

Definite Purpose Contactors and Starters



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Product Overview

Eaton offers the most complete line of Definite Purpose (DP) contactors in the industry. Designed for heating, ventilation, air conditioning and refrigeration (HVACR) applications, Eaton's DP contactors are designed to handle the most challenging installations.

Application Description

These ampere and horsepower rated devices from Eaton's electrical sector are designed for service in applications such as refrigeration, air conditioning and resistance heating and are manufactured to traditional standards for quality and reliability. They are subjected to stringent quality assurance inspections and testing procedures. The life expectancy, both electrical and mechanical, will meet or exceed industry performance requirements for Definite Purpose devices.

If more detailed technical information is required—specifications, ratings, and so on—contact your local Eaton distributor or sales office.

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Features

- Completely encased design impervious to dust and other environmental elements
- 15–360A contactor ratings
- Single-, two-, three- and four-pole configurations
- Contactors and starters (up to 60A)
- Open components and enclosed designs

Catalog Number Selection

Definite Purpose Control—Contactors and Starters

C 25 D N A 2 15 A A 161 -84

Model
C = Contactor
A = Three-phase starter
B = Single-phase starter

Type
25 = Non-reversing contactors and starters (C306)
27 = Non-reversing starters (XTOB)
30 = Non-reversing starters (C440 EOL)
65 = Reversing contactors

Contactors Frame Size
A = Compact, single-pole
B = Compact, two-pole
C = Compact, single-pole w/shunt
D = 15–50A, two- and three-pole
E = 25–40A, four-pole
F = 60–75A, two- and three-pole
G = 90A, two- and three-pole
H = 120A, two- and three-pole
K = 200 and 300A, three-pole
L = 360A, three-pole
For Starters Only
C = Common control wiring
S = Separate control wiring

Enclosure Type
N = Open with metal mounting plate
R = Open with DIN rail mounting adapter (two- and three-pole, 15–50A contactors only)
G = NEMA Type 1 Enclosed

Power Terminals
A = Binding head screw
B = Binding head screw and quick connect terminals (side-by-side)
C = Screw/pressure plate ①
D = Screw/pressure plate and quick connect terminals (side-by-side) ①
E = Box lugs (posidrive setscrew)
F = Box lugs (posidrive setscrew) and quick connect terminals (side-by-side)
G = Binding head screw and quick connect terminals (vertical in-line)
H = Screw/pressure plate and quick connect terminals (vertical in-line) ①
J = Box lugs (posidrive setscrew) and quick connect terminals (vertical in-line)
K = Box lugs (hex socket allen head setscrew)
L = Box lugs (hex socket allen head setscrew) and quick connect terminals (side-by-side)
M = Box lugs (hex socket allen head setscrew) and quick connect terminals (vertical in-line)

Bulk Packaging
Blank = Individual pkg.
-84 = 20 pc./pkg. (C25D_)
50 pc./pkg. (C25A_, C25B_, C25C_)
-86 = Rotate coil terminals 180° for 15A–50A contactors

Fuse Blocks
161 = Class M, 600V, 30A
237 = Class G, 300V, 15A
238 = Class G, 300V, 20A
231 = Class G, 300V, 30A
232 = Class G, 300V, 60A
361 = Class J, 600V, 30A
362 = Class J, 600V, 60A
431 = Class T, 300V, 30A
432 = Class T, 300V, 60A
461 = Class T, 600V, 30A
462 = Class T, 600V, 60A
521 = Class H, 250V, 30A
522 = Class H, 250V, 60A
621 = Class R, 250V, 30A
622 = Class R, 250V, 60A

Auxiliary Contacts (Side Mount)
A = 1NO pressure plate
B = 1NC pressure plate
C = 1NO-1NC pressure plate
D = 2NO pressure plate
E = 2NC pressure plate
F = 1NO pressure plate and QC
G = 1NC pressure plate and QC
H = 1NO-1NC pressure plate and QC
J = 2NO pressure plate and QC
K = 2NC pressure plate and QC
L = 1NO-1NC snap switch QC only
M = 2NO-2NC snap switch QC only

Coil Selection	
A = 110–120 Vac, 50/60 Hz	R = 12 Vac, 50/60 Hz
B = 208–240 Vac, 50/60 Hz	T = 24 Vac, 50/60 Hz
C = 440–480 Vac, 50/60 Hz	1R = 12 Vdc
D = 550–600 Vac, 50/50 Hz	1T = 24 Vdc
H = 277 Vac, 60 Hz	1W = 48 Vdc
J = 220–240 Vac, 50/60 Hz	1A = 120 Vdc
L = 380–415 Vac, 50 Hz	

Number of Poles
1 = Single-pole
2 = Two-pole
3 = Three-pole
4 = Four-pole

Current Rating	
15 = 15A	75 = 75A
25 = 25A	90 = 90A
30 = 30A	120 = 120A
40 = 40A	200 = 200A
50 = 50A	300 = 300A
60 = 60A	360 = 360A

Note

① Not available on 50A devices.

15–360A, Two-, Three- and Four-Pole—C25



15–360A, Two-, Three- and Four-Pole—C25

Product Description

Type C25 Definite Purpose Contactors 15A through 360A, from Eaton’s electrical sector incorporate most competitive contactor mounting dimensions into a single baseplate. Contactors are dual-rated with inductive and resistive ratings as well as horsepower and kilowatt ratings. C25 contactors are furnished with pressure plates and quick connect terminals as standard on 15, 25 and 30A devices and with box lugs and quick-connect terminals on 40, 50, 60 and 75A.

Other terminal configurations are available, see **Page V5-T4-13**. Contactors will accept add-on auxiliary contacts—order factory assembled or as kits for field installation.

The separately available snap-on mechanical interlock permits interlocking two contactors for reversing or two-speed applications.

Contactors rated 15–50A only are available with DIN rail mount as a factory installed option.

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Standards and Certifications

- UL Recognized Components UL File #E-1491, Guide NLDX2
- UL recognized, CSA certified and conform to ARI 780
- CSA Certified Components File #LR353, Class 3211 04, 481301 and 122201
- IEC 60947-4-1
- EN 60947-4-1
- CE mark
- RoHS Compliance (15A to 50A and 90A)



DP Contactor



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C25 Contactors—Open Type, continued

Ampere Rating			Locked Rotor	Maximum Motor (hp)		Maximum Motor (kW)		Number of Poles	Open Type with Metal Mounting Plate Catalog Number ^{①②③}
Inductive Full Load	Resistive per Pole	Line Voltage		Single-Phase	Three-Phase	Single-Phase	Three-Phase		
90	120	115	540	7-1/2	—	5.5	—	2	C25GNF290_
		230	540	15	30	11	22	3	C25GNF390_
		460	450	—	50	—	37	—	C25GNF390_
		575	360	—	50	—	37	—	C25GNF390_
120	140	230	720	—	—	—	—	3	C25HNE3120_
		460	720	—	—	—	—	—	C25HNE3120_
		575	570	—	—	—	—	—	C25HNE3120_
200	200	240	1200	—	—	—	—	3	C25KNE3200_
		480	1200	—	—	—	—	—	C25KNE3200_
		600	1000	—	—	—	—	—	C25KNE3200_
300	300	240	1800	—	—	—	—	3	C25KNE3300_
		480	1800	—	—	—	—	—	C25KNE3300_
		600	1500	—	—	—	—	—	C25KNE3300_
360	360	240	2320	—	—	—	—	3	C25LNE3360_
		480	2320	—	—	—	—	—	C25LNE3360_
		600	1900	—	—	—	—	—	C25LNE3360_

Magnet Coil Suffix

Voltage 60 Hertz	50 Hertz	Coil Suffix
AC ^④		
12 ^⑤	12	R
24 ^⑥	24	T
110–120 ^⑦	110–120 ^⑦	A
208 ^⑧	—	E
208–240 ^⑧	208–240	B
240 ^⑧	220	J
277	—	H
—	380–415	L
440–480	440–480	C
550–600 ^⑨	550–600	D

Voltage 60 Hertz	Coil Suffix
DC ^⑩	
12	1R
24	1T
48	1W
120	1A ^⑪

Notes

- ① Incomplete catalog number. Replace underscore (_) in catalog number with magnet coil suffix from table above.
- ② Carton quantities including 20 individually packaged units are available for two- and three-pole units through 60A inductive.
- ③ Quick connects for 50–90A are vertical-in-line.
- ④ Class H AC coils available as option for 15A–50A contactor. Add 2 before AC coil suffix letter.
- ⑤ Available through 75A.
- ⑥ Available through 120A.
- ⑦ 104–120V 50/60 Hz for 60A, 75A and all four-pole contactors (25A–40A).
- ⑧ Available 120–360A.
- ⑨ Available 15–90A, others 240V.
- ⑩ Available through 50A.
- ⑪ Contactors with DC coils (only available up to 75A) include an early break NC auxiliary contact, C320KGD1. See **Page V5-T4-62** for more details.
- Ⓜ Available only for 15A through 75A contactors and four-pole contactors.
- Ⓝ Not available for 90A.

Renewal Parts

Renewal Contact Kits for C25 Definite Purpose Contactors

- Replace complete contactor for:
 - C25A_
 - C25B_
 - C25C_
 - C25D_

Renewal Contact Kits for C25 Definite Purpose Contactors

Catalog Number	Single-Pole Kit Part Number	Two-Pole Kit Part Number	Three-Pole Kit Part Number
C25FNF250	—	6-65-5	—
C25FNF350	—	—	6-65-6
C25FNF260	—	6-65-7	—
C25FNF360	—	—	6-65-8
C25FNF275	—	6-65-20	—
C25FNF375	—	—	6-65-19
C25GNF290	—	—	—
C25GNF390	—	—	—
C25HNE3120	—	—	6-43-6
C25KNE3200	—	—	6-288
C25KNE3300	—	—	6-286
C25LNE3360	—	—	6-45-2

Product Selection

AC Coils

AC Coil Voltage	Frequency	Inrush (Maximum)		Sealed (Maximum)		Coil Suffix	Class	Part Number
		VA	Watts	VA	Watts			
15, 25, 30 and 40A – Two- and Three-Pole (Series D1)								
12	60	74.85	46.1	5.53	1.68	R	Class F, 155°C	9-3185-5
24		81.35	49.7	5.83	1.74	T		9-3185-6
110/120		74.69	51.6	5.79	1.81	A		9-3185-1
208/240		82.64	59.1	6.96	2.38	B		9-3185-2
220/240	60	74.03	51.8	5.85	1.99	J	Class F, 155°C	9-3185-10
440/480		73.39	52.1	6.09	2.58	C		9-3185-3
550/600		79.47	51.7	6.56	3.05	D		9-3185-4
277		72.88	52.4	6.09	2.58	H		9-3185-7
380/415	50	64.5	50.6	6.08	2.43	L	Class F, 155°C	9-3185-8
15, 25, 30 and 40A – Two- and Three-Pole (Series C1)								
12	60	65	30	11	2.5	R	Class F, 155°C	9-3125-5
24		65	30	11	2.5	T		9-3125-6
104/120		65	30	11	2.5	A		9-3125-1
208/240	50	75	35	17	3.5	B	Class F, 155°C	9-3125-2
440/480		75	35	17	3.5	C		9-3125-3
550/600		75	35	17	3.5	D		9-3125-4
277	60	65	30	11	2.5	H	Class F, 155°C	9-3125-8
380/415	50	75	35	17	3.5	L	Class F, 155°C	9-3125-8