**Bulletin 100-M Miniature Contactors**

- Compact Size
- Uniform Panel Mounting Dimensions
- Full Voltage Non-Reversing and Reversing Contactors
- 5, 9, and 12 A Contactors
- Compatible with Bulletin 193-E solid-state and 193-M bimetal Overload Relays

Allen-Bradley miniature contactors are designed for commercial and light industrial applications where panel space is at a premium. These miniature devices, while 45 mm wide, are shallower and have less panel depth requirements than standard IEC contactors.

These mini-contactors are designed with flexibility in mind. They are available in several contact configurations, offer 2- and 4-pole adder decks, and a wide variety of contact configurations. Additionally, the contactor is available with both AC or DC operating coils.

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Specifications 88
Approximate
Dimensions 124
Overload Relays..... 134, 164

Conformity to Standards

IEC 60947-4
 CSA C22.2 No. 14
 UL 508

Approvals

CE Marked (Per EU Low Voltage Directive 73/23/EEC 93/68/EEC)
 CSA Certified (File No. LR1234)
 UL Listed (File No. E3125; Guide No. NLDX 2nd NVYT)

Your order must include: cat. no. of the miniature contactor specified with coil voltage code and, if required, cat. no. of any accessories

Mini-Contactors**Non-Reversing Mini-Contactors 3 N.O. Power Poles/Auxiliary Contact**

I _e [A]		Ratings for switching AC motors									Auxiliary Contact Configuration		Pkg. Qty. ❶	Cat. No.
		3Ø AC-3 kW Ratings (50 Hz) ❸			Hp (60 Hz)									
AC-3	AC-1	230V	400V/415V	500V	1Ø		3Ø							
					115V	230V	200V	230V	460V	575V				
5.3	20	1.5	2.2	2.2	1/2	1	1-1/2	1-1/2	3	3	1	0	10	100-M05NØ3
											0	1	10	100-M05NØ31
9	20	3	4	4	1/2	1-1/2	2	2	5	5	1	0	10	100-M09NØ3
											0	1	10	100-M09NØ31
12	20	3	5.5	4	1/2	2	3	3	7-1/2	10	1	0	10	100-M12NØ3
											0	1	10	100-M12NØ31

Reversing Mini-Contactors 3 N.O. Power Poles/Auxiliary Contact

I _e [A]		Ratings for switching AC motors									Auxiliary Contact Configuration		Pkg. Qty.	Cat. No. ②
		AC-3 kW Ratings (50 Hz) ③			Hp (60 Hz)									
AC-3	AC-1	230V	400V/415V	500V	1Ø		3Ø							
					115V	230V	200V	230V	460V	575V				
5.3	20	1.5	2.2	2.2	1/2	1	1-1/2	1-1/2	3	3			1	104-M05N③
													1	104-M05N③1
9	20	3	4	4	1/2	1-1/2	2	2	5	5			1	104-M09N③
													1	104-M09N③31
12	20	3	5.5	4	1/2	2	3	3	7-1/2	10			1	104-M12N③
													1	104-M12N③31

❶ Coil Voltage Code

The cat. no. as listed is incomplete. Select a Coil Voltage Code from the table below to complete the cat. no. Example: **Cat. No. 100-M05NØ3** becomes **Cat. No. 100-M05NKD3**. For other voltages, consult your local Allen-Bradley distributor.

Voltage	24V	48V	110V	110...120V	220...230V	230...240V	380V
50 Hz	KD	KH	D	—	A	—	KK
60 Hz	KD	KH	—	D	—	A	KK
DC	Z24	—	—	—	—	—	—
DC with integrated diode	ZD24	—	—	—	—	—	—

❶ Contactors may be ordered in quantities of 1. Add the letter **S** to the end of the cat. no. (Example: **100-M09ND3S**).

❷ Not available with DC coil.

❸ Preferred values according to IEC 60072-1.



Bulletin 100-C/104-C IEC Contactors

- Compact Sizes from 4...45 kW/5...60 Hp (9...85 A)
- AC and DC Coil Control
- Common Accessories for All Contactor Sizes
- Front and Side Mounting of Auxiliary Contacts
- Electronic and Pneumatic Timing Modules
- Space-Saving Coil-Mounted Control Modules
- Reversible Coil Terminations (Line or Load Side)
- All Devices Can Be Attached to 35 mm DIN Mounting Rail
- Environmentally Friendly Materials

The Bulletin 100-C/104-C contactor family, along with a wide range of common accessories and Bulletin 193 solid-state overload relays, provides the most compact and flexible starter component system available.

Product Selection

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Conformity to Standards

EN/IEC 60947-4-1, 60947-5-1
IEC 947 Type "2" Coordination
CSA C22.2 No. 14
UL 508

Approvals

CE Marked
CSA Certified (File No.
LR13908)
UL Listed (File No. E3125;
Guide No. NLDX)

Your order must include: cat. no. of the contactor specified with coil voltage code and, if required, cat. no. of any accessories and/or replacement coils.

Product Selection

3-Pole AC- and DC-Operated Contactors (with or without auxiliary contacts)

- 3 Main Contacts



I _e [A]		Ratings for Switching AC Motors - AC-2, AC-3, AC-4										Aux. Contacts		Cat. No.
		3Ø kW (50 Hz)				Hp (60 Hz)								
AC-3	AC-1	230V	400V/415V	500V	690V	1Ø		3Ø						
						115V	230V	200V	230V	460V	575V			
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2	1	0	100-C09Ø10
												0	1	100-C09Ø01
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	0	100-C12Ø10
												0	1	100-C12Ø01
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	0	100-C16Ø10
												0	1	100-C16Ø01
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	0	100-C23Ø10
												0	1	100-C23Ø01
												0	0	100-C30Ø00
30	65	10	15	15	15	2	5	7-1/2	10	20	25	1	0	100-C30Ø10
												0	1	100-C30Ø01
												0	0	100-C37Ø00
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	1	0	100-C37Ø10
												0	1	100-C37Ø01
												0	0	100-C43Ø00
43	85	13	22	25	22	3	7-1/2	10	15	30	30	1	0	100-C43Ø10
												0	1	100-C43Ø01
												0	0	100-C60Ø00
60	100	18.5	32	37	32	5	10	15	20	40	50	1	0	100-C60Ø10
												0	1	100-C60Ø01
												0	0	100-C72Ø00
72	100	22	40	45	40	5	15	20	25	50	60	1	0	100-C72Ø10
												0	1	100-C72Ø01
												0	0	100-C85Ø00
85	100	25	45	55	45	7-1/2	15	25	30	60	60	1	0	100-C85Ø10
												0	1	100-C85Ø01

⊗ **Coil Voltage Code and Terminal Position**

The Cat. No. as listed is incomplete. Select a coil voltage code from the table below to complete the Cat. No. Example: 120V, 60Hz:

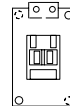
Cat. No. 100-C09⊗10 becomes Cat. No. 100-C09D10.

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

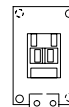
DC Voltages [V]		9	12	24	36	48	60	64	72	80	110	115	125	220	230	250
100-C09...C43	Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—
100-C60...C85	with Integrated Diode	DR	DQ	DJ	DW	DY	DZ	DB	DG	DE	DD	DP	DS	DA	DF	DT

Coil Terminal Position

- All contactors are delivered with the coil terminals located on the **line side**.
- For **load side** coil terminations, insert a "U" prior to the coil voltage code. Ordering example:
Cat. No. 100-C09UD10.



Cat. No.
100-C09⊗10
Line Side



Cat. No.
100-C09U⊗10
Load Side

4-Pole AC- and DC-Operated Contactors

- 4 Main Contacts (without auxiliary contacts)



Cat. No. 100-C23D400

I _e [A]		Ratings for Switching AC Motors										Contact Configuration, Main Pole		Cat. No.
		AC-2, AC-3, AC-4												
		3∅ kW (50 Hz) ❶				Hp (60 Hz)								
AC-3	AC-1	230V	400V/415V	500V	690V	1 ∅		3 ∅ ❶						
						115V	230V	200V	230V	460V	575V			
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2	4	0	100-C09®400
												3	1	100-C09®300
												2	2	100-C09®200
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	4	0	100-C12®400
												3	1	100-C12®300
												2	2	100-C12®200
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	4	0	100-C16®400
												3	1	100-C16®300
												2	2	100-C16®200
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	4	0	100-C23®400
												3	1	100-C23®300
												2	2	100-C23®200
37	75	11	18.5/20	20	18.5	3	5	10	10	25	30	4	0	100-C40®400
												2	2	100-C40®200
												4	0	100-C90®400
85	130	25	45	55	45	7-1/2	15	25	30	60	50	4	0	100-C90®400
												2	2	100-C90®200

⊗ **Coil Voltage Code**

The Cat. No. as listed is incomplete. Select a coil voltage code from the table below to complete the cat. no. Example: 120V, 60 Hz: Cat. No. 100-C09⊗400 becomes Cat. No. 100-C09D400.

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

DC Voltages [V]		9	12	24	36	48	60	64	72	80	110	115	125	220	230	250
100-C09...C40	Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—
100-C90	with Integrated Diode	DR	DQ	DJ	DW	DY	DZ	DB	DG	DE	DD	DP	DS	DA	DF	DT

① Three-phase ratings only apply to contactors with at least three N.O. power poles.

② Not available with 100-C90 contactors.

Reversing AC- and DC-Operated Contactors

- Includes Mechanical/Electrical Interlock
- Includes Reversing Power Wiring



Cat. No. 104-C09D22



Cat. No. 104-C30ZJ22



Cat. No. 104-C85D22

I_e [A]		Ratings for Switching AC Motors										Auxiliary Contacts Installed per Contactor		Cat. No.
		AC-2, AC-3, AC-4												
		3∅ kW (50 Hz)				Hp (60 Hz)								
AC-3	AC-1	230V	400V/ 415V	500V	690V	1∅		3∅						
						115V	230V	200V	230V	460V	575V			
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2	1	1	104-C09⊗22
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	104-C12⊗22
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	104-C16⊗22
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	104-C23⊗22
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	1	104-C30⊗02
												1	1	104-C30⊗22
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	1	104-C37⊗02
												1	1	104-C37⊗22
43	85	13	22	25	22	3	7.5	10	15	30	30	0	1	104-C43⊗02
												1	1	104-C43⊗22
60	100	18.5	32	37	32	5	10	15	20	40	50	0	1	104-C60⊗02
												1	1	104-C60⊗22
72	100	22	40	45	40	5	15	20	25	50	60	0	1	104-C72⊗02
												1	1	104-C72⊗22
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	1	104-C85⊗02
												1	1	104-C85⊗22

① The N.C. auxiliary contact is supplied as part of the mechanical/electrical interlock.

⊗ **Coil Voltage Code**

The Cat. No. as listed is incomplete. Select a coil voltage code from the table below to complete the Cat. No. Example: 120V 60 Hz: **Cat. No. 104-C09 $\otimes$ 22** becomes **Cat. No. 104-C09D22**.

V Hz	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	208	208-240	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600
50	R	K	V	W	X	Y	KP	—	D	P	S	KG	L	—	—	F	—	VA	T	—	—	—	N	—	G	B	—	M	C	—
60	Q	J	—	V	—	X	—	KP	—	D	—	—	KG	H	L	—	—	—	A	T	I	E	—	—	—	N	B	—	—	C
50/60	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	KL	—	—	KL	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—
DC Voltages									9	12	24	36	48	60	64	72	80	110	115	125	220	230	250							
104-C09...C43		Standard							ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT							
		with Integrated Diode							—	—	DJ	—	—	—	—	—	—	—	—	—	—	—								
104-C60...C85		with Integrated Diode							DR	DQ	DJ	DW	DY	DZ	DB	DG	DE	DD	DP	DS	DA	DF	DT							

	Bulletin 100-D IEC Contactors • 50...500 kW @400V • 60...600 Hp @460V • 75...700 Hp @575V • Electronic and Conventional Coils - AC & DC - Integrated PLC Interface - Low Power Pick-Up & Hold-In - Wide Voltage Ranges • Complete Range of Accessories • Environmentally-Friendly • Compact Dimensions The Bulletin 100-D/104-D contactor family, along with a wide range of common accessories and Bulletin 193 electronic overload relays, provides the most compact and flexible starter component system available.	Table of Contents Product Selection 67 Accessories..... 84 Specifications..... 88 Approximate Dimensions..... 127 Overload Relays..... 139, 154 Conformity to Standards IEC 60947-4-1 IEC 60947 Type “2” Coordination CSA C22.2 No. 14 UL 508 Approvals CE Marked CSA Certified UL Listed
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3-pole AC-Operated Contactors

- Conventional and Electronic AC Coils
- 3 Main Contacts
- Non-Reversing or Reversing



100-D180...



100-D420...



100-D860...

I_e [A]		Switching of 3-phase motors — AC-2, AC-3										Auxiliary contacts		Non-Reversing Contactor Cat. No.	Reversing Contactor Cat. No.
60°C	40°C	kW (50 Hz) ❶						Hp (60 Hz)				N.O.	N.C.		
AC-3	AC-1	230V	400V	415V	500V	690V	1000V	200V	230V	460V	575V				
95	160	30	50	55	63	90	45	25	30	60	75	0	0	100-D95⊗00	—
												1	1	100-D95⊗11	—
												2	4	—	104-D95⊗24
110	160	32	55	63	75	100	55	40	40	75	100	0	0	100-D110⊗00	—
												1	1	100-D110⊗11	—
												2	4	—	104-D110⊗24
140	250	45	75	80	80 ❷	110 ❷	75	40	50	100	125	0	0	100-D140⊗00	—
					100 ❸	132 ❸						1	1	100-D140⊗11	—
												2	4	—	104-D140⊗24
180	250	55	90	100	90 ❷	132 ❷	90	50	60	150	150	0	0	100-D180⊗00	—
					125 ❸	160 ❸						1	1	100-D180⊗11	—
												2	4	—	104-D180⊗24
210	350	63	110	125	150	200	110	60	75	150	200	0	0	100-D210⊗00	—
												1	1	100-D210⊗11	—
												2	4	—	104-D210⊗24
250	350	80	132	150	160	250	132	75	100	200	250	0	0	100-D250⊗00	—
												1	1	100-D250⊗11	—
												2	4	—	104-D250⊗24
300	450	90	160	160	200	300	160	100	125	250	300	0	0	100-D300⊗00	—
												1	1	100-D300⊗11	—
												2	4	—	104-D300⊗24
420	500	132	220	250	300	425	220	150	175	350	400	0	0	100-D420⊗00	—
												1	1	100-D420⊗11	—
												2	4	—	104-D420⊗24
630	800	200	355	355	450	500	—	200	250	500	600	0	0	100-D630⊗00	—
												1	1	100-D630⊗11	—
												2	4	—	104-D630⊗24
860	1000	250	500	500	560	600	—	250	300	600	700	0	0	100-D860⊗00	—
												1	1	100-D860⊗11	—
												2	4	—	104-D860⊗24

⊗ Voltage Suffix Codes for AC Control

Conventional Coil	V	24	48	100	110	120	200	208	220... 230	230	240	277	380... 400	415	440	480	500	550	600
100-D95...100-D180	50 Hz	K	Y	—	D	—	—	—	A	—	T	—	N	B	G	—	M	C	—
	60 Hz	J	X	—	—	D	—	H	—	—	A	T	—	—	N	B	—	—	C
100-D95...100-D110	50/60 Hz	—	—	KP	KN	—	KG	—	—	KF	KA	—	—	—	—	—	—	—	—

Electronic Coil w/ EI Interface ❹	V	24	42... 64	100	110... 130	200	208... 277	380... 415	440... 480	500	600
100-D95...100-D250	50/60 Hz	EJ	EY	EP	ED	EG	EA	EN	EN	EN	—
100-D300...100-D420	50/60 Hz	—	EY	EP	ED	EG	EA	EN	EN	EN	—
100-D630...100-D860	50/60 Hz	—	—	EP	ED	EG	EA	EN	EB	EM	EC

❶ Preferred values according to IEC 60072-1

❷ Conventional coils.

❸ Electronic coils.

❹ Signal voltage of the Cat. No. 100-D... electronic interface: Nominal U_e : 24V DC/ I_e : 15 mA

Pick-up Voltage: 13.0V DC...30.2V DC

Drop-out Voltage: -3.0V DC...+5.0V DC

3-pole DC-Operated Contactors

- Conventional and Electronic DC Coils
- 3 Main Contacts
- Non-Reversing or Reversing



100-D180...



100-D420...



100-D860...

I _e [A]		Switching of 3-phase motors — AC-2, AC-3										Auxiliary contacts		Non-reversing Contactor Cat. No.	Reversing Contactor Cat. No.
60°C	40°C	kW (50 Hz) ❶						Hp (60 Hz)				N.O.	N.C.		
AC-3	AC-1	230V	400V	415V	500V	690V	1000V	200V	230V	460V	575V				
95	160	30	50	55	63	90	45	25	30	60	75	0	0	100-D95❸00	—
												1	1	100-D95❸11	—
												2	1/1L	100-D95❸22L ❷	—
												2	4	—	104-D95❸24
												2	2/2L	—	104-D95❸24L ❷
110	160	32	55	63	75	100	55	40	40	75	100	0	0	100-D110❸00	—
												1	1	100-D110❸11	—
												2	1/1L	100-D110❸22L ❷	—
												2	4	—	104-D110❸24
												2	2/2L	—	104-D110❸24L ❷
140	250	45	75	80	80 ❸	110 ❸	75	40	50	100	125	0	0	100-D140❸00	—
					100 ❹	132 ❹						1	1	100-D140❸11	—
					2	1/1L						100-D140❸22L ❷	—		
					2	4						—	104-D140❸24		
					2	2/2L						—	104-D140❸24L ❷		
180	250	55	90	100	90 ❸	132 ❸	90	50	60	150	150	0	0	100-D180❸00	—
					125 ❹	160 ❹						1	1	100-D180❸11	—
					2	1/L						100-D180❸22L ❷	—		
					2	4						—	104-D180❸24		
					2	2/2L						—	104-D180❸24L ❷		
210	350	63	110	125	150	200	110	60	75	150	200	0	0	100-D210❸00	—
												1	1	100-D210❸11	—
												2	4	—	104-D210❸24
250	350	80	132	150	160	250	132	75	100	200	250	0	0	100-D250❸00	—
												1	1	100-D250❸11	—
												2	4	—	104-D250❸24
300	450	90	160	185	220	300	160	100	125	250	300	0	0	100-D300❸00	—
												1	1	100-D300❸11	—
												2	4	—	104-D300❸24
420	500	132	220	250	300	425	220	150	175	350	400	0	0	100-D420❸00	—
												1	1	100-D420❸11	—
												2	4	—	104-D420❸24
630	800	200	355	355	450	500	—	200	250	500	600	0	0	100-D630❸00	—
												1	1	100-D630❸11	—
												2	4	—	104-D630❸24
860	1000	250	500	500	560	600	—	250	300	600	700	0	0	100-D860❸00	—
												1	1	100-D860❸11	—
												2	4	—	104-D860❸24

⊗ Voltage Suffix Codes for DC Control

Conventional Coil	V	24	48	110	125	220
100-D95...100-D180 ❷	DC	ZJ	ZY	ZD	ZS	ZA

Electronic Coil w/ EI Interface ❸	V	24	48...72	110...130	200...255
100-D95...100-D300	DC	EZJ	EZY	EZD	EZA
100-D420	DC	—	EZY	EZD	EZA
100-D630...860	DC	—	—	ED	EA

❶ Preferred value according to IEC 60072-1.

❷ For conventional DC coil only. The pickup winding must be interconnected with the N.C. late-break auxiliary contact(s).

❸ Conventional coils.

❹ Electronic coils.

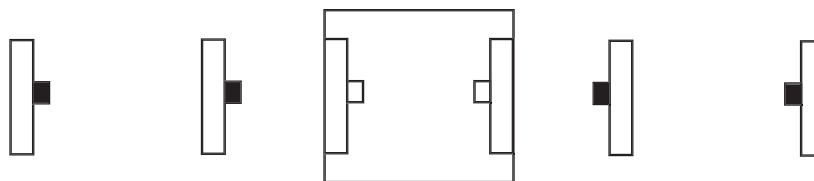
❺ Signal voltage of the Cat. No. 100-D... electronic interface: U_E : 24V DC/ I_E : 15 mA

Pick-Up Voltage: 13.0V DC...30.2V DC

Drop-Out Voltage: -3.0V DC...+5.0V DC

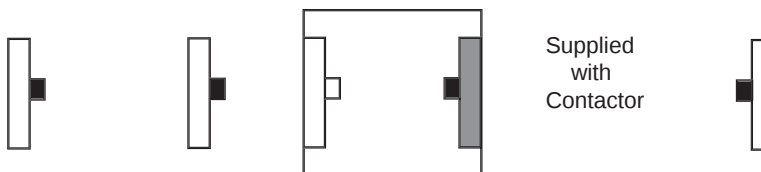
Auxiliary contacts with sequence numbering

Cat. Nos. 100-D95...D860 — Electronic and Conventional AC Coils, Electronic DC Coils



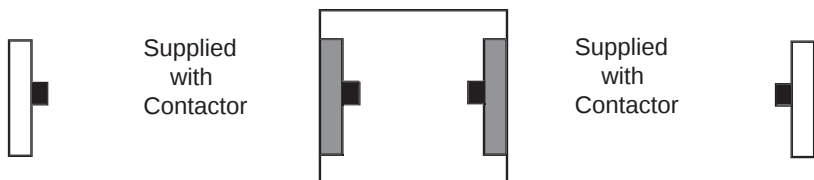
Contact Configuration		Auxiliary contact configurations				
		Left-Side Mounting		For Use With	Right-Side Mounting	
N.O.	N.C.	Outside Cat. No.	Inside Cat. No.		Inside Cat. No.	Outside Cat. No.
8	0	100-DS2-20	100-DS1-20	100-D...00	100-DS1-20	100-DS2-20
Sequence starts with...		7/8	3/4		1/2	5/6
7	1	100-DS2-20	100-DS1-20	100-D...00	100-DS1-11	100-DS2-20
Sequence starts with...		7/8	3/4		1/2	5/6
6	2	100-DS2-20	100-DS1-11	100-D...00	100-DS1-11	100-DS2-20
Sequence starts with...		7/8	3/4		1/2	5/6
5	3	100-DS2-20	100-DS1-11	100-D...00	100-DS1-11	100-DS2-11
Sequence starts with...		7/8	3/4		1/2	5/6
4	4	100-DS2-11	100-DS1-11	100-D...00	100-DS1-11	100-DS2-11
Sequence starts with...		7/8	3/4		1/2	5/6

Cat. Nos. 100-D95...D860 — Electronic and Conventional AC Coils, Electronic DC Coils



Contact Configuration		Auxiliary contact configurations				
		Left-Side Mounting		For Use With	Right-Side Mounting	
N.O.	N.C.	Outside Cat. No.	Inside Cat. No.		Inside Cat. No.	Outside Cat. No.
8	0	—	—	100-D...11	—	—
Sequence starts with...		—	—		—	—
7	1	100-DS2-20	100-DS1-20	100-D...11	100-DS1-11	100-DS2-20
Sequence starts with...		7/8	3/4		1/2	5/6
6	2	100-DS2-20	100-DS1-11	100-D...11	100-DS1-11	100-DS2-20
Sequence starts with...		7/8	3/4		1/2	5/6
5	3	100-DS2-20	100-DS1-11	100-D...11	100-DS1-11	100-DS2-11
Sequence starts with...		7/8	3/4		1/2	5/6
4	4	100-DS2-11	100-DS1-11	100-D...11	100-DS1-11	100-DS2-11
Sequence starts with...		7/8	3/4		1/2	5/6

Contactor cat. nos. 100-D95...D180 — Conventional DC coils



Contact Configuration		Auxiliary contact configurations				
		Left-Side Mounting		For Use With	Right-Side Mounting	
N.O.	N.C.	Outside Cat. No.	Inside Cat. No.		Inside Cat. No.	Outside Cat. No.
8	0	—	—	100-D...22L	—	—
Sequence starts with...		—	—		—	—
7	1	—	—	100-D...22L	—	—
Sequence starts with...		—	—		—	—
6	2	100-DS2-20	100-DS1-11	100-D...22L	100-DS1-L11 ①	100-DS2-20
Sequence starts with...		7/8	3/4		1/2	5/6
5	3	100-DS2-20	100-DS1-11	100-D...22L	100-DS1-L11 ①	100-DS2-11
Sequence starts with...		7/8	3/4		1/2	5/6
4	4	100-DS2-11	100-DS1-11	100-D...22L	100-DS1-L11 ①	100-DS2-11
Sequence starts with...		7/8	3/4		1/2	5/6

① With conventional DC control, the pickup winding must be interconnected with the N.C. late-breaking auxiliary contacts.



Bulletin 100-G IEC Contactors

- 315...710 kW, 400V
- 350...900 Hp, 460/575V
- 3-Pole Contactors
- 4th Add-On Neutral Switching Pole
- AC and DC Control
- Horizontal and Vertical Interlocking
- Mechanical Latching
- Meets IEC, CE, UL, and cUL Standards and Approvals

The Bulletin 100-G contactor product family provides reliable switching of motor loads up to 1200 A. A complete range of accessories including auxiliary contacts, mechanical latches, horizontal and vertical interlocks, and 4th add-on neutral switching poles provides maximum flexibility to meet a wide variety of application requirements.

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Conformity to Standards

EN/IEC 60947-4-1
 IEC 60947
 Type "1" Coordination
 CSA C22.2 No. 14
 UL 508

Approvals

CE Marked
 UL Listed
 cUL

Your order must include: cat. no. of the contactor selected, coil voltage code, overload relay suffix code, and, if required, cat. no. of any accessories.

Product Selection

AC and DC Control

AC-1	Switching of 3-phase motors — AC-2, AC-3								Auxiliary Contacts		Cat. No.
I _e (A)	kW (50 Hz) ❶				Hp (60 Hz)						
40°C	230V	400V	500V	690V	200V	230V	460V	575V	N.O.	N.C.	
760	160	315	400	500	150	150	350	350	2	2	100-G550❸22
1000	220	400	500	630	200	250	500	500	2	2	100-G700❸22
1100	280	500	630	710	250	300	600	600	2	2	100-G860❸22
1200	315	560	750	850	—	—	—	—	2 ❷	2	100-G1000❸12❹
1350	375	710	850	1000	450	450	900	900	2 ❷	2	100-G1200❸12

❶ Preferred value according to IEC 60072-1.

❷ 1 N.O. contact used in control circuit.

❸ No UL/cUL

⊗ Coil Voltage Code

For Use With:		100...110V	110...120V	200...220V	220...240V	345...380V	380...415V	400...440V	440...480V
100-G550...100-G860	50/60 Hz	—	KD	—	KF	—	KN	—	KB
	DC	KD	—	KF	—	KN	—	KB	—

For Use With:		110...115V	110V	220...230V	220V	240V	380...400V	440V	480V
100-G1000...100-G1200	50/60 Hz	KD	—	KF	—	KA	KN	KB	KU
	DC	—	ZD	—	ZA	—	—	—	—

Price Adder For	Type	Available Control Voltages	No Surcharge
Special control voltages	100-G550...100-G860	24...600V 50/60 Hz, 24...440V DC	>25 pieces
	100-G1000...100-G1200	48...600V 50/60 Hz, 48...440V DC	



Cat. No. 100Q-C37A11

Bulletin 100Q Capacitor-Switching Contactors

- Compact Sizes
- Limits High Inrush Currents
- AC and DC Coil Control
- Reversible Coil Terminals
- Panel or 35 mm DIN Rail Mounting
- Environmentally Friendly Materials

The Bulletin 100Q Capacitor-Switching Contactors are designed for switching banks of capacitors. The unique design uses front-mounted resistor elements that limit the severely high inrush currents seen in these applications. This reduces stress to the contactors and the capacitors, as well as allowing a more compact and economical design without the use of air-core reactors.

Product Selection71
Approximate Dimensions 130
Conformity to Standards
IEC 60947-4
CSA C22.2 No. 14
UL 508
Approvals
CE Marked
CSA Certified
UL Listed

Your order must include: cat. no. of the contactor specified with coil voltage code and, if required, cat. no. of any accessories

Product Selection

For Applications per IEC 60947-4 (AC-6b)

Ratings for Switching Capacitor Banks @ 40°C														
1-Phase 50 Hz (kVar)						3-Phase 50 Hz (kVar)						Aux. Contacts		Cat. No.
230V	240V	400V	415V	500V	690V	230V	240V	400V	415V	500V	690V	N.O.	N.C.	
5	5	8.5	9	10.5	15	8.5	8.5	15	15.5	18.5	25	1	1	100Q-C16®11
												2	0	100Q-C16®20
8	8.5	14	14.5	17.5	24	14	14	25	25	30	40	1	1	100Q-C37®11
												2	0	100Q-C37®20

Ratings for Switching Capacitor Banks @ 60° C														
1-Phase 50 Hz (kVar)						3-Phase 50 Hz (kVar)						Aux. Contacts		Cat. No.
230V	240V	400V	415V	500V	690V	230V	240V	400V	415V	500V	690V	N.O.	N.C.	
5	5	8.5	9	10.5	15	8.5	8.5	15	15.5	18.5	25	1	1	100Q-C16®11
												2	0	100Q-C16®20
7	7.5	12.5	13	16	22	12.5	13	21.5	22.5	27	37.5	1	1	100Q-C37®11
												2	0	100Q-C37®20

For Applications per UL/CSA

Ratings for Switching Capacitor Banks										Aux. Contacts		Cat. No.
1-Phase 50 Hz (kVar)		3-Phase 50 Hz (kVar)								N.O.	N.C.	
115V	230V	200V	230V	460V	600V							
2.2	4.5	6.5	7.5	15	18.5					1	1	100Q-C16®11
										2	0	100Q-C16®20
3.6	7.5	11	12.5	20	25					1	1	100Q-C37®11
										2	0	100Q-C37®20

⊗ Coil Voltage Code

The cat. no. as listed is incomplete. Select a coil voltage code from the table below to complete the Cat. No. Example: 120V, 60 Hz:

Cat. No. 100Q-C16®11 becomes Cat. No.100Q-C16D11.

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

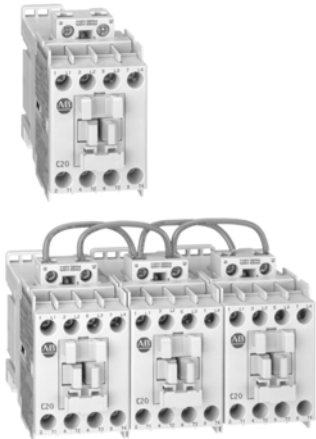
DC Voltages	9	12	24	36	48	60	64	72	80	110	115	125	220	230	250
Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—

Maximum Operational Rates

100Q-C16	200 operations/hour
100Q-C37	100 operations/hour

Bulletin 100L
Electrically Held Lighting Contactors

Overview/Product Selection



Bulletin 100L Electrically Held Lighting Contactors

- Electrically Held
- 20 A Rating
- 4-, 8-, and 12-Pole Configurations
- Open or Enclosed
- CSA Certified, UL Listed

Bulletin 100 Lighting Contactors have been designed to control a variety of lighting loads. The product offering includes 4-, 8-, and 12-pole contactors with or without enclosures. The Bulletin 100 line of lighting contactors has been designed with a 20 A rating for all popular lighting loads and other non-motor applications including tungsten filament lighting loads, electric discharge (fluorescent) loads, electric furnaces, and electric water heaters. In addition these contactors have been designed to meet the requirements of both CSA and UL.

Product Selection72

Wiring Diagram72

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Conformity to Standards

CSA C22.2 No. 14
UL 508

Approvals

CE Marked
CSA Certified (File No. LR1234)
UL Listed (File No. E14843; Guide No. NRNT)

Your order must include: Cat. No. of the contactor specified with coil voltage code and, if required, Cat. No. of any accessories

Product Selection

Type	Number of Poles ❶	Cat. No.
Open	4	100L-C20N❸4
	8	100L-C20N❸8
	12	100L-C20N❸12
IP42 (Type 1) (with lift-off cover)	4	100L-C20A❸4
	8	100L-C20A❸8
	12	100L-C20A❸12
IP66 (Type 3/4/12) (with hinged cover)	4	100L-C20F❸4
	8	100L-C20F❸8
	12	100L-C20F❸12

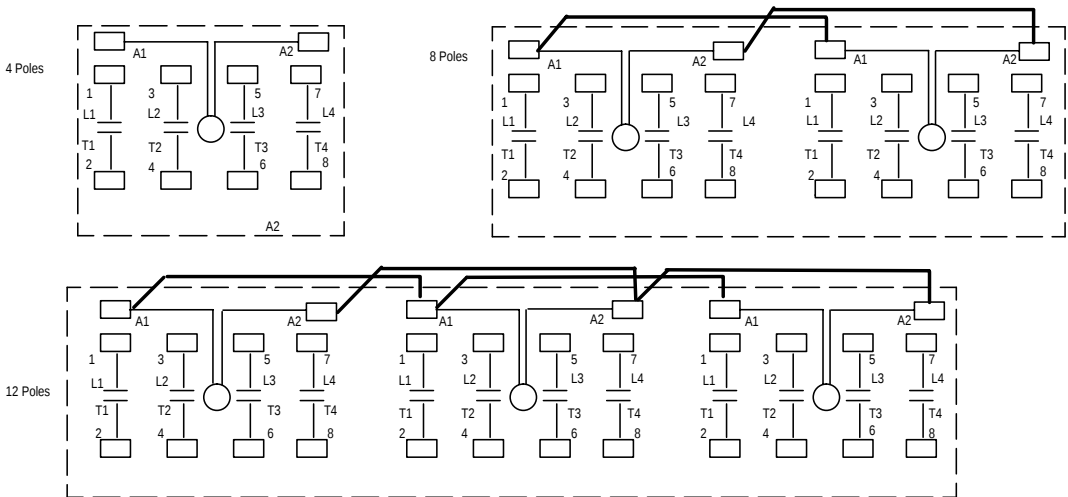
❶ These contactors do not include an auxiliary hold-in contact. If a hold-in contact is required it can be ordered by adding a suffix -90 to the Cat. No.
Example: Cat. No. 100L-C20NJ4-90.

❷ Coil Voltage Code

The Cat. No. as listed is incomplete. To complete the Cat. No., select a coil voltage code from the chart below and insert into the Cat. No.
Example: Cat. No. 100L-C20N❸4 becomes Cat. No. 100L-C20NJ4. For other voltages, consult Allen-Bradley Sales Office.

Voltage	24V	48V	110V	120V	208V	220V	240V	277V	347V	380V-400V	415V	440V	480V	500V	600V
50 Hz	K	Y	D	P	—	A	T	—	—	N	G	B	—	M	—
60 Hz	J	X	—	D	H	L	A	T	I	—	—	N	B	—	C

Wiring Diagram





Bulletin 100S/104S Safety Contactors

- Positively Guided/Mechanically Linked Auxiliary Contacts
- Front-Mounted Auxiliary Contacts:
 - Permanently Fixed
 - Protective Cover to Prevent Manual Operation
 - Red Contact Housing for Easy Identification
 - Incorporates IEC 60947-5-1 "Mechanically Linked" Symbol
- AC and DC Operating Coils
- SUVA Third-Party Certification

Bulletin 100S-C/104S-C safety contactors provide mechanically linked, positively guided contacts, which are required in feedback circuits for modern safety applications. The positively guided N.C. auxiliary contacts will not change state when a power contact welds. Also, the power contacts will not change state if a N.C. auxiliary contact welds.

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Conformity to Standards

CSA C22.2 No. 14
UL 508
EN/IEC 60947-4-1, 60947-5-1
IEC 60947-4-1 Annex F—
Mirror Contacts
IEC 60947-5-1 Annex L —
Mechanically Linked Contacts

Approvals

SUVA Third-Party Certified
CE Marked
CSA Certified (Cert No.
LR13908)
UL Listed (File No. E3125;
Guide No. NLDX)

Your order must include: cat. no. of the contactor specified with coil voltage code and, if required, cat. no. of any accessories and/or replacement coils.

Product Selection

3-Pole AC- and DC-Operated Contactors

- 3 Main Contacts



I _e [A]		Ratings for Switching AC Motors - AC-2, AC-3, AC-4										Aux. Contacts		Cat. No. ①②
		3Ø kW (50 Hz)					Hp (60 Hz)							
AC-3	AC-1	230V	400V/ 415V	500V	690V	1Ø		3Ø						
						115V	230V	200V	230V	460V	575V			
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2	0	5	100S-C09®05C
												1	4	100S-C09®14C
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	0	5	100S-C12®05C
												1	4	100S-C12®14C
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	0	5	100S-C16®05C
												1	4	100S-C16®14C
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	0	5	100S-C23®05C
												1	4	100S-C23®14C
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	4	100S-C30®04C
												1	4	100S-C30®14C
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	4	100S-C37®04C
												1	4	100S-C37®14C
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	4	100S-C43®04C
												1	4	100S-C43®14C
60	100	18.5	32	37	32	5	10	15	20	40	50	0	4	100S-C60®04C ③
												1	4	100S-C60®14C ③
72	100	22	40	45	40	5	15	20	25	50	60	0	4	100S-C72®04C ③
												1	4	100S-C72®14C ③
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	4	100S-C85®04C ③
												1	4	100S-C85®14C ③

① For other contact configurations, please consult your local Allen-Bradley distributor.

② If bifurcated front-mount auxiliary contacts are required, insert the letter "B" before the letter "C" in the catalog number.
Example: Cat. No. **100S-C09③05C** becomes Cat. No. **100S-C09③05BC**.

③ Bifurcated front-mount auxiliary contacts on **100S-C60...C85** safety contactors conform to mirror contact performance only.

⊗ **Coil Voltage Code and Terminal Position**

The Cat. No. as listed is incomplete. Select a coil voltage code from the table below to complete the Cat. No. Example: 120V, 60Hz:

Cat. No. 100S-C09⊗05C becomes **Cat. No. 100S-C09D05C**.

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

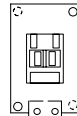
DC Voltages		9	12	24	36	48	60	64	72	80	110	115	125	220	230	250
100S-C09...C43	Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—
100S-C60...C85	with Integrated Diode	DR	DQ	DJ	DW	DY	DZ	DB	DG	DE	DD	DP	DS	DA	DF	DT

Coil Terminal Position

- All contactors are delivered with the coil terminals located on the **line side**.
- For **load side** coil terminations, insert a "U" prior to the coil voltage code. Example: **Cat. No. 100S-C09UD05C**.



Cat. No.
100S-C09⊗05C
Line Side



Cat. No.
100S-C09U⊗05C
Load Side

4-Pole AC- and DC-Operated Contactors

- 4 Main Contacts

I _e [A]		Ratings for Switching AC Motors										Contact Configuration				Cat. No. ❶	
		AC-2, AC-3, AC-4															
		3∅ kW (50 Hz) ❷				Hp (60 Hz)						Main Pole		Auxiliary Contacts			
AC-3	AC-1	230V	400V/ 415V	500V	690V	1 ∅		3 ∅ ❷									
						115V	230V	200V	230V	460V	575V						
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2					100S-C09⊗404C	
																100S-C09⊗304C	
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10					100S-C12⊗404C	
																100S-C12⊗304C	
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15					100S-C16⊗404C	
																100S-C16⊗304C	
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15					100S-C23⊗404C	
																100S-C23⊗304C	

❶ For other contact configurations, please consult your local Allen-Bradley distributor.

❷ Three-phase ratings only apply to contactors with at least three N.O. power poles.

⊗ **Coil Voltage Code**

The Cat. No. as listed is incomplete. Select a coil voltage code from the table below to complete the cat. no. Example: 120V, 60 Hz: **Cat. No. 100S-C09⊗404C** becomes **Cat. No. 100S-C09D404C**.

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

DC Voltages		9	12	24	36	48	60	64	72	80	110	115	125	220	230	250
100S-C09...C23	Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—

Reversing AC- and DC-Operated Contactors

- 3 Main Contacts
- Includes Mechanical/Electrical Interlock
- Includes Reversing Power Wiring



I _e [A]		Ratings for Switching AC Motors										Auxiliary Contacts Installed per Contactor		Cat. No. ①②
		AC-2, AC-3, AC-4												
		3 Ø kW (50 Hz)				Hp (60 Hz)								
AC-3	AC-1	230V	400V/ 415V	500V	690V	1Ø		3Ø					 	
						115V	230V	200V	230V	460V	575V			
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2	0	6	104S-C09②012C
												1	5	104S-C09②210C
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	0	6	104S-C12②012C
												1	5	104S-C12②210C
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	0	6	104S-C16②012C
												1	5	104S-C16②210C
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	0	6	104S-C23②012C
												1	5	104S-C23②210C
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	5	104S-C30②010C
												1	5	104S-C30②210C
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	5	104S-C37②010C
												1	5	104S-C37②210C
43	85	13	22	25	22	3	7.5	10	15	30	30	0	5	104S-C43②010C
												1	5	104S-C43②210C
60	100	18.5	32	37	32	5	10	15	20	40	50	0	5	104S-C60②010C ④
												1	5	104S-C60②210C ④
72	100	22	40	45	40	5	15	20	25	50	60	0	5	104S-C72②010C ④
												1	5	104S-C72②210C ④
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	5	104S-C85②010C ④
												1	5	104S-C85②210C ④

① For other contact configurations, please consult your local Allen-Bradley distributor.

② One of the N.C. auxiliary contacts is supplied as part of the mechanical/electrical interlock.

③ If bifurcated front-mount auxiliary contacts are required, insert the letter "B" before the letter "C" in the catalog number.

Example: Cat. No. 104S-C09②012C becomes Cat. No. 104S-C09②012BC.

④ Bifurcated front-mount auxiliary contacts on 104S-C60...C85 safety contactors conform to mirror contact performance only.

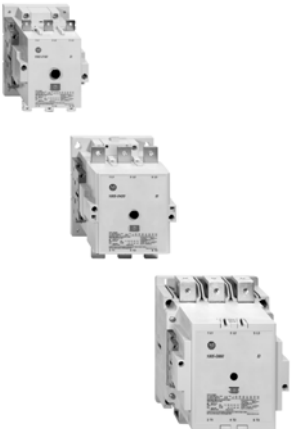
⊗ Coil Voltage Code

The cat. no. as listed is incomplete. Select a coil voltage code from the table below to complete the cat. no. Example: 120V 60 Hz:

Cat. No. 104S-C09②210C becomes Cat. No. 104S-C09D210C.

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

DC Voltages		9	12	24	36	48	60	64	72	80	110	115	125	220	230	250
104S-C09...C43	Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—
104S-C60...C85	with Integrated Diode	DR	DQ	DJ	DW	DY	DZ	DB	DG	DE	DD	DP	DS	DA	DF	DT

	Bulletin 100S-D Safety Contactors • 50...500 kW @400V • 60...600 Hp @460V • 75...700 Hp @575V • Electronic and Conventional Coils - AC & DC - Integrated PLC Interface - Low Power Pick-Up & Hold-In - Wide Voltage Ranges • Complete Range of Accessories • Environmentally-Friendly • Compact Dimensions Bulletin 100S-D safety contactors were designed to provide safe isolation of hazardous motionloads, using "mirror contact" performance. Mirror contacts provide reliable indication about the open/closed status of the main power poles.	Table of Contents Product Selection 76 Accessories..... 84 Specifications..... 88 Approximate Dimensions..... 128 Conformity to Standards IEC 60947-4-1 IEC 60947-4 Annex F IEC 60947 Type "2" Coordination CSA C22.2 No. 14 UL 508 Approvals CE Marked CSA Certified UL Listed SUVA Certified
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Product Selection

3-pole AC-Operated Contactors

- Conventional and Electronic AC Coils
- 3 Main Contacts
- Non-Reversing



100S-D860...

I_e [A]		Switching of 3-phase motors — AC-2, AC-3										Auxiliary contacts		Cat. No.
60°C	40°C	kW (50 Hz) ❶						Hp (60 Hz)				N.O.	N.C. ❷	
AC-3	AC-1	230V	400V	415V	500V	690V	1000V	200V	230V	460V	575V			
95	160	30	50	55	63	90	45	25	30	60	75	2	2	100S-D95@22C
110	160	32	55	63	75	100	55	40	40	75	100	2	2	100S-D110@22C
140	250	45	75	80	80/100❸	110/132❹	75	40	50	100	125	2	2	100S-D140@22C
180	250	55	90	100	90/125❸	132/160❹	90	50	60	150	150	2	2	100S-D180@22C
210	350	63	110	125	150	200	110	60	75	150	200	2	2	100S-D210@22C
250	350	80	132	150	160	250	132	75	100	200	250	2	2	100S-D250@22C
300	450	90	160	160	200	300	160	100	125	250	300	2	2	100S-D300@22C
420	500	132	220	250	300	425	220	150	175	350	400	2	2	100S-D420@22C
630	800	200	355	355	450	500	—	200	250	500	600	2	2	100S-D630@22C
860	1000	250	500	500	560	600	—	250	300	600	700	2	2	100S-D860@22C

ⓧ Voltage Suffix Codes for AC Control

Conventional Coil	V	24	48	100	110	120	200	208	220... 230	230	240	277	380... 400	415	440	480	500	550	600
100S-D95...100S-D180	50 Hz	K	Y	—	D	—	—	—	A	—	T	—	N	B	G	—	M	C	—
	60 Hz	J	X	—	—	D	—	H	—	—	A	T	—	—	N	B	—	—	C
100S-D95...100S-D110	50/60 Hz	—	—	KP	KN	—	KG	—	—	KF	KA	—	—	—	—	—	—	—	—

Electronic Coil w/ PLC Interface ❹	V	24	42... 64	100	110... 130	200	208... 277	380... 415	440... 480	500	600
100S-D95...100S-D250	50/60 Hz	EJ	EY	EP	ED	EG	EA	EN	EN	EN	—
100S-D300...100S-D420	50/60 Hz	—	EY	EP	ED	EG	EA	EN	EN	EN	—
100S-D630...100S-D860	50/60 Hz	—	—	EP	ED	EG	EA	EN	EB	EM	EC

❶ Preferred values according to IEC 60072-1.

❷ The N.C. contacts meet IEC 60947-4 Annex F requirements to mirror contact performance. The N.C. mirror contacts are wired in series or parallel and must be used as monitoring contacts with feedback to the safety circuit.

❸ Higher kW rating only applies to contactors with electronic coil.

❹ Signal voltage of the Cat. No. 100S-D... electronic interface: U_E : 24V DC/ I_E : 15 mA

Pick-Up Voltage: 13.0V DC...30.2V DC
Drop-Out Voltage: -3.0V DC...+5.0V DC

3-pole DC-Operated Contactors

- Conventional and Electronic DC Coils
- 3 Main Contacts
- Non-Reversing



100S-D420...

I_e [A]		Switching of 3-phase motors — AC-2, AC-3										Auxiliary contacts		Cat. No.
60°C	40°C	kW (50 Hz) ❶						Hp (60 Hz)				N.O.	N.C. ❷	
AC-3	AC-1	230V	400V	415V	500V	690V	1000V	200V	230V	460V	575V			
95	160	30	50	55	63	90	45	25	30	60	75	3	2/1L	100S-D95®33LC ❸
												2	2	100S-D95®22C
110	160	32	55	63	75	100	55	40	40	75	100	3	2/1L	100S-D110®33LC ❸
												2	2	100S-D110®22C
140	250	45	75	80	80	110	75	40	50	100	125	3	2/1L	100S-D140®33LC ❸
					100 ❹	132 ❹						2	2	100S-D140®22C
180	250	55	90	100	90	132	90	50	60	150	150	3	2/1L	100S-D180®33LC ❸
					125 ❹	160 ❹						2	2	100S-D180®22C
210	350	63	110	125	150	200	110	60	75	150	200	2	2	100S-D210®22C
250	350	80	132	150	160	250	132	75	100	200	250	2	2	100S-D250®22C
300	450	90	160	160	200	300	160	100	125	250	300	2	2	100S-D300®22C
420	500	132	220	250	300	425	220	150	175	350	400	2	2	100S-D420®22C
630	800	200	355	355	450	500	—	200	250	500	600	2	2	100S-D630®22C
860	1000	250	500	500	560	600	—	250	300	600	700	2	2	100S-D860®22C

⊗ Voltage Suffix Codes for DC Control

Conventional Coil	V	24	48	110	125	220	250
100S-D95...100S-D180 ❸	DC	ZJ	ZY	ZD	ZS	ZA	ZT

Electronic Coil w/ EI Interface ❸	V	24	48...72	110...130	200...255
100S-D95...100S-D300	DC	EZJ	EZY	EZD	EZA
100S-D420	DC	—	EZY	EZD	EZA
100S-D630...860	DC	—	—	ED	EA

❶ Preferred values according to IEC 60072-1.

❷ The N.C. contacts meet IEC 60947-4 Annex F requirements to mirror contact performance. The N.C. mirror contacts are wired in series or parallel and must be used as monitoring contacts with feedback to the safety circuit.

❸ For conventional DC coil only. The pickup winding must be interconnected with the N.C. late-breaking auxiliary contacts.

❹ Higher kW rating only applies to contactors with electronic coil.

❺ Signal voltage of the Cat. No. 100S-D... electronic interface: U_E : 24V DC/ I_E : 15 mA

Pick-Up Voltage: 13.0V DC...30.2V DC

Drop-Out Voltage: -3.0V DC...+5.0V DC

Accessories

	Description	Type	For Use With	Cat. No. ❶
 Cat. No. 195-MB22	Auxiliary Contact Adder Deck (Top Mounted)	2 N.C. 1 N.O./1 N.C. 2 N.O./2 N.C 2 N.O.	100/104-M05...M12	195-MB02 195-MB11 195-MB22 195-MB20
	Solid-State Timing Element	0.3...3 s ON-Delay, 110...250V AC or DC 1...30 s ON-Delay, 110...250V AC or DC	100/104-M05...M12	196-MT3S
	Star-Delta Timer	220V AC		196-MT30S
		110V AC		196-MTSDA1
	35 mm DIN Rail Mounting Adapter for Above Timers			196-MTSDA2
				196-MTDM
	Mechanical Interlock Kit	Mechanical Interlock Only	100-M05...M12 (AC Coils Only)	199-MXM1
	Power Wiring Kit	For Reversing Contactors	100-M05...M12	140-KCR4❷❸
	R-C Suppressor	24...48V AC 110...240V AC	100/104-M05...M12	199-MSMA48 199-MSMA1
	MOV Suppressor	12...55V AC/12...77V DC 56...125V AC/78...162V DC 126...277V AC/163...350V DC		199-MSMV1 199-MSMV2 199-MSMV3
	Diode Suppressor	12...250V DC		199-MSMD1

❶ Must be ordered in multiples of 10.

❷ Sold in quantities of 1.

❸ Not for use with direct-mounted overload relays.

Bulletin 100-M Miniature Contactors Labelling Material

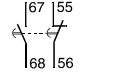
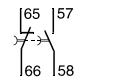
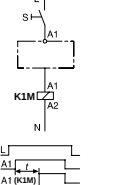
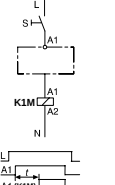
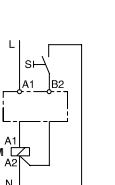
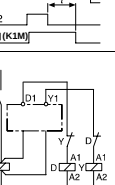
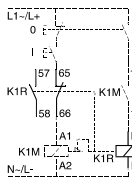
Description		Pkg. Qty.	Cat. No.
Labels	Adhesive Paper, 105 per sheet	10	199-ID1
Marking Tags	160 per sheet	10	199-ID2
Cover	Transparent/Tag	100	199-ID3
Tag Carrier	For Clip-On Tags	100	199-ID4

Clip-On Marking Tag Strip (10 per Strip)								
Tag Marking	Pkg. Qty.	Cat. No.	Tag Marking	Pkg. Qty.	Cat. No.	Tag Marking	Pkg. Qty.	Cat. No.
1...10	25	199-ID5	1	25	199-ID25	G	25	199-ID45
11...20	25	199-ID6	2	25	199-ID26	H	25	199-ID46
21...30	25	199-ID7	3	25	199-ID27	I	25	199-ID47
31...40	25	199-ID8	4	25	199-ID28	J	25	199-ID48
41...50	25	199-ID9	5	25	199-ID29	K	25	199-ID49
51...60	25	199-ID10	6	25	199-ID30	L	25	199-ID50
61...70	25	199-ID11	7	25	199-ID31	M	25	199-ID51
71...80	25	199-ID12	8	25	199-ID32	N	25	199-ID52
81...90	25	199-ID13	9	25	199-ID33	O	25	199-ID53
91...100	25	199-ID14	0	25	199-ID34	P	25	199-ID54
101...110	25	199-ID15	Unmarked	25	199-ID35	Q	25	199-ID55
111...120	25	199-ID16	0...9	25	199-ID36	R	25	199-ID56
121...130	25	199-ID17	+	25	199-ID37	S	25	199-ID57
131...140	25	199-ID18	-	25	199-ID38	T	25	199-ID58
141...150	25	199-ID19	A	25	199-ID39	U	25	199-ID59
151...160	25	199-ID20	B	25	199-ID40	V	25	199-ID60
161...170	25	199-ID21	C	25	199-ID41	W	25	199-ID61
171...180	25	199-ID22	D	25	199-ID42	X	25	199-ID62
181...190	25	199-ID23	E	25	199-ID43	Y	25	199-ID63
191...200	25	199-ID24	F	25	199-ID44	Z	25	199-ID64

	Description	 N.O.	 N.C.	Connection Diagrams	For Use With	Cat. No.	Bifurcated Auxiliary Contact Cat. No.
	Auxiliary Contact Blocks for Front Mounting 2- and 4-pole - Quick and easy mounting without tools - Electronic-compatible contacts down to 17V, 5 mA - Mechanically linked performance between N.O. and N.C. poles and to the main contactor poles (except for L types) - Models with equal function with several terminal numbering choices 1L = Late break N.C./early make N.O. - Bifurcated version for switching down to 8V, 5 mA	0	2		100-C all C3000...C8500	100-FA02 100-FB02	100-FAB02 100-FBB02
		1	1		100-C all C3000...C8500 C09010...C23010	100-FA11 100-FB11 100-FC11	100-FAB11 100-FBB11 100-FCB11
		2	0		100-C all C3000...C8500	100-FA20 100-FB20	100-FAB20 100-FBB20
		1L	1L		C3000...C8500	100-FAL11 100-FBL11	—
		0	4		100-C all	100-FA04	100-FAB04
		1	3		100-C all	100-FA13	100-FAB13
		2	2		100-C all C3000...C8500 C09010...C23010	100-FA22 100-FB22 100-FC22	100-FAB22 100-FBB22 100-FCB22
		3	1		100-C all C09010...C23010	100-FA31 100-FC31	100-FAB31 100-FCB31
		4	0		100-C all	100-FA40	100-FAB40
		1+1L	1+1L		100-C all	100-FAL22	—
	Auxiliary Contact Blocks for Side Mounting without Sequence Terminal Designations 1- and 2-pole - Two-way numbering for right or left mounting on the contactor - Quick and easy mounting without tools - Electronic-compatible contacts down to 17V, 10 mA - Mirror contact performance to the main contactor poles 1L = Late break N.C./early make N.O.	0	1		100-C all	100-SA01	—
		1	0		100-C all	100-SA10	—
		0	2		100-C all	100-SA02	—
		1	1		100-C all	100-SA11	—
		2	0		100-C all	100-SA20	—
		1L	1L		100-C all	100-SAL11	—
	Auxiliary Contact Blocks for Side Mounting with Sequence Terminal Designations 1- and 2-pole - Two-way numbering for right or left mounting on the contactor - Quick and easy mounting without tools - Electronic compatible contacts down to 17V, 10 mA - Mirror contact performance to the main contactor poles 1L = Late break N.C./early make N.O.	0	1		100-C all	100-SB01	—
		1	0		100-C ②	100-SB10	—
		0	2		100-C ②	100-SB02	—
		1	1		100-C ②	100-SB11	—
		2	0		100-C ②	100-SB20	—
		1L	1L		100-C ②	100-SBL11	—

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Control Modules (For 100-C09...C85 contactors)

	Description	Connection Diagrams	For Use With	Cat. No.
	Pneumatic Timing Modules Pneumatic timing element contacts switch after the delay time. The contacts on the main contactor continue to operate without delay. - Continuous adjustment range - Repeat accuracy $\pm 10\%$	 ON-Delay 0.3...30 s 1.8...180 s	100-C with AC coils	100-FPTA30 100-FPTA180
	Electronic Timing Modules Delay of the contactor solenoid 100-ETA ON-Delay The contactor is energized at the end of the delay time.	 ON-Delay 0.1...3 s 1...30 s 10...180 s 110...240V, 50/60 Hz 110...250VDC	100-C all	100-FPTB30 100-FPTB180
	100-ETA ON-Delay The contactor is energized at the end of the delay time.	 ON-Delay 0.1...3 s 1...30 s 10...180 s 24...48V DC	100-C with DC coils	100-ETAZ30 100-ETAZ180
	100-ETB OFF-Delay After interruption of the control signal, the contactor is de-energized at the end of the delay time.	 OFF-Delay 0.3...3 s 1...30 s 10...180 s 24V 50/60 Hz	100-C09...C37 with AC coils	100-ETBKJ30 100-ETBKJ180
	100-ETB OFF-Delay After interruption of the control signal, the contactor is de-energized at the end of the delay time.	 OFF-Delay 0.3...3 s 1...30 s 10...180 s 110...240V 50/60 Hz	100-C with AC coils	100-ETB30 100-ETB180
	100-ETY Contactor K 3 (Y) is de-energized (off) and K 2 (D) is energized (on) after the end of the set Y end time. (Switching delay at 50 ms). - Continuous adjustment range - High repeat accuracy	 Transition Time Y Contactor 1...30 s 110...240V 50/60 Hz	100-C with AC coils	100-ETY30
	Mechanical Interlocks For interlocking of two contactors. - Common interlock for all 100-C contactor sizes - Interlocking of different sizes possible - Mechanical and electrical interlocking possible in one module by means of integrated auxiliary contacts 9 mm dovetail connector included	- Mechanical only - Without auxiliary contacts 	100-C all	100-MCA00
	Mechanical Interlocks For interlocking of two contactors. - Common interlock for all 100-C contactor sizes - Interlocking of different sizes possible - Mechanical and electrical interlocking possible in one module by means of integrated auxiliary contacts 9 mm dovetail connector included	- Mechanical/electrical - With 2 N.C. auxiliary contacts 	100-C all	100-MCA02
	Mechanical Latch Following contactor latching, the contactor coil is immediately de-energized (off) by the N.C. auxiliary contact (65-66). - Electrical or manual release 1 N.O. + 1 N.C. auxiliary contacts - Suitable for all 100-C contactor sizes, 9...85 A		100-C with AC coils	100-FL11 $\otimes$

⊗ Voltage Suffix Code

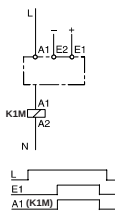
The cat. no. as listed is incomplete. Select a voltage suffix code from the table below to complete the cat. no. Example: 120V, 60 Hz:

Cat. No. 100-FL11 $\otimes$ becomes Cat. No. 100-FL11D.

Voltage ①	24V	48V	100V	110V	120V	230-240V	240V	277V	380-400V	400-415V	440V	480V
50 Hz	K	Y	KP	D	—	VA	T	—	N	G	B	—
60 Hz	J	—	—	—	D	—	A	T	—	—	N	B

① For special voltages, consult your local Allen-Bradley distributor.

Control Modules (For 100-C09...C85 contactors), Continued

Description		Connection Diagrams	For Use With	Cat. No.
	DC Interface (electronic) Interface between the DC control signal (PLC) and the AC operating mechanism of the contactor. - Control (input) voltage 12V DC 18...30V DC (24V nominal) 48V DC - Requires no additional surge suppression on the contactor coils		100-C with AC coils 110...240V AC	100-JE12 100-JE 100-JE48
		RC Module AC Operating Mechanism	100-C with AC coils	100-FSC48 100-FSC280 100-FSC480
	Surge Suppressors For limitation of coil switching transients. - Plug-in, coil mounted - Suitable for all 100-C contactor sizes, 9...85 A - RC, Varistor and Diode Versions	Varistor Module AC/DC Operating Mechanism	100-C all	100-FSV55 100-FSV136 100-FSV277 100-FSV575
		Diode Module DC Operating Mechanism	100-C with DC coils	100-FSD250

Assembly Components (For 100-C09...C85 contactors)

	Description	For Use With	Pkg. Qty. ❶	Cat. No.
 Cat. No. 100-S0	Dovetail Connectors - For use in contactor and starter assemblies. 10 each Single Connector 0 mm Spacing Dual Connector 9 mm Spacing	100-C all	10 10	100-S0 100-S9
 Cat. No. 100-SCCA  Cat. No. 100-SCFA	Protective Covers - Provides protection against unintended manual operation - For contactors and front mounted auxiliary contacts, pneumatic timers and latches	100-C all 100-FA, FB, FC, FP, FL	1 10	100-SCCA 100-SCFA
 Cat. No. 105-PW23	Reversing Power Wiring Kits For Reversing Connection with a solid-state or thermal overload relay	100-C09...C23 100-C30...C37 100-C43 100-C60...C85	1	105-PW23 105-PW37 105-PW43 105-PW85
	35 x 7.5 mm DIN Rail (1 m)	100-C09...C85	10	199-DR1

❶ Must be ordered in multiples of package quantities.

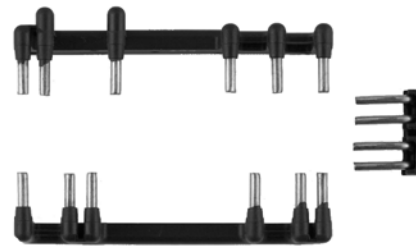
Accessories — Field Installed

Accessories, Continued

Wye-Delta (Star-Delta) Starter Kits

Wye-Delta power wiring kits were designed to aid in the field assembly of open-transition wye-delta starters that use Bulletin 100-C contactors. These kits include line, load, and start-point (shorting) connections. Assembling a wye-delta starter requires the use of the following additional components:

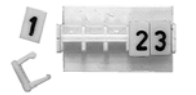
- Contactors
- Overload Relay
- Cat. No. 100-MCA02 Mechanical/Electrical Interlock
- Cat. No. 100-ETY30 Electronic Y-Δ Timer
- Cat. No. 100-S9 Base Coupler for 1M to 2M contactor (optional)



Cat. No. 170-PW23

3-Phase Rating											Pkg. Qty.	Cat. No.
kW (50 Hz)				Hp (60 Hz)				Use with Cat. No. 100-				
230V	380/415V	500V	690V	200V	230V	460V	575V	Delta		Wye		
								1M	2M	1S		
5.5	8	8	8	5	5	10	10	C09	C09	C09	1	170-PW23
7.5	11	11	11	5	7.5	15	15	C12	C12	C09	1	170-PW23
10	14	15	14	7.5	10	20	20	C16	C16	C12	1	170-PW23
14	21	21	19	7.5	10	25	25	C23	C23	C12	1	170-PW23
18	28	28	28	10	15	30	30	C30	C30	C16	1	170-PW37
19	35	35	32	15	20	40	40	C37	C37	C23	1	170-PW37
23	40	40	41	20	25	50	50	C43	C43	C30	1	170-PW43
33	58	60	56	30	40	75	75	C60	C60	C37	1	170-PW72
39	69	67	70	40	50	100	100	C72	C72	C43	1	170-PW72
47	82	82	81	50	60	125	125	C85	C85	C60	1	170-PW85

Marking Systems (For 100-C09...C85 contactors)

	Description	Pkg. Qty. ❶	Cat. No.
	Label Sheet • 10 sheets with 105 self-adhesive paper labels each, 6 x 17 mm	10	100-FMS
	Marking Tag Sheet • 10 sheets with 160 perforated paper labels each, 6 x 17 mm • To be used with a transparent cover	10	100-FMP
	Transparent Cover • 100 each • To be used with marking tag sheets	100	100-FMC
	Marking Tag Adapters • 100 each • To be used with marking tag: - System V4 / V5 - System Bul. 1492W	100 100	100-FMA1 100-FMA2

❶ Must be ordered in multiples of package quantities.

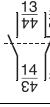
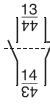
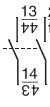
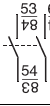
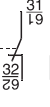
Terminal Kits (For 100-C09...C85 contactors)

	Description	Max. Current Ratings and Wire Sizes		Pkg. Qty.	Cat. No.
	Stab Connector Kit - Dual stab (0.250 in.) for 100-C coil terminals - For 100-C09...C85 contactors			20 ❶	199-SC2
	Stab Connector Kit - Dual stab (0.250 in.) for 100-C power terminals - For 100-C09...C23 contactors			100 ❶	199-SC10
	3-Pole Terminal Lug Kit For 100-C09...C23 (Line side)	IEC @ 40°C IEC @ 40°C UL/CSA (Encl.)	45 A (4...16 mm² ❷, fine stranded w/ ferrule) 45 A (4...25 mm², coarse stranded/solid) 40 A (#10...4 AWG, stranded/solid)	1	100-CTN23
	For 100-C09...C23 (Load side)	IEC @ 40°C IEC @ 40°C UL/CSA (Encl.)	45 A (4...16 mm² ❷, fine stranded w/ ferrule) 45 A (4...25 mm², coarse stranded/solid) 40 A (#10...4 AWG, stranded/solid)	1	100-CTL23
	For 100-C30...C37	IEC @ 40°C IEC @ 40°C UL/CSA (Encl.)	60 A (4...16 mm² ❷, fine stranded w/ ferrule) 60 A (4...25 mm², coarse stranded/solid) 55 A (#10...4 AWG, stranded/solid)	1	100-CT37
	1-Pole Terminal Lug Kit For 100-C43	IEC @ 40°C IEC @ 40°C UL/CSA (Encl.)	90 A (6...35 mm², fine stranded w/ ferrule) 90 A (6...50 mm², coarse stranded/solid) 75 A (#8...2 AWG, stranded/solid)	3	100-CT43
	For 100-C60...C85	IEC @ 40°C IEC @ 40°C UL/CSA (Encl.)	130 A (10...70 mm², fine stranded w/ ferrule) 130 A (10...95 mm², coarse stranded/solid) 130 A (#8...2/0 AWG, stranded/solid)	3	100-CT85
	3-Pole Paralleling Kit For 100-C09...C23	IEC @ 40°C IEC @ 40°C UL/CSA (Encl.)	100 A (35...70 mm², fine stranded w/ ferrule) 100 A (35...95 mm², coarse stranded/solid) 100 A (#0...2/0 AWG, stranded/solid)	2	100-CP23
	For 100-C30...C37	IEC @ 40°C IEC @ 40°C UL/CSA (Encl.)	150 A (35...70 mm², fine stranded w/ ferrule) 150 A (35...95 mm², coarse stranded/solid) 150 A (#0...2/0 AWG, stranded/solid)	2	100-CP37

❶ Must be ordered in multiples of the package quantity.

❷ 16 mm² max. according to IEC 60947; actual max. 25 mm².

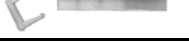
Auxiliary Contacts

	Description	N.O.	N.C.	Connection Diagram	For use with	Cat. No.
 - Side-mounted - With IEC sequence terminal designations	- Electronically compatible auxiliary contacts - Ideal for use when switching low-power control circuits - Contact ratings: AC-12 250V, 0.1 A AC-15, DC-13 3...125V, 1...100 mA	1	1		100-D Left or right inside mounting	100-DS1-11
		1	1		100-D Left or right outside mounting	100-DS2-11
		1	1L		100-D Left or right inside mounting	100-DS1-L11
		2	0		100-D Left or right inside mounting	100-DS1-20
		2	0		100-D Left or right outside mounting	100-DS2-20
		1	1		100-D Left or right inside mounting	100-DS1-B11

Labeling Material

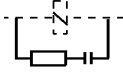
	Uniform labeling materials for contactors, motor protection devices, timing relays, and circuit breakers.
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Marking Systems (For 100-D95...D860 contactors)

	Description	Pkg. Qty. ❶	Cat. No.
	Label Sheet 10 sheets with 105 self-adhesive paper labels each, 6 x 17 mm	10	100-FMS
	Marking Tag Sheet 10 sheets with 160 perforated paper labels each, 6 x 17 mm - To be used with a transparent cover	10	100-FMP
	Transparent Cover 100 each - To be used with marking tag sheets	100	100-FMC
	Marking Tag Adapters 100 each - To be used with marking tag: System V4 / V5 System Bul. 1492W	100 100	100-FMA1 100-FMA2

❶ Must be ordered in multiples of package quantities.

Suppressor Modules

	Description	Circuit Diagram		For use with	Cat. No.
	Suppressor Module for 100-D Contactors - For limiting surge voltage when coil circuits are interrupted - Can be plugged into all 100-D contactors - Supplied as standard on all conventional DC coil contactors and all electronic coil contactors as part of the supply module, or delivered with separate suppressor module		RC Module (AC control) for contactors with conventional coil 21...48V 50 Hz/24...55V 60 Hz 95...110V 50 Hz/110...127V 60 Hz 190...240V 50 Hz/220...277V 60 Hz 380...550V 50 Hz/440...575V 60 Hz	100-D95... 100-D180	100-DFSC48 100-DFSC110 100-DFSC240 100-DFSC550
			Varistor Module for contactors with conventional coil ≤55V AC 56...136V AC 137...277V AC 278...575V AC	100-D95... 100-D180	100-DFSV55 100-DFSV136 100-DFSV277 100-DFSV575
			Varistor Module for contactors with electronic coil 208...277V AC (overvoltage category IV)	100-D95... 100-D420	100-DFSV550

Connecting Components

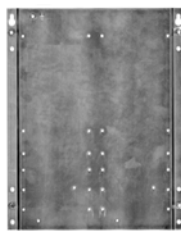
	Description	Output Connection	For Use With			Terminal Connection	Cat. No.
			100-D95...180	100-D210...420	100-D630...860		
	Reversing: Input Connection Wye-Delta: Main-Delta connection	50 mm²	X			Lugs, 100-DL...	100-D180-VL
		120 mm²		X			100-D420-VL
		350 mm²			X		100-D860-VL
		50 mm²	X			Terminal Blocks, 100-DTB...	100-D180-VLTB
		120 mm²		X			100-D420-VLTB
	Reversing: Output Connection Wye-Delta: Delta-Wye connection	50 mm²	X			Lugs, 100-DL...	100-D180-VT
		120 mm²		X			100-D420-VT
		350 mm²			X		100-D860-VT
		50 mm²	X			Terminal Blocks, 100-DTB...	100-D180-VTTB
		120 mm²		X			100-D420-VTTB
	Delta-Wye connection if 100-D95...180 is used as a Wye contactor	80 mm²	—	X		Terminal Blocks, 100-DTB...	100-D420-VYTB
	Wye-Delta: Neutral bridge	—	X			—	100-D180-VYU
		—		X		—	100-D420-VYU
		—			X	—	100-D860-VYU
	Power Wiring Kits (for contactors using 100-DL lug kits)	For 100-D95...100-D180 • Reversing • Two-speed, or changeover • Wye-Delta/Star-Delta					100-DPW180 100-D180-VL 100-DPY180
		For 100-D210...100-D420 • Reversing • Two-speed, or changeover • Wye-Delta/Star-Delta					100-DPW420 100-D420-VL 100-DPY420
		For 100-D630...100-D860 • Reversing • Two-speed, or changeover					100-DPW860 100-D860-VL

Bulletin 100-D

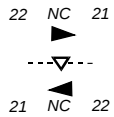
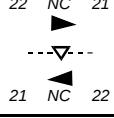
IEC Contactors

Accessories, Continued

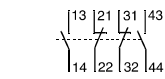
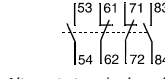
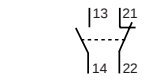
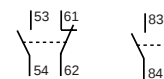
Connecting Components, Continued

	Description		Cat. No.
	Terminal Blocks - Set of 2 - Protection class IP20 per IEC 60529 and DIN 40 050	For 100-D95,100-D110 For 100-D140,100-D180, 100-D95E...D180E For 100-D210...100-D420	100-DTB110 100-DTB180 100-DTB420
	Terminal Lugs (UL/CSA), Copper Frame Set of 3	For 100-D95, 100-D110 For 100-D95E, 100-D110E For 100-D140, 100-D180 For 100-D210...100-D420 For 100-D630, 100-D860 For 100-D630, 100-D860	100-DL110 100-DLE110 100-DL180 100-DL420 100-DL630 100-DL860
	Terminal Lugs (UL/CSA), Aluminum Frame Set of 3	For 100-D95, 100-D110 (conventional coil) For 100-D140, 100-D180, 100-D95E, 100-D110E For 100-D210, 100-D420	100-DLA110 100-DLA180 100-DLA420
	Control Circuit Terminal 2 x 2.5 mm²	For connecting to 100-D95...D180 For connecting to 100-D210...D420 For connecting to 100-D630...D860	100-DAT1 100-DAT2 100-DAT3
	Terminal Shields - Set of 2 - Protection class IP10 per IEC 60529 and DIN 40 050 - For direct-on-line, reversing, two-speed, and wye-delta/star-delta assemblies	For 100-D95,100-D110 For 100-D140,100-D180, 100-D95E...D180E For 100-D210...100-D420	100-DTS110 100-DTS180 100-DTS420
	Terminal Covers - Qty: 1 - Protection class IP20 per IEC 60529 and DIN 40 050 - For direct-on-line, reversing, two-speed, and wye-delta/star-delta assemblies	For 100-D95...100-D180 For 100-D210...100-D420 For 100-D630...100-D860	100-DTC180 100-DTC420 100-DTC860
	Phase Barriers Set of 4	100-D630...D860	100-DPB860
	Mounting Plate Galvanized steel plate for starter combinations	For 100-D95...100-D180 - Direct-on-line - Reversing, two-speed, or changeover - Y-Δ or Dahlander	100-DMS180 100-DMU180 100-DMY180
		For 100-D210...100-D420 - Direct-on-line - Reversing, two-speed, or changeover - Y-Δ or Dahlander	100-DMS420 100-DMU420 100-DMY420
		For 100-D630...100-D860 - Direct-on-line - Reversing, two-speed, or changeover - Y-Δ or Dahlander	100-DMS860 100-DMU860 100-DMY860
	Mounting Plate	For interlocking between 100-C60...C85 and 100-D95...D180 contactors Two-speed or changeover switches	100-DMU85

Interlocks

	Description	Circuit Diagram	For use with	Cat. No.
	Mechanical only No additional space required		100-D95...100-D860	100-DMA00
	Dual electrical/mechanical - No additional space required 2 N.C. auxiliary contacts		100-D95...100-D860	100-DMD02
	Mechanical only No additional space required		100-D95...100-D860	100-DMD00
	Mechanical only Provides interlocking between 100-C and 100-D contactors			100-DMC00
	Dual electrical/mechanical - Provides interlocking between 100-C and 100-D contactors 2 N.C. auxiliary contacts		100-C60...100-C85 between 100-D95...100-D180	100-DMC02

Control Modules

	Description	For use with	Cat. No.
 4-Pole	Auxiliary Contact Block - For mounting between T1 & T2 or between T2 & T3 - Adjustable; provides normal, delayed or overlapping contacts - Maximum two blocks per contactor - Alternate terminal marking tags included 2 N.O. and 2 N.C.	 Standard terminal marking for mounting between T1 & T2  Alternate terminal marking for mounting between T2 & T3	100-G550...100-G860 100-EF22
 2-Pole	Auxiliary Contact Block - For side mounting on either side of the contactor - Max. four blocks per contactor - Alternate terminal marking tags included 1 N.O. and 1 N.C.	 Standard terminal marking  Alternate terminal markings	100-G1000...100-G1200 100-EB11
	Fourth Add-On Neutral Switching Pole Left- or right-side mountable Note: No UL/cUL	I_{th} AC-1 500 A 100-G550 100-G700, 100-G860	100-NP500-5 100-NP500-6
	Note: No UL / cUL	I_{th} AC-1 1000 A 100-G700, 100-G860 100-G1000, 100-G1200	100-NP1000-6 100-NP1000-7
	Mechanical Latch Mechanical life: 0.5 million operations Direct and Impulse Contact Control Direct and Impulse Contact Control	100-G550 100-G700, 100-G860	100-FLAM5® 100-FLAM6®
	Mechanical Interlocks — Horizontal	100-G550/100-G550	100-MC00-5H
		100-G550/100-G700, 100-G860	100-MC00-56H
		100-G700, 100-G860/ 100-G700, 100-G860	100-MC00-6H
		100-G700, 100-G860/ 100-G1000, 100-G1200	100-MC00-67H
		100-G1000, 100-G1200/ 100-G1000, 100-G1200	100-MC00-7H
	Mechanical Interlocks — Vertical	100-G550/100-G550	100-MC00-5V
		100-G550/100-G700, 100-G860	100-MC00-56V
		100-G700, 100-G860/ 100-G700, 100-G860	100-MC00-6V
		100-G700, 100-G860/ 100-G1000, 100-G1200	100-MC00-67V
		100-G1000, 100-G1200/ 100-G1000, 100-G1200	100-MC00-7V
	Terminal Lugs Contains set of 3 lugs (2) #2...600 MCM (3) #2...600 MCM (4) #2...600 MCM	100-G550 100-G700, -G860 100-G1000, 100-G1200	100-LG5 100-LG6 100-LG7

⊗ Coil Voltage Codes ❶

For use with		110...120V	220...240V	380...415V	440...480V
100-G550...100-G860	50/60 Hz	KD	KF	KN	KB

❶ For other voltages, consult your local Allen-Bradley distributor.

Contactors

Specifications

IEC Specifications

Coil Type : Conventional Electronic — EI			100/104-M				100/104-C, 100S/104S-C								
			05	09	12	09	12	16	23	30	37	40*200	40*400	43	60
			X	X	X	X	X	X	X	X	X	X	X	X	X
AC-1 Active Power Load (50 Hz); Ambient temperature 40°C															
<i>I_e</i>	≤500V	[A]	20	20	20	32	32	32	32 (40) ①	65	65	75	75	85	100
	690V	[A]	—	—	—	32	32	32	32 (40) ①	65	65	75	75	85	100
	1000V	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—
	230V	[kW]	8	8	8	13	13	13	13	26	26	30	30	34	40
	240V	[kW]	8.3	8.3	8.3	13	13	13	13	27	27	31	31	35	42
	400V	[kW]	14	14	14	22	22	22	22	45	45	52	52	59	69
	415V	[kW]	14	14	14	23	23	23	23	47	47	54	54	61	72
	500V	[kW]	17	17	17	28	28	28	28	56	56	65	65	74	87
	690V	[kW]	—	—	—	38	38	38	38	78	78	90	90	102	120
	1000V	[kW]	—	—	—	—	—	—	—	—	—	—	—	—	—
Ambient temperature 60°C															
<i>I_e</i>	≤500V	[A]	16	16	16	32	32	32	32	65	65	60	60	80	100
	690V	[A]	—	—	—	32	32	32	32	65	65	60	60	80	100
	1000V	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—
	230V	[kW]	6.4	6.4	6.4	13	13	13	13	26	26	24	24	25	40
	240V	[kW]	6.7	6.7	6.7	13	13	13	13	27	27	25	25	26	42
	400V	[kW]	11	11	11	22	22	22	22	45	45	42	42	44	69
	415V	[kW]	12	12	12	23	23	23	23	47	47	43	43	45	72
	500V	[kW]	14	14	14	28	28	28	28	56	56	52	52	55	87
	690V	[kW]	—	—	—	38	38	38	38	78	78	72	72	75	120
	1000V	[kW]	—	—	—	—	—	—	—	—	—	—	—	—	—
Switching of 3-phase Motors, (50Hz); Ambient temperature 60°C, AC-2, AC-3															
	230V	[A]	6.5	12	12	12	15	20	26.5	35	38	38	38	44	62
	240V	[A]	6.5	12	12	12	15	20	26.5	35	38	38	38	44	62
	400V	[A]	5.3	9	12	9	12	16	23	30	37	37	37	43	60
	415V	[A]	5.3	9	12	9	12	16	23	30	37	37	37	43	60
	500V	[A]	4	7	7	7	10	14	20	25	30	29	30	38	55
	690V	[A]	—	—	—	5	7	9	12	18	21	9	21	25	34
	1000V	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—
	230V	[kW]	1.7	3.3	3.3	3	4	5.5	7.5	10	11	11	11	13	18.5
	240V	[kW]	1.8	3.4	3.4	3	4	5.5	7.5	10	11	11	11	13	18.5
	400V	[kW]	2.5	4.3	5.9	4	5.5	7.5	11	15	18.5	18.5	18.5	22	32
	415V	[kW]	2.6	4.5	6.1	4	5.5	7.5	11	15	20	20	20	22	32
	500V	[kW]	2.3	4.2	4.2	4	5.5	7.5	13	15	20	18.5	20	25	37
	690V	[kW]	—	—	—	4	5.5	7.5	10	15	18.5	7.5	18.5	22	32
	1000V	[kW]	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Carrying Capacity per UL/CSA (60 Hz)															
General Purpose Current (enclosed)			[A]	12	12	12	25	25	30	30	55	60	60	60	90
Rated power (enclosed)															
1-phase	115V	[A]	9.8	9.8	9.8	9.8	9.8	16	24	24	34	34	34	34	56
	230V	[A]	8	10	12	10	12	17	17	28	28	28	28	40	50
	115V	[Hp]	0.5	0.5	0.5	0.5	0.5	1	2	2	3	3	3	3	5
3-phase	230V	[Hp]	1	1.5	2	1.5	2	3	3	5	5	5	5	7.5	10
	200V	[A]	6.9	7.8	11	7.8	11	17.5	17.5	25.3	32.2	32.2	32.2	32.2	48.3
	230V	[A]	6	6.8	9.6	6.8	9.6	15.2	22	28	28	28	28	42	54
	460V	[A]	4.8	7.6	11	7.6	11	14	21	27	34	34	34	40	52
	575V	[A]	3.9	6.1	11	9	11	17	17	27	32	17	32	32	52
	200V	[Hp]	1.5	2	3	2	3	5	5	7.5	10	10	10	10	15
	230V	[Hp]	1.5	2	3	2	3	5	7.5	10	10	10	10	15	20
	460V	[Hp]	3	5	7.5	5	7.5	10	15	20	25	25	25	30	40
	575V	[Hp]	3	5	10	7.5	10	15	15	25	30	15	30	30	50

① Values in () with increased cross-section and cable lug.

100/104-C, 100S/104S-C				100/104-D, 100S-D											
72	85	90*200	90*400	95	110	140	140	180	180	210	250	300	420	630	860
X	X	X	X	X	X	X	—	X	—	—	—	—	—	—	—
—	—	—	—	X	X	—	X	—	X	X	X	X	X	X	X
100	100	130	130	160	160	250	250	250	250	350	350	450	500	800	1000
100	100	130	130	160	160	250	250	250	250	350	350	450	500	800	1000
—	—	—	—	160	160	250	250	250	250	350	350	450	500	④	④
40	40	52	52	64	64	100	100	100	100	139	139	179	199	319	398
42	42	54	54	67	67	104	104	104	104	145	145	187	208	333	416
69	69	90	90	111	111	173	173	173	173	242	242	312	346	554	693
72	72	93	93	115	115	180	180	180	180	252	252	323	359	575	719
87	87	113	113	139	139	217	217	217	217	303	303	390	433	693	866
120	120	155	155	191	191	299	299	299	299	418	418	538	598	956	1195
—	—	—	—	277	277	433	433	433	433	606	606	779	866	④	④
100	100	110	110	135	135	210	210	210	210	300	300	380	425	④	④
100	100	110	110	135	135	210	210	210	210	300	300	380	425	④	④
—	—	—	—	135	135	210	210	210	210	300	300	380	425	④	④
40	40	44	44	54	54	84	84	84	84	120	120	151	169	④	④
42	42	46	46	56	56	87	87	87	87	125	125	158	177	④	④
69	69	76	76	94	94	145	145	145	145	208	208	263	294	④	④
72	72	79	79	97	97	151	151	151	151	216	216	273	305	④	④
87	87	95	95	117	117	182	182	182	182	260	260	329	368	④	④
120	120	131	131	161	161	251	251	251	251	359	359	454	508	④	④
—	—	—	—	234	234	364	364	364	364	520	520	658	736	④	④
72	85	85	85	95	110	140	140	180	180	210	250	300	420	630	860
72	85	85	85	95	110	140	140	180	180	210	250	300	420	630	860
72	85	85	85	95	110	140	140	180	180	210	250	300	420	630	860
72	85	85	85	95	110 (130)④	140 (155)④	140 (155)④	180 (189)④	180 (189)④	210 (227)④	250 (258)④	300 (315)④	420	630	860
67	80	80	80	95	110	115	140	140	180	210	250	300	420	630	753
42	49	22	49	95	110	115	140	140	180	210	250	300	420	④	④
—	—	—	—	33	40	55	55	65	65	80	95	115	160	④	④
22	25	25	25	30	34	45	45	57	57	67	80	97	135	200	250
22	25	25	25	31	36	47	47	60	60	70	83	101	141	200	250
40	45	45	45	53	61	78	78	101	101	118	140	170	238	355	500
40	45	45	45	55	63 (75)④	82 (90)④	82 (90)④	105 (110)④	105 (110)④	122 (132)④	145 (150)④	176 (185)④	250	355	500
45	55	55	55	66	76	80	98	126	126	147	177	213	298	450	560
40	45	18.5	45	92	106	111	135	135	176	205	250	293	424	④	④
—	—	—	—	45	55	75	75	90	90	110	132	160	225	④	④
90	100	125	130	160	160	220	220	220	220	300	300	340	420	④	④
56	80	80	80	80	100	135	135	—	—	—	—	—	—	—	—
68	68	68	68	68	110	136	136	176	176	216	—	—	—	—	—
5	7.5	7.5	7.5	7.5	10	15	15	—	—	—	—	—	—	—	—
15	15	15	15	15	25	30	30	40	40	50	—	—	—	—	—
62.1	78.2	78.2	78.2	78.2	120	120	120	150	150	177	221	285	414	552	692
68	80	80	80	80	104	130	130	154	154	192	248	312	420	602	720
65	77	65	77	77	96	124	124	180	180	180	240	302	414	590	702
62	62	22	52	77	99	125	125	144	144	192	242	289	382	562	651
20	25	25	25	25	40	40	40	50	50	60	75	100	150	200	250
25	30	30	30	30	40	50	50	60	60	75	100	125	175	250	300
50	60	50	60	60	75	100	100	150	150	150	200	250	350	500	600
60	60	20	50	75	100	125	125	150	150	200	250	300	400	600	700

④ 415 V: values in () AC-3 and AC-4 lifespan -25 %

④ To be determined.

Contactors

Specifications

IEC Specifications

Coil Type :		100/104-M			100/104-C, 100S/104S-C							
		05	09	12	09	12	16	23	30	37	43	60
		X	X	X	X	X	X	X	X	X	X	X
Conventional		—	—	—	—	—	—	—	—	—	—	—
Electronic — EI		—	—	—	—	—	—	—	—	—	—	—
Switching of 3-phase Motors, (50Hz); Ambient temperature 60°C, AC-4												
230V	[A]	6.5	12	12	12	15	20	26.5	35	38	44	62
240V	[A]	6.5	12	12	12	15	20	26.5	35	38	44	62
400V	[A]	5.3	9	9	9	12	16	23	30	37	43	60
415V	[A]	5.3	9	9	9	12	16	23	30	37	43	60
500V	[A]	4	7	7	7	10	14	20	25	30	38	55
690V	[A]	—	—	—	5	7	9	12	18	21	25	34
1000V	[A]	—	—	—	—	—	—	—	—	—	—	—
230V	[kW]	1.7	3.3	3.3	3	4	5.5	7.5	10	11	13	18.5
240V	[kW]	1.8	3.4	3.4	3	4	5.5	7.5	10	11	13	18.5
400V	[kW]	2.5	4.3	5.9	4	5.5	7.5	11	15	18.5	22	32
415V	[kW]	2.6	4.5	6.1	4	5.5	7.5	11	15	20	22	32
500V	[kW]	2.3	4.2	4.2	4	5.5	7.5	13	15	20	25	37
690V	[kW]	—	—	—	4	5.5	7.5	10	15	18.5	22	32
1000V	[kW]	—	—	—	—	—	—	—	—	—	—	—
AC-4 at approximately 200,000 operations												
230V	[A]	2.3	3.9	3.9	4.3	6.6	9	10	12	14	16.5	25.5
240V	[A]	2.3	3.9	3.9	4.3	6.6	9	10	12	14	16.5	25.5
400 / 415V	[A]	2	3.3	3.3	4.3	6.6	9	10	12	14	16.5	25.5
500V	[A]	1.9	3.2	3.2	4.3	6.6	9	10	12	14	16.5	25.5
690V	[A]	—	—	—	4.3	6.6	9	10	12	14	16.5	25.5
1000V	[A]	—	—	—	—	—	—	—	—	—	—	—
230V	ⓘ [kW]	0.37	0.75	0.75	0.75	1.5	2.2	2.2	3	3.7	4	6.3
240V	ⓘ [kW]	0.37	0.75	0.75	0.75	1.5	2.2	2.2	3	4	4	7.5
400V	ⓘ [kW]	0.75	1.1	1.1	1.8	3	4	4	5.5	6.3	7.5	13
415V	ⓘ [kW]	0.75	1.1	1.1	1.8	3	4	4	5.5	6.3	7.5	13
500V	ⓘ [kW]	0.75	1.5	1.5	2.2	3.7	5.5	5.5	7.5	7.5	10	15
690V	ⓘ [kW]	—	—	—	3	5.5	7.5	7.5	10	11	15	22
1000V	ⓘ [kW]	—	—	—	—	—	—	—	—	—	—	—
Max. switching frequency	Ops/h	250	250	250	250	250	220	200	200	200	200	120
Wye-Delta (60 Hz)												
200V	[Hp]	—	—	—	5	5	7½	7½	10	15	20	30
230V	[Hp]	—	—	—	5	7½	10	10	15	20	25	40
460V	[Hp]	—	—	—	10	15	20	25	30	40	50	75
575V	[Hp]	—	—	—	10	15	20	25	30	40	50	75
UL/CSA Elevator Duty ⓘ												
200V	[A]	—	—	—	7.8	11.0	11.0	17.5	25.3	25.3	32.2	32.2
230V	[A]	—	—	—	6.8	9.6	15.2	15.2	22.0	28.0	28.0	42.0
460V	[A]	—	—	—	7.6	11.0	14.0	21.0	27.0	27.0	34.0	40.0
575V	[A]	—	—	—	6.1	9.0	11.0	17.0	22.0	27.0	32.0	41.0
200V	[Hp]	—	—	—	2	3	3	5	7½	7½	10	10
230V	[Hp]	—	—	—	2	3	5	5	7½	10	10	15
460V	[Hp]	—	—	—	5	7½	10	15	20	20	25	30
575V	[Hp]	—	—	—	5	7½	10	15	20	25	30	40
Star-Delta Starting (50 Hz)												
≤ 230V	[A]	11	21	21	21	26	35	46	61	66	76	107
≤ 240V	[A]	11	21	21	21	26	35	46	61	66	76	107
400V	[A]	9.2	16	21	16	21	28	40	52	64	74	104
415V	[A]	9.2	16	21	16	21	28	40	52	64	74	104
500V	[A]	6.9	12	12	12	17	24	35	43	52	66	95
690V	[A]	—	—	—	8.6	12	16	21	31	36	43	59
1000V	[A]	—	—	—	—	—	—	—	—	—	—	—
230V	ⓘ [kW]	3	5.5	5.5	5.5	7.5	10	13	17	20	22	32
240V	ⓘ [kW]	3	5.5	5.5	5.5	7.5	10	13	18.5	20	22	32
400V	ⓘ [kW]	4	7.5	10	7.5	10	13	20	25	32	40	55
415V	ⓘ [kW]	4	7.5	11	7.5	11	15	22	25	37	40	55
500V	ⓘ [kW]	4	7.5	7.5	7.5	11	15	22	25	32	45	63
690 V	ⓘ [kW]	—	—	—	7.5	10	13	18.5	25	32	40	55
1000V	ⓘ [kW]	—	—	—	—	—	—	—	—	—	—	—

ⓘ Power ratings at 50 Hz: Preferred values according to IEC 60072-1

ⓘ Approval pending on 100-D95...D860

100/104-C, 100S/104S-C		100/104-D, 100S-D											
72	85	95	110	140	140	180	180	210	250	300	420	630	860
X	X	X	X	X	—	X	—	—	—	—	—	—	—
—	—	X	X	—	X	—	X	X	X	X	X	X	X
72	85	95	110	140	140	180	180	210	250	300	420	④	④
72	85	95	110	140	140	180	180	210	250	300	420	④	④
72	85	95	110	140	140	180	180	210	250	300	420	④	④
72	85	95	110 (130)④	140 (155)④	140 (155)④	180 (189)④	180 (189)④	210 (227)④	250 (258)④	300 (315)④	420	④	④
67	80	85	105	115	140	140	170	210	250	300	360	④	④
42	49	85	105	115	140	140	170	210	250	300	360	④	④
—	—	33	40	55	55	65	65	80	95	115	160	④	④
22	25	30	34	45	45	57	57	67	80	97	135	④	④
22	25	31	36	47	47	60	60	70	83	101	141	④	④
40	45	53	61	78	78	101	101	118	140	170	238	④	④
40	45	55	63 (75)④	82 (90)④	82 (90)④	105 (110)④	105 (110)④	122 (132)④	145 (150)④	176 (185)④	250	④	④
45	55	59	73	80	98	98	119	147	177	213	255	④	④
40	45	81	102	111	135	135	167	205	250	293	356	④	④
—	—	45	55	75	75	90	90	110	132	160	225	④	④
31	38	43	50	60	60	67	67	85	105	140	170	④	④
31	38	43	50	60	60	67	67	85	105	140	170	④	④
31	38	43	50	60	60	67	67	85	105	140	170	④	④
31	38	43	50	60	60	67	67	85	105	140	170	④	④
31	38	43	50	60	60	67	67	85	105	140	170	④	④
—	—	19	23	37	37	43	43	60	72	85	105	④	④
7.5	11	13	15	17	17	20	20	25	32	45	55	④	④
7.5	11	13	15	18.5	18.5	22	22	25	32	45	55	④	④
15	20	22	25	32	32	37	37	45	55	75	90	④	④
17	20	22	25	32	32	37	37	50	55	80	100	④	④
20	25	25	32	40	40	45	45	55	75	100	110	④	④
25	32	40	45	55	55	63	63	80	100	132	160	④	④
—	—	22	30	50	50	55	55	80	100	110	150	④	④
120	120	120	120	120	120	100	100	120	100	70	70	④	④
40	50	40	60	60	60	75	75	100	125	175	250	④	④
50	60	50	60	75	75	100	100	125	175	200	250	④	④
100	125	100	125	175	175	200	200	250	350	450	600	④	④
100	125	125	150	200	200	250	250	300	450	500	650	④	④
48.3	62.1	62.1	78	92	92	120	120	150	150	177	221	④	④
54.0	68.0	68.0	80	104	104	130	130	130	154	192	248	④	④
52.0	65.0	65.0	77	96	96	124	124	156	180	180	240	④	④
52.0	62.0	62.0	77	77	77	99	99	125	144	192	242	④	④
15	20	20	25	30	30	40	40	50	50	60	75	④	④
20	25	25	30	40	40	50	50	50	60	75	100	④	④
40	50	50	60	75	75	100	100	125	150	150	200	④	④
50	60	60	75	75	75	100	100	125	150	200	250	④	④
125	147	165	191	242	242	312	312	364	433	520	727	④	④
125	147	165	191	242	242	312	312	364	433	520	727	④	④
125	147	165	191	242	242	312	312	364	433	520	727	④	④
125	147	165	191 (225)④	242 (268)④	242 (268)④	312 (322)④	312 (322)④	364 (393)④	433 (447)④	520 (546)④	727	④	④
116	139	165	191	199	242	312	312	364	433	520	727	④	④
73	85	165	191	199	242	312	312	364	433	520	727	④	④
—	—	57	69	95	95	113	113	139	165	200	277	④	④
37	45	45	55	75	75	90	90	110	132	160	220	④	④
40	50	50	63	80	80	100	100	125	150	160	250	④	④
63	80	80	100	132	132	160	160	200	250	300	425	④	④
63	80	80 (90)④	100 (132)④	132 (160)④	132 (160)④	160	160	220	250	315 (335)④	425 (450)④	④	④
80	90	100	132	132	160	200	200	250	315	375	530	④	④
63	80	132	160	200	220	300	300	355	425	530	750	④	④
—	—	75	90	132	132	160	160	200	220	280	400	④	④

④ 415V: Values in () AC-3 and AC-4 lifespan -25 %

④ To be determined.

Contactors

Specifications

IEC Specifications

Coil Type :	Conventional Electronic — EI	100/104-M			100/104-C, 100S/104S-C							
		05	09	12	09	12	16	23	30	37	43	60
		X	X	X	X	X	X	X	X	X	X	X
		—	—	—	—	—	—	—	—	—	—	—

Switching of Power Transformers,
AC-6a (50 Hz)

Inrush current _____ = n
Rated transformer current

n = 30	≤ 230V	[A]	2.9	5.4	5.4	10.9	10.9	10.9	10.9	20	20	23	40.8
	≤ 240V	[A]	2.9	5.4	5.4	10.9	10.9	10.9	10.9	20	20	23	40.8
	≤ 400V	[A]	2.4	4.1	5.4	10.9	10.9	10.9	10.9	20	20	23	40.8
	415V	[A]	2.4	4.1	5.4	10.9	10.9	10.9	10.9	20	20	23	40.8
	≤ 500V	[A]	1.8	3.2	3.2	10.9	10.9	10.9	10.9	20	20	23	40.8
	≤ 690V	[A]	—	—	—	10.9	10.9	10.9	10.9	20	20	23	40.8
	≤ 1000V	[A]	—	—	—	—	—	—	—	—	—	—	—
	230V	[kVA]	1.2	2.2	2.2	4.3	4.3	4.3	4.3	8	8	9.2	16
	240V	[kVA]	1.2	2.2	2.2	4.5	4.5	4.5	4.5	8.3	8.3	10	17
	400V	[kVA]	1.7	2.8	3.7	7.5	7.5	7.5	7.5	14	14	16	28
	415V	[kVA]	1.7	2.9	3.9	7.8	7.8	7.8	7.8	14	14	17	29
	500V	[kVA]	1.6	2.7	2.7	9.4	9.4	9.4	9.4	17	17	20	35
	690V	[kVA]	—	—	—	13	13	13	13	24	24	27	49
	1000V	[kVA]	—	—	—	—	—	—	—	—	—	—	—
n = 20	≤ 690V	[A]	—	—	—	16.3	16.3	16.3	16.3	30	30	34.5	61.3
n = 15	≤ 690V	[A]	—	—	—	22	22	22	22	40	40	46	82

60 Hz Peak Inrush/peak rated transformer current

n=30	[A]	❶	❶	❶	10.9	10.9	10.9	10.9	20	20	23	40.8
200V	[kVA]	❶	❶	❶	3.8	3.8	3.8	3.8	6.9	6.9	8.0	14.1
208V	[kVA]	❶	❶	❶	3.9	3.9	3.9	3.9	7.2	7.2	8.3	14.7
240V	[kVA]	❶	❶	❶	4.5	4.5	4.5	4.5	8.3	8.3	9.6	17.0
480V	[kVA]	❶	❶	❶	9.1	9.1	9.1	9.1	16.6	16.6	19.1	33.9
600V	[kVA]	❶	❶	❶	11.3	11.3	11.3	11.3	20.8	20.8	23.9	42.4
660V	[kVA]	❶	❶	❶	12.5	12.5	12.5	12.5	22.9	22.9	26.3	46.6

60 Hz Peak Inrush/peak rated transformer current

n=20	[A]	❶	❶	❶	16.3	16.3	16.3	16.3	30	30	34.5	61.3
200V	[kVA]	❶	❶	❶	5.6	5.6	5.6	5.6	10.4	10.4	12.0	21.2
208V	[kVA]	❶	❶	❶	5.9	5.9	5.9	5.9	10.8	10.8	12.4	22.1
240V	[kVA]	❶	❶	❶	6.8	6.8	6.8	6.8	12.5	12.5	14.3	25.5
480V	[kVA]	❶	❶	❶	13.6	13.6	13.6	13.6	24.9	24.9	28.7	51.0
600V	[kVA]	❶	❶	❶	16.9	16.9	16.9	16.9	31.2	31.2	35.9	63.7
660V	[kVA]	❶	❶	❶	18.6	18.6	18.6	18.6	34.3	34.3	39.4	70.1

60 Hz Peak Inrush/peak rated transformer current

n=15	[A]	❶	❶	❶	22	22	22	22	40	40	46	82
200V	[kVA]	❶	❶	❶	7.5	7.5	7.5	7.5	13.9	13.9	15.9	28.4
208V	[kVA]	❶	❶	❶	7.8	7.8	7.8	7.8	14.4	14.4	16.6	29.5
240V	[kVA]	❶	❶	❶	9.0	9.0	9.0	9.0	16.6	16.6	19.1	34.1
480V	[kVA]	❶	❶	❶	18.1	18.1	18.1	18.1	33.3	33.3	38.2	68.2
600V	[kVA]	❶	❶	❶	22.6	22.6	22.6	22.6	41.6	41.6	47.8	85.2
660V	[kVA]	❶	❶	❶	24.9	24.9	24.9	24.9	45.7	45.7	52.6	93.7

❶ To be determined.

100/104-C, 100S/104S-C		100/104-D, 100S-D											
72	85	95	110	140	140	180	180	210	250	300	420	630	860
X	X	X	X	X	—	X	—	—	—	—	—	—	—
—	—	X	X	—	X	—	X	X	X	X	X	X	X

40.8	40.8	53	60	70	70	85	85	105	125	150	210	0	0
40.8	40.8	53	60	70	70	85	85	105	125	150	210	0	0
40.8	40.8	53	60	70	70	85	85	105	125	150	210	0	0
40.8	40.8	53	60	70	70	85	85	105	125	150	210	0	0
40.8	40.8	53	60	70	70	85	85	105	125	150	210	0	0
—	—	53	60	70	70	85	85	105	125	150	210	0	0
16	16	21	24	28	28	34	34	42	50	60	84	0	0
17	17	22	25	29	29	35	35	44	52	62	87	0	0
28	28	37	42	48	48	59	59	73	87	104	145	0	0
29	29	38	43	50	50	61	61	75	90	108	151	0	0
35	35	46	52	61	61	74	74	91	108	130	182	0	0
49	49	64	72	84	84	102	102	125	149	179	251	0	0
—	—	92	104	121	121	147	147	182	217	260	364	0	0
61.3	61.3	80	90	105	105	128	128	158	188	225	315	0	0
82	82	107	120	140	140	170	170	210	250	300	420	0	0

40.8	40.8	53	60	70	70	85	85	102	125	150	210	0	0
14.4	14.4	18.4	20.8	24.2	24.2	29.4	29.4	36.4	43.3	52.0	72.7	0	0
14.7	14.7	19.1	21.6	25.2	25.2	30.6	30.6	37.8	45.0	54.0	75.7	0	0
17.0	17.0	22.0	24.9	29.1	29.1	35.3	35.3	43.6	52.0	62.4	87.3	0	0
33.9	33.9	44.1	49.9	58.2	58.2	70.7	70.7	87.3	104	125	175	0	0
42.4	42.4	55.1	62.4	72.7	72.7	88.3	88.3	109	130	156	218	0	0
46.6	46.6	60.6	68.6	80.0	80.0	97.2	97.2	120	143	171	240	0	0

61.3	61.3	80	90	105	105	128	128	158	188	225	315	0	0
21.2	21.2	27.7	31.2	36.4	36.4	44.3	44.3	54.7	65.1	77.9	109	0	0
22.1	22.1	28.8	32.4	37.8	37.8	46.1	46.1	51.9	67.7	81.1	113	0	0
25.5	25.5	33.3	37.4	43.6	43.6	53.2	53.2	65.7	78.2	93.5	131	0	0
51.0	51.0	66.5	74.8	87.3	87.3	106	106	131	156	187	262	0	0
63.7	63.7	83.1	93.5	109	109	114	114	141	167	200	281	0	0
70.1	70.1	91.5	103	120	120	146	146	131	215	257	360	0	0

82	82	107	120	140	140	170	170	210	250	300	420	0	0
28.4	28.4	37.1	41.6	48.5	48.5	58.9	58.9	72.7	86.6	104	145	0	0
29.5	29.5	38.5	43.2	50.4	50.4	61.2	61.2	75.7	90.1	108	151	0	0
34.1	34.1	44.5	49.9	58.2	58.2	70.7	70.7	87.3	104	125	175	0	0
68.2	68.2	89.0	99.8	116	116	141	141	175	208	249	349	0	0
85.2	85.2	111	125	145	145	177	177	218	260	312	436	0	0
93.7	93.7	122	137	160	160	194	194	240	286	343	480	0	0

Contactors

Specifications

IEC Specifications

Coil Type : Conventional Electronic — EI			100/104-M				100/104-C, 100S/104S-C								
			05	09	12	09	12	16	23	30	37	40*200	40*400	43	60
			X	X	X	X	X	X	X	X	X	X	X	X	X
			—	—	—	—	—	—	—	—	—	—	—	—	—
Switching of 3-phase Capacitors, AC-6b (50 Hz); Inductance of leads between capacitors in parallel: min. 6 µH (100-C09...-C30 contactors: min. 30 µH)															
Single capacitor 40°C	230V	[kVar]	—	—	—	8	8	8.5	9	14	14	—	—	24	28
	240V	[kVar]	—	—	—	8	8	8.5	9	14	14	—	—	25	29
	400V	[kVar]	—	—	—	8	8	10	12.5	20	24	—	—	35	48
	415V	[kVar]	—	—	—	8	8	10	12.5	20	25	—	—	35	50
	500V	[kVar]	—	—	—	8	8	10	12.5	20	25	—	—	35	50
	690V	[kVar]	—	—	—	8	8	10	12.5	20	25	—	—	35	50
	1000V	[kVar]	—	—	—	—	—	—	—	—	—	—	—	—	—
60°C	230V	[kVar]	—	—	—	8	8	8.5	9	12.5	12.5	—	—	18	28
	240V	[kVar]	—	—	—	8	8	8.5	9	12.5	12.5	—	—	18	29
	400V	[kVar]	—	—	—	8	8	10	12.5	20	21.5	—	—	30	42
	415V	[kVar]	—	—	—	8	8	10	12.5	20	22	—	—	30	42
	500V	[kVar]	—	—	—	8	8	10	12.5	20	25	—	—	30	42
	690V	[kVar]	—	—	—	8	8	10	12.5	20	25	—	—	30	42
	1000V	[kVar]	—	—	—	—	—	—	—	—	—	—	—	—	—
Group capacitors 40°C	230V	[kVar]	—	—	—	5	5	8	9	12.5	14	—	—	20	28
	240V	[kVar]	—	—	—	5	5	8	9	12.5	14	—	—	20	29
	400V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	415V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	500V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	690V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	1000V	[kVar]	—	—	—	—	—	—	—	—	—	—	—	—	—
60°C	230V	[kVar]	—	—	—	5	5	8	9	12.5	12.5	—	—	18	28
	240V	[kVar]	—	—	—	5	5	8	9	12.5	12.5	—	—	18	29
	400V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	415V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	500V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	690V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40
	1000V	[kVar]	—	—	—	—	—	—	—	—	—	—	—	—	—
60 Hz Single Capacitor — 40°C															
200V	[kVar]	—	—	—	5	5	8	9	12.5	14	—	—	20	28	
230V	[kVar]	—	—	—	5	5	8	9	12.5	14	—	—	20	29	
460V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40	
600V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40	
60 Hz Group Capacitors — 40°C															
200V	[kVar]	—	—	—	5	5	8	9	12.5	12.5	—	—	18	28	
230V	[kVar]	—	—	—	5	5	8	9	12.5	12.5	—	—	18	29	
460V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40	
600V	[kVar]	—	—	—	5	5	8	10	15	20	—	—	25	40	
Switching of Lamps															
Gas discharge lamps AC-5a open		[A]	18	18	18	22.5	25	28	29	40.5	45	65	65	77	81
closed		[A]	14.5	14.5	14.5	22.5	25	28	29	37	41	54	54	57	77
Individually compensated:															
Max. capacitance at expected															
Short-circuit current of	10 kA	[µF]	750	750	750	1 000	1 000	1 000	1 000	2 700	2 700	—	—	3 200	4 000
	20 kA	[µF]	400	400	400	500	500	500	500	1 350	1 350	—	—	1 600	2 000
	50 kA	[µF]	—	—	—	200	200	200	200	540	540	—	—	640	800
Filament AC-5b	230/240V	[A]	9.3	9.3	9.3	12	16	18	22	30	37	18	25	43	60
Switching of Low Inductive Loads in Home Appliances and Similar Applications per IEC 61095 (50 Hz)															
AC-7a	230V	[A]	—	—	—	32	32	32	32	45	45	—	—	63	—
	400V	[A]	—	—	—	32	32	32	32	45	45	—	—	63	—
	440V	[A]	—	—	—	32	32	32	32	45	45	—	—	63	—
Switching of Motor Load for Home Appliances per IEC 61095 (50 Hz)															
AC-7b	230V	[A]	—	—	—	10.5	14	19	23	30	—	—	—	—	—
	400V	[A]	—	—	—	9	12	16	20	30	—	—	—	—	—
	440V	[A]	—	—	—	7.5	10	13.5	18	27	—	—	—	—	—

100/104-C, 100S/104S-C				100/104-D, 100S-D											
72	85	90*200	90*400	95	110	140	140	180	180	210	250	300	420	630	860
X	X	X	X	X	X	X	—	X	—	—	—	—	—	—	—
—	—	—	—	X	X	—	X	—	X	X	X	X	X	X	X
28	28	—	—	45	45	70	70	70	70	98	98	125	139	●	●
29	29	—	—	47	47	73	73	73	73	102	102	131	145	●	●
48	48	—	—	78	78	121	121	121	121	170	170	218	242	●	●
50	50	—	—	81	81	126	126	126	126	176	176	226	252	●	●
55	60	—	—	97	97	152	152	152	152	212	212	273	303	●	●
55	60	—	—	134	134	209	209	209	209	293	293	376	418	●	●
—	—	—	—	194	194	303	303	303	303	424	424	546	606	●	●
28	28	—	—	38	38	59	59	59	59	84	84	106	119	●	●
29	29	—	—	39	39	61	61	61	61	87	87	111	124	●	●
48	48	—	—	65	65	102	102	102	102	145	145	184	206	●	●
50	50	—	—	68	68	106	106	106	106	151	151	191	214	●	●
50	55	—	—	82	82	127	127	127	127	182	182	230	258	●	●
50	55	—	—	113	113	176	176	176	176	251	251	318	356	●	●
—	—	—	—	164	164	255	255	255	255	364	364	461	515	●	●
28	28	—	—	42	45	70	70	70	70	98	98	125	139	●	●
29	29	—	—	43	47	73	73	73	73	102	102	131	145	●	●
48	48	—	—	44	56	76	76	111	111	170	170	218	242	●	●
50	50	—	—	44	56	76	76	112	112	170	176	226	252	●	●
50	50	—	—	44	56	76	76	113	113	172	212	273	303	●	●
50	50	—	—	45	57	78	78	114	114	174	247	356	418	●	●
—	—	—	—	46	58	79	79	116	116	177	251	361	606	●	●
28	28	—	—	38	38	59	59	59	59	84	84	106	119	●	●
29	29	—	—	39	39	61	61	61	61	87	87	111	124	●	●
48	48	—	—	44	56	76	76	102	102	145	145	184	206	●	●
50	50	—	—	44	56	76	76	106	106	151	151	191	214	●	●
50	50	—	—	44	56	76	76	113	113	172	182	230	258	●	●
50	50	—	—	45	57	78	78	114	114	174	247	318	356	●	●
—	—	—	—	46	58	79	79	116	116	177	251	361	515	●	●
28	28	—	—	39	39	61	61	61	61	85	85	109	121	●	●
29	29	—	—	45	45	70	70	70	70	98	98	125	139	●	●
50	50	—	—	89	89	139	139	139	139	195	195	251	279	●	●
50	50	—	—	116	116	182	182	182	182	255	255	327	364	●	●
28	28	—	—	39	39	61	61	61	61	85	85	109	121	●	●
29	29	—	—	42	45	70	70	70	70	98	95	125	139	●	●
50	50	—	—	44	56	76	76	112	112	171	195	251	279	●	●
50	50	—	—	45	57	77	77	114	114	173	246	327	364	●	●
85	90	115	115	144	144	225	225	225	225	315	315	405	450	●	●
81	90	95	95	122	122	189	189	189	189	270	270	342	383	●	●
4 000	4 700	—	—	—	—	—	—	—	—	—	—	—	—	●	●
2 000	2 350	—	—	—	—	—	—	—	—	—	—	—	—	●	●
800	940	—	—	—	—	—	—	—	—	—	—	—	—	●	●
70	76	60	75	107	120	140	140	170	170	210	250	300	420	●	●
—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	●
—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	●
—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	●
—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	●
—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	●
—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	●

● To be determined.

Contactors

Specifications

Specifications

Coil Type :			100/104-M			100/104-C, 100S/104S-C									
			05	09	12	09	12	16	23	30	37	40*200	40*400	43	60
			X	X	X	X	X	X	X	X	X	X	X	X	X
Electronic — EI			—	—	—	—	—	—	—	—	—	—	—	—	—
Switching of Hermetically Sealed Cooling Compressor Motors - manual reset of overload release (50 Hz)															
AC-8a	400V	[A]	—	—	—	12	16	22	32	38	45	—	—	63	72
	500V	[A]	—	—	—	12	16	22	32	38	45	—	—	63	72
	690V	[A]	—	—	—	8	10	14	20	28	35	—	—	42	56
- automatic reset of overload release															
AC-8b	400V	[A]	—	—	—	5.5	7	9.3	12	13	14	—	—	16	24
	500V	[A]	—	—	—	5.5	7	9.3	12	13	14	—	—	16	24
	690V	[A]	—	—	—	5.5	7	9.3	12	13	14	—	—	16	24
Switching of DC Loads															
Non-inductive or slightly inductive loads or resistance furnaces DC-1 at 60°C															
1 pole	24V	[A]	6	9	9	25	25	32	32	45	45	45	45	50	70
	48/60V	[A]	4/1	6/1.5	6/1.5	20	20	20	20	25	25	25	25	30	40
	110V	[A]	0.6	1	1	6	6	6	6	8	8	10	10	9	11
	220V	[A]	0.2	0.3	0.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2
	440V	[A]	0.08	0.1	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
	2 poles in series	24V	6	9	9	25	25	32	32	45	45	45	45	50	70
	48/60V	[A]	6	8	8	25	25	32	32	45	45	45	45	50	70
	110V	[A]	4	6	6	25	25	32	32	45	45	45	45	50	70
	220V	[A]	0.8	1.2	1.2	8	8	8	10	10	10	10	10	10	15
	440V	[A]	0.2	0.3	0.3	1	1	1	1	1	1	1	1	1	1.5
	3 poles in series	24V	6	9	9	25	25	32	32	45	45	—	45	63	90
	48/60V	[A]	6	9	9	25	25	32	32	45	45	—	45	63	90
	110V	[A]	6	9	9	25	25	32	32	45	45	—	45	63	90
	220V	[A]	3	4	4	25	25	32	32	45	45	—	45	50	70
	440V	[A]	0.4	0.6	0.6	3	3	3	3	3.5	3.5	—	3.5	4	5
Shunt-wound Motors															
Starting, reverse current braking, reversing, stepping DC-3, 60°C															
3 poles in series	24V	[A]	5	9	9	25	25	32	32	45	45	—	—	63	90
	48/60V	[A]	4	6	6	25	25	32	32	45	45	—	—	50	70
	110V	[A]	2	3	3	20	20	25	25	30	30	—	—	35	70
	220V	[A]	0.8	1.2	1.2	6	6	6	10	15	15	—	—	20	25
	440V	[A]	0.15	0.2	0.2	0.6	0.6	0.6	0.6	0.6	0.6	—	—	0.6	0.6
Series-wound Motors															
Starting, reverse current braking, reversing, stepping DC-5, 60°C															
3 poles in series	24V	[A]	5	9	9	25	25	32	32	45	45	—	—	63	90
	48/60V	[A]	2	3	3	25	25	32	32	45	45	—	—	50	70
	110V	[A]	0.6	1	1	20	20	25	25	30	30	—	—	35	70
	220V	[A]	0.1	0.1	0.1	6	6	6	10	15	15	—	—	20	25
	440V	[A]	—	—	—	0.6	0.6	0.6	0.6	0.6	0.6	—	—	0.6	0.6
Short Time Withstand I_{CW} , 60°C															
10 s			[A]	60	96	96	170	170	170	215	300	304	304	304	700
Resistance and Power Dissipation															
Main current circuit resistance			[mΩ]	5.5	5.5	5.5	2.7	2.7	2.7	2	2	2	2	1.5	0.9
Power dissipation by all circuits at I_e AC-3/400V			[W]	0.46	1.3	2.4	0.66	1.2	2.1	3.2	5.4	8.2	11.3	8.4	9.7
Total power dissipation															
at I_e AC-3/400V	AC control	[W]	1.9	2.7	3.8	3.3	3.8	4.7	6.2	8.4	11.2	26.1	37.4	11.5	11
	DC control	[W]	3.0	3.8	4.9	6.7	7.2	8.1	12.4	14.6	17.4	32.6	43.9	18.4	11
Lifespan															
Mechanical AC control			[Mio. operations]	10	10	10	13	13	13	13	13	10	10	12	10
DC control			[Mio. operations]	20	20	20	13	13	13	13	13	10	10	13	10
Electrical AC-3 (400 V)[Mio. operations]				0.7	0.7	0.7	1.3	1.3	1.3	1.3	1.3	—	—	1	1
Weight															
AC	Non-Reversing	kg (lbs.)	0.16 (0.35)	0.16 (0.35)	0.16 (0.35)	0.39 (0.86)	0.39 (0.86)	0.39 (0.86)	0.39 (0.86)	0.48 (1.06)	0.49 (1.08)	—	—	0.51 (1.12)	1.45 (3.20)
	Reversing	kg (lbs.)	—	—	—	0.85 (1.89)	0.85 (1.89)	0.85 (1.89)	0.85 (1.89)	1.08 (2.39)	1.08 (2.39)	—	—	1.15 (2.54)	3.14 (6.92)
DC	Non-Reversing	kg (lbs.)	0.16 (0.35)	0.16 (0.35)	0.16 (0.35)	0.6 (1.32)	0.6 (1.32)	0.6 (1.32)	0.73 (1.61)	0.85 (1.87)	0.85 (1.87)	—	—	1.0 (2.20)	1.47 (3.24)
	Reversing	kg (lbs.)	—	—	—	1.27 (2.81)	1.27 (2.81)	1.27 (2.81)	1.53 (3.39)	1.81 (4.0)	1.81 (4.0)	—	—	2.13 (4.7)	3.22 (7.1)

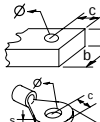
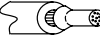
100/104-C, 100S/104S-C				100-D, 100S-D											
72	85	90*200	90*400	95	110	140	140	180	180	210	250	300	420	630	860
X	X	X	X	X	X	X	—	X	—	—	—	—	—	—	—
—	—	—	—	X	X	—	X	—	X	X	X	X	X	X	X
85	100	—	—	—	—	—	—	—	—	—	—	—	—	②	②
85	100	—	—	—	—	—	—	—	—	—	—	—	—	②	②
67	80	—	—	—	—	—	—	—	—	—	—	—	—	②	②
30	35	—	—	—	—	—	—	—	—	—	—	—	—	②	②
30	35	—	—	—	—	—	—	—	—	—	—	—	—	②	②
30	35	—	—	—	—	—	—	—	—	—	—	—	—	②	②
80	80	80	80	135	135	210	210	210	210	300	300	380	425	②	②
40	40	40	40	135	135	210	210	210	210	300	300	380	425	②	②
11	11	11	11	135	135	210	210	210	210	300	300	380	425	②	②
2	2	1.8	1.8	3	3	3.3	3.3	3.3	3.3	4.9	4.9	4.9	5.2	②	②
0.5	0.5	0.5	0.5	0.6	0.6	0.75	0.75	0.75	0.75	1	1	1	1.2	②	②
80	80	80	80	135	135	210	210	210	210	300	300	380	425	②	②
80	80	80	80	135	135	210	210	210	210	300	300	380	425	②	②
80	80	80	80	135	135	210	210	210	210	300	300	380	425	②	②
15	15	15	15	135	135	210	210	210	210	300	300	380	425	②	②
1.5	1.5	1.5	1.5	3	3	3.3	3.3	3.3	3.3	4.9	4.9	4.9	5.2	②	②
90	100	—	100	135	135	210	210	210	210	300	300	380	425	②	②
90	100	—	100	135	135	210	210	210	210	300	300	380	425	②	②
90	100	—	100	135	135	210	210	210	210	300	300	380	425	②	②
80	80	—	80	135	135	210	210	210	210	300	300	380	425	②	②
5	5	—	5	11	11	11	11	11	11	14	14	14	15	②	②
90	100	—	—	135	135	210	210	210	210	300	300	380	425	②	②
70	80	—	—	135	135	210	210	210	210	300	300	380	425	②	②
70	80	—	—	135	135	210	210	210	210	300	300	380	425	②	②
25	30	—	—	135	135	210	210	210	210	300	300	380	425	②	②
0.6	0.6	—	—	3	3	3.5	3.5	3.5	3.5	4.1	4.1	4.1	5.8	②	②
90	100	—	—	135	135	210	210	210	210	300	300	380	425	②	②
70	80	—	—	135	135	210	210	210	210	300	300	380	425	②	②
70	80	—	—	135	135	210	210	210	210	300	300	380	425	②	②
25	30	—	—	135	135	210	210	210	210	300	300	380	425	②	②
0.6	0.6	—	—	1.2	1.2	2.1	2.1	2.1	2.1	2.4	2.4	2.4	3	②	②
700	700	700	700	1040	1040	1240	1360	1480	1480	2360	2520	2840	4700	②	②
0.9	0.9	0.8	0.7	0.4	0.4	0.42	0.42	0.42	0.42	0.22	0.22	0.18	0.15	0.19	0.14
14	19.5	13.5	11.8	10.8	14.5	24.6	24.6	40.8	40.8	29.4	41.7	48.6	79.5	78.4	103.2
13.8	17.5	36	56.3	20.8 (16.8)	24.5 (20.5)	34.6	30.6	59.8	46.8	35.4	47.7	57.6	86.5	105.4	133.2
13.8	17.5	32.5	52.8	18.8 (16.8)	22.5 (20.5)	32.6	30.6	48.8	46.8	35.4	47.7	57.6	86.5	105.4	133.2
10	10	10	10	10	10	10	10	10	10	10	10	10	10	2	2
10	10	10	10	10	10	10	10	10	10	10	10	10	10	2	2
1	1	—	—	1	1	1	1	1	1	1	1	1	1	②	②
1.45 (3.2)	1.45 (3.2)	—	—	3.3 (7.28) [3.8 (8.38)]①	3.3 (7.28) [3.8 (8.38)]①	3.3 (7.28)	3.8 (8.38)	3.3 (7.28)	3.8 (8.38)	7.5 (16.53)	7.5 (16.53)	7.5 (16.53)	7.5 (16.53)	28.6 (63)	28.6 (63)
3.14 (6.92)	3.14 (6.92)	—	—	②	②	②	②	②	②	②	②	②	②	②	②
1.47 (3.24)	1.47 (3.24)	—	—	3.3 (7.28) [3.8 (8.38)]①	3.3 (7.28) [3.8 (8.38)]①	3.3 (7.28)	3.8 (8.38)	3.3 (7.28)	3.8 (8.38)	7.5 (16.53)	7.5 (16.53)	7.5 (16.53)	7.5 (16.53)	28.6 (63)	28.6 (63)
3.22 (7.1)	3.22 (7.1)	—	—	②	②	②	②	②	②	②	②	②	②	②	②

① Values in brackets refer to electronic coil (EI) version.

② To be determined.

Contactors

Specifications

Coil Type : Conventional Electronic — EI		100/104-M			100/104-C, 100S/104S-C											
		05	09	12	09	12	16	23	30	37	40	43	60	72	85	90
		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Conductor Cross Sections - Main Contacts Terminal type																
	(1) conductor [mm ²] (2) conductors [mm ²]	0.75...2.5 0.75...2.5			1...4 1...4			2.5...10 2.5...10		2.5...16 2.5...10		2.5...35 2.5...25				
	(1) conductor [mm ²] (2) conductors [mm ²]	0.75...2.5 0.75...2.5			1.5...6 1.5...6			2.5...16 2.5...16		2.5...25 2.5...16		2.5...50 2.5...35				
	b max. [mm]	—			—			—		—		—				
	c max. [mm]	—			—			—		—		—				
	s max. [mm]	—			—			—		—		—				
	Ø min. [mm]	—			—			—		—		—				
Recommended torque [Nm]		1...1.5			1...2.5			2.5...3.5		2.5...3.5		3.5...6				
Cross section per UL/CSA [AWG]		18...14			16...10			14...4		14...6 14...4		14...1				
Recommended torque [lb-in]		7...15			9...22			22...31		22...31		31...53				
With terminal lug kit		—			—			—		—		—				
Cross section per UL/CSA [AWG]		—			—			—		—		—				
Recommended torque [lb-in]		—			—			—		—		—				
With Frame Terminal Block		—			—			—		—		—				
	top opening [mm ²] bottom opening [mm ²]	—			—			—		—		—				
	top opening [mm ²] bott. opening [mm ²]	—			—			—		—		—				
	b max. [mm] s top [mm] s bottom [mm]	—			—			—		—		—				
Recommended torque [Nm]		—			—			—		—		—				
Cross section per UL/CSA top [AWG]		—			—			—		—		—				
bottom [AWG]		—			—			—		—		—				
Recommended torque [lb-in]		—			—			—		—		—				

① Pozidriv No. 2 / Blade No. 3 screw

② Pozidriv No. 2 / Blade No. 4 screw

③ Hexagonal socket screw

100-D, 100S-D											
95	110	95	110	140	180	210	250	300	420	630	860
X	X	—	—	X	X	—	—	—	—	—	—
—	—	X	X	X	X	X	X	X	X	X	X
											
— —		— —				— —				— —	— —
— —		— —				— —				— —	— —
20		25				30				52	52
10		12.5				15				22	22
5		5				6				2x8	2x8
6.1		8.3				10.5				13	13
8...10		10...12				16				68	68
—		—				—				—	—
70...90		90...110				130...150				600	600
100-DL110 ④ 100-DLA110 ④		100-DLE110 ②		100-DL180 ④ 100-DLA180 ④		100-DL420 ④ 100-DLA420 ④				100-DL630	100-DL860
14...2/0		8...2/0		6...300 MCM		(2x) 4...350 MCM				2X 2/0...500MCM	4X 2/0...500MCM
70...90		70...90		90...110		375				400	400
100-DTB110 ④		100-DTB180 ④				100-DTB420 ④				—	—
16...35 16...70		16...35 16...95				25...240 ⑤ 25...240				—	—
16...50 16...95		16...50 16...120				25...300 25...300				—	—
16 3...9 3...12		20 3...9 3...14				25 4...20 4...20				—	—
8...10		10...12				20...25				—	—
6...1 / 0 AWG		6...1 / 0 AWG				4 AWG...600 MCM				—	—
6...3 / 0 AWG		6 AWG...250 MCM				4 AWG...600 MCM				—	—
70...90		90...110				180...220				—	—

④ Hexagonal screw
⑤ 25...95 mm² with sleeve per DIN 46228

Contactors

Specifications

Coil Data

Coil Type : Conventional Electronic — EI			100/104-M			100/104-C, 100S/104S-C													
			05	09	12	09	12	16	23	30	37	40*200	40*400	43	60	72	85	90*200	90*400
			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Operating Limits																			
50 Hz, 60 Hz, 50/60 Hz	pick-up	[x Us]	0.85...1.1			0.85...1.1					0.85...1.1		0.85....1.1						
	dropout	[x Us]	0.35...0.65			0.3...0.6					0.3...0.6		0.3...0.6						
DC control	pick-up	[x Us]	0.85...1.1			0.8...1.1					0.8...1.1		0.8...1.1						
	dropout	[x Us]	0.1...0.25			0.1...0.6					0.1...0.6		0.1...0.6						
Coil Consumption																			
50 Hz, 60 Hz, 50/60 Hz	pick-up	[VA/W]	22/20			70/50		70/50	80/60	130/90	130/90	130/90	200/110			400/240			
	hold-in	[VA/W]	4/1.4			8/2.6		9/3	9/3	12/3.6	12/3.6	10/3.2	16/4.5			24/9			
DC control	pick-up	[W]	2.5			6.5		9.2	9.2	10.1	10.1	10.1	200			325			
	hold-in	[W]	2.5			6.5		9.2	9.2	10.1	10.1	10.1	4.5			5.5			
Operating Times																			
AC	closing delay	[ms]	15...40			15...30		15...30	15...30	15...30		15...30	20...40		20...30		20...30		
	opening delay	[ms]	15...25			10...60		10...60	10...60	10...60		10...60	10...60		20...40		20...40		
With RC module	opening delay	[ms]	15...25			10...60		10...60	10...60	10...60		10...60	10...60		20...40		20...40		
DC	closing delay	[ms]	18...40			40...70		40...70	50...80	50...80		50...80	20...40		15...25		20...25		
	opening delay	[ms]	6...12			7...15		7...15	7...15	7...15		7...15	—		20...25		20...25		
With integrated diode	opening delay	[ms]	8...12			14...20		17...23	17...23	—		17...23	≤ 220V 20...35		—		—		
With external diode	opening delay	[ms]	35...50			70...95		80...125	80...125	—		80...125	> 220V 80...125		—		—		

100/104-D, 100S/104S-D											
95/110	140/180	95	110	140	180	210	250	300	420	630	860
X	X	—	—	—	—	—	—	—	—	—	—
—	—	X	X	X	X	X	X	X	X	X	X
0.85...1.1		0.85...1.1								0.8...1.1	
0.3...0.6		0.3...0.5								0.3...0.8	
0.85...1.1		0.85...1.1								0.85...1.1	
0.3...0.6		0.3...0.5								0.3...0.8	
650/310		380/240 ❶							490/270 ❶		1915/1720 ❶
50/10		13/6							18/7		33/30
540		265 ❶							340 ❶		1980 ❶
8		6							7		30
20...47		20...45								60...100	
6...12		25...110								70...145	
9...18		—								—	
27...47		25...50								60...100	
12...20		35...110								70...145	
12...20		—								—	
—		—								—	

❶ Electronic coil drives are controlled for minimizing performance, but this control may shortly require (< 1ms) peak load when energizing. This must be taken into account for the proper sizing of supply devices, all-or-nothing relays and cross-sections of coil supply lines. Please contact your nearest Rockwell Automation distributor for detailed information

Contactors

Specifications

Coil Type :	Conventional Electronic — EI	100/104-M			100/104-C, 100S/104S-C													
		05	09	12	09	12	16	23	30	37	40*200	40*400	43	60	72	85	90*200	90*400
		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short Circuit Coordination (Max.Fuse or Circuit Breaker Rating)																		
Per IEC 60947-4-1 (contactor and fuses only)																		
DIN Fuses - gG, gL		100 kA Available Fault Current																
Type "1" (690V)	[A]	25	25	25	50	50	50	80	125	125	160 ❶	160 ❶	160	250	250	250	250 ❶	250 ❶
Type "2" (400V)	[A]	16	16	16	25	35	35	40	80	80	63 ❶	80 ❶	100	160	160	160	160 ❶	100 ❶
Type "2" (690V)	[A]	—	—	—	25	35	35	40	80	80	63 ❶	80 ❶	100	160	160	160	160 ❶	100 ❶
BS88 Fuses		65 kA Available Fault Current																
Type "1" (415V)	[A]	—	—	—	25	32	40	50	63	80	—	—	80	100	160	160	—	—
Type "2" (415V)	[A]	—	—	—	20	25	32	50	63	80	—	—	80	100	125	160	—	—
Per UL 508 and CSA 22.2 No. 14 (contactor and fuses or circuit breaker only)																		
UL Class K5 and RK5 Fuses		5 kA Available Fault Current																
UL Listed Combination (600V)	[A]	40	40	40	35	40	70	90	110	125	125	125	150	200	—	—	—	—
UL Class K5 and RK5 Fuses		10 kA Available Fault Current																
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	250	300	300	300
UL Class L Fuses		18 kA Available Fault Current																
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
UL Class L Fuses		42 kA Available Fault Current																
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
UL Class CC and CSA HRCI-MISC Fuses		100 kA Available Fault Current																
UL Listed Combination (600V) - "Type 2"	[A]	—	—	—	15	20	20	30	—	—	—	—	—	—	—	—	—	—
UL Class J and CSA HRCI-J Fuses		100 kA Available Fault Current																
UL Listed Combination (600V) - "Type 2"	[A]	—	—	—	15	20	20	30	40	50	—	—	50	80	100	100	—	—
UL Inverse-Time Circuit Breaker		5 kA Available Fault Current																
UL Listed Combination (480V)	[A]	—	—	—	30	30	50	50	125	125	—	—	125	250	—	—	—	—
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	125	125	—	—	125	250	—	—	—	—
UL Inverse-Time Circuit Breaker		10 kA Available Fault Current																
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	250	250	—	—
UL Inverse-Time Circuit Breaker		18 kA Available Fault Current																
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
UL Inverse-Time Circuit Breaker		42 kA Available Fault Current																
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

❶ 50 kA available fault current.

100/104-D, 100S/104S-D											
95/110	140/180	95	110	140	180	210	250	300	420	630	860
X	X	—	—	—	—	—	—	—	—	—	—
—	—	X	X	X	X	X	X	X	X	X	X
100 kA Available Fault Current											
250	315	250	250	315	355	500	500	630	630	②	②
200	250	200	200	250	315	400	400	500	500	②	②
200	250	200	200	250	315	400	400	500	500	②	②
65 kA Available Fault Current											
160	250	200	200	250	250	355	355	450	630	②	②
160	250	200	200	250	250	355	355	450	560	②	②
5 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	—	—
10 kA Available Fault Current											
225/250	350/450	225	250	350	450	500	—	—	—	—	—
18 kA Available Fault Current											
—	—	—	—	—	—	—	700	700	1000	—	—
42 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	2500	2500
100 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	—	—
100 kA Available Fault Current											
②	②	②	②	②	②	②	②	②	②	②	②
5 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
10 kA Available Fault Current											
125/150	200/250	125	150	200	250	300	—	—	—	—	—
18 kA Available Fault Current											
—	—	—	—	—	—	—	350	400	500	—	—
42 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	1200	1200

② To be determined.

Contactors

Specifications

Auxiliary Contacts and Auxiliary Contact Blocks

				Auxiliary contact for 100-M		Auxiliary contact for 100-C, 100S-C				Auxiliary contact for 100-D	
				Internal	Blocks	Internal	Front-mounted	Front-mounted (Bifurcated)	Side-mounted	Conventional	Electronically compatible
Switching of AC Loads											
AC-12	I _{th}	at 40 °C	[A]	16	10	20	10	10	10	16	0.1
		at 60 °C	[A]	12	6	20	6	6	6	12	at 250 V
AC-15 at rated voltage of											
	24 V	[A]	6	2	10	6	3	6	5.5	(1...100 mA) at 3...125 V	
	42 / 48 V	[A]	6	2	10	6	3	6	5.5		
	120 V	[A]	6	2	10	6	3	6	5.5		
	230 V	[A]	6	2	10	5.5	3	5.5	5.5		
	240 V	[A]	5	2	10	5	3	5	5		
	400 V	[A]	2.5	1	6	3	2	3	3		
	415 V	[A]	2	1	6	3	2	3	2.5		
	500 V	[A]	1.25	0.6	2.5	1.6	1.2	1.6	1.6		
	690 V	[A]	—	—	1	1	0.7	1	1		
Switching of DC Loads											
DC-12 L/R< 1 ms resistive loads at											
	24 VDC	[A]	6	6	12	12	6	6	16	—	
	48 VDC	[A]	4	2	9	9	3.2	3.2	9	—	
	110 VDC	[A]	0.6	0.6	3.5	3.5	0.45	0.45	3.5	—	
	220 VDC	[A]	0.2	0.2	0.55	0.55	0.18	0.18	0.55	—	
	440 VDC	[A]	0.08	0.08	0.2	0.2	0.1	0.1	0.2	—	
DC-14 L/R< 15 ms inductive loads with economy resistor in series at											
	24 VDC	[A]	4	4	9	9	2	2	9	—	
	48 VDC	[A]	2.5	1.2	5	5	1.6	1.6	5	—	
	110 VDC	[A]	0.4	0.4	2	2	0.3	0.3	2	—	
	220 VDC	[A]	0.12	0.12	0.4	0.4	0.12	0.12	0.4	—	
	440 VDC	[A]	0.05	0.05	0.16	0.16	0.05	0.05	0.16	—	
DC-13 switching electromagnets at											
	24 VDC	[A]	5	2	5	5	2.5	5	5	(1...100 mA) at 3...125 V	
	48 VDC	[A]	0.6	0.6	3	3	1.5	3	2		
	110 VDC	[A]	0.45	0.45	1.2	1.2	0.6	1.2	0.7		
	220 VDC	[A]	0.25	0.1	0.6	0.6	0.3	0.6	0.25		
	440 VDC	[A]	0.04	0.04	0.3	0.15	0.15	0.15	0.12		
Fuse gG											
Short-circuit protection with no Welding of contacts per IEC 60947-5-1											
		[A]	16	10	20	10	10	10	16	—	
		[A]	16	10	20	10	10	10	16	—	
Protective Separation per IEC 60947-1, Annex N					between load and auxiliary circuit 320V	between load and auxiliary circuit 440V					
Min. switching capacity 17V IEC 60947-5-4		[mA]	10	5	10	5	5 @ 8V	10	10	1 	
Load Carrying Capacity per UL/CSA											
Rated voltage	AC	[V]	max. 600		max. 600				max. 600	max. 250	
Continuous rating	40 °C	[A]	10 General purpose		10	10	10	10	10 General purpose	0.1	
Switching capacity	AC	[A]	Heavy pilot duty (A 600)		A 600				Heavy pilot duty (A 600)	0.1	
Rated voltage	DC	[V]	max. 600		max. 600				max. 600	max. 250	
Switching capacity	DC	[A]	Light pilot duty (Q 600)		P 600	P 300/Q 600	Q600	P 300/Q 600	Standard pilot duty (P 600)	0.1	

❶ Only with 100-DS2-B11

General

	100-M		100-C, 100S-C	100-D, 100S-D
	05...09	12	09...85	95...420
Rated Isolation Voltage U_i				
IEC [V]	500		690	1000
UL, CSA [V]	600		600	600
Rated Impulse Voltage Withstand U_{imp} [kV]	6		8	12
Rated Voltage U_e				
AC 50/60 Hz [V]	230, 240, 400, 415, 500		115, 230, 400, 500, 690	230, 240, 400, 415, 500, 690, 1000
DC [V]	24, 48, 110, 220, 440		24, 48, 110, 220, 440	24, 48, 110, 220, 440
Insulation Class of the Coil	Class «B» per IEC 85		Class «F» per IEC 85	Class «B» per VDE 0660, Table 22
Rated coil frequency	AC 50/60 Hz, DC		AC 50/60 Hz, DC	AC 50 Hz, 50/60 Hz, DC
Ambient Temperature				
Storage [°C]	-55...+80		-55...+80	-40...+80
Operation at rated voltage [°C]	-25...+60		-25...+60	-25...+60
at 70 °C	15 % current reduction against 60°C values			
Climatic Withstand	IEC 68-2		IEC 68-2	IEC 68-2
Max. Altitude of Installation Site [m]	2000 NN, per IEC 60947-4		2000 NN, per IEC 60947-4	2000 NN, per IEC 60947-4
Protection Class	IP2X		IP2X (in connected state)	IP00 IEC 60529 / DIN 40 050
Single contactor cover	—			IP10 IEC 60529 / DIN 40 050
Contactor with frame terminal block	—			IP20 IEC 60529 / DIN 40 050
Auxiliary contact	—			IP20 IEC 60529 / DIN 40 050
Protection against Accidental Contact	Finger and back-of-hand proof per VDE 0106, part 100		Finger and back-of-hand proof per VDE 0106, part 100	Finger and back-of-hand proof per VDE 0106, part 100
Resistance to Shock	IEC 68-2		IEC 68-2-27	IEC 68-2-27
Resistance to Vibration	IEC 68-2		IEC 68-2-6	IEC 68-2-6
Mechanically Linked Contacts IEC 60947-5-1, Annex L SUVA Certified	100-M... 700-M... 700-DC-M...		100-C09...C23, 100S-C09...C85, 100-C + 100-FA/FB/FC (except L11, L22), 100-C09...C43 + 100-FAB/FBB/FCB, 700-CF + 100-FA/FB/FC (except L11, L22), 700-CF... + 100-FAB	—
Mirror Contacts IEC 60947-4 Annex F SUVA Certified	100-M... + 195-M...		100-C09...C23, 100S-C09...C85, 100-C + 100-FA/FB/FC + 100-SA/SB, 100-C60...C85 + 100-FAB/FBB/FCB, 100S-C + 100-SA/SB	100-D... + 2 x 100-DS1-11 100S-D5
Standards	IEC/EN 60947-1/-4-1/-5-1, UL 508; CSA 22.2. No. 14		IEC/EN 60947-1/-4-1/-5-1, UL 508; CSA 22.2. No. 14	IEC/EN 60947-1/-4-1/-5-1, UL 508; CSA 22.2. No. 14
Approvals	CE, UL, CSA		CE, UL, CSA, RINA, Bureau Veritas, Russian Maritime Register of Shipping, American Bureau of Shipping	CE, UL, CSA

Bulletin 100-G

IEC Contactors

Specifications

Electrical Data

Cat. No.		100-G550...	100-G700...	100-G860...	100-G1000...	100-G1200...
AC-1, Three-phase Switching - IEC Ambient temperature: 40°C						
I_e	≤ 690V [A]	760	1,000	1,100	1,200	1,350
	230V [kW]	303	398	438	478	538
	240V [kW]	316	416	457	499	561
	400V [kW]	527	693	762	831	935
	415V [kW]	546	719	791	863	970
	500V [kW]	658	866	953	1,039	1,169
	690V [kW]	908	1,195	1,315	1,434	1,613
Ambient temperature: 60°C						
I_e	≤ 690V [A]	605	800	870	960	1,085
	230V [kW]	241	319	347	382	432
	240V [kW]	251	333	362	399	451
	400V [kW]	419	554	603	665	752
	415V [kW]	435	575	625	690	780
	500V [kW]	524	693	753	831	940
	690V [kW]	723	956	1,040	1,147	1,297
Continuous Current - UL/CSA General Purpose Rating 40°C		520	700	810	—	1215
Switching of 3-phase Motors - IEC						
AC-2, AC-3	230/240V [A]	550	700	860	1,000	1,200
50Hz/60°C	400/415V [A]	550	700	860	1,000	1,200
	500V [A]	550	700	860	1,000	1,200
	690V [A]	500	630	700	860	1,000
	230V [kW]	179	228	280	326	391
	240V [kW]	187	238	293	340	408
	400V [kW]	312	414	509	592	710
	415V [kW]	324	430	528	628	737
	500V [kW]	407	518	636	756	888
	690V [kW]	510	657	730	897	1,043
AC-4 at 200,000 operations 50Hz						
	230/240V [A]	140	180	210	260	300
	400/415V [A]	140	180	210	260	300
	230V [kW]	45	57	67	83	97
	240V [kW]	47	60	70	87	101
	400V [kW]	78	101	118	146	170
	415V [kW]	81	105	122	151	176
AC-4, Squirrel-cage motors with reversing and jogging at 20,000 (25,000), operations						
	230/240V [A]	360	430	520	(630)	(700)
	400/415V ❶ [A]	350	420	520	(630)	(700)
	230V [kW]	116	139	170	(205)	(228)
	240V [kW]	120	151	177	(214)	(245)
	400V [kW]	198	238	295	(357)	(414)
	415V [kW]	206	247	300	(359)	(424)

❶ At rated voltage 415V and rated current: Life span -25%

Electrical Data, Continued

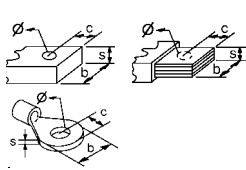
Cat. No.			100-G550...	100-G700...	100-G860...	100-G1000...	100-G1200...
Switching of 3-phase Motors - UL/CSA							
60Hz/60°C	200V	[A]	414	552	692	—	1185
	230V	[A]	360	602	722	—	1130
	460V	[A]	414	590	708	—	1062
	575V	[A]	336	472	576	—	864
	200V	[Hp]	150	200	250	—	450
	230V	[Hp]	150	250	300	—	450
	460V	[Hp]	350	500	600	—	900
	575V	[Hp]	350	500	600	—	900
Rated making capacity							
AC-3 I_e	≤ 415V	[A]	5500	7000	8600	10000	12000
	500V	[A]	5500	7000	8600	10000	12000
	690V	[A]	5500	7000	8600	10000	12000
Rated breaking capacity							
AC-3 I_e	≤ 240V	[A]	4400	5600	6900	8000	9600
	400V	[A]	4400	5600	6900	8000	9600
	415V	[A]	4400	5600	6900	8000	9600
	500V	[A]	4400	5600	6900	8000	9600
	690V	[A]	4000	5100	5600	6900	8000
Star-Delta Starting							
50Hz	230V	[A]	953	1212	1490	1732	2078
	240V	[A]	953	1212	1490	1732	2078
	400V	[A]	953	1212	1490	1732	2078
	415V	[A]	953	1212	1490	1732	2078
	500V	[A]	953	1212	1490	1732	2078
	690V	[A]	831	1091	1195	1490	1732
	230V	[kW]	310	395	485	565	677
	240V	[kW]	324	412	507	589	707
	400V	[kW]	540	717	882	1025	1,250
	415V	[kW]	561	745	915	1088	1278
	500V	[kW]	705	897	1102	1309	1538
	690V	[kW]	883	1138	1247	1554	2078
Wye-Delta Starting							
60Hz	230V	[Hp]	250	400	500	650	750
	460V	[Hp]	600	800	1000	1300	1500
	575V	[Hp]	600	800	1000	1500	1500
Short-circuit Protection of Contactors without Overload Relay							
Fuse gG (aM) Type 1 coordination (per IEC 60947-4-1) 500V			[A]	(630)	800	1000	1250
690V			[A]	(630)	800	1000	1000
Switching of Three-phase Capacitor							
Inductivity of dispatching between parallel switched capacitors: min. 6 μ H							
Single capacitors 40°C	230V	[kVar]	180	220	250	290	330
	240V	[kVar]	200	250	300	325	360
	400V	[kVar]	320	400	450	500	575
	415V	[kVar]	350	430	500	550	630
	500V	[kVar]	450	520	600	660	750
	690V	[kVar]	580	700	800	875	1,000
	230V	[kVar]	150	180	220	275	325
	240V	[kVar]	170	200	260	300	350
	400V	[kVar]	280	330	400	460	550
	415V	[kVar]	300	360	450	500	600
	500V	[kVar]	360	420	540	600	720
	690V	[kVar]	500	580	720	800	950

Bulletin 100-G
IEC Contactors
Specifications, Continued

Electrical Data, Continued

Cat. No.			100-G550...	100-G700...	100-G860...	100-G1000...	100-G1200...
Capacitor Banks 40°C	230V	[kVar]	180	220	250	290	330
	240V	[kVar]	200	250	300	325	360
	400V	[kVar]	320	400	450	500	575
	415V	[kVar]	350	430	500	550	630
	500V	[kVar]	450	520	600	660	750
	690V	[kVar]	580	700	800	875	1000
	55°C						
	230V	[kVar]	150	180	220	275	325
	240V	[kVar]	170	200	260	300	350
	400V	[kVar]	280	330	400	460	550
	415V	[kVar]	300	360	450	500	600
	500V	[kVar]	360	420	540	600	720
	690V	[kVar]	500	580	720	800	950
DC Switching							
Switching of non- or slightly inductive loads, resistance furnaces							
DC-1 at 60°C							
1-Pole	24/48V	[A]	645	760	930	1020	1150
2-Poles in series	24/48V	[A]	645	760	930	1020	1150
3 Poles in series	24/48V	[A]	645	760	930	1020	1150
	110V	[A]	480	560	630	800	900
	220V	[A]	315	400	450	500	600
Shunt-wound Motors							
Starting, plugging, reversing, plugging							
DC-3 at 60°C							
3 Poles in series	24/48V	[A]	605	800	870	960	1,085
Series-wound Motors							
Starting, plugging, reversing, plugging							
DC-5 at 60°C							
3 Poles in series	24/48V	[A]	605	800	870	960	1,085
Lighting Loads							
Elec. Discharge. Lamps - AC - 5a,							
Non-Compensated		[A]	450	570	700	850	1,000
Compensated		[A]	360	460	550	660	800
Incandescent Lamps - AC - 5b,							
Electrical Endurance @ 100,000 ops		[A]	315	440	500	560	630
Switching Power Transformers AC - 6a							
Inrush = $n \cdot I_e$	400V AC	[A]	7440	9450	11700	13500	16200
I_e Rated transformer current	400V AC	[A]	248	315	390	450	540
n = 30	400V AC	[kVA]	172	218	270	312	374
	500V AC	[kVA]	215	273	338	390	468
	690V AC	[kVA]	269	339	376	538	645
n = 20	400V AC	[A]	371	472	580	675	810
n = 15	400V AC	[A]	435	630	774	900	1080
Rated Short-time Withstand ICW, 60°C							
1 s		[A]	5500	7000	8000	10000	12000
4 s		[A]	5500	7000	8000	10000	12000
10 s		[A]	4400	5600	6900	8000	9600
15 s		[A]	3800	5000	6000	7400	8500
60 s		[A]	2300	2800	3400	4000	4800
240 s		[A]	1300	1800	2000	2300	2700
900 s		[A]	850	1150	1350	1600	1900
Minimum cooling time at zero current		[Min.]	60	60	60	60	60
Resistance and Energy Dissipation							
Main circuit resistance		[mΩ]	0.11	0.1	0.08	0.06	0.05
Total energy dissipation at I_e AC-3		[W]	99	147	177	180	216
Excess energy dissipation at I_e AC-3							
AC Control		[W]	110	172	202	250	286
DC Control		[W]	109	169	199	240	276

Mechanical Data

Cat. No.			100-G550...	100-G700...	100-G860...	100-G1000...	100-G1200...
Life Span in Millions of Operations							
Mechanical	AC Control	[Mil.]	5	5	5	1	1
	DC Control	[Mil.]	5	5	5	1	1
Shipping Weights	AC Control	[kg]	13.8	26.4	28.4	50.3	53.4
		[lb]	30.4	58.1	62.5	110.8	117.6
	DC Control	[kg]	13.8	26.4	28.4	50.3	53.4
		[lb]	30.4	58.1	62.5	110.8	117.6
Terminals ❶							
Terminal dimensions		[mm]	6 x 40	8 x 50	8 x 50	10 x 50	10 x 60
Terminal screw hole size		[mm]	(1) x ø13	(1) x ø13	(1) x ø15	(2) x ø13	(2) x ø13
Terminations - Power Type			Hexagonal Bolt				
Direct Connection							
	b max.	[mm]	50	60	60	60	60
	c max.	[mm]	20	20	25	25	25
	s max.	[mm]	2 x 5	2 x 5	2 x 6	2 x 6	2 x 8
	Ø min.	[mm]	12.5	13	15	2 x 13	2 x 13
Recommended Torque		[Nm]	50	60	75	60	60
		[ft.-lb]	37	44	55	44	44
Conductor/Wire Terminations ❶							
Bus bar (width)		[mm]	40	50	50	50	60
Terminal lugs			100-LG5	100-LG6	100-LG6	100-LG7	100-LG7
Wire size per IEC 60947-1		[mm²]	(2) x 35...300	(3) x 35...300	(3) x 35...300	(4) x 35...300	(4) x 35...300
Wire size per UL/CSA		[AWG]	(2) x #2...600 MCM	(3) x #2...600 MCM	(3) x #2...600 MCM	(4) x #2...600 MCM	(4) x #2...600 MCM
Hex screw		[in]	1/2	3/8	3/8	3/8	3/8
Recommended Torque		[Nm]	42	62	62	56	56
		[lb-in]	375	550	550	500	500
Auxiliary Contact		[mm²]	(2) x 2.5	(2) x 2.5	(2) x 2.5	(2) x 2.5	(2) x 2.5
Coils		[mm²]	(2) x 2.5	(2) x 2.5	(2) x 2.5	(2) x 2.5	(2) x 2.5

❶ Quantity indicated in ().

Coil Data

Cat. No.			100-G550...	100-G700...	100-G860...	100-G1000...	100-G1200...
Operating Limits							
AC- 50 Hz	Pick-up	[x U_s]	0.85...1.1				
	Drop-out	[x U_s]	0.2...0.5	0.2...0.75		0.1...0.6	
AC- 60 Hz	Pick-up	[x U_s]	0.85...1.1				
	Drop-out	[x U_s]	0.2...0.5	0.2...0.75		0.1...0.6	
DC Control	Pick-up	[x U_s]	0.85...1.1				
	Drop-out	[x U_s]	0.2...0.5	0.2...0.75		0.1...0.6	
Pickup and Holding Power							
AC- 50 Hz	Pick-up	[VA]	800...950	1,350...1,600		2,400	
	Hold-in	[VA]	9...11	21...25		70	
AC- 60 Hz	Pick-up	[VA]	800...950	1,350...1,600		2,400	
	Hold-in	[VA]	9...11	21...25		70	
DC Control	Pick-up	[W]	700...850	1,300...1,550		2,100	
	Hold-in	[W]	8...10	18...22		60	
Operating Times: Switching Delay							
AC	Making delay	[ms]	50...100				50...100
	Breaking delay	[ms]	20...50 ②/150...200/500...1,000 ③				25...50
DC	Making delay	[ms]	50...100				50...100
	Breaking delay	[ms]	20...50 ②/150...200/500...1,000 ③				25...50

❷ Accelerates

❸ Delays

Bulletin 100-G
IEC Contactors
Specifications, Continued

Auxiliary Contacts

Cat. No.				100-G550...	100-G700...	100-G860...	100-G1000...	100-G1200...
AC Switching								
AC-1	I_{th}	at 40°C	[A]	16			16	
		at 60°C	[A]	12			12	
AC-15 at rated voltage								
		120V	[A]	6			6	
		230V	[A]	3			3	
		240V	[A]	3			3	
		400V	[A]	2			2	
		415V	[A]	2			2	
		500V	[A]	1.5			1.5	
		690V	[A]	1			1	
DC Switching								
DC-13 control of electromagnets								
		24V DC	[A]	6			6	
		48V DC	[A]	3			3	
		110V DC	[A]	1			1	
		220V DC	[A]	0.5			0.5	
Back-up Fuse								
Short-circuit protection without contact welding per IEC 60947-5-1								
Fuse gG			[A]	10			16	

General Data

Cat. No.	100-G550...	100-G700...	100-G860...	100-G1000...	100-G1200...
Rated Isolation Voltage U_i IEC, AS, BS, SEV, VDE 0660 UL/CSA	[V]	1,000V 600V		690V 600V	
Impulse Voltage U_{imp} 1 minute per IEC 60947-4-1	[kV]	3,500V		2,500V	
Rated Voltage - Main Control U_e AC 50/60 Hz DC	[V] [V]	230, 240, 400, 415, 460, 500, 575, 690V 24, 48, 110, 220, 440V		230, 240, 400, 415, 460, 500, 575, 690V	
Operating Frequency for AC Loads 50/60 Hz	[Hz]	180/hr. for 0.25s start time – 42/hr. for 1s start time			
Insulation Class of the Magnetic Coil		Class B per VDE 0660, table 22			
Rated Frequency of the Coil		AC 50/60 Hz, DC			
Ambient Temperature Storage Operation at rated current		-40°C...+80°C -25°C...+60°C			
Climatic Withstand		Damp alternating conditions cyclical, per DIN 50 016 and 40 046, Part 38, IEC 68			
Altitude		2000 m above sea level, per IEC 60947-1			
Type of Protection		IP00 IEC 529/DIN 40 050			
Certifications		IEC 60947			
Approvals		UL, cUL, CE 			

❶ Cat. No. 100-G1000 is not UL or cUL certified.

Electrical life in Utilization Category

Bulletin 100/104 IEC contactors are designed for superior performance in a wide variety of applications. When selecting IEC products, the user must give consideration to the specific load, utilization category and required electrical life of the application. The life-load curves shown here are based on Rockwell Automation tests according to the requirements defined in IEC 60947-4-1. Since contact life in application is dependent on environmental conditions and duty cycle, actual application contact life may vary from that indicated by the curves shown here.

To find the contactor's estimated electrical life, follow these guidelines:

1. Identify the appropriate utilization category from the table below.
2. Choose the graph for the utilization category selected.
3. Locate the intersection of the life-load curve for the appropriate contactor with the application's operational current (I_e) found on the horizontal axis.
4. Read the estimated contact life along the vertical axis.

Contact Life for Mixed Utilization Categories AC-3 and AC-4:

In many applications, the utilization category cannot be defined as either purely AC-3 or AC-4. In those applications, the electrical life of the contactor can be estimated from the following equation:

$L_{mixed} = Lac3 / [1 + Pac4 * (Lac3 / Lac4 - 1)]$, where:

L_{mixed} Approximate contact life in operations for a mixed AC-3/AC-4 utilization category application.

$Lac3$ Approximate contact life in operations for a pure AC-3 utilization category (from the AC-3 life-load curves).

$Lac4$ Approximate contact life in operations for a pure AC-4 utilization category (from the AC-4 life-load curves).

$Pac4$ Percentage of AC-4 operations.

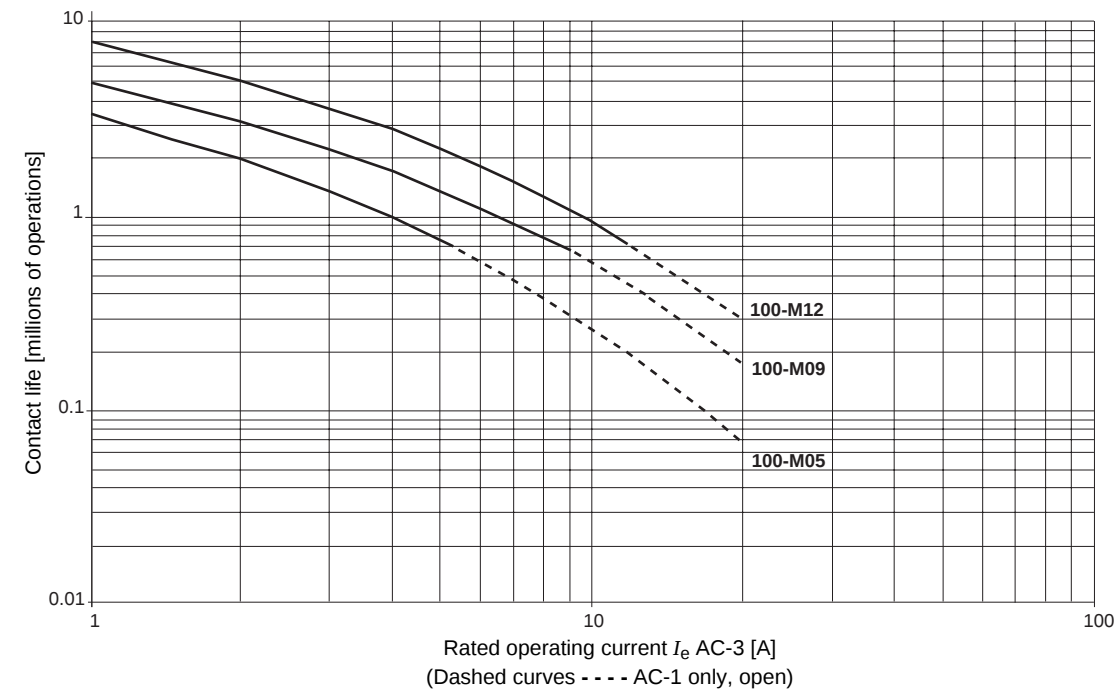
Test Conditions		Making			Breaking		
		I/I_e	U/U_e	$\cos\phi$	I_c/I_e	U_r/U_e	$\cos\phi$
AC-1	Resistance Furnaces: Non inductive or slightly inductive loads	1	1	0.95	1	1	0.95
AC-2	Slip-ring motors: Starting and reversing	2.5	1	0.65	2.5	1	0.65
AC-3	Squirrel - cage motors: Starting and stopping of running motors	$I_e < 17 \text{ A}$	1	0.65	6	0.17	0.65
		$I_e > 17 \text{ A}$	1	0.35	6	0.17	0.35
AC-4	Squirrel - cage motors: Starting, plugging ❶, inching ❷	$I_e < 17 \text{ A}$	1	0.65	6	1	0.65
		$I_e > 17 \text{ A}$	1	0.35	6	1	0.35
AC-15	Solenoids: Contactors, valves and lifting magnets	10	1	0.7	1	1	0.4

I_e	Rated operational current	I	Making Current
U_e	Rated voltage	I_c	Breaking Current
U_r	Recovery voltage	U	Off-load voltage

- ❶ Plugging is understood as stopping or reversing the motor rapidly by reversing motor primary connections while the motor is running.
 ❷ Inching (jogging) is understood as energizing a motor once or repeatedly for short periods to obtain small movements of the driven mechanism.

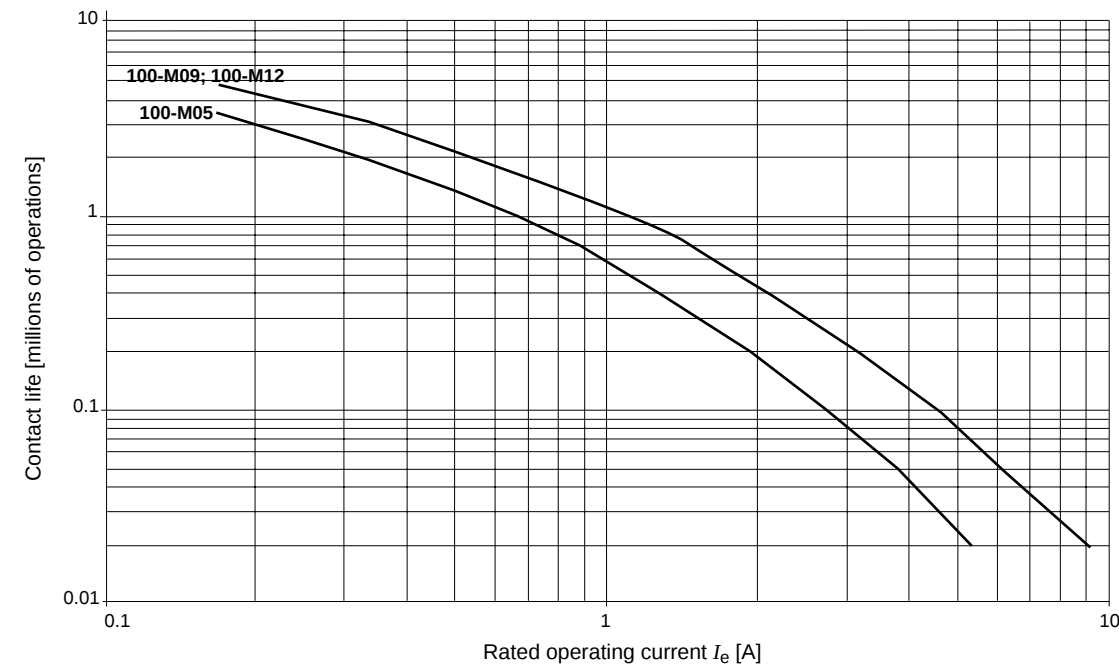
100-M

Electrical Life; $U_e = 400...460V$ AC
AC-3 Switching of squirrel-cage motors while starting
AC-1 Non- or slightly inductive loads, resistance furnaces



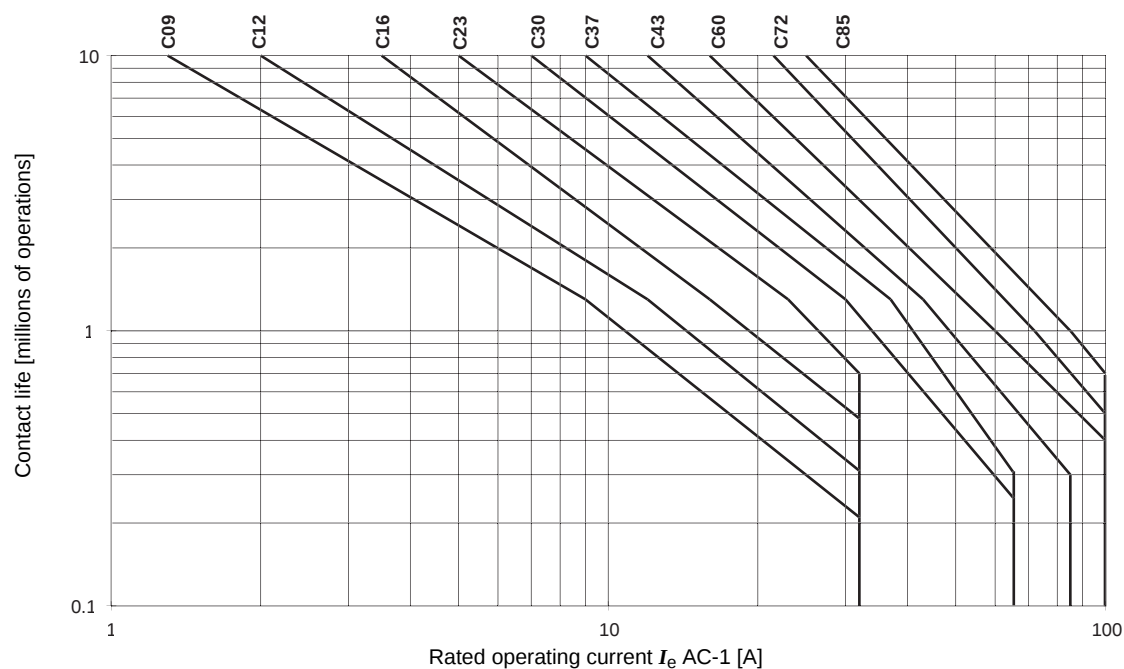
100-M

Electrical Life; $U_e = 400...460V$ AC
AC-4 Stepping of squirrel-cage motors

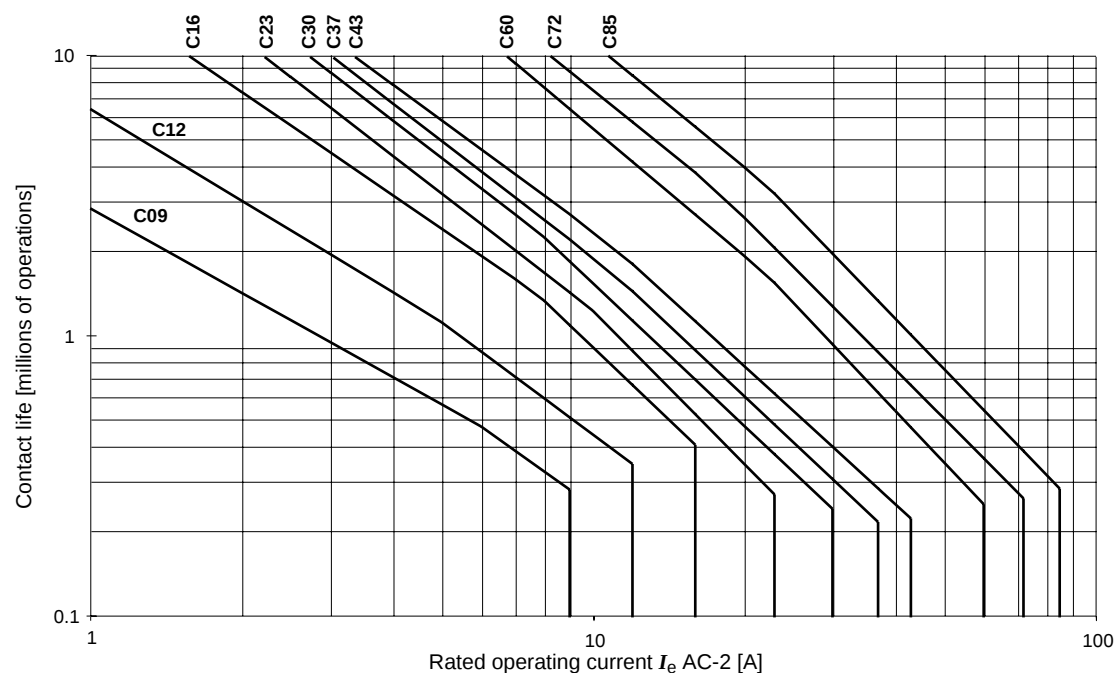


Life-Load Curves

AC-1 40°C Non- or slightly inductive loads, resistance furnaces; $U_e = 230...690V$



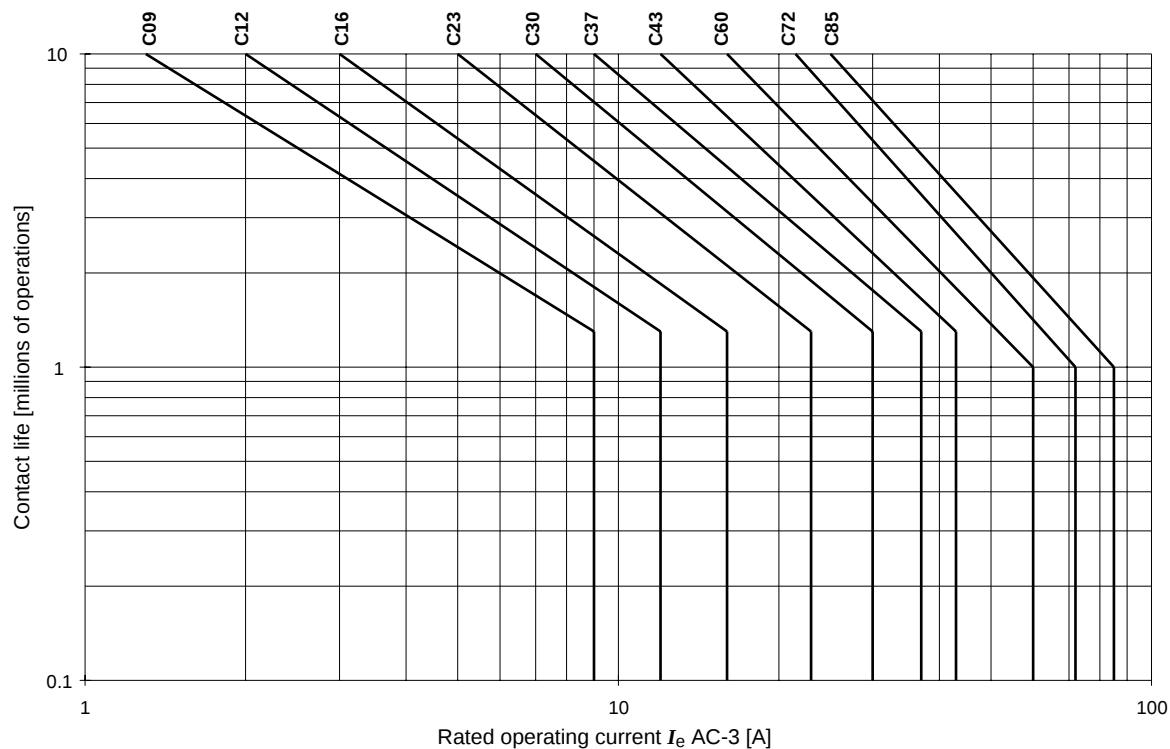
AC-2 Switching of slip-ring motors; $U_e = 230...400...460V$



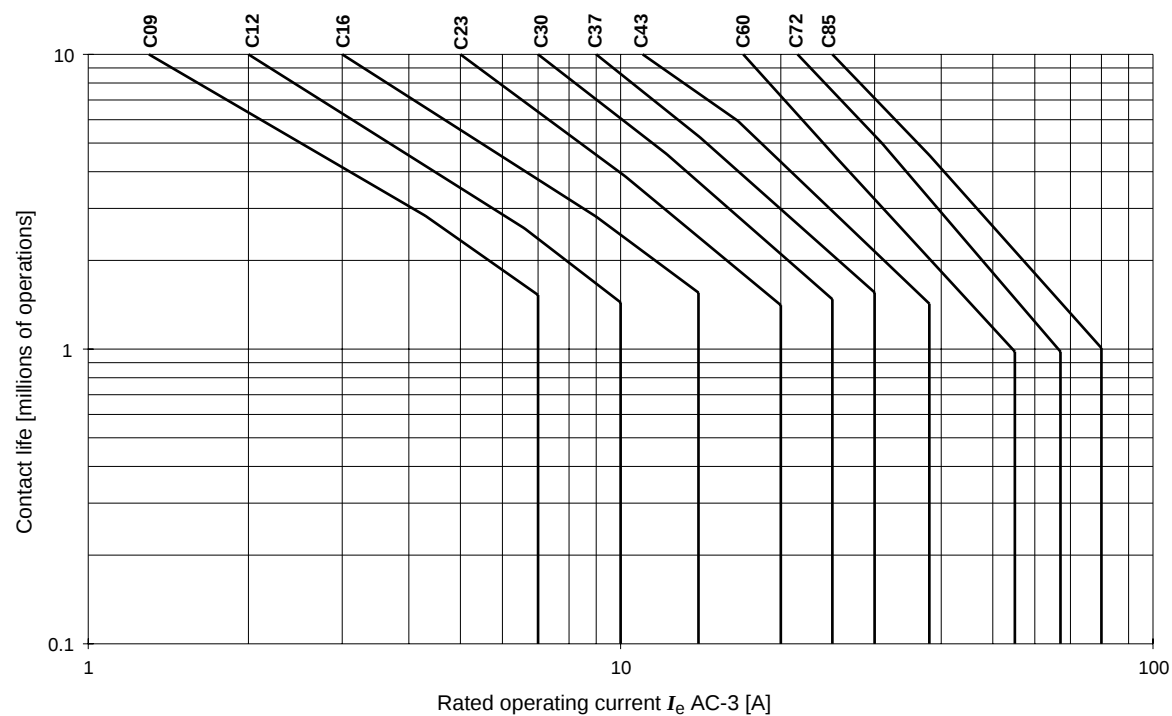
Life-Load Curves

AC-3

Switching of squirrel-cage motors while starting; $U_e = 230...400...460V$



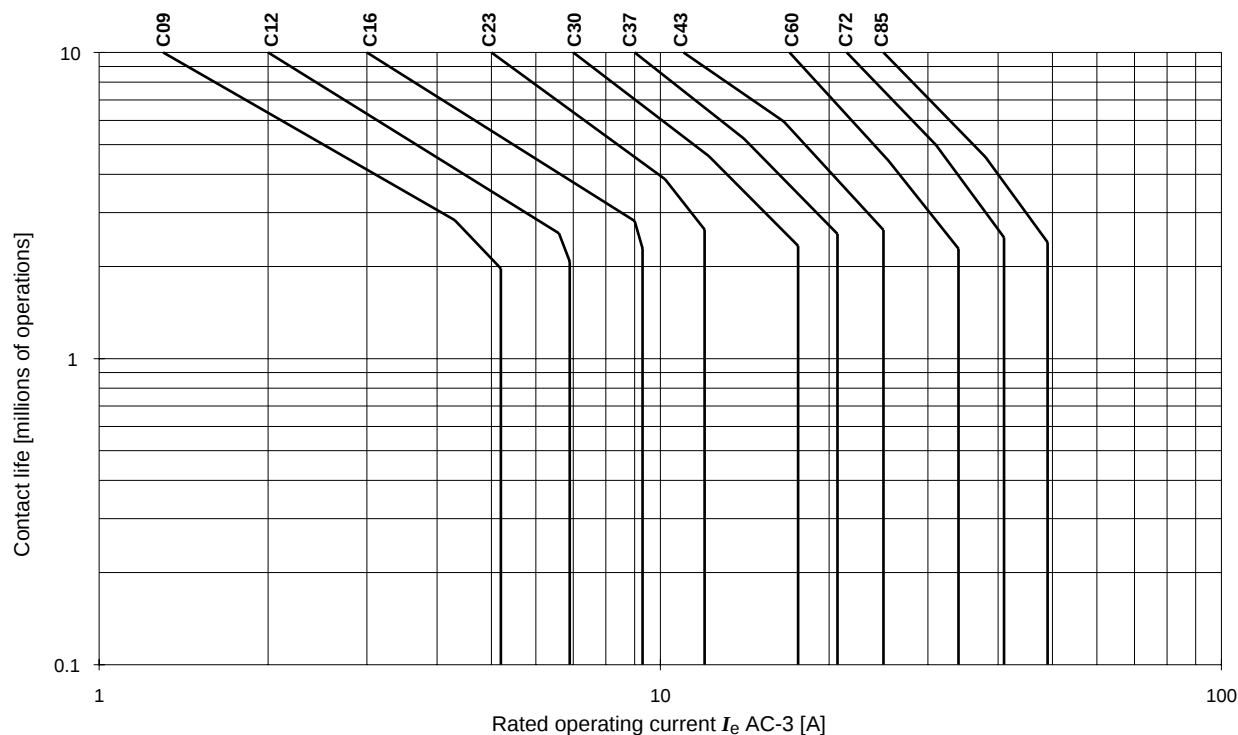
Switching of squirrel-cage motors while starting; $U_e = 500...575V$



Life-Load Curves

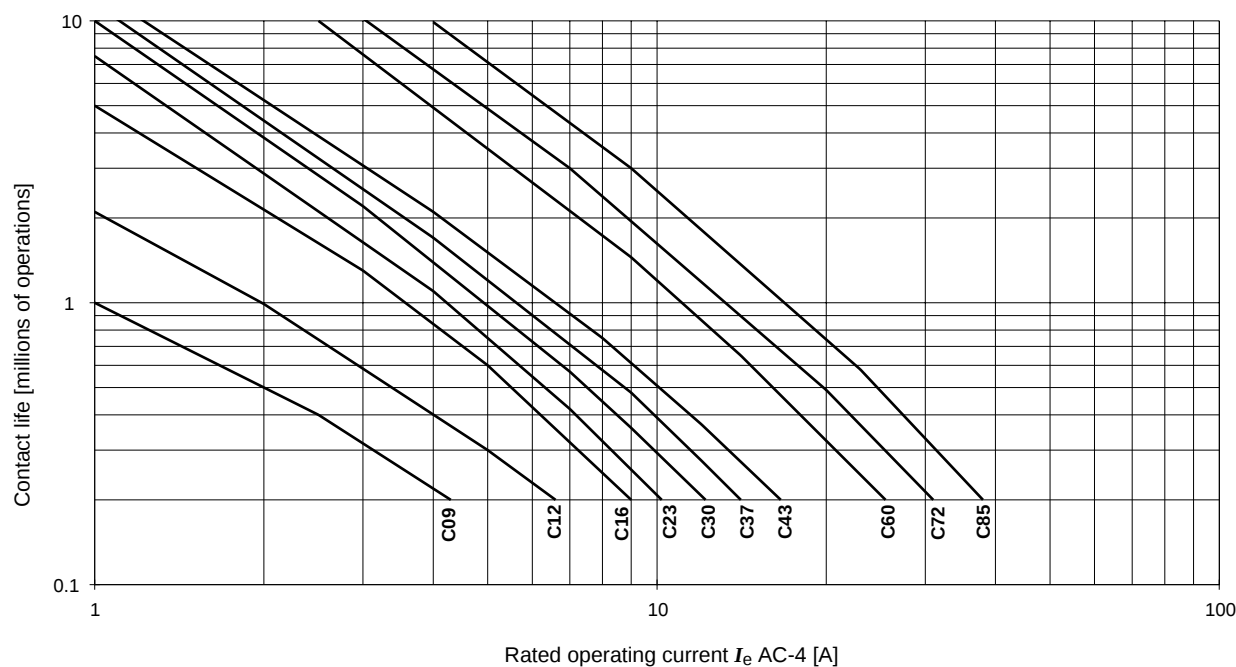
AC-3

Switching of squirrel-cage motors while starting; $U_e = 690V$



AC-4

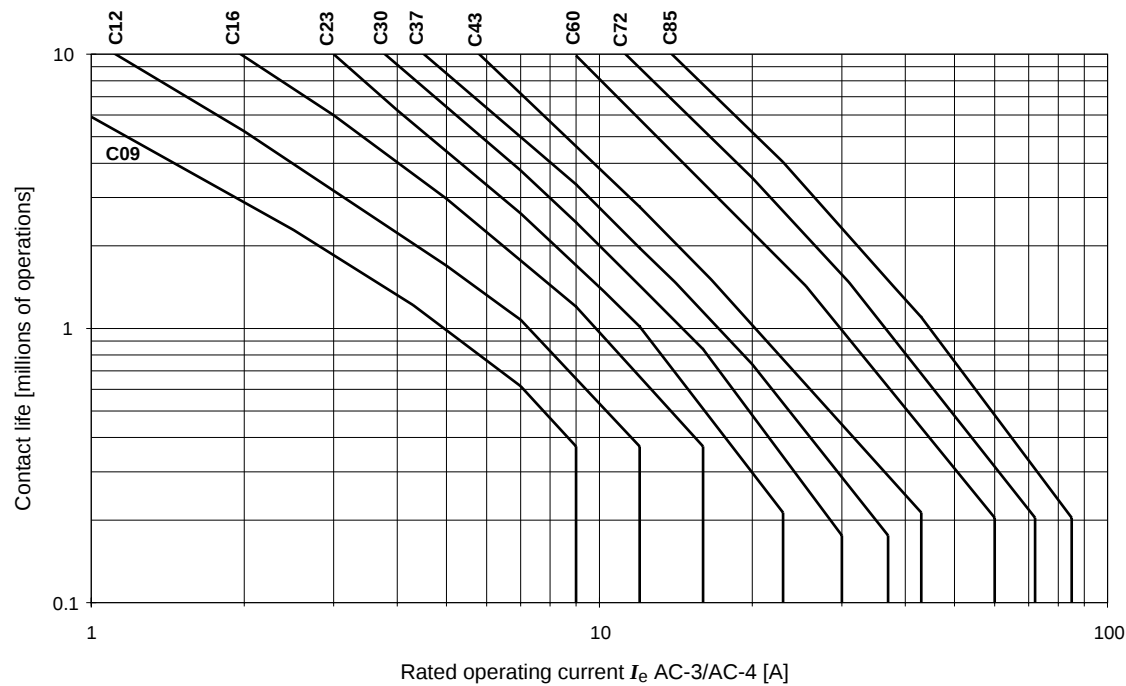
Switching of squirrel-cage motors; $U_e = 230...690V$



Life-Load Curves

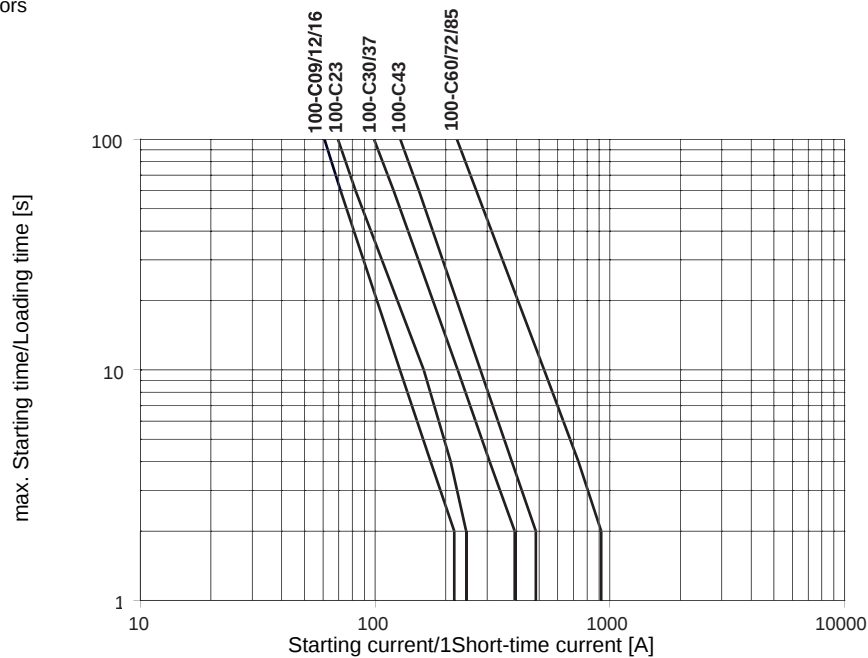
AC-3 & AC-4

10 % AC-4 Mixed operation of squirrel-cage motors; $U_e = 230...400...460V$



Heavy Duty Starting and Regular Short-time Operation

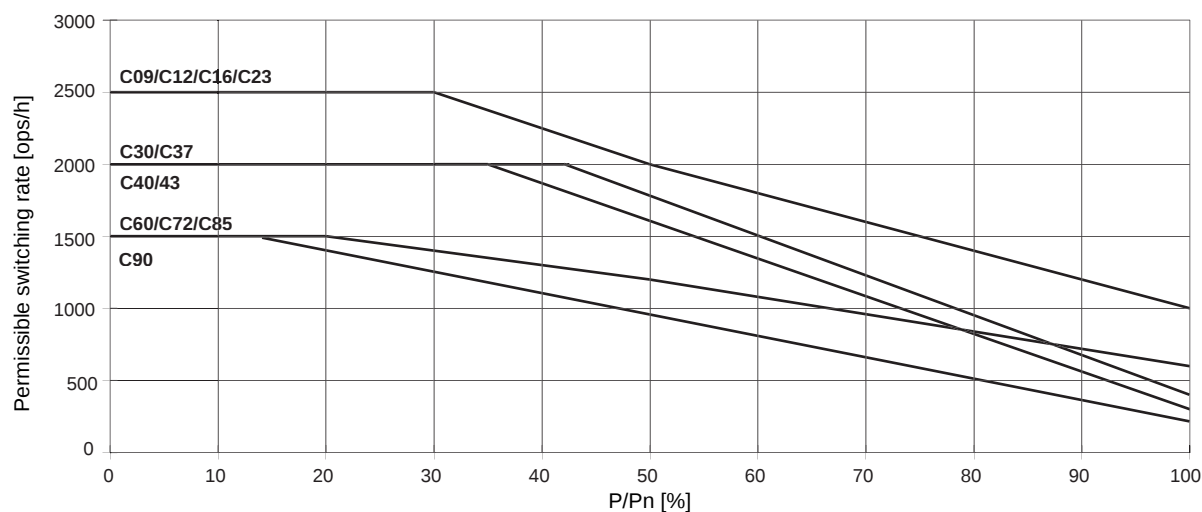
Bulletin 100-C Contactors



Maximum Operating Rates

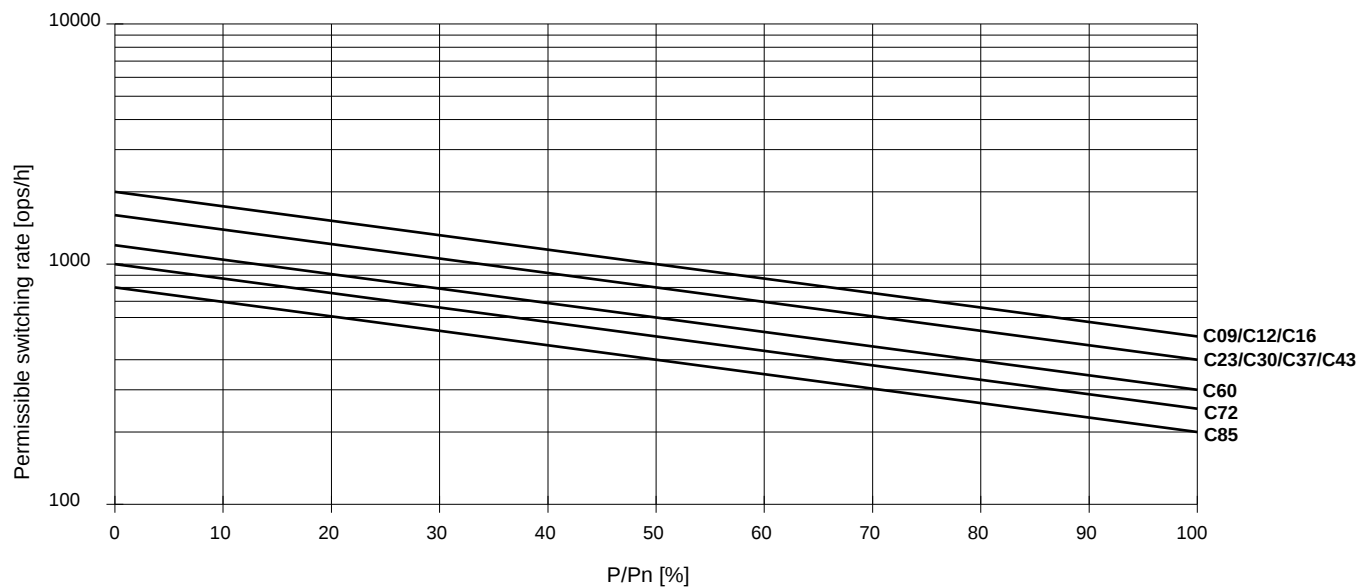
AC-1

40°C Non- or slightly inductive loads, resistance furnaces; $U_e = 230...690V$



AC-2

Stepping of slip-ring motors; $U_e = 230...460 V$

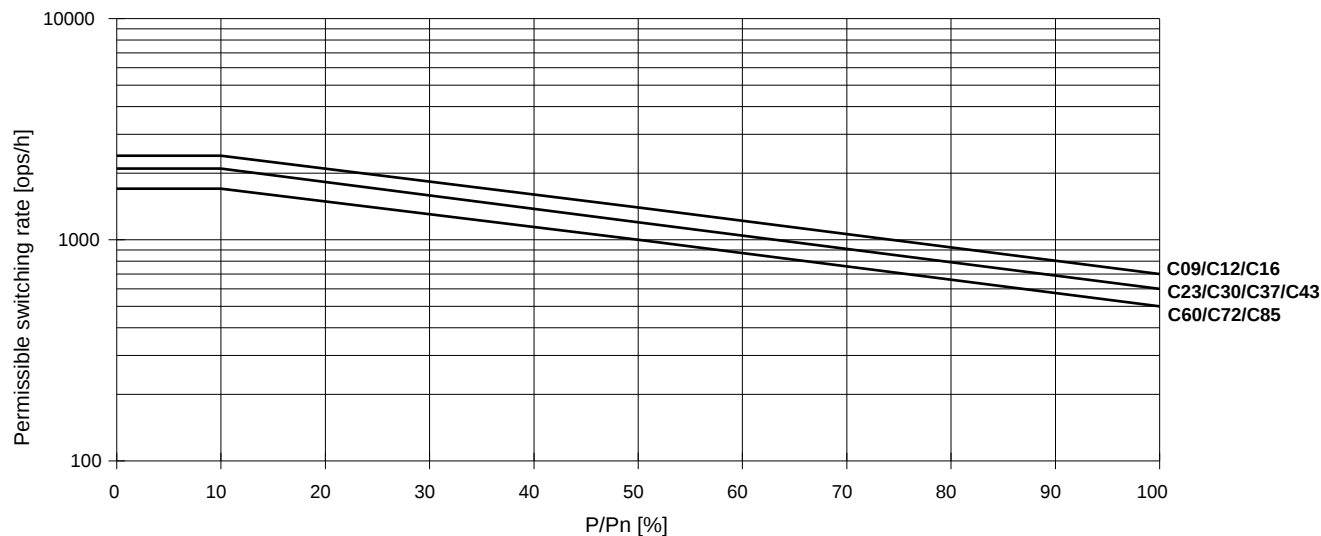


Maximum Operating Rates

AC-3

Switching of squirrel-cage motors while starting; $U_e = 230...460V$

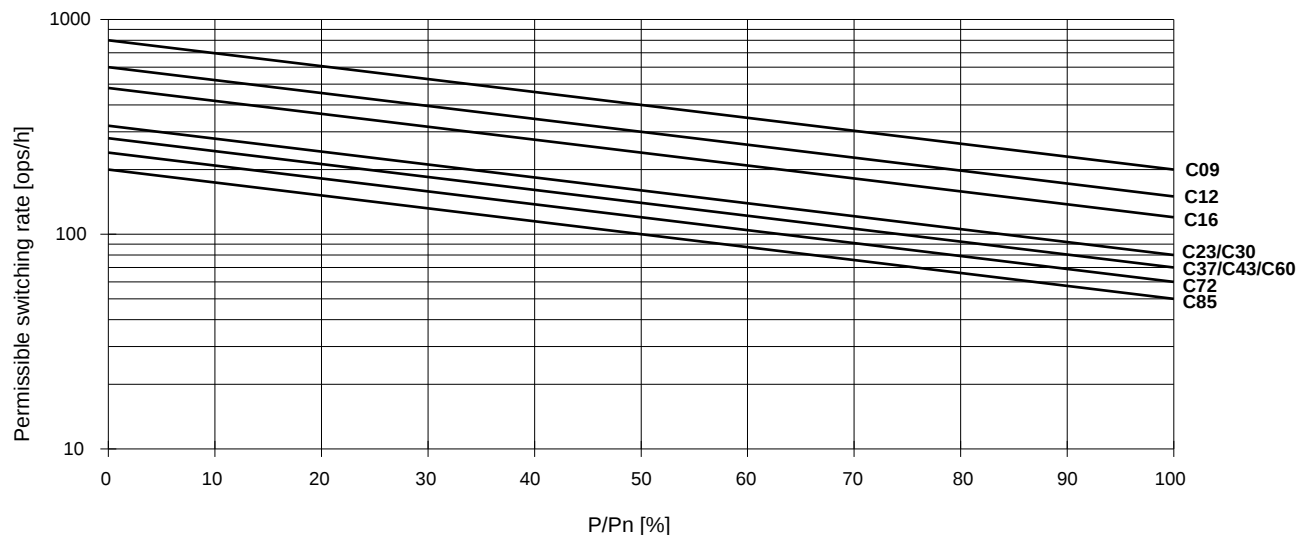
Relative operating time 40 %, Starting time $t_A = 0.25$ s



AC-4

Stepping of squirrel-cage motors; $U_e = 230...460V$

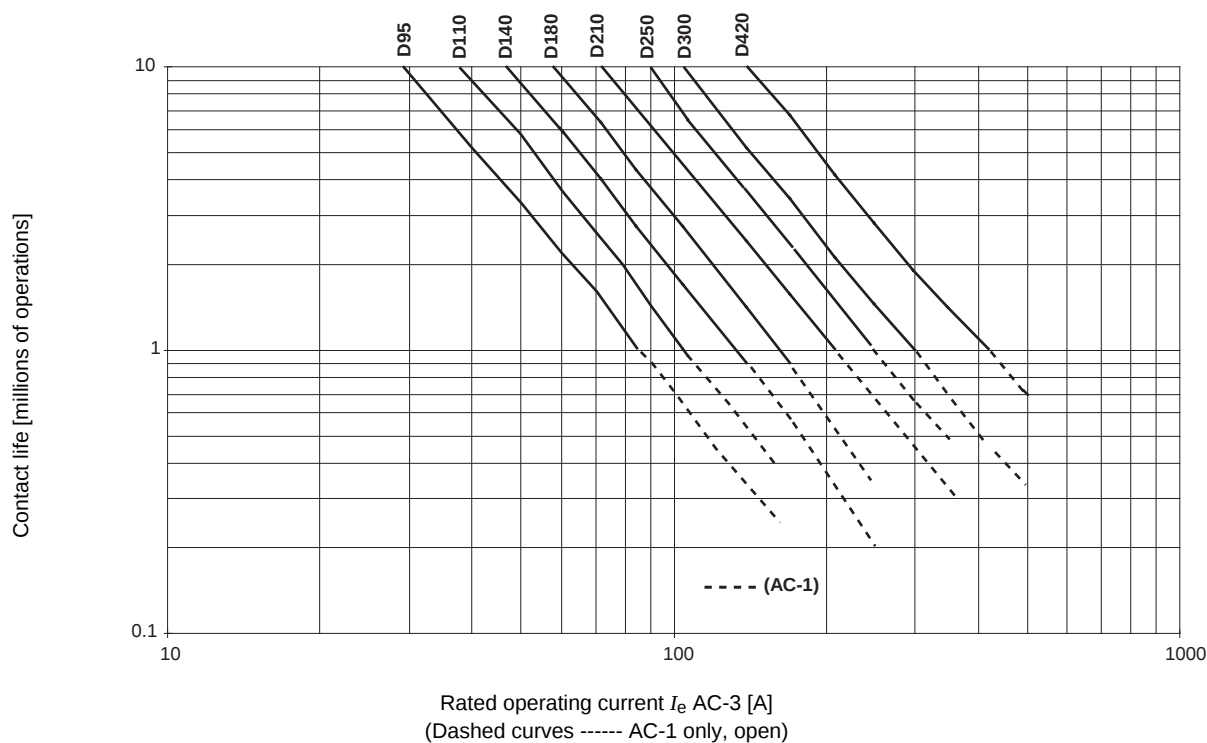
Starting time $t_A = 0.25$ s



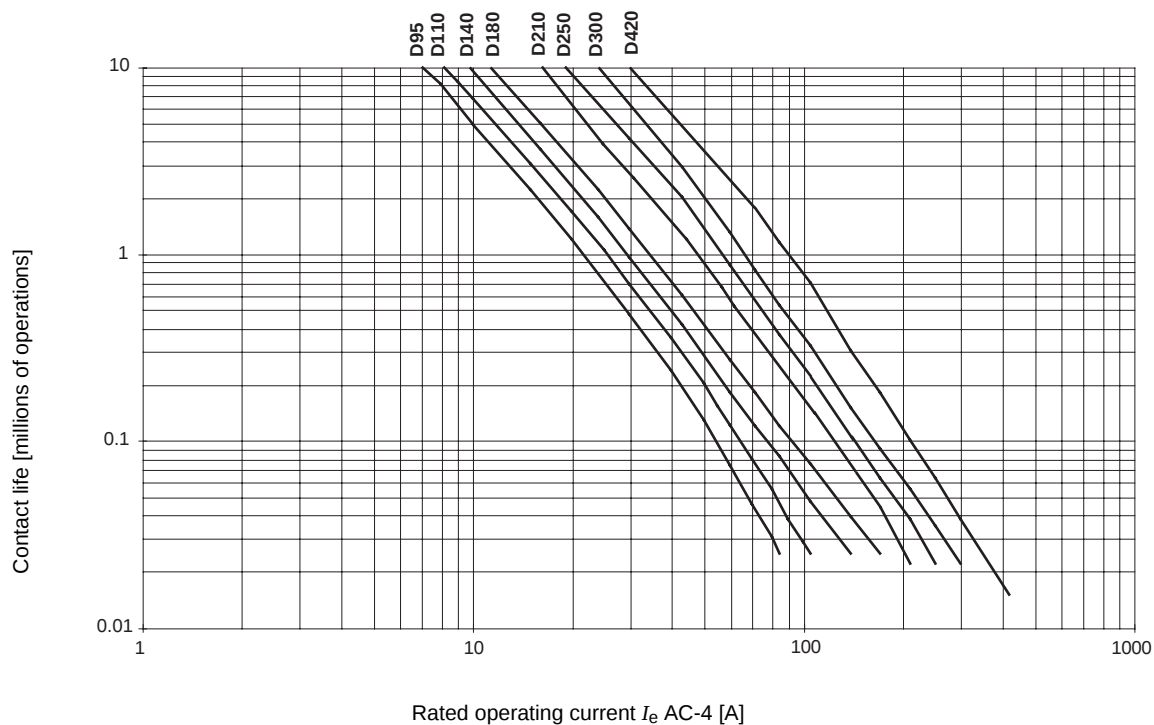
Electrical Life

100-D

AC-3 Switching of squirrel-cage motors while starting

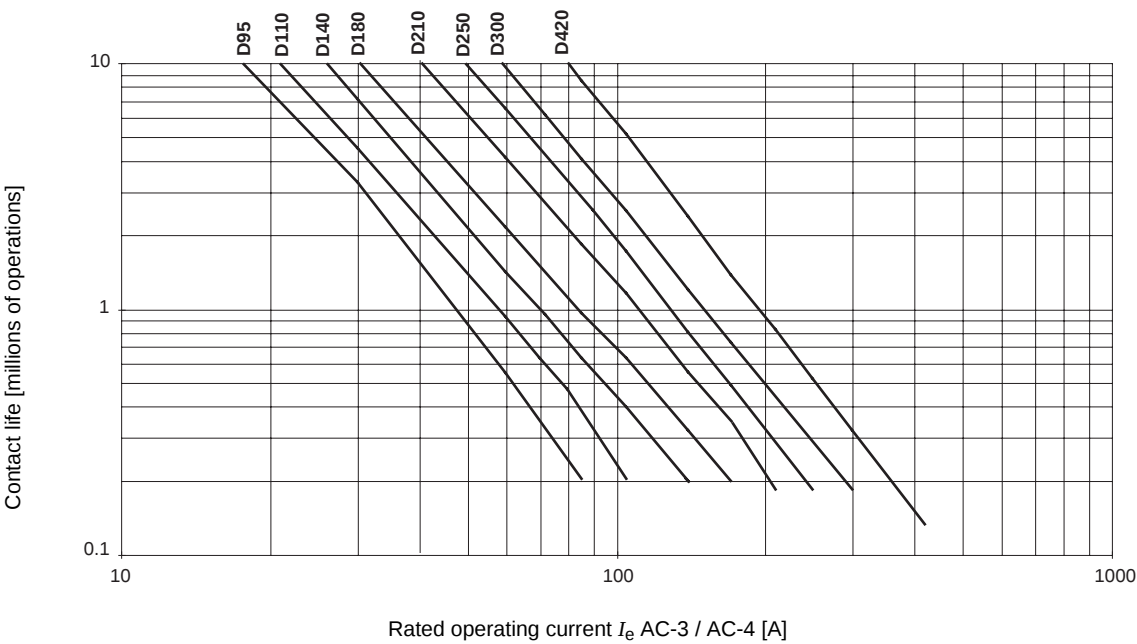
AC-1 Non- or slightly inductive loads, resistance furnaces; $U_e = 400V$ 

100-D

AC-4 Stepping of squirrel-cage motors; $U_e = 400V$ 

100-D

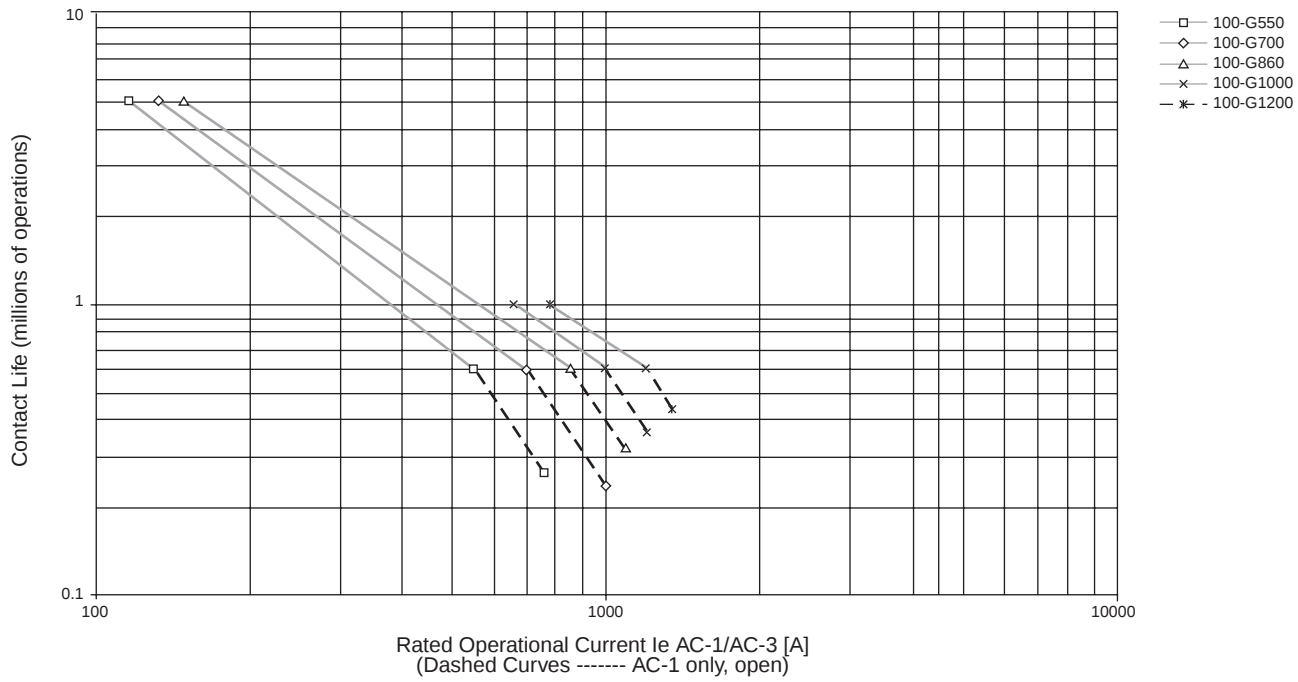
AC-3 90 % & AC-4 10 % Mixed operation of squirrel-cage motors; $U_e = 400V$



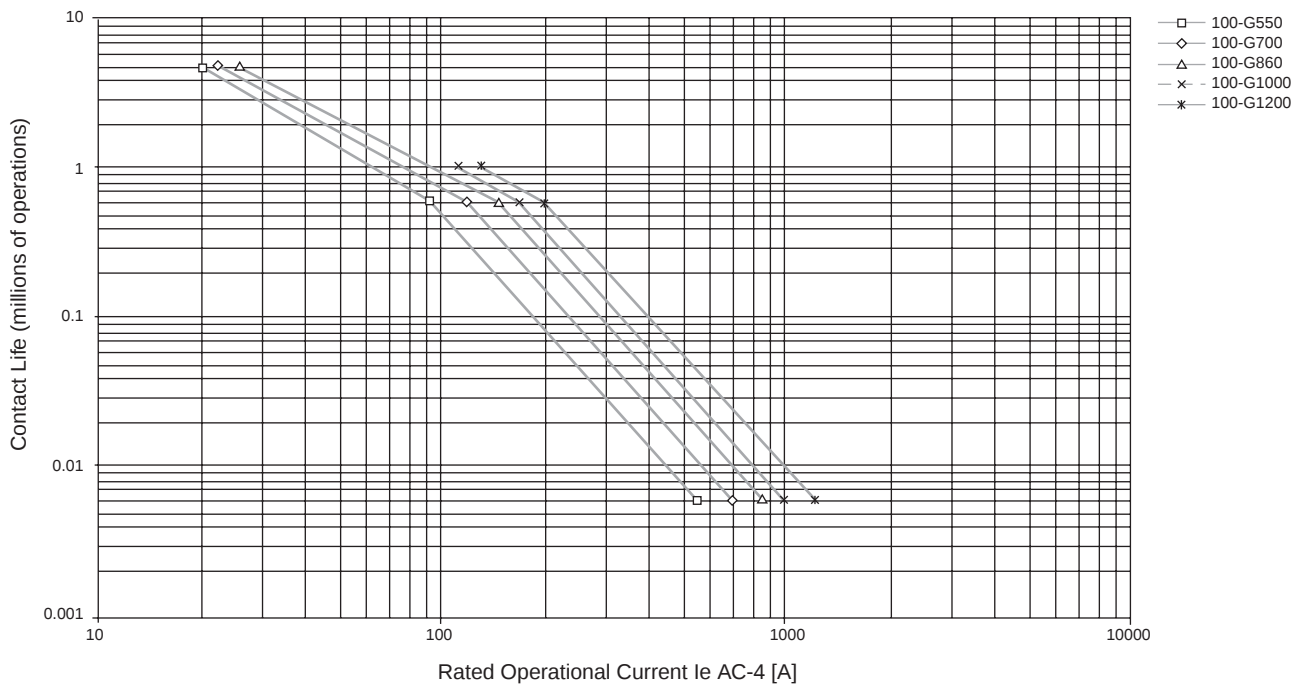
Electrical Life

100-G550...100-G1200

AC-3 Switching of Running Three-phase Motors, $U_e = 380...460V$ AC
AC-1 Non or Slightly Inductive Loads, Resistance Furnaces

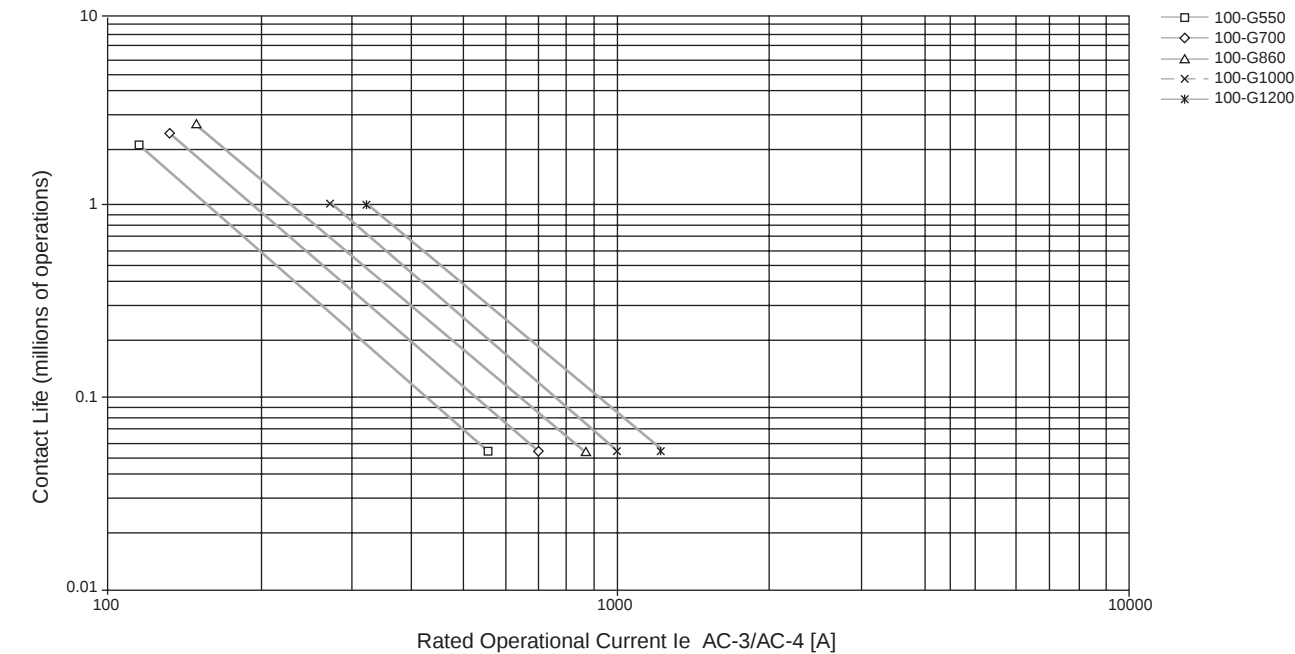


AC-4 Jogging of Squirrel-cage Motors, $U_e = 380...460V$ AC



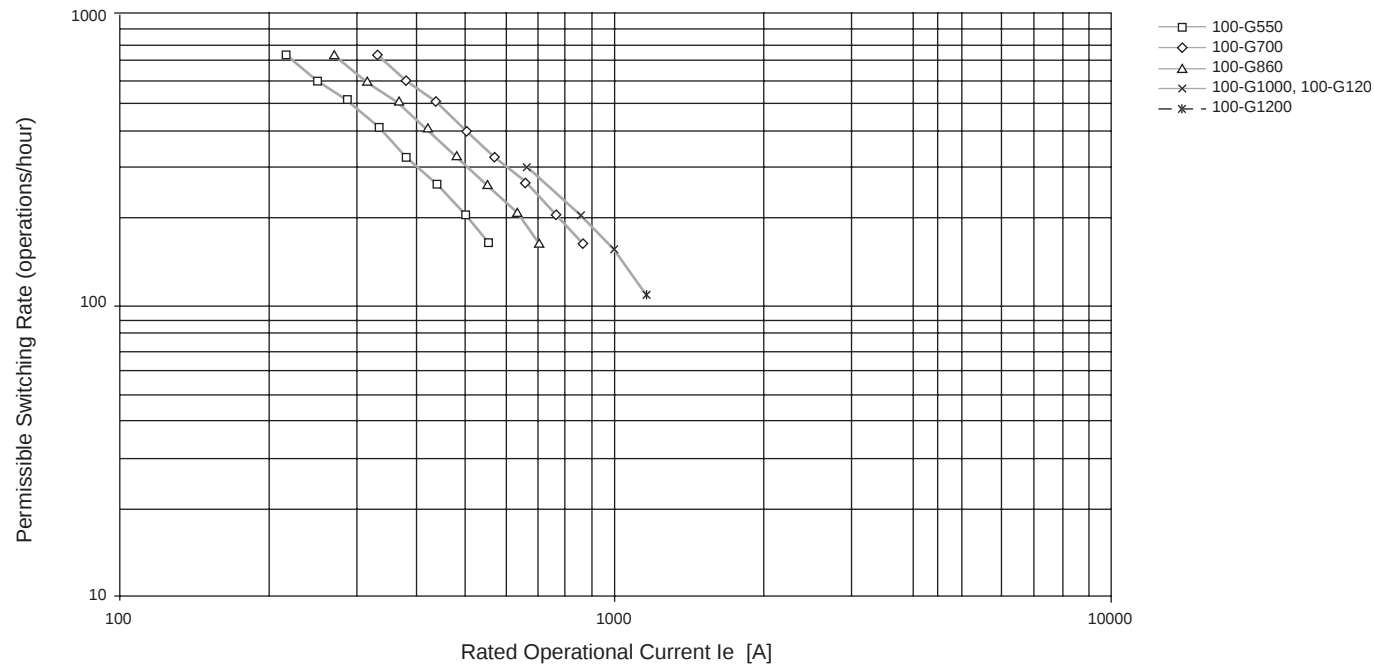
Electrical Life, Continued

100-G550...100-G1200
AC-3 90% Switching of Running Motors, $U_e = 380 \dots 460V$ AC
AC-4 10% Jogging



Permissible Switching Rate

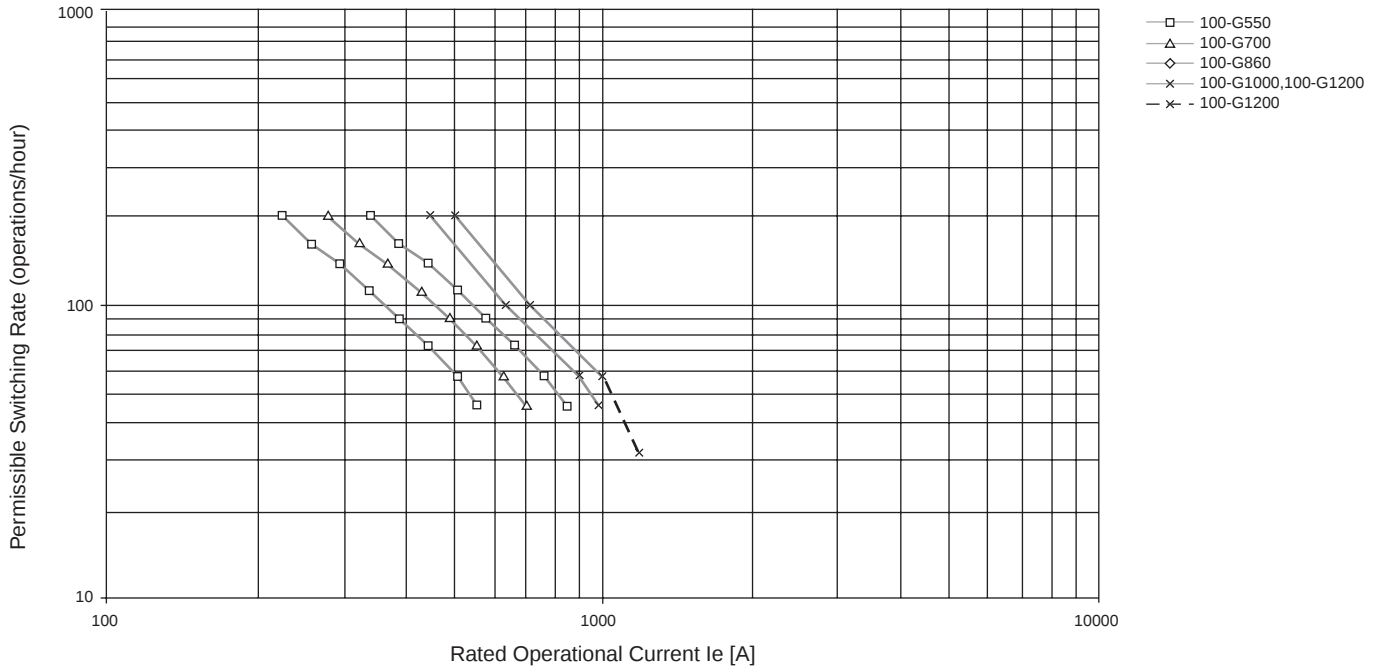
100-G550...100-G1200
Switching of Running Squirrel-cage Motors AC-3, $U_e = 380 \dots 460V$ AC



Permissible Switching Rate, Continued

100-G550...100-G1200

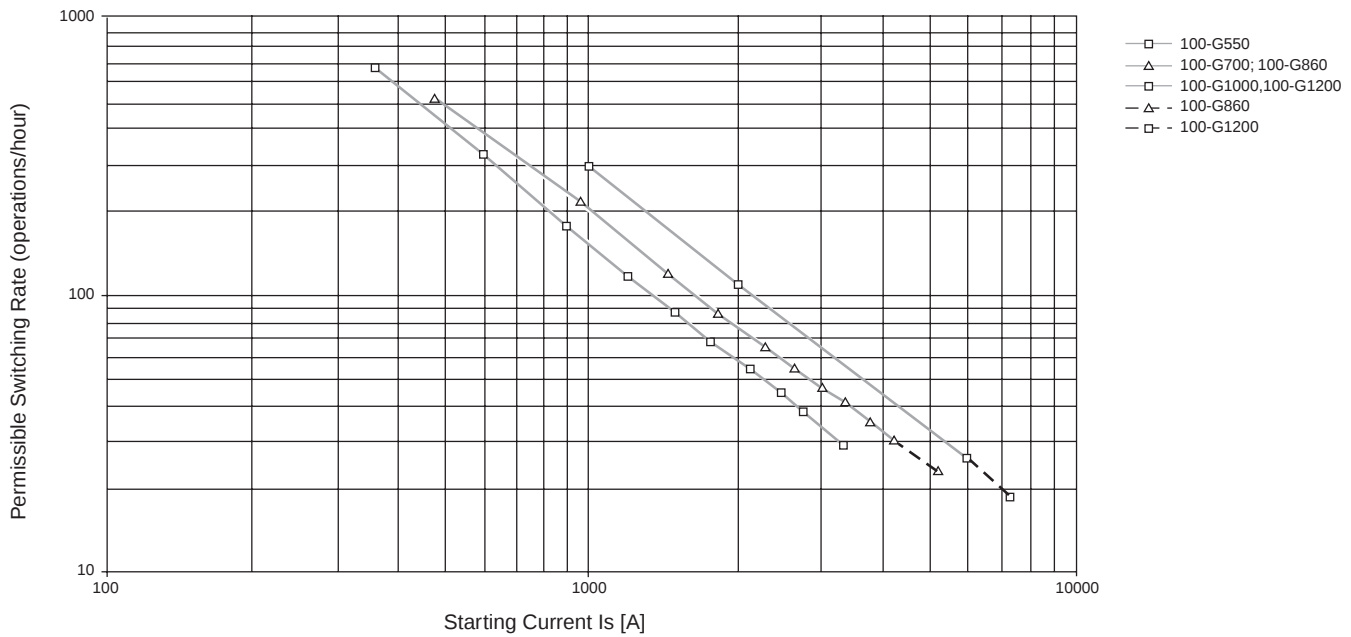
Switching of Running Squirrel-cage Motors AC-3, $U_e = 380 \dots 460V$ AC



100-G550...100-G1200

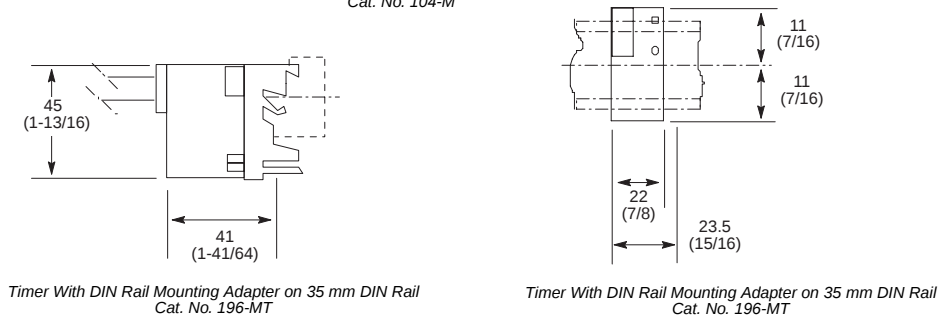
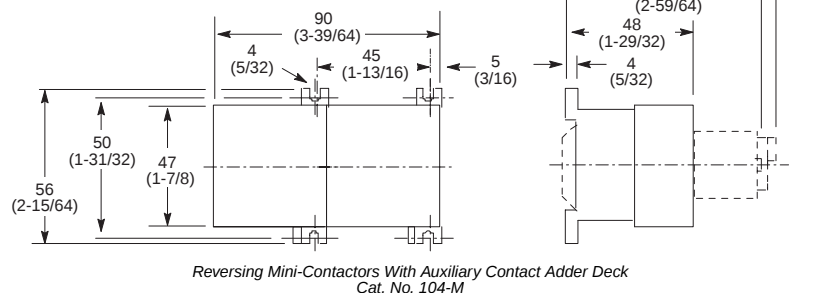
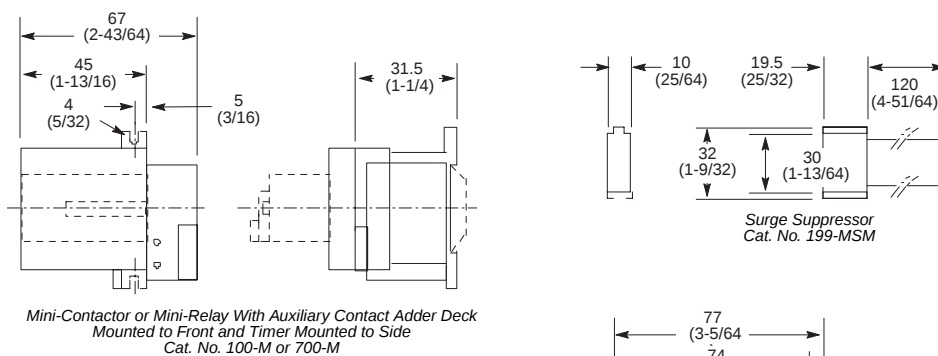
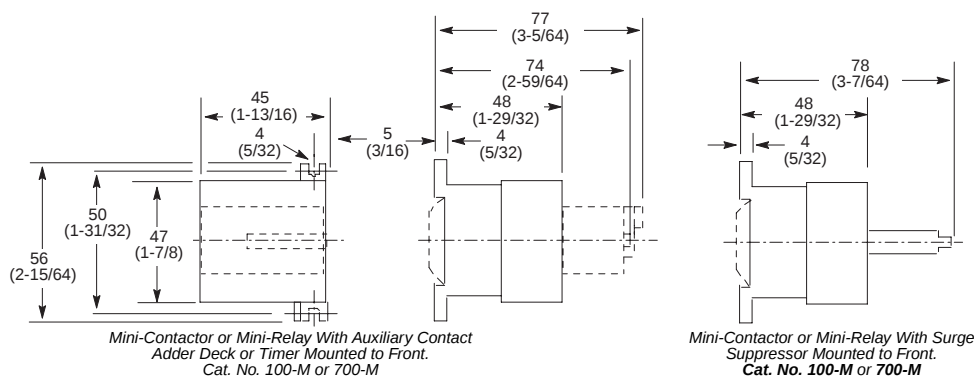
Switching of Starting Motors (AC-2 and AC-4), $U_e = 380 \dots 460V$ AC

Starting Time $t_{ed} = 1$ s ($< t_s$)

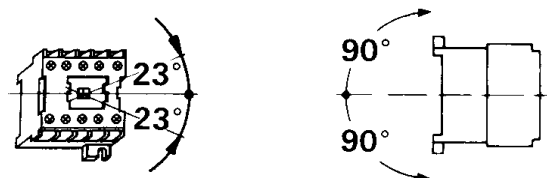


Bulletin 100-M Miniature Contactors and Accessories

Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.

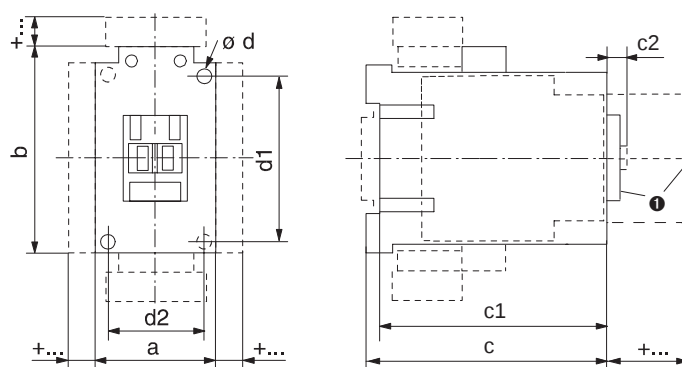


Mounting Position

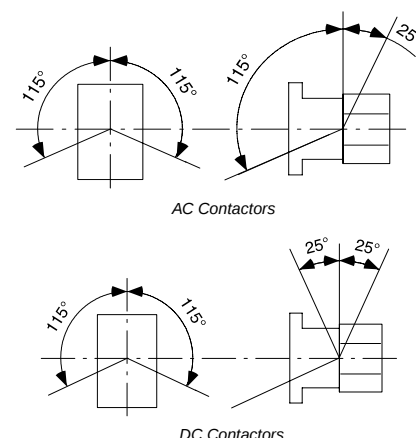


Bulletin 100-C Contactors and Accessories

Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.



Mounting Position



AC Contactors

Cat. No.	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 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100-C30, 100-C37	45 (1-25/32)	81 (3-3/16)	97.5 (4)	92.5 (3-49/64)	6.5 (17/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100-C40	59 (2-21/64)	81 (3-3/16)	100.5 (4-7/64)	95.5 (3-49/64)	6.5 (17/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	45 (1-25/32)
100-C43	54 (2-1/8)	81 (3-3/16)	100.5 (4-7/64)	95.5 (3-49/64)	6.5 (17/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	45 (1-25/32)
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 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)
100-C90	95 (3-3/4)	122 (4-51/64)	117 (4-49/64)	111.5 (4-35/64)	8.5 (21/64)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)

DC Contactors

Cat. No.	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 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100-C23Z	45 (1-25/32)	81 (3-3/16)	123.5 (4-55/64)	118.5 (4-43/64)	6 (1/4)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100-C30...100-C37	45 (1-25/32)	81 (3-3/16)	141.5 (5-37/64)	136.5 (5-3/8)	6.5 (17/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100-C40Z	59 (2-21/64)	81 (3-3/16)	144.5 (5-11/16)	139.5 (5-1/2)	6.5 (17/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	45 (1-25/32)
100-C43Z	54 (2-1/8)	81 (3-3/16)	144.5 (5-11/16)	139.5 (5-1/2)	6.5 (17/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	45 (1-25/32)
100-C60D...100-C85D	72 (2-53/64)	122 (4-51/64)	117 (4-49/64)	111.5 (4-35/64)	8.5 (21/64)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)
100-C90D	95 (3-3/4)	122 (4-51/64)	117 (4-49/64)	111.5 (4-35/64)	8.5 (21/64)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)

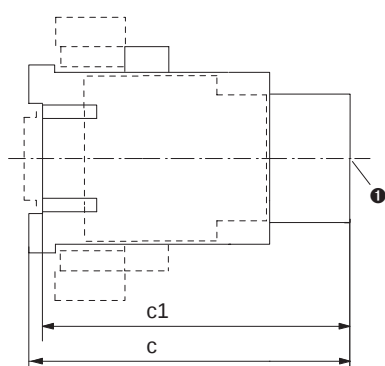
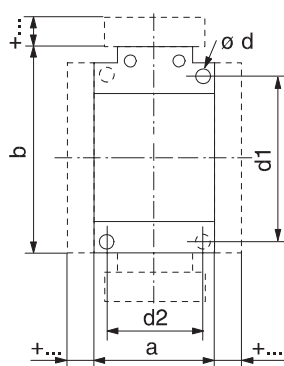
Accessories

Contactors with			mm	(inches)
Auxiliary contact block for front mounting	2- or 4-pole		c/c1 + 39	(c/c1 + 1-37/64)
Auxiliary contact block for side mounting	1- or 2-pole		a + 9	(a + 23/64)
Pneumatic Timing Module			c/c1 + 58	(c/c1 + 2-23/64)
Electronic Timing Module	on coil terminal side		b + 24	(b + 15/16)
Mechanical Interlock	on side of contactor		a + 9	(a + 23/64)
Mechanical Latch			c/c1 + 61	(c/c1 + 2-31/64)
Interface Module	on coil terminal side		b + 9	(b + 23/64)
Surge Suppressor	on coil terminal side		b + 3	(b + 1/8)
Labeling with 1	label sheet		+ 0	(+ 0)
	marking tag sheet with clear cover		+ 0	(+ 0)
	marking tag adapter for System V4 / V5		+ 5.5	(+ 7/32)
	marking tag adapter for System Bul. 1492W		+ 5.5	(+ 7/32)
Terminal Lug Kit	100-C09...C23		b + 53	(b + 2-3/32)
	100-C30...37		b + 44	(b + 1-47/64)
	100-C43		b + 52	(b + 2-3/64)
	100-C60...C85		b + 99	(b + 3-7/8)
Paralleling Links	100-C09...C23		b + 78	(b + 3-1/16)
			c + 9/5	(c + 3/8)
	100-C30...C37		b + 85	(b + 3-11/32)

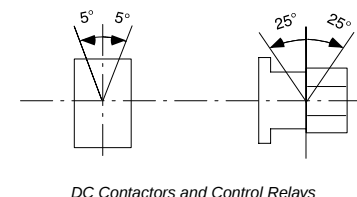
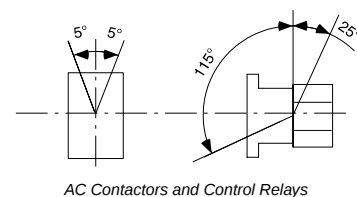
Bulletin 100S/104S
Safety Contactors
Approximate Dimensions

Bulletin 100S/104S Contactors and Accessories

Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.



Mounting Position



AC Contactors

Cat. No.	a	b	c	c1	Ød	d1	d2
100S-C09...100S-C23	45 (1-25/32)	81 (3-3/16)	119.5 (4-3/4)	114.5 (4-43/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100S-C30, 100S-C37	45 (1-25/32)	81 (3-3/16)	136.5 (5-37/64)	131.5 (5-11/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100S-C43	54 (2-1/8)	81 (3-3/16)	139.5 (5-11/16)	134.5 (5-19/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	45 (1-25/32)
100S-C60...100S-C85	72 (2-53/64)	122 (4-51/64)	156 (6-11/32)	150.5 (6-1/8)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)

DC Contactors

Cat. No.	a	b	c	c1	Ød	d1	d2
100S-C09Z...100S-C16Z	45 (1-25/32)	81 (3-3/16)	145.5 (5-49/64)	140.5 (5-37/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100S-C23Z	45 (1-25/32)	81 (3-3/16)	162.5 (6-7/16)	158 (6-1/4)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100S-C30...100S-C37	45 (1-25/32)	81 (3-3/16)	180.5 (7-5/32)	175.5 (6-61/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-25/64)
100S-C43Z	54 (2-1/8)	81 (3-3/16)	183.5 (7-17/64)	178.5 (7-1/32)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	45 (1-25/32)
100S-C60D...100S-C85D	72 (2-53/64)	122 (4-51/64)	156 (6-11/32)	150.5 (6-1/8)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)

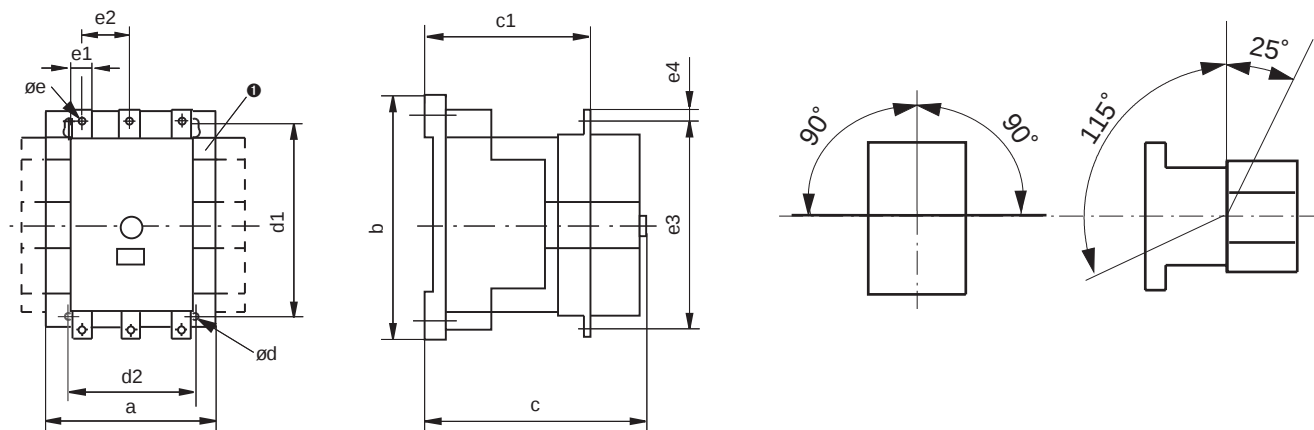
Accessories

Contactors with			mm	(inches)
Auxiliary contact block for side mounting	1- or 2-pole		a + 9	(a + 23/64)
Electronic Timing Module	on coil terminal side		b + 24	(b + 15/16)
Mechanical Interlock	on side of contactor		a + 9	(a + 23/64)
Interface Module	on coil terminal side		b + 9	(b + 23/64)
Surge Suppressor	on coil terminal side		b + 3	(b + 1/8)
Labeling with 1	label sheet		+ 0	(+ 0)
	marking tag sheet with clear cover		+ 0	(+ 0)
	marking tag adapter for System V4 / V5		+ 5.5	(+ 7/32)
	marking tag adapter for System Bul. 1492W		+ 5.5	(+ 7/32)

Bulletin 100-D Contactors and Accessories

Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes.

Mounting Position



Cat. No.	a	b	c	c1	ϕd	d1	d2	ϕe	e1	e2	e3	e4
100-D95, 100-D110	120	170	156	110.5	5.2	145	100	M6	16	38.5	147	8
100-D95E...100-D180E, 100-D140, 100-D180	120	170	156	110.5	5.2	145	100	M8	20	39	160	10
100-D210E...100-D420E	155	205	180	110.5	6.5	180	130	M10	25	48	193	12.5
100-D630E...100D-860E	255	310	265	110.5	10	230	225	M12	40	70	291	22

Contactor with		[mm]
Auxiliary contact block ❶	100-DS1...	a
	100-DS2...	a + 13.5 each
Mechanical interlock	100-DM...	a + a
Frame terminal block	100-DTB110	b + 7 each
	100-DTB180	b + 7 each
	100-DTB420	b + 8.5 each
Label holder		c...+ 5

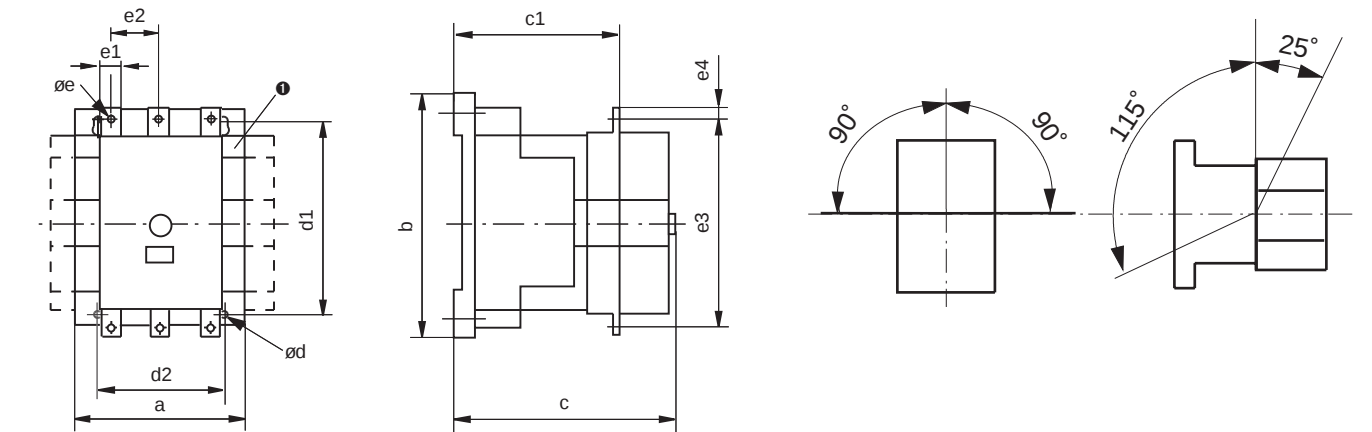
❶ Conventional DC coil contactors will only accept 100-DS2... auxiliary contacts.

Approximate Dimensions

Bulletin 100S-D Contactors and Accessories

Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes.

Mounting Position



Cat. No.	a	b	c	c1	ϕd	d1	d2	ϕe	e1	e2	e3	e4
100S-D95, 100S-D110	120	170	156	110.5	5.2	145	100	M6	16	38.5	147	8
100S-D95E...100S-D180E, 100S-D140, 100S-D180	120	170	156	110.5	5.2	145	100	M8	20	39	160	10
100S-D210E...100S-D420E	155	205	180	110.5	6.5	180	130	M10	25	48	193	12.5
100S-D630E...100S-D860E	255	310	265	110.5	10	230	225	M12	40	70	291	22

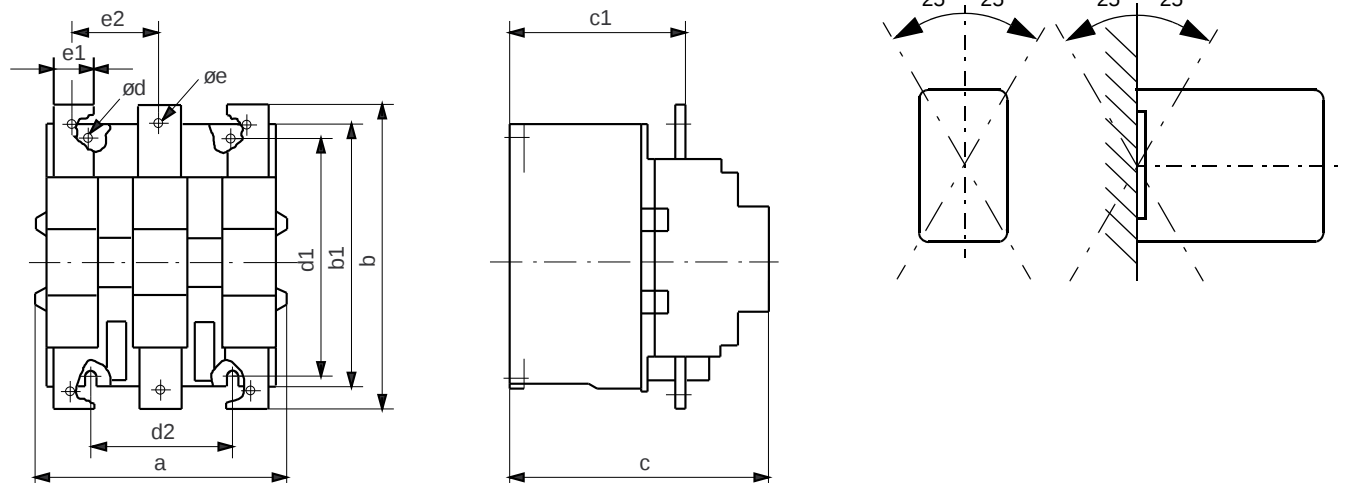
Contactor with		[mm]
Auxiliary contact block	100-DS1...	a
	100-DS2...	a + 13.5 each
Mechanical interlock	100-DM...	a + a
Frame terminal block	100-DTB110	b + 7 each
	100-DTB180	b + 7 each
	100-DTB420	b + 8.5 each
Label holder		c...+ 5

❶ Conventional DC coil contactors will have an additional auxiliary contact block that will add 13.5 mm to the "a" dimension on the right-hand side.

Bulletin 100-G Contactors and Accessories

Dimensions are in millimeters. Dimensions are not intended for manufacturing purposes.

Mounting Position



Cat. No.	a	b	b1	c	c1	ϕd	d1	d2	ϕe	e1	e2
100-G550	220	258	228	225	164	9	220	110	12.5	40	79
100-G700	280	307	277	291	203	11	280	175	13	50	101
100-G860	280	361	325	291	203	11	280	175	15	50	101
100-G1000	334	490	434	345	231	13.5	380	120	2x13	60	100
100-G1200	334	490	434	345	231	13.5	380	120	2x13	60	100

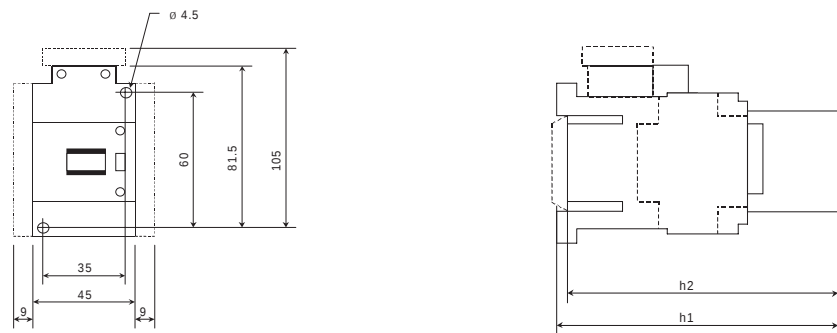
Contactor with:		[mm]	
Auxiliary contact block		a	
Mechanical interlock	side-by-side	100-G550/100-G550	a+42+a
		100-G700, -860/100-G700, -860	a+32+a
		100-G1000, -1200/100-G1000, -1200	a+46+a
		100-G550/100-G700, -860	a+37+a
		100-G700, -860/100-G1000, -1200	a+73+a
	stacked vertically	100-G550/100-G550	b+56 + b
		100-G700, -860/100-G700, -860	b/2+380...480+b/2
		100-G1000, -1200/100-G1000, -1200	b+120...170+b
		100-G550/100-G700, -860	b/2+400+b/2
		100-G700, -860/100-G1000, -1200	b/2+570+b/2
4th add-on neutral switching pole	100-G550	a+74	
	100-G700, -860	a+68	
	100-G1000, -1200	a+76	
Mechanical latch	100-G550	b+59	
	100-G700	b+64	
	100-G860	b+37	

Bulletin 100Q
Capacitor-Switching Contactors

Approximate Dimensions

Bulletin 100Q Capacitor Switching Contactors

Dimensions are in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

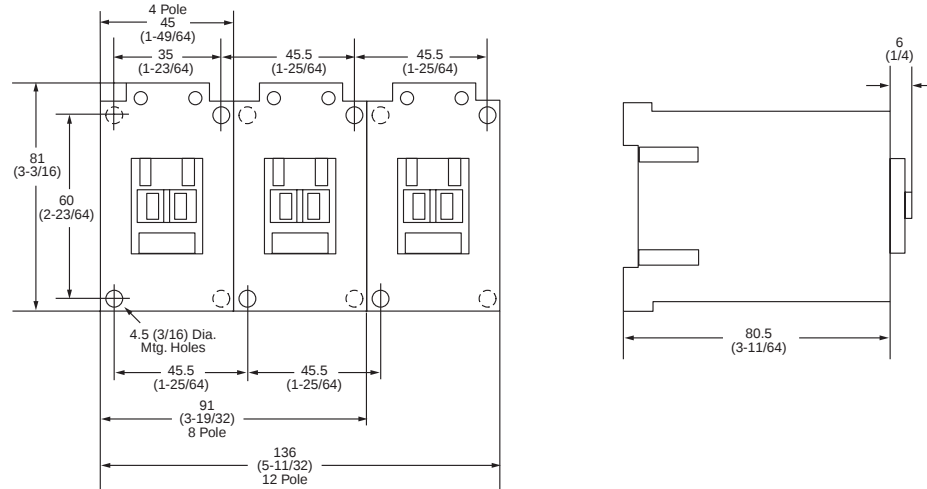


Cat. No.	AC-Operated		DC-Operated	
	h1	h2	h1	h2
100Q-C16	120 (4-23/32)	115 (4-17/32)	146 (5-3/4)	141 (5-9/16)
100Q-C37	137 (5-3/8)	132 (5-3/16)	181 (7-1/8)	176 (6-15/16)

Bulletin 100L Lighting Contactors and Accessories

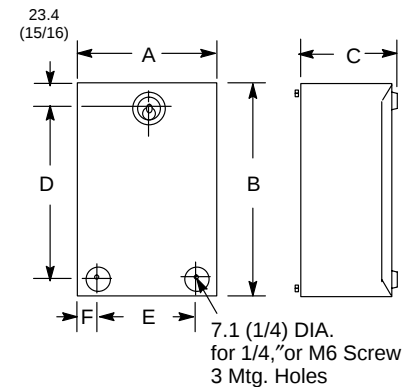
Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.

Open Type

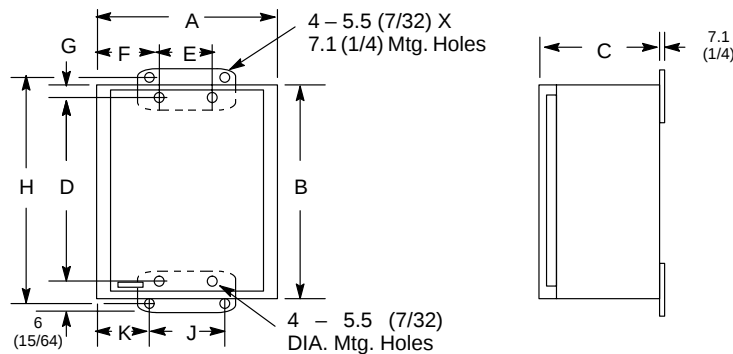


IP42 (Type 1)

Cat. No.	A Wide	B High	C Deep	D	E	F
100L-C20A@4	140 (5-1/2)	220 (8-21/32)	152 (5-31/32)	175 (6-7/8)	95 (3-3/4)	22.5 (7/8)
100L-C20A@8	235 (9-1/4)	220 (8-21/32)	152 (5-31/32)	175 (6-7/8)	190 (7-1/2)	22.5 (7/8)
100L-C20A@12	270 (10-5/8)	290 (11-7/16)	152 (5-31/32)	245 (9-21/32)	225 (8-7/8)	22.5 (7/8)



IP66 (Type 3/4/12)



Cat. No.	A Wide	B High	C Deep	D	E	F	G	H	J	K
100L-C20F@4	200 (7-7/8)	300 (11-13/16)	160 (6-5/16)	236 (9-9/32)	76 (3)	62 (2-7/8)	17.5 (11/16)	313 (12-5/16)	105 (4-1/8)	47.5 (1-7/8)
100L-C20F@8	250 (9-27/32)	250 (9-27/32)	160 (6-5/16)	186 (7-5/16)	76 (3)	87 (3-7/16)	17.5 (11/16)	263 (10-3/8)	105 (4-1/8)	72.5 (2-7/8)
100L-C20F@12	300 (11-13/16)	300 (11-13/16)	160 (6-5/16)	236 (9-9/32)	178 (7)	61 (2-13/32)	17.5 (11/16)	313 (12-5/16)	206 (8-1/8)	47 (1-27/32)