



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.

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.

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Standards Compliance

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

Certifications



CE Marked
 cULus Listed (File No. E3125;
 Guide No. NLDX, NLDX7)

3-Pole AC- and DC-Operated Contactors

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)						N.O.	N.C.	
		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-C09@10
												0	1	100-C09@01
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	0	100-C12@10
												0	1	100-C12@01
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	0	100-C16@10
												0	1	100-C16@01
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	0	100-C23@10
												0	1	100-C23@01
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	0	100-C30@00
												1	0	100-C30@10
												0	1	100-C30@01
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	0	100-C37@00
												1	0	100-C37@10
												0	1	100-C37@01
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	0	100-C43@00
												1	0	100-C43@10
												0	1	100-C43@01
60	100	18.5	32	37	32	5	10	15	20	40	50	0	0	100-C60@00
												1	0	100-C60@10
												0	1	100-C60@01
72	100	22	40	45	40	5	15	20	25	50	60	0	0	100-C72@00
												1	0	100-C72@10
												0	1	100-C72@01
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	0	100-C85@00
												1	0	100-C85@10
												0	1	100-C85@01

⊗Coil voltage code and terminal position—see page 2-101

4-Pole AC- and DC-Operated Contactors

I_e [A]		Ratings for Switching AC Motors — AC-2, AC-3										Contact Configuration, Main Pole		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	N.O.	N.C.	
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
85	130	25	45	55	45	7-1/2	15	25	30	60	50	4	0	100-C90⊗400
												2	2	100-C90⊗200

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

⊗Coil voltage code and terminal position—see page 2-101

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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 — AC-2, AC-3, AC-4										Auxiliary Contacts Installed per Contactor		Cat. No.
		3Ø kW (50 Hz)					Hp (60 Hz)					N.O.	N.C.*	
		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	1	104-C09Ø22
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	104-C12Ø22
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	104-C16Ø22
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	104-C23Ø22
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	1	104-C30Ø02
												1	1	104-C30Ø22
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	1	104-C37Ø02
												1	1	104-C37Ø22
43	85	13	22	25	22	3	7.5	10	15	30	30	0	1	104-C43Ø02
												1	1	104-C43Ø22
60	100	18.5	32	37	32	5	10	15	20	40	50	0	1	104-C60Ø02
												1	1	104-C60Ø22
72	100	22	40	45	40	5	15	20	25	50	60	0	1	104-C72Ø02
												1	1	104-C72Ø22
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	1	104-C85Ø02
												1	1	104-C85Ø22

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

⊗ **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-C09Ø10 becomes **Cat. No.100-C09D10**.

[V]	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...C43	Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
	with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—
	Electronic with Integrated Diode	—	—	EJ	—	—	—	—	—	—	—	—	—	—	—	—
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-C09Ø10
 Line Side



Cat. No. 100-C09UØ10
 Load Side



Bulletin 100S/104S Safety Contactors

- Mechanically linked N.C. auxiliary contacts
- Front-mounted auxiliary contacts:
 - Gold bifurcated
 - 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, required in feedback circuits of modern safety applications. The mechanically linked N.C. auxiliary contacts will not change state when a power pole welds. In addition, the gold-plated bifurcated auxiliary contacts are ideally suited for low-energy applications or feedback control circuits with multiple series-connected N.C. auxiliary contacts.

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.

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 EN/IEC 60947-4
 IEC 60947-4-1 Annex H — Mirror Contacts
 IEC 60947-5-1 Annex L — Mechanically Linked Contacts
Certifications
 SUVA Third-Party Certified
 CE Marked
 cULus Listed (File No. E3125; Guide NLDX, NLDX7)

3-Pole AC- and DC-Operated Contactors

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)						N.O.	N.C.	
		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-C0905BC
												1	4	100S-C09014BC
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	0	5	100S-C1205BC
												1	4	100S-C12014BC
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	0	5	100S-C1605BC
												1	4	100S-C16014BC
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	0	5	100S-C2305BC
												1	4	100S-C23014BC
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	4	100S-C3004BC
												1	4	100S-C30014BC
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	4	100S-C3704BC
												1	4	100S-C37014BC
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	4	100S-C4304BC
												1	4	100S-C43014BC
60	100	18.5	32	37	32	5	10	15	20	40	50	0	4	100S-C6004BC
												1	4	100S-C60014BC
72	100	22	40	45	40	5	15	20	25	50	60	0	4	100S-C7204BC
												1	4	100S-C72014BC
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	4	100S-C8504BC
												1	4	100S-C85014BC

* For other contact configurations and full product details, please contact your local Rockwell Automation sales office or Allen-Bradley distributor.
 * If standard cross-stamped front-mount auxiliary contacts are required, remove the letter "B" before the letter "C" in the cat. no. Example: Cat. No. **100S-C0905BC** becomes Cat. No. **100S-C0905C**.
 † Bifurcated front-mount auxiliary contacts on Cat. Nos. **100S-C60...C85** conform to mirror contact performance only.
 ©Coil voltage code and terminal position—see page 2-104

4-Pole AC- and DC-Operated Contactors

I_e [A]		Ratings for Switching AC Motors										Contact Configuration				
		AC-2, AC-3, AC-4				Hp (60 Hz)						Main Pole		Auxiliary Contacts		
		3 \emptyset kW (50 Hz)*										1 \emptyset		3 \emptyset †		
AC-3	AC-1	230V	400V/ 415V	500V	690V	115V	230V	200V	230V	460V	575V	N.O.	N.C.	N.O.	N.C.	
9	32	3	4	4	4	1/2		1-1/2	2	2	5	7-1/2	4	0	0	4
						3	1	0	4							
12	32	4	5.5	5.5	5.5	1/2		2	3	3	7-1/2	10	4	0	0	4
						3	1	0	4							
16	32	5.5	7.5	7.5	7.5	1		3	5	5	10	15	4	0	0	4
						3	1	0	4							
23	32	7.5	11	13	10	2		3	5	7-1/2	15	15	4	0	0	4
						3	1	0	4							

* For other contact configurations, please contact your local Rockwell Automation sales office or Allen-Bradley distributor.

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

‡ If standard cross-stamped front-mount auxiliary contacts are required, remove the letter "B" before the letter "C" in the cat. no. Example: Cat. No. **100S-C09~~B~~404BC** becomes Cat. No. **100S-C09~~B~~404C**.

ⓄCoil voltage code and terminal position—see page 2-104

Bulletin 100S-C/104S-C
Safety Contactors
 Product Selection, Continued

Reversing AC- and DC-Operated Contactors

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



2

I _e [A]		Ratings for Switching AC Motors											Aux. Contacts Installed per Contactor		Cat. No.*
		AC-2, AC-3, AC-4											N.O.	N.C. ‡	
		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	6	104S-C09012BC	
												1	5	104S-C090210BC	
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	0	6	104S-C12012BC	
												1	5	104S-C120210BC	
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	0	6	104S-C16012BC	
												1	5	104S-C160210BC	
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	0	6	104S-C23012BC	
												1	5	104S-C230210BC	
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	5	104S-C30010BC	
												1	5	104S-C300210BC	
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	5	104S-C37010BC	
												1	5	104S-C370210BC	
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	5	104S-C43010BC	
												1	5	104S-C430210BC	
60	100	18.5	32	37	32	5	10	15	20	40	50	0	5	§ 104S-C60010BC	
												1	5	§ 104S-C600210BC	
72	100	22	40	45	40	5	15	20	25	50	60	0	5	§ 104S-C72010BC	
												1	5	§ 104S-C720210BC	
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	5	§ 104S-C85010BC	
												1	5	§ 104S-C850210BC	

* For other contact configurations, please contact your local Rockwell Automation sales office or Allen-Bradley distributor.
 † If standard cross-stamped front-mount auxiliary contacts are required, remove the letter "B" before the letter "C" in the cat. no. Example: Cat. No. 104S-C0905BC becomes Cat. No. 104S-C09005C.
 ‡ One of the N.C. auxiliary contacts is supplied as part of the mechanical/electrical interlock.
 § Bifurcated front-mount auxiliary contacts on Cat. Nos. 104S-C60...C85 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-C0905BC** becomes **Cat. No. 100S-C09D05BC**.

[V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	208	208-240	220-230
AC, 50 Hz	R	K	V	W	X	Y	KP	—	D	P	S	KG	L	—	—	F
AC, 60 Hz	Q	J	—	V	—	X	—	KP	—	D	—	—	KG	H	L	—
AC, 50/60 Hz	—	KJ	—	—	—	KY	KP	—	KD	—	—	KG	KL	—	—	KL

[V]	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600
AC, 50 Hz	—	VA	T	—	—	—	N	—	G	B	—	M	C	—
AC, 60 Hz	—	—	A	T	I	E	—	—	—	N	B	—	—	C
AC, 50/60 Hz	KF	—	KA	—	—	—	—	KN	—	KB	—	—	—	—

		[V]	9	12	24	36	48	60	64	72	80	110	115	125	220	230	250	
100S-C09...C43	Standard	DC	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT	
	with Integrated Diode		—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—	—
	Electronic with Integrated Diode		—	—	EJ	—	—	—	—	—	—	—	—	—	—	—	—	—
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-C09UD05BC**.



Cat. No. 100S-C0905C
Line Side



Cat. No. 100S-C09U05C
Load Side



Cat. No. 100Q-C37A11

Bulletin 100Q-C 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-C 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.

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

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Product Selection this page

Approximate Dimensions..... 2-160

Standards Compliance

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

Certifications

CE Marked
 cULus Listed (File No. E 41850, Guide NLDX, NLDX7)

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
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

For Applications per UL/CSA

Ratings for Switching Capacitor Banks										Aux. Contacts		Cat. No.
1-Phase 60 Hz (kVar)			3-Phase 60 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**.





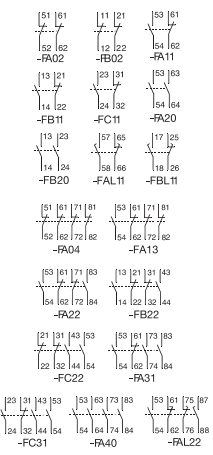


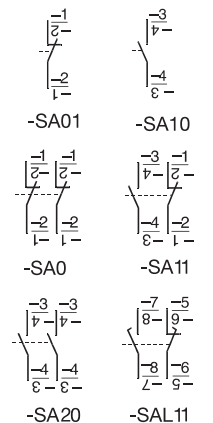


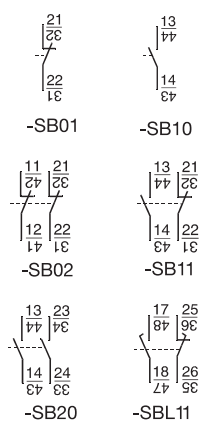
[V]	12	24	32	36	42	48	100	100-110	110	120	127	200	200-220	208	208-240	220-230	230	230-240	240	277	347	380	380-400	400	400-415	440	480	500	550	600	
50 Hz	R	K	V	W	X	Y	KP	—	D	P	S	KG	L	—	—	F	—	VA	T	—	—	—	N	—	G	B	—	M	C	—	
60 Hz	Q	J	—	V	—	X	—	KP	—	D	—	—	KG	H	L	—	—	—	A	T	I	E	—	—	—	N	B	—	—	C	—
50/60 Hz	—	KJ	—	—	—	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
Standard	ZR	ZQ	ZJ	ZW	ZY	ZZ	ZB	ZG	ZE	ZD	ZP	ZS	ZA	ZF	ZT
with Integrated Diode	—	—	DJ	—	—	—	—	—	—	—	—	—	—	—	—
Electronic with Integrated Diode	—	—	EJ	—	—	—	—	—	—	—	—	—	—	—	—

Maximum Operational Rates
 100Q-C16 200 operations/hour
 100Q-C37 100 operations/hour



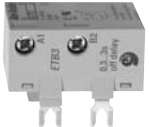



Auxiliary Contacts (For 100-C09...C85 contactors)

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Description	 		Connection Diagrams	For Use With	Standard Auxiliary Contact Cat. No.	Bifurcated Auxiliary Contact Cat. No.
	N.O.	N.C.				
 <p>Auxiliary Contact Blocks for Front Mounting*</p> <ul style="list-style-type: none"> • 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 also available 	0	2		100-C all	100-FA02	100-FAB02
	C30⊗00...C85⊗00	100-FB02		100-FBB02		
	100-C all	100-FA11		100-FAB11		
	C30⊗00...C85⊗00	100-FB11		100-FBB11		
	C09⊗10...C23⊗10	100-FC11		100-FCB11		
	100-C all	100-FA20		100-FAB20		
	C30⊗00...C85⊗00	100-FB20		100-FBB20		
	C30⊗00...C85⊗00	100-FAL11		—		
	C30⊗00...C85⊗00	100-FBL11		—		
	100-C all	100-FA04		100-FAB04		
	100-C all	100-FA13		100-FAB13		
	100-C all	100-FA22		100-FAB22		
C30⊗00...C85⊗00	100-FB22	100-FBB22				
C09⊗10...C23⊗10	100-FC22	100-FCB22				
100-C all	100-FA31	100-FAB31				
C09⊗10...C23⊗10	100-FC31	100-FCB31				
100-C all	100-FA40	100-FAB40				
100-C all	100-FAL22	—				
  <p>Auxiliary Contact Blocks for Side Mounting without Sequence Terminal Designations*</p> <ul style="list-style-type: none"> • 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	—
	100-C all	100-SA10		—		
	100-C all	100-SA02		—		
	100-C all	100-SA11		—		
	100-C all	100-SA20		—		
	100-C all	100-SAL11		—		
  <p>Auxiliary Contact Blocks for Side Mounting with Sequence Terminal Designations*</p> <ul style="list-style-type: none"> • 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	100-SB01	—
	100-C*	100-SB10		—		
	100-C*	100-SB02		—		
	100-C*	100-SB11		—		
	100-C*	100-SB20		—		
	100-C*	100-SBL11		—		

* Max. number of auxiliary contacts that may be mounted:
 AC coil contactors — max. 4 N.O. contacts on the front of the contactor, 2 N.O. contacts on the side, 4 N.C. front or side, 6 total.
 DC coil contactors — max. 4 N.O. contacts on the front of the contactor or max 2 N.O. contacts on the side, 4 N.C. front or side, 4 total.
 * Double numbering — Left-side mounting only is recommended for **Cat. No. 100-C09...100-C23** due to double numbering.

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 control relay continue to operate without delay.	On-Delay 0.3...30 s Range 1.8...180 s Range	100-C with AC coils, 700-CF all	100-FPTA30 100-FPTA180		
		Off-Delay 0.3...30 s Range 1.8...180 s Range		100-C all, 700-CF all 100-FPTB30 100-FPTB180		
			Electronic Timing Modules — On-Delay Delay of the contactor or control relay solenoid. The contactor or control relay is energized at the end of the delay time.	0.1...3 s Range 1...30 s Range 10...180 s Range	100-C (all), 700-CF 110...240V 50/60 Hz 110...250V DC	100-ETA3 100-ETA30 100-ETA180
				0.1...3 s Range 0.1...3 s Range 10...180 s Range		100-C with 24...48V DC coils, 700-CF with DC coils
	Electronic Timing Modules — Off-Delay Delay of the contactor or control relay solenoid. After interruption of the control signal, the contactor or control relay is deenergized at the end of the delay time.	0.3...3 s Range 1...30 s Range 10...180 s Range	100-C09...C37 with 24V 50/60 Hz coils, 700-CF with AC coils	100-ETBKJ3 100-ETBKJ30 100-ETBKJ180		
		0.3...3 s Range 1...30 s Range 10...180 s Range		100-C with 110...240V 50/60 Hz coils, 700-CF with AC coils	100-ETB3 100-ETB30 100-ETB180	
		0.3...3 s Range 1...30 s Range 10...180 s Range			100-C with 110...240V AC, 50/60 Hz coils	100-ETY30
			Transition Time Y Contactor Delay of the contactor solenoid. 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	1...30 s Range 10...180 s Range	100-C (except 100-C40, -C90)	100-MCA00 100-MCA02
				Mechanical only without auxiliary contacts		---∇---
	Mechanical Interlocks For interlocking of two contactors. Common interlock for all Bul. 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 (except 100-C40, -C90)	100-MCA00 100-MCA02		
		Mechanical only without auxiliary contacts	---∇---			
	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 Bul. 100-C contactor sizes, 9...85 A	Maximum command duration 0.03...10 s	100-C with AC coils (except 100-C90)	100-FL11®		

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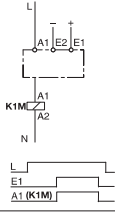

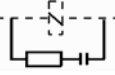
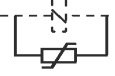

⊗ **Coil Voltage Code**

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⊗ becomes **Cat. No. 100-FL11D**.





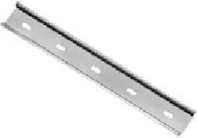
Voltage* [V]	24	48	100	110	120	230-240	240	277	380-400	400-415	440	480
50 Hz	K	Y	KP	D	—	VA	T	—	N	G	B	—
60 Hz	J	—	—	—	D	—	A	T	—	—	N	B

* For special voltages, consult your local Rockwell Automation sales office or Allen-Bradley distributor.

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

	Description		Voltage Range	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. Requires no additional surge suppression on the relay coils		Input: 12V DC Output: 110...240V AC		100-C with AC coils 110...240V AC	100-JE12	
			Input: 18...30V DC Output: 110...240V AC			100-JE	
			Input: 48V DC Output: 110...240V AC			100-JE48	
	RC Module AC operating mechanism		24...48V AC, 50/60 Hz		100-C with AC coils	100-FSC48	
			110...280V AC, 50/60 Hz			100-FSC280	
			380...480V AC, 50/60 Hz			100-FSC480	
	Varistor Module AC/DC operating mechanism			12...55V AC/ 12...77V DC		100-C	100-FSV55
				56...136V AC/ 78...180V DC			100-FSV136
				137...277V AC/ 181...350V DC			100-FSV277
				278...575V AC			100-FSV575
	Diode Module DC operating mechanism			12...250V DC		100-C with DC coils	100-FSD250

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

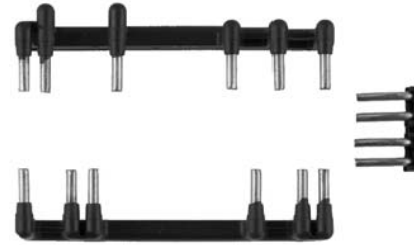
	Description	For Use With	Pkg. Quantity*	Cat. No.
 <i>Cat. No. 100-S0</i>	Dovetail Connectors For use in contactor and starter assemblies. Single Connector — 0 mm Spacing	100-C	10	100-S0
	Dovetail Connectors For use in contactor and starter assemblies. Dual Connector — 9 mm Spacing			100-S9
 <i>Cat. No. 100-SCCA</i>	Protective Covers Provides protection against unintended manual operation For contactors and front mounted auxiliary contacts, pneumatic timers and latches	100-C all	1	100-SCCA
 <i>Cat. No. 100-SCFA</i>		100-FA, -FB, -FC, -FP, -FL;	10	100-SCFA
 <i>Cat. No. 105-PW23</i>	Reversing Power Wiring Kits For reversing connection with a solid-state or thermal overload relay	100-C09...C23	1	105-PW23
		100-C30...C37		105-PW37
		100-C43		105-PW43
		100-C60...85		105-PW85
	DIN (#3) symmetrical Rail 35 mm x 7.5 mm x 1 m long	140M-D 140M-F	10	199-DR1

* Must be ordered in multiples of package quantities.

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.*	Cat. No.
	Label Sheet 105 self-adhesive paper labels each, 6 x 17 mm	10	100-FMS
	Marking Tag Sheet 160 perforated paper labels each, 6 x 17 mm To be used with a transparent cover	10	100-FMP
	Transparent Cover To be used with marking tag sheets	100	100-FMC
	Marking Tag Adapters To be used with marking tag	100	100-FMA1
	Marking Tag Adapters To be used with marking tag	100	100-FMA2

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

* Must be ordered in multiples of the package quantity.

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

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Contactors

Specifications

Bulletin 100/104-K, 100/104-C, 100/104-D, 100S/104S-C, 100S-D Specifications

Coil Type :		100/104-K			100/104-C, 100S/104S-C										
		05	09	12	09	12	16	23	30	37	40*200	40*400	43	60	
Conventional	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Electronic — EI	—	—	—	—	—	—	—	—	—	—	—	—	—	
AC-1 Active Power Load (50 Hz); Ambient temperature 40 °C															
I_e	≤ 500V [A]	20	20	20	32	32	32	32 (40)*	65	65	75	75	85	100	
	690V [A]	20	20	20	32	32	32	32 (40)*	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]	24	24	24	38	38	38	38	78	78	90	90	102	120	
	1000V [kW]	—	—	—	—	—	—	—	—	—	—	—	—	—	
Ambient temperature 60 °C															
I_e	≤ 500V [A]	16	16	16	32	32	32	32	65	65	60	60	80	100	
	690V [A]	16	16	16	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]	19	19	19	38	38	38	38	78	78	72	72	75	120	
	1000V [kW]	—	—	—	—	—	—	—	—	—	—	—	—	—	
Switching of 3-phase Motors; (50 Hz) Ambient temperature 60 °C, AC-2, AC-3															
I_e	230V [A]	6.3	11.3	11.3	12	15	20	26.5	35	38	38	38	44	62	
	240V [A]	6.3	11.3	11.3	12	15	20	26.5	35	38	38	38	44	62	
	400V [A]	4.9	8.5	11.5	9	12	16	23	30	37	37	37	43	60	
	415V [A]	4.9	8.5	11.5	9	12	16	23	30	37	37	37	43	60	
	500V [A]	3.9	6.8	9.2	7	10	14	20	25	30	29	30	38	55	
	690V [A]	2.8	4.9	6.7	5	7	9	12	18	21	9	21	25	34	
	1000V [A]	—	—	—	—	—	—	—	—	—	—	—	—	—	
	230V [kW]	1.5	3	3	3	4	5.5	7.5	10	11	11	11	13	18.5	
	240V [kW]	1.5	3	3	3	4	5.5	7.5	10	11	11	11	13	18.5	
	400V [kW]	2.2	4	5.5	4	5.5	7.5	11	15	18.5	18.5	18.5	22	32	
	415V [kW]	2.2	4	5.5	4	5.5	7.5	11	15	20	20	20	22	32	
	500V [kW]	2.2	4	5.5	4	5.5	7.5	13	15	20	18.5	20	25	37	
	690V [kW]	2.2	4	5.5	4	5.5	7.5	10	15	18.5	7.5	18.5	22	32	
	1000V [kW]	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Load Carrying Capacity per UL/CSA														
	General Purpose Current (enclosed)														
		[A]	12	15	18	25	25	30	30	55	60	60	60	75	90
Rated power (enclosed)															
1-phase	115V [A]	9.8	9.8	13.8	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	0.75	0.5	0.5	1	2	2	3	3	3	3	5	
	230V [Hp]	1	1.5	2	1.5	2	3	3	5	5	5	5	7.5	10	
3-phase	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	9	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	7.5	7.5	10	15	15	25	30	15	30	30	50		

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

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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
AC-1 Active Power Load (50 Hz); Ambient temperature 40 °C															
100	100	130	130	160	160	250	250	250	250	350	350	450	540	800	1000
100	100	130	130	160	160	250	250	250	250	350	350	450	540	800	1000
—	—	—	—	160	160	250	250	250	250	350	350	450	540	—	—
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	—	—
Ambient temperature 60 °C															
100	100	110	110	135	135	210	210	210	210	300	300	380	425	—	—
100	100	110	110	135	135	210	210	210	210	300	300	380	425	—	—
—	—	—	—	135	135	210	210	210	210	300	300	380	425	—	—
40	40	44	44	54	54	84	84	84	84	120	120	151	169	—	—
42	42	46	46	56	56	87	87	87	87	125	125	158	177	—	—
69	69	76	76	94	94	145	145	145	145	208	208	263	294	—	—
72	72	79	79	97	97	151	151	151	151	216	216	273	305	—	—
87	87	95	95	117	117	182	182	182	182	260	260	329	368	—	—
120	120	131	131	161	161	251	251	251	251	359	359	454	508	—	—
—	—	—	—	234	234	364	364	364	364	520	520	658	736	—	—
Switching of 3-phase Motors; (50 Hz) Ambient temperature 60 °C, AC-2, AC-3															
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)‡	140 (155)‡	140 (155)‡	180 (189)‡	180 (189)‡	210 (227)‡	250 (258)‡	300 (315)‡	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	492	—
—	—	—	—	33	40	55	55	65	65	80	95	115	160	—	—
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)‡	82 (90)‡	82 (90)‡	105 (110)‡	105 (110)‡	122 (132)‡	145 (150)‡	176 (185)‡	250	355	500
45	55	55	55	66	76	80	98	98	126	147	177	213	298	450	560
40	45	18.5	45	92	106	111	135	135	176	205	250	293	424	500	—
—	—	—	—	45	55	75	75	90	90	110	132	160	225	—	—
Load Carrying Capacity per UL/CSA															
General Purpose Current (enclosed)															
90	100	125	130	160	160	220	220	220	220	300	300	340	420	630	860
Rated power (enclosed)															
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

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

Contactors

Specifications, Continued

IEC Specifications

Coil Type :	Conventional Electronic — EI	100/104-K			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 3-phase Motors, (50Hz); Ambient temperature 60 °C, AC-4													
230V	[A]	6.3	11.3	11.3	12	15	20	26.5	35	38	44	62	
240V	[A]	6.3	11.3	11.3	12	15	20	26.5	35	38	44	62	
400V	[A]	4.9	8.5	11.5	9	12	16	23	30	37	43	60	
415V	[A]	4.9	8.5	11.5	9	12	16	23	30	37	43	60	
500V	[A]	3.9	6.8	9.2	7	10	14	20	25	30	38	55	
690V	[A]	2.8	4.9	6.7	5	7	9	12	18	21	25	34	
1000V	[A]	—	—	—	—	—	—	—	—	—	—	—	
230V	[kW]	1.5	3	3	3	4	5.5	7.5	10	11	13	18.5	
240V	[kW]	1.5	3	3	3	4	5.5	7.5	10	11	13	18.5	
400V	[kW]	2.2	4	5.5	4	5.5	7.5	11	15	18.5	22	32	
415V	[kW]	2.2	4	5.5	4	5.5	7.5	11	15	20	22	32	
500V	[kW]	2.2	4	5.5	4	5.5	7.5	13	15	20	25	37	
690V	[kW]	2.2	4	5.5	4	5.5	7.5	10	15	18.5	22	32	
1000V	[kW]	—	—	—	—	—	—	—	—	—	—	—	
Electronic — EI													
230V	[A]	2.3	3.9	3.9	4.3	6.6	9	9	12	14	16.5	25.5	
240V	[A]	2.3	3.9	3.9	4.3	6.6	9	9	12	14	16.5	25.5	
400/415V	[A]	2	3.6	3.6	4.3	6.6	9	9	12	14	16.5	25.5	
500V	[A]	1.9	3.2	3.2	4.3	6.6	9	9	12	14	16.5	25.5	
690V	[A]	—	—	—	4.3	6.6	9	9	12	14	16.5	25.5	
1000V	[A]	—	—	—	—	—	—	—	—	—	—	—	
AC-4 at approximately 200,000 operations	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	1.5	1.5	1.8	3	4	4	5.5	6.3	7.5	13
	415V*	[kW]	0.75	1.5	1.5	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]	2.2	3	5	5	5	7½	7½	10	15	20	30	
230V	[Hp]	2.2	3	5	5	7½	10	10	15	20	25	40	
460V	[Hp]	5	7.5	10	10	15	20	25	30	40	50	75	
575V	[Hp]	5	7.5	10	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]	11.3	20	20	21	26	35	46	61	66	76	107	
≤ 240V	[A]	11.3	20	20	21	26	35	46	61	66	76	107	
400V	[A]	8.5	15.5	15.5	16	21	28	40	52	64	74	104	
415V	[A]	8.5	15.5	15.5	16	21	28	40	52	64	74	104	
500V	[A]	6.8	12.4	12.4	12	17	24	35	43	52	66	95	
690V	[A]	4.9	8.9	8.9	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	
690V*	[kW]	4	7.5	7.5	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 Cat. No. 100-D210...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
Switching of 3-phase Motors, (50Hz); Ambient temperature 60 °C, AC-4													
72	85	95	110	140	140	180	180	210	250	300	420	—	—
72	85	95	110	140	140	180	180	210	250	300	420	—	—
72	85	95	110	140	140	180	180	210	250	300	420	—	—
72	85	95	110 (130)*	140 (155)*	140 (155)*	180 (189)‡	180 (189)‡	210 (227)*	250 (258)*	300 (315)*	420	—	—
67	80	85	105	115	140	140	170	210	250	300	360	—	—
42	49	85	105	115	140	140	170	210	250	300	360	—	—
—	—	33	40	55	55	65	65	80	95	115	160	—	—
22	25	30	34	45	45	57	57	67	80	97	135	—	—
22	25	31	36	47	47	60	60	70	83	101	141	—	—
40	45	53	61	78	78	100	100	118	140	170	238	—	—
40	45	55	63 (75)*	82 (90)*	82 (90)*	105 (110)*	105 (110)*	125 (132)*	145 (150)*	176 (185)*	250	—	—
45	55	59	73	80	98	98	119	147	177	213	255	—	—
40	45	81	102	110	135	135	167	205	250	293	356	—	—
—	—	45	55	75	75	90	90	110	132	160	225	—	—
Electronic — EI													
31	38	43	50	60	60	67	67	85	105	140	170	—	—
31	38	43	50	60	60	67	67	85	105	140	170	—	—
31	38	43	50	60	60	67	67	85	105	140	170	—	—
31	38	43	50	60	60	67	67	85	105	140	170	—	—
—	—	19	23	37	37	43	43	60	72	85	105	—	—
7.5	11	13	15	17	17	20	20	25	32	45	55	—	—
7.5	11	13	15	18.5	18.5	22	22	25	32	45	55	—	—
15	20	22	25	32	32	37	37	45	55	75	90	—	—
17	20	22	25	32	32	37	37	50	55	80	100	—	—
20	25	25	32	40	40	45	45	55	75	100	110	—	—
25	32	40	45	55	55	63	63	80	100	132	160	—	—
—	—	22	30	50	50	55	55	80	100	110	150	—	—
120	120	120	120	120	120	100	100	120	100	70	70	—	—
Electronic — EI													
40	50	40	60	60	60	75	75	100	125	175	250	—	—
50	60	50	60	75	75	100	100	125	175	200	250	—	—
100	125	100	125	175	175	200	200	250	350	450	600	—	—
100	125	125	150	200	200	250	250	300	450	500	650	—	—
UL/CSA Elevator Duty*													
48.3	62.1	62.1	78	92	92	120	120	150	150	177	221	—	—
54.0	68.0	68.0	80	104	104	130	130	130	154	192	248	—	—
52.0	65.0	65.0	77	96	96	124	124	156	180	180	240	—	—
52.0	62.0	62.0	77	77	77	99	99	125	144	192	242	—	—
15	20	20	25	30	30	40	40	50	50	60	75	—	—
20	25	25	30	40	40	50	50	50	60	75	100	—	—
40	50	50	60	75	75	100	100	125	150	150	200	—	—
50	60	60	75	75	75	100	100	125	150	200	250	—	—
Star-Delta Starting (50 Hz)													
125	147	165	191	242	242	312	312	364	433	520	727	—	—
125	147	165	191	242	242	312	312	364	433	520	727	—	—
125	147	165	191	242	242	312	312	364	433	520	727	—	—
125	147	165	191 (225)*	242 (268)*	242 (268)*	312 (332)‡	312 (332)‡	364 (393)*	433 (447)*	520 (546)*	727	—	—
116	139	165	191	199	242	312	312	364	433	520	727	—	—
73	85	165	191	199	242	312	312	364	433	520	727	—	—
—	—	57	69	95	95	113	113	139	165	200	277	—	—
37	45	45	55	75	75	90	90	110	132	160	220	—	—
40	50	50	63	80	80	100	100	125	150	160	250	—	—
63	80	80	100	132	132	160	160	200	250	300	425	—	—
63	80	80 (90)*	100 (132)*	132 (160)*	132 (160)*	160	160	220	250	315 (335)*	425	—	—
80	90	100	132	132	160	200	200	250	315	375	530	—	—
63	80	132	160	200	220	300	300	355	425	530	750	—	—
—	—	75	90	132	132	160	160	200	220	280	400	—	—

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

Contactors

Specifications, Continued

IEC Specifications

Coil Type :	Conventional Electronic — EI	100/104-K			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													
Rated transformer current = n													
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	4.3	4.3	4.3	4.3	8	8	9.2	16
	240V	[kVA]	1.2	2	2	4.5	4.5	4.5	4.5	8.3	8.3	10	17
	400V	[kVA]	1.7	2.8	3.4	7.5	7.5	7.5	7.5	14	14	16	28
415V	[kVA]	1.7	2.8	3.4	7.8	7.8	7.8	7.8	14	14	17	29	
500V	[kVA]	1.7	2.8	3.4	9.4	9.4	9.4	9.4	17	17	20	35	
690V	[kVA]	2	4	5	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]	—	—	—	10.9	10.9	10.9	10.9	20	20	23	40.8	
200V	[kVA]	—	—	—	3.8	3.8	3.8	3.8	6.9	6.9	8.0	14.1	
208V	[kVA]	—	—	—	3.9	3.9	3.9	3.9	7.2	7.2	8.3	14.7	
240V	[kVA]	—	—	—	4.5	4.5	4.5	4.5	8.3	8.3	9.6	17.0	
480V	[kVA]	—	—	—	9.1	9.1	9.1	9.1	16.6	16.6	19.1	33.9	
600V	[kVA]	—	—	—	11.3	11.3	11.3	11.3	20.8	20.8	23.9	42.4	
660V	[kVA]	—	—	—	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]	—	—	—	16.3	16.3	16.3	16.3	30	30	34.5	61.3	
200V	[kVA]	—	—	—	5.6	5.6	5.6	5.6	10.4	10.4	12.0	21.2	
208V	[kVA]	—	—	—	5.9	5.9	5.9	5.9	10.8	10.8	12.4	22.1	
240V	[kVA]	—	—	—	6.8	6.8	6.8	6.8	12.5	12.5	14.3	25.5	
480V	[kVA]	—	—	—	13.6	13.6	13.6	13.6	24.9	24.9	28.7	51.0	
600V	[kVA]	—	—	—	16.9	16.9	16.9	16.9	31.2	31.2	35.9	63.7	
660V	[kVA]	—	—	—	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]	—	—	—	22	22	22	22	40	40	46	82	
200V	[kVA]	—	—	—	7.5	7.5	7.5	7.5	13.9	13.9	15.9	28.4	
208V	[kVA]	—	—	—	7.8	7.8	7.8	7.8	14.4	14.4	16.6	29.5	
240V	[kVA]	—	—	—	9.0	9.0	9.0	9.0	16.6	16.6	19.1	34.1	
480V	[kVA]	—	—	—	18.1	18.1	18.1	18.1	33.3	33.3	38.2	68.2	
600V	[kVA]	—	—	—	22.6	22.6	22.6	22.6	41.6	41.6	47.8	85.2	
660V	[kVA]	—	—	—	24.9	24.9	24.9	24.9	45.7	45.7	52.6	93.7	

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

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

Inrush Current

Rated transformer current

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

60 Hz Peak Inrush/peak rated transformer current

40.8	40.8	53	60	70	70	85	85	105	125	150	210	—	—
14.4	14.4	18.4	20.8	24.2	24.2	29.4	29.4	36.4	43.3	52.0	72.7	—	—
14.7	14.7	19.1	21.6	25.2	25.2	30.6	30.6	37.8	45.0	54.0	75.7	—	—
17.0	17.0	22.0	24.9	29.1	29.1	35.3	35.3	43.6	52.0	62.4	87.3	—	—
33.9	33.9	44.1	49.9	58.2	58.2	70.7	70.7	87.3	104	125	175	—	—
42.4	42.4	55.1	62.4	72.7	72.7	88.3	88.3	109	130	156	218	—	—
46.6	46.6	60.6	68.6	80.0	80.0	97.2	97.2	120	143	171	240	—	—

60 Hz Peak Inrush/peak rated transformer current

61.3	61.3	80	90	105	105	128	128	158	188	225	315	—	—
21.2	21.2	27.7	31.2	36.4	36.4	44.3	44.3	54.7	65.1	77.9	109	—	—
22.1	22.1	28.8	32.4	37.8	37.8	46.1	46.1	56.9	67.7	81.1	113	—	—
25.5	25.5	33.3	37.4	43.6	43.6	53.2	53.2	65.7	78.2	93.5	131	—	—
51.0	51.0	66.5	74.8	87.3	87.3	106	106	131	156	187	262	—	—
63.7	63.7	83.1	93.5	109	109	133	133	164	195	234	327	—	—
70.1	70.1	91.5	103	120	120	146	146	181	215	257	360	—	—

60 Hz Peak Inrush/peak rated transformer current

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

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Contactors

Specifications, Continued

IEC Specifications

Coil Type : Conventional Electronic — EI		100/104-K			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)*																
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		open	[A]	18	18	18	22.5	25	28	29	40.5	45	65	65	77	81
AC-5a, 40 °C		enclosed	[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]	5	9	9	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]	20	20	20	32	32	32	32	45	45	—	—	63	—	
	400V	[A]	20	20	20	32	32	32	32	45	45	—	—	63	—	
	440V	[A]	—	—	—	32	32	32	32	45	45	—	—	63	—	
Switching of Motor Load for Home Appliances (50 Hz)																
AC-7b	230V	[A]	6	11	11	10.5	14	19	23	30	—	—	—	—		
	400V	[A]	6	11	11	9	12	16	20	30	—	—	—	—		
	440V	[A]	—	—	—	7.5	10	13.5	18	27	—	—	—	—		

* Inductance of leads between capacitors in parallel: min. 6 μH (100-C09...C30 contactors: min 30 μH)

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
Switching of 3-phase Capacitors, AC-6b (50 Hz)															
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	—	—
60 Hz Single Capacitor — 40 °C															
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	—	—
60 Hz Group Capacitors — 40 °C															
28	28	—	—	39	39	61	61	61	61	85	85	109	121	—	—
29	29	—	—	42	45	70	70	70	70	98	98	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	—	—
Switching of Lamps															
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	—	—
Individually compensated:															
Max. capacitance at expected															
4 000	4 700	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2 000	2 350	—	—	—	—	—	—	—	—	—	—	—	—	—	—
800	940	—	—	—	—	—	—	—	—	—	—	—	—	—	—
70	76	60	75	107	120	140	140	170	170	210	250	300	420	—	—
Switching of Low Inductive Loads in Home Appliances and Similar Applications per IEC 61095 (50 Hz)															
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Switching of Motor Load for Home Appliances (50 Hz)															
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Contactors

Specifications, Continued

Specifications

Coil Type :			100/104-K			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	X
Conventional																
Electronic — EI																
Switching of Hermetically Sealed Cooling Compressor Motors - manual reset of overload release (50 Hz)																
AC-8a	400V	[A]	11	18	18	12	16	22	32	38	45	—	—	63	72	
	500V	[A]	10	15	15	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	[A]	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	
3 poles in series	24V	[A]	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	
3 poles in series	24V	[A]	0.4	0.6	0.6	3	3	3	3	3.5	3.5	—	3.5	4	5	
	48/60V	[A]	0.4	0.6	0.6	3	3	3	3	3.5	3.5	—	3.5	4	5	
	110V	[A]	0.4	0.6	0.6	3	3	3	3	3.5	3.5	—	3.5	4	5	
	220V	[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	375	700		
Resistance and Power Dissipation																
Main current circuit resistance			[mΩ]	2.2	2.2	2.2	2.7	2.7	2.7	2	2	2	2	1.5	1.5	0.9
Power dissipation by all circuits at I_e AC-3/400V			[W]	0.3	0.9	0.9	0.66	1.2	2.1	3.2	5.4	8.2	11.3	8.4	8.3	9.7
Total power dissipation																
At I_e AC-3/400V	AC control	[W]	2.1	2.7	2.7	3.3	3.8	4.7	6.2	8.4	11.2	26.1	37.4	11.5	11	
	DC control	[W]	2.9	3.5	3.5	6.7	7.2	8.1	12.4	14.6	17.4	32.6	43.9	18.4	11	
Lifespan																
Mechanical AC control			[Mil. operations]	15	15	15	13	13	13	13	13	13	10	10	12	10
Mechanical DC control			[Mil. operations]	15	15	15	13	13	13	13	13	13	10	10	13	10
Electrical AC-3 (400 V)			[Mil. operations]	0.7	0.7	0.7	1.3	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.)	0.2 (0.44)	0.2 (0.44)	0.2 (0.44)	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)	

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



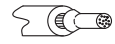



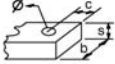
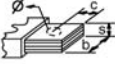


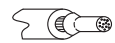



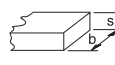
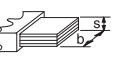



100/104-C, 100S/104S-C				100-D, 100S-D											
72	85	90*200	90*400	95	110	140	140	180	180	210	250	300	420	630	860
X	X	X	X	X	X	X	—	X	—	—	—	—	—	—	—
—	—	—	—	X	X	—	X	—	X	X	X	X	X	X	X
Switching of Hermetically Sealed Cooling Compressor Motors - manual reset of overload release (50 Hz)															
85	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—
85	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—
67	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—
- automatic reset of overload release															
30	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Switching of DC Loads															
80	80	80	80	135	135	210	210	210	210	300	300	380	425	—	—
40	40	40	40	135	135	210	210	210	210	300	300	380	425	—	—
11	11	11	11	135	135	210	210	210	210	300	300	380	425	—	—
2	2	1.8	1.8	3	3	3.3	3.3	3.3	3.3	4.9	4.9	4.9	5.2	—	—
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	—	—
80	80	80	80	135	135	210	210	210	210	300	300	380	425	—	—
80	80	80	80	135	135	210	210	210	210	300	300	380	425	—	—
80	80	80	80	135	135	210	210	210	210	300	300	380	425	—	—
15	15	15	15	135	135	210	210	210	210	300	300	380	425	—	—
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	—	—
90	100	—	100	135	135	210	210	210	210	300	300	380	425	—	—
90	100	—	100	135	135	210	210	210	210	300	300	380	425	—	—
90	100	—	100	135	135	210	210	210	210	300	300	380	425	—	—
80	80	—	80	135	135	210	210	210	210	300	300	380	425	—	—
5	5	—	5	11	11	11	11	11	11	14	14	14	15	—	—
Shunt-wound Motors															
Starting, reverse current braking, reversing, stepping DC-3, 60 °C															
90	100	—	—	135	135	210	210	210	210	300	300	380	425	—	—
70	80	—	—	135	135	210	210	210	210	300	300	380	425	—	—
70	80	—	—	135	135	210	210	210	210	300	300	380	425	—	—
25	30	—	—	135	135	210	210	210	210	300	300	380	425	—	—
0.6	0.6	—	—	3	3	3.5	3.5	3.5	3.5	4.1	4.1	4.1	5.8	—	—
Series-wound Motors															
Starting, reverse current braking, reversing, stepping DC-5, 60 °C															
90	100	—	—	135	135	210	210	210	210	300	300	380	425	—	—
70	80	—	—	135	135	210	210	210	210	300	300	380	425	—	—
70	80	—	—	135	135	210	210	210	210	300	300	380	425	—	—
25	30	—	—	135	135	210	210	210	210	300	300	380	425	—	—
0.6	0.6	—	—	1.2	1.2	2.1	2.1	2.1	2.1	2.4	2.4	2.4	3	—	—
Short Time Withstand I _{CW} , 60 °C															
700	700	700	700	1040	1040	1240	1360	1480	1480	2360	2520	2840	4700	—	—
Resistance and Power Dissipation															
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
Total power dissipation															
13.8	17.5	36	56.3	20.8 (16.8)	24.5 (20.5)	34.6	30.6	50.8	46.8	35.4	47.7	54.6	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	54.6	86.5	105.4	133.2
Lifespan															
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	—	—
Weight															
1.45 (3.2)	1.45 (3.2)	—	—	3.3 (7.28) [3.8 (8.38)]*	3.3 (7.28) [3.8 (8.38)]*	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1.47 (3.24)	1.47 (3.24)	—	—	3.3 (7.28) [3.8 (8.38)]*	3.3 (7.28) [3.8 (8.38)]*	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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





Contactors

Specifications, Continued

Coil Type :	Conventional Electronic — EI	100/104-K						100/104-C, 100S/104S-C							
		05	09	12	09	12	16	23	30	37	40	43	60	72	85
		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]	0.75...2.5	1...4			2.5...10	2.5...16		2.5...35			
			(2) conductors	[mm ²]	0.75...2.5	1...4			2.5...10	2.5...10		2.5...25			
			(1) conductor	[mm ²]	1...4	1.5...6			2.5...16	2.5...25		2.5...50			
			(2) conductors	[mm ²]	1...2.5+ 1...4	1.5...6			2.5...16	2.5...16		2.5...35			
			b max.	[mm]	—	—			—	—		—			
			c max.	[mm]	—	—			—	—		—			
			s max.	[mm]	—	—			—	—		—			
			Ø min.	[mm]	—	—			—	—		—			
Recommended torque		[N•m]	1.2			1.5...2.5			2.5...3.5	2.5...3.5		3.5...6			
Cross section per UL/CSA		[AWG]	18...12			16...10			14...4	14...6	14...4	14...1			
Recommended torque		[lb-in]	10.6			13.3...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		[N•m]	—			—			—	—		—			
Cross section per UL/CSA		[AWG]	—			—			—	—		—			
top		[AWG]	—			—			—	—		—			
bottom		[AWG]	—			—			—	—		—			
Recommended torque		[lb-in]	—			—			—	—		—			

* Pozidriv No. 2 / Blade No. 3 screw
 * Pozidriv No. 2 / Blade No. 4 screw
 ‡ Hexagonal socket screw

2

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	—	—	2 x 8	2 x 8
6.1	—	8.3	—	—	—	—	10.5	—	—	13	13
9	—	22	—	—	—	—	43	—	—	68	68
—	—	—	—	—	—	—	—	—	—	—	—
80	—	195	—	—	—	—	380	—	—	600	600
100-DL110‡	—	100-DLE110‡	—	100-DL180‡	—	—	100-DL420‡	—	—	100-DL630	100-DL860
8...2/0	—	8...2/0	—	6...300 MCM	—	—	(2x) 4...350 MCM	—	—	(2X) 2/0...500MCM	(4X) 2/0...500MCM
90	—	90	—	250	—	—	250	—	—	400	400
100-DTB110‡	—	100-DTB180‡	—	—	—	—	100-DTB420*	—	—	—	—
16...35	—	16...35	—	—	—	—	25...240*	—	—	—	—
16...70	—	16...95	—	—	—	—	25...240	—	—	—	—
16...50	—	16...50	—	—	—	—	25...300	—	—	—	—
16...95	—	16...120	—	—	—	—	25...300	—	—	—	—
16	—	20	—	—	—	—	25	—	—	—	—
3...9	—	3...9	—	—	—	—	4...20	—	—	—	—
3...12	—	3...14	—	—	—	—	4...20	—	—	—	—
12	—	14	—	—	—	—	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	—	—	—	—
106	—	124	—	—	—	—	220	—	—	—	—

* Pozidriv No. 2 / Blade No. 3 screw
 * Pozidriv No. 2 / Blade No. 4 screw
 ‡ Hexagonal socket screw
 § Hexagonal screw
 * 25...95 mm² with sleeve per DIN 46228



Contactors

Specifications, Continued

Short-Circuit Coordination Data†

Coil Type :	Conventional Electronic – EI	100/104-K			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	X
Short Circuit Coordination (Max. Fuse or Circuit Breaker Rating)																			
Per IEC 60947-4-1 (contactor and fuses only)																			
DIN Fuses - gG, gL		50 kA Available Fault Current																	
Type "1" (690V)	[A]	35	35	35	50	50	50	80	125	125	160	160	160	250	250	250	250*	250*	
Type "2" (400V)	[A]	16	20	20	25	35	35	40	80	80	63	80	100	160	160	160	160*	100*	
Type "2" (690V)	[A]	—	—	—	25	35	35	40	80	80	63	80	100	160	160	160	160*	100*	
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		30 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 verified combination to IEC 60947-4-1 "Type 2"	[A]	—	—	—	15	20	20	30	—	—	—	—	—	—	—	—	—	—	
UL Class J and CSA HRCI-J Fuses		100 kA Available Fault Current																	
UL verified combination to IEC 60947-4-1 "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		30 kA Available Fault Current																	
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
UL Inverse-Time Circuit Breaker		42 kA Available Fault Current																	
UL Listed Combination (600V)	[A]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

* 50 kA available fault current.

† See www.ab.com/certifications/ui508a for complete short-circuit current ratings.

100/104-D, 100S-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

50 kA Available Fault Current											
250	315	250	250	315	355	500	500	630	630	*	*
200	250	200	200	250	315	400	400	500	500	*	*
200	250	200	200	250	315	400	400	500	500	*	*

65 kA Available Fault Current											
160	250	200	200	250	250	355	355	450	630	*	*
160	250	200	200	250	250	355	355	450	560	*	*

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	—	—

30 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	2500	—

42 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	—	2500

100 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	—	—

100 kA Available Fault Current											
*	*	*	*	*	*	*	*	*	*	*	*

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	—	—

30 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	1200	—

42 kA Available Fault Current											
—	—	—	—	—	—	—	—	—	—	—	1200

* To be determined.

Contactors

Specifications, Continued

Coil Data

Coil Type			100/104-K			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
Conventional			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Electronic — EI			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
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]	0.2...0.75			0.3...0.6			0.3...0.6			0.3...0.6							
DC (conventional)	pick-up	[x Us]	0.85...1.1 0.7...1.25§			0.8...1.1			0.8...1.1			0.8...1.1							
	dropout	[x Us]	0.1...0.75			0.1...0.6			0.1...0.6			0.1...0.6							
DC (electronic)	pick-up	[x Us]	—			0.7...1.25			—										
	dropout	[x Us]	—			0.1...0.5			—										
Coil Consumption																			
50 Hz, 60 Hz, 50/60 Hz	pick-up	[VA/W]	35/32			70/50		70/50		80/60		130/90		130/90		200/110		400/240	
	hold-in	[VA/W]	5/1.8			8/2.6		9/3		9/3		12/3.6		10/3.2		16/4.5		24/9	
DC (conventional)	pick-up	[W]	cold 3.0, warm 2.6			6.5		9.2		9.2		10.1		10.1		200		325	
	hold-in	[W]	cold 3.0, warm 2.6			6.5		9.2		9.2		10.1		10.1		4.5		5.5	
DC (electronic)	pick-up (avg/peak)	[W]	—			10/22			10/22		12/28		—		—		—		
	hold-in	[W]	—			1.5			—		2.5		—		—		—		
Operating Times																			
AC	closing delay	[ms]	15...40			15...30		15...30		15...30		15...30		15...30		20...40		20...30	
	opening delay	[ms]	15...33			10...60		10...60		10...60		10...60		10...60		10...60		20...40	
With RC module	opening delay	[ms]	15...28			10...60		10...60		10...60		10...60		10...60		10...60		20...40	
DC (conventional)	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	
With integ. 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		—	
DC (electronic)	closing delay	[ms]	—			—			20...40		—		—		—		—		
	opening delay	[ms]	—			—			20...40		—		—		—		—		
Max. Ripple			—			—			± 15%		—		—		—		—		

§ For 9, 12, 24, and 110V DC coils

Coil Type			100/104-D, 100S-D											
			95/110	140/180	95	110	140	180	210	250	300	420	630	860
Conventional			X	X	—	—	—	—	—	—	—	—	—	—
Electronic — EI			—	—	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			0.8...1.1		
	dropout	[x Us]	0.3...0.6			0.3...0.5			0.3...0.5			0.3...0.8		
DC control	pick-up	[x Us]	0.85...1.1			0.85...1.1			0.85...1.1			0.85...1.1		
	dropout	[x Us]	0.3...0.6			0.3...0.5			0.3...0.5			0.3...0.8		
Coil Consumption														
50 Hz, 60 Hz, 50/60 Hz	pick-up	[VA/W]	650/310			380/240*			490/270*			1915/1720*		
	hold-in	[VA/W]	50/10			13/6			18/7			33/30		
DC control	pick-up	[W]	540			265*			340*			1980*		
	hold-in	[W]	8			6			7			30		
Operating Times														
AC	closing delay	[ms]	20...47			20...45			60...100					
	opening delay	[ms]	6...12			25...110			70...145					
With RC module	opening delay	[ms]	9...18			—			—					
DC	closing delay	[ms]	27...47			25...50			60...100					
	opening delay	[ms]	12...20			35...110			70...145					
With integrated diode	opening delay	[ms]	12...20			—			—					
With external diode	opening delay	[ms]	—			—			—			—		

* Electronic coil drives are designed to minimize power requirements, but this control may exhibit a higher inrush (540 W, < 10 ms) 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 local Rockwell Automation sales office or Allen-Bradley distributor for detailed information.

Auxiliary Contacts and Auxiliary Contact Blocks

			100-K		100-C, 100S-C				100-D, 100S-D			
			Internal	Front-mounted	Internal	Front-mounted	Front-mounted (Bifurcated)	Side-mounted	Side-mounted			
									Convent'l	Bifurcated	Electronically compatible	
Switching of AC Loads												
AC-12 I _{th}	at 40 °C	[A]	10	10	20	10	10	10	16	10	0.1	
	at 60 °C	[A]	6	6	20	6	6	6	12	6	at 250V	
AC-15 at rated voltage of												
	24V	[A]	6	3	10	6	3	6	5.5	3	(1...100 mA) at 3...125V	
	42/48V	[A]	6	3	10	6	3	6	5.5	3		
	120V	[A]	6	3	10	6	3	6	5.5	3		
	230V	[A]	3	2	10	5.5	3	5.5	5.5	3		
	240V	[A]	3	2	10	5	3	5	5	3		
	400V	[A]	1.8	1.2	6	3	2	3	3	2		
	415V	[A]	1.8	1.2	6	3	2	3	2.5	2		
	500V	[A]	1.4	1.0	2.5	1.6	1.2	1.6	1.6	1.2		
	690V	[A]	1.0	0.6	1	1	0.7	1	1	0.7		
Switching of DC Loads												
DC-12 L/R < 1 ms resistive loads at												
	24V DC	[A]	6	—	12	12	6	6	16	16	—	
	48V DC	[A]	4	—	9	9	3.2	3.2	9	9	—	
	110V DC	[A]	0.6	—	3.5	3.5	0.45	0.45	3.5	3.5	—	
	220V DC	[A]	0.2	—	0.55	0.55	0.18	0.18	0.55	0.55	—	
	440V DC	[A]	0.08	—	0.2	0.2	0.1	0.1	0.2	0.2	—	
DC-14 L/R < 15 ms inductive loads with economy resistor in series at												
	24V DC	[A]	4	—	9	9	2	2	9	9	—	
	48V DC	[A]	2.5	—	5	5	1.6	1.6	5	5	—	
	110V DC	[A]	0.4	—	2	2	0.3	0.3	2	2	—	
	220V DC	[A]	0.12	—	0.4	0.4	0.12	0.12	0.4	0.4	—	
	440V DC	[A]	0.05	—	0.16	0.16	0.05	0.05	0.16	0.1	—	
DC-13 switching electromagnets at												
	24V DC	[A]	2.8	2.3	5	5	2.5	5	5	5	(1...100 mA) at 3...125V	
	48V DC	[A]	1.2	1	3	3	1.5	3	2	2		
	110V DC	[A]	0.55	0.55	1.2	1.2	0.6	1.2	0.7	0.7		
	220V DC	[A]	0.27	0.27	0.6	0.6	0.3	0.6	0.25	0.25		
	440V DC	[A]	0.15	0.15	0.3	0.15	0.15	0.15	0.12	0.12		
Fuse gG												
Short-circuit protection with no welding of contacts per IEC 60947-5-1												
		[A]	10	10	20	10	10	10	16	16	—	
		[A]	10	10	20	10	10	10	16	16	—	
Protective Separation per IEC 60947-1, Annex N			—	—	between load and auxiliary circuit 320V	between load and auxiliary circuit 440V	between load and auxiliary circuit 440V					
Min. switching capacity according to IEC 60947-5-4			—	15V/2 mA	17V/10 mA	17V/5 mA	8V/5 mA	17V/10 mA	17V/10 mA	5V/2 mA (1 Mio. ops.)	3V/1 mA	
Failure rate			—	—	—	—	—	—	—	<10-8 (less than 1 failure to 100 Mio. operations)	—	
Load Carrying Capacity per UL/CSA												
Rated voltage	AC	[V]	max. 600		max. 600				max. 600		max. 250	
Continuous rating	40 °C	[A]	10		10	10	10	10	10 General purpose		0.1	
Switching capacity	AC	[A]	A 600	B 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]	Q 600		P 600	P 300/Q 600	Q 600		Standard pilot duty (P 600)	Standard pilot duty (Q 600)	0.1	

Contactors

Specifications, Continued

General

		100-K	100-C, 100S-C	100-D, 100S-D
		05...12	09...85	95...420
Rated Isolation Voltage U_i				
IEC [V]		690	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, 690	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 F per IEC 60085 Class 105 insulation system per UL 508	Class F per IEC 60085	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 at 70 °C [°C]		-25...+60	-25...+60	-25...+60
		15% current reduction against 60°C values		
Climatic Withstand		IEC 60068-2	IEC 60068-2	IEC 60068-2
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	IP00 IEC 60529 / DIN 40 050
Single contactor cover		—		IP10 IEC 60529 / DIN 40 050
Contactors with frame terminal block		—		IP20 IEC 60529 / DIN 40 050
Auxiliary contact		IP2X		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
Resistance to Shock		IEC 60068-2	IEC 60068-2-27	IEC 60068-2-27
Resistance to Vibration		IEC 60068-2	IEC 60068-2-6	IEC 60068-2-6
Mechanically Linked Contacts IEC 60947-5-1, Annex L	100-K... (on main device)		100-C09...C23, 100S-C09...C85, 100-C + 100-FA/FB/FC (except L11, L22), 100-C09...C43 + 100-FAB/FBB/FCB	—
Mirror Contacts IEC 60947-4 Annex F	100-K... + 100-KF...		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-D... + 2 x 100S-DS1-11
Standards Compliance		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
Certifications		CE, cULus CCC in prep.	CE, cULus, CCC	CE, cULus, CCC

2



IEC Contactors

Specifications

Electrical Life in Utilization Category

Bulletin 100-C/104-C 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.

2

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:

$L_{mixed} = L_{ac3} / [1 + Pac4 * (L_{ac3} / L_{ac4} - 1)]$, where:

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

L_{ac3} Approximate contact life in operations for a pure AC-3 utilization category (from the AC-3 life-load curves).

L_{ac4} 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	$I_e < 17\text{ A}$	6	1	0.65	1	0.17	0.65
		$I_e > 17\text{ A}$	6	1	0.35	1	0.17	0.35
AC-4	Squirrel - cage motors: Starting, plugging*, inching*	$I_e < 17\text{ A}$	6	1	0.65	6	1	0.65
		$I_e > 17\text{ A}$	6	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

* Plugging is understood as stopping or reversing the motor rapidly by reversing motor primary connections while the motor is running.

* Inching (jogging) is understood as energizing a motor once or repeatedly for short periods to obtain small movements of the driven mechanism.

Life-Load Curves

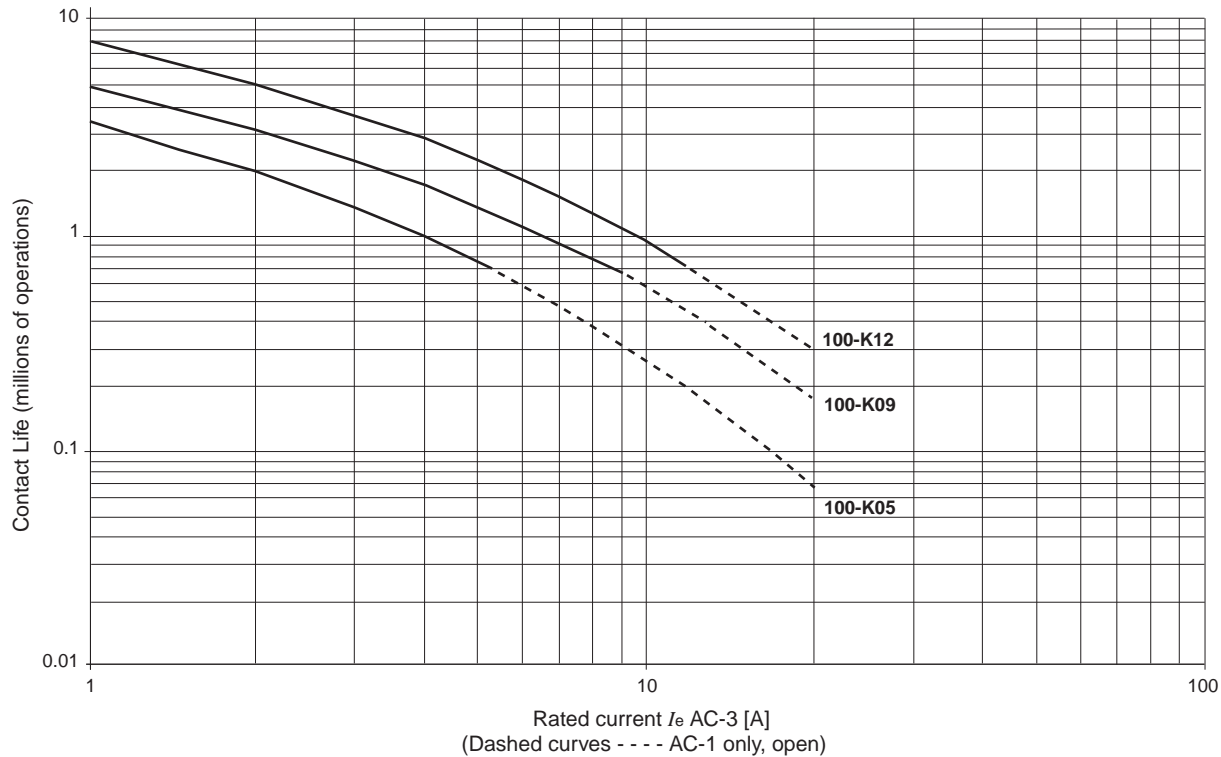
Electrical life; $U_e = 400...460V$ AC

AC-3

Switching of squirrel-cage motors while starting

AC-1

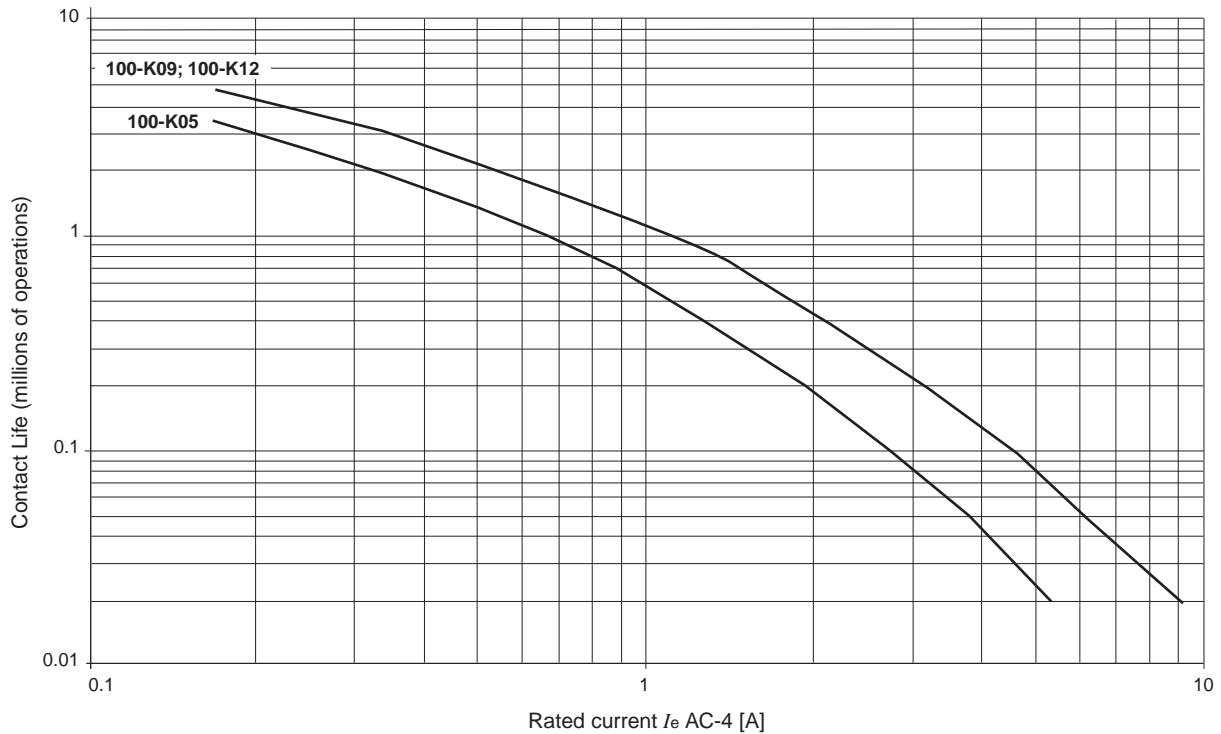
Non- or slightly inductive loads, resistance furnaces



Electrical life; $U_e = 400...460V$ AC

AC-4

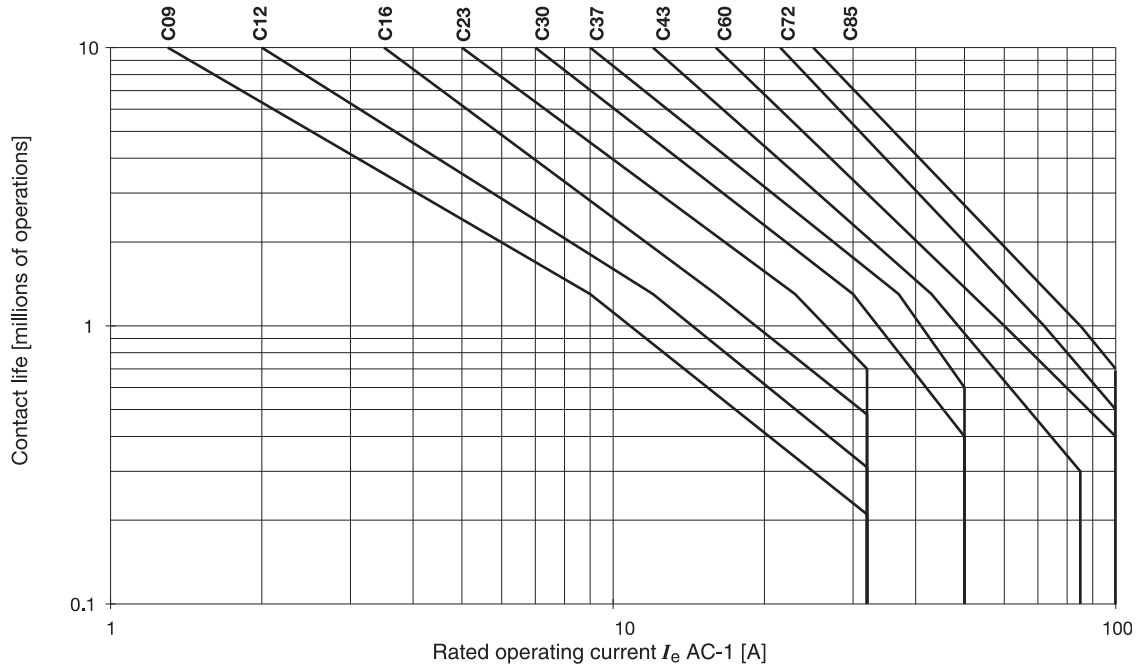
Stepping of squirrel-cage motors



Life-Load Curves

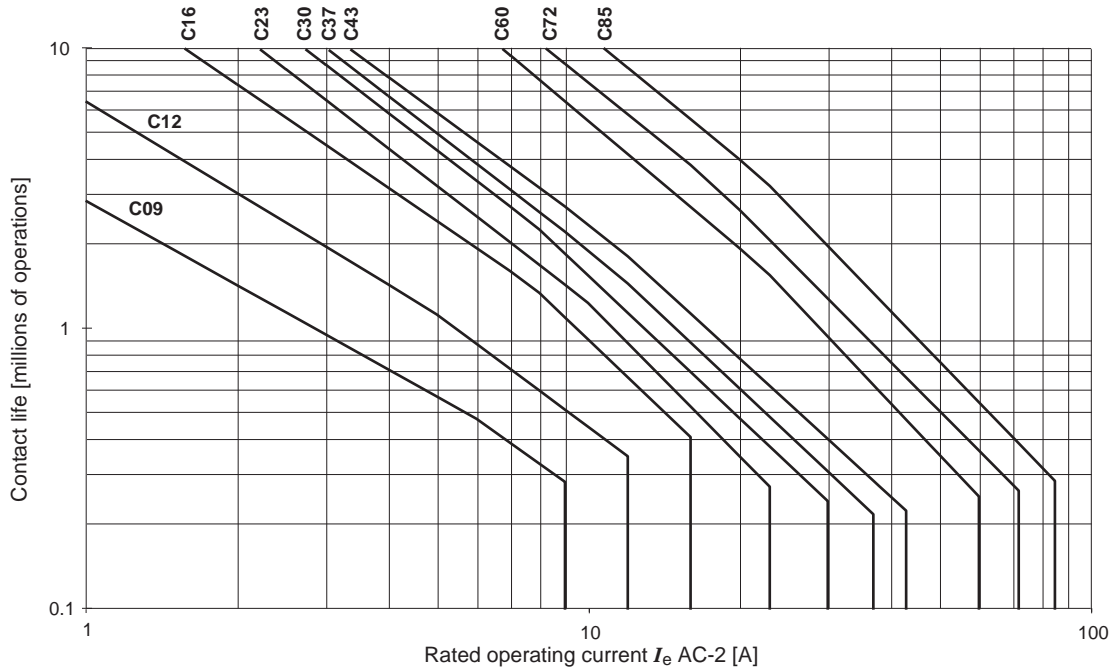
AC-1

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



AC-2

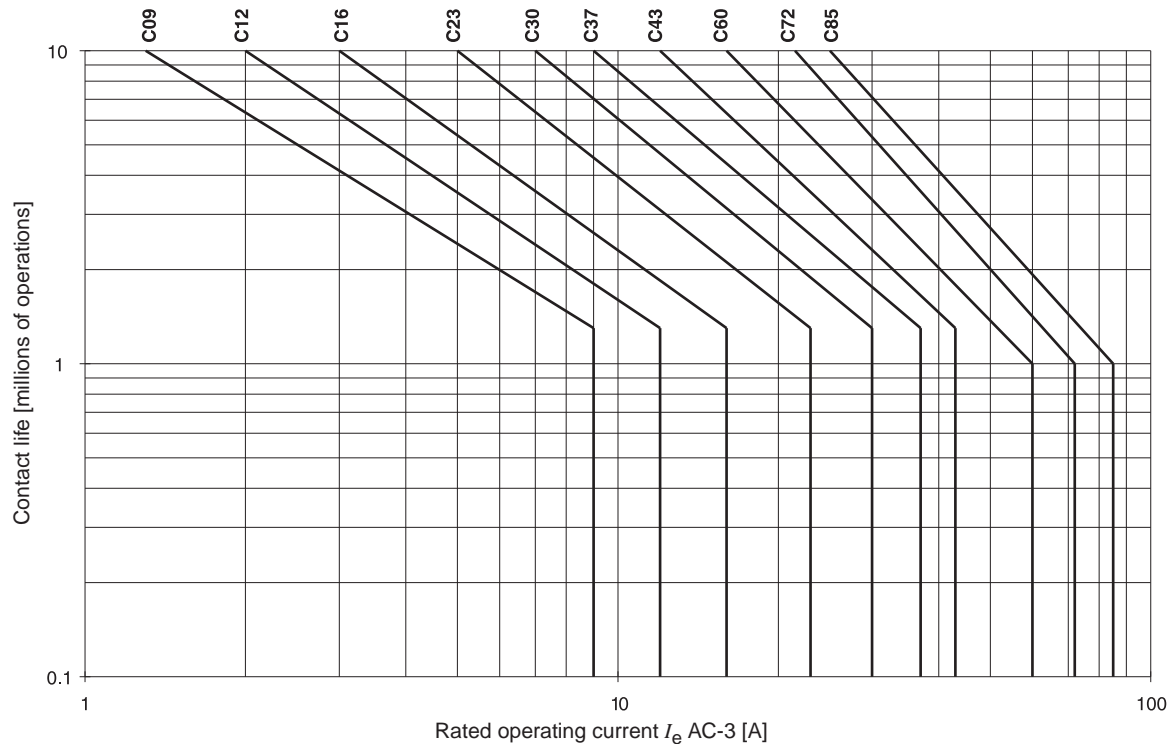
Switching of slip-ring motors; $U_e = 230...400...460V$



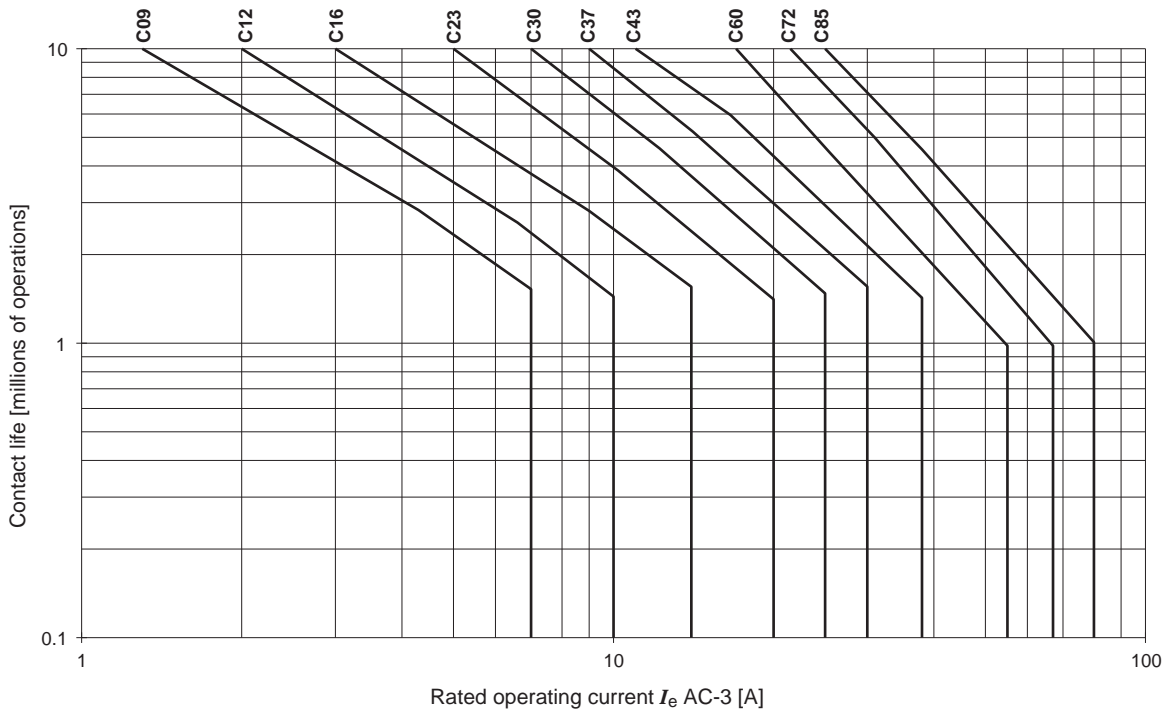
Life-Load Curves

AC-3

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



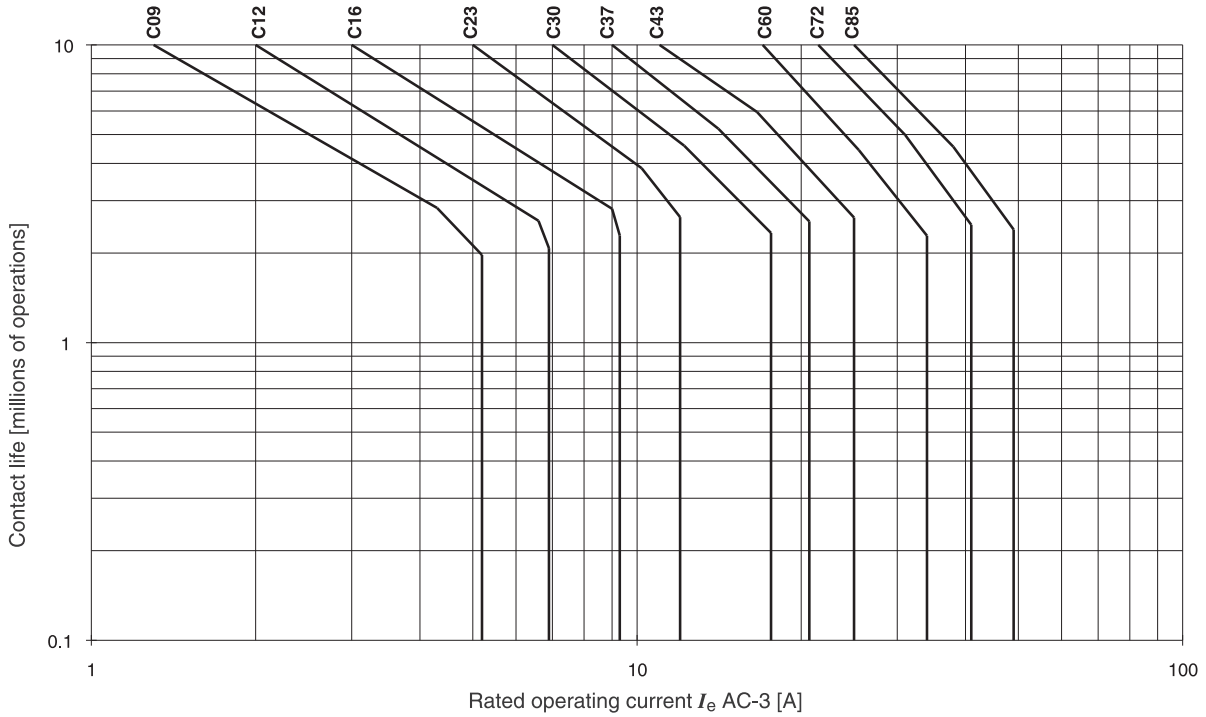
Switching of squirrel-cage motors while starting; $U_e = 500...575V$



Life-Load Curves

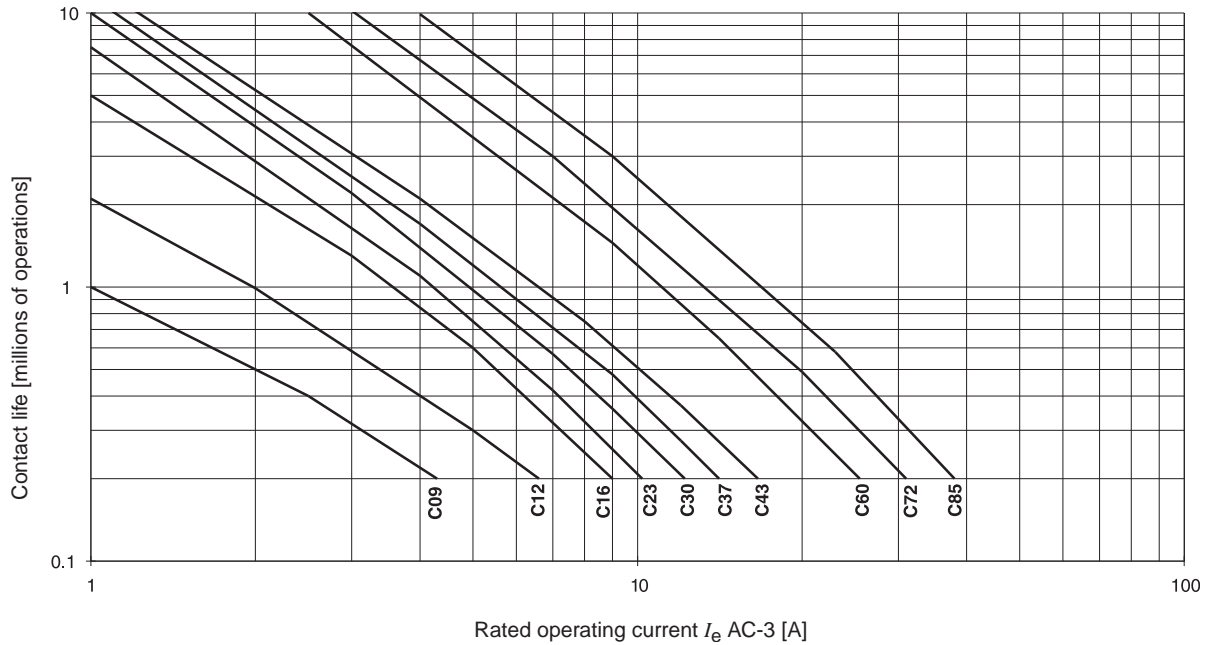
AC-3

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



AC-4

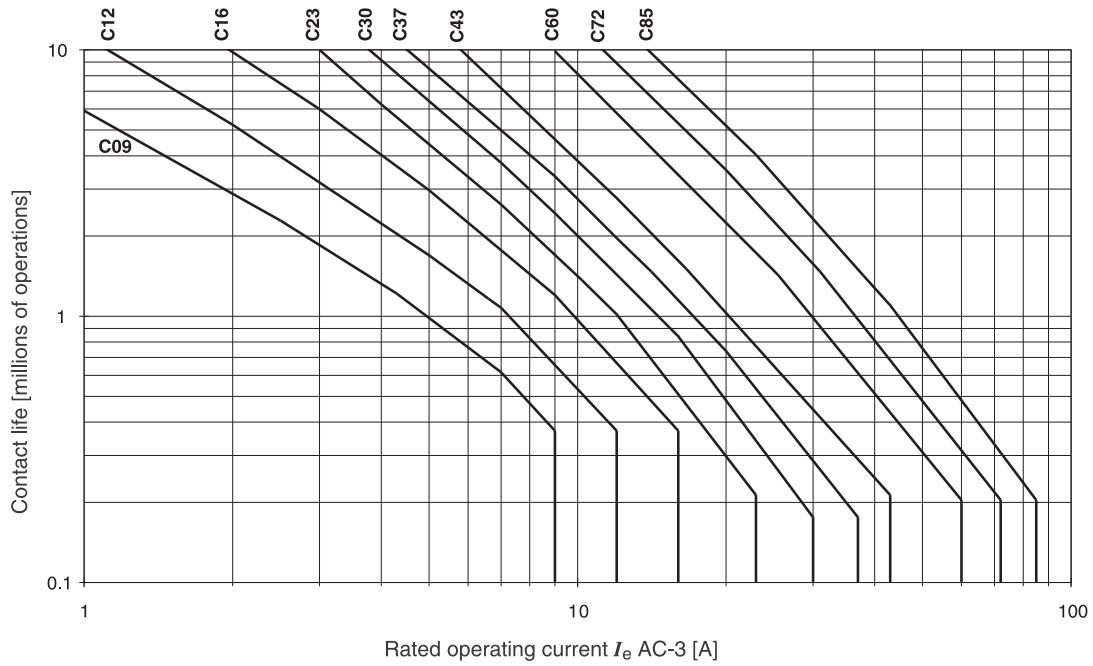
Switching of squirrel-cage motors; $U_e = 230...690V$



Life-Load Curves

AC-3 & AC-4

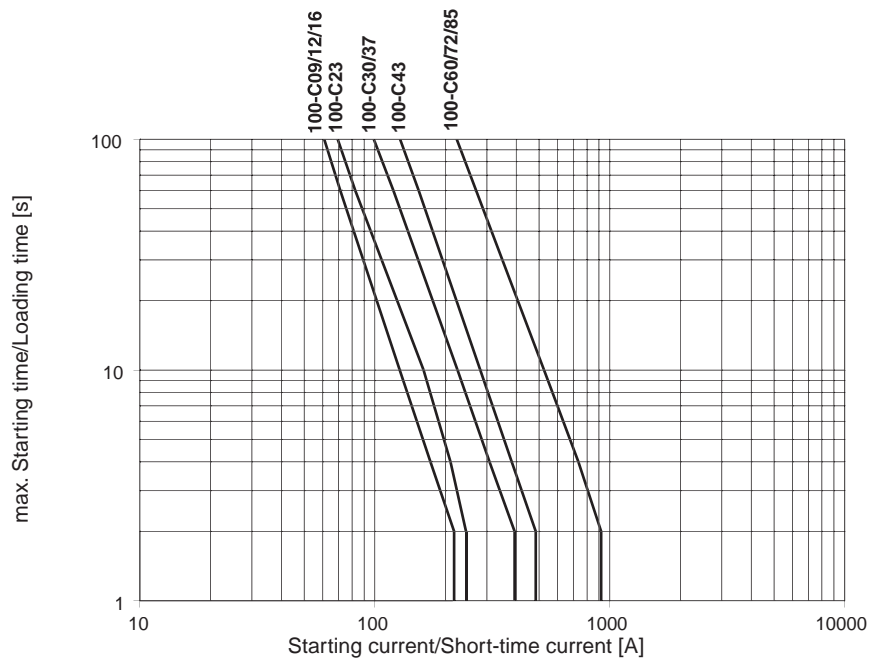
10% AC-4 Mixed operation of squirrel-cage motors; $U_e = 230...400...460V$



2

Heavy Duty Starting and Regular Short-time Operation

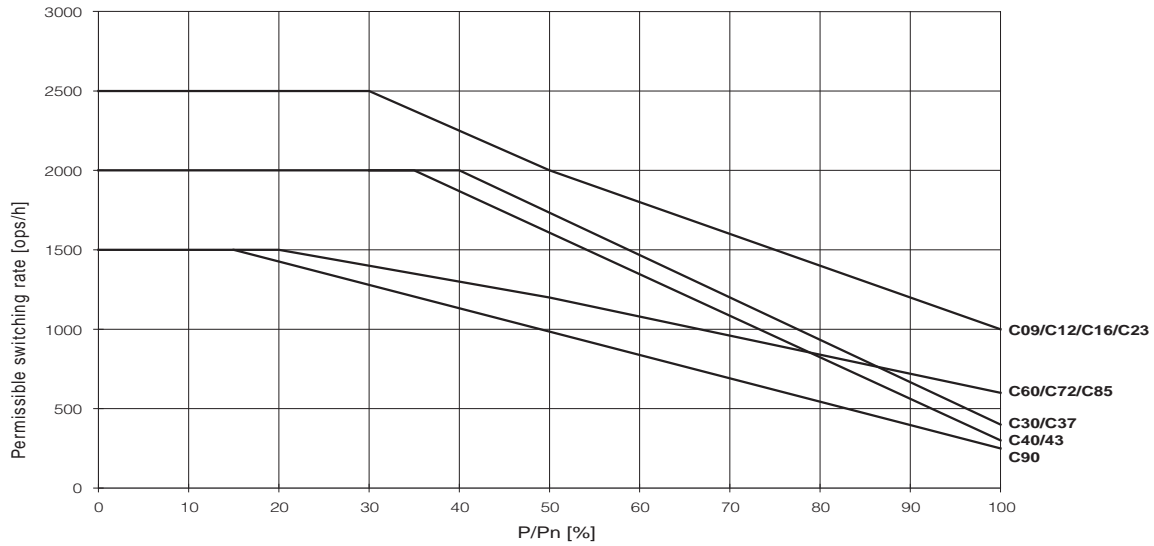
Bulletin 100-C Contactors



Maximum Operating Rates

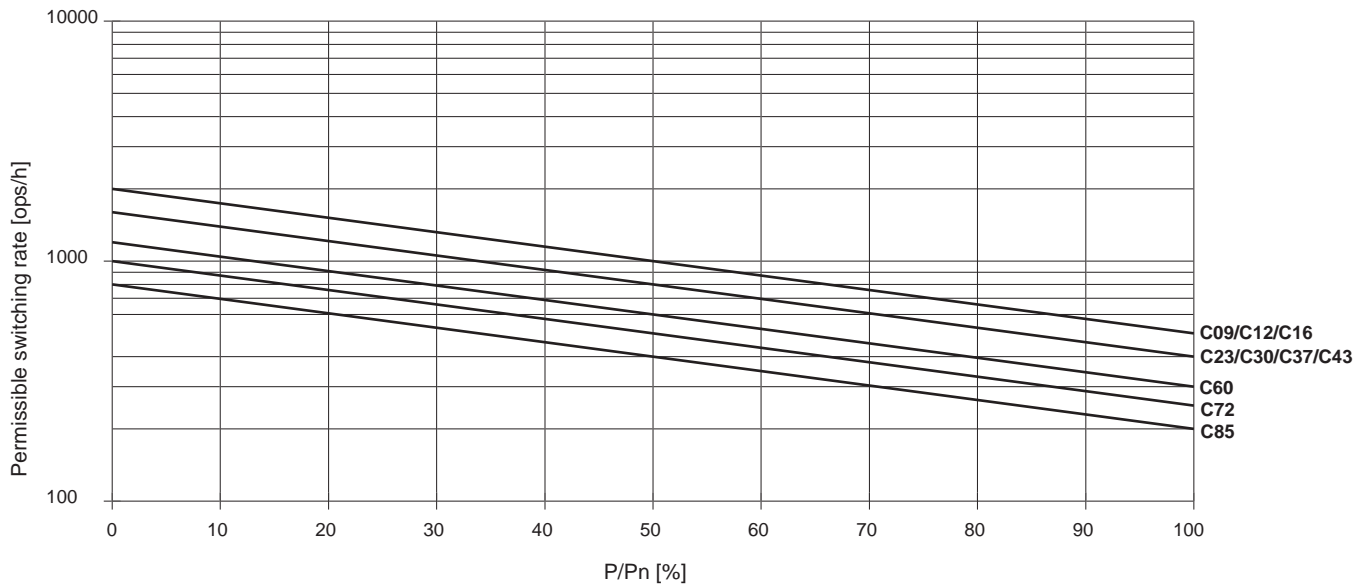
AC-1

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



AC-2

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

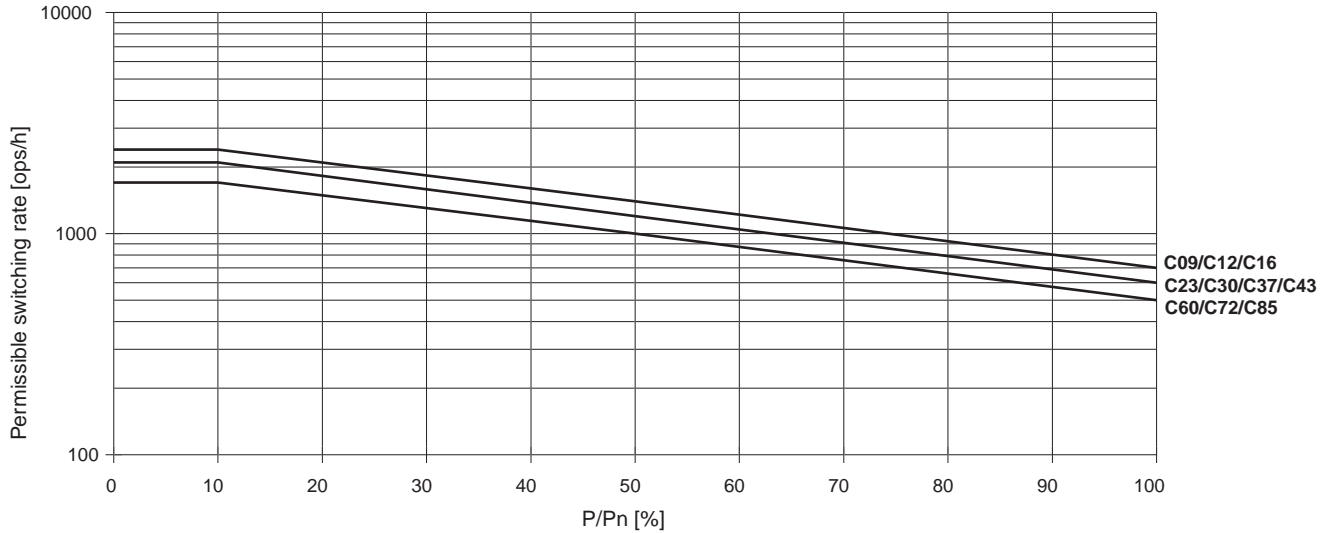


Maximum Operating Rates

AC-3

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

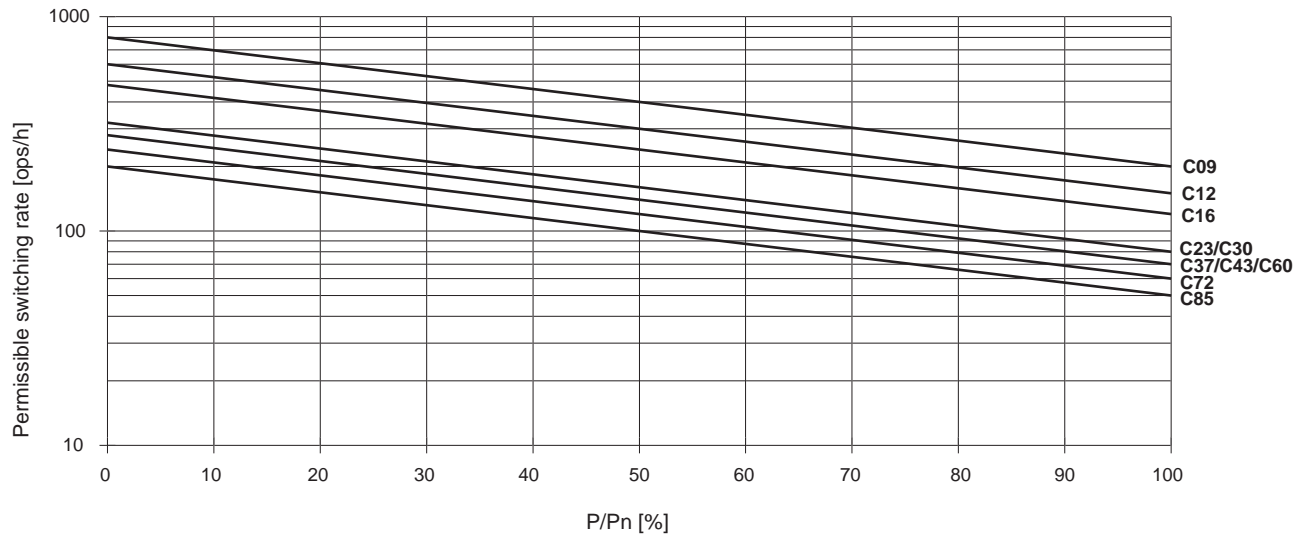
Relative operating time 40%, Starting time $t_A = 0.25 s$



AC-4

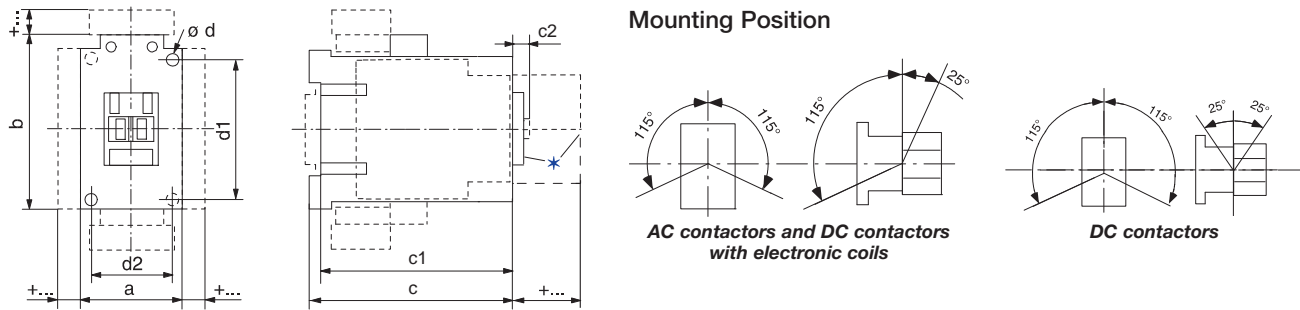
Stepping of squirrel-cage motors; $U_e = 230...460V$

Starting time $t_A = 0.25 s$



Bulletin 100-C Contactors and Accessories

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



2

AC Contactors and DC Contactors with Electronic Coils

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 (2-31/32)	6 (15/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100-C30, 100-C37	45 (1-25/32)	81 (3-3/16)	97.5 (4)	92.5 (3-41/64)	6.5 (1/4)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100-C40	59 (2-21/64)	81 (3-3/16)	100.5 (3-61/64)	95.5 (3-49/64)	6.5 (1/4)	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 (3-61/64)	95.5 (3-49/64)	6.5 (1/4)	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 (4-39/64)	111.5 (4-25/64)	8.5 (21/64)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)
100-C90	95 (3-47/64)	122 (4-51/64)	117 (4-39/64)	111.5 (4-25/64)	8.5 (21/64)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)

DC Contactors

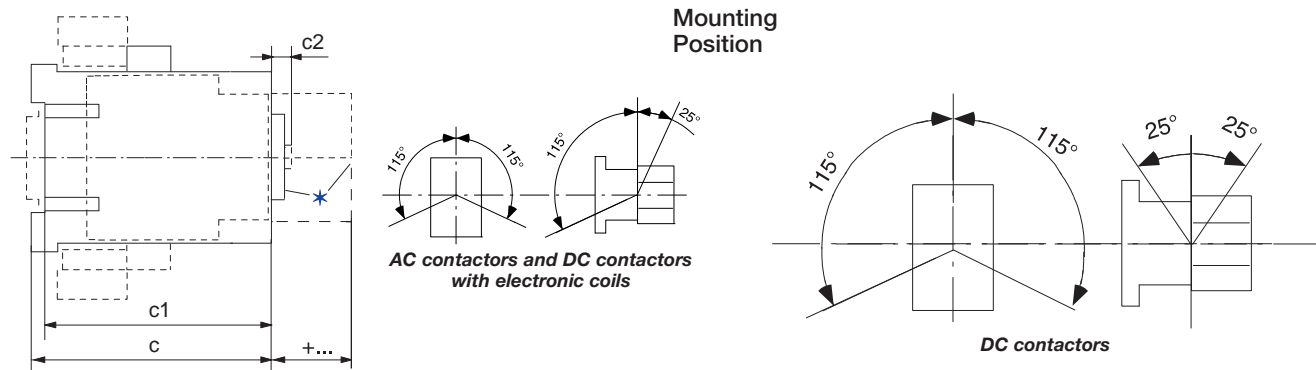
Cat. No.	a	b	c	c1	c2	Ød	d1	d2
100-C09Z...100-C16Z	45 (1-25/32)	81 (3-3/16)	106.5 (4-3/16)	101.5 (4)	6 (15/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100-C23Z	45 (1-25/32)	81 (3-3/16)	123.5 (4-55/64)	119 (4-43/64)	6 (15/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100-C30...100-C37	45 (1-25/32)	81 (3-3/16)	141.5 (5-37/64)	136.5 (5-3/8)	6.5 (1/4)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100-C40Z	59 (2-21/64)	81 (3-3/16)	144.5 (5-11/16)	139.5 (5-1/2)	6.5 (1/4)	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 (1/4)	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 (4-39/64)	111.5 (4-25/64)	8.5 (21/64)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)
100-C90D	95 (3-47/64)	122 (4-51/64)	117 (4-39/64)	111.5 (4-25/64)	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 *	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)
	100-C30...C37	c + 9/5	(c + 3/8)
		b + 85	(b + 3-11/32)

Bulletin 100S-C/104S-C Contactors and Accessories

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



AC Contactors and DC Contactors with Electronic Coils

Cat. No.	a	b	c	c1	c2	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)	6 (15/64)	2-4.5 (2-3/16)	60 (2-23/64)	35 (1-3/8)
100S-C30, 100S-C37	45 (1-25/32)	81 (3-3/16)	136.5 (5-37/64)	131.6 (5-11/32)	6.5 (1/4)	2-4.5 (2-3/16)	60 (2-23/64)	35 (1-3/8)
100S-C43	54 (2-1/8)	81 (3-3/16)	139.5 (5-11/16)	134.6 (5-29/64)	6.5 (1/4)	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)	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
100S-C09Z...100S-C16Z	45 (1-25/32)	81 (3-3/16)	145.5 (5-49/64)	140.5 (5-37/64)	6 (15/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100S-C23Z	45 (1-25/32)	81 (3-3/16)	162.5 (6-7/16)	158 (6-1/4)	6 (15/64)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100S-C30Z...100S-C37Z	45 (1-25/32)	81 (3-3/16)	180.5 (7-5/32)	175.5 (6-61/64)	6.5 (1/4)	2 - 4.5 (2 - 3/16)	60 (2-23/64)	35 (1-3/8)
100S-C43Z	54 (2-1/8)	81 (3-3/16)	183.5 (7-17/64)	179 (7-3/32)	6.5 (1/4)	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)	8.5 (21/64)	4 - 5.4 (4 - 7/32)	100 (3-15/16)	55 (2-11/64)

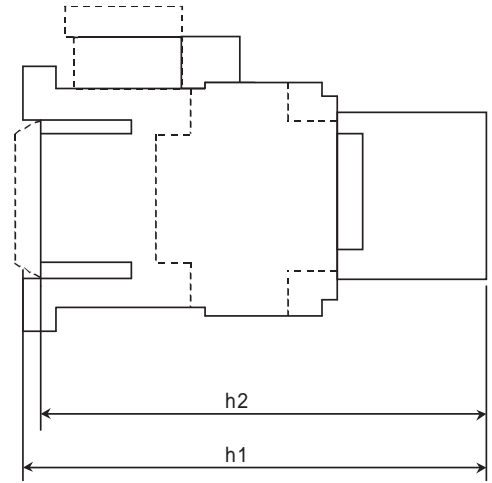
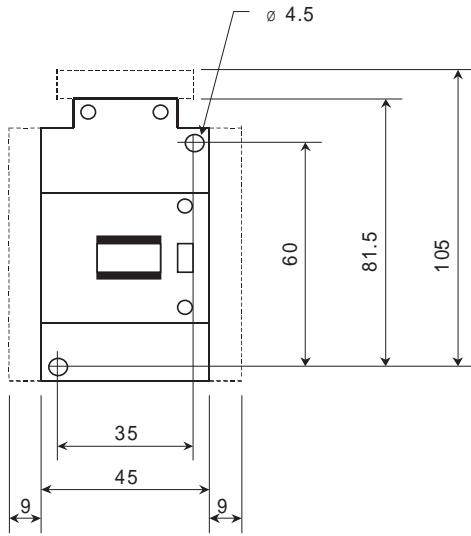
Accessories

Contactors with		mm	(inches)
Auxiliary contact block for 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 *	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 100Q-C
IEC Contactors
 Approximate Dimensions

Bulletin 100Q-C 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)

Coils



2

AC Standard Control Voltages [V]			AC Coil Code	100-C09...100-C16	100-C23...100-C37, 100L-C20	100-C40, -C43	100-C60...100-C85	100-C90
50 Hz	60 Hz	50/60 Hz		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
—	12	—	Q	TA006	TC006	TD006	TE006	TF006
12	—	—	R	TA404	TC404	TD404	TE404	TF404
—	24	—	J	TA013	TC013	TD013	TE013	TF013
24	—	—	K	TA407	TC407	TD407	TE407	TF407
—	—	24	KJ	TA855	TC855	TD855	TE855	TF855
32	36	—	V	TA481	TC481	TD481	TE481	TF481
36	—	—	W	TA410	TC410	TD410	TE410	TF410
42	48	—	X	TA482	TC482	TD482	TE482	TF482
48	—	—	Y	TA414	TC414	TD414	TE414	TF414
—	—	48	KY	TA860	TC860	TD860	TE860	TF860
100	100...110	100	KP	TA861	TC861	TD861	TE861	TF861
110	120	—	D	TA473	TC473	TD473	TE473	TF473
—	—	110	KD	TA856	TC856	TD856	TE856	TF856
120	—	—	P	TA425	TC425	TD425	TE425	TF425
127	—	—	S	TA428	TC428	TD428	TE428	TF428
200	200...220	200	KG	TA862	TC862	TD862	TE862	TF862
—	208	—	H	TA049	TC049	TD049	TE049	TF049
200...220	208...240	—	L	TA296	TC296	TD296	TE296	TF296
—	—	200...230	KL	TA864	TC864	TD864	TE864	—
220	240	—	A	TA474	TC474	TD474	TE474	TF474
220...230	260	—	F	TA441	TC441	TD441	TE441	TF441
—	—	230	KF	TA851	TC851	TD851	TE851	TF851
230...240	—	—	VA	TA440	TC440	TD440	TE440	TF440
240	277	—	T	TA480	TC480	TD480	TE480	TF480
—	—	240	KA	TA858	TC858	TD858	TE858	TF858
—	347	—	I	TA065	TC065	TD065	TE065	TF065
—	380	—	E	TA067	TC067	TD067	TE067	TF067
380...400	440	—	N	TA071	TC071	TD071	TE071	TF071
—	—	400	KN	TA863	TC863	TD863	TE863	TF863
400...415	—	—	G	TA457	TC457	TD457	TE457	TF457
440	480	—	B	TA475	TC475	TD475	TE475	TF475
—	—	440	KB	TA859	TC859	TD859	TE859	TF859
500	—	—	M	TA479	TC479	TD479	TE479	TF479
550	600	—	C	TA476	TC476	TD476	TE476	TF476

Coils, Continued



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DC Standard Control Voltage [V]	DC Coil Code	100-C09...100-C16	100-C23...100-C37, 100L-C20	100-C40, -C43	100-C60...100-C85	100-C90
		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
9*	ZR	TA766	TC766	TD766	—	—
9V Diode*	DR	—	—	—	TE766M	TF766M
12	ZQ	TA708	TC708	TD708	—	—
12V Diode	DQ	—	—	—	TE708M	TF708M
24*	ZJ	TA714	TC714	TD714	—	—
24 Diode*	DJ	TA714M	TC714M	TD714M	TE714M	TF714M
36	ZW	TA719	TC719	TD719	—	—
36V Diode	DW	—	—	—	TE719M	TF719M
48	ZY	TA724	TC724	TD724	—	—
48V Diode	DY	—	—	—	TE724M	TF724M
60	ZZ	TA774	TC774	TD774	—	—
60V Diode	DZ	—	—	—	TE774M	TF774M
64	ZB	TA727	TC727	TD727	—	—
64V Diode	DB	—	—	—	TE727M	TF727M
72	ZG	TA728	TC728	TD728	—	—
72V Diode	DG	—	—	—	TE728M	TF728M
80	ZE	TA729	TC729	TD729	—	—
80V Diode	DE	—	—	—	TE729M	TF729M
110	ZD	TA733	TC733	TD733	—	—
110V Diode	DD	—	—	—	TE733M	TF733M
115	ZP	TA734	TC734	TD734	—	—
115V Diode	DP	—	—	—	TE734M	TF734M
125	ZS	TA737	TC737	TD737	—	—
125V Diode	DS	—	—	—	TE737M	TF737M
220	ZA	TA747	TC747	TD747	—	—
220V Diode	DA	—	—	—	TE747M	TF747M
230	ZF	TA749	TC749	TD749	—	—
230V Diode	DF	—	—	—	TE749F	TF749F
250	ZT	TA751	TC751	TD751	—	—
250V Diode	DT	—	—	—	TE751F	TF751F

* Voltage operating range: 0.65...1.3 x Us.
 * Voltage operating range: 0.7...1.25 x Us.

Bulletin 193 Overload Relays with Current Transformers

For Use With	Panel Adapter Assembly Cat. No.	Overload Relay Only Cat. No.
193-HPD110	40781-607-01	193-NX23
193-DPC88	40781-607-01	193-NX24
193-DPD120	40781-607-01	193-NX25
193-DPD200	40781-607-01	193-NX26
193-EPD180	40781-607-01	193-NX27
193-EPD300	40781-607-01	193-NX28
193-FPD240	40781-607-01	193-NX29
193-FPD40	40781-607-01	193-NX30
193-GPD378*	40781-607-01	193-NX32
193-GPD630*	40781-607-01	193-NX33

* Contact kits for Cat. Nos. 100-A09...100-A30 are not available as replacement parts.