

Auxiliary Contacts



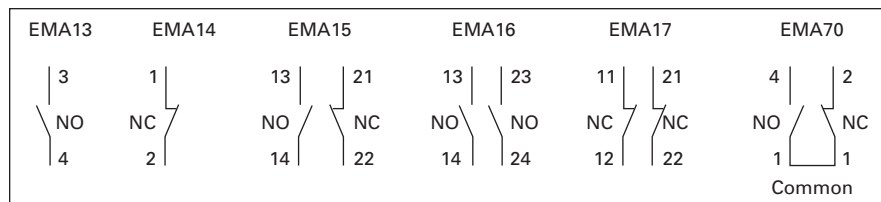
Auxiliary Contacts are available for mounting on Eaton's Cutler-Hammer Intelligent Technologies (IT) Electro-Mechanical Contactors and Starters. The various choices available for non-reversing models are shown in **Tables 33-12 and 33-13**, and their ratings in **Tables 33-14 – 33-16**. For reversing models, the number of auxiliaries indicated is for each of the contactors/starters in the assembly.

Table 33-12. Auxiliary Contact Availability — Sizes 00 – 5

Top Mounted (Maximum Auxiliaries per Contactor/Starter) ②							
Contactor/Starter Size					Contact Type	Catalog Number	Price U.S. \$
Size 00, 0	Size 1	Size 2	Size 3, 4	Size 5			
3	3	3	3	—	1NO	EMA13	
3	3	3	3	—	1NC	EMA14	
2	2 ①	3	3	—	1NO-1NC	EMA15	
2	2 ①	3	3	—	2NO	EMA16	
2	2 ①	3	3	—	2NC	EMA17	
2	3	3	3	3	Logic Level 1NO-1NC	EMA70	

① Other combinations: Single, Dual, Single; Dual, Single, Dual; and Dual, Logic Level, Dual.

② For reversers, multiply quantities by two.

**Figure 33-6. Connecting Diagram — Sizes 00 – 5****Table 33-13. Auxiliary Contact — Size 5**

Auxiliary Contacts per Non-reversing and Reversing Contactor or Starter				
Max	Contact Type	Description	Catalog Number	Price U.S. \$
2	1NO	Base auxiliary (max. 1 per side)	C320KGS41	
2	1NO-1NC	Base auxiliary (max. 1 per side)	C320KGS42	
6	1NO	C320KGS41 or C320KGS42 required (max. 3 Add-on auxiliaries per side)	C320KGS20	
2	1NO Logic Level	C320KGS41 or C320KGS42 required (max. 1 Add-on auxiliary per side)	C320KGS20L	
6	1NC	C320KGS41 or C320KGS42 required (max. 2 Add-on auxiliaries per side)	C320KGS21	
2	1NC Logic Level	C320KGS41 or C320KGS42 required (max. 1 Add-on auxiliary per side)	C320KGS21L	
2	1NO-1NC	C320KGS41 or C320KGS42 required (max. 1 Add-on auxiliary per side)	C320KGS22	
2	1NO-1NC Logic Level	C320KGS41 or C320KGS42 required (max. 1 Add-on auxiliary per side)	C320KGS22L ③	
3	1NO-1NC Logic Level	Front mounted only	EMA70 ④	

③ Form C contacts.

④ For reversers, multiply quantities by two.

Notes:

- Side Mounted — Maximum (10) Total Circuits
- Front Mounted — Maximum (6) Total Circuits ④
- Maximum 4 auxiliaries per side (base + 3 side mounted)

- EMASA/B __ have been superseded by the above Catalog Numbers.

Table 33-14. IEC Ratings

DC-13		AC-15	
U_e Voltage	I_e Amps.	U_e Voltage	I_e Amps.
24	5	48	8
48	2.5	120	6
125	1.1	240	4
250	.55	440	2

Table 33-15. NEMA A600 Ratings

Current	AC Voltage			
	120	240	480	600
Make and Interrupting	60	30	15	12
Break	6	3	1.5	1.2
Continuous	10	10	10	10
Thermal	10	10	10	10

Table 33-16. NEMA P300 Ratings

Current	DC Voltage	
	125	250
Make and Interrupting	1.1	.55
Break	1.1	.55
Continuous	5	5
Thermal	5	5

Table 33-17. EMA70 Auxiliary Contact

DC-12		AC-12	
U_e	I_e	U_e	I_e
30	.1	250	.1

Table 33-18. C320KGS20L, C320KGS21L, C320KGS22L, Auxiliary Contact Ratings

DC-12		AC-12	
U_e	I_e	U_e	I_e
80	0.1	250	0.1

Auxiliary Contacts

Contact Configuration Code

This two-digit code is found on the auxiliary contact to assist in identifying the specific contact configuration. The first digit indicates the quantity of NO contacts and the second indicates the quantity of NC contacts.

NEMA Sizes 00 – 2 — IEC Sizes A – K

The auxiliary contacts listed below are designed for installation on Freedom Series starters and contactors. Snap-on design facilitates quick, easy installation.

These bifurcated design contact blocks, featuring silver cadmium alloy contacts, are well suited for use in very low energy (logic level) circuits.



Side Mounted



Top Mounted

Table 33-134. Product Selection

Description	Contact Configuration Code ^①	Catalog Number	Price U.S. \$
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Side Mounted

1NO 1NC	10 01	C320KGS1 C320KGS2	
1NO-1NC 2NO 2NC 1NO-1NCI 1NO (EC)-1NC (LO) 1NCI	11 20 02 N/A N/A N/A	C320KGS3 C320KGS4 C320KGS5 C320KGS6 C320KGS7 C320KGS8	

Top Mounted

1NO 1NC	10 01	C320KGT1 C320KGT2	
1NO-1NC 2NO 2NC 1NO-1NCI 1NO (EC)-1NC (LO) 1NCI	11 20 02 N/A N/A N/A	C320KGT3 C320KGT4 C320KGT5 C320KGT6 C320KGT7 C320KGT8	
3NO 2NO-1NC 1NO-2NC 3NC 4NO	30 21 12 03 40	C320KGT9 C320KGT10 C320KGT11 C320KGT12 C320KGT13	
3NO-1NC 2NO-2NC 1NO-3NC 4NC 3NO-1NCI	31 22 13 04 N/A	C320KGT14 C320KGT15 C320KGT16 C320KGT17 C320KGT18	
2NO-1NCI-1NC 2NO-1NO (EC)-1NC (LO) 1NO-1NC-1NO (EC)-1NC (LO)	N/A N/A N/A	C320KGT19 C320KGT20 C320KGT21	

Note: NCI = Normally Closed early opening designed for use in reversing applications. EC = Early Closing. LO = Late Opening.

^① For reference only — not part of Catalog Number. See above.

NEMA Sizes 3 – 8 — IEC Sizes L – Z

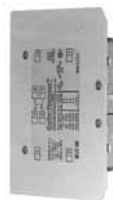
Base
Auxiliary
Contact
Cat. No.
C320KGS42Auxiliary
Contact
Cat. No.
C320KGS22

Table 33-135. Product Selection

Circuit	Contact Configuration Code ^②	Catalog Number	Price U.S. \$
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Base Auxiliary Contacts — NEMA Sizes 3 – 5, IEC Sizes L – S

		NEMA Size 3 IEC Sizes L – N	NEMA Sizes 4 – 5 IEC Sizes P – S	
NO NO-NC	10 11	C320KGS31 C320KGS32	C320KGS41 C320KGS42	

Auxiliary Contacts — NEMA Sizes 3 – 5, IEC Sizes L – S

		Catalog Number	
NO NC NO-NC ^③	10 01 11	C320KGS20 C320KGS21 C320KGS22	

Auxiliary Contacts, Sealed Logic Level – NEMA Sizes 3 – 5, IEC Sizes L – S

		Catalog Number	
NO NC NO-NC ^④	10 01 11	C320KGS20L C320KGS21L C320KGS22L	

Auxiliary Contacts — NEMA Sizes 6 – 8, IEC Sizes T – Z

		Size	Catalog Number	
NO-NC 2NO-2NC 2NO-2NC	11 22 22	NEMA 8, IEC Z NEMA 6 – 7 IEC T – X	C320KA5 C320KA6 C320KA8	

^② For reference only — not part of Catalog Number. See above left.

^③ NO-NC occupies two positions — L2 and L3, or R2 and R3.

See Figure 33-30 on Page 33-97.

^④ Form C contacts.

Auxiliary Contact Ratings (Amperes)

Table 33-136. Ratings — NEMA A600

Current	AC Volts			
	120V	240V	480V	600V
Make and Interrupting	60	30	15	12
Break	6	3	1.5	1
Continuous	10	10	10	10

Table 33-137. Ratings — NEMA P300

Continuous Thermal Rating: 5A	
DC Volts	Make/Break Amperes
125	1.10
250	.55

Table 33-138. Ratings — Logic Level

Minimum Ratings for Logic Level and Hostile Atmosphere Application	
Minimum Amperes	20 mA
Minimum Volts	24V AC/DC

Table 33-139. Ratings C320KGS20L, C320KGS21L, C320KGS22L

DC-12		AC-12	
Ue	Ie	Ue	Ie
80	0.1	250	0.1

Discount Symbol 1CD1C

Auxiliary Contact Location

NEMA Sizes 00 – 2, IEC Sizes A – K

The sketches below illustrate the maximum number of auxiliary contacts that can be assembled to a contactor or starter and their locations.

Table 33-140. Auxiliary Contacts

Catalog Number	Size	Poles	Available Mounting Positions ^{①②}	
			Open Type	Enclosed
AE16	A – K	3	T1, L1	L1
AN16	00 0 – 2	3 3	T1, L1, R1 T1, L1	L1 L1
AE56	A – K	3	L1, R1	L1, R1
AN56	00 – 2	3	T1, T2	—
CE15	A – C	2 – 4	T1, L1, R1	L1, R1
	D – K	3	T1, L1	L1
	G – J	4	T1, R1	—
	G – J	5	T1	—
CN15	00	2 – 4	T1, L1, R1	L1
	0 – 2	2 – 3	T1, L1	L1
	1, 2	4	T1, L1	—
	1, 2	5	T1, L1	—
CN35	10A	2 – 4	T1, L1, R1	L1
	20 – 60A	2 – 3	T1, L1	L1
	60A	4	T1, L1	—
	60A	5	T1, L1	—
CE55	A – K	3	L1, R1	L1, R1
CN55	00 – 2	3	T1, T2	—

① Available positions on contactors or starters other than what is factory installed.

② When a pneumatic timer is mounted on contactor, only side mounted auxiliary contact positions are available. The solid-state timer, when added, takes up side mounted auxiliary contact position.

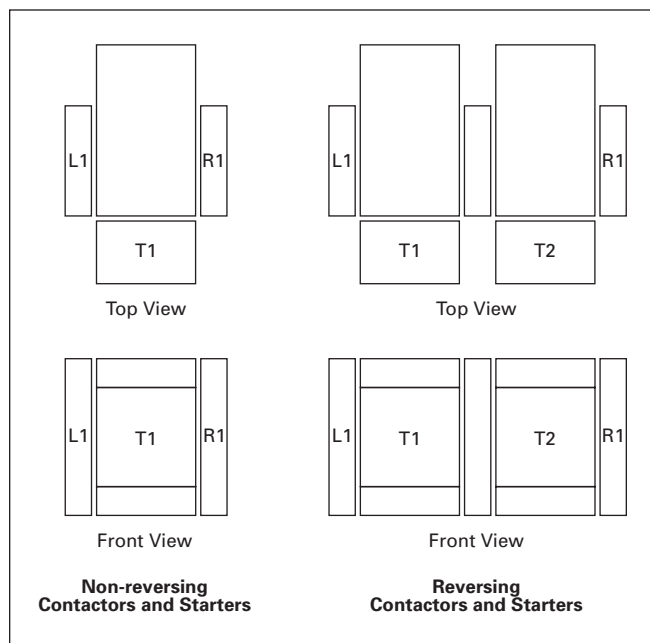


Figure 33-30. Auxiliary Contact Location

NEMA Sizes 3 – 8, IEC Sizes L – Z

The sketches below illustrate the maximum number of auxiliary contacts that can be assembled to a contactor and their locations.

Note: A Base Auxiliary Contact must be added in position R1 before additional auxiliary contacts can be mounted on NEMA Size 3 and IEC Sizes L – N, or in L1 on NEMA Sizes 4 – 5 and IEC Sizes P – S.

Table 33-141. Mounting Positions

Size	Available Mounting Positions ^③
NEMA Size 3, IEC Sizes L – N	R2, R3, L1, L2, L3
NEMA Sizes 4 – 5, IEC Sizes P – S	L2, L3, R1, R2, R3
NEMA Sizes 6 – 7, IEC Sizes T – X	R1
NEMA Size 8, IEC Size Z	L2, R2

③ Available positions on contactors or starters other than what is factory installed.

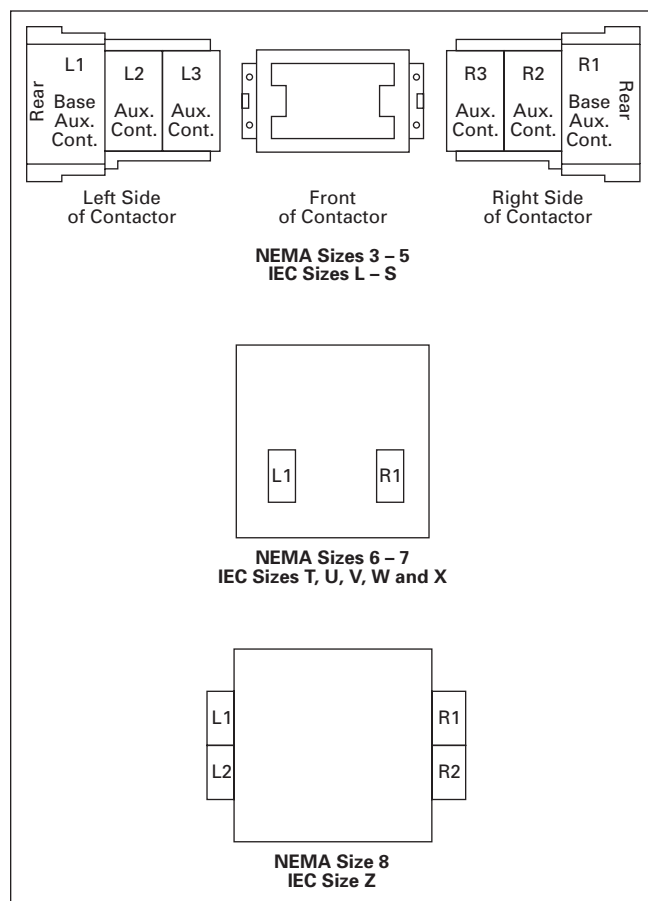


Figure 33-31. Auxiliary Contact Location