm ² (for CA(B)6-..HB) Output connections 45 mm ² (for CA(B)6-..HU) Output connections 50 mm ² (for CA(B)6-..HB) For star contactor CA 3-60-N ... 72-N with 1 overload relay 16 mm ² For star contactor CA 3-60-N ... 72-N with 2 overload relays 16 mm ² For star contactor 100-C60 ... C85 with 1 overload relay 25 mm ² For star contactor 100-C60 ... C85 with 1 overload relay 25 mm ² (for CA(B)6-..HB) «Star-point» for 100-C60 ... C85; 25 mm ² «Star-point» for CA 3-60-N ... 72-N; 16 mm ² «Star-point» for CA(B)6-85 ... CA(B)6-170-EI For CA(B)6-210-EI ... CA(B)6-420-EI Input connections 120 mm ² (for CA(B)6-..HB3 und CA(B)6-..HU) Output connections 120 mm ² (for CA(B)6-..HU) Output connections 120 mm ² (for CA(B)6-..HB) For star contactor CA(B)6-140-EI ... CA(B)6-170-EI; 80 mm ² For star contactor CA(B)6-210-EI ... CA(B)6-250-EI; 120 mm ² For star contactor CA(B)6-210-EI ... CA(B)6-250-EI; 120 mm ² (for CA(B)6-..HB) «Star-point» for CA(B)6-210-EI ... CA(B)6-420-EI	CAB6-105-VL CAB6-105-VLHB CAB6-105-VT CAB6-105-VTHB CAB6-105-VY CAB6-105-VYT CAB6-140-VY CAB6-140-VYHB CAB6-140-VYHB CAB6-140-VYS CAB6-105-VYS CAB6-105-VYU CAB6-250-VL CAB6-250-VT CAB6-250-VTHB CAB6-250-VY CAB6-250-VT CAB6-250-VTHB CAB6-250-VYU	CA 6-105-VL CA 6-105-VLHB CA 6-105-VT CA 6-105-VTHB CA 6-105-VY CA 6-105-VYT CA 6-140-VY CA 6-140-VYHB CA 6-140-VYHB CA 6-140-VYS CA 6-105-VYS CA 6-105-VYU CA 6-250-VL CA 6-250-VT CA 6-250-VTHB CA 6-250-VY CA 6-250-VT CA 6-250-VTHB CA 6-250-VYU		

Labeling Materials

	Uniform labeling materials for contactors, motor protection devices, timing relays and circuit-breakers Product Information and Ordering Information see Chapter 3
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Replacement Parts

	Description	Type	For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Arc chambers for contactors	For CAB6 / CA 6 contactors for 3 poles	CA(B)6-85 CA(B)6-105 CA(B)6-105-EI CA(B)6-140-EI CA(B)6-170-EI CA(B)6-210-EI CA(B)6-250-EI CA(B)6-300-EI CA(B)6-420-EI	CAB6-85-ARC CAB6-105-ARC CAB6-105-EI-ARC CAB6-140-EI-ARC CAB6-170-EI-ARC CAB6-210-EI-ARC CAB6-250-EI-ARC CAB6-300-EI-ARC CAB6-420-EI-ARC	22.801.204-09 22.801.204-10 22.801.206-02 22.802.204-05 22.802.204-06 22.805.203-02 22.805.204-02 22.806.203-01 22.806.204-01	
	Main contact sets for contactors	Set for 3 poles	CA(B)6-85 CA(B)6-105 CA(B)6-105-EI CA(B)6-140-EI CA(B)6-170-EI CA(B)6-210-EI CA(B)6-250-EI CA(B)6-300-EI CA(B)6-420-EI	CAB6-85-CONT-1 CAB6-105-CONT-2 CAB6-105-EI-CONT-2 CAB6-140-EI-CONT-3 CAB6-170-EI-CONT-4 CAB6-210-EI-CONT-5 CAB6-250-EI-CONT-6 CAB6-300-EI-CONT-7 CAB6-420-EI-CONT-8	22.801.200-01 22.801.201-01 22.801.206-01 22.802.200-01 22.802.201-01 22.805.201-01 22.805.202-01 22.806.201-01 22.806.202-01	

Mini-Contactors and Contactors

Accessories

Replacement Parts



AC - standard control voltages			100-C09 ... 100-C16	100-C23 ... 100-C37	100-C43	100-C60 ... 100-C85	DC - standard control voltages	100-C09 ... 100-C16	100-C23 ... 100-C37	100-C43	100-C60 ... 100-C85
50 Hz	60 Hz	50/60 Hz	Cat. No.	Cat. No.	Cat. No.	Cat. No.	VDC	Cat. No.	Cat. No.	Cat. No.	Cat. No.
	12 V		TA006	TC006	TD006	TE006	6 ... 12 V	TA766	TC766	TD766	TE766
12 V			TA404	TC404	TD404	TE404	12 V	TA708	TC708	TD708	TE708
	24 V		TA013	TC013	TD013	TE013	24 V Diode	TA714M	TC714M	TD714M	TE714M
24 V			TA407	TC407	TD407	TE407	17 ... 30 V	TA769	TC769	TD769	TE769
		24 V	TA855	TC855	TD855	TE855	24 V	TA714	TC714	TD714	TE714
32 V	36 V		TA481	TC481	TD481	TE481	36 V	TA719	TC719	TD719	TE719
36 V			TA410	TC410	TD410	TE410	48 V	TA724	TC724	TD724	TE724
42 V	48 V		TA482	TC482	TD482	TE482	60 V	TA774	TC774	TD774	TE774
48 V			TA414	TC414	TD414	TE414	64 V	TA727	TC727	TD727	TE727
		48 V	TA860	TC860	TD860	TE860	72 V	TA728	TC728	TD728	TE728
100 V	100...110 V		TA861	TC861	TD861	TE861	80 V	TA729	TC729	TD729	TE729
110 V	120 V		TA473	TC473	TD473	TE473	110 V	TA733	TC733	TD733	TE733
		110 V	TA856	TC856	TD856	TE856	115 V	TA734	TC734	TD734	TE734
120 V			TA425	TC425	TD425	TE425	125 V	TA737	TC737	TD737	TE737
127 V			TA428	TC428	TD428	TE428	220 V	TA747	TC747	TD747	TE747
200 V	200...220 V		TA862	TC862	TD862	TE862	230 V	TA749	TC749	TD749	TE749
		200...230 V	TA864	TC864	TD864	TE864	250 V	TA751	TC751	TD751	TE751
	208 V		TA049	TC049	TD049	TE049					
	208...240 V		TA296	TC296	TD296	TE296					
220 V	240 V		TA474	TC474	TD474	TE474					
220...230 V			TA441	TC441	TD441	TE441					
		230 V	TA851	TC851	TD851	TE851					
230...240 V			TA440	TC440	TD440	TE440					
240 V	277 V		TA480	TC480	TD480	TE480					
		240 V	TA858	TC858	TD858	TE858					
	347 V		TA065	TC065	TD065	TE065					
	380 V		TA067	TC067	TD067	TE067					
380...400 V	440 V		TA071	TC071	TD071	TE071					
		400 V	TA863	TC863	TD863	TE863					
400...415 V			TA457	TC457	TD457	TE457					
440 V	480 V		TA475	TC475	TD475	TE475					
		440 V	TA859	TC859	TD859	TE859					
500 V			TA479	TC479	TD479	TE479					
550 V	600 V		TA476	TC476	TD476	TE476					
Index											

Surcharge	Type	Available control voltages	No surcharge	
Special control voltages	100-C09 ... 100-C85 Please inquire about special voltages	12...500 V 50 Hz / 12...600 V 60 Hz 12 ... 250 VDC	greater than 20 pcs.	
with diode protection circuit	100-C09 ... 100-C85	24 VDC	—	

Replacement Parts

	Description	Type	For use with	Allen-Bradley Cat. No.	Sprecher+Schuh Type Ref.	
	Coils and supply modules for contactors Only for replacement	For CAB6 / CA 6 contactors				
		AC control Conventional coils	CAB6-85 / CA 6-85 ... CAB6-105 / CA 6-105	CAB6-105-COIL-	⊗ 22.801.314-	⊗
		Electronic coils	CAB6-105-EI / CA 6-105-EI ... CAB6-300-EI / CA 6-300-EI	CAB6-300-COIL-	⊗ 22.805.314-	⊗
			CAB6-420-EI / CA 6-420-EI	CAB6-420-COIL-	⊗ 22.806.314-	⊗
		DC control Conventional coils	CAB6-85 / CA 6-85 ... CAB6-105 / CA 6-105	CAB6-105-COIL-	⊗ 22.801.315-	⊗
		Electronic coils	CAB6-105-EI / CA 6-105-EI ... CAB6-300-EI / CA 6-300-EI	CAB6-300-COIL-	⊗ 22.805.316-	⊗
			CAB6-420-EI / CA 6-420-EI	CAB6-420-COIL-	⊗ 22.806.316-	⊗
						⊗

Options	Cat. No. suffix	Description	Ordering example
⊗ Control voltage	For example 14	Enter the control voltage code from tables below	CAB6-105-COIL-14

Standard Control Voltages

CAB6-85...CAB6-105 / CA 6-85...CA 6-105		[V]	24	28	48	55	110	127	220- 230	230	240	260	277	380- 400	415	440- 460	480	
	50 Hz	⊗	05	—	08	—	10	—	13	—	15	—	—	16	17	—	—	
	60 Hz	⊗	—	05	—	08	—	10	—	—	—	13	15	—	—	16	17	
	50/60 Hz	⊗	—	—	—	—	48	—	—	54	55	—	—	—	—	—	—	
CAB6-105-EI...CAB6-170-EI / CA 6-105-EI...CA 6-170-EI		[V]	24- 28	40- 50	43- 65	110- 130	208- 277	380- 400										
	50/60 Hz	⊗	05	08	—	10	14	16										
CAB6-210-EI...CAB6-300-EI / CA 6-210-EI...CA 6-300-EI		[V]	24- 28	40- 50	43- 65	110- 130	208- 277	380- 400										
	50/60 Hz	⊗	—	08	—	10	14	16										
CAB6-420-EI / CA 6-420-EI	50/60 Hz	⊗	—	—	08	10	14	16										
CAB6-85...CAB6-105 / CA 6-85...CA 6-105		[V]	24	48	110	220												
	DC	⊗	66	70	76	86												
CAB6-105-EI...CAB6-300-EI / CA 6-105-EI...CA 6-300-EI		[V]	23- 26	48- 72	90- 135	110- 135	170- 255	190- 255										
	DC	⊗	66	70	76	—	86	—										
CAB6-420-EI / CA 6-420-EI	DC	⊗	—	70	—	76	—	86										
Surcharge	Type	Available control voltages												No surcharge				
Special control voltages	CAB6-85...CAB6-105 / CA 6-85...CA 6-105	21...575 V 50/60 Hz / 24 ... 240 VDC												greater than 25 pcs.				
	CAB6-105-EI...CAB6-170-EI / CA 6-105-EI...CA 6-170-EI	24...400 V 50/60 Hz / 24 ... 255 VDC												greater than 25 pcs.				
	CAB6-210-EI...CAB6-300-EI / CA 6-210-EI...CA 6-300-EI	40...400 V 50/60 Hz / 23 ... 255 VDC												greater than 25 pcs.				
	CAB6-420-EI / CA 6-420-EI	43...400 V 50/60 Hz / 43 ... 255 VDC												greater than 25 pcs.				

Mini-Contactors and Contactors**Technical Information****Specifications according to IEC**

	100-M0... / CA 4-...		100-C					
	5	9	09	12	16	23	30	37
AC-1 active power load, three phase switching								
Ambient temperature 40 °C								
I_c ≤ 500 V [A]	20	20	25	25	32	32	45	50
690 V [A]	–	–	25	25	32	32	45	50
1000 V [A]	–	–	–	–	–	–	–	–
230 V [kW]	8	8	10	10	13	13	18	20
240 V [kW]	8.3	8.3	10	10	13	13	19	21
400 V [kW]	14	14	17	17	22	22	31	35
415 V [kW]	14	14	18	18	23	23	32	36
500 V [kW]	17	17	22	22	28	28	39	43
690 V [kW]	–	–	30	30	38	38	54	60
1000 V [kW]	–	–	–	–	–	–	–	–
Ambient temperature 60 °C								
I_c ≤ 500 V [A]	16	16	20	20	24	24	36	40
690 V [A]	–	–	20	20	24	24	36	40
1000 V [A]	–	–	–	–	–	–	–	–
230 V [kW]	6.4	6.4	8	8	10	10	14	16
240 V [kW]	6.7	6.7	8	8	10	10	15	17
400 V [kW]	11	11	14	14	17	17	25	28
415 V [kW]	12	12	14	14	17	17	26	29
500 V [kW]	14	14	17	17	21	21	31	35
690 V [kW]	–	–	24	24	29	29	43	48
1000 V [kW]	–	–	–	–	–	–	–	–
Switching of three phase motors								
AC-2, AC-3, AC-4								
230 V [A]	6.5	12	11.5	14.5	20	24	34	37
240 V [A]	6.5	12	11	14	19	24	32.5	36
400 V [A]	5.3	9	9	12	16	23	30	37
415 V [A]	5.3	9	9	12	15	22	29	36
500 V [A]	4	7	7	10	13	18	24	30
690 V [A]	–	–	5	7	9.3	12	17	20
1000 V [A]	–	–	–	–	–	–	–	–
230 V [kW]	1.7	3.3	3	4	5.5	7.5	10	11
240 V [kW]	1.8	3.4	3	4	5.5	7.5	10	11
400 V [kW]	2.5	4.3	4	5.5	7.5	11	15	18.5
415 V [kW]	2.6	4.5	4	5.5	7.5	11	15	18.5
500 V [kW]	2.3	4.2	4	5.5	7.5	11	15	18.5
690 V [kW]	–	–	4	5.5	7.5	10	15	18.5
1000 V [kW]	–	–	–	–	–	–	–	–
AC-4 at approx. 200 000 operations								
230 V [A]	2.3	3.9	5.5	7	10	12	15	17
240 V [A]	2.3	3.9	5.5	7	10	12	15	17
400 V [A]	2	3.3	4.3	6.6	9	10.2	12.2	14.1
415 V [A]	2	3.3	4.3	6.6	9	10.2	12.2	14.1
230 V [kW]	0.43	0.92	1.6	2	2.8	3.7	4.6	5.2
240 V [kW]	0.45	0.96	1.5	1.9	2.7	3.5	4.4	5
400 V [kW]	0.82	1.5	2	3	4	5	6	7
415 V [kW]	0.85	1.6	1.9	2.9	3.9	4.8	5.8	6.7
Switching frequency [oper./h]	250	250	250	250	220	200	200	200

100-C				CAB6... / CA 6...							
43	60	72	85	-85	-105(-EI)	-140-EI	-170-EI	-210-EI	-250-EI	-300-EI	-420-EI
63	90	90	100	160	160	250	250	350	350	450	500
63	90	90	100	160	160	250	250	350	350	450	500
–	–	–	–	160	160	250	250	350	350	450	500
25	36	36	40	64	64	100	100	139	139	179	199
26	37	37	42	67	67	104	104	145	145	187	208
44	62	62	69	111	111	173	173	242	242	312	346
45	65	65	72	115	115	180	180	252	252	323	359
55	78	78	87	139	139	217	217	303	303	390	433
75	108	108	120	191	191	299	299	418	418	538	598
–	–	–	–	277	277	433	433	606	606	779	866
50	72	72	85	135	135	210	210	300	300	380	425
50	72	72	85	135	135	210	210	300	300	380	425
–	–	–	–	135	135	210	210	300	300	380	425
20	29	29	34	54	54	84	84	120	120	151	169
21	30	30	35	56	56	87	87	125	125	158	177
35	50	50	59	94	94	145	145	208	208	263	294
36	52	52	61	97	97	151	151	216	216	273	305
43	62	62	74	117	117	182	182	260	260	329	368
60	86	86	102	161	161	251	251	359	359	454	508
–	–	–	–	234	234	364	364	520	520	658	736
42	62	72	85	85	105	140	170	210	250	300	420
41	60	70	82	85	105	140	170	210	250	300	420
43	62	72	85	85	105	140	170	210	250	300	420
41	58	69	82	95*	130*	155*	170	227*	258*	315*	425*
34	50	56	68	85	105	140	170	210	250	300	360
25	34	42	49	85	105	140	170	210	250	300	360
–	–	–	–	33	40	55	65	80	95	115	160
13	18.5	22	25	26	33	45	55	67	80	97	135
13	18.5	22	25	27	34	47	57	70	83	101	141
22	30	37	45	47	58	78	95	118	140	170	238
22	30	37	45	55*	75*	90*	100	132*	150*	185*	250*
22	30	37	45	59	75	98	118	147	177	213	298
22	30	37	45	81	101	135	167	205	245	293	424
–	–	–	–	45	55	75	90	110	133	163	225
19	28	34	41	43	50	60	67	85	105	140	170
19	28	34	41	43	50	60	67	85	105	140	170
16.6	25.5	31	38	43	50	60	67	85	105	140	170
16.6	25.5	31	38	43	50	60	67	85	105	140	170
6.1	8.6	11	13.6	13	15	18	21	27	33	45	54
5.8	8.2	10.5	13	13	16	19	22	28	35	47	57
8.5	12.5	16	20	23	27	33	36	47	58	78	94
8.2	12	15.4	19.3	24	28	35	38	49	60	81	98
200	120	120	120	100	100	100	100	50	50	50	50

* AC-4, at a design voltage of 415 V and design current: life reduced by 25 %

- in preparation

Mini-Contactors and Contactors

Technical Information

Specifications according to IEC

			100-M0... / CA 4-...		100-C					
			5	9	09	12	16	23	30	37
Star-delta starting										
≤ 230 V	[A]		11	21	20	25	35	46	59	64
≤ 240 V	[A]		11	21	19	24	33	44	56	62
400 V	[A]		9.2	16	16	21	28	40	52	64
415 V	[A]		9.2	16	16	21	26	38	50	62
500 V	[A]		6.9	12	12	17	23	31	42	52
690 V	[A]		–	–	9.3	12	15	20	28	36
1 000 V	[A]		–	–	–	–	–	–	–	–
230 V	[kW]		3.1	5.8	5.5	7.5	10	14	18	19
240 V	[kW]		3.2	6.3	5.5	7.5	10	14	18	20
400 V	[kW]		4.4	7.9	8	11	14	21	28	35
415 V	[kW]		4.5	8.2	8	11	14	21	28	35
500 V	[kW]		4.1	7.7	8	11	15	21	28	35
690 V	[kW]		–	–	8	11	14	19	28	32
1 000 V	[kW]		–	–	–	–	–	–	–	–
Short-circuit protection of contactors without motor protection relays										
Fuse gG according to IEC 947-4-1										
Coordination Type «1»	[A]		–	–	50	50	50	63	100	125
Coordination Type «2»	400 V	[A]	(16)	(16)	20	25	25	35	50	80
Coordination Type «2»	690 V	[A]	–	–	20	25	25	35	50	80

Mini-Contactors and Contactors

Technical Information

100-C				CAB6... / CA 6...							
43	60	72	85	-85	-105(-EI)	-140-EI	-170-EI	-210-EI	-250-EI	-300-EI	-420-EI
74	107	125	147	147	182	242	294	364	433	520	727
71	104	121	142	147	182	242	294	364	433	520	727
74	104	125	147	147	182	242	294	364	433	520	727
71	100	120	142	147	182	242	294	364	433	520	727
59	87	97	118	147	182	242	294	364	433	520	624
43	59	73	85	147	182	242	294	364	433	520	624
–	–	–	–	55	65	96	112	139	165	200	277
23	33	39	47	47	58	77	94	116	138	166	232
23	34	39	47	49	61	81	98	121	144	173	242
40	58	69	82	83	102	136	165	204	243	291	408
40	58	69	82	90	110	147	178	220	262	314	440
40	60	67	82	103	128	170	206	255	304	364	437
41	56	70	81	144	178	237	288	356	424	508	610
–	–	–	–	77	91	135	157	195	231	280	389
160	200	250	250	250	250	315	355	500	500	630	630
100	125	125	160	200	200	250	315	400	400	500	500
100	125	125	160	200	200	250	315	400	400	500	500

Mini-Contactors and Contactors

Technical Information

Specifications according to IEC

	100-M0... / CA 4-...		100-C					
	5	9	09	12	16	23	30	37
Switching, power transformers AC-6a according to IEC 947-4-1								
Inrush current	= n							
Rated transformer current	= n							
n = 30								
≤ 230 V [A]	2.9	5.4	5.2	6.5	9	12	15	17
≤ 240 V [A]	2.9	5.4	5	6.3	8.6	11	15	16
≤ 400 V [A]	2.4	4.1	4.1	5.4	7.2	10	14	17
415 V [A]	2.4	4.1	4.1	5.4	6.8	9.9	13	16
≤ 500 V [A]	–	–	3.2	4.5	5.9	8.1	11	14
≤ 690 V [A]	–	–	2.3	3.2	4.2	5.4	7.7	9
≤ 1000 V [A]	–	–	–	–	–	–	–	–
230 V [kVA]	1.2	2.2	2.1	2.6	3.6	4.8	6.1	6.6
240 V [kVA]	1.2	2.2	2.1	2.6	3.6	4.8	6.1	6.7
400 V [kVA]	1.7	2.8	2.8	3.7	5	7.2	9.4	12
415 V [kVA]	1.7	2.9	2.9	3.9	4.9	7.1	9.4	12
500 V [kVA]	1.6	2.7	2.7	3.9	5.1	7	9.4	12
690 V [kVA]	–	–	2.7	3.8	5	6.5	9.1	11
1000 V [kVA]	–	–	–	–	–	–	–	–
Switching three phase capacitors Minimum inductance of leads between capacitors in parallel: 6 µH								
Single capacitors								
40 °C								
230 V [kVar]	–	–	•	•	•	•	•	•
240 V [kVar]	–	–	•	•	•	•	•	•
400 V [kVar]	–	–	•	•	•	•	•	•
415 V [kVar]	–	–	•	•	•	•	•	•
500 V [kVar]	–	–	•	•	•	•	•	•
690 V [kVar]	–	–	•	•	•	•	•	•
1 000 V [kVar]	–	–	–	–	–	–	–	–
60 °C (55 °C)								
230 V [kVar]	–	–	•	•	•	•	•	•
240 V [kVar]	–	–	•	•	•	•	•	•
400 V [kVar]	–	–	•	•	•	•	•	•
415 V [kVar]	–	–	•	•	•	•	•	•
500 V [kVar]	–	–	•	•	•	•	•	•
690 V [kVar]	–	–	•	•	•	•	•	•
1 000 V [kVar]	–	–	–	–	–	–	–	–
Group capacitors								
40 °C								
230 V [kVar]	–	–	•	•	•	•	•	•
240 V [kVar]	–	–	•	•	•	•	•	•
400 V [kVar]	–	–	•	•	•	•	•	•
415 V [kVar]	–	–	•	•	•	•	•	•
500 V [kVar]	–	–	•	•	•	•	•	•
690 V [kVar]	–	–	•	•	•	•	•	•
1 000 V [kVar]	–	–	–	–	–	–	–	–
60 °C (55 °C)								
230 V [kVar]	–	–	•	•	•	•	•	•
240 V [kVar]	–	–	•	•	•	•	•	•
400 V [kVar]	–	–	•	•	•	•	•	•
415 V [kVar]	–	–	•	•	•	•	•	•
500 V [kVar]	–	–	•	•	•	•	•	•
690 V [kVar]	–	–	•	•	•	•	•	•
1 000 V [kVar]	–	–	–	–	–	–	–	–

• in preparation

Mini-Contactors and Contactors

Technical Information

100-C				CAB6... / CA 6...							
43	60	72	85	-85	-105(-EI)	-140-EI	-170-EI	-210-EI	-250-EI	-300-EI	-420-EI
19	28	32	38	38	1947	63	77	95	113	135	—
18	27	32	37	38	47	63	77	95	113	135	—
19	27	32	38	38	47	63	77	95	113	135	189
18	26	31	37	43	59	70	77	102	116	142	191
15	23	25	31	38	47	63	77	95	113	135	162
11	15	19	22	38	47	63	77	95	113	135	162
—	—	—	—	15	18	25	29	36	43	52	72
7.7	11	13	15	15	19	25	30	38	45	54	75
7.7	11	13	15	16	20	26	32	39	47	56	79
13	19	22	27	27	33	44	53	65	78	94	131
13	19	22	27	31	42	50	55	73	83	102	137
13	19	22	27	33	41	55	66	82	97	117	140
13	18	23	26	46	56	75	91	113	134	161	194
—	—	—	—	26	31	43	51	62	74	90	125
•	•	•	•	45	45	70	70	—	—	—	—
•	•	•	•	48	48	73	73	—	—	—	—
•	•	•	•	78	78	120	120	—	—	—	—
•	•	•	•	80	80	125	125	—	—	—	—
•	•	•	•	98	98	150	150	—	—	—	—
•	•	•	•	133	133	208	208	—	—	—	—
—	—	—	—	193	193	300	300	—	—	—	—
•	•	•	•	33	33	60	60	—	—	—	—
•	•	•	•	35	35	63	63	—	—	—	—
•	•	•	•	58	58	100	100	—	—	—	—
•	•	•	•	60	60	105	105	—	—	—	—
•	•	•	•	73	73	128	128	—	—	—	—
•	•	•	•	100	100	175	175	—	—	—	—
—	—	—	—	145	145	253	253	—	—	—	—
•	•	•	•	45	40	70	70	—	—	—	—
•	•	•	•	47	45	73	73	—	—	—	—
•	•	•	•	58	75	98	120	—	—	—	—
•	•	•	•	60	78	98	123	—	—	—	—
•	•	•	•	60	78	100	123	—	—	—	—
•	•	•	•	60	78	100	123	—	—	—	—
—	—	—	—	60	80	100	125	—	—	—	—
•	•	•	•	33	35	58	58	—	—	—	—
•	•	•	•	35	38	60	60	—	—	—	—
•	•	•	•	58	58	98	100	—	—	—	—
•	•	•	•	60	60	98	105	—	—	—	—
•	•	•	•	60	73	100	123	—	—	—	—
•	•	•	•	60	78	100	123	—	—	—	—
—	—	—	—	60	80	100	125	—	—	—	—

Mini-Contactors and Contactors**Technical Information****Specifications according to IEC**

				100-M0... / CA 4-...		100-C					
				5	9	09	12	16	23	30	37
Switching, lamps											
Filament AC-5b		[A]		9.3	9.3	12	12	12	25	25	35
Gas-discharge	AC-5a	open	[A]	18	18	22.5	22.5	28	28	40.5	45
		closed	[A]	14.5	14.5	18	18	21	21	32	36
Individually compensated: Max. capacitance at an expected short-circuit current of:											
10 kA		[μF]		750	750	1 000	1 000	1 000	1 000	2 700	2 700
20 kA		[μF]		400	400	500	500	500	500	1 350	1 350
50 kA		[μF]		–	–	200	200	200	200	540	540
Switching DC loads Non-inductive or slightly inductive loads resistance furnaces DC-1 at 60 °C											
1 contact	24/48 V	[A]		6/4	9/6	•	•	•	•	•	•
	110 V	[A]		0.6	1	•	•	•	•	•	•
	220 V	[A]		0.2	0.3	•	•	•	•	•	•
	440 V	[A]		0.08	0.1	•	•	•	•	•	•
2 contacts in series	24/48 V	[A]		6	9/8	•	•	•	•	•	•
	110 V	[A]		4	6	•	•	•	•	•	•
	220 V	[A]		0.8	1.2	•	•	•	•	•	•
	440 V	[A]		0.2	0.3	•	•	•	•	•	•
3 contacts in series	24/48 V	[A]		6	9	•	•	•	•	•	•
	110 V	[A]		6	9	•	•	•	•	•	•
	220 V	[A]		3	4	•	•	•	•	•	•
	440 V	[A]		0.4	0.6	•	•	•	•	•	•
Shunt wound motors Starting, reverse current breaking, reversing, stepping DC-3, 60 °C											
3 contacts in series	24/48 V	[A]		5/4	9/6	•	•	•	•	•	•
	110 V	[A]		2	3	•	•	•	•	•	•
	220 V	[A]		0.8	1.2	•	•	•	•	•	•
	440 V	[A]		0.15	0.2	•	•	•	•	•	•
Series wound motors Starting, reverse current breaking, reversing, stepping DC-5, 60 °C											
3 contacts in series	24/48 V	[A]		5/2	9/3	•	•	•	•	•	•
	110 V	[A]		0.6	1	•	•	•	•	•	•
	220 V	[A]		0.1	0.1	•	•	•	•	•	•
	440 V	[A]		–	–	•	•	•	•	•	•
Short time withstand I _{CW} , 60 °C											
1 s	[A]			110	110	210	210	290	380	480	525
4 s	[A]			85	85	140	150	220	280	360	390
10 s	[A]			60	60	100	120	175	220	290	310
15 s	[A]			50	50	90	100	150	200	250	270
60 s	[A]			30	30	60	60	90	125	170	175
240 s	[A]			20	20	40	40	50	60	100	100
900 s	[A]			20	20	30	30	38	38	54	60
Minimum cooling time at zero current		[Min.]		3	3	20	20	20	20	20	20

- in preparation

100-C				CAB6... / CA 6...							
43	60	72	85	-85	-105(-EI)	-140-EI	-170-EI	-210-EI	-250-EI	-300-EI	-420-EI
35	60	60	70	107	120	140	170	273	273	300	420
57	81	81	90	144	144	225	225	315	315	405	420
45	65	65	76	121.5	121.5	189	189	270	270	342	382.5
3 200	4 000	4 000	4 700	—	—	—	—	—	—	—	—
1 600	2 000	2 000	2 350	—	—	—	—	—	—	—	—
640	800	800	940	—	—	—	—	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	3	3	4	4	—	—	—	—
•	•	•	•	0.6	0.6	1	1	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	3	3	4	4	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	11	11	11	11	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	120	120	210	210	—	—	—	—
•	•	•	•	3	3	4	4	—	—	—	—
•	•	•	•	80	80	120	120	—	—	—	—
•	•	•	•	80	80	120	120	—	—	—	—
•	•	•	•	80	80	120	120	—	—	—	—
•	•	•	•	1.2	1.2	2	2	—	—	—	—
650	1 100	1 150	1 250	1 800	1 800	2 550	2 550	3 405	3 870	4 727	6 375
480	820	860	910	1 500	1 500	1 970	1 970	3 150	3 870	4 100	6 375
375	640	680	710	1 040	1 040	1 360	1 360	2 360	2 520	2 840	4 700
325	560	600	620	860	860	1 130	1 130	2 000	2 110	2 270	3 460
200	350	370	380	650	650	850	850	1 215	1 300	1 500	1 880
120	190	190	200	340	340	600	600	705	750	840	1 280
76	108	108	120	240	240	440	440	460	500	590	840
20	20	20	20	20	20	20	20	30	30	30	30

• in preparation

Mini-Contactors and Contactors**Technical Information****Specifications according to IEC**

	100-M0... / CA 4-...		100-C					
	5	9	09	12	16	23	30	37
Resistance and power dissipation								
Main current circuit resistance [mΩ]	5.5	5.5	2.7	2.7	2.7	2	2	2
Power dissipated by all circuits at I_c AC-3 [W]	0.4	1.3	0.7	1.2	2.1	3.2	5.4	8.2
Total power dissipation at I_c AC-3								
AC control [W]	1.8	2.7	3.3	3.8	4.7	6.2	8.4	11.2
DC control [W]	2.9	3.8	6.7	7.2	8.1	12.4	14.6	17.4
Load carrying capacity per UL/CSA Lloyd's Register of Shipping								
Continuous current (open) [A]	12	12	25	25	30	30	45	50
(enclosed) [A]	12	12	25	25	30	30	45	50
Rated power								
Three phase AC motors, 60 Hz, enclosed (DOL starting)								
1 phase 115 V * [A]	9.8	13.8	7.2	9.8	16	24	24	34
230 V * [A]	8	10	8	12	17	17	28	28
115 V [HP]	0.5	0.75	1/3	0.5	1	2	2	3
230 V [HP]	1	1.5	1	2	3	3	5	5
3 phases 200 V * [A]	6	11	7.8	11	17.5	17.5	25.3	32.2
230 V * [A]	5.2	9.6	6.8	9.6	15.2	22	28	28
460 V * [A]	4.8	7.6	7.6	11	14	21	27	34
575 V * [A]	3.9	6.1	9	11	11	17	22	27
200 V [HP]	1.5	3	2	3	5	5	7.5	10
230 V [HP]	1.5	3	2	3	5	7.5	10	10
460 V [HP]	3	5	5	7.5	10	15	20	25
575 V [HP]	3	5	7.5	10	10	15	20	25
(Reversing combinations) 3 phases 200 V [A]	6	11	7.8	11	17.5	17.5	25.3	32.2
230 V [A]	5.2	9.6	6.8	9.6	15.2	22	28	28
460 V [A]	4.8	7.6	7.6	11	14	21	27	34
575 V [A]	3.9	6.1	9	11	11	17	22	27
200 V [HP]	1.5	3	2	3	5	5	7.5	10
230 V [HP]	1.5	3	2	3	5	7.5	10	10
460 V [HP]	3	5	5	7.5	10	15	20	25
575 V [HP]	3	5	7.5	10	10	15	20	25
Life span in millions of operations								
Mechanical AC control [x10 ⁶]	10	10	13	13	13	13	13	13
DC control [x10 ⁶]	20	20	13	13	13	13	13	13
AC-3 (400 V) [x10 ⁶]	0.7	0.7	1.3	1.3	1.3	1.3	1.3	1.3
Weight								
AC control [kg]	0.16	0.16	0.39	0.39	0.39	0.39	0.48	0.49
DC control [kg]	0.16	0.16	0.6	0.6	0.6	0.73	0.85	0.85

* FLA = Full-Load motor-running currents

Mini-Contactors and Contactors

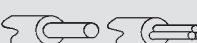
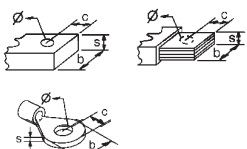
Technical Information

100-C				CAB6... / CA 6...							
43	60	72	85	-85	-105(-EI)	-140-EI	-170-EI	-210-EI	-250-EI	-300-EI	-420-EI
1.5	0.9	0.9	0.9	0.4	0.4	0.42	0.42	0.22	0.22	0.18	0.15
8.3	9.7	14	19.5	8.7	13.2 (13.8)	24.6	36.3	29.4	41.7	48.6	79.5
11.5	14.2	18.5	2.4	18.2	22.7	34.5	46.5	39.4	51.7	58.6	89.5
18.4	14.6	18.9	12.4	16.7	20.9	32.5	44.5	37.4	49.7	56.6	87.5
63	90	90	100	178	178	250	250	350	350	420	500
63	90	90	100	160	160	220	220	300	300	340	420
34	56	56	80	80	100	135	—	—	—	—	—
40	50	68	68	68	110	136	176	216	—	—	—
3	5	5	7.5	7.5	10	15	—	—	—	—	—
7.5	10	15	15	15	25	30	40	50	—	—	—
32.2	48.3	62.1	78.2	78.2	119.6	119.6	149.5	180	220.8	285.2	414
42	54	68	80	68	104	130	154	192	248	312	420
40	52	65	77	77	96	124	180	180	240	302	414
32	41	52	62	77	99	125	144	192	242	289	382
10	15	20	25	25	40	40	50	60	75	100	150
15	20	25	30	30	40	50	60	75	100	125	175
30	40	50	60	60	75	100	150	150	200	250	350
30	40	50	60	75	100	125	150	200	250	300	400
32.2	48.3	62.1	78.2	78.2	119.6	119.6	149.5	180	220.8	285.2	336
42	54	68	80	68	104	130	154	192	248	312	336
40	52	65	77	77	96	124	180	180	240	302	336
32	41	52	62	77	99	125	144	192	242	289	336
10	15	20	25	25	40	40	50	60	75	100	117
15	20	25	30	30	40	50	60	75	100	125	135
30	40	50	60	60	75	100	150	150	200	250	278
30	40	50	60	75	100	125	150	200	250	300	350
12	10	10	10	10	10	10	10	10	10	10	10
13	10	10	10	10	10	10	10	10	10	10	10
1.3	1	1	1	1	1	1	1	1	1	1	1
0.51	1.45	1.45	1.45	3.3	3.8	3.8	3.8	7.5	7.5	7.5	7.5
1.0	1.47	1.47	1.47	3.3	3.8	3.8	3.8	7.5	7.5	7.5	7.5

Mini-Contactors and Contactors

Technical Information

Specifications according to IEC

			100-M0... / CA 4-...		100-C					
			5	9	09	12	16	23	30	37
Terminal cross-section										
Main contacts										
Terminal type										
	1. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	1 ... 4	1 ... 4	1 ... 4	1 ... 4	2.5 ... 10	2.5 ... 10
	2. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	1 ... 4	1 ... 4	1 ... 4	1 ... 4	2.5 ... 10	2.5 ... 10
	1. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	1.5 ... 6	1.5 ... 6	1.5 ... 6	1.5 ... 6	2.5 ... 16	2.5 ... 16
	2. conductor	[mm ²]	0.75 ... 2.5	0.75 ... 2.5	1.5 ... 6	1.5 ... 6	1.5 ... 6	1.5 ... 6	2.5 ... 16	2.5 ... 16
	b max.	[mm]	—	—	—	—	—	—	—	—
	c max.	[mm]	—	—	—	—	—	—	—	—
	s max.	[mm]	—	—	—	—	—	—	—	—
	ø min.	[mm]	—	—	—	—	—	—	—	—
Recommended torque			[Nm]	1 ... 1.5	1 ... 1.5	1 ... 2.5	1 ... 2.5	1 ... 2.5	1 ... 2.5	1.5 ... 3.5
Cross-section per UL/CSA			[AWG]	18 ... 14	18 ... 14	16 ... 10	16 ... 10	16 ... 10	16 ... 10	14 ... 6
with Terminal Lug Kit				—	—	—	—	—	—	—
Recommended torque			[lb-in]	7 ... 15	7 ... 15	8.9 ... 22	8.9 ... 22	8.9 ... 22	8.9 ... 22	13 ... 31
with frame terminal block										
	1. conductor	[mm ²]	—	—	—	—	—	—	—	—
	2. conductor	[mm ²]	—	—	—	—	—	—	—	—
	1. conductor	[mm ²]	—	—	—	—	—	—	—	—
	2. conductor	[mm ²]	—	—	—	—	—	—	—	—
	b max.	[mm]	—	—	—	—	—	—	—	—
	s above	[mm]	—	—	—	—	—	—	—	—
	s bottom	[mm]	—	—	—	—	—	—	—	—
Recommended torque			[Nm]	—	—	—	—	—	—	—
Cross-section per UL/CSA	above	[AWG]	—	—	—	—	—	—	—	—
	bottom	[AWG]	—	—	—	—	—	—	—	—
Recommended torque			[lb-in]	—	—	—	—	—	—	—

* Pozidriv / slotted screw

** Hexagon socket size screw

*** Hexagonal screw

Coil Circuit

			100-M0... / CA 4-...		100-C					
			5	9	09	12	16	23	30	37
Operating limits										
50 Hz, 60 Hz, 50/60 Hz	pick-up	[x U _S]	0.85...1.1		0.85...1.1			0.85...1.1		0.85...1.1
	dropout	[x U _S]	0.3...0.65		0.3...0.6			0.3...0.6		0.3...0.6
DC control	pick-up	[x U _S]	0.85...1.1		0.8...1.1			0.8...1.1		08...1.1
	dropout	[x U _S]	0.1...0.25		0.1...0.6			0.1...0.6		0.1...0.6
Pick-up- and holding power										
50 Hz, 60 Hz, 50/60 Hz	pick-up	[VA/W]	22/20		70/50			70/50	70/50	80/60
	holding	[VA/W]	4/1.4		8/2.6			9/3	9/3	9/3
DC control	pick-up	[W]	2.5		6			9.2		9.2
	holding	[W]	2.5		6			9.2		9.2
Switching delay										
AC	closing delay	[ms]	15...40		15...30			15...30		15...30
	opening delay	[ms]	15...25		10...60			10...60		10...60
with RC-module	opening delay	[ms]	15...25		10...60			10...60		10...60
DC	closing delay	[ms]	18...40		40...70			40...70	50...80	50...80
	opening delay	[ms]	6...12		7...15			7...15	7...15	7...15
integ. protection circuit	opening delay	[ms]	8...12		14...20			17...23		17...23
with diode	opening delay	[ms]	35...50		70...95			80...125		80...125

100-C				CAB6... / CA 6...								
43	60	72	85	-85	-105	-105-EI	-140-EI	-170-EI	-210-EI	-250-EI	-300-EI	-420-EI
												
2.5 ... 16	2.5 ... 35	2.5 ... 35	2.5 ... 35	—	—	—	—	—	—	—	—	—
2.5 ... 10	2.5 ... 25	2.5 ... 25	2.5 ... 25	—	—	—	—	—	—	—	—	—
2.5 ... 25	2.5 ... 50	2.5 ... 50	2.5 ... 50	—	—	—	—	—	—	—	—	—
2.5 ... 16	2.5 ... 35	2.5 ... 35	2.5 ... 35	—	—	—	—	—	—	—	—	—
—	—	—	—	20		25			30			
—	—	—	—	10		12.5			15			
—	—	—	—	2 x 5		2 x 5			2 x 6			
—	—	—	—	6.1		8.3			10.5			
1.5 ... 3.5	2 ... 6	2 ... 6	2 ... 6	8...10		10...12			16			
14 ... 6	14 ... 2	14 ... 2	14 ... 2	6...2/0		6...250 MCM			8...600 MCM			
—	—	—	—	CA 6-105-HU **		CA 6-170-HU **			CA 6-420-HU **			
13 ... 31	18 ... 52	18 ... 52	18 ... 52	70...90		90...110			375			
—	—	—	—	CA(B)6-HB1 **		CA(B)6-HB2 **			◆ CA(B)6-HB3 **			
—	—	—	—	16 ... 35		● 16 ... 35			25 ... 240 ▲			
—	—	—	—	16 ... 70		● 16 ... 95			25 ... 240 ▲			
—	—	—	—	16 ... 50		● 16 ... 50			25 ... 300			
—	—	—	—	16 ... 95		● 16 ... 120			25 ... 300			
—	—	—	—	16		20			25			
—	—	—	—	3 ... 9		3 ... 9			4 ... 20			
—	—	—	—	3 ... 12		3 ... 14			4 ... 20			
—	—	—	—	8 ... 10		10 ... 12			15 ... 20			
—	—	—	—	No. 6 ... 1 / 0 AWG		No. 6 ... 1 / 0 AWG			No. 4 AWG ... 600 MCM			
—	—	—	—	No. 6 ... 3 / 0 AWG		No. 6 AWG ... 250 MCM			No. 4 AWG ... 600 MCM			
—	—	—	—	70 ... 90		90 ... 110			130 ... 170			

● At CT(A)(B)6-150 / 200 min. 25 mm² ◆ CA(B)6-HB3 not suitable for CEF(B)1-41 / 42 and CWE 4-630 / 825-MCM630

▲ 25 ... 95 mm² with sleeve according to DIN 46228

100-C				CA 6... / CAB6...								
43	60	72	85	-85	-105	-105-EI	-140-EI	-170-EI	-210-EI	-250-EI	-300-EI	-420-EI
0.85 ... 1.1				0.85 ... 1.1		0.85 ... 1.1						
0.3 ... 0.6				0.3 ... 0.6		0.3 ... 0.5						
0.8 ... 1.1				0.85 ... 1.1		0.85 ... 1.1						
0.1 ... 0.6				0.3 ... 0.6		0.3 ... 0.5						
130/90 10/3.2	200/110 16/4.5	200/110 16/4.5	200/110 16/4.5	650/310 50/10		370/243 13/7						590/355 15/7
10.1	10.1	10.1	10.1	540		190						375
10.1	10.1	10.1	10.1	8		6.5						7
15...30	18.5...30	18.5...30	18.5...30	20...47		75...90						75...90
10...60	10...60	10...60	10...60	6...12		30...60						30...60
				9...18		—						—
				27...47		75...90						75...90
				12...20		30...60						30...60
				12...20		—						—
				—		—						—

Mini-Contactors and Contactors

Technical Information

Auxiliary Switches, Auxiliary Contact Blocks

				for 100-M / CA 4	for 100-M / CA 4	for 100-C			for CAB6... / CA 6...	
				Built-in	Blocks	Built-in	Front mounting	Side mounting	Conventional	Suitable for electr. circuits
Switching, AC loads										
AC-1	I_{th}	at 40 °C	[A]	16	10	25	10	10	16	0.1 A at 250 V
		at 60 °C	[A]	12	6	20	6	6	12	
AC-15 at rated voltage of										1 ... 100 mA at 3 ... 125 V
	230 V		[A]	6	2	10	5.5	3	5.5	
	240 V		[A]	5	2	10	5	3	5	
	400 V		[A]	2.5	1	5	3	2	3	
	415 V		[A]	2	1	5	2.5	2	2.5	
	500 V		[A]	1.25	0.6	2.5	1.6	1.6	1.6	
	690 V		[A]	–	–	1	1	0.75	1	
Switching, DC loads										
L/R< 1 ms, resistive loads at:										
	24 VDC		[A]	6	6	12	12	6	16	–
	48 VDC		[A]	4	2	9	9	3.2	9	–
	110 VDC		[A]	0.6	0.6	3.5	3.5	0.45	3.5	–
	220 VDC		[A]	0.2	0.2	0.55	0.55	0.18	0.55	–
	440 VDC		[A]	0.08	0.08	0.2	0.2	0.1	0.2	–
L/R< 15 ms, inductive loads with economy resistor in series at:										
	24 VDC		[A]	4	4	9	9	2	9	–
	48 VDC		[A]	2.5	1.2	5	5	1.6	5	–
	110 VDC		[A]	0.4	0.4	2	2	.3	2	–
	220 VDC		[A]	0.12	0.12	0.4	0.4	0.12	0.4	–
	440 VDC		[A]	0.05	0.05	0.16	0.16	0.05	0.16	–
DC-13, switching electromagnets at:										
	24 VDC		[A]	5	2	5	5	3	5	1 ... 100 mA at 3 ... 125 V
	48 VDC		[A]	0.6	0.6	2	2	1.5	2	
	110 VDC		[A]	0.45	0.45	0.7	0.7	0.6	0.7	
	220 VDC		[A]	0.25	0.1	0.25	0.25	0.3	0.25	
	440 VDC		[A]	0.04	0.04	0.12	0.12	0.2	0.12	
Fuse gG										
Short-circuit protection with no welding of contacts according to IEC 947-5										
			[A]	16	10	10	10	10	16	16
			[A]	16	10	10	10	10	16	16
Safe isolation						between load and auxiliary circuit 690 V	between auxiliary circuit 250 V			
Min. short-circuit switching capacity 17 V DIN 19240										
Auxiliary switches [mA]				5	5	5	5	5	1 *	1 *
Load carrying capacity per UL/CSA										
Rated voltage		AC	[V]	max. 600	max. 600	max. 600			max. 600	
Continuous rating		40 °C	[A]	10 General purpose	10 General purpose	25	10	10	10 General purpose	
Switching capacity		AC		Heavy pilot duty (A 600)	Heavy pilot duty (A 600)	A 600			Heavy pilot duty (A 600)	
Rated voltage DC			[V]	max. 600	max. 600	max. 600			max. 600	
Switching capacity				Light pilot duty (Q 600)	Light pilot duty (Q 600)	P 600	Q 600		Standard pilot duty (P 600)	

* Only with CAB6-P2-B11 and CAB6-P3-B11 / CA 6-P2-B11 and CA 6-P3-B11

General Specifications

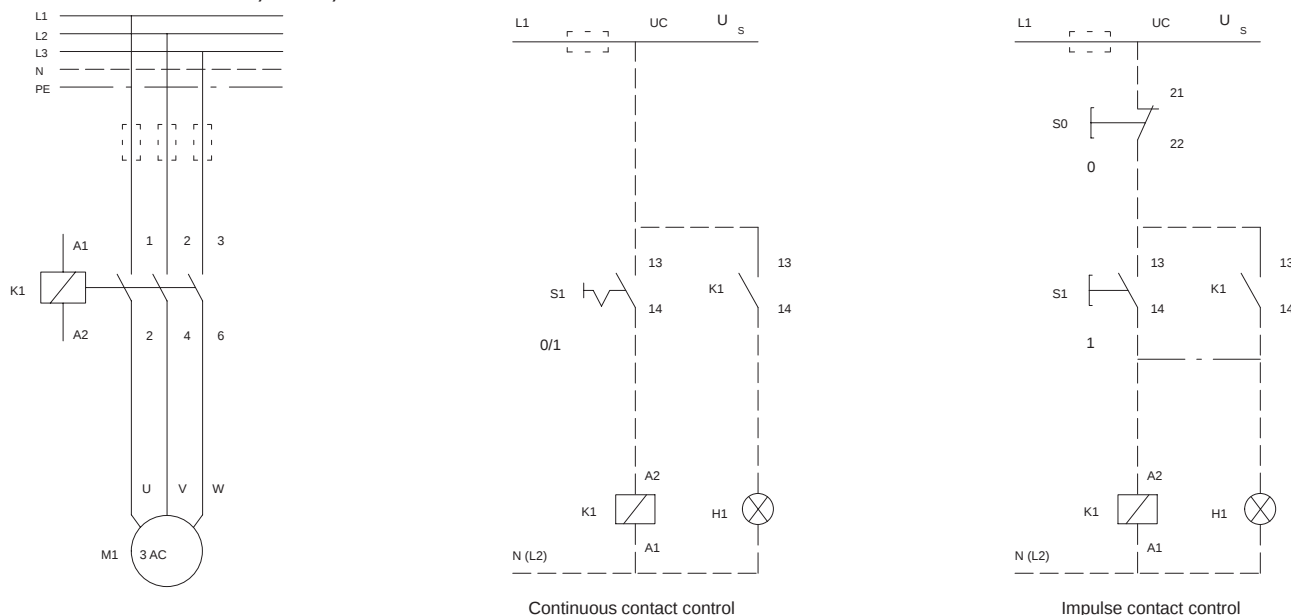
	100-M0... / CA 4-...	100-C	CAB6... / CA 6...
	5 ... 9	09 ... 85	-85 ... 420-EI
Rated voltage withstand U_i			
IEC, AS, BS, SEV, VDE 0660	500 V	690 V	1000 V
according UL, NEMA, CSA, EEMAC	600 V	600 V	600 V
Rated impulse voltage withstand U_{imp}	8 kV	8 kV	12 kV
Rated voltage U_e			
AC 50/60 Hz	230, 240, 400, 415, 500 V	115, 230, 400, 500, 690 V	230, 240, 400, 415, 500, 690, 1000 V
DC	24, 48, 110, 220, 440 V	24, 48, 110, 220, 440 V	24, 48, 110, 220, 440 V
Insulation class of the coil	Class «B» acc. to IEC 85	Class «F» acc. to IEC 85	Class «B» acc. to VDE 0660, Table 22
Rated frequency of coil	AC 50/60 Hz, DC	AC 50/60 Hz, DC	AC 50 Hz, 50/60 Hz, DC
Ambient temperature			
Storage	-55 °C...+80 °C	-55 °C...+80 °C	-40 °C...+80 °C
Operation at rated current	-50 °C...+60 °C	-25 °C...+60 °C	-25 °C...+60 °C
at 70 °C	15 % current reduction against 60 °C values		
Climatic withstand	IEC 68-2	IEC 68-2	IEC 68-2
Maximum altitude of installation site	2000 m NN, acc. to IEC 947-4	2000 m NN, acc. to IEC 947-4	2000 m NN, acc. to IEC 947-1
Protection class	IP2LX	IP2LX (in connected state)	IP00 IEC 529 / DIN 40 050
Single contactor cover	—		IP1X IEC 529 / DIN 40 050
Contactor with frame terminal block	—		IP2LX IEC 529 / DIN 40 050
Auxiliary switch	—		IP2LX IEC 529 / DIN 40 050
Protection against accidental contact	Finger and back-of hand proof acc. to VDE 0106, Part 100	Finger and back-of hand proof acc. to VDE 0106, Part 100	Finger and back-of hand proof acc. to VDE 0106, Part 100
Resistance to shock	IEC 68-2	IEC 68-2	IEC 68-2
Resistance to vibration	IEC 68-2	IEC 68-2	IEC 68-2
Positively guided contacts acc. to SUVA	—	Yes, N.O. and N.C. mutually unrestricted including N.C. in relation to N.O.-main contacts of contactor have no 100-FL, 100-FPT positive guidance	—
Safe isolation	—	400 V	—
Standards	IEC 947; EN 60947; UL 508; CSA 22.2 No. 14; SEV 1025;	IEC 947-1/4; EN 60947; UL 508; CSA 22.2. No. 14	IEC 947-4, BS 5424, VDE 0660
Approvals see chapter 15 for more details Publication A111.1 97	CE, UL, CSA, SEV, Elektrizitäts-Inspektorat Finnland, RINA, Germanischer Lloyd, Lloyd's Reg. of Shipping, Bureau Veritas, Maritime Reg. of Shipping, SUVA	CE, UL, CSA	CE, UL, CSA, Lloyd's Reg. of Shipping, SUVA, Germanischer Lloyd

Mini-Contactors and Contactors

Technical Information

Electrical Life

Contactor 100-M / CA 4, 100-C, CAB6 / CA 6



The values given below are valid for the operating conditions defined in IEC 947-4; -5 and the utilisation categories AC-1...AC-4 for 400 V, 50/60 Hz.

Utilisation categories

Switching conditions for verifying electrical life, (number of operations under load) according to IEC 947-4; -5.

Test conditions		Making			Breaking		
		I/I_e	U/U_e	$\cos\phi$	I_c/I_e	U_r/U_e	$\cos\phi$
AC-1	Resistance furnaces: Non inductive or slightly inductive loads	1	1	0.95	1	1	0.95
AC-2	Slip-ring motors: Starting and reversing	2.5	1	0.65	2.5	1	0.65
AC-3	Squirrel-cage motors: Starting and stopping of running motors	$I_e \leq 17 \text{ A}$	1	0.65	1	0.17	0.65
		$I_e > 17 \text{ A}$	1	0.35	1	0.17	0.35
AC-4	Squirrel-cage motors: Starting, reversing, stepping	$I_e \leq 17 \text{ A}$	1	0.65	6	1	0.65
		$I_e > 17 \text{ A}$	1	0.35	6	1	0.35
AC-15	Solenoid of contactors: Valves, and lifting magnets	10	1	0.7	1	1	0.4

I_e Rated operational current

U_e Rated voltage

U_r Recovery voltage

I Making current

I_c Breaking current

U Off-load voltage

Electrical life of contactors as a function of breaking current

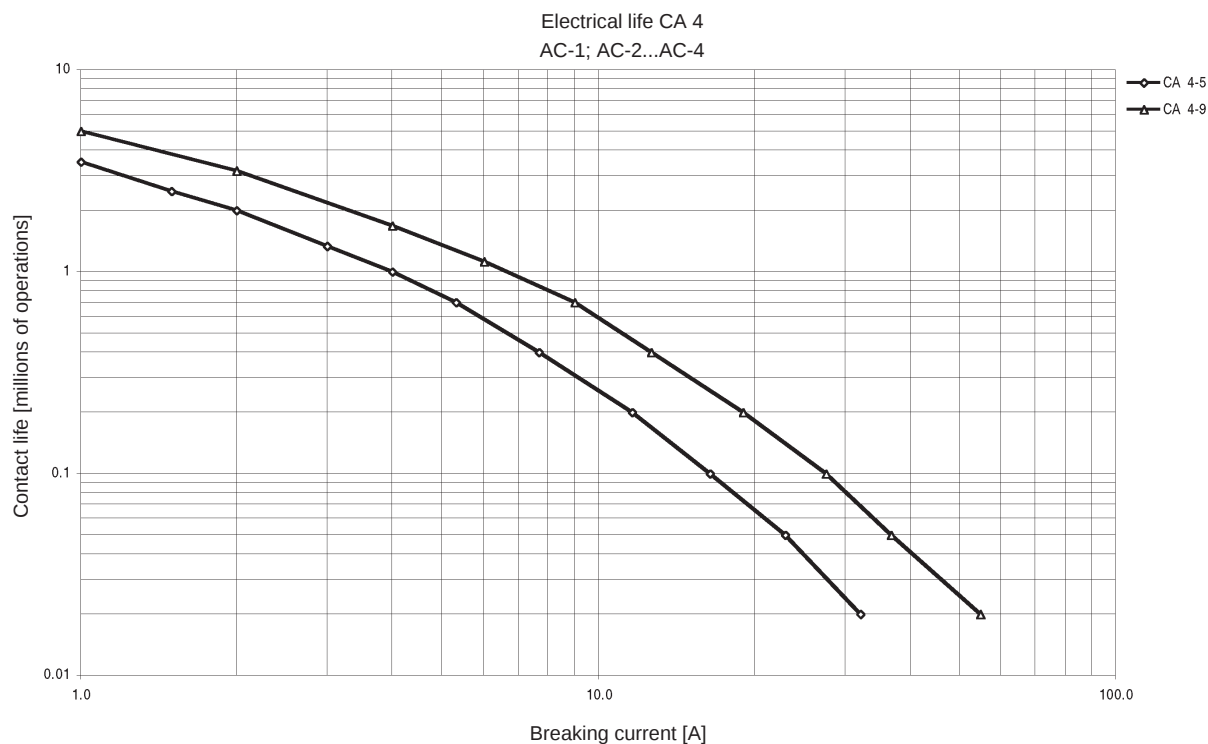
The diagrams below are valid up to 400/415 VAC 50/60 Hz, for switching motors of any kind regardless of operating mode, utilisation categories from AC-2...AC-4, and whether the loads is resistive or slightly inductive (AC-1).

The electrical life determined under the test conditions given above for the various utilisation categories is presented in the following diagrams as a function of the breaking current.

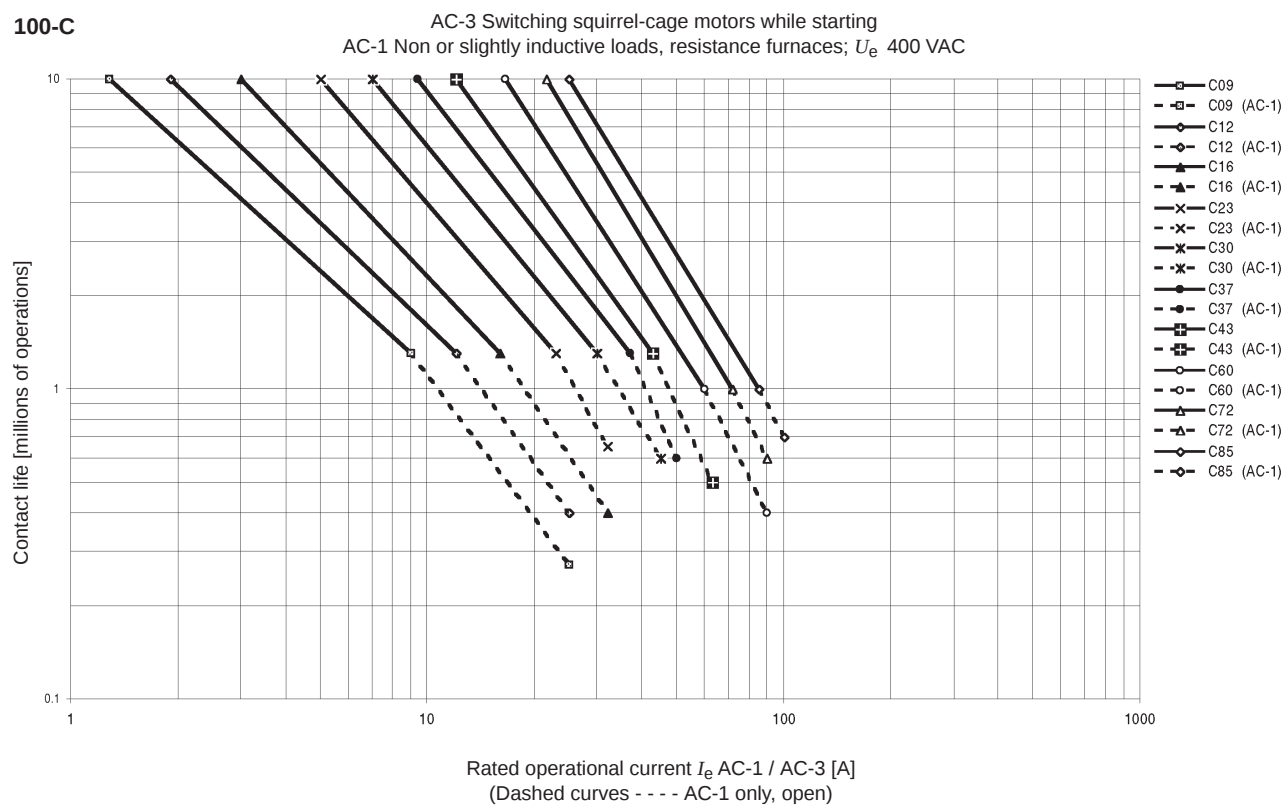
Generally, it is permissible to base the selection of contactors on these values without further thought. In practice, the deviation of the main influencing factor-the breaking current is always on the safe side. For example, the current conducted band of a motor while running up is generally less than the rated operating current and the pick-up current reduces to some extent in the case of long stepping switching. These tend to compensate for the effects of any factors which may have been neglected.

Electrical Life

100-M / CA 4



100-C

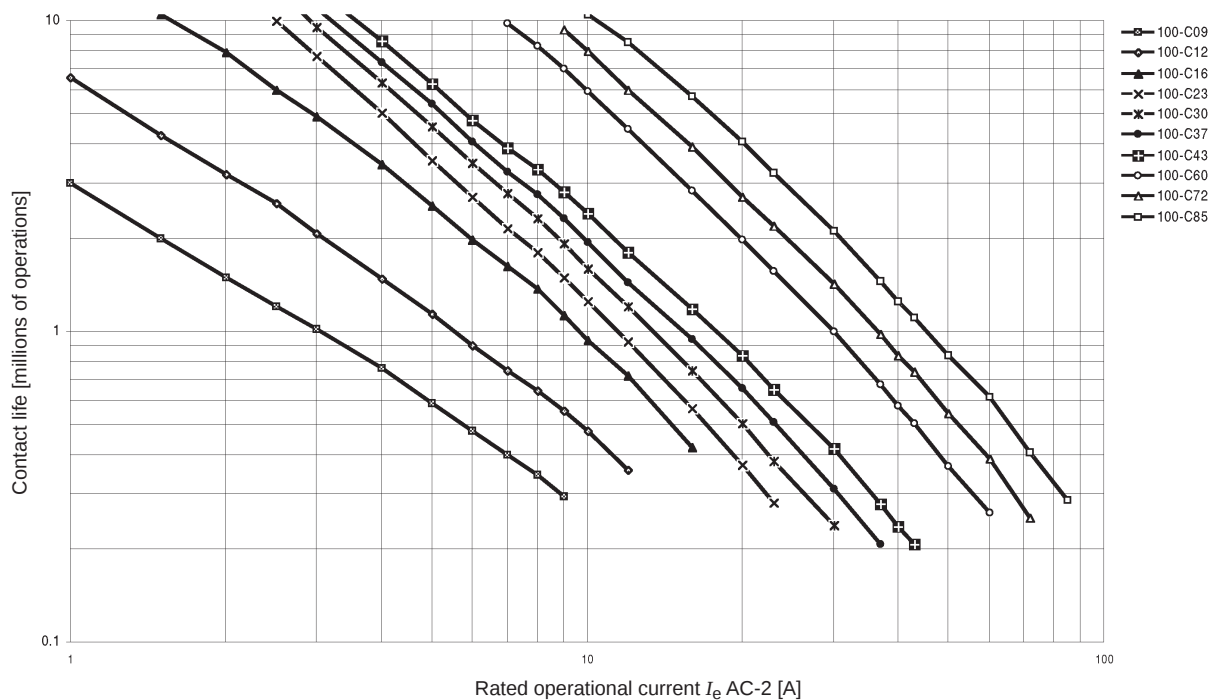


Mini-Contactors and Contactors

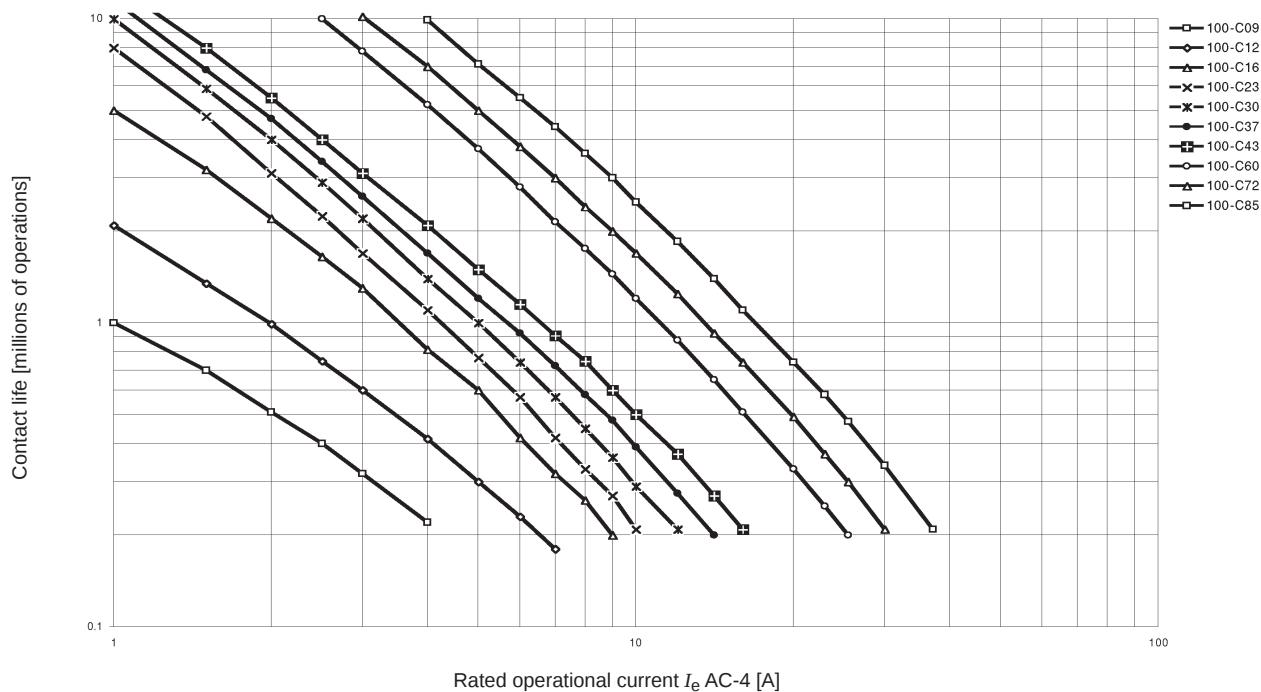
Technical Information

Electrical Life

100-C

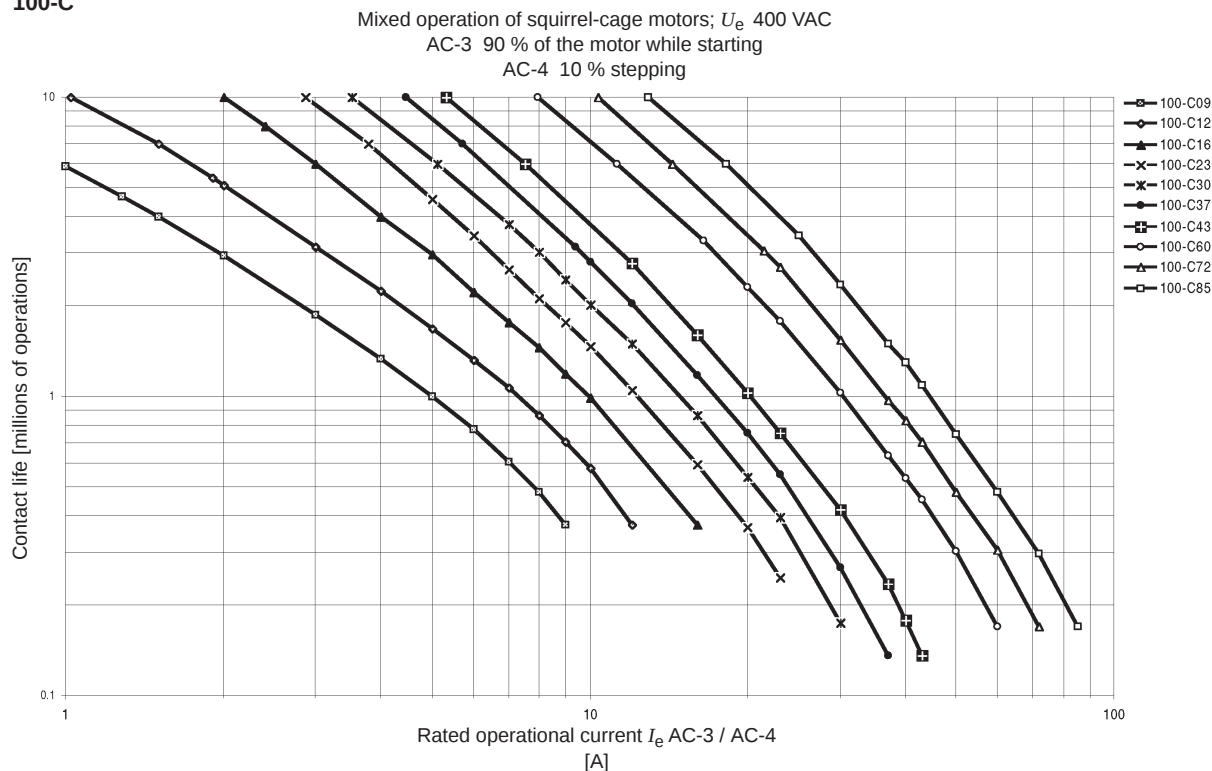
AC-2 Stepping of slip-ring motors; U_e 400...460 VAC

100-C

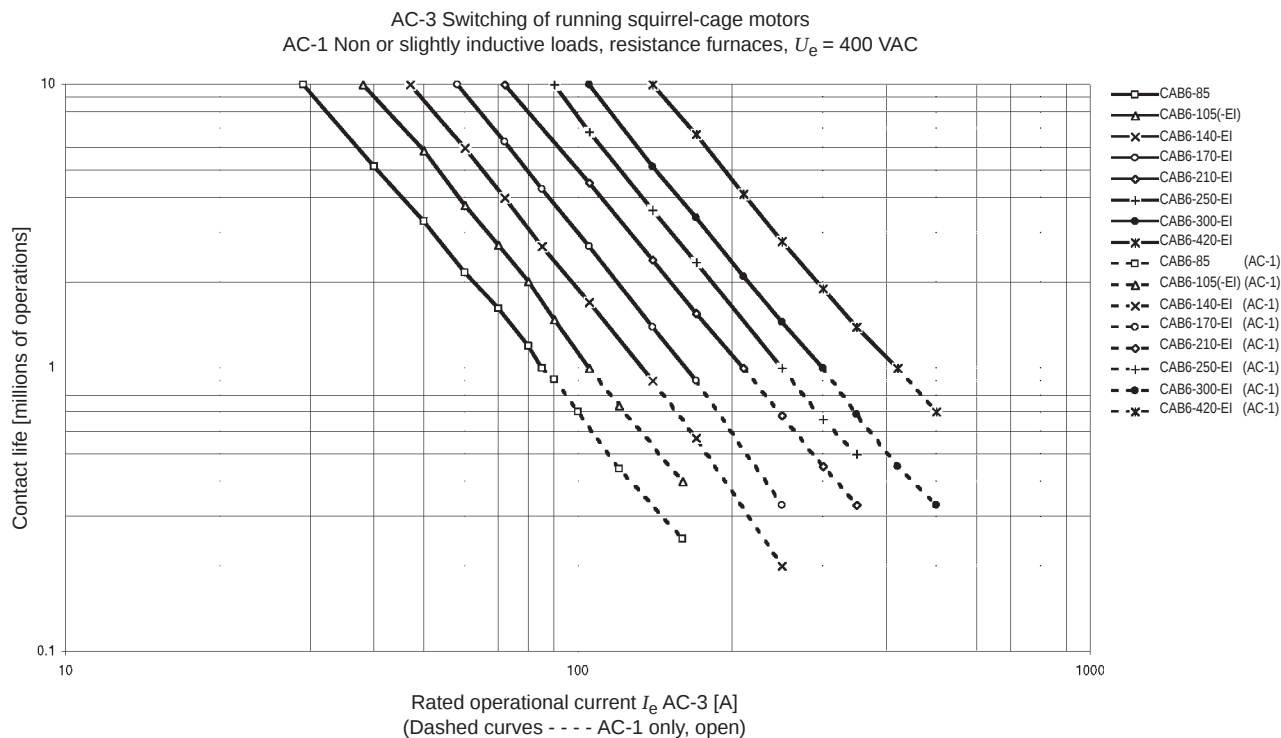
AC-4 Stepping of squirrel-cage motors; U_e 400...460 VAC

Electrical Life

100-C



CA 6 / CAB6

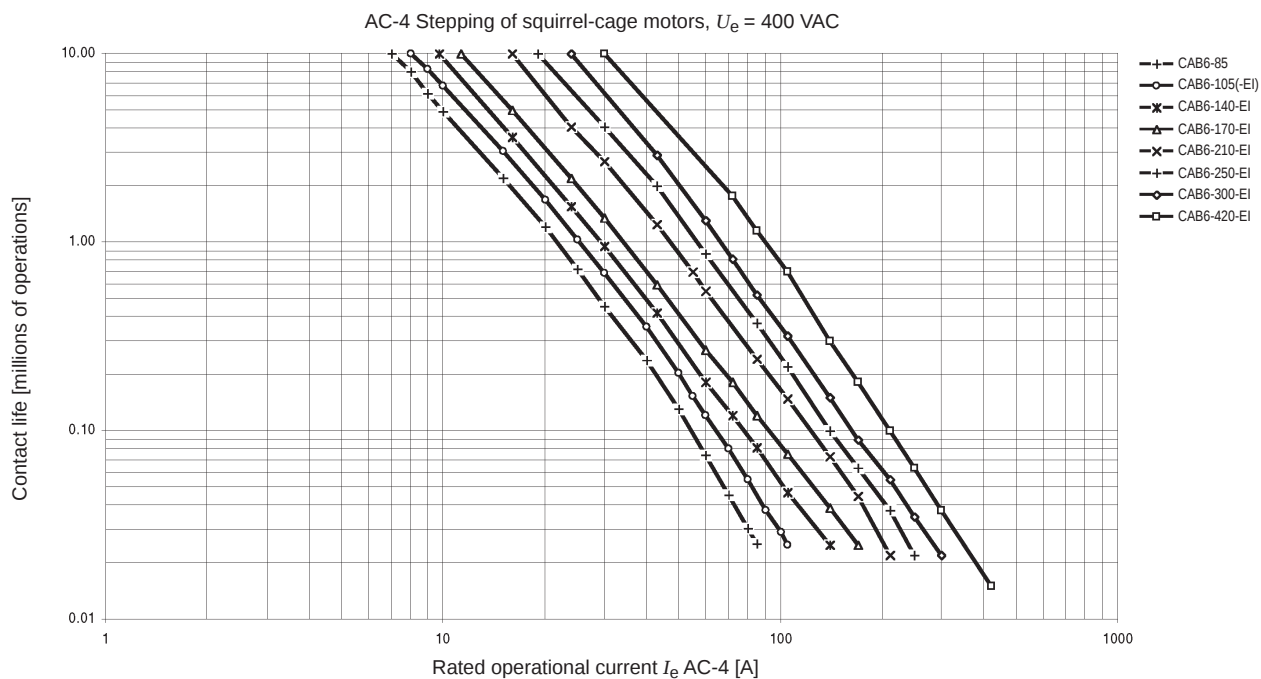


Mini-Contactors and Contactors

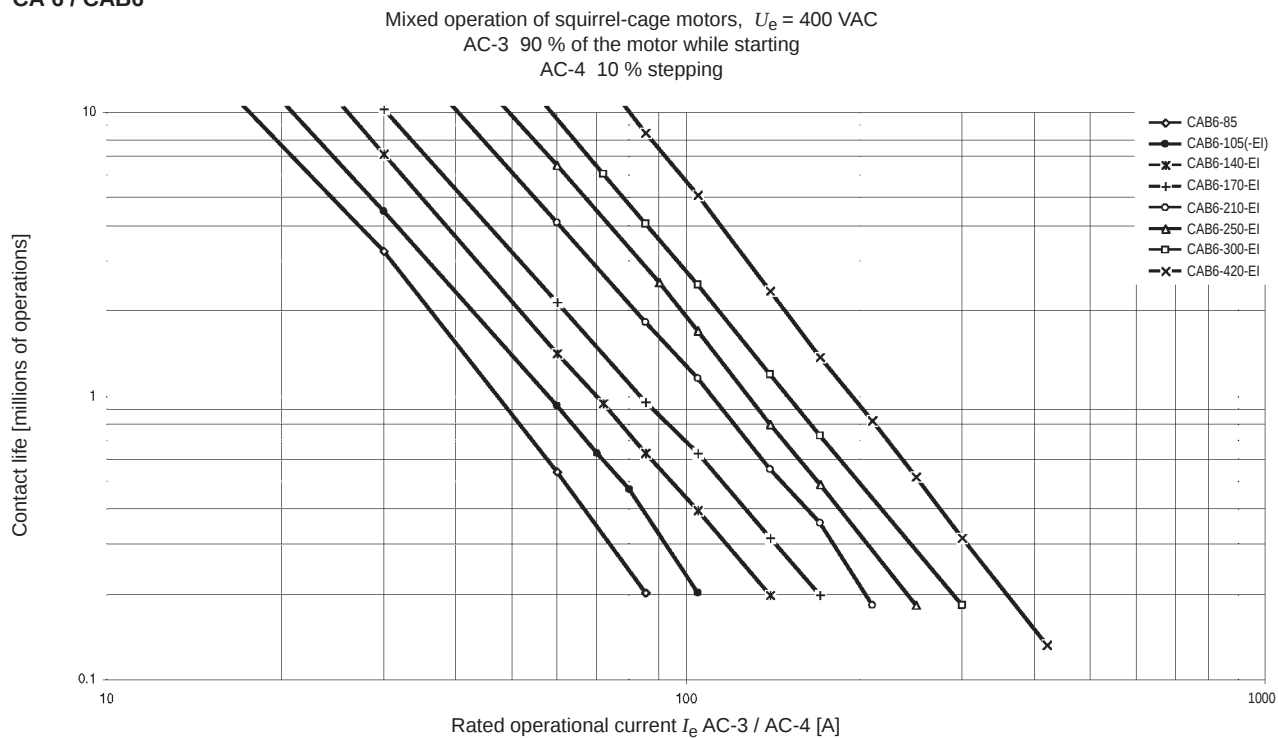
Technical Information

Electrical Life

CA 6 / CAB6



CA 6 / CAB6



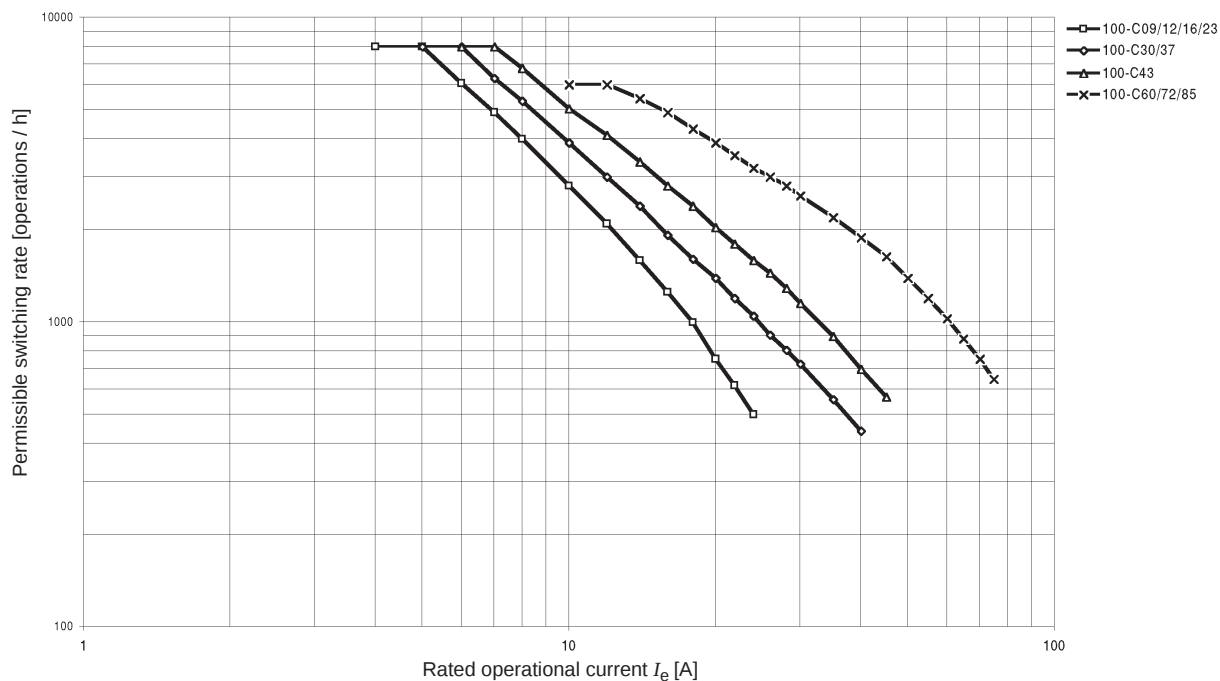
Permissible Switching Rate

100-C

Switching of squirrel-cage motors (AC-3)

Starting time $t_A = 0,25$ s

Load factor ED = 40%

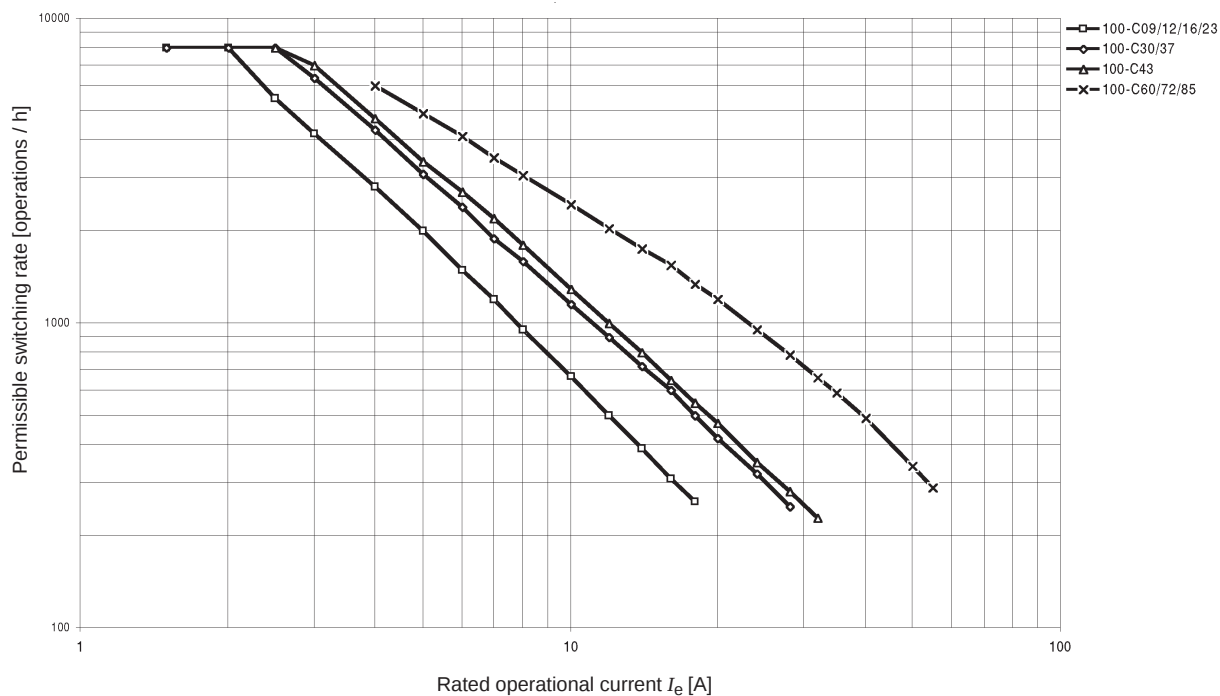


100-C

Switching of squirrel-cage motors (AC-3)

Starting time $t_A = 1$ s

Load factor ED = 40%



Mini-Contactors and Contactors

Technical Information

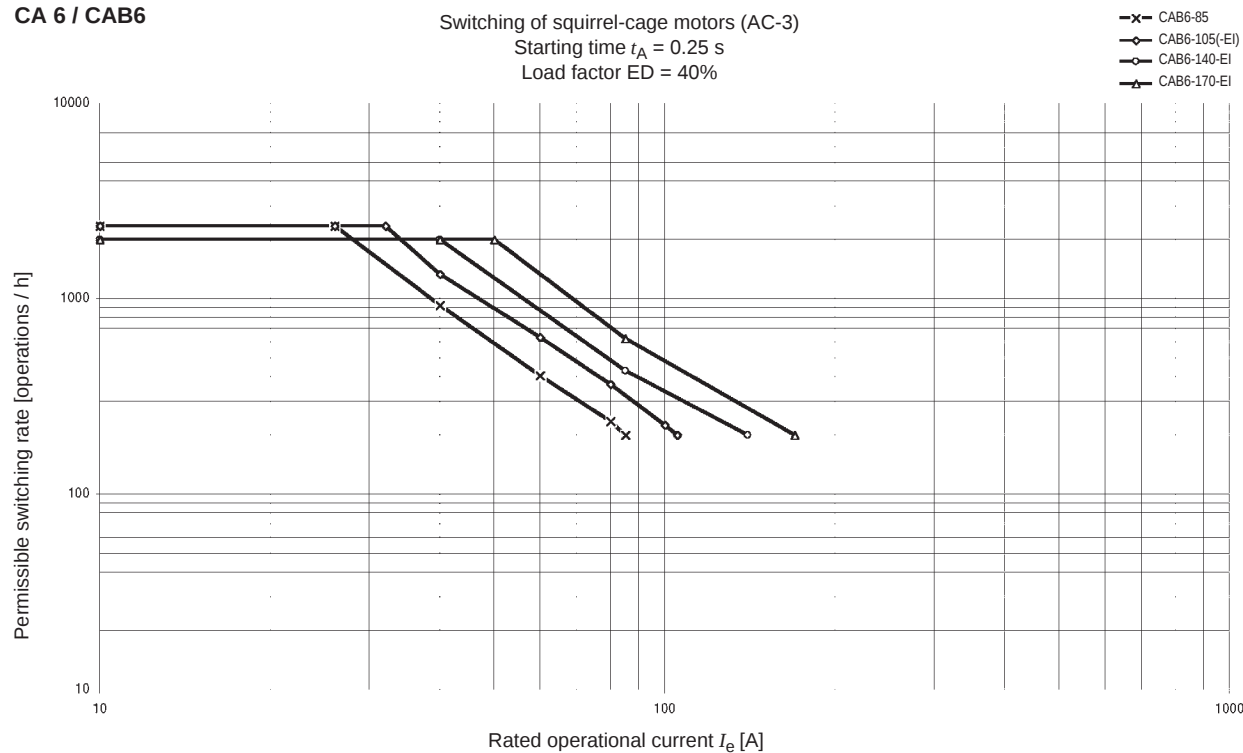
Permissible Switching Rate

CA 6 / CAB6

Switching of squirrel-cage motors (AC-3)

Starting time $t_A = 0.25$ s

Load factor ED = 40%

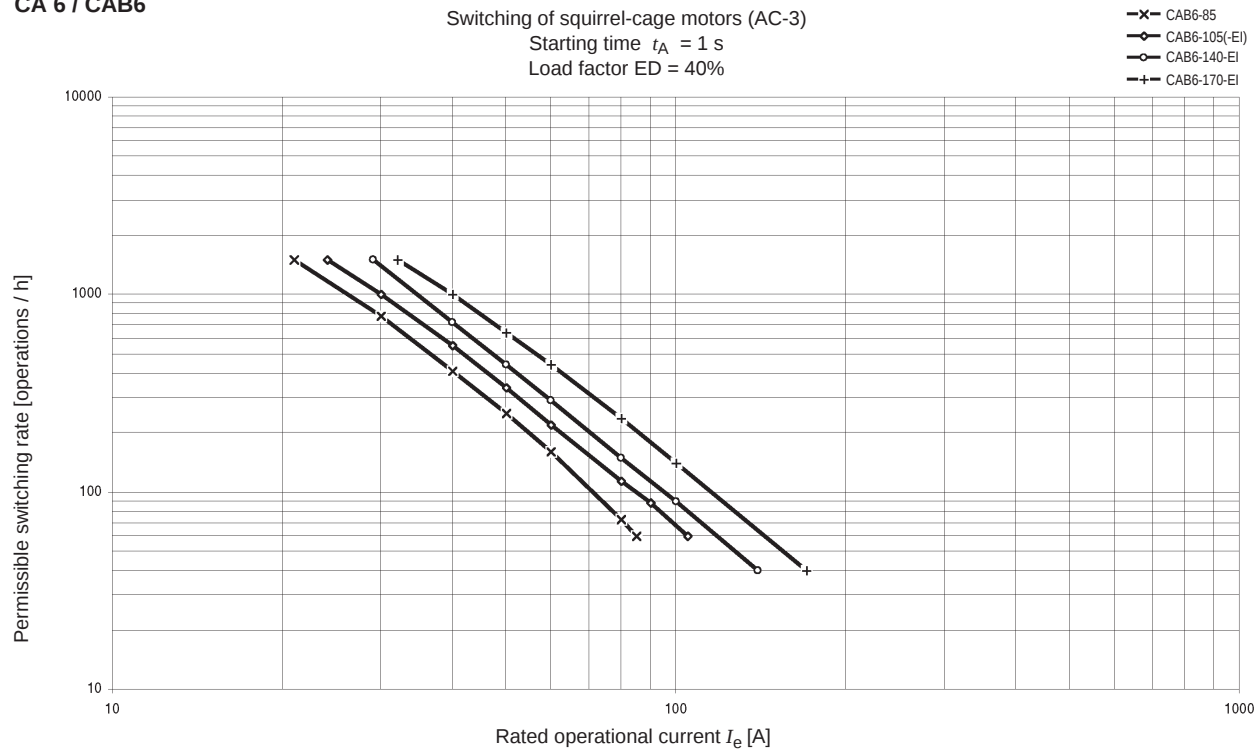


CA 6 / CAB6

Switching of squirrel-cage motors (AC-3)

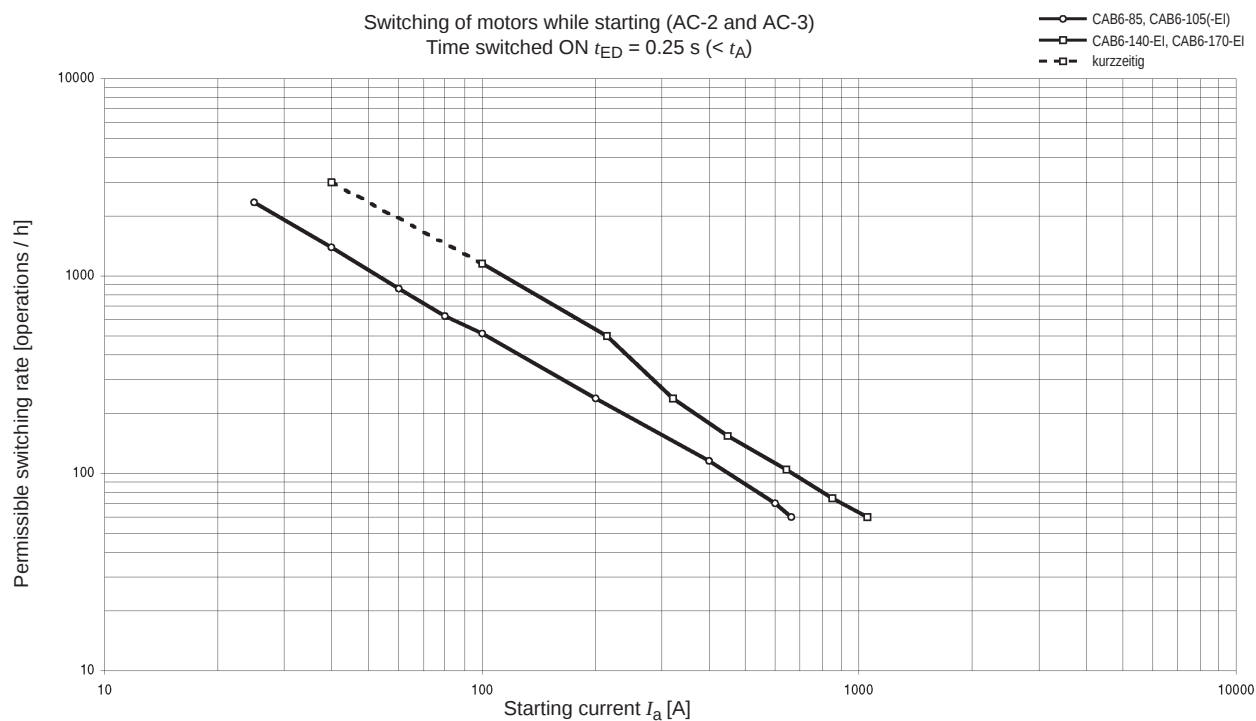
Starting time $t_A = 1$ s

Load factor ED = 40%

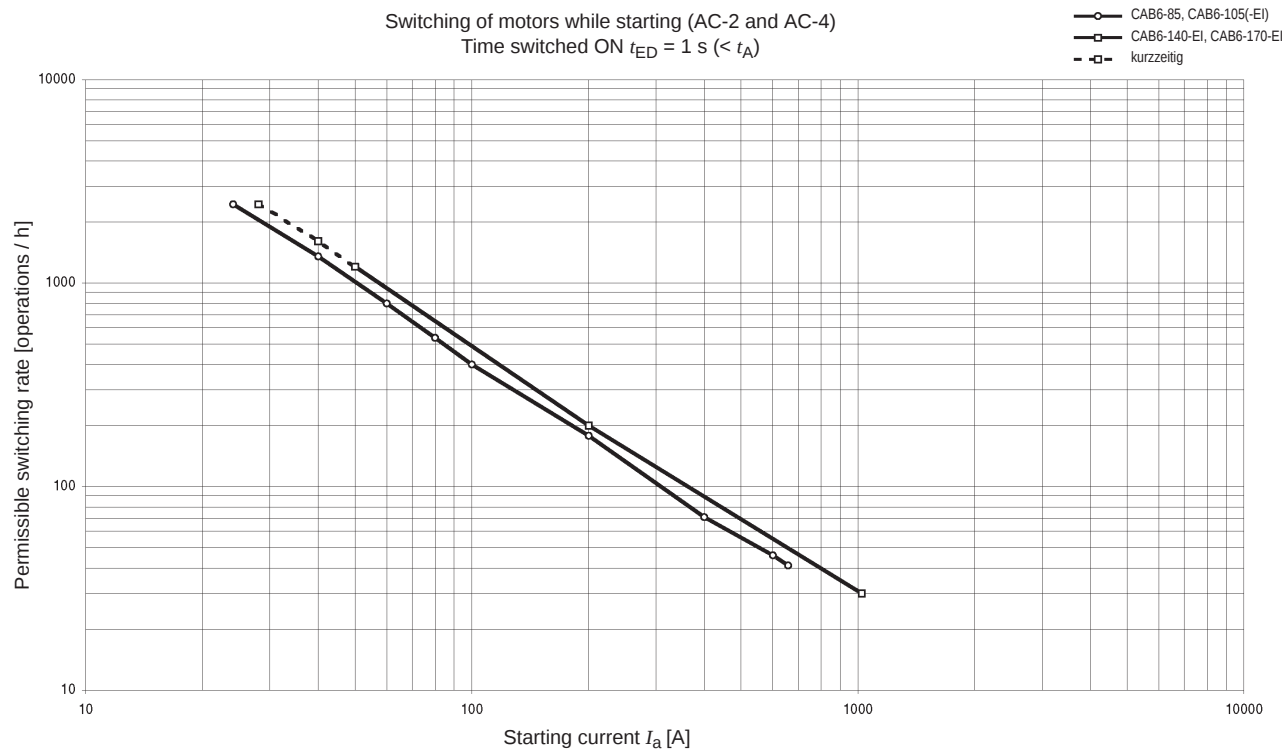


Permissible Switching Rate

CA 6 / CAB6



CA 6 / CAB6

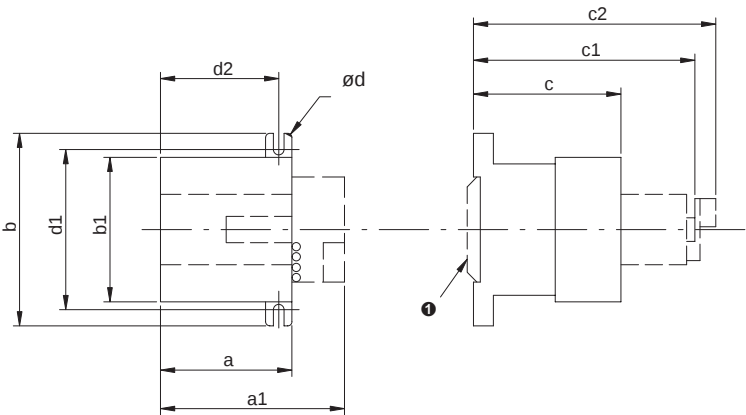


Mini-Contacters and Contacters

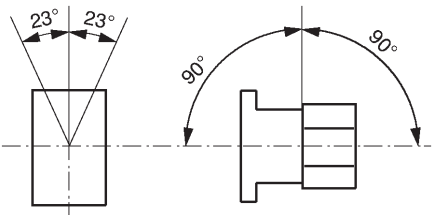
Dimensions

Bulletin 100-M / CA 4

Dimensions in mm



Mounting Position



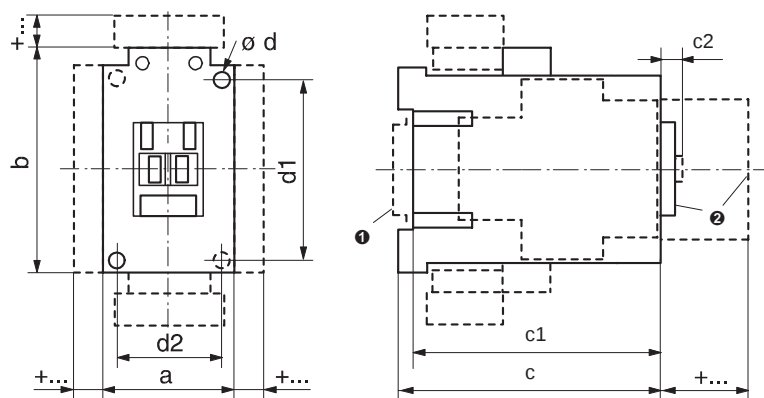
Type	a	a1	b	b1	c	c1	c2	$\varnothing d$	d1	d2	
CA 4 /100-M	45	67	56	47	48	74	77	4	50	40	❶

Contactor with...		[mm]
mechanical latch		a+a
auxiliary switch block		c1
timer	above of contactor	c2
	at side of contactor	a1
neutral terminal	at side of contactor	a+20
suppressor module		c2
label holder		c..+5

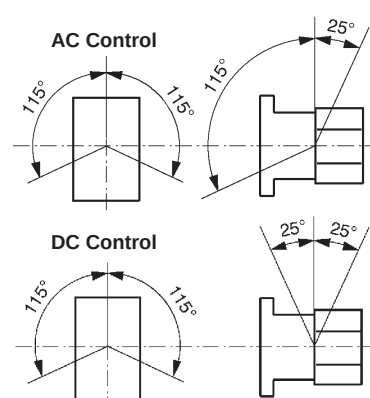
❶ Provision for mounting on a 35 mm top-hat rail EN 50 022 (combined top-hat and C rail mounting not possible in conjunction with mechanical interlock or latch accessories).

Bulletin 100-C

Dimensions in mm (inches)



Mounting Position



AC Control

Type	a	b	c	c1	c2	ød	d1	d2	
100-C09 ... 100-C23	45 (1- 25/32)	81 (3- 3/16)	80.5 (3- 11/64)	75.5 (3- 3/32)	6 (1/4)	2 pcs. à 4.5 (2 pcs. à 3/16)	60 (2- 23/64)	35 (1- 25/64)	❶
100-C30 ... 100-C37	45 (1- 25/32)	81 (3- 3/16)	97.5 (4)	92.6 (3- 49/64)	6.5 (17/64)	2 pcs. à 4.5 (2 pcs. à 3/16)	60 (2- 23/64)	35 (1- 25/64)	❶
100-C43	54 (2- 1/8)	81 (3- 3/16)	100.5 (4- 7/64)	95.6 (3- 7/8)	6.5 (17/64)	2 pcs. à 4.5 (2 pcs. à 3/16)	60 (2- 23/64)	45 (1- 25/32)	❶
100-C60 ... 100-C85	72 (2- 53/64)	122 (4- 51/64)	117 (4- 49/64)	111.5 (4- 35/64)	8.5 (21/64)	4 pcs. à 5.4 (4 pcs. à 7/32)	100 (3- 15/16)	55 (2- 11/64)	❶

DC Control

Type	a	b	c	c1	c2	ød	d1	d2	
100-C09Z ... 100-C16Z	45 (1- 25/32)	81 (3- 3/16)	106.5 (4- 3/16)	101.5 (4)	6 (1/4)	2 pcs. à 4.5 (2 pcs. à 3/16)	60 (2- 23/64)	35 (1- 25/64)	❶
100-C23	45 (1- 25/32)	81 (3- 3/16)	123.5 (4- 55/64)	119 (4- 43/64)	6 (1/4)	2 pcs. à 4.5 (2 pcs. à 3/16)	60 (2- 23/64)	35 (1- 25/64)	❶
100-C30Z ... 100-C37Z	45 (1- 25/32)	81 (3- 3/16)	141.5 (5- 37/64)	136.5 (5- 3/8)	6.5 (17/64)	2 pcs. à 4.5 (2 pcs. à 3/16)	60 (2- 23/64)	35 (1- 25/64)	❶
100-C43Z	54 (2- 1/8)	81 (3- 3/16)	144.5 (5- 11/16)	140 (5- 33/64)	6.5 (17/64)	2 pcs. à 4.5 (2 pcs. à 3/16)	60 (2- 23/64)	45 (1- 25/32)	❶
100-C60Z ... 100-C85Z	72 (2- 53/64)	122 (4- 51/64)	117 (4- 49/64)	111.5 (4- 35/64)	8.5 (21/64)	4 pcs. à 5.4 (4 pcs. à 7/32)	100 (3- 15/16)	55 (2- 11/64)	❶

Accessories

Contactor with ...	AC Control		DC Control	
	[mm]	[inches]	[mm]	[inches]
auxiliary switch block for front mounting	2, or 4 poles		c/c1 + 39	c/c1 + 1- 37/64
auxiliary switch block for side mounting	1, or 2 poles		a + 9	a + 23/64
pneumatic timer module			c/c1 + 58	c/c1 + 2- 23/64
electronic timing module (100-ETA)	at side of coil connection		b + 24	b + 15/16
electronic timing module (100-ETB / 100-ETY)	at side of coil connection		b + 24	b + 15/16
mechanical interlock	at side of contactor		a + 9	a + 23/64
mechanical interlock			c/c1 + 61	c/c1 + 2- 31/64
Interface	at side of coil connection		b + 9	b + 23/64
suppressor module	at side of coil connection		b + 3	b + 1/8
❷ Marking with	sheets of labels		+ 0	+ 0
	marking sheets with cover		+ 0	+ 0
	label holder for system V4 / V5		+ 5.5	+ 7/32
	label holder for system Bul. 1492W		+ 5.5	+ 7/32

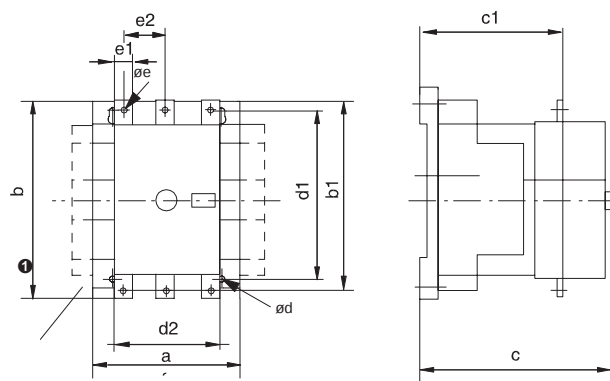
❶ Provision for mounting on a 35 mm top-hat rail EN 50 022

Mini-Contactors and Contactors

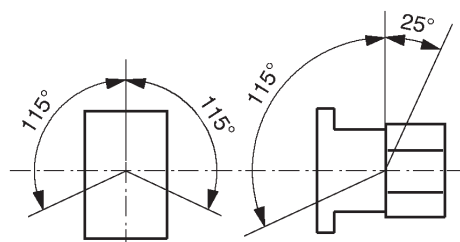
Dimensions

Bulletin CAB6 / CA 6

Dimensions in mm



Mounting Position

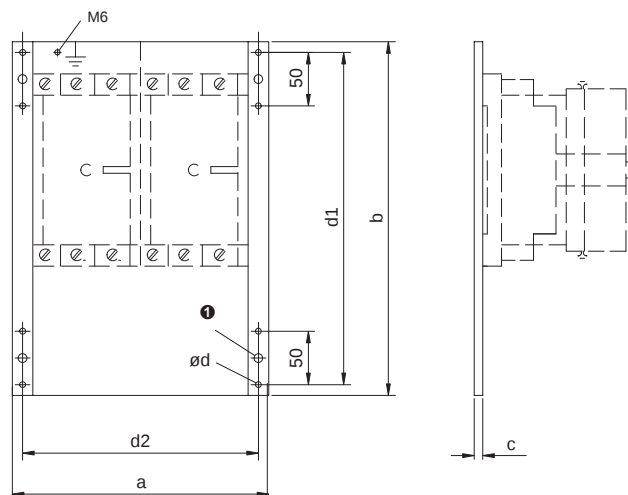


Type	a	b	b1	c	c1	ød	d1	d2	øe	e1	e2
CA 6-85 / CAB6-85, CA 6-105 / CAB6-105	120	165	170	156	110.4	5.2	145	100	M6	16	38.5
CA 6-105-EI / CAB6-105-EI... CA 6-170-EI / CAB6-170-EI	120	182	170	156	110.4	5.2	145	100	M8	20	39
CA 6-210-EI / CAB6-210-EI... CA 6-420-EI / CAB6-420-EI	155	222	205	180	110.4	6.5	180	130	M10	25	48

Contactor with...		[mm]
auxiliary switch block	P1 + P2 + P3, or + P4	a a + each 13.5
mechanical interlock		a + a
frame terminal block	HB 1 HB 2 HB 3	b + each 7 b + each 7 b + each 8.5
suppressor module	HA 1 HA 2 HA 3	b + each 20...40 b + each 15...40 b + each 11...50
label holder		c.. + 5

❶ No change of base dimensions with 1 or 2 auxiliary switch blocks (P1, P2).
Each dimension increased by + 13.5mm with 3 or 4 auxiliary switch blocks (P3, P4).

Bulletin CAB6 / CA 6 Mounting Plates



Type	a	b	c	ød	d1	d2	[kg]
CA 6-105-PS / CAB6-105-PS	150	340	6	6.5	315	135	1
CA 6-105-PU / CAB6-105-PU	270	340	6	6.5	315	255	1.8
CA 6-105-PY / CAB6-105-PY	390	340	6	6.5	315	275	2.5
CA 6-250-PS / CAB6-250-PS	188	380	6	6.5	315	173	1.4
CA 6-250-PU / CAB6-250-PU	344	380	6	6.5	315	328.5	2.6
CA 6-250-PY / CAB6-250-PY	499	380	6	6.5	315	484	3.75

❶ For fixing of the cover