

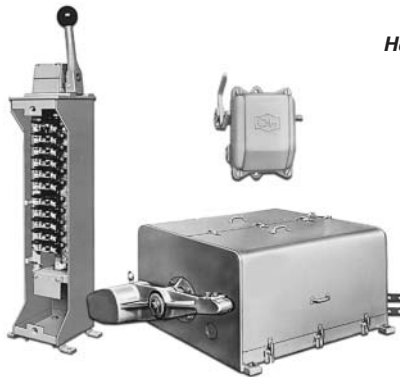
# Crane Control

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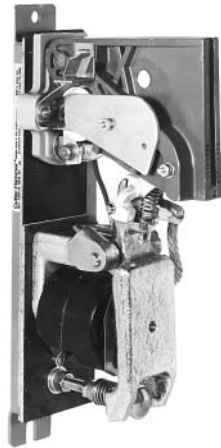
*Heavy-Duty Brakes*



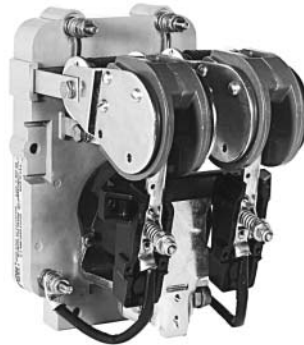
*Master and Limit Switch Family*



*Contactors and Relays*



**Cat. No. C80FJ421N00**  
**Size 4 — NC Contactor**



**Cat. No. C80DG221N00**  
**Size 2 — 2 Pole Contactor**

**Product Description**

These dc mill type contactors are designed for heavy industry service and are suitable for use on moving machinery. The contactors listed in this section are for surface mounting on steel panels and front-of-panel wiring. The power stud assembly is mounted on the side of the contactor, rather than as part of a separate mounting kit.

These contactors utilize dc coils. If control power is 120 Vac, the rectifier module listed on **Page 44** should be used in conjunction with a 100 V coil contactor.

Auxiliary contacts and mechanical interlocks for use with these contactors are listed on the following pages.

The contactors feature forged steel armature levers and magnet frames for superior physical strength. Self-lubricating bearings eliminate the need for lubricating the contactor. Hot-molded arc chute assemblies contain no asbestos and have better arc extinction characteristics for longer contact life. The short stroke armature results in a mechanical life of more than 20 million operations.

The arc chutes and magnetic blowout structures are designed to quickly absorb and dissipate the heat caused by arcing. In addition to increasing contact life, the molded arc chute

offers advantages of improved mechanical life and cooling characteristics plus superior arc-tracking resistance. The arc chutes are hinged to provide front accessibility, easy inspection or replacement of contacts without removing any other contactor parts.

Construction of the pivot pin assembly provides positive pin locking so that the bearing pin remains stationary with respect to the operating movement of the forged armature.

A leaf spring attached to the unit base and the arc chute holds the chute in the "down" or functioning position. The addition of this assembly resists the violent vibrations encountered on open hearth charging machines and on a wide variety of crane applications.

Pre-drilled mounting holes are provided on the unit base to accommodate interlock mounting brackets. An interlock is merely attached to a bracket and the assembly is then bolted in the desired operating position on the contactor.

**DC Drive Service Contactors**

Eaton's Cutler-Hammer industrial type contactors modified for dc drive service are provided with silver faced contact tips, to provide optimum contact structure and minimum maintenance under continuous duty service. These contactors are designed for steel panel surface mounting.

Power studs are a part of the contact or assembly.

**Standards and Certifications**

- CMAA 5.6.6-2.
- NEMA ICS3-441, 442, 443.
- NEMA ICS2-331.23.
- NEMA ICS2-110.05.02.
- NEMA ICS2-125.21.02.

**Technical Data and Specifications**

- Current Range: 5 to 1800 amperes.
- Voltage: 600 Vdc.
- Operation: Magnetic.
- Mounting: Steel Panel.
- Mechanical Life: 20 million operations.
- Electrical Life: 500,000 operations.
- Interlock Ratings:
  - 10 amperes continuous
  - 2.2 amperes inductive breaking at 115 V
  - 1.1 amperes inductive breaking at 230 V
- Duty:
  - Continuous (for intermittent ratings consult factory)

**Table 75. Coil Ampere Data**

NEMA Size	No. of Poles	100 Vdc Coil	115 Vdc Coil	230 Vdc Coil
2	1NO	.288	.263	.125
	2NO	.339	.274	.140
3	1NO	.268	.235	.112
	1NC	.339	.274	.140
4	1NO	.268	.235	.112
	1NC	.339	.274	.140
5	1NO	.433	.391	.187
	1NC	.424	.329	.164
6	1NO	.450	.365	.200
	1NC	1.832/ .597 ①	1.337/ .485 ①	.714/ .267 ①
6A	1NO	.450	.365	.200
8	1NO	.787 ②	.757 ②	.438 ②

① Inrush/sealed current.  
② Coil used with series resistor.

## Options

### Other Options Available

- Silver Faced Contact Tips:
  - Can be supplied in place of standard contact tips
  - Note:** Use silver tips for non-arcing or long (8 hour) extended continuous current applications.
- Special Voltage Coils:
  - Coils with dc voltage ratings other than those listed are available
- 1800 Ampere Contactors:
  - Size 8 A (not a NEMA size) contactors are also available
- Consult factory for pricing.

## Accessories

### Auxiliary Contacts

Table 76. Mounting Kits for Auxiliary Contacts

Separate for Field Installation					Factory Installed			
For Size and Type of Contactor		Location of Auxiliary Contacts on Contactor and Number of Units Kit Will Mount		Maximum Number of Units Acceptable per Contactor	Mounting Kit Catalog Number	*	Suffix Code Letter for Factory Installation	Adder *
NEMA Size	Contactor Power Pole Configuration	Location	No. of Units					
2	1NO	Bottom — Right and Left	2	2	10923H11		B	
	1NO or 1NO Ltl	Side — Right or Left	1	1	10923H12		A	
		2NO	Bottom — Right and Left	1	2	10923H14		B
	2NO-1NC		Side — Left	1	2	10923H15		A
		2NO-1NC	Side — Right	1	2	10923H16		A
3, 4 and 5	1NO		Bottom — Right and Left	2	2	10923H19		B
		Bottom — Left Only	1	1	10923H38		B	
	1NO Ltl or 1NC	Bottom — Right	1	1	10923H20		B	
6, 6A, 8 and 8A	1NO	Bottom — Right and Left	2	2	10923H19		B	
		Bottom — Left Only	1	1	10923H38		B	
	1NO Ltl	Bottom — Right	1	1	10923H20		B	
	1NC	Bottom — Right	1	1	①		—	

① 10923H19 supplied with contactor as standard. No charge.

Table 77. Auxiliary Contacts — without Mounting Kit All Sizes Bottom Mounted

Separate for Field Installation			Factory Installed			
Contact Configuration	Catalog Number	*	Suffix Code LH Position	Adder *	Suffix Code RH Position	Adder *
None	—		0		0	
1NO	10923H1		1		1	
2NO	10923H2		2		2	
1NO-1NC	10923H3		3		3	
1NC	10923H4		4		4	
2NC	10923H5		5		5	

Table 78. Auxiliary Contacts — without Mounting Kit Size 2 Side Mount Only

Separate for Field Installation			Factory Installed			
Contact Configuration	Catalog Number	*	Suffix Code LH Position	Adder *	Suffix Code RH Position	Adder *
None	—		0		0	
1NO	10923H6		1		1	
2NO	10923H7		2		2	
1NO-1NC	10923H8		3		3	
1NC	10923H9		4		4	

## Rectifiers

Table 79. Rectifier Module

Description	Contactor Size	Catalog Number	*
120 Vac Input 100 Vdc Output 3.5 Amps	All	C81EB	

Discount Symbol ..... 18CD-4

\* Consult Sales Office for Pricing

**Mounting Kits and Mechanical Interlocks**

**Table 80. Contactor Mounting Kits ① and Mechanical Interlocks**

NEMA Size	No. of Poles	Type of Mounting	For Metal Panels	
			Catalog Number	*
<b>Mounting Kits</b>				
3, 4	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81AEA11 C81AEA13	
5	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81AGA11 C81AGA13	
6, 6A	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81AJA11 C81AJA13	
8, 8A	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81ALA11 C81ALA13	
<b>Mechanical Interlocks</b>				
2	1 2 3	Surface	C81DDA11 C81DDA12 C81DDA13	
3, 4	1	Surface Elevated	C81DEA11 C81DEA21	
5	1	Surface Elevated	C81DGA11 C81DGA21	
6, 6A	1	Surface Elevated	C81DJA11 C81DJA21	
8, 8A	1	Surface Elevated	C81DLA11 C81DLA21	

① Mounting kits include power studs and stud mounting, as well as contactor mounting hardware, but do not include lugs.

**Renewal Parts**

**Table 81. Renewal Parts ②**

Description	Size 2, 1-Pole, 2-Pole 3-Pole and Ltl 25 & 50 Ampere	Size 3, 1-Pole NO, NC and Ltl 100 Ampere	Size 4, 1-Pole NO, NC and Ltl 150 Ampere	Size 5, 1-Pole NO, NC and Ltl 300 Ampere	Size 6, 1-Pole NO, NC and Ltl 600 Ampere	Size 6A, 1-Pole NO, NC and Ltl 810 Ampere	Size 8, 1-Pole NO 1350 Ampere
	Part Number	Part Number	Part Number	Part Number	Part Number	Part Number	Part Number
<b>Set of Contacts</b>							
1-Pole Copper	6-599	6-189	6-189	6-189-3	6-189-4	6-189-4	6-215
1-Pole Silver	—	6-189-5	6-189-5	6-189-7	6-189-8	6-189-8	6-215-2
2-Pole Copper	6-169-4	—	—	—	—	—	—
3-Pole Copper	6-169-5	—	—	—	—	—	—
<b>Arc Shield</b>							
Right-Hand	73-2676-2	62-791	62-791	62-793	62-840	62-840	62-804
Left-Hand	73-2676	62-791-2	62-791-2	62-793-2	62-840-2	62-840-2	62-804
<b>Coils</b>							
1-Pole NO 100 V	9-1549-18	9-1583-15	9-1583-15	9-1589-10	9-1688-8	9-1688-8	9-547-7 ④
115 V	9-1549-2	9-1583-2	9-1583-2	9-1589-2	9-1688-2	9-1688-2	9-547-7 ④
230 V	9-1549-1	9-1583-1	9-1583-1	9-1589-1	9-1688-1	9-1688-1	9-547-4 ④
1-Pole NC 110 V	—	9-1585-18	9-1585-18	9-967-13	9-1717-4	—	—
115 V	—	9-1585-2	9-1585-2	9-967-8	9-1717-1	—	—
230 V	—	9-1585-1	9-1585-1	9-967-7	9-1717-2	—	—
1-Pole Ltl ③ 100 V	9-1549-18	9-1583-15	9-1583-15	9-1589-10	9-1688-8	—	—
115 V	9-1549-2	9-1583-2	9-1583-2	9-1589-2	9-1688-2	—	—
230 V	9-1549-1	9-1583-1	9-1583-1	9-1589-1	9-1688-1	—	—
2-Pole 100 V	9-1585-18	—	—	—	—	—	—
115 V	9-1585-2	—	—	—	—	—	—
230 V	9-1585-1	—	—	—	—	—	—
3-Pole 110 V	9-1585-18	—	—	—	—	—	—
115 V	9-1585-2	—	—	—	—	—	—
230 V	9-1585-1	—	—	—	—	—	—

② For prices refer to Eaton's parts distributor or call factory.

③ Magnet closing coil only. If holdout coil is required, give number stamped on coil or advise Bulletin or Serial Number of controller.

④ Series resistor used with coil for voltage shown.

Discount Symbol ..... **18CD-4**

\* Consult Sales Office for Pricing

DC Contactors — Type C80

Dimensions

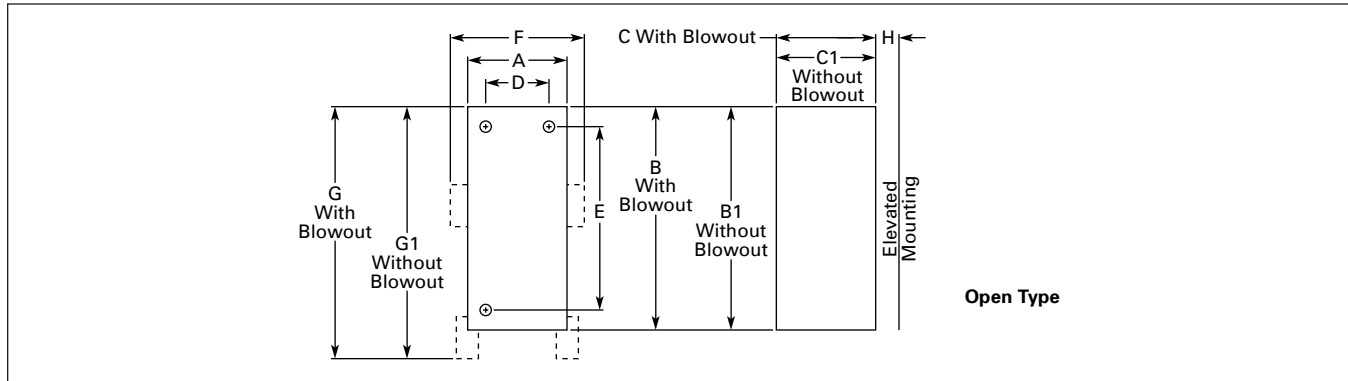


Figure 24. Approximate Dimensions and Shipping Weights

Table 82. Type C80

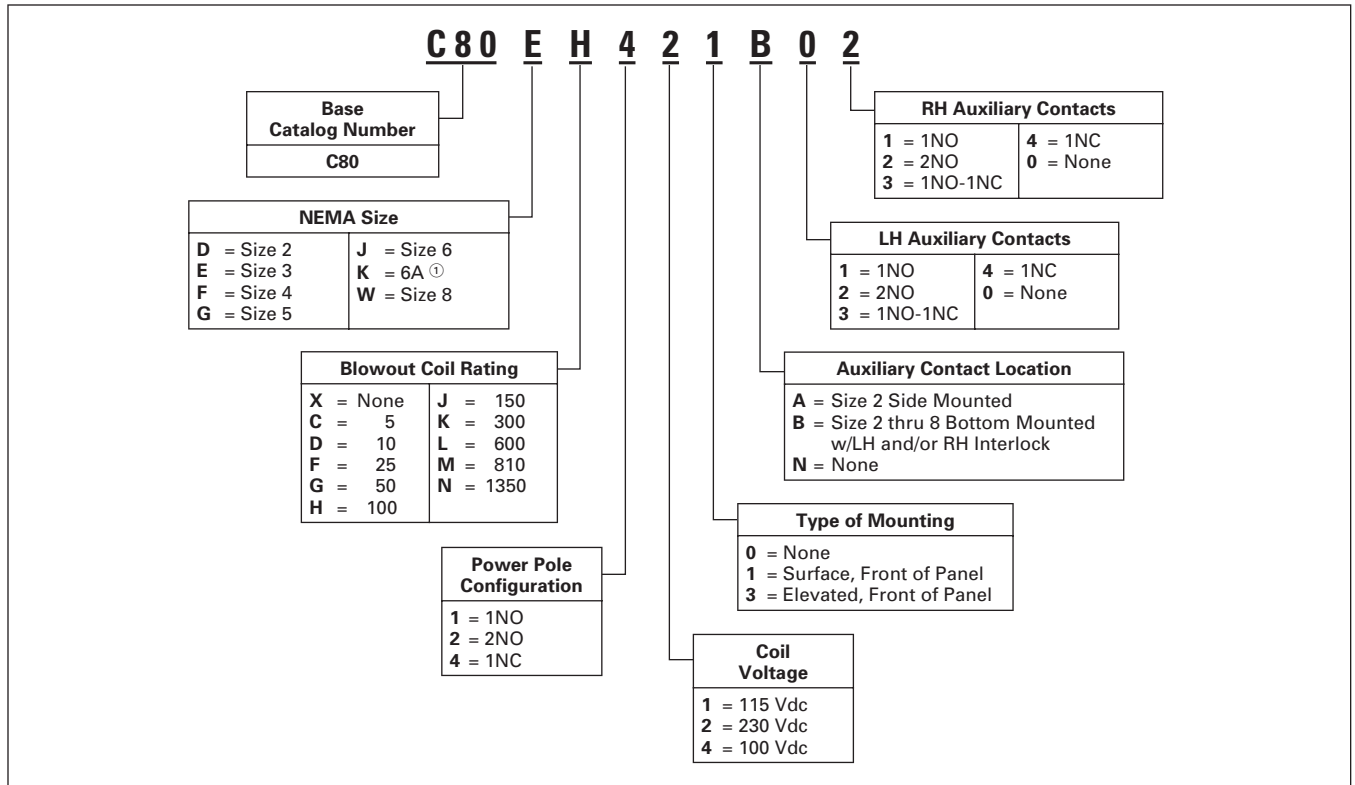
Size	Poles	Approximate Dimensions in Inches (mm)											Ship. Wt. Lbs. (kg)	Stud Size		
		Wide		High	Deep		Mounting		With Auxiliary Contacts			H			Min. Arc Clearance	
		A	B	B1	C	C1	D	E	F	G	G1	250 V			600 V	
<b>Open Type DC Contactors</b>																
2	1NO	3 (76.2)	8.38 (212.9)	6.5 (165.1)	6 (152.4)	5.38 (136.7)	2.25 (57.2)	4.5 (114.3)	7.38 (187.5)	10.88 (276.4)	9.13 (231.9)	—	.59 (15.1)	.91 (23.0)	6 (2.7)	1/4-20
	2NO	5.75 (146.1)	8.88 (225.6)	8.88 (225.6)	6.88 (174.8)	6.5 (165.1)	5 (127.0)	4.63 (117.6)	10.13 (257.3)	11.38 (289.1)	11.38 (289.1)	—	1.19 (30.2)	2.19 (55.6)	10 (4.5)	
	2NO-1NC	5.75 (146.1)	12.63 (320.8)	12.63 (320.8)	6.88 (174.8)	6.5 (165.1)	5 (127.0)	8.38 (212.9)	10.13 (257.3)	—	—	—	1.19 (30.2)	2.19 (55.6)	13 (5.9)	
3, 4	1NO	4.25 (108.0)	12.13 (308.1)	12.13 (308.1)	7.25 (184.2)	6.38 (162.1)	—	11.25 (285.8)	4.5 (114.3)	12.13 (308.1)	12.13 (308.1)	1.63 (41.4)	2.75 ① (69.9)	3.75 ② (95.3)	11 (5)	3/8-16
	1NC	4.25 (108.0)	13.63 (346.2)	13.63 (346.2)	7.25 (184.2)	5.63 (143.0)	—	12.75 (323.9)	5 (127.0)	13.63 (346.2)	13.63 (346.2)	1.63 (41.4)	4.25 ① (108.0)	5.25 ② (133.4)	13 (5.9)	
5	1NO	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	10 (254.0)	8 (203.2)	1.25 (31.8)	16 (406.4)	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	1.88 (47.8)	3.5 (88.9)	4.5 (114.3)	26 (12)	1/2-13
	1NC	5.25 (133.4)	18.88 (479.6)	16.88 (428.8)	10 (254.0)	7.5 (190.5)	1.25 (31.8)	18 (457.2)	6.13 (155.7)	18.88 (479.6)	18.88 (479.6)	1.88 (47.8)	3 (76.2)	4 (101.6)	34 (15)	
6	1NO	7.13 (181.1)	18.75 (476.3)	16.88 (428.8)	12.25 (311.2)	9.5 (241.3)	1.25 (31.8)	17.5 (444.5)	7.13 (181.1)	18.75 (476.3)	18.75 (476.3)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	43 (20)	3/4-12
	1NC	7.25 (184.2)	22.88 (581.2)	18.88 (479.6)	12.25 (311.2)	9.88 (251.0)	1.25 (31.8)	22 (558.8)	7.25 (184.2)	22.88 (581.2)	22.88 (581.2)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	66 (30)	
6A	1NO	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	12.25 (311.2)	9.5 (241.3)	1.25 (31.8)	17.5 (444.5)	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	45 (20)	3/4-12
8, 8A	1NO	9.5 (241.3)	24 (609.6)	22.5 (571.5)	17 (431.8)	14.88 (378.0)	7 (177.8)	10 (254.0)	9.5 (241.3)	24 (609.6)	24 (609.6)	2 (50.8)	8 (203.2)	10 (254.0)	130 (59)	1/2 hole
<b>Definite Purpose Contactors</b>																
260A	1NO	4.25 (108.0)	12.13 (308.1)	12.13 (308.1)	7.25 (184.2)	6.38 (162.1)	—	11.25 (285.8)	4.5 (114.3)	12.13 (308.1)	12.13 (308.1)	1.63 (41.4)	2.5 (63.5)	3.5 (88.9)	11 (5)	3/8-16
	1NC	4.25 (108.0)	13.63 (346.2)	13.63 (346.2)	7.25 (184.2)	5.63 (143.0)	—	12.75 (323.9)	5 (127.0)	13.63 (346.2)	13.63 (346.2)	1.63 (41.4)	2.5 (63.5)	3.5 (88.9)	13 (5.9)	
480A	1NO	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	10 (254.0)	8 (203.2)	1.25 (31.8)	16 (406.4)	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	1.88 (47.8)	3 (76.2)	4 (101.6)	26 (12)	1/2-13
	1NC	5.25 (133.4)	18.88 (479.6)	16.88 (428.8)	10 (254.0)	7.5 (190.5)	1.25 (31.8)	18 (457.2)	6.13 (155.7)	18.88 (479.6)	18.88 (479.6)	1.88 (47.8)	3 (76.2)	4 (101.6)	34 (15)	
960A	1NO	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	12.25 (311.2)	9.5 (241.3)	1.25 (31.8)	17.5 (444.5)	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	45 (20)	3/4-12

① May be reduced to 2.5 (63.5) for Size 3.

② May be reduced to 3.5 (88.9) for Size 3.

**Catalog Number Selection**

Table 83. DC Contactor Catalog Numbering System



<sup>①</sup> Not an actual NEMA size.

## Product Selection

### When Ordering

■ Select complete Catalog Number from **Tables 84, 85 or 86** below. If contactor is to include factory assembled auxiliary contacts, change **N00** Suffix to correct Suffix letter and digits from **Tables 76 and 77** on **Page 44**.

Example: Catalog Number for elevated Size 3 NO contactor, 230 Vdc coil with 2NO auxiliary contact bottom mounted on RH side of contactor is **C80EH123B02**.

## DC Contactors

**Table 84. Surface Mounted DC Contactors w/o Auxiliary Contacts**

NEMA Size	Number of Poles	Blowout Coil Ampere	Catalog Number			*
			100 Vdc Coil	115 Vdc Coil	230 Vdc Coil	
2	1NO	None	C80DX141N00	C80DX111N00	C80DX121N00	
		5	C80DC141N00	C80DC111N00	C80DC121N00	
		10	C80DD141N00	C80DD111N00	C80DD121N00	
		25	C80DF141N00	C80DF111N00	C80DF121N00	
		50	C80DG141N00	C80DG111N00	C80DG121N00	
	2NO	None	C80DX241N00	C80DX211N00	C80DX221N00	
		5	C80DC241N00	C80DC211N00	C80DC221N00	
		10	C80DD241N00	C80DD211N00	C80DD221N00	
		25	C80DF241N00	C80DF211N00	C80DF221N00	
		50	C80DG241N00	C80DG211N00	C80DG221N00	
3	1NO	100	C80EH141N00	C80EH111N00	C80EH121N00	
	1NC	100	C80EH441N00	C80EH411N00	C80EH421N00	
4	1NO	150	C80FJ141N00	C80FJ111N00	C80FJ121N00	
	1NC	150	C80FJ441N00	C80FJ411N00	C80FJ421N00	
5	1NO	300	C80GK141N00	C80GK111N00	C80GK121N00	
	1NC	300	C80GK441N00	C80GK411N00	C80GK421N00	
6	1NO	600	C80JL141N00	C80JL111N00	C80JL121N00	
	1NC	600	C80JL441N00	C80JL411N00	C80JL421N00	
6A ①	1NO	810	C80KM141N00	C80KM111N00	C80KM121N00	
8	1NO	1350	C80WN141N00	C80WN111N00	C80WN121N00	

① Not a NEMA size.

**Table 85. Elevated Mounted DC Contactors w/o Auxiliary Contacts**

NEMA Size	Number of Poles	Blowout Coil Ampere	Catalog Number			*
			100 Vdc Coil	115 Vdc Coil	230 Vdc Coil	
3	1NO	100	C80EH143N00	C80EH113N00	C80EH123N00	
	1NC	100	C80EH443N00	C80EH413N00	C80EH423N00	
4	1NO	150	C80FJ143N00	C80FJ113N00	C80FJ123N00	
	1NC	150	C80FJ443N00	C80FJ413N00	C80FJ423N00	
5	1NO	300	C80GK143N00	C80GK113N00	C80GK123N00	
	1NC	300	C80GK443N00	C80GK413N00	C80GK423N00	
6	1NO	600	C80JL143N00	C80JL113N00	C80JL123N00	
	1NC	600	C80JL443N00	C80JL413N00	C80JL423N00	
6A ②	1NO	810	C80KM143N00	C80KM113N00	C80KM123N00	
8	1NO	1350	C80WN143N00	C80WN113N00	C80WN123N00	

② Not a NEMA size.

## DC Drive Service Contactors

**Table 86. Surface Mounted DP Drive Service Contactors w/o Auxiliary Contacts**

Number of Poles	Ampere Rating	Catalog Number 100 Vdc Coil	* ③
1NO	260	C80RK141N00	
1NC	260	C80RK441N00	
1NO	480	C80SL141N00	
1NC	480	C80SL441N00	
1NO	960	C80TM141N00	

③ Discount Symbol **18CD-4**.

Options..... **Page 44**  
 Accessories..... **Page 44**  
 Dimensions..... **Page 46**  
 Cross-Reference to  
 Previous Numbers..... **Pages 49 – 52**  
 Discount Symbol..... **18CD-1**

\* Consult Sales Office for Pricing

**Cross-Reference to Previous Numbers**

Table 87. Old Catalog Numbering System

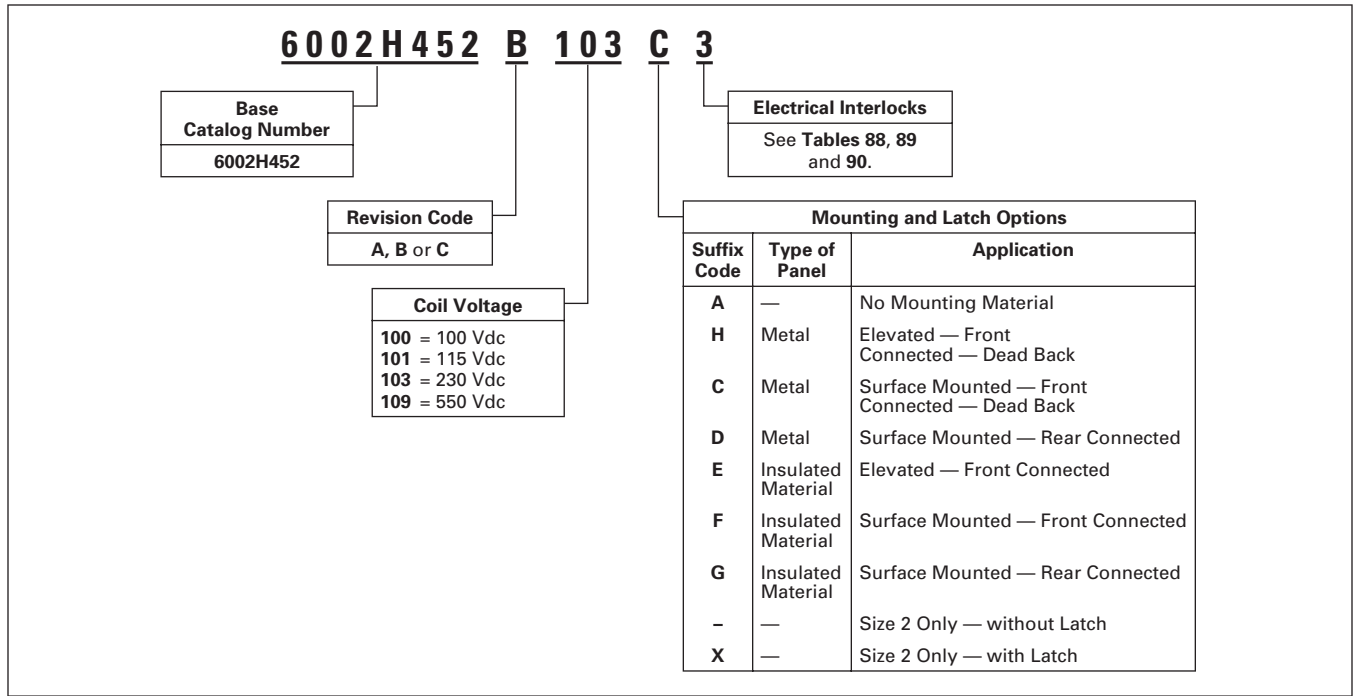


Table 88. Electrical Interlock and/or Pneumatic Timing Interlock Assemblies

Description	Location		Mounting Plate	Circuit	Index Number	Number Required	Mounting Plate and Driver		Handling Suffix Number		
							Index Number	Number Required	Size 3	Size 4, 5 & 6A	Size 8 & 8A
NO (Normally Open) Contactors	Without Interlock		None	—	—	—	—	—	1	1	1
	<b>Unit Electrical Interlocks Only</b>										
	Bottom Mounted	LH & RH	Full	4NO	10923H2A	2	10923H19A	1	3	3	3
		LH	Full	2NO	10923H2A	1	10923H38A	1	19	17	17
	<b>Unit Electrical Interlocks and Pneumatic Timing Interlocks ①</b>										
	Bottom Mounted	LH	Full	2NO 1TC & 1TO	10923H2A 10923H25B (ON Delay)	1 1	10923H19A	1	13	11	—
		RH									
	Bottom Mounted	LH	Full	2NO 1IO & 1IC	10923H2A 10923H26B (OFF Delay)	1 1	10923H19A	1	14	12	—
RH											
<b>Pneumatic Timing Interlocks Only ①</b>											
Bottom Mounted	RH	Full	1TC & 1TO 1IO & 1IC	10923H25B 10923H26B (ON Delay)	1 1	10923H38A 10923H38A	1 1	20 21	18 19	— 19	
	RH										

① Pneumatic interlocks are no longer available. Use C84 in-line timers as replacements. Consult factory for details.



## DC Contactors — Type C80

Table 89. Size 2 DC Contactors, Unit Electrical Interlock and/or Pneumatic Timing Interlock

Description	Location		Mounting Plate	Circuit	Index Number	Number Required	Mounting Plate and Driver		Handling Suffix Number	
							Index Number	Number Required		
Size 2 1NO (Normally Open) Contactor	Without Interlock		—	—	—	—	—	—	1	
	<b>Unit Electrical Interlocks Only</b>									
	Bottom Mounted (Pre-wired)	LH	Full	2NO	10923H2A	1	10923H11A	1	2	
		LH & RH	Full	4NO	10923H2A	2	10923H11A	1	3	
	Side Mount	LH	Half	2NO	10923H2A	1	10923H17A	1	4	
		RH	Half	2NO	10923H2A	1	10923H17A	1	5	
	Side Mount	LH	—	2NO	10923H7A	1	10923H12A	1	6	
		RH	—	2NO	10923H7A	1	10923H12A	1	7	
		LH & RH	—	4NO	10923H7A	2	10923H12A	2	8	
	<b>Unit Electrical Interlocks and Pneumatic Timing Interlocks ①</b>									
	Bottom Mounted Only	RH	Full	2NO	10923H2A	1	10923H11A	1	15	
		LH	Full	1TC & 1TO	10923H24B (ON Delay)	1	10923H11A	1	15	
	Bottom Mounted Only	RH	Full	2NO	10923H2A	1	10923H11A	1	16	
		LH	Full	1IO & 1IC	10923H24B (OFF Delay)	1	10923H11A	1	16	
	<b>Pneumatic Timing Interlocks Only ①</b>									
	Bottom Mounted Only	LH	Full	1TC & 1TO	10923H24B (ON Delay)	1	10923H11A	1	17	
LH		Full	1IO & 1IC	10923H26B (OFF Delay)	1	10923H11A	1	18		
LH		Full	1TC & 1TO	10923H24B (ON Delay)	1	10923H17A	1	19		
LH		Full	1IO & 1IC	10923H26B (OFF Delay)	1	10923H17A	1	20		
Size 2 2NO (Normally Open) Contactor	Without Interlock		—	—	—	—	—	—	1	
	<b>Unit Electrical Interlocks</b>									
	Bottom Mounted (Pre-wired)	LH	Full	2NO	10923H2A	1	10923H14A	1	2	
		LH & RH	Full	4NO	10923H2A	2	10923H14A	1	3	
	Side Mount	LH	—	2NO	10923H7A	1	10923H15A	1	4	
		RH	—	2NO	10923H7A	1	10923H16A	1	5	
		LH & RH	—	4NO	10923H7A	2	10923H15A 10923H16A	1 1	6	
Without Interlock		None	—	—	—	—	—	—	11	
<b>Unit Electrical Interlocks</b>										
Side Mount	LH	—	2NO	10923H7A	1	10923H15A	1	2		
	RH	—	2NO	10923H7A	1	10923H15A	1	3		
	LH & RH	—	4NO	10923H7A	2	10923H15A 10923H16A	1 1	4		
Size 2 2NO-1NC Contactor	Without Interlock		None	—	—	—	—	—	11	
	<b>Unit Electrical Interlocks</b>									
	Side Mount	LH	—	2NO	10923H7A	1	10923H15A	1	2	
		RH	—	2NO	10923H7A	1	10923H15A	1	3	
LH & RH		—	4NO	10923H7A	2	10923H15A 10923H16A	1 1	4		

① Pneumatic interlocks are no longer available. Use C84 in-line timers as replacements. Consult factory for details.

Table 90. Electrical and/or Pneumatic Timing Interlock Assemblies

Description	Location		Mounting Plate	Circuit	Index Number	Number Required	Mounting Plate and Driver		Handling Suffix Number		
							Index Number	Number Required	Size 3 and 4	Size 5	Size 6 and 6A
NC (Normally Closed) dc Contactor	Without Interlock		None	—	—	—	—	—	1	1	1
	<b>Unit Electrical Interlocks Only ②</b>										
	Bottom	RH	Single	2NO	10923H2A	1	10923H20A	1	2	2	2
	<b>Pneumatic Timing Interlocks Only ②</b>										
	Bottom	RH	Single	1TC & 1TO	10923H26B (ON Delay)	1	10923H30A	1	6	5	—
RH		Single	1IC & 1IC	10923H31B (OFF Delay)	1	10923H30A	1	7	6	—	

② Pneumatic interlocks are no longer available. Use C84 in-line timers as replacements. Consult the factory for details.

**Table 91. Old/New Catalog Number Cross-Reference**

Old Number					Replacement Number ①
Description					Catalog Number
Catalog Number	Size	Contact Configuration	Blowout Coil Rating (Amperes)	Enclosure	
6002H331	1	1NO	None	Open	C80DX121N00
6002H332	1	1NO	1	Open	C80DC121N00
6002H333	1	1NO	2	Open	C80DC121N00
6002H334	1	1NO	5	Open	C80DC121N00
6002H335	1	1NO	10	Open	C80DD121N00
6002H336	1	1NO	25	Open	C80DF121N00
6002H337	2	1NO	None	Open	C80DX121N00
6002H338	2	1NO	5	Open	C80DC121N00
6002H339	2	1NO	10	Open	C80DD121N00
6002H340	2	1NO	15	Open	C80DF121N00
6002H341	2	1NO	25	Open	C80DF121N00
6002H342	2	1NO	50	Open	C80DG121N00
6002H343	1	2NO	1	Open	C80DC221N00
6002H344	1	2NO	2	Open	C80DC221N00
6002H345	1	2NO	5	Open	C80DC221N00
6002H346	1	2NO	10	Open	C80DF221N00
6002H347	1	2NO	25	Open	C80DF221N00
6002H348	2	2NO	5	Open	C80DC221N00
6002H349	2	2NO	10	Open	C80DF221N00
6002H350	2	2NO	15	Open	C80DF221N00
6002H351	2	2NO	25	Open	C80DF221N00
6002H352	2	2NO	50	Open	C80DG221N00
6002H353	2	2NO-1NC	5 (NO & NC)	Open	6002H353-103
6002H354	2	2NO-1NC	10 (NO & NC)	Open	6002H354-103
6002H355	2	2NO-1NC	15 (NO & NC)	Open	6002H355-103
6002H356	2	2NO-1NC	25 (NO & NC)	Open	C80DGG32
6002H357	2	2NO-1NC	50 (NO & NC)	Open	C80DGG32
6002H383	1	1NO	None	NEMA 1	Cancelled ②
6002H384	1	1NO	1	NEMA 1	Cancelled ②
6002H385	1	1NO	2	NEMA 1	Cancelled ②
6002H386	1	1NO	5	NEMA 1	Cancelled ②
6002H387	1	1NO	10	NEMA 1	Cancelled ②
6002H388	1	1NO	25	NEMA 1	Cancelled ②
6002H389	2	1NO	None	NEMA 1	Cancelled ②
6002H390	2	1NO	5	NEMA 1	Cancelled ②
6002H391	2	1NO	10	NEMA 1	Cancelled ②
6002H392	2	1NO	15	NEMA 1	Cancelled ②
6002H393	2	1NO	25	NEMA 1	Cancelled ②
6002H394	2	1NO	50	NEMA 1	Cancelled ②
6002H395	1	2NO	1	NEMA 1	Cancelled ②
6002H396	1	2NO	2	NEMA 1	Cancelled ②
6002H397	1	2NO	5	NEMA 1	Cancelled ②
6002H398	1	2NO	10	NEMA 1	Cancelled ②
6002H399	1	2NO	25	NEMA 1	Cancelled ②
6002H400	2	2NO	5	NEMA 1	Cancelled ②
6002H401	2	2NO	10	NEMA 1	Cancelled ②
6002H402	2	2NO	15	NEMA 1	Cancelled ②
6002H403	2	2NO	25	NEMA 1	Cancelled ②
6002H404	2	2NO	50	NEMA 1	Cancelled ②
6002H405	2	2NO-1NC	5 (NO & NC)	NEMA 1	Cancelled ②
6002H406	2	2NO-1NC	10 (NO & NC)	NEMA 1	Cancelled ②
6002H407	2	2NO-1NC	15 (NO & NC)	NEMA 1	Cancelled ②
6002H408	2	2NO-1NC	25 (NO & NC)	NEMA 1	Cancelled ②
6002H409	2	2NO-1NC	50 (NO & NC)	NEMA 1	Cancelled ②
6002H410	3	1NO	None	Open	6002H410-103
6002H411	3	1NO	5	Open	6002H411-103
6002H412	3	1NO	10	Open	6002H412-103
6002H413	3	1NO	25	Open	6002H413-103
6002H414	3	1NO	50	Open	6002H414-103
6002H415	3	1NO	100	Open	C80EH121
6002H416	3	1NO	None	NEMA 1	Cancelled ②
6002H417	3	1NO	5	NEMA 1	Cancelled ②
6002H418	3	1NO	10	NEMA 1	Cancelled ②

① Catalog Numbers and prices listed for C80 devices include surface mounting kit and 240 Vdc coil. For C80 and C81 prices, see **Pages 44, 45 and 48.**

**Table 91. Old/New Catalog Number Cross-Reference (Continued)**

Old Number					Replacement Number ①
Description					Catalog Number
Catalog Number	Size	Contact Configuration	Blowout Coil Rating (Amperes)	Enclosure	
6002H419	3	1NO	25	NEMA 1	Cancelled ②
6002H420	3	1NO	50	NEMA 1	Cancelled ②
6002H421	3	1NO	100	NEMA 1	Cancelled ②
6002H440	3	1NC	None	Open	6002H440-103
6002H441	3	1NC	5	Open	6002H441-103
6002H442	3	1NC	10	Open	6002H442-103
6002H443	3	1NC	25	Open	6002H443-103
6002H444	3	1NC	50	Open	C80EH421N00
6002H445	3	1NC	100	Open	C80EH421N00
6002H446	3	1NC	None	NEMA 1	Cancelled ②
6002H447	3	1NC	5	NEMA 1	Cancelled ②
6002H448	3	1NC	10	NEMA 1	Cancelled ②
6002H449	3	1NC	25	NEMA 1	Cancelled ②
6002H450	3	1NC	50	NEMA 1	Cancelled ②
6002H451	3	1NC	100	NEMA 1	Cancelled ②
6002H452	4	1NO	None	Open	C80FX121N00
6002H453	4	1NO	150	Open	C80FJ121N00
6002H454	4	1NO	None	NEMA 1	Cancelled ②
6002H455	4	1NO	150	NEMA 1	Cancelled ②
6002H456	4	1NC	None	Open	C80FX421
6002H457	4	1NC	150	Open	C80FJ421N00
6002H458	1	2NO	None	Open	C80DX22N00
6002H459	2	2NO	None	Open	C80DX22N00
6002H460	1	2NO	None	NEMA 1	Cancelled ②
6002H461	2	2NO	None	NEMA 1	Cancelled ②
6002H465	3	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Metal Panel			C81AEA11 C81AGA11 C81AJA11
6002H466	5	Contactor Mounting Kits 1 P, Surface, Rear of Panel, for Metal Panel			C81AEA12 C81AGA12 C81AJA12
6002H467	6 & 810 A	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB13 C81AGB13 C81AJB13
6002H468	3 & 4	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB11 C81AGB11 C81AJB11
6002H469	5	Contactor Mounting Kits 1 P, Surface, Rear of Panel, for Insulated Panel			C81AEB12 C81AGB12 C81AJB12
6002H470	6 & 810 A	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB11 C81AGB11 C81AJB11
6002H471	3 & 4	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB11 C81AGB11 C81AJB11
6002H472	5	Contactor Mounting Kits 1 P, Surface, Rear of Panel, for Insulated Panel			C81AEB12 C81AGB12 C81AJB12
6002H473	6 & 810 A	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB11 C81AGB11 C81AJB11
6002H474	3	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB11 C81AGB11 C81AJB11
6002H475	5	Contactor Mounting Kits 1 P, Surface, Rear of Panel, for Insulated Panel			C81AEB12 C81AGB12 C81AJB12
6002H476	6 & 810 A	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB11 C81AGB11 C81AJB11
6002H477	3 & 4	Contactor Mounting Kits 1 P, Surface, Rear of Panel, for Insulated Panel			C81AEB12 C81AGB12 C81AJB12
6002H478	5	Contactor Mounting Kits 1 P, Surface, Front of Panel, for Insulated Panel			C81AEB11 C81AGB11 C81AJB11
6002H479	6 & 810 A	Contactor Mounting Kits 1 P, Surface, Rear of Panel, for Insulated Panel			C81AEB12 C81AGB12 C81AJB12
6002H480	1	2NO-1NC	None	Open	Cancelled ②
6002H481	1	2NO-1NC	1 (NO & NC)	Open	Cancelled ②
6002H482	1	2NO-1NC	2 (NO & NC)	Open	Cancelled ②
6002H483	1	2NO-1NC	5 (NO & NC)	Open	Cancelled ②
6002H484	1	2NO-1NC	10 (NO & NC)	Open	Cancelled ②
6002H485	1	2NO-1NC	25 (NO & NC)	Open	C80DGG32
6002H486	1	2NO-1NC	None	NEMA 1	Cancelled ②
6002H487	1	2NO-1NC	1 (NO & NC)	NEMA 1	Cancelled ②
6002H488	1	2NO-1NC	2 (NO & NC)	NEMA 1	Cancelled ②
6002H489	1	2NO-1NC	5 (NO & NC)	NEMA 1	Cancelled ②
6002H490	1	2NO-1NC	10 (NO & NC)	NEMA 1	Cancelled ②
6002H491	1	2NO-1NC	25 (NO & NC)	NEMA 1	Cancelled ②
6002H492	1	2NO-1NC	1 (NO)	Open	Cancelled ②
6002H493	1	2NO-1NC	2 (NO)	Open	Cancelled ②
6002H494	1	2NO-1NC	5 (NO)	Open	Cancelled ②
6002H495	1	2NO-1NC	10 (NO)	Open	6002H503-103
6002H496	1	2NO-1NC	25 (NO)	Open	6002H505-103
6002H497	1	2NO-1NC	1 (NO)	NEMA 1	Cancelled ②
6002H498	1	2NO-1NC	2 (NO)	NEMA 1	Cancelled ②
6002H499	1	2NO-1NC	5 (NO)	NEMA 1	Cancelled ②
6002H500	1	2NO-1NC	10 (NO)	NEMA 1	Cancelled ②
6002H501	1	2NO-1NC	25 (NO)	NEMA 1	Cancelled ②

② Enclosed contactors no longer available. Select equivalent open contactor. Enclosure by others.

## DC Contactors — Type C80

Table 91. Old/New Catalog Number Cross-Reference (Continued)

Old Number					Replacement Number ①
Description					Catalog Number
Catalog Number	Size	Contact Configuration	Blowout Coil Rating (Amperes)	Enclosure	
6002H502	2	2NO-1NC	5 (NO)	Open	<b>6002H502-103</b>
6002H503	2	2NO-1NC	10 (NO)	Open	<b>6002H503-103</b>
6002H504	2	2NO-1NC	15 (NO)	Open	<b>6002H504-103</b>
6002H505	2	2NO-1NC	25 (NO)	Open	<b>6002H505-103</b>
6002H506	2	2NO-1NC	50 (NO)	Open	<b>6002H506-103</b>
6002H507	2	2NO-1NC	5 (NO)	NEMA 1	Cancelled ②
6002H508	2	2NO-1NC	10 (NO)	NEMA 1	Cancelled ②
6002H509	2	2NO-1NC	15 (NO)	NEMA 1	Cancelled ②
6002H510	2	2NO-1NC	25 (NO)	NEMA 1	Cancelled ②
6002H511	2	2NO-1NC	50 (NO)	NEMA 1	Cancelled ②
6002H512	4	1NC	None	NEMA 1	Cancelled ②
6002H513	4	1NC	150	NEMA 1	Cancelled ②
6002H514	5	1NO	None	Open	<b>6002H514-103</b>
6002H515	5	1NO	300	Open	<b>C80GK121N00</b>
6002H516	5	1NO	None	NEMA 1	Cancelled ②
6002H517	5	1NO	300	NEMA 1	Cancelled ②
6002H518	5	1NC	None	Open	<b>6002H518-103</b>
6002H519	5	1NC	300	Open	<b>C80GK421N00</b>
6002H520	5	1NC	None	NEMA 1	Cancelled ②
6002H521	5	1NC	300	NEMA 1	Cancelled ②
6002H522	6	1NO	None	Open	<b>6002H522-103</b>
6002H523	6	1NO	600	Open	<b>C80JL121N00</b>
6002H524	6	1NO	None	NEMA 1	Cancelled ②
6002H525	6	1NO	600	NEMA 1	Cancelled ②
6002H630	4	Contactor Mtg. Kit, 1 P, Surface, Front of Panel, Metal Panel			Cancelled
6002H631	4	Contactor Mtg. Kit, 1 P, Surface, Front of Panel, Insul. Panel			Cancelled
6002H634	1 & 2	Mechanical Interlock, 1NO, Surf., Metal or Insul. Panel			<b>C81DDA11</b>
6002H635	1 & 2	Mech. Inter., 2NO or 2NO-1NC, Surface, Metal or Insul. Panel			<b>C81DDA12</b>
6002H636	3	Mech. Inter., 1NO, Surface, Metal			<b>C81DEA11</b>
6002H637	3	Mech. Inter., 1NO, Elev., Metal			<b>C81DEA21</b>
6002H638	3	Mech. Inter., 1NO, Surf., Insul.			Cancelled
6002H639	3	Mech. Inter., 1NO, Elev., Insul.			Cancelled
6002H640	4	Mech. Inter., 1NO, Surf., Metal			Cancelled
6002H641	4	Mech. Inter., 1NO, Elev., Metal			Cancelled
6002H642	4	Mech. Inter., 1NO, Surf., Insul.			Cancelled
6002H643	4	Mech. Inter., 1NO, Elev., Insul.			Cancelled
6002H644	5	Mech. Inter., 1NO, Surf., Metal			<b>C81DGA11</b>
6002H645	5	Mech. Inter., 1NO, Elev., Metal			<b>C81DGA21</b>
6002H646	5	Mech. Inter., 1NO, Surf., Insul.			Cancelled
6002H647	5	Mech. Inter., 1NO, Elev., Insul.			Cancelled
6002H648	6 & 810A	Mech. Inter., 1NO, Surf., Metal			<b>C81DJA11</b>
6002H649	6 & 810A	Mech. Inter., 1NO, Elev., Metal			<b>C81DJA21</b>
6002H650	6 & 810A	Mech. Inter., 1NO, Surf., Insul.			Cancelled
6002H651	6 & 810A	Mech. Inter., 1NO, Elev., Insul.			Cancelled
6002H652	Voltage Relay		None	Open	Cancelled
6002H653	Voltage Relay		1	Open	Cancelled
6002H654	Voltage Relay		2	Open	Cancelled
6002H655	Voltage Relay		5	Open	Cancelled
6002H656	Voltage Relay		10	Open	Cancelled
6002H657	Voltage Relay		15	Open	Cancelled
6002H658	Voltage Relay		25	Open	Cancelled
6002H659	Voltage Relay		50	Open	Cancelled
6002H668	6A	1NO	810	Open	<b>C80KM121N00</b>
6002H670	6	1NC	None	Open	<b>6002H670-103</b>
6002H671	6	1NC	600	Open	<b>C80JL421N00</b>
6002H672	6	1NC	None	NEMA 1	Cancelled ②
6002H673	6	1NC	600	NEMA 1	Cancelled ②
6002H701	4	2NO	None	Open	Cancelled

① Catalog Numbers listed for C80 devices include surface mounting kits and 240 Vdc coil. For C80 and C81 prices, see **Pages 44, 45 and 48.**

Table 91. Old/New Catalog Number Cross-Reference (Continued)

Old Number					Replacement Number ①
Description					Catalog Number
Catalog Number	Size	Contact Configuration	Blowout Coil Rating (Amperes)	Enclosure	
6002H702	4	2NO	5	Open	Cancelled
6002H703	4	2NO	10	Open	Cancelled
6002H704	4	2NO	25	Open	Cancelled
6002H705	4	2NO	50	Open	Cancelled
6002H706	4	2NO	100	Open	Cancelled
6002H707	4	2NO	150	Open	Cancelled
6002H708	5	2NO	None	Open	Cancelled
6002H709	5	2NO	300	Open	Cancelled
6002H719	4	2NO	None	NEMA 1	Cancelled
6002H720	4	2NO	5	NEMA 1	Cancelled
6002H721	4	2NO	10	NEMA 1	Cancelled
6002H722	4	2NO	25	NEMA 1	Cancelled
6002H723	4	2NO	50	NEMA 1	Cancelled
6002H724	4	2NO	100	NEMA 1	Cancelled
6002H725	4	2NO	150	NEMA 1	Cancelled
6002H726	5	2NO	None	NEMA 1	Cancelled
6002H727	5	2NO	300	NEMA 1	Cancelled
6002H729	4	Contactor Mounting Kits, 2-Pole Surface, Front of Panel, Metal			Cancelled
6002H730	4	Surface, Rear of Panel, Metal			Cancelled
6002H731	4	Elev., Front of Panel, Metal			Cancelled
6002H732	4	Surface, Rear of Panel, Insul.			Cancelled
6002H733	4	Contactor Mounting Kits, 2-Pole Surface, Rear of Panel, Insul.			Cancelled
6002H735	4	Surface, Front of Panel, Metal			Cancelled
6002H736	5	Surface, Rear of Panel, Metal			Cancelled
6002H737	5	Contactor Mounting Kits, 2-Pole Elev., Front of Panel, Insul.			Cancelled
6002H738	5	Surface, Front of Panel, Insul.			Cancelled
6002H739	5	Surface, Rear of Panel, Insul.			Cancelled
6002H740	3 & 4	Contactor Mounting Kits			<b>C81AEA13</b>
6002H741	4	1P, Elev., Front of Panel, Metal			Cancelled
6002H742	5	2P, Elev., Front of Panel, Metal			<b>C81AGA13</b>
6002H743	5	1P, Elev., Front of Panel, Metal			Cancelled
6002H744	6 & 810A	2P, Elev., Front of Panel, Metal			<b>C81AJA13</b>
6002H744	6 & 810A	1P, Elev., Front of Panel, Metal			Cancelled
6002H747	4	Mech. Inter., 2NO, All Mountings, Metal or Insul. Panel			Cancelled
6002H748	5				Cancelled
6002H749	8 & 8A	Mech. Inter., 1NO, Surf., Metal			<b>C81DLA11</b>
6002H750	8 & 8A	Mech. Inter., 1NO, Elev., Metal			<b>C81DLA21</b>
6002H751	8 & 8A	Mech. Inter., 1NO, Surf., Insul.			Cancelled
6002H752	8 & 8A	Mech. Inter., 1NO, Elev., Insul.			Cancelled
6002H753	8 & 8A	Contactor Mtg. Kits, 1-Pole Surface, Front of Panel, Insul.			Cancelled
6002H754	8 & 8A	Elev., Front of Panel, Insul.			Cancelled
6002H755	8 & 8A	Surface, Front of Panel, Metal			<b>C81ALA11</b>
6002H756	8 & 8A	Elev., Front of Panel, Metal			<b>C81ALA21</b>
6002H757	8	1NO	1350	Open	<b>C80WN121</b>
6002H758	8	1NO	None	Open	Cancelled
6002H759	8A	1NO	1800	Open	<b>6002H759-103</b>
6002H760	8A	1NO	None	Open	Cancelled

② Enclosed contactors no longer available. Select equivalent open contactor. Enclosure by others.