

C396 Electronic Overload

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Note: Supplement to Publication No. CA08102001E — Tabs 33, 34 and 35.



C396 Electronic Overload Relays

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C396 Electronic Overload Relay

Product Description

The C396 is a self-powered, robust electronic overload designed for integrated use with Freedom NEMA, XT IEC, and DP contactors. The overload can also be ordered as a stand-alone device that is designed for Panel-Mounting and for use on 35 mm DIN rail. The C396 has an FLA range of 0.1 – 150 Amps with internal CTs, and up to 1500 Amps using external CTs.

Features

- Standard Version: Selectable trip class (5, 10, 20, 30) with Selectable Manual or Auto Reset
- Broad 5:1 FLA range
- Self-Powered Design, will accept AC voltages from 12 – 690V 50/60 Hz
- Ambient Temperature Compensation
- Low Heat Generation
- Phase Loss Protection
- Phase Unbalance Protection
- Electrically isolated 1NO-1NC Contacts (Push-to-Test)
- Trip Status Indicator
- FLA range of 0.1 – 1500 Amps

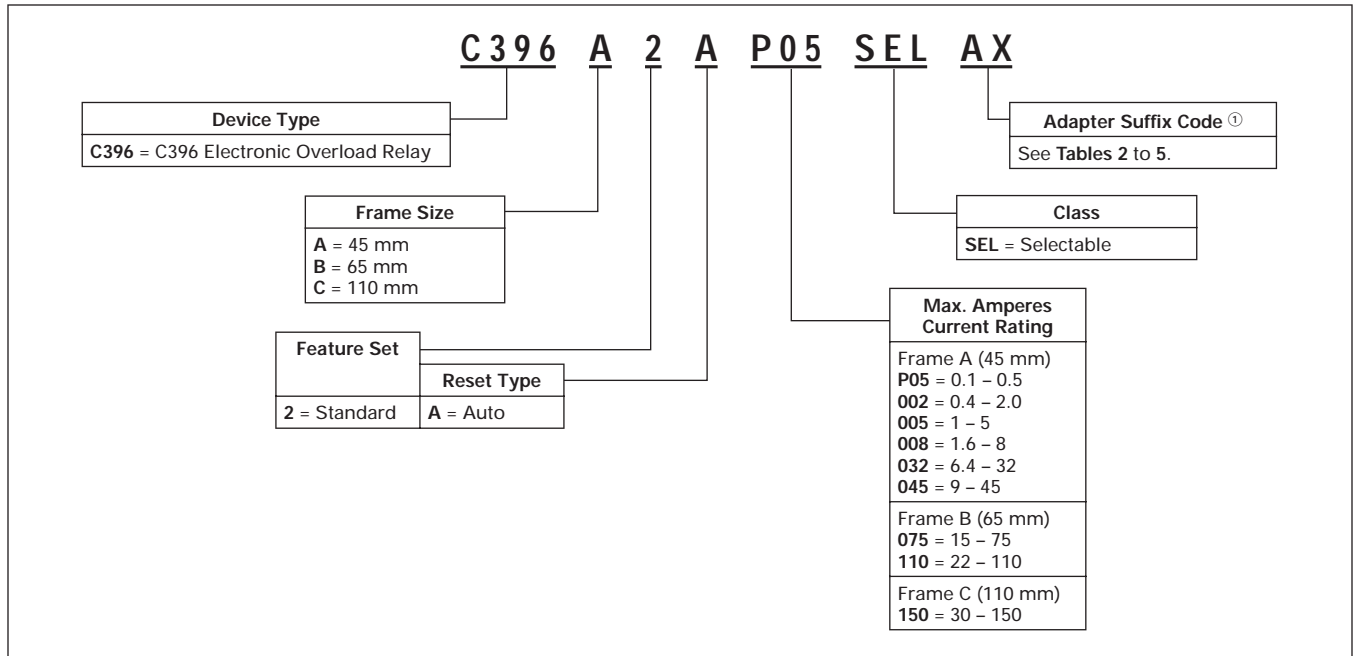
Standards and Certifications

- UL Listed Components: Stand-alone, starter-mounted devices and remote reset kit
- CSA Certified Components: Stand-alone, starter-mounted devices and remote reset kit
- IEC EN 60947-4-1, EN 60947-5-1
- CE
- RoHS



Catalog Number Selection

Table 1. C396 Electronic Overload Catalog Numbering System



① Choose appropriate adapter based on application FLA range and contactor's frame size.

Table 2. Stand-Alone Overload Relay Suffix Code

FLA Range	Frame Size	Suffix
All	N/A	AX

Table 3. XT IEC Adapter Suffix Code

Contactor Frame Size	FLA Range (Amps)	Suffix
IEC Frame B	0.1 - 0.5 0.4 - 2.0 1 - 5 1.6 - 8 6.4 - 32	XB
IEC Frame C	0.1 - 0.5 0.4 - 2.0 1 - 5 1.6 - 8 6.4 - 32	XC
IEC Frame D	6.4 - 32 9 - 45 15 - 75	XD
IEC Frame F - G	22 - 110	XF

Table 4. Freedom NEMA Adapter Suffix Code

FLA Range (Amps)	Contactor Frame Size	Suffix
0.1 - 0.5	NEMA Size 00 NEMA Size 0 NEMA Size 1	FD
0.4 - 2.0	NEMA Size 00 NEMA Size 0 NEMA Size 1	FD
1 - 5	NEMA Size 00 NEMA Size 0 NEMA Size 1	F00 F0 F01
1.6 - 8	NEMA Size 00 NEMA Size 0 NEMA Size 1 NEMA Size 2	F00 F0 F1 F2
6.4 - 32	NEMA Size 0 NEMA Size 1	FB FD
9 - 45	NEMA Size 2	FG
22 - 110	NEMA Size 3	FK

Table 5. DP Contactor Adapter Suffix Code

FLA Range (Amps)	Contactor Frame Size	Suffix
0.1 - 0.5 0.4 - 2.0 1 - 5	15, 25, 30A	DC
1.6 - 8	15, 25, 30, 40A	DE
6.4 - 32	15, 25, 30, 40, 50A	DF
9 - 45	40, 50A	DF
15 - 75	60, 75A	DG

Product Selection



Cat. No.
C396A2A045SELAX



Cat. No.
C396B2A110SELFK



Cat. No.
C396C2A150SELAX



Cat. No.
C396C2A150SELAX +
C396CBAR



Cat. No.
C396C2A150SELAX +
C396CBAR + C396CLUG

Table 6. C396 Stand-Alone Overload Relay

FLA Range (Amps)	Description	Catalog Number	Price U.S. \$
45 mm Overload Frame Size ①			
0.1 – 0.5	—	C396A2AP05SELAX	139.
0.4 – 2.0	—	C396A2A002SELAX	139.
1 – 5	—	C396A2A005SELAX	139.
1.6 – 8	—	C396A2A008SELAX	139.
6.4 – 32	—	C396A2A032SELAX	152.
9 – 45	—	C396A2A045SELAX	202.
65 mm Overload Frame Size ①			
15 – 75	—	C396B2A075SELAX	248.
22 – 110	—	C396B2A110SELAX	283.
110 mm Overload Frame Size ②			
30 – 150	—	C396C2A150SELAX	524.

① Overload comes with a panel/DIN rail mounting adapter assembled. No separate mounting adapter accessory offered.

② Panel mount only! Overload comes with integrated pass-through holes for power wires. Bus Bar Kit (C396CBAR or C396CBARXT, see Table 11) and Lug Kit (C396CLUG) must be purchased separately if customer prefers not to use pass-through capability.

Table 7. Current Transformer Kits for Use with Stand-Alone Overload Relay C396A2A005SELAX ③

FLA Range (Amps)	Description	Catalog Number	Price U.S. \$
60 – 300	300: 5 Panel-mount CT Kit with integrated, pass-through holes. Kit includes CT, bus bars, lugs and hardware to mount C396A2A005SELAX (not included).	C396CTK300	525.
120 – 600	600: 5 Panel-mount CT Kit with integrated, pass-through holes. Kit includes CT, bus bars, lugs and hardware to mount C396A2A005SELAX (not included).	C396CTK600	612.
200 – 1000	1000: 5 Panel-mount CT Kit with integrated, pass-through holes. Kit includes CT, bus bars, lugs and hardware to mount C396A2A005SELAX (not included).	C396CTK1000	735.
300 – 1500	1500: 5 Panel-mount CT Kit with integrated, pass-through holes. Kit includes CT, bus bars, lugs and hardware to mount C396A2A005SELAX (not included).	C396CTK1500	852.

③ C396A2A005SELAX is not included in the current transformer kits. This item must be ordered separately.

Table 8. C396 Overload for Integrated Use with XT IEC Contactors

FLA Range (Amps)	XT IEC Contactor Frame Size / Width	Catalog Number	Price U.S. \$
45 mm Overload Frame Size			
0.1 – 0.5	B / 45 mm	C396A2AP05SELXB	112.
0.4 – 2.0	B / 45 mm	C396A2A002SELXB	112.
1 – 5	B / 45 mm	C396A2A005SELXB	112.
1.6 – 8	B / 45 mm	C396A2A008SELXB	112.
6.4 – 32	B / 45 mm	C396A2A032SELXB	126.
0.1 – 0.5	C / 45 mm	C396A2AP05SELXC	112.
0.4 – 2.0	C / 45 mm	C396A2A002SELXC	112.
1 – 5	C / 45 mm	C396A2A005SELXC	112.
1.6 – 8	C / 45 mm	C396A2A008SELXC	112.
6.4 – 32	C / 45 mm	C396A2A032SELXC	126.
6.4 – 32	D / 55 mm	C396A2A032SELXD	164.
9 – 45	D / 55 mm	C396A2A045SELXD	175.
65 mm Overload Frame Size			
15 – 75	D / 55 mm	C396B2A075SELXD	211.
22 – 110	F – G / 90 mm	C396B2A110SELXF	246.
110 mm Overload Frame Size — Stand-Alone or Direct to XT Contactor with Indicated Kit			
30 – 150	G / 90 mm	C396C2A150SELAX ④	524.
110 mm XT Bus Bar Kit		C396CBARXT	124.

④ Catalog Number shown is for Stand-Alone C396 Overload Relay. For direct connection to XT Frame G contactor, order additional XT Bus Bar Kit, C396CBARXT, shown in Tables 8 and 11. If load side lugs are required, order C396CLUG (set of 3).

Technical Data	Page 6
Dimensions	Pages 7 – 10
Accessories	Page 5
Discount Symbol	1CD7

Table 9. C396 Overload for Integrated Use with Freedom NEMA Contactors ①

FLA Range (Amps)	NEMA Contactor Frame Size	Description	Catalog Number	Price U.S. \$
0.1 – 0.5	00, 0, 1	—	C396A2AP05SELFD	181.00
0.4 – 2.0	00, 0, 1	—	C396A2A002SELFD	181.00
1 – 5	00	—	C396A2A005SELFD	181.00
	0		C396A2A005SELF0	181.00
	1		C396A2A005SELF1	181.00
1.6 – 8	00	—	C396A2A008SELFD	181.00
	0		C396A2A008SELF0	181.00
	1		C396A2A008SELF1	181.00
	2		C396A2A008SELF2	181.00
6.4 – 32	0	—	C396A2A032SELFB	192.00
	1		C396A2A032SELFD	276.00
9 – 45	2	—	C396A2A045SELFG	290.00

65 mm Overload Frame Size

22 – 110	3	—	C396B2A110SELFK	385.00
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110 mm Overload Frame Size — Stand-Alone ③

30 – 150	4	—	C396C2A150SELAX ②	524.00
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Note: For NEMA Sizes 5 – 8, refer to **Table 7**, Current Transformer Kits.

① Discount Symbol 1CD1.

② Discount Symbol 1CD7.

③ Panel mount only! Overload comes with integrated pass-through holes for power wires. Bus Bar Kit (C396CBAR or C396CBARXT, see **Table 11**) and Lug Kit (C396CLUG) must be purchased separately if customer prefers not to use pass-through capability.



*Cat. No.
C396A2A008SELDC*

Table 10. C396 Overload for Integrated Use with DP Contactors by Feature Set ④

FLA Range (Amps)	DP Contactor Rating	Catalog Number	Price U.S. \$
0.1 – 0.5	15, 25, 30	C396A2AP05SELDC	134.00
0.4 – 2.0	15, 25, 30	C396A2A002SELDC	134.00
1 – 5	15, 25, 30	C396A2A005SELDC	134.00
1.6 – 8	15, 25, 30, 40	C396A2A008SELDC	134.00
6.4 – 32	15, 25, 30, 40, 50	C396A2A032SELDF	134.00
9 – 45	40, 50	C396A2A045SELDF	189.00

65 mm Overload Frame Size

15 – 75	60, 75	C396B2A075SELDG	267.00
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④ Discount Symbol 1CD-5C.

Accessories

Table 11. C396 Electronic Overload Accessories

	Description	Catalog Number	Price U.S. \$
	Reset Bar Kit ⑤ assembles to the top of the overload to increase reset area.	C396ARST	18.70
	110 mm Lug Kit ⑥⑦	C396CLUG	77.00
	110 mm Bus Bar Kit ⑥⑧	C396CBAR	135.00
	110 mm XT Bus Bar Kit ⑥⑧	C396CBARXT	124.00
 <i>C396ARST + C396RR Assembled to a C396 Overload Relay</i>	Remote Reset 24V DC ⑥⑩⑪	C396RR024DC	79.50
	Remote Reset 24V AC ⑥⑩⑪	C396RR024AC	79.50
	Remote Reset 120V AC ⑥⑩⑪	C396RR120AC	79.50
	Remote Reset 240V AC ⑥⑩⑪	C396RR240AC	79.50
	Mechanical Reset with E22 Flush Push-button and Mechanical Push Rod ⑥⑨		
	Plastic Black Bezel	E22PB6N29L	22.80
	Chrome Bezel	E22P6N29L	25.00
	Mechanical Push Rod — for external mechanical reset ⑥⑫	E22MRL	13.50
	Mounting Hole Adapter Kit ⑥⑬	E22ARK	6.35

⑤ Discount Symbol 1CD7.

⑥ Discount Symbol 1CD1.

⑦ Set of 3 lugs and hardware, 2 sets are required to wire line and load sides. Bus Bar Kit (C396CBAR or C396CBARXT) is needed to use the Lug Kit.

⑧ Bus bar kits do not include lugs. Order C396CLUG if lugs are needed (3 lugs per kit).

⑨ The operator button is blue with the letters “RESET” printed in white. The push rod is 4.72” long and can be cut to the desired length. This kit can be used alone or in conjunction with the C396 Reset Bar Kit, C396ARST, to increase the size of the reset area on the overload.

⑩ Reset Bar Kit (C396ARST) required to use the Remote Reset modules. Note that all Freedom Starters come with Reset Bars.

⑪ When used in conjunction with a Stand-Alone C396 Overload Relay (overloads with an “AX” suffix), style number of the overload must end in a “B” or later.

⑫ Must be cut to proper length — uncut 4.72 inches (119.9 mm) long.

⑬ Enables a 22.5 mm operator to be mounted in a 30.5 mm holes — 1/16 to 7/32 inch (1.6 to 5.6 mm) panel thickness.

Technical Data and Specifications

Table 12. Overload Relay Specifications

General Description	C396_2_
	Standard
Protection	
Thermal	1.05 x FLA: Does not trip 1.25 x FLA: Overload trip
Phase Loss	1 Phase = 0, Trip time = 3s (Hot Status)
Phase Imbalance	Max - Min / Max > 40%, Trip time = 3s (Hot Status)
Inrush Current	> 8 x Max FLA, Trip time is 0.3s (Cold Status)
Trip Class	
Class 5, 10, 20, 30	Selectable
Reset	
M / M-O A / A-O	Manual / Manual + Stop Auto / Auto + Stop Auto Reset Time = up to 165s
Indications	
Test Indicator	Yellow
Trip Indicator	Yellow
PCBA	
Power Sensing	3 phase
Instant Reset by Power ON	CPU reset by Power ON after 2 – 3s
Thermal memory	< 3 min.
Cold and Hot Trip Curves	Power ON > 20 min. is Hot Status
Power Consumption	< 300 mW
Options	
Safety Cover	Covers FLA dial, DIP switches
Remote Reset	24V DC, 24V AC, 120V AC, 240V AC

Table 12. Overload Relay Specifications (Continued)

General Description	C396_2_
	Standard
Climate Considerations	
Ambient Temperature (Operating)	-25° to 65°C (-13° to 149°F) inside enclosure
Ambient Temperature (Storage / Transportation)	-40° to 80°C (-40° to 176°F)
Humidity	UL991 (H3): 20 – 95% non-condensing
Altitude (Operating)	NEMA ICS1: 2000 meters max above sea level
Pollution (Operating — External)	Pollution degree 3
Mechanical Shock Resistance (IEC/EN 68-2-17)	15g
Vibration (Lloyd's Register of Shipping, Vibration Test 2)	6g
Temperature Compensation	Continuous
Voltages	
Control Voltage	12 – 690V AC, 50/60 Hz
Insulation Voltage (Ui) — Main Circuit	1000V AC
Insulation Voltage (Ui) — Control Circuit	690V AC
Impulse Withstand Voltage (Uimp) VAC	6000
FLA Range	
45 mm Frame: C396A_	0.1 – 45A
65 mm Frame: C396B_	15 – 110A
110 mm Frame: C396C_	30 – 150A
Safety	
Degree of Protection	IP20 (Stand-Alone Version Only)
Capacity	
Control Terminal Capacity	18 – 14 AWG
Control Terminal Tightening Torque in Nm (lb-in)	0.79 (7)
Load Terminal Capacity	
45 mm Frame: C396A_	14 – 6 AWG
65 mm Frame: C396B_	10 – 1 AWG
110 mm Frame: C396C_	6 AWG – 250 mcm
Load Terminal Tightening Torque in Nm (lb-in)	
45 mm Frame: C396A_	3.2 (28)
65 mm Frame: C396B_	9.0 (80)
110 mm Frame: C396C_	22.6 (200)

Dimensions

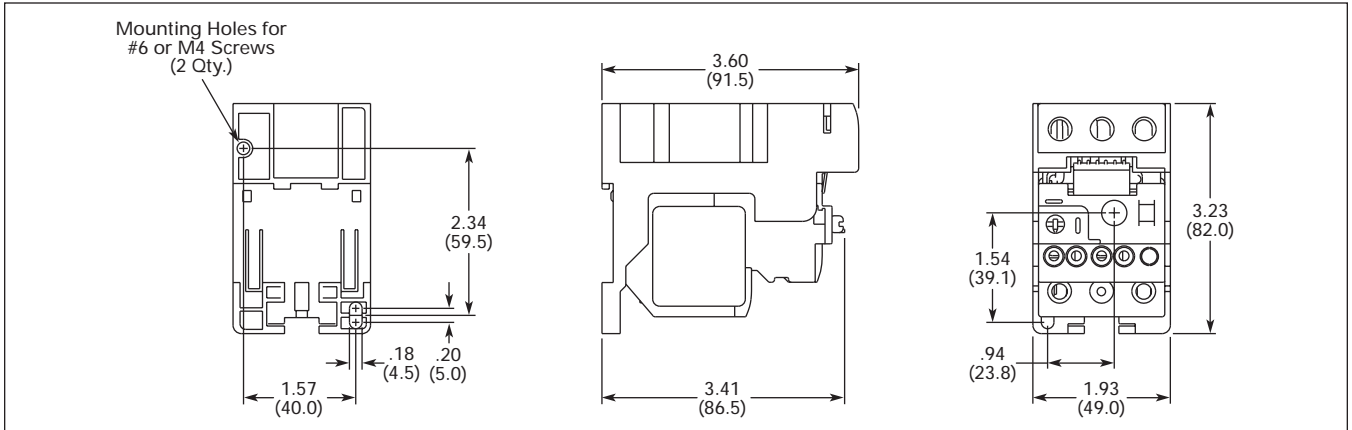


Figure 1. 45 mm Stand-Alone C396 Electronic Overload Relay — Approximate Dimensions in Inches (mm)

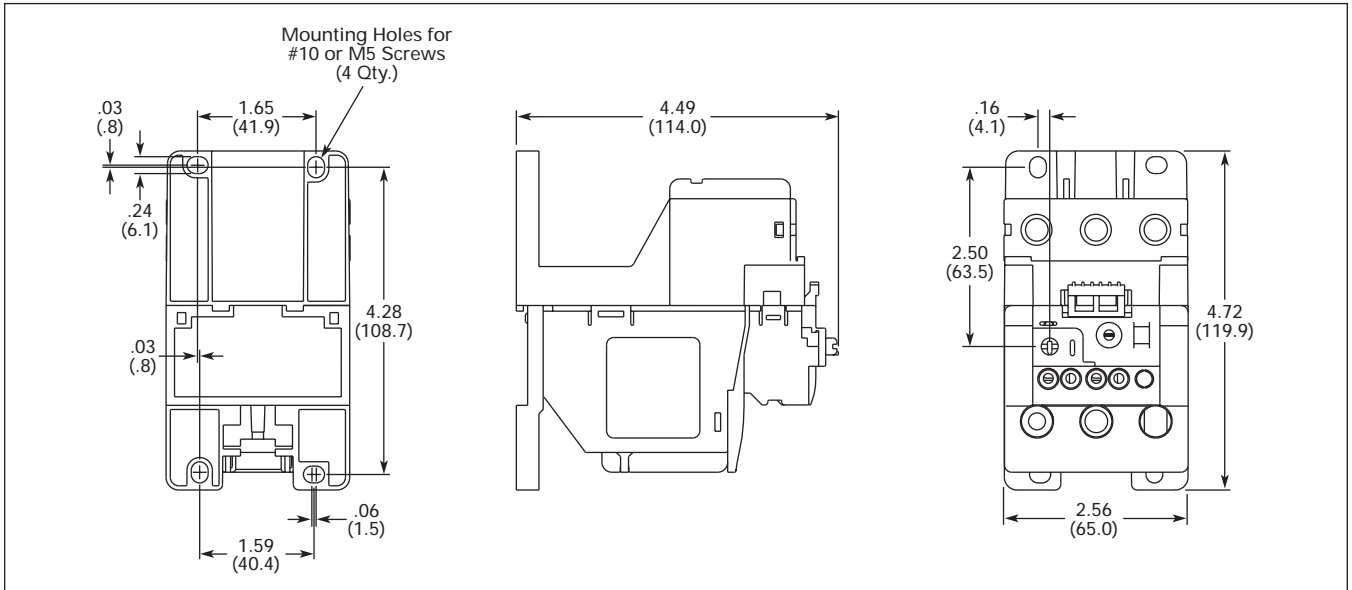


Figure 2. 65 mm Stand-Alone C396 Electronic Overload Relay — Approximate Dimensions in Inches (mm)

Overload Relays — C396

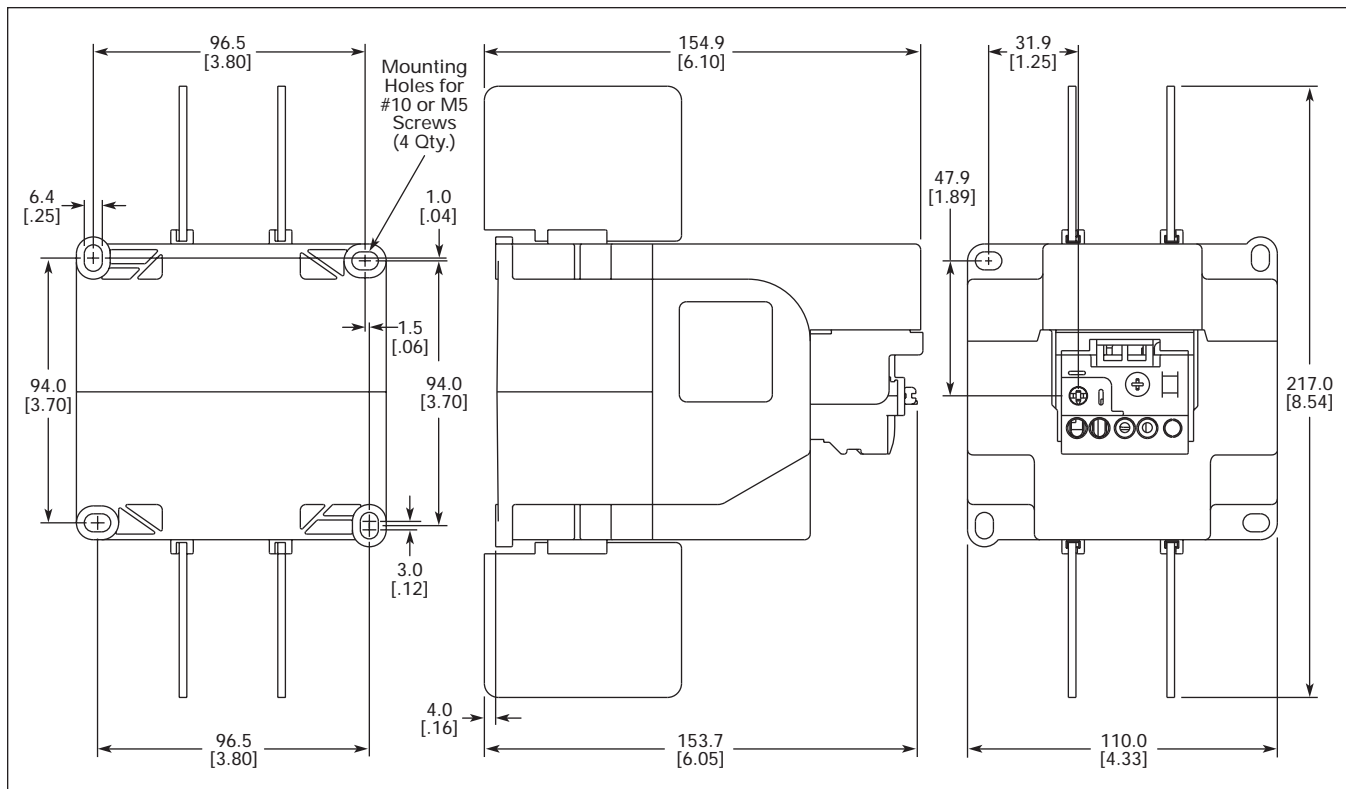


Figure 3. 110 mm Stand-Alone C396 Electronic Overload Relay — Approximate Dimensions in mm [in]

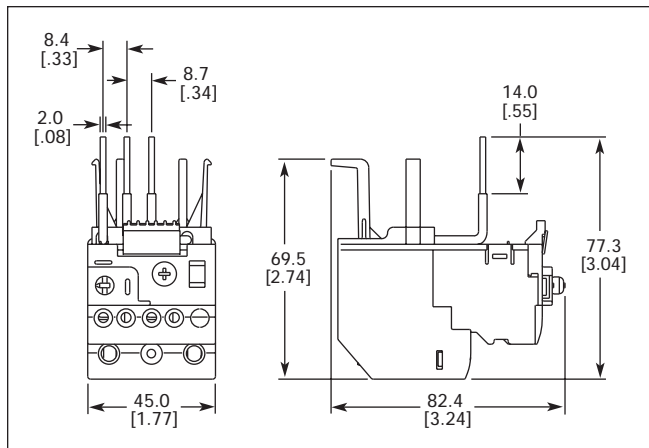


Figure 4. 45 mm C396 (0.1 – 8A) Direct Connect to XT Frame B Contactor — Approximate Dimensions in mm [in]

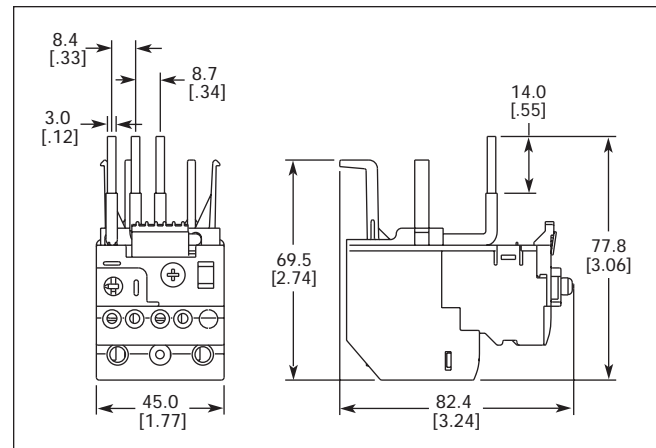


Figure 5. 45 mm C396 (6.4 – 32A) Direct Connect to XT Frame B Contactor — Approximate Dimensions in mm [in]

Overload Relays — C396

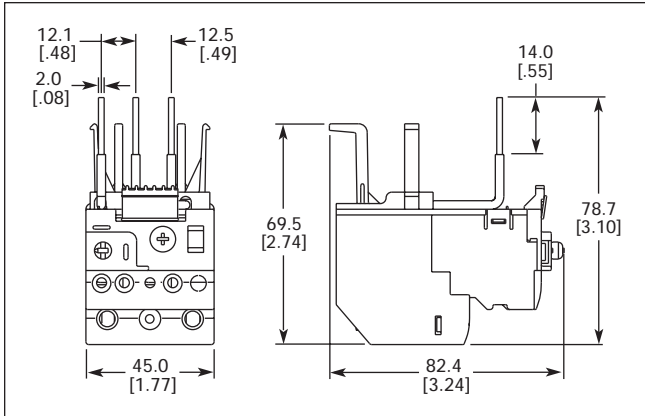


Figure 6. 45 mm C396 (0.1 – 8A) Direct Connect to XT Frame C Contactor — Approximate Dimensions in mm [in]

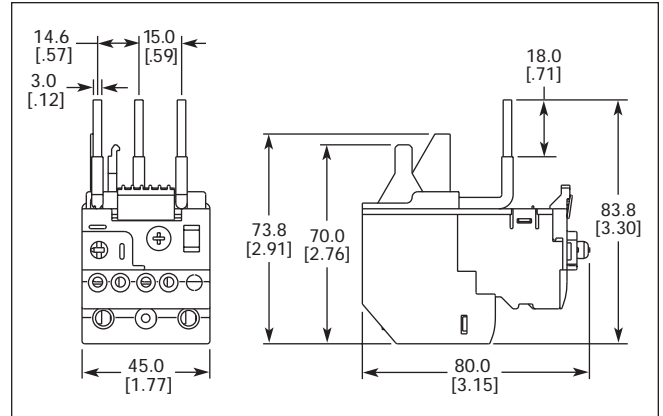


Figure 8. 45 mm C396 (6.4 – 45A) Direct Connect to XT Frame D Contactor — Approximate Dimensions in mm [in]

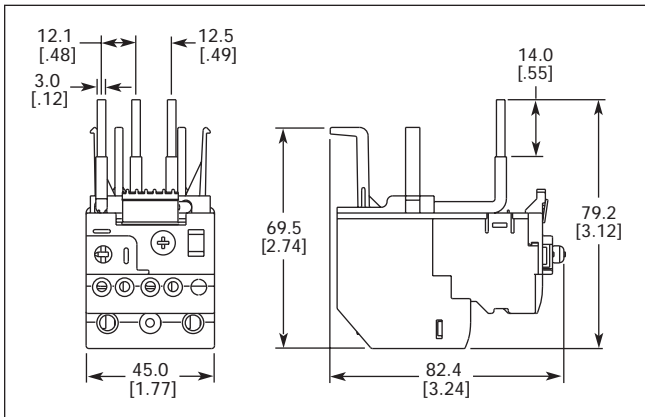


Figure 7. 45 mm C396 (6.4 – 32A) Direct Connect to XT Frame C Contactor — Approximate Dimensions in mm [in]

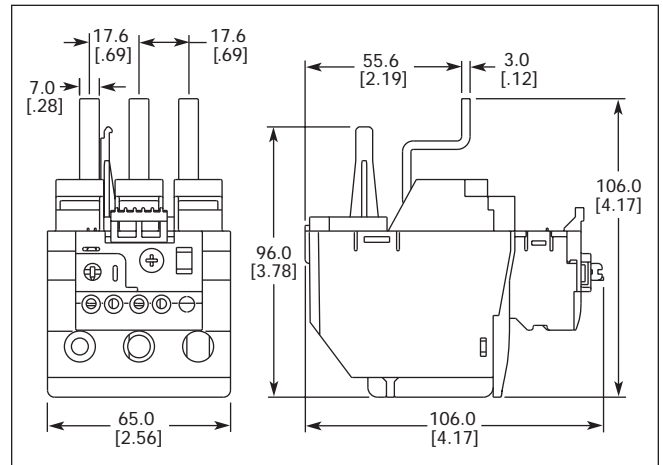


Figure 9. 65 mm C396 (15 – 75A) Direct Connect to XT Frame D Contactor — Approximate Dimensions in mm [in]

Overload Relays — C396

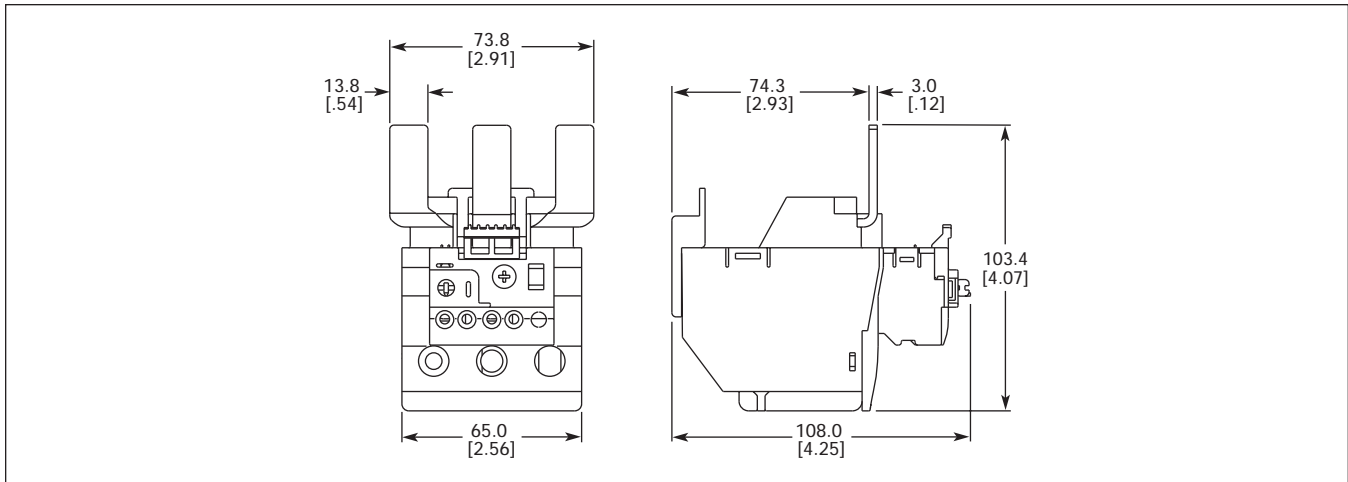


Figure 10. 65 mm C396 (22 – 110A) Direct Connect to XT Frame F – G Contactor — Approximate Dimensions in mm [in]

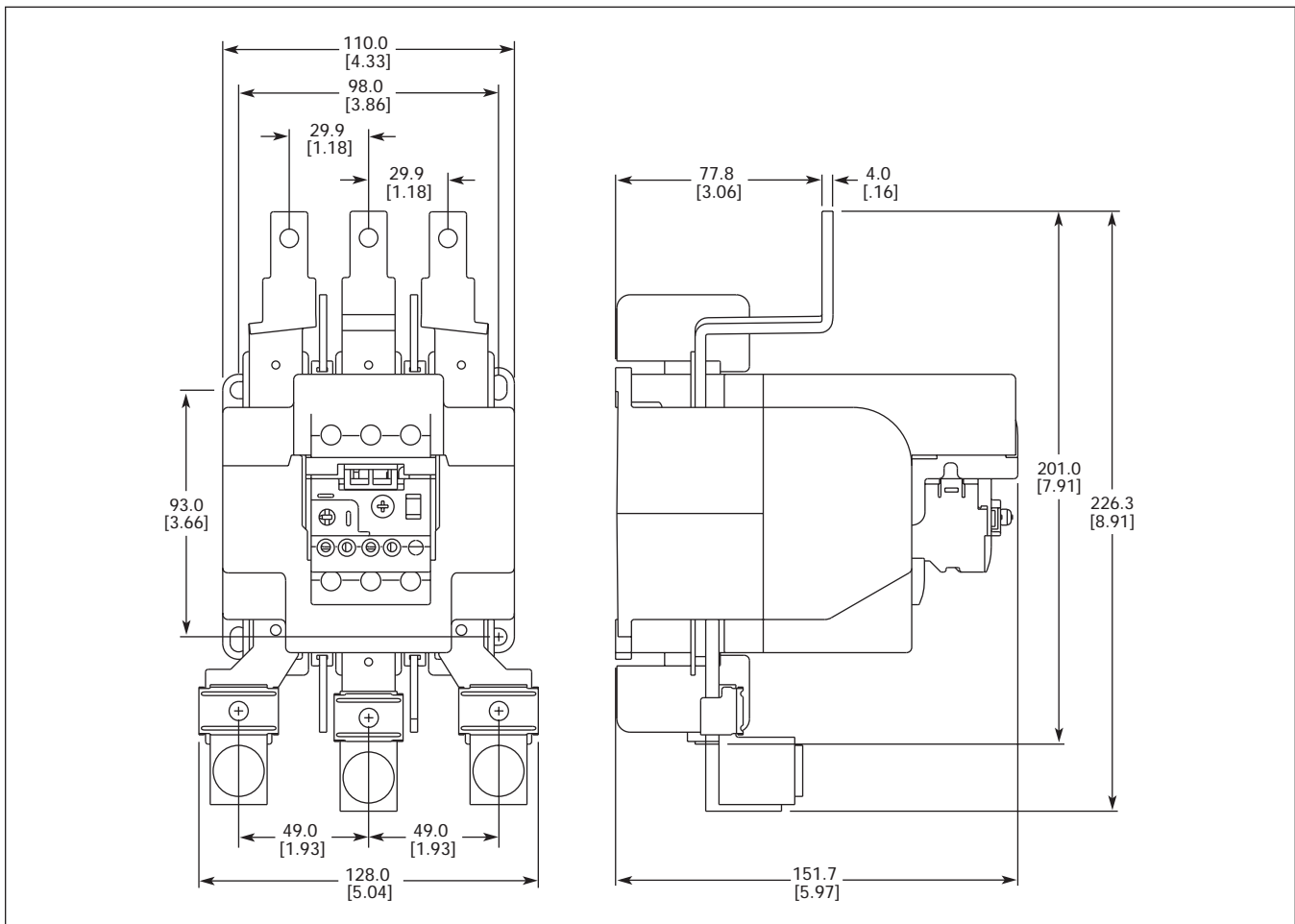


Figure 11. 110 mm C396 (30 – 150A) + C396CBARXT Direct Connect to XT Frame G Contactor — Approximate Dimensions in mm [in]

Catalog Number Selection

Table 13. XTIEC Contactors & Starters — Catalog Numbering System

XT CE C 007 B 01 AD P16																																																												
<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">Designation</td> </tr> <tr> <td>XT = XT Line of IEC Control</td> </tr> </table>			Designation	XT = XT Line of IEC Control																																																								
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<table border="1" style="width: 100%;"> <tr> <th style="text-align: center;">Current Ratings, AC-3</th> <th style="text-align: center;">Frame Size Designation</th> <th style="text-align: center;">Built-In Auxiliary Contact</th> </tr> <tr> <td>007 = 7A 009 = 9A 012 = 12A 015 = 15A</td> <td>B = 45 mm</td> <td>01 = 1NC 10 = 1NO</td> </tr> <tr> <td>018 = 18A 025 = 25A 032 = 32A</td> <td>C = 45 mm</td> <td></td> </tr> <tr> <td>040 = 40A 050 = 50A 065 = 65A 072 = 72A</td> <td>D = 55 mm</td> <td>00 = 0NO-0NC S1 = 1NO-1NC Side-mount Auxiliary</td> </tr> <tr> <td>080 = 80A 095 = 95A</td> <td>F = 90 mm</td> <td>S2 = 2NO-2NC Side-mount Auxiliary</td> </tr> <tr> <td>115 = 115A 150 = 150A 170 = 170A</td> <td>G = 90 mm</td> <td>11 = 1NO-1NC Top-mount Auxiliary</td> </tr> <tr> <td>185 = 185A 225 = 225A 250 = 250A</td> <td>L = 140 mm</td> <td>22 = 2NO-2NC</td> </tr> <tr> <td>300 = 300A 400 = 400A 500 = 500A 570 = 580A</td> <td>M = 160 mm</td> <td></td> </tr> <tr> <td>580 = 580A 650 = 650A 750 = 750A 820 = 820A C10 = 1000A</td> <td>N = 250 mm</td> <td></td> </tr> <tr> <td>C14 = 1400A, AC-1</td> <td>P = 260 mm</td> <td></td> </tr> <tr> <td>C16 = 1600A, AC-3 C20 = 2000A, AC-1</td> <td>R = 515 mm</td> <td></td> </tr> </table>			Current Ratings, AC-3	Frame Size Designation	Built-In Auxiliary Contact	007 = 7A 009 = 9A 012 = 12A 015 = 15A	B = 45 mm	01 = 1NC 10 = 1NO	018 = 18A 025 = 25A 032 = 32A	C = 45 mm		040 = 40A 050 = 50A 065 = 65A 072 = 72A	D = 55 mm	00 = 0NO-0NC S1 = 1NO-1NC Side-mount Auxiliary	080 = 80A 095 = 95A	F = 90 mm	S2 = 2NO-2NC Side-mount Auxiliary	115 = 115A 150 = 150A 170 = 170A	G = 90 mm	11 = 1NO-1NC Top-mount Auxiliary	185 = 185A 225 = 225A 250 = 250A	L = 140 mm	22 = 2NO-2NC	300 = 300A 400 = 400A 500 = 500A 570 = 580A	M = 160 mm		580 = 580A 650 = 650A 750 = 750A 820 = 820A C10 = 1000A	N = 250 mm		C14 = 1400A, AC-1	P = 260 mm		C16 = 1600A, AC-3 C20 = 2000A, AC-1	R = 515 mm																										
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115 = 115A 150 = 150A 170 = 170A	G = 90 mm	11 = 1NO-1NC Top-mount Auxiliary																																																										
185 = 185A 225 = 225A 250 = 250A	L = 140 mm	22 = 2NO-2NC																																																										
300 = 300A 400 = 400A 500 = 500A 570 = 580A	M = 160 mm																																																											
580 = 580A 650 = 650A 750 = 750A 820 = 820A C10 = 1000A	N = 250 mm																																																											
C14 = 1400A, AC-1	P = 260 mm																																																											
C16 = 1600A, AC-3 C20 = 2000A, AC-1	R = 515 mm																																																											
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Non-reversing Starters, C396 Electronic Overload



Frame C XT Starter with
C396 Electronic Overload

Table 14. Full Voltage Non-reversing 3-Pole Starters with C396 Electronic Overload

Maximum 3-Phase Motor Rating						I _e (A)		Maximum kW Ratings AC-3					Auxiliary Contacts	Catalog Number ①②	Price U.S. \$	
1-Phase hp Ratings		3-Phase hp Ratings				AC-3	AC-1	3-Phase Motors 50 – 60 Hz							Standard	
115V	230V	200V	230V	460V	575V			220/ 230V	380/ 400V	415V	660/ 690V	1000V			AC Coil	DC Coil
Frame B																
1/4	1	1-1/2	2	3	5	7	20	2.2	3	4	3.5	—	1NO	XTAE007B10_	255.	288.
1/4	1	1-1/2	2	3	5	7	20	2.2	3	4	3.5	—	1NC	XTAE007B01_	255.	288.
1/2	1-1/2	3	3	5	7-1/2	9	20	2.5	4	5.5	4.5	—	1NO	XTAE009B10_	263.	299.
1/2	1-1/2	3	3	5	7-1/2	9	20	2.5	4	5.5	4.5	—	1NC	XTAE009B01_	263.	299.
1	2	3	3	10 ^③	10	12	20	3.5	5.5	7	6.5	—	1NO	XTAE012B10_	291.	334.
1	2	3	3	10 ^③	10	12	20	3.5	5.5	7	6.5	—	1NC	XTAE012B01_	291.	334.
1	3	5	5	10 ^③	10	15.5	20	4	7.5	8	7	—	1NO	XTAE015B10_	307.	341.
1	3	5	5	10 ^③	10	15.5	20	4	7.5	8	7	—	1NC	XTAE015B01_	307.	341.
Frame C																
2	3	5	5	10 ^③	15	18	35	5	7.5	10	11	—	1NO	XTAE018C10_	321.	357.
2	3	5	5	10 ^③	15	18	35	5	7.5	10	11	—	1NC	XTAE018C01_	321.	357.
2	5	7-1/2	7-1/2	15	20	25	40	7.5	11	14.5	14	—	1NO	XTAE025C10_	356.	389.
2	5	7-1/2	7-1/2	15	20	25	40	7.5	11	14.5	14	—	1NC	XTAE025C01_	356.	389.
3	5	10	10	20	25	32	40	10	15	18	17	—	1NO	XTAE032C10_	406.	449.
3	5	10	10	20	25	32	40	10	15	18	17	—	1NC	XTAE032C01_	406.	449.
Frame D																
3	7-1/2	10	15	30	40	40	50	12.5	18.5	24	23	—	—	XTAE040D00_	524.	574.
3	10	15	20	40	50	50	60	15.5	22	30	30	—	—	XTAE050D00_	555.	638.
5	15	20	25	50	60	65	72	20	30	39	35	—	—	XTAE065D00_	575.	657.
Frame F																
7-1/2	15	25	30	60	75	80	110	25	37	48	63	—	—	XTAE080F00_	780.	893.
7-1/2	15	25	40	75	100	95	110	30	45	57	75	—	—	XTAE095F00_	873.	1,016.
Frame G																
10	25	40	50	100	125	115	160	37	55	70	105	—	—	XTAE115G00_	1,285.	1,435.
15	30	40	60	125	125	150	160	48	75	91	125	—	—	XTAE150G00_	1,674.	1,874.

① Underscore () indicates magnet coil suffix required. See Table 16.
 ② Underscore () indicates overload relay suffix required. See Table 18.
 ③ For electrical life contactor application data see Table 17.

Reversing Starters, C396 Electronic Overload

Table 15. Full Voltage Reversing Starters with Screw Terminals and C396 Electronic Overload

Maximum 3-Phase Motor Rating						I _e (A)		Maximum kW Ratings AC-3				Catalog Number ④⑤	Price U.S. \$	
1-Phase hp Ratings		3-Phase hp Ratings				AC-3	3-Phase Motors 50 – 60 Hz				Standard			
115V	230V	200V	230V	460V	575V		220/ 230V	380/ 400V	415V	660/ 690V	AC Coil		DC Coil	
Frame B														
1/4	1	1-1/2	2	3	5	7	2.2	3	4	3.5	—	XTAR007B21_	541.	609.
1/2	1-1/2	3	3	5	7-1/2	9	2.5	4	5.5	4.5	—	XTAR009B21_	559.	630.
1	2	3	3	10	10	12	3.5	5.5	7	6.5	—	XTAR012B21_	624.	706.
Frame C														
2	3	5	5	10	15	18	5	7.5	8	11	—	XTAR018C21_	706.	783.
2	5	7-1/2	7-1/2	15	20	25	7.5	11	14.5	14	—	XTAR025C21_	788.	852.
3	5	10	10	20	25	32	10	15	18	17	—	XTAR032C21_	899.	981.
Frame D														
3	7-1/2	10	15	30	40	40	12.5	18.5	24	23	—	XTAR040D11_	1,143.	1,242.
3	10	15	20	40	50	50	15.5	22	30	30	—	XTAR050D11_	1,214.	1,383.
5	15	20	25	50	60	65	20	30	39	35	—	XTAR065D11_	1,348.	1,516.

④ Underscore () indicates magnet coil suffix required. See Table 16.
 ⑤ Underscore () indicates overload relay suffix required. See Table 18.

Coil Voltage Chart Page 13
 Accessories Page 5
 Dimensions Pages 18-20
 Overload Relays Page 2
 Discount Symbol 1CD7

Contactors and Starters

Table 16. Magnet Coil Suffix

Coil Voltage	Suffix Code
Frame A – B	
110V 50 Hz, 120V 60 Hz	A
220V 50 Hz, 240V 60 Hz	B
230V 50 Hz	F
24V 50/60 Hz	T
24V DC	TD
415V 50 Hz, 480V 60 Hz	C ③
550V 50 Hz, 600V 60 Hz	D ③
208V 60 Hz	E ③
190V 50 Hz, 220V 60 Hz	G ③
240V 50 Hz, 277V 60 Hz	H ③
380V 50 Hz, 440V 60 Hz	L ③
400V 50 Hz	N ③
380V 60 Hz	P ③
12V 50/60 Hz	R ③
24V 50 Hz	U ③
42V 50 Hz, 48V 60 Hz	W ③
48V 50 Hz	Y ③
120V DC	AD ③
220V DC	BD ③
12V DC	RD ③
48V DC	WD ③

Coil Voltage	Suffix Code
Frame C – F	
110V 50 Hz, 120V 60 Hz	A
220V 50 Hz, 240V 60 Hz	B
230V 50 Hz	F
24V 50/60 Hz	T
24 – 27V DC	TD
415V 50 Hz, 480V 60 Hz	C ③
550V 50 Hz, 600V 60 Hz	D ③
208V 60 Hz	E ③
190V 50 Hz, 220V 60 Hz	G ③
240V 50 Hz, 277V 60 Hz	H ③
380V 50 Hz, 440V 60 Hz	L ③
400V 50 Hz	N ③
380V 60 Hz	P ③
12V 50/60 Hz	R ③
24V 50 Hz	U ③
42V 50 Hz, 48V 60 Hz	W ③
48V 50 Hz	Y ③
110 – 130V DC	AD ③
200 – 240V DC	BD ③
12 – 14V DC	RD ①③
48 – 60V DC	WD ③

Coil Voltage	Suffix Code
Frame G	
100 – 120V 50/60 Hz	A
190 – 240V 50/60 Hz	B
24V 50/60 Hz	T
24 – 27V DC	TD
480 – 500V 50/60 Hz	C ③
380 – 440V 50/60 Hz	L ③
42 – 48V 50/60 Hz	W ③
110 – 130V DC	AD ③
200 – 240V DC	BD ③
48 – 60V DC	WD ③
Frame L – N	
110 – 250V 40 – 60 Hz/DC	A
250 – 500V 40 – 60 Hz	C ③
48 – 110V 40 – 60 Hz/DC	Y ③
24 – 48V DC	TD ②
Frame L – N, S-Series	
110 – 120V 50/60 Hz	A
220 – 240V 50/60 Hz	B
Frame P – R	
220 – 250V 50 – 60 Hz/DC	B

- ① Frame C – D only.
- ② Frame L – M only.
- ③ For indicated coils, price adder of 10% must be applied to the contactor list price.

Table 17. Contactor Application Data

Catalog Prefix	Electrical Life (Operations) for 10hp, 480V (14.2A) Applications
XTCE012B	1 million
XTCE015B	1.2 million
XTCE018C	2 million

Table 18. C396 Overload Relay Suffix

FLA Range (Amps)	Suffix	For Use with XTIEC Contactor Frame Size / Width	Catalog Number Standard Class 5/10/20/30
	Std. Class 5/10/20/30		
45 mm Overload Frame Size			
0.1 – 0.5	3EP05	B / 45 mm	C396A2AP05SELXB
0.4 – 2.0	3E002	B / 45 mm	C396A2A002SELXB
1 – 5	3E005	B / 45 mm	C396A2A005SELXB
1.6 – 8	3E008	B / 45 mm	C396A2A008SELXB
6.4 – 32	3E032	B / 45 mm	C396A2A032SELXB
0.1 – 0.5	3EP05	C / 45 mm	C396A2AP05SELXC
0.4 – 2.0	3E002	C / 45 mm	C396A2A002SELXC
1 – 5	3E005	C / 45 mm	C396A2A005SELXC
1.6 – 8	3E008	C / 45 mm	C396A2A008SELXC
6.4 – 32	3E032	C / 45 mm	C396A2A032SELXC
6.4 – 32	3E032	D / 55 mm	C396A2A032SELXD
9 – 45	3E045	D / 55 mm	C396A2A045SELXD
65 mm Overload Frame Size			
15 – 75	3E075	D / 55 mm	C396B2A075SELXD
22 – 110	3E110	F – G / 90 mm	C396B2A110SELXF
110 mm Overload Frame Size			
30 – 150	3E150	G / 90 mm	C396C2A150SELAX ④

④ Catalog Number listed is for Stand-Alone Overload Relay. For direct connection of 110 mm C396 to Frame G XT Contactors use 110 mm XT Bus Bar Kit, C396CBARXT.

Accessories Page 5
 Dimensions Pages 18-20
 Overload Relays Page 2
 Discount Symbol 1CD7

XTAE Starters with C396 Overload Relay

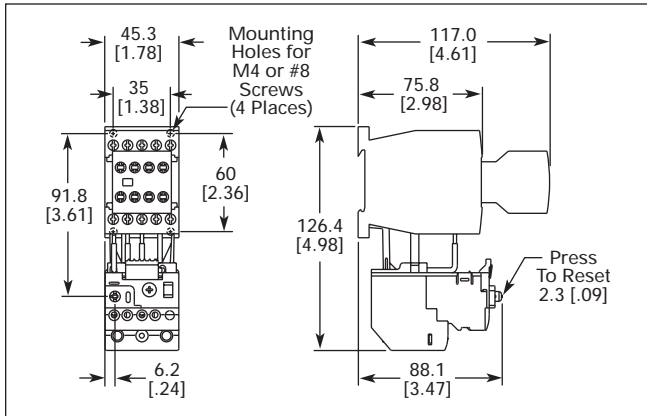


Figure 12. Frame B, XTAE007B – XTAE012B Starters with C396 (0.1 – 15A) — Approximate Dimensions in mm [in.]

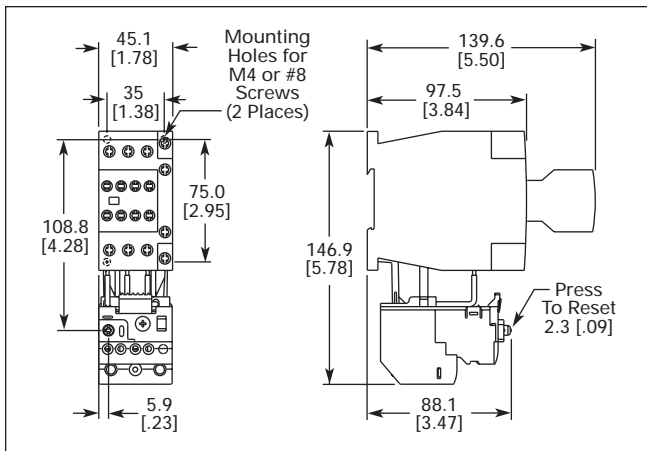


Figure 13. Frame C, XTAE018C – XTAE032C Starters with C396 (0.1 – 32A) — Approximate Dimensions in mm [in.]

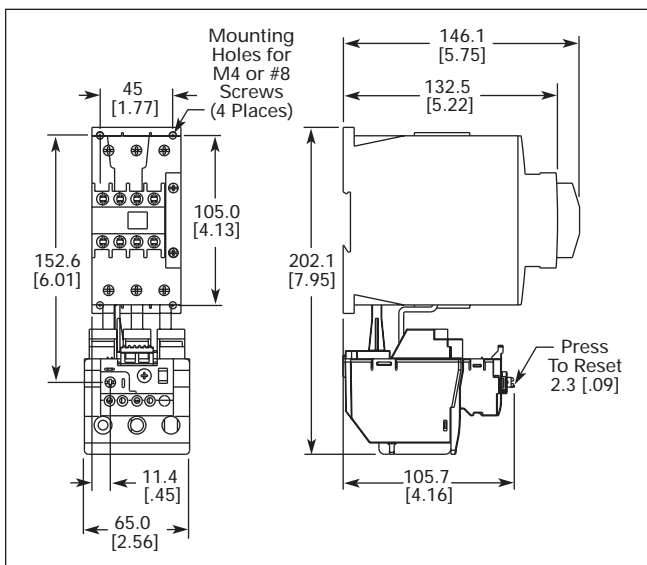


Figure 14. Frame D, XTAE040D – XTAE065D Starters with C396 (15 – 75A) — Approximate Dimensions in mm [in.]

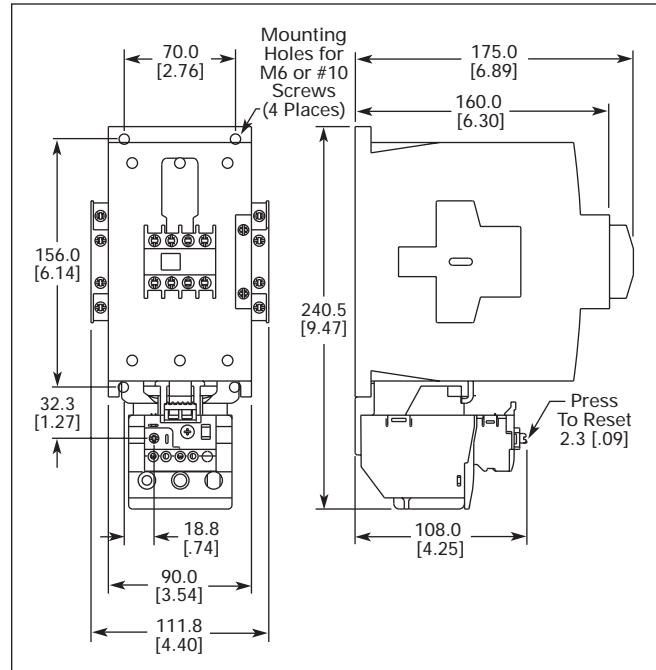


Figure 15. Frame F and G, XTAE080F – XTAE115G Starters with C396 (22 – 110A) — Approximate Dimensions in mm [in.]

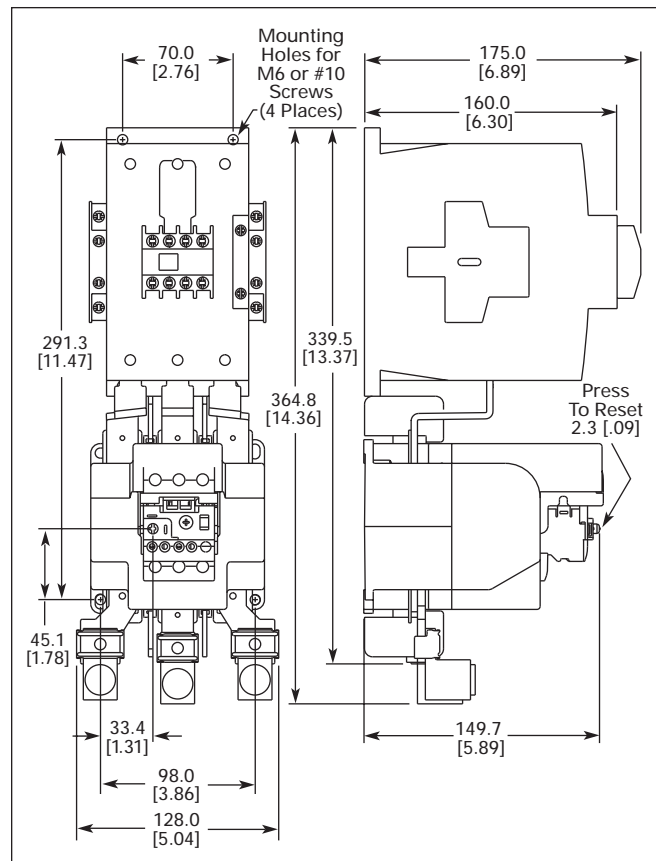
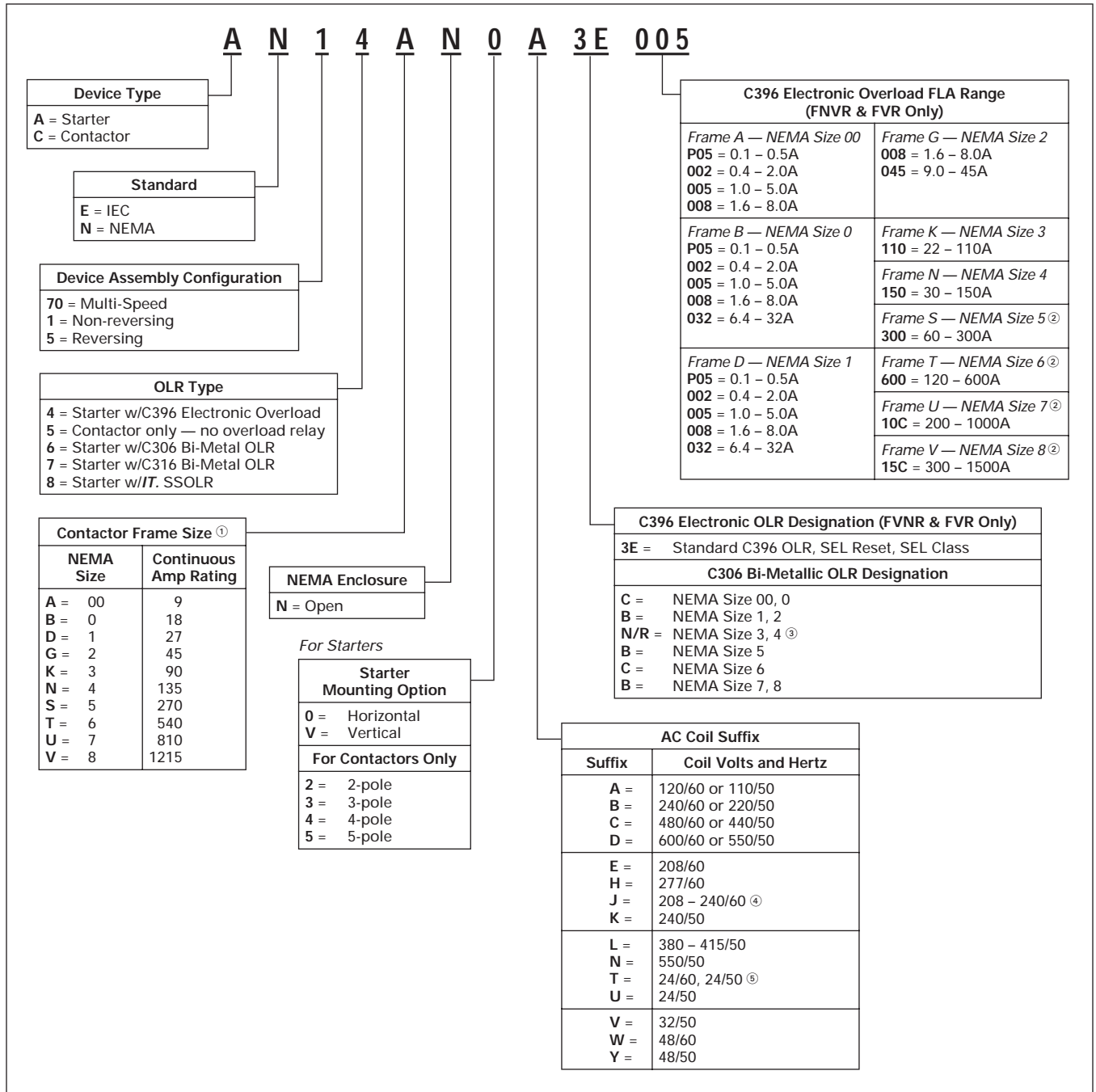


Figure 16. Frame G, XTAE115G – XTAE150G Starters with C396 (30 – 150A) — Approximate Dimensions in mm [in.]

Catalog Number Selection

Table 19. Freedom Catalog Numbering System



① For Contactor Only orders, add **B** to end of Catalog Number if NEMA Size 00 – 2, 6.
 ② Uses panel-mount CT with C396A2A005SELAX Overload.
 ③ Not required.
 ④ NEMA Sizes 00 and 0 only.
 ⑤ NEMA Sizes 00 and 0 only. Sizes 1 – 8 are 24/60 only.

Product Selection



Catalog Number AN14GN0_ _ _

Table 20. Type AN14/AN54 NEMA — C396 Selectable Reset Electronic Overload Relay — Non-reversing and Reversing

NEMA Size	Cont. Amp Rating	Service-Limit Current Rating ^⑤ (Amps)	Maximum UL Horsepower ^⑤						3-Pole Non-reversing ^{①②③}		3-Pole Reversing ^{①②③}		Vertical Reversing ^{①②③}	
			1-Phase		3-Phase				Catalog Number	Price U.S. \$	Catalog Number	Catalog Number	Price U.S. \$	
			115V	230V	208V	240V	480V	600V						
00	9	11	1/3	1	1-1/2	1-1/2	2	2	AN14AN0_ _ _	382.	AN54AN0_ _ _	—	842.	
0	18	21	1	2	3	3	5	5	AN14BN0_ _ _	462.	AN54BN0_ _ _	AN54BNV_ _ _	984.	
1	27	32	2	3	7-1/2	7-1/2	10	10	AN14DN0_ _ _	512.	AN54DN0_ _ _	AN54DNV_ _ _	1,120.	
2	45	52	3	7-1/2	10	15	25	25	AN14GN0_ _ _	926.	AN54GN0_ _ _	AN54GNV_ _ _	2,022.	
3	90	104	—	—	25	30	50	50	AN14KN0_ _ _	1,595.	AN54KN0_ _ _	AN54KNV_ _ _	3,291.	
4 ^④	135	156	—	—	40	50	100	100	AN14NN0_ _ _	2,990.	AN54NN0_ _ _	AN54NNV_ _ _	7,660.	
5	270	311	—	—	75	100	200	200	AN14SN0_ _ _	8,955.	AN54SN0_ _ _	—	14,610.	
6	540	621	—	—	150	200	400	400	AN14TN0_ _ _	17,005.	AN54TN0_ _ _	—	31,725.	
7	810	932	—	—	200	300	600	600	AN14UN0_ _ _	24,215.	AN54UN0_ _ _	—	⑧	
8 ^⑦	1215	1400	—	—	400	450	900	900	AN14VN0_ _ _	37,500.	AN54VN0_ _ _	—	⑧	

- ① Underscore (_) indicates coil suffix required, see Table 21.
 - ② Underscore (_) indicates OLR designation required, see Table 22.
 - ③ Underscore (_) indicates FLA range, see Table 23.
 - ④ Starter is shipped unassembled. Catalog Number includes overload relay and contactor. Not a direct dimensional replacement for Size 4 Starter with C306 bi-metallic overload.
 - ⑤ Maximum horsepower rating of starters for 380V 50 Hz applications:
- | NEMA Size | 00 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|-------|---|----|----|----|----|-----|-----|-----|-----|
| Horsepower | 1-1/2 | 5 | 10 | 25 | 50 | 75 | 150 | 300 | 600 | 900 |
- ⑥ The service-limit current ratings represent the maximum rms current, in amperes, which the controller shall be permitted to carry for protracted periods in normal service. At service-limit current ratings, temperature rises shall be permitted to exceed those obtained by testing the controller at its continuous current rating. The current rating of overload relays or trip current of other motor protective devices used shall not exceed the service-limit current rating of the controller.
 - ⑦ Common control. For separate 120V control, insert letter D in 7th position of listed Catalog Number. EXAMPLE: AN54VND_ _ _.
 - ⑧ Contact local sales office for pricing and availability.

Table 21. AC Suffix Code

Coil Volts and Hertz	Code Suffix
120/60 or 110/50 240/60 or 220/50 480/60 or 440/50 600/60 or 550/50	A B C D
208/60 277/60 208 – 240/60 ^⑨ 240/50	E H J K
380 – 415/50 550/50 24/60, 24/50 ^⑩ 24/50	L N T U
32/50 48/60 48/50	V W Y

- ⑨ NEMA Sizes 00 and 0 only.
- ⑩ NEMA Sizes 00 and 0 only. Sizes 1 – 8 are 24/60 only.

Table 22. OLR Designation

OLR
3E = Standard C396 OLR, SEL Reset, SEL Class

Table 23. C396 FLA Range (FNVR & FVR Only)

NEMA Size	FLA Range
00	P05 = 0.1 – 0.5A 005 = 1.0 – 5.0A 002 = 0.4 – 2.0A 008 = 1.6 – 8.0A
0	P05 = 0.1 – 0.5A 008 = 1.6 – 8.0A 002 = 0.4 – 2.0A 032 = 6.4 – 32A 005 = 1.0 – 5.0A
1	P05 = 0.1 – 0.5A 008 = 1.6 – 8.0A 002 = 0.4 – 2.0A 032 = 6.4 – 32A 005 = 1.0 – 5.0A
2	008 = 1.6 – 8.0A 045 = 9.0 – 45A
3	110 = 22 – 110A
4	150 = 30 – 150A
5 ^⑪	300 = 60 – 300A
6 ^⑪	600 = 120 – 600A
7 ^⑪	10C = 200 – 1000A
8 ^⑪	15C = 300 – 1500A

- ⑪ Uses panel-mount CT with C396A2A005SELAX Overload.

Technical Data – Overload Page 6
 Overload Relay Page 2
 Dimensions Pages 18 – 20
 Accessories Page 5
 Discount Symbol 1CD1

Accessories

DC Magnet Coils

When Ordering Specify

Conversion Kit for Field Assembly

- Catalog Number

Factory Installed DC Coil

- For factory installed DC magnet coil on AC contactors or non-combination starters (open type only), substitute the Code Suffix from table below for the magnet coil identifier in the device Catalog Number

EXAMPLE: For Size 0 AC contactor with a 24V DC coil, change AN16BN0AC to AN16BN0T1C.

Application

- Connect for separate control
- Not for use with cover control switch operators
- Use twin break, heavy-duty pilot devices
- Designed for +10%, -20% rated voltage, continuous duty operation

Non-reversing Kit Consists of:

- 1 Encapsulated DC magnet coil
- 1 NCI or NO/NCI side mounted auxiliary contact

Note: These kits are supplied with a NO/NCI side mounted auxiliary contact in place of the NCI contact.

- 2 Blue colored connection wires
- 1 Instruction publication

Operation

See next page for operation details.

Table 24. Product Selection

Contactor or Starter Size		Conversion Data				NCI Interlock	Complete Conversion Kit			Factory Installed	
		Volts	Magnet Coil		NCI Interlock		Catalog Number	Price U.S. \$	Ship Wt. Lbs. (kg)	Code Suffix	Adder U.S. \$
NEMA	IEC		Coil Number	Amps P.U./Seal		Watts P.U./Seal					
Non-reversing — Kit includes NCI Side Mounted Auxiliary contact											
00 and 0 CN35 – A, B, D D15 Relays	A – F	12	9-2988-11	6.4/28	76.8/3.36	C320KGD1	C335KD3R1	60.00	1.0 (.5)	R1	53.50
		24	9-2988-12	3.2/14	76.8/3.36	C320KGD1	C335KD3T1	60.00		T1	53.50
		48	9-2988-13	1.6/07	76.8/3.36	C320KGD1	C335KD3W1	60.00		W1	53.50
		120	9-2988-14	.64/.028	76.8/3.36	C320KGD1	C335KD3A1	60.00		A1	53.50
① 00 and 0 CN35 – A, B, D D15 Relays	A – F	12	9-2988-11	6.4/28	76.8/3.36	C320KGD2 ①	C335KD3R4	99.00	1.0 (.5)	R4	89.00
		24	9-2988-12	3.2/14	76.8/3.36	C320KGD2 ①	C335KD3T4	99.00		T4	89.00
		48	9-2988-13	1.6/07	76.8/3.36	C320KGD2 ①	C335KD3W4	99.00		W4	89.00
		120	9-2988-14	.64/.028	76.8/3.36	C320KGD2 ①	C335KD3A4	99.00		A4	89.00
1 and 2 CN35 – G	G – K	12	9-2990-1	15.4/42	185/4.98	C320KGD5	C335KD4R4	99.00	1.0 (.5)	R4	89.00
		24	9-2990-2	7.7/21	185/4.96	C320KGD5	C335KD4T4	99.00		T4	89.00
		48	9-2990-3	3.9/11	185/5.04	C320KGD5	C335KD4W4	99.00		W4	89.00
		120	9-2990-4	1.5/.041	185/4.87	C320KGD5	C335KD4A4	99.00		A4	89.00
3 CN35 – K	L – N	12	9-3002-1	24/40	293/4.84	C320KGD3	C335KD5R1	149.00	2.0 (.9)	R1	133.00
		24	9-3002-2	12/20	288/4.75	C320KGD3	C335KD5T1	149.00		T1	133.00
		48	9-3002-3	6.1/097	295/4.67	C320KGD3	C335KD5W1	149.00		W1	133.00
		120	9-3002-4	2.5/038	298/4.57	C320KGD3	C335KD5A1	149.00		A1	133.00
4 and 5 CN35 – N, S	P – S	24	9-2026-4	18/22	400/5.3	C320KGD3	C335KA3T1	1,608.00	2.5 (1.1)	T1B	1,336.00
		48	9-2026-3	9/11	400/5.2	C320KGD3	C335KA3W1	1,608.00		W1B	1,336.00
		120	9-2026-2	3.3/05	450/5.4	C320KGD3	C335KA3A1	1,608.00		A1B	1,336.00
		240	9-2026-1	1.7/02	440/4.9	C320KGD3	C335KA3B1	1,608.00		B1B	1,336.00
Reversing											
00 and 0 CN35 – A, B, D D15 Relays	A – F	12	(2) 9-2988-1	6.4/28	76.8/3.36	(2) C320KGD1	C335RD3R1 ②	⑤	1.0 (.5)	R1 ③	160.00
		24	(2) 9-2988-2	3.2/14	76.8/3.36	(2) C320KGD1	C335RD3T1 ②	⑤		T1 ③	160.00
		48	(2) 9-2988-3	1.6/07	76.8/3.36	(2) C320KGD1	C335RD3W1 ②	⑤		W1 ③	160.00
		120	(2) 9-2988-4	.64/.028	76.8/3.36	(2) C320KGD1	C335RD3A1 ②	⑤		A1 ③	160.00
1 and 2 CN35 – G	G – K	12	(2) 9-2990-1	15.4/42	185/4.98	(2) C320KGD3	④	—	—	R1 ③	280.00
		24	(2) 9-2990-2	7.7/21	185/4.96	(2) C320KGD3	④	—		T1 ③	280.00
		48	(2) 9-2990-3	3.9/11	185/5.04	(2) C320KGD3	④	—		W1 ③	280.00
		120	(2) 9-2990-4	1.5/.041	185/4.87	(2) C320KGD3	④	—		A1 ③	280.00

① These kits are supplied with a NO/NCI side mounted auxiliary contact in place of the NCI contact.
 ② Kit does not include mechanical interlock or crossover wiring. Two NO/NCI top mounted auxiliary contacts are supplied for electrical interlocking.
 ③ Factory installed DC coils on NEMA contactors and starters include a NO/NC top mounted auxiliary contact on each contactor for electrical interlocking. On IEC contactors and starters, a NC top mounted auxiliary contact is supplied on each contactor for electrical interlocking.
 ④ Available factory assembled only.
 ⑤ Please contact your local Eaton sales office.

Dimensions

Non-reversing Starters, C396 Electronic Overload

Table 25. Approximate Dimensions and Shipping Weights — C396 Electronic Overload

NEMA Size	Dimensions in Inches (mm)			Mounting			
	Wide A	High B	Deep C	Wide D	High E	Wide D1	High E1
00-0	2.13 (54.0)	6.60 (167.6)	3.65 (92.8)	1.01 (25.7)	6.18 (157.0)	—	—
1	2.59 (65.9)	7.08 (179.7)	4.49 (114.0)	2.00 (50.8)	6.50 (165.1)	1.29 (32.8)	—
2	2.59 (65.9)	8.08 (205.1)	4.49 (114.0)	2.00 (50.8)	7.50 (190.5)	1.29 (32.8)	6.50 (165.1)
3	4.09 (103.9)	11.40 (289.6)	5.82 (147.9)	3.00 (76.2)	10.81 (274.6)	1.50 (38.1)	6.63 (168.3)

ⓐ Consult Eaton.

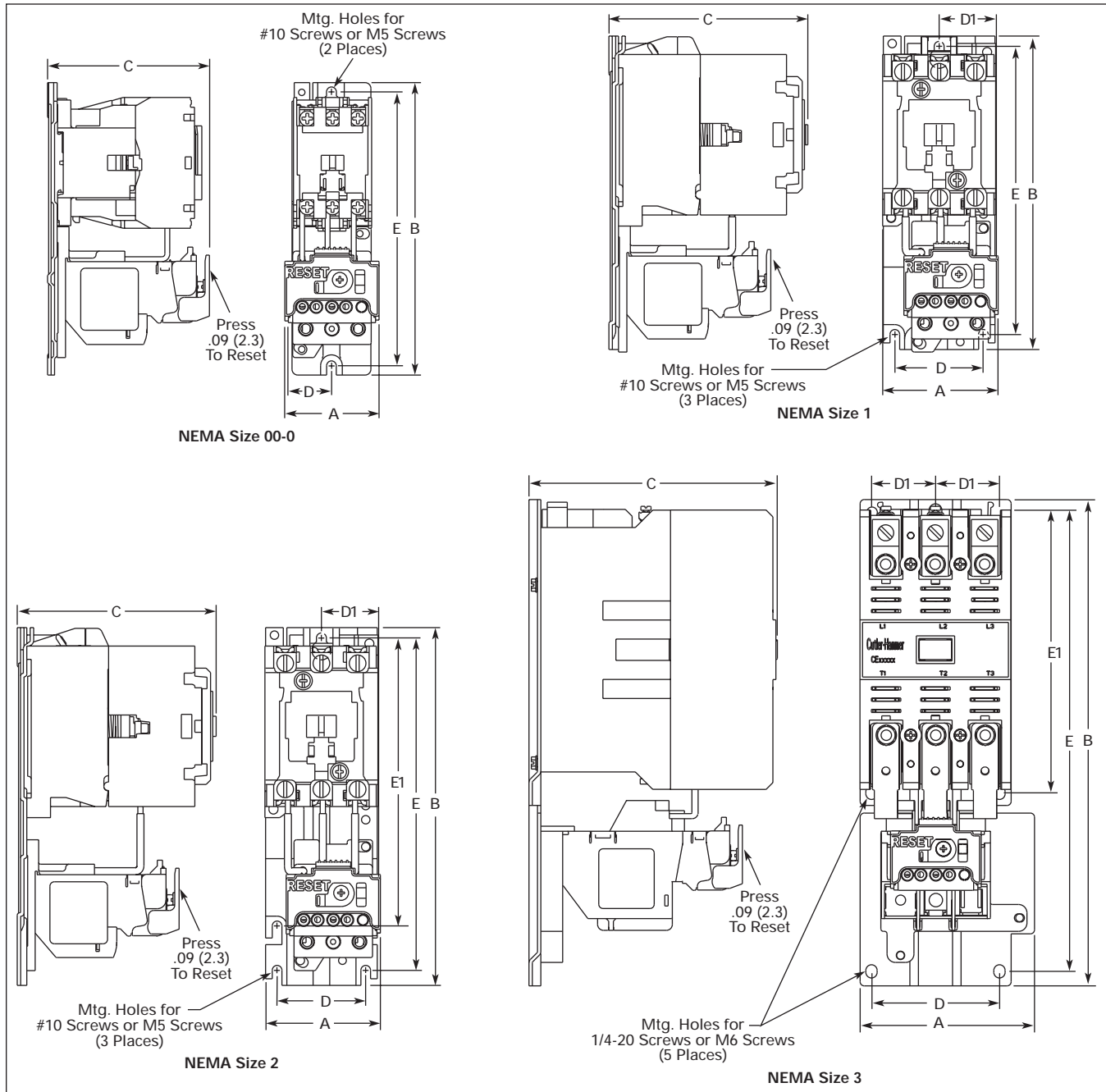


Figure 17. Approximate Dimensions

Dimensions

Table 26. Approximate Dimensions and Shipping Weights — C396 Electronic Overload

NEMA Size	Dimensions in Inches (mm)				Mounting			
	Wide A	High B	Deep C	Wide D	High E	Wide D1	High E1	
4	7.00 (177.8)	9.11 (231.4)	7.17 (182.2)	6.00 (152.4)	8.50 (215.8)	—	—	
5	7.64 (194.0)	17.86 (453.7)	7.57 (192.4)	6.00 (152.4)	16.01 (406.6)	—	.66 (16.7)	
6	9.47 (240.5)	21.69 (551.0)	9.89 (251.2)	3.10 (79.7)	18.00 (457.2)	3.18 (80.9)	.89 (22.5)	

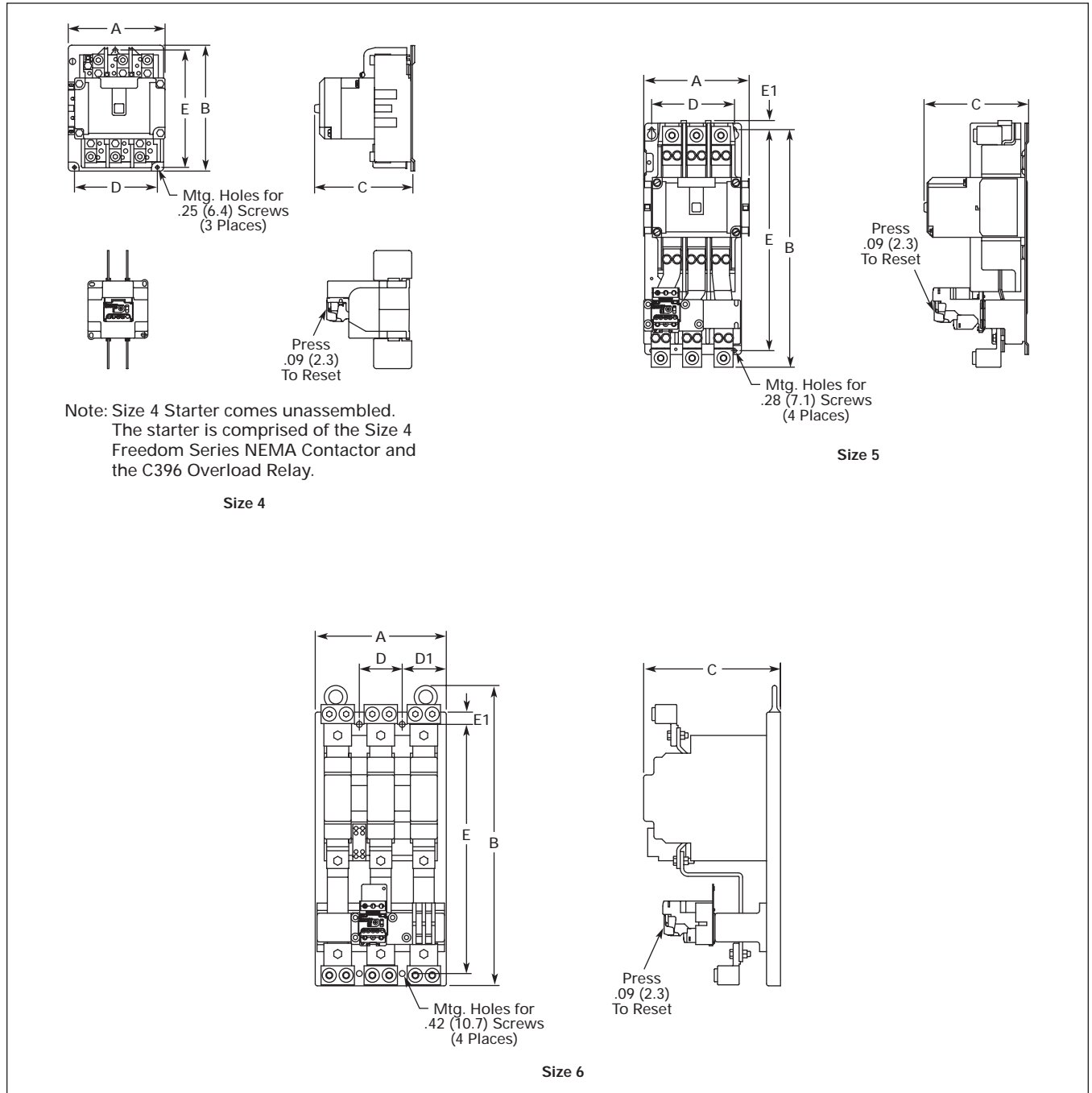


Figure 18. Approximate Dimensions

Dimensions

Table 27. Approximate Dimensions and Shipping Weights — C396 Electronic Overload

NEMA Size	Dimensions in Inches (mm)			Mounting			
	Wide A	High B	Deep C	Wide D	High E	Wide D1	High E1
7	15.11 (383.8)	29.04 (737.7)	12.63 (320.9)	13.25 (336.6)	21.25 (539.8)	.93 (23.7)	1.27 (32.4)
8	15.11 (383.8)	35.28 (895.1)	14.69 (373.0)	13.25 (336.6)	16.75 (425.5)	.93 (23.7)	—

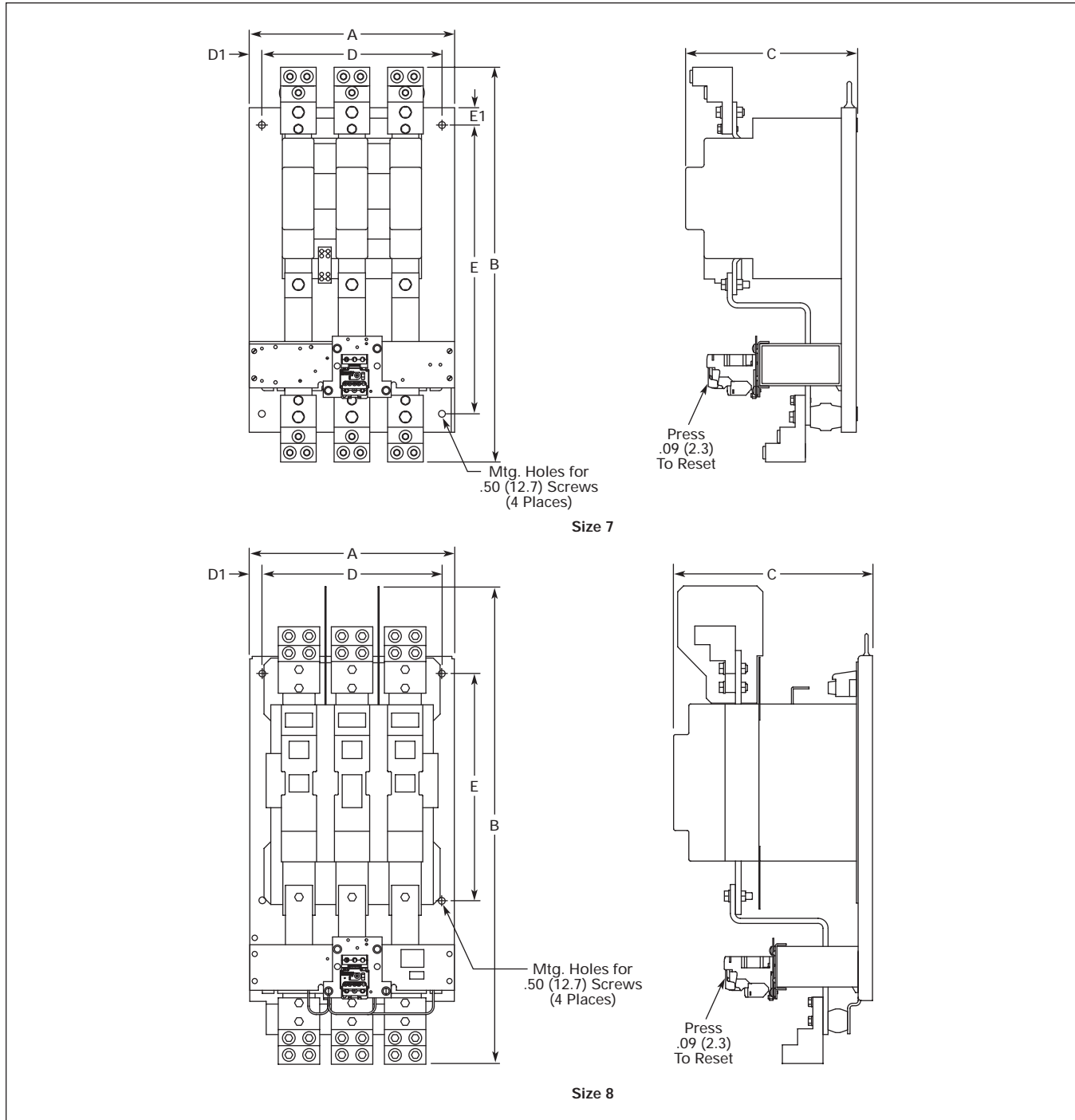


Figure 19. Approximate Dimensions

Contents

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A29 Starter

Product Description

Cutler-Hammer® A29 and B29 Definite Purpose Starters from Eaton’s electrical business combine the features and flexibility of the C25 Definite Purpose Contactors and C396 Electronic Overload Relays.

Features

- Standard Version: Selectable Trip Class (5, 10, 20, 30) with Selectable Manual or Auto Reset (45 and 65 mm Frames)
- Current Adjustment Range: 5:1
- Self-Powered Design — will accept AC voltages from 12 to 690V 50/60 Hz
- Ambient Temperature Compensation
- Low Heat Generation
- Phase Loss Protection
- Phase Unbalance Protection
- Electrically isolated 1NO-1NC Contacts (Push-to-Test)
- Trip Status Indicator

Standards and Certifications

- UL Listed Components
- CSA Certified Components
- IEC EN 60947-4-1, EN 60947-5-1
- CE Certified Components
- CCC Certified Components
- RoHS Certified Components

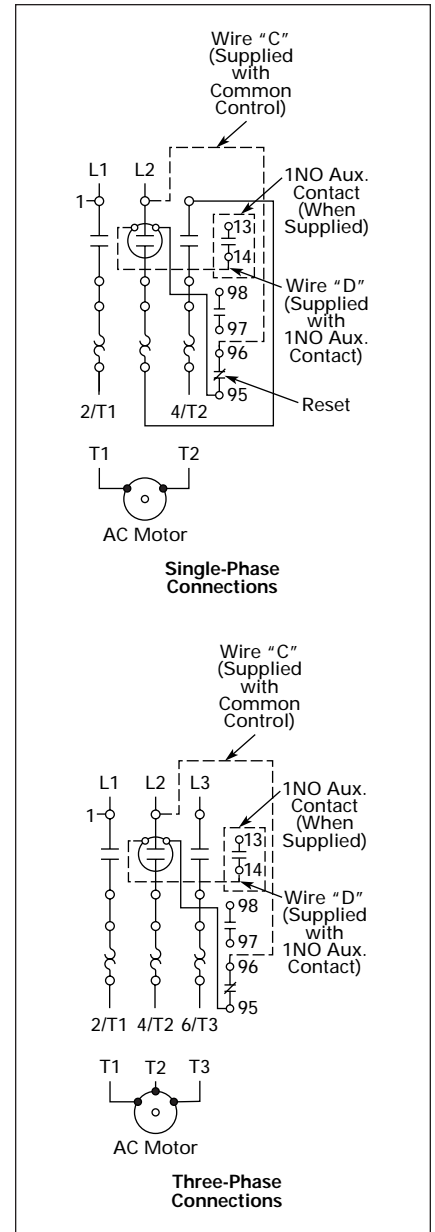
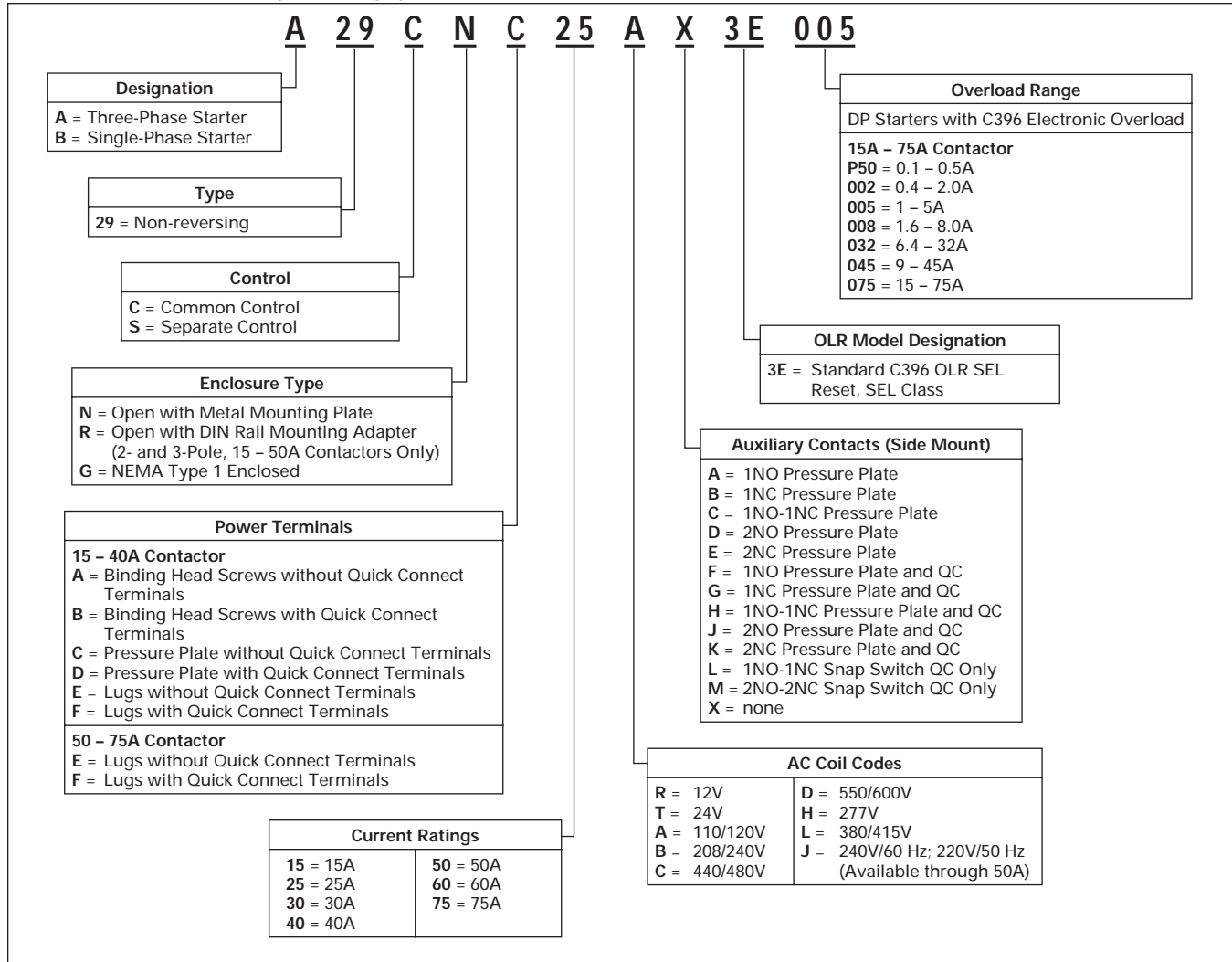


Figure 20. Starter Wiring Diagrams

Catalog Number Selection

Table 28. A29 and B29 DP Catalog Numbering System



Product Selection

When Ordering Specify

- Catalog Number plus AC Coil Code, Auxiliary Contact Code, OLR Model Designation and Overload Range Code (see Table 29)

Table 29. Catalog Numbering System

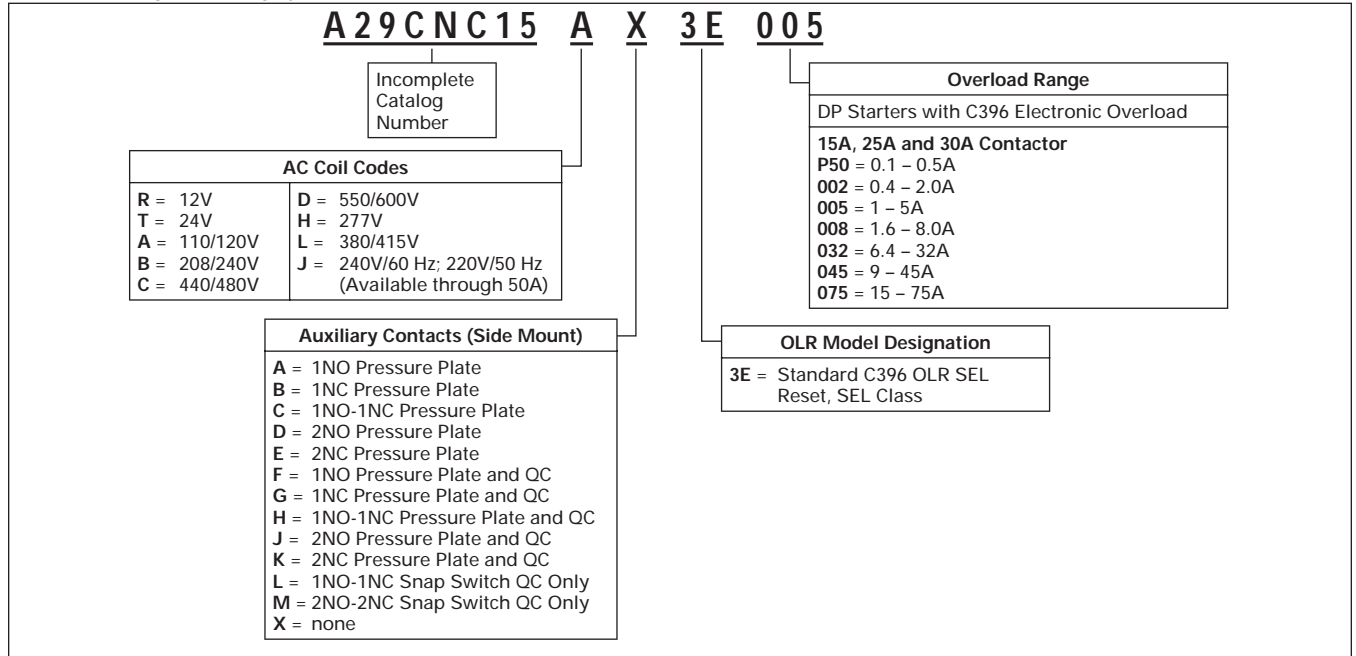


Table 30. Three-Phase Starter Product Selection — Open Type

Ampere Rating			Max. Motor hp	Max. Motor kW	Common Control		Separate Control		Price U.S. \$ ②
Inductive Full Load	Line Voltage	Locked Rotor			Metal Mounting Plate	DIN Rail Adapter	Metal Mounting Plate	DIN Rail Adapter	
					Catalog Number ①	Catalog Number ①	Catalog Number ①	Catalog Number ①	
15	115	90	—	—	A29CNC15_	A29CRC15_	A29SNC15_	A29SRC15_	—
	230	90	3	2.2					
	460	75	5	3.7					
	575	60	5	3.7					
25	115	150	—	—	A29CNC25_	A29CRC25_	A29SNC25_	A29SRC25_	—
	230	150	7-1/2	5.5					
	460	125	10	7.5					
	575	100	10	7.5					
30	115	180	—	—	A29CNE30_	A29CRE30_	A29SNE30_	A29SRE30_	—
	230	180	10	7.5					
	460	150	15	11					
	575	120	15	11					
40	115	240	—	—	A29CNE40_	A29CRE40_	A29SNE40_	A29SRE40_	—
	230	240	10	7.5					
	460	200	20	15					
	575	160	20	15					
50	115	300	—	—	A29CNE45_	A29CRE45_	A29SNE45_	A29SRE45_	—
	230	300	15	11					
	460	250	30	22					
	575	200	30	22					
60	115	360	—	—	A29CNE60_	—	A29SNE60_	—	—
	230	360	20	15					
	460	300	40	30					
	575	240	40	30					
75	115	450	—	—	A29CNE75_	—	A29SNE75_	—	—
	230	450	20	18.5					
	460	375	50	37					
	575	300	50	37					

① Incomplete Catalog Number. Replace underscore (_) with Suffix (see Table 29).

② Consult factory for pricing.

Product Selection

When Ordering Specify

- Catalog Number plus AC Coil Code, Auxiliary Contact Code, OLR Model Designation and Overload Range Code (see Table 31)

Table 31. Catalog Numbering System

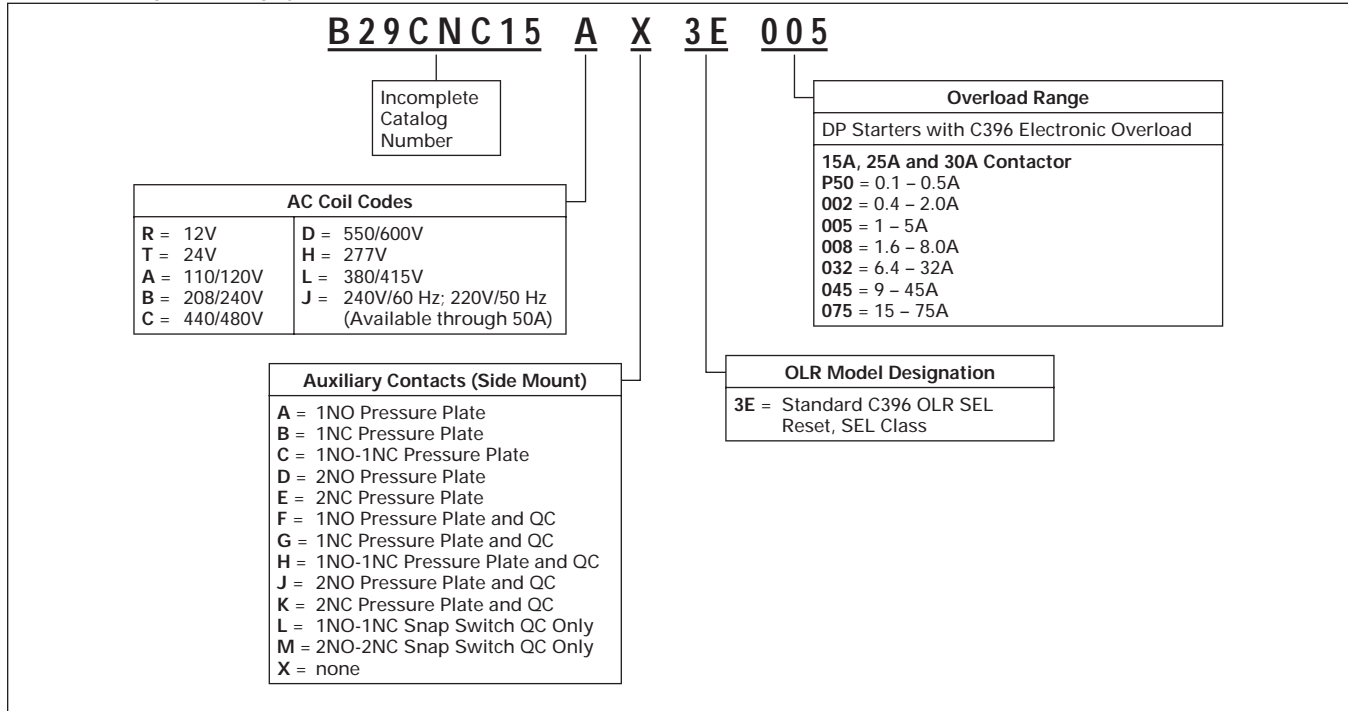


Table 32. Single-Phase Starter Product Selection — Open Type

Ampere Rating			Max. Motor hp	Max. Motor kW	Common Control		Separate Control		Price U.S. \$ ②	
Inductive Full Load	Line Voltage	Locked Rotor			Metal Mounting Plate	DIN Rail Adapter	Metal Mounting Plate	DIN Rail Adapter		
					Catalog Number ①	Catalog Number ①	Catalog Number ①	Catalog Number ①		
15	115	90	3/4	0.4	B29CNC15_	B29CRC15_	B29SNC15_	B29SRC15_		—
	230	90	2	1.5						
	460	75	—	—						
	575	60	—	—						
25	115	150	2	1.5	B29CNC25_	B29CRC25_	B29SNC25_	B29SRC25_		—
	230	150	3	2.2						
	460	125	—	—						
	575	100	—	—						
30	115	180	2	1.5	B29CNE30_	B29CRE30_	B29SNE30_	B29SRE30_		—
	230	180	5	3.7						
	460	150	—	—						
	575	120	—	—						
40	115	240	3	2.2	B29CNE40_	B29CRE40_	B29SNE40_	B29SRE40_		—
	230	240	7-1/2	5.5						
	460	200	—	—						
	575	160	—	—						
50	115	300	3	2.2	B29CNE45_	B29CRE45_	B29SNE45_	B29SRE45_		—
	230	300	10	7.5						
	460	250	—	—						
	575	200	—	—						

① Incomplete Catalog Number. Replace underscore (_) with Suffix (see Table 31).

② Consult factory for pricing.



*Cat. No.
C396A2A045SELDF*

Table 33. C396 Overload Relay for Integrated Use with DP Contactors by Feature Set ①

FLA Range (Amps)	DP Contactor Rating	Catalog Number	Price U.S. \$
45 mm Overload Frame Size			
0.1 – 0.5	15, 25, 30	C396A2AP05SELDC	134.
0.4 – 2.0	15, 25, 30	C396A2A002SELDC	134.
1 – 5	15, 25, 30	C396A2A005SELDC	134.
1.6 – 8	15, 25, 30, 40	C396A2A008SELDE	134.
6.4 – 32	15, 25, 30, 40, 50	C396A2A032SELDF	134.
9 – 45	40, 50	C396A2A045SELDF	189.
65 mm Overload Frame Size			
15 – 75	60, 75	C396B2A075SELDG	267.

① Discount Symbol 1CD-5C.

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