

## Product Selection: 100-C/104-C Contactors

- Compact sizes from 4...55 kW/5...75 Hp (9...97 A)
- 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



100-C Contactor



104-C Reversing Contactor

The Bulletin 100-C/104-C IEC 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 and are made of environmentally friendly materials.

### 3-Pole AC- and DC-Operated Contactors



Rated Operational Current $I_e$ [A] 40 °C (104 °F)		Ratings for Switching AC Motors: AC-2, AC-3, AC-4										Auxiliary Contacts		Cat. No. (1)		
		3-phase kW (50 Hz) [V]				Hp (60 Hz)									N.O.	N.C.
						1-Phase [V]		3-Phase [V]								
AC-3	AC-1	230	400/415	500	690	115	230	200	230	460	575	N.O.	N.C.			
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 (2)		
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 (2)		
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 (2)		
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 (2)		
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 (3)		
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 (3)		
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 (3)		
55	85	15	30	30	30	5	10	15	20	40	40	0	0	100-C55⊗00		
												1	0	100-C55⊗10		
												0	1	100-C55⊗01 (3)		
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⊗01C (3)		
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⊗01C (3)		
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 (3)		
97	130	30	55	55	55	10	20	30	30	75	75	0	0	100-C97⊗00		
												1	0	100-C97⊗10		
												0	1	100-C97⊗01 (3)		

(1) The ⊗ symbol represents the coil voltage code – see [Coil Voltage Codes on page 19](#).

(2) N.C. auxiliary contact meets mechanically linked performance per IEC 60947-5-1, Annex L.



(3) N.C. auxiliary contact meets mirror contact performance per IEC 60947-4-1, Annex F.

### 4-Pole AC- and DC-Operated Contactors

Rated Operational Current $I_e$ [A] 40 °C (104 °F)		Ratings for Switching AC Motors: AC-2, AC-3										Contact Configuration, Main Poles		Cat. No.
		3-phase kW (50 Hz) <sup>(1)</sup> [V]				Hp (60 Hz)								
						1-Phase [V]		3-Phase [V] <sup>(1)</sup>						
AC-3	AC-1	230	400/415	500	690	115	230	200	230	460	575	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	10	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

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

### Reversing AC- and DC-Operated Contactors

Rated Operational Current $I_e$ [A] 40 °C (104 °F)		Ratings for Switching AC Motors: AC-2, AC-3, AC-4										Auxiliary Contacts per Contactor		Cat. No.
		3-phase kW (50 Hz)				Hp (60 Hz)								
						1-Phase		3-Phase						
AC-3	AC-1	230V	400/415V	500V	690V	115V	230V	200V	230V	460V	575V	N.O.	N.C. <sup>(1)</sup>	
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2	1	1	104-C09⊗22
12	32	4	5.5	5.5	5.5	1	2	3	3	7-1/2	10	1	1	104-C12⊗22
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	104-C16⊗22
23	32	7.5	11	13	10	2	3	5	7-1/2	15	20	1	1	104-C23⊗22
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	1	104-C30⊗02
												1	1	104-C30⊗22
37	65	11	18.5/20	20	18.5	3	5	10	10	25	30	0	1	104-C37⊗02
												1	1	104-C37⊗22
43	85	13	22	25	22	3	7.5	10	15	30	30	0	1	104-C43⊗02
												1	1	104-C43⊗22
55	85	15	30	30	30	5	10	15	20	40	40	0	1	104-C55⊗02
												1	1	104-C55⊗22
60	100	18.5	32	37	32	5	10	15	20	40	50	0	1	104-C60⊗02
												1	1	104-C60⊗22
72	100	22	40	45	40	5	15	20	25	50	60	0	1	104-C72⊗02
												1	1	104-C72⊗22
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	1	104-C85⊗02
												1	1	104-C85⊗22
97	130	30	55	55	55	10	15	30	30	75	75	0	1	104-C97⊗02
												1	1	104-C97⊗22

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

## Coil Voltage Codes

Select a coil voltage code from the table below to complete the Cat. No.  
 Example: 120V, 60 Hz: Cat. No. 100-C09⊗10 becomes Cat. No.100-C09D10.

Hz	AC Voltages [V]										
	24	110	120	200...220	208...240	230	240	277	400...415	440	480
50 Hz	—	D	—	L	—	—	T	—	G	B	—
60 Hz	—	—	D	—	L	—	—	T	—	G	B
50/60 Hz	KJ	—	—	—	—	KF	—	—	—	—	—

Cat. No.	Description	DC Voltages [V]								
		12	24	36...48	48...72	72	110	110...125	220	220...250
100-C09...C55	Electronic with Integrated Diode	EJ	EJ	EW	EY	—	—	ED	—	EA
100-C60...C97	with Integrated Diode	—	DJ	—	—	DG	DD	—	DA	—

## Coil Terminal Position

All contactors are delivered with the coil terminals located on the line side.

For load-side coil terminations, insert a "U" prior to the coil voltage code.  
 Ordering example: Cat. No. 100-C09UD10.



Cat. No.100-C09⊗10 Line Side



Cat. No.100-C09U⊗10 Load Side

## Assignment of Contacts

Table valid for: AC / DC = 0.85...1.1 x U<sub>s</sub>, T<sub>amb</sub> = -25 °C...+60 °C (-13...140 °F), normal position (horizontal rail mounting)

### Device Combinations in Accordance with IEC 60947-1 / -4-1

Auxiliary Contact Blocks		100-C Contactors (AC and DC Control)							
Cat. No.	Circuit Diagram	Control	100-C09_⊗10 100-C12_⊗10 100-C16_⊗10 100-C23_⊗10 	100-C09_⊗01 100-C12_⊗01 100-C16_⊗01 100-C23_⊗01 	100-C30_⊗00 100-C37_⊗00 100-C43_⊗00 100-C55_⊗00 100-C60_⊗00 100-C72_⊗00 100-C85_⊗00 100-C97_⊗00 	100-C09_⊗400 100-C12_⊗400 100-C16_⊗400 100-C23_⊗400 100-C40_⊗400 100-C90_⊗400 	100-C09_⊗300 100-C12_⊗300 100-C16_⊗300 100-C23_⊗300 	100-C09_⊗200 100-C12_⊗200 100-C16_⊗200 100-C23_⊗200 100-C40_⊗200 100-C90_⊗200 	

### Side Mounting <sup>(1)</sup>

100-SB01		AC/DC	10 + 01 = 11	01 + 01 = 02 <sup>(2)</sup>	00 + 01 = 01	00 + 01 = 01	00 + 01 = 01	00 + 01 = 01
100-SB10		AC/DC	10 + 10 = 20 <sup>(2)</sup>	01 + 10 = 11	00 + 10 = 10	00 + 10 = 10	00 + 10 = 10	00 + 10 = 10
100-SB02		AC/DC	10 + 02 = 12 <sup>(2)</sup>	—	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02
100-SB11		AC/DC	10 + 11 = 21 <sup>(2)</sup>	01 + 11 = 12 <sup>(2)</sup>	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11

Device Combinations in Accordance with IEC 60947-1 / -4-1 (Continued)

Auxiliary Contact Blocks		100-C Contactors (AC and DC Control)							
Cat. No.	Circuit Diagram	Control	100-C09_⊗10 100-C12_⊗10 100-C16_⊗10 100-C23_⊗10	100-C09_⊗01 100-C12_⊗01 100-C16_⊗01 100-C23_⊗01	100-C30_⊗00 100-C37_⊗00 100-C43_⊗00 100-C55_⊗00 100-C60_⊗00 100-C72_⊗00 100-C85_⊗00 100-C97_⊗00	100-C09_⊗400 100-C12_⊗400 100-C16_⊗400 100-C23_⊗400 100-C40_⊗400 100-C90_⊗400	100-C09_⊗300 100-C12_⊗300 100-C16_⊗300 100-C23_⊗300	100-C09_⊗200 100-C12_⊗200 100-C16_⊗200 100-C23_⊗200 100-C40_⊗200 100-C90_⊗200	
100-SB20		AC/DC	10 + 20 = 30 <sup>(2)</sup>	01 + 20 = 21 <sup>(2)</sup>	00 + 20 = 20	00 + 20 = 20	00 + 20 = 20	00 + 20 = 20	
100-SBL11 <sup>(3)</sup>		AC/DC	10 + L11 = L21 <sup>(2)</sup>	01 + L11 = L12 <sup>(2)</sup>	00 + L11 = L11	00 + L11 = L11	00 + L11 = L11	00 + L11 = L11	
<b>Front Mounting <sup>(4)</sup></b>									
100-FA02, 100-FAB02		AC/DC	10 + 02 = 12	01 + 02 = 03	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02	
100-FA11, 100-FAB11		AC/DC	10 + 11 = 21	01 + 11 = 12	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	
100-FB11, 100-FBB11		AC/DC	-	-	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	
100-FC11, 100-FCB11		AC/DC	10 + 11 = 21	-	-	-	-	-	
100-FA02, 100-FAB02		AC/DC	10 + 02 = 12	01 + 02 = 03	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02	
100-FA11, 100-FAB11		AC/DC	10 + 11 = 21	01 + 11 = 12	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	
100-FB11, 100-FBB11		AC/DC	-	-	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	00 + 11 = 11	
100-FC11, 100-FCB11		AC/DC	10 + 11 = 21	-	-	-	-	-	
100-FA20, 100-FAB20		AC/DC	10 + 20 = 30	01 + 20 = 21	00 + 20 = 20	00 + 20 = 20	00 + 20 = 20	00 + 20 = 20	
100-FBL11 <sup>(5)</sup>		AC/DC	-	-	00 + L11 = L11	00 + L11 = L11	00 + L11 = L11	00 + L11 = L11	
100-FA22, 100-FAB22		AC/DC	10 + 22 = 32	01 + 22 = 23	00 + 22 = 22	00 + 22 = 22	00 + 22 = 22	00 + 22 = 22	
100-FB22, 100-FBB22		AC/DC	-	-	00 + 22 = 22	00 + 22 = 22	00 + 22 = 22	00 + 22 = 22	

Device Combinations in Accordance with IEC 60947-1 / -4-1 (Continued)

Auxiliary Contact Blocks		100-C Contactors (AC and DC Control)						
Cat. No.	Circuit Diagram	Control	100-C09_⊗10 100-C12_⊗10 100-C16_⊗10 100-C23_⊗10	100-C09_⊗01 100-C12_⊗01 100-C16_⊗01 100-C23_⊗01	100-C30_⊗00 100-C37_⊗00 100-C43_⊗00 100-C55_⊗00 100-C60_⊗00 100-C72_⊗00 100-C85_⊗00 100-C97_⊗00	100-C09_⊗400 100-C12_⊗400 100-C16_⊗400 100-C23_⊗400 100-C40_⊗400 100-C90_⊗400	100-C09_⊗300 100-C12_⊗300 100-C16_⊗300 100-C23_⊗300	100-C09_⊗200 100-C12_⊗200 100-C16_⊗200 100-C23_⊗200 100-C40_⊗200 100-C90_⊗200
100-FC22, 100-FCB22		AC/DC	10 + 22 = 32	—	—	—	—	—
100-FA31, 100-FAB31		AC/DC	10 + 31 = 41	01 + 31 = 32	00 + 31 = 31	00 + 31 = 31	00 + 31 = 31	00 + 31 = 31
100-FA40, 100-FAB40		AC/DC	10 + 40 = 50	01 + 40 = 41	00 + 40 = 40	00 + 40 = 40	00 + 40 = 40	00 + 40 = 40
100-FAL22 (2)		AC/DC	10 + L22 = L32	01 + L22 = L23	00 + L22 = L22	00 + L22 = L22	00 + L22 = L22	00 + L22 = L22
100-FA04, 100-FAB04		AC/DC	10 + 04 = 14	01 + 04 = 05	00 + 04 = 04	00 + 04 = 04	00 + 04 = 04	00 + 04 = 04
100-FA13, 100-FAB13		AC/DC	10 + 13 = 23	01 + 13 = 14	00 + 13 = 13	00 + 13 = 13	00 + 13 = 13	00 + 13 = 13
100-FB02, 100-FBB02		AC/DC	10 + 02 = 12	01 + 02 = 03	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02	00 + 02 = 02
100-FB20, 100-FBB20		AC/DC	10 + 20 = 30	01 + 20 = 21	00 + 20 = 20	00 + 20 = 20	00 + 20 = 20	00 + 20 = 20
100-FC31, 100-FCB31		AC/DC	10 + 31 = 41	01 + 31 = 32	00 + 31 = 31	00 + 31 = 31	00 + 31 = 31	00 + 31 = 31

- (1) Up to 8 auxiliary contacts possible: contactor + front mounted (AC max. 4 N.C. / DC max. 4 N.C.), side mounted (AC max. 2 N.O. / DC max. 2 N.O. and max. 2 N.C.).
- (2) Double numbering: because of double numbering only left-side mounting is recommended.
- (3) Early make and/or late break.
- (4) Up to 8 auxiliary contacts possible: contactor + front mounted (AC max. 4 N.C. / DC max. 4 N.C.), side mounted (AC max. 2 N.O. / DC max. 2 N.O. and max. 2 N.C.).
- (5) Early make and/or late break.