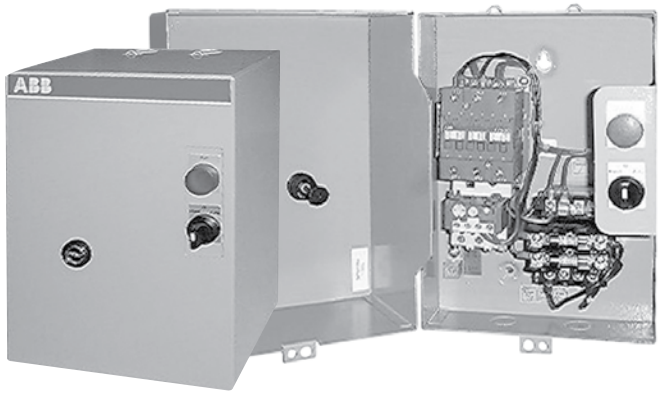
Across the line starters
Open & enclosed
A9 – AF750



Description
A9 – AF750

- Maximum UL horsepower ratings
- UL508A Panel Program, #E105450
- NEMA sizes (00 – 7) available
- Compact space-saving design
- Standard auxiliary contact configurations:
  A9 – A40 1 NO
  A50 – AF750 1 NO & 1 NC
- Additional auxiliary contact blocks are available
- Consult factory for DC ratings & DC control operation
- Fast, snap-on DIN rail mounting (A9 - A110)
- Double break contact design
- Snap-on front and side mounted accessories include mechanical latch, pneumatic timer and 1 & 4 pole auxiliary contact blocks (A9 – A110)
- Easy coil change
- Captive terminal screws
- NEMA, UL, CSA, and most other international standards
- cUL marked
- Operates over an extended voltage range of 85% to 110% of rated control voltage
- Screwdriver guide holes

For reduced voltage starters, consult factory.

Enclosure types

- NEMA 1 (Indoor metal)
- NEMA 3R (Outdoor metal)
- NEMA 12 (Metal dusttight)
- NEMA 4X (Stainless steel)
- NEMA 4 (Water tight)
- NEMA 1, 3R, 4, 4X, & 12 (Plastic)
- IP 65 plastic A9 – A16 starters
- NEMA 7 & 9
  Class I, Group C, D, Div 1 & 2
  Class II, Groups E, F, & G, Div 1 & 2
  Class III, 4X

Overload relay protection

Starters, sizes A9–A300, have Class 10 adjustable thermal bimetallic overload relay protection as standard.

Sizes AF400 – AF750, have selectable Class 10, 20, 30 adjustable electronic overload relay protection as standard.

Electronic overload relay protection is available for other starter sizes.

Across the line **Starters**

Starter selection by motor horsepower & voltage
Maximum UL/CSA ratings, three phase

Motor horsepower 3-phase, 1800 RPM ①				Open Complete starter		Starter components			
						Contactors		Overload relays	
200V	230V	460V	575V	Catalog number	List price	Catalog number	List price	Catalog number	List price
—	—	—	1/4	11-2C		A9-30-10-84		TA25DU0.4 (0.25 – .4)	
—	—	1/4, 1/3	1/3	11-2D		A9-30-10-84		TA25DU0.63 (0.4 – .63)	
—	—	—	1/2	11-2E		A9-30-10-84		TA25DU1.0 (0.63 – 1.0)	
—	—	1/2	3/4	11-2F		A9-30-10-84		TA25DU1.4 (1.0 – 1.4)	
—	—	3/4	—	11-2G		A9-30-10-84		TA25DU1.8 (1.3 – 1.8)	
—	1/2	1	1.5	11-2H	**$ 165**	A9-30-10-84	**$ 78**	TA25DU2.4 (1.7 – 2.4)	
1/2	—	1.5	2	11-2J		A9-30-10-84		TA25DU3.1 (2.2 – 3.1)	
3/4	3/4	2	—	11-2K		A9-30-10-84		TA25DU4.0 (2.8 – 4.0)	
—	1	—	3	11-2L		A9-30-10-84		TA25DU5.0 (3.5 – 5.0)	**$ 63**
1	1.5	3	5	11-2M		A9-30-10-84		TA25DU6.5 (4.5 – 6.5)	
2	2	5	—	11-2N		A9-30-10-84		TA25DU8.5 (6.0 – 8.5)	
—	—	—	7.5	11-2P		A9-30-10-84		TA25DU11 (7.5 – 11)	
3	3	7.5	10	21-2Q	**171**	A12-30-10-84	**84**	TA25DU14 (10 – 14)	
5	5	10	15	31-2R	**200**	A16-30-10-84	**102**	TA25DU19 (13 – 19)	
—	7.5	15	20	41-2S	**294**	A26-30-10-84	**183**	TA25DU25 (18 – 25)	
7.5	10	20	25	41-2T		A26-30-10-84		TA25DU32 (24 – 32)	
10	10	—	—	51-2B	**365**	A30-30-10-84	**252**	TA42DU32 (22 – 32)	
—	—	25	30	51-2C				TA42DU42 (29 – 42)	**78**
10	15	30	40	61-2C	**423**	A40-30-10-84	**297**	TA42DU42 (29 – 42)	
15	—	40	50	71-2D	**458**	A50-30-11-84	**330**	TA75DU52 (36 – 52)	
—	20	—	—	71-2E		A50-30-11-84		TA75DU63 (45 – 63)	
20	—	—	—	81-2F	**522**	A63-30-11-84	**372**		**102**
—	—	50	60	81-2F		A63-30-11-84		TA75DU80 (60 – 80)	
25	30	60	75	91-2F	**563**	A75-30-11-84	**413**		
30	40	75	100	A1-2B	**765**	A110-30-11-84	**480**	TA110DU110 (80 – 110)	**165**
40	—	—	—	B1-2C	**1,315**	A145-30-11-84	**825**	TA200DU135 (100 – 135)	
—	50	100	125	B1-2D				TA200DU150 (110 – 150)	**225**
50	60	125	150	C1-2E	**1,730**	A185-30-11-84	**1,290**	TA200DU175 (130 – 175)	
60	75	150	200	D1-2E3	**2,422**	A210-30-11-84	**1,635**		
75	100	200	250	E1-2E3	**3,027**	A260-30-11-84	**1,815**	E320DU320 (105-320)	**775**
100	—	250	300	F1-2E3	**3,177**	A300-30-11-84	**1,875**		
125	125, 150	350	400	G1-70E5	**4,125**	AF400-30-11-70	**3,120**	E500DU500 (170 – 500)	**865**
150	200	400	500	H1-70E5	**9,375**	AF460-30-11-70	**4,425**		
200	250	500	600	T1-70E8	**12,400**	AF580-30-11-70	**6,900**	E800DU800 (270 – 800)	**950**
250	300	600	700	U1-70E8	**13,350**	AF750-30-11-70	**7,200**		

CAUTION: The above ratings are based on average motor FLA. Actual FLA on the motor nameplate should be used for overload relay setting.

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 starter: 91-4F

D.C. operated starters

If DC operation is required, consult factory.

Factory modifications

See page 3.3

Coil voltage selection – A9 - A300

Hz	Contactor type	Volts									
		24	110	120	208	220	240	440	480	500	600
60	A	1		2	3		4	5	6		7
50	A	1	2			4				7	

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts	
		100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz	Volts				
	Type	200-208/120	240/120	460 – 480/120	575 – 600/120
	A/AF	A	B	C	D
50/60	Type	200-208/24	240/24	460 – 480/24	575 – 600/24
	A/AF	E	F	G	H

NOTE: For motors with RPM greater or less than 1800 RPM, check full load amp rating on motor nameplate to ensure proper overload protection.
For AF50 – AF 300 starters, consult factory.

① For AF400 - AF750 only.

Starter selection by motor horsepower & voltage
NEMA sizes & ratings, three phase

NEMA size	Motor horsepower 3-phase, 1800 RPM ① 200V	230V	460V	575V	Open Complete starter Catalog number	List price	Starter components Contactors Catalog number	List price	Overload relays Catalog number	List price
00	—	—	—	1/4	J1-2C	$ 165	A9N00-30-10-84	$ 78	TA25DU0.4 (0.25 – .4)	$ 63
	—	—	—	1/3	J1-2D		A9N00-30-10-84		TA25DU0.63 (0.4 – .63)	
	—	—	1/4	1/2	J1-2E		A9N00-30-10-84		TA25DU1.0 (0.63 – 1.0)	
	—	1/4	1/3,1/2	—	J1-2F		A9N00-30-10-84		TA25DU1.4 (1.0 – 1.4)	
	—	1/3	3/4	3/4	J1-2G		A9N00-30-10-84		TA25DU1.6 (1.3 – 1.6)	
	1/3,1/4	1/2	1	1	J1-2H		A9N00-30-10-84		TA25DU2.4 (1.7 – 2.4)	
	1/2	—	—	1.5, 2	J1-2J		A9N00-30-10-84		TA25DU3.1 (2.2 – 3.1)	
	3/4	3/4	1.5, 2	—	J1-2K		A9N00-30-10-84		TA25DU4.0 (2.8 – 4.0)	
	—	1	—	—	J1-2L		A9N00-30-10-84		TA25DU5.0 (3.5 – 5.0)	
	1	1.5	—	—	J1-2M		A9N00-30-10-84		TA25DU6.5 (4.5 – 6.5)	
	1.5	—	—	—	J1-2N		A9N00-30-10-84		TA25DU8.5 (6.0 – 8.5)	
0	—	—	—	3	K1-2L	200	A16N0-30-10-84	102	TA25DU5.0 (3.5 – 5.0)	
	—	—	3	5	K1-2M		A16N0-30-10-84		TA25DU6.5 (4.5 – 6.5)	
	2	2	5	—	K1-2N		A16N0-30-10-84		TA25DU8.5 (6.0 – 8.5)	
	3	3	—	—	K1-2P		A16N0-30-10-84		TA25DU11 (7.5 – 11)	
1	—	—	—	7.5	L1-2P	294	A26N1-30-10-84	183	TA25DU11 (7.5 – 11)	
	—	—	7.5	10	L1-2Q		A26N1-30-10-84		TA25DU14 (10 – 14)	
	5	5	10	—	L1-2R		A26N1-30-10-84		TA25DU19 (13 – 19)	
	7.5	7.5	—	—	L1-2S		A26N1-30-10-84		TA25DU25 (18 – 25)	
2	—	—	—	15	M1-2R	458	A50N2-30-11-84	330	TA25DU19 (13 – 19) ②	
	—	—	15	20	M1-2A		A50N2-30-11-84		TA75DU25 (18 – 25)	102
	—	10	20	25	M1-2B	458	A50N2-30-11-84	330	TA75DU32 (22 – 32)	
	10	15	25	—	M1-2C		A50N2-30-11-84		TA75DU42 (29 – 42)	
3	—	—	—	30	N1-2C	563	A75N3-30-11-84	413	TA75DU42 (29 – 42)	
	15	—	30	40	N1-2D		A75N3-30-11-84		TA75DU52 (36 – 52)	
	20	20	40	50	N1-2E		A75N3-30-11-84		TA75DU63 (45 – 63)	
	25	25,30	50	—	N1-2F		A75N3-30-11-84		TA75DU80 (60 – 80)	
4	—	—	60	60, 75	P1-2A	1,315	A145N4-30-11-84	825	TA200DU90 (65 – 90)	165
	30	40	75	100	P1-2B		A145N4-30-11-84		TA200DU110 (80 – 110)	
	40	50	100	—	P1-2C		A145N4-30-11-84		TA200DU135 (100 – 135)	
5	50,60,75	60,75,100	125,150,200	200	Q1-2E3	3,027	A260N5-30-11-84	1,815	E320DU320 (105-320)	775
	—	100	200	—						
6	100, 125	125,150	250, 300	250,300	R1-70E5	5,700	AF460N6-3011-70	4,425	E500DU500 (170 - 500)	865
	150	200	400	400						
7	—	250, 300	500, 600	500, 600	S1-70E8	8,646	AF750N7-3011-70	7,200	E800DU800 (270 - 800)	950

CAUTION: The above ratings are based on average motor FLA. Actual FLA on the motor nameplate should be used for overload relay setting.

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 starter: N1-4F

D.C. operated starters

If DC operation is required, consult factory.

Factory modifications

See page 3.3

Coil voltage selection – A9 - A300

Hz	Contactor type	Volts 24	110	120	208	220	240	440	480	500	600
60	A	1		2	3		4	5	6		7
50	A	1	2			4				7	

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts 100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz		Volts			
	Type	200-208/120	240/120	460 – 480/120	575 – 600/120
	A/AF	A	B	C	D
50/60	Type	200-208/24	240/24	460 – 480/24	575 – 600/24
	A/AF	E	F	G	H

NOTE: For motors with RPM greater or less than 1800 RPM, check full load amp rating on motor nameplate to ensure proper overload protection. For AF50 – AF 300 starters, consult factory.

① AF400 - AF750 only.

② Overload to be base mounted.

Selection by motor horsepower
UL/CSA Starters with electronic overload

Motor horsepower 3 Phase, 1800 RPM				Open Complete starter		Starter components			
						Contactor		Overload relay	
200V	230V	460V	575V	Catalog number	List Price	Catalog number	List Price	Catalog number	List Price
—	—	—	1/4	11-2B1		A9-30-10-84		E16DU1.0 (0.3 - 1.0)	
—	—	1/4,1/3	1/3						
—	—	—	1/2						
—	—	1/2	3/4	11-2C1		A9-30-10-84		E16DU2.7 (0.9-2.7)	
—	—	3/4	—						
—	1/2	1	1 1/2		**$ 198**		**$ 78**		**$ 96**
1/2	—	1 1/2	2	11-2D1		A9-30-10-84		E16DU6.3 (2.0-6.3)	
3/4	3/4	2	—						
—	1	—	3						
1	1 1/2	3	5						
2	2	5	7 1/2	11-2E1		A9-30-10-84		E16DU18.9 (5.7-18.9)	
3	3	7 1/2	10	21-2E1	**204**	A12-30-10-84	**84**		
5	5	10	15	31-2E1	**233**	A16-30-10-84	**102**		
—	7 1/2	15	20	41-2E1	**336**	A26-30-10-84	**183**	E45DU30 (9-30)	**105**
7 1/2	10	20	25						
10	10	—	—	51-2E2	**414**	A30-30-10-84	**252**	E45DU45 (15-45)	
—	—	25	30						
10	15	30	40	61-2E2	**472**	A40-30-10-84	**297**	E45DU45 (15-45)	**112**
15	20	40	50	71-2E1	**544**	A50-30-11-84	**330**	E80DU80 (27-80)	**188**
20	—	50	60	81-2E1	**608**	A63-30-11-84	**372**		
25	30	60	75	91-2E1	**649**	A75-30-11-84	**413**		
30	—	—	—	A1-2E1	**861**	A110-30-11-84	**480**	E140DU140 (50-140)	**261**
—	40	75	100						
40	50	100	125	B1-2E2	**1,415**	A145-30-11-84	**825**	E200DU200 (60-200)	**325**
50	60	125	150	C1-2E2	**1,830**	A185-30-11-84	**1,290**		
60	75	150	200	D1-2E3	**2,422**	A210-30-11-84	**1,635**	E320DU320 (100-320)	**775**
75	100	200	250	E1-2E3	**3,027**	A260-30-11-84	**1,815**		
100	—	250	300	F1-2E3	**3,177**	A300-30-11-84	**1,875**		
125	5/6	350	400	G1-70E5	**4,125**	AF400-30-11-70	**3,120**	E500DU500 (150-500)	**865**
150	200	400	500	H1-70E5	**5,700**	AF460-30-11-70	**4,425**		
200	250	500	600	T1-70E8	**8,346**	AF580-30-11-70	**6,900**	E800DU800 (250-800)	**950**
250	300	600	700	U1-70E8	**8,646**	AF750-30-11-70	**7,200**		

Selection by motor horsepower
NEMA Starters with electronic overload

NEMA size	Motor horsepower 3-phase, 1800 RPM 200V	230V	460V	575V	Open Complete starter Catalog number	List price	Starter components Contactors Catalog number	List price	Overload relays Catalog number	List price
00	—	—	—	1/4	J1-2A1	$ 198	A9N00-30-10-84	$ 78	E16DU0.32 (0.1 - 0.32)	$ 96
	—	—	—	1/3	J1-2B1		A9N00-30-10-84		E16DU1.0 (0.3 - 1.0)	96
	—	—	1/4	1/2	J1-2B1		A9N00-30-10-84			
	—	1/4	1/3,1/2	—	J1-2C1		A9N00-30-10-84		E16DU2.7 (0.9 - 2.7)	96
	—	1/3	3/4	3/4	J1-2C1		A9N00-30-10-84			
	1/3,1/4	1/2	1	1	J1-2C1		A9N00-30-10-84			
	1/2	—	—	1.5, 2	J1-2D1		A9N00-30-10-84		E16DU6.3 (2.0 - 6.3)	96
	3/4	3/4	1.5, 2	—	J1-2D1		A9N00-30-10-84			
	—	1	—	—	J1-2D1		A9N00-30-10-84			
	1	1.5	—	—	J1-2D1		A9N00-30-10-84			
	1.5	—	—	—	J1-2E1		A9N00-30-10-84		E16DU18.9 (5.7 - 18.9)	96
0	—	—	—	3	K1-2D1	233	A16N0-30-10-84	102	E16DU6.3 (2.0 - 6.3)	96
	—	—	3	5	K1-2D1		A16N0-30-10-84			
	2	2	5	—	K1-2E1		A16N0-30-10-84		E16DU18.9 (5.7 - 18.9)	96
	3	3	—	—	K1-2E1		A16N0-30-10-84			
1	—	—	—	7.5	L1-2E1	336	A26N1-30-10-84	183	E45DU30 (9 - 30)	105
	—	—	7.5	10	L1-2E1		A26N1-30-10-84			
	5	5	10	—	L1-2E1		A26N1-30-10-84			
	7.5	7.5	—	—	L1-2E1		A26N1-30-10-84			
2	—	—	—	15	M1-2E1	544	A50N2-30-11-84	330	E45DU45 (15 - 45)	112
	—	—	15	20	M1-2E1	544	A50N2-30-11-84	330	E45DU45 (15 - 45)	112
	—	10	20	25	M1-2E1		A50N2-30-11-84			
	10	15	25	—	M1-2E1		A50N2-30-11-84		E80DU80 (27 - 80)	188
3	—	—	—	30	N1-2E1	649	A75N3-30-11-84	413	E80DU80 (27 - 80)	188
	15	—	30	40	N1-2E1		A75N3-30-11-84			
	20	20	40	50	N1-2E1		A75N3-30-11-84			
	25	25,30	50	—	N1-2E1		A75N3-30-11-84			
4	—	—	60	60, 75	P1-2E2	1,415	A145N4-30-11-84	825	E200DU200 (60 - 200)	325
	30	40	75	100	P1-2E2		A145N4-30-11-84			
	40	50	100	—	P1-2E2		A145N4-30-11-84			
5	50	60	125	200	Q1-2E3	3,027	A260N5-30-11-84	1,815	E320DU320 (105-320)	775
	60	75	150							
	75	100	200							
	—	100	200	—						
6	100	125	250	250	R1-70E5	5,700	AF460N6-3011-70	4,425	E500DU500 (170 - 500)	865
	125	150	300	300						
	150	200	400	400						
7	—	250	500	500	S1-70E8	8,646	AF750N7-3011-70	7,200	E800DU800 (270 - 800)	950
		300	600	600						

Non-reversing
A9 - AF750
Three phase

UL motor switching current	Contactor size	Maximum ratings - UL Listed Maximum motor horsepower ratings 200/208V	230/240V	480/480V	575/600V	Open type Catalog number	List price	UL Type 1 (Indoor metal) Catalog number	List price	UL type 3R (Outdoor metal) Catalog number	List price
UL rated											
9	A9	2	2	5	7.5	11-2Δ	**$ 165**	111-2Δ	**$ 255**	113-2Δ	**$ 330**
11	A12	3	3	7.5	10	21-2Δ	**171**	211-2Δ	**285**	213-2Δ	**360**
17	A16	5	5	10	15	31-2Δ	**200**	311-2Δ	**300**	313-2Δ	**383**
28	A26	7.5	10	20	25	41-2Δ	**294**	411-2Δ	**405**	413-2Δ	**465**
34	A30	10	10	25	30	51-2Δ	**365**	511-2Δ	**473**	513-2Δ	**533**
42	A40	10	15	30	40	61-2Δ	**423**	611-2Δ	**525**	613-2Δ	**578**
54	A50	15	20	40	50	71-2Δ	**458**	711-2Δ	**600**	713-2Δ	**719**
65	A63	20	25	50	50	81-2Δ	**522**	811-2Δ	**713**	813-2Δ	**795**
80	A75	25	30	60	75	91-2Δ	**563**	911-2Δ	**975**	913-2Δ	**1,058**
110	A110	30	40	75	100	A1-2Δ	**765**	A11-2Δ	**1,170**	A13-2Δ	**1,515**
130	A145	40	50	100	125	B1-2Δ	**1,315**	B11-2Δ	**1,765**	B13-2Δ	**2,130**
156	A185	50	60	125	150	C1-2Δ	**1,730**	C11-2Δ	**2,400**	C13-2Δ	**2,805**
192	A210	60	75	150	200	D1-2Δ	**2,135**	D11-2Δ	**2,650**	D13-2Δ	**3,375**
248	A260	75	100	200	250	E1-2Δ	**2,740**	E11-2Δ	**3,825**	E13-2Δ	**4,650**
302	A300	100	100	250	300	F1-2Δ	**2,890**	F11-2Δ	**4,125**	F13-2Δ	**4,875**
414	AF400	125	150	350	400	G1-70Δ	**4,125**	G11-70Δ	**7,857**	G13-70Δ	**8,625**
480	AF460	150	200	400	500	H1-70Δ	**5,700**	H11-70Δ	**9,375**	H13-70Δ	**9,435**
590	AF580	200	250	500	600	T1-70Δ	**8,346**	T11-70Δ	**12,400**	T13-70Δ	**13,465**
810	AF750	250	300	600	700	U1-70Δ	**8,646**	U11-70Δ	**13,350**	U13-70Δ	**14,325**
NEMA rated											
NEMA size	Contactor size	Continuous current	200V	230V	460/575V						
00	A9	9	1.5	1.5	2	J1-2Δ	**$ 165**	J11-2Δ	**$ 255**	J13-2Δ	**$ 330**
0	A16	18	3	3	5	K1-2Δ	**200**	K11-2Δ	**300**	K13-2Δ	**383**
1	A26	27	7.5	7.5	10	L1-2Δ	**294**	L11-2Δ	**405**	L13-2Δ	**465**
2	A50	45	10	15	25	M1-2Δ	**458**	M11-2Δ	**600**	M13-2Δ	**719**
3	A75	90	25	30	50	N1-2Δ	**563**	N11-2Δ	**975**	N13-2Δ	**1,058**
4	A145	135	40	50	100	P1-2Δ	**1,315**	P11-2Δ	**1,765**	P13-2Δ	**2,130**
5	AF260	270	75	100	200	Q1-2Δ	**2,740**	Q11-2Δ	**3,825**	Q13-2Δ	**4,650**
6	AF460	540	150	200	400	R1-70Δ	**5,700**	R11-70Δ	**9,375**	R13-70Δ	**9,435**
7	AF750	810	—	300	600	S1-70Δ	**8,646**	S11-70Δ	**13,350**	S13-70Δ	**14,325**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7.

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the suffix code after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 starter: 91-4F

D.C. operated starters

If DC operation is required, consult factory.

Factory modifications

See page 3.3

Control transformer option

Contactor size	VA rating	List price adder
A9 – A40	50	**360**
A9 – A40 (N7 & 9)	50	**630** ②
A50 – A75	75	**435**
A95 – A110	100	**560**
A145 – A185	150	**720**
A210 – A300	250	**795**
AF400 – AF460	150	**720**
AF580 – AF750	250	**795**

Reference page 3.3 for Extra VA under all (Control Transformer Options chart)

Coil voltage selection – A9 - A300

Hz	Contactor type	Volts 24	110	120	208	220	240	440	480	500	600
60	A	1		2	3		4	5	6		7
50	A	1	2			4				7	

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts 100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz		Volts			
	Type	200-208/120	240/120	460 – 480/120	575 – 600/120
	A/AF	A	B	C	D
50/60	Type	200-208/24	240/24	460 – 480/24	575 – 600/24
	A/AF	E	F	G	H

NOTE: For AF50 – AF 300 starters, consult factory.
① AF400 - AF750 only.
② NEMA 7 & 9 Enclosed starter only.

Non-reversing
A9 - AF750
Three phase

UL Type 12 (Metal dustight)		UL Type 4 (Watertight)		UL Type 4X (Stainless steel)		UL Type 1, 3R, 4, 4X & 12 (Plastic)		UL Type 7 & 9 non-reversing (Explosion proof)	
Catalog number	List price	Catalog number	List price	Catalog number	List price	Catalog number	List price	Catalog number	List price
UL rated									
112-2Δ	**$ 330**	114-2Δ	**$ 495**	11X-2Δ	**$ 645**	11P-2Δ	**$ 315**	117-2Δ	**$ 1,500**
212-2Δ	**360**	214-2Δ	**540**	21X-2Δ	**713**	21P-2Δ	**345**	217-2Δ	**1,560**
312-2Δ	**383**	314-2Δ	**570**	31X-2Δ	**743**	31P-2Δ	**360**	317-2Δ	**1,590**
412-2Δ	**465**	414-2Δ	**630**	41X-2Δ	**831**	41P-2Δ	**443**	417-2Δ	**1,680**
512-2Δ	**533**	514-2Δ	**690**	51X-2Δ	**885**	51P-2Δ	**510**	517-2Δ	**2,040**
612-2Δ	**578**	614-2Δ	**1,050**	61X-2Δ	**1,275**	61P-2Δ	**555**	617-2Δ	**2,410**
712-2Δ	**719**	714-2Δ	**1,103**	71X-2Δ	**1,328**	71P-2Δ	**698**	717-2Δ	**2,600**
812-2Δ	**795**	814-2Δ	**1,170**	81X-2Δ	**1,410**	81P-2Δ	**773**	817-2Δ	**3,350**
912-2Δ	**1,058**	914-2Δ	**1,425**	91X-2Δ	**2,010**	91P-2Δ	**1,035**	917-2Δ	**3,900**
A12-2Δ	**1,515**	A14-2Δ	**2,100**	A1X-2Δ	**2,813**	A1P-2Δ	**1,440**	A17-2Δ	**5,550**
B12-2Δ	**2,130**	B14-2Δ	**2,700**	B1X-2Δ	**3,375**	B1P-2Δ	**1,950**	B17-2Δ	**6,040**
C12-2Δ	**2,805**	C14-2Δ	**3,340**	C1X-2Δ	**3,900**	C1P-2Δ	**2,440**	C17-2Δ	**8,100**
D12-2Δ	**3,375**	D14-2Δ	**3,900**	D1X-2Δ	**4,785**	D1P-2Δ	**3,000**	D17-2Δ	**9,600**
E12-2Δ	**4,650**	E14-2Δ	**5,175**	E1X-2Δ	**5,815**	E1P-2Δ	**4,200**	E17-2Δ	**11,740**
F12-2Δ	**4,875**	F14-2Δ	**5,400**	F1X-2Δ	**6,040**	F1P-2Δ	**4,425**	F17-2Δ	**11,965**
G12-70Δ	**8,625**	G14-70Δ	**9,000**	G1X-70Δ	**9,855**	Consult factory	**—**	Consult factory	**—**
H12-70Δ	**10,380**	H14-70Δ	**10,800**	H1X-70Δ	**11,700**	Consult factory	**—**	Consult factory	**—**
T12-70Δ	**13,465**	T14-70Δ	**14,250**	T1X-70Δ	**14,590**	Consult factory	**—**	Consult factory	**—**
U12-70Δ	**14,325**	U14-70Δ	**14,850**	U1X-70Δ	**15,745**	Consult factory	**—**	Consult factory	**—**
NEMA rated									
J12-2Δ	**$ 330**	J14-2Δ	**$ 495**	J1X-2Δ	**$ 645**	J1P-2Δ	**$ 315**	J17-2Δ	**$ 1,500**
K12-2Δ	**383**	K14-2Δ	**570**	K1X-2Δ	**743**	K1P-2Δ	**360**	K17-2Δ	**1,590**
L12-2Δ	**465**	L14-2Δ	**630**	L1X-2Δ	**831**	L1P-2Δ	**443**	L17-2Δ	**1,680**
M12-2Δ	**719**	M14-2Δ	**1,103**	M1X-2Δ	**1,328**	M1P-2Δ	**698**	M17-2Δ	**2,600**
N12-2Δ	**1,058**	N14-2Δ	**1,425**	N1X-2Δ	**2,010**	N1P-2Δ	**1,035**	N17-2Δ	**3,900**
P12-2Δ	**2,130**	P14-2Δ	**2,700**	P1X-2Δ	**3,375**	P1P-2Δ	**1,950**	P17-2Δ	**6,040**
Q12-2Δ	**4,650**	Q14-2Δ	**5,175**	Q1X-2Δ	**5,815**	Q1P-2Δ	**4,200**	Q17-2Δ	**11,740**
R12-70Δ	**10,380**	R14-70Δ	**10,800**	R1X-70Δ	**11,700**	Consult factory	**—**	Consult factory	**—**
S12-70Δ	**14,325**	S14-70Δ	**14,850**	S1X-70Δ	**15,745**	Consult factory	**—**	Consult factory	**—**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7.

Non-reversing
A9 - A185
Single phase

UL motor switching current	Contactor size	Maximum ratings - UL Listed Maximum motor horsepower ratings 115V	230V	Open type Catalog number	List price	UL Type 1 (Indoor metal) Catalog number	List price
UL rated							
9	A9	1/2	1	11S-2Δ	**$ 165**	11S1-2Δ	**$ 255**
11	A12	3/4	2	21S-2Δ	**171**	21S1-2Δ	**285**
17	A16	1	3	31S-2Δ	**200**	31S1-2Δ	**300**
28	A26	1.5	5	41S-2Δ	**294**	41S1-2Δ	**405**
34	A30	2	7.5	51S-2Δ	**372**	51S1-2Δ	**473**
42	A40	3	7.5	61S-2Δ	**423**	61S1-2Δ	**525**
54	A50	3	7.5	71S-2Δ	**458**	71S1-2Δ	**600**
65	A63	5	10	81S-2Δ	**522**	81S1-2Δ	**713**
80	A75	7.5	15	91S-2Δ	**563**	91S1-2Δ	**975**
110	A110	10	20	A1S-2Δ	**765**	A1S1-2Δ	**1,170**
130	A145	10	25	B1S-2Δ	**1,315**	B1S1-2Δ	**1,765**
156	A185	15	30	C1S-2Δ	**1,730**	C1S1-2Δ	**2,400**

NEMA size	Contactor size	Continuous current	115V	200V				
NEMA rated								
00	A9	9	1/3	1	J1S-2Δ	**$ 165**	J1S1-2Δ	**$ 255**
0	A16	18	1	2	K1S-2Δ	**200**	K1S1-2Δ	**300**
1	A26	27	2	3	L1S-2Δ	**294**	L1S1-2Δ	**405**
2	A50	45	3	7.5	M1S-2Δ	**458**	M1S1-2Δ	**600**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7.

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the suffix code after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 starter: 91S-4F

D.C. operated starters

If DC operation is required, consult factory.

Factory modifications

See page 3.3

Control transformer option

Contactor size	VA rating	List price adder
A9 – A30	50	**$ 360**
A40 – A75	75	**435**
A95 – A110	100	**560**
A145 – A185	150	**720**

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts 100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz		Volts			
	Type	200-208/120	240/120	460 – 480/120	575 – 600/120
	A/AF	A	B	C	D
50/60	Type	200-208/24	240/24	460 – 480/24	575 – 600/24
	A/AF	E	F	G	H

Discount schedule Open: AA [OA], AEA [OC] – A9 - A110; Enclosed: AAE [EA], AEAE [EC] – A145 - AF1650

Non-reversing
A9 - A185
Single phase

UL Type 3R (Outdoor metal)		UL Type 12 (Metal dustight)		UL Type 4 (Watertight)		UL Type 4X (Stainless steel)		UL Type 1, 3R, 4, 4X & 12 (Plastic)	
Catalog number	List price	Catalog number	List price	Catalog number	List price	Catalog number	List price	Catalog number	List price
UL rated									
11S3-2Δ	**$ 330**	11S2-2Δ	**$ 330**	11S4-2Δ	**$ 495**	11SX-2Δ	**$ 645**	11SP-2Δ	**$ 315**
21S3-2Δ	**360**	21S2-2Δ	**360**	21S4-2Δ	**540**	21SX-2Δ	**713**	21SP-2Δ	**345**
31S3-2Δ	**383**	31S2-2Δ	**383**	31S4-2Δ	**570**	31SX-2Δ	**743**	31SP-2Δ	**360**
41S3-2Δ	**465**	41S2-2Δ	**465**	41S4-2Δ	**630**	41SX-2Δ	**831**	41SP-2Δ	**443**
51S3-2Δ	**533**	51S2-2Δ	**533**	51S4-2Δ	**690**	51SX-2Δ	**885**	51SP-2Δ	**510**
61S3-2Δ	**578**	61S2-2Δ	**578**	61S4-2Δ	**1,050**	61SX-2Δ	**1,275**	61SP-2Δ	**555**
71S3-2Δ	**719**	71S2-2Δ	**719**	71S4-2Δ	**1,103**	71SX-2Δ	**1,328**	71SP-2Δ	**698**
81S3-2Δ	**795**	81S2-2Δ	**795**	81S4-2Δ	**1,170**	81SX-2Δ	**1,410**	81SP-2Δ	**773**
91S3-2Δ	**1,058**	91S2-2Δ	**1,058**	91S4-2Δ	**1,425**	91SX-2Δ	**2,010**	91SP-2Δ	**1,035**
A1S3-2Δ	**1,515**	A1S2-2Δ	**1,515**	A1S4-2Δ	**2,100**	A1SX-2Δ	**2,813**	A1SP-2Δ	**1,440**
B1S3-2Δ	**2,130**	B1S2-2Δ	**2,130**	B1S4-2Δ	**2,700**	B1SX-2Δ	**3,375**	B1SP-2Δ	**1,950**
C1S3-2Δ	**2,805**	C1S2-2Δ	**2,805**	C1S4-2Δ	**3,340**	C1SX-2Δ	**3,900**	C1SP-2Δ	**2,440**
NEMA rated									
J1S3-2Δ	**$ 330**	J1S2-2Δ	**$ 330**	J1S4-2Δ	**$ 495**	J1SX-2Δ	**$ 645**	J1SP-2Δ	**$ 315**
K1S3-2Δ	**383**	K1S2-2Δ	**383**	K1S4-2Δ	**570**	K1SX-2Δ	**743**	K1SP-2Δ	**360**
L1S3-2Δ	**465**	L1S2-2Δ	**465**	L1S4-2Δ	**630**	L1SX-2Δ	**831**	L1SP-2Δ	**443**
M1S3-2Δ	**719**	M1S2-2Δ	**719**	M1S4-2Δ	**1,103**	M1SX-2Δ	**1,328**	M1SP-2Δ	**698**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7.

Reversing
A9 - AF750
Three phase

UL motor switching current	Contactor size	Maximum ratings - UL Listed Maximum motor horsepower ratings 200/208V	230/240V	480/480V	575/600V	Open type Catalog number	List price	UL Type 1 (Indoor metal) Catalog number	List price	UL type 3R (Outdoor metal) Catalog number	List price
UL rated											
9	A9	2	2	5	7.5	12-2Δ	**$ 342**	121-2Δ	**$ 510**	123-2Δ	**$ 630**
11	A12	3	3	7.5	10	22-2Δ	**387**	221-2Δ	**585**	223-2Δ	**705**
17	A16	5	5	10	15	32-2Δ	**443**	321-2Δ	**630**	323-2Δ	**750**
28	A26	7.5	10	20	25	42-2Δ	**503**	421-2Δ	**810**	423-2Δ	**900**
34	A30	10	10	25	30	52-2Δ	**675**	521-2Δ	**953**	523-2Δ	**1,043**
42	A40	10	15	30	40	62-2Δ	**765**	621-2Δ	**1,080**	623-2Δ	**1,305**
54	A50	15	20	40	50	72-2Δ	**1,152**	721-2Δ	**1,395**	723-2Δ	**1,763**
65	A63	20	25	50	50	82-2Δ	**1,515**	821-2Δ	**1,780**	823-2Δ	**2,310**
80	A75	25	30	60	75	92-2Δ	**1,620**	921-2Δ	**1,905**	923-2Δ	**2,813**
110	A110	30	40	75	100	A2-2Δ	**1,800**	A21-2Δ	**2,970**	A23-2Δ	**3,630**
130	A145	40	50	100	125	B2-2Δ	**2,997**	B21-2Δ	**3,570**	B23-2Δ	**4,275**
156	A185	50	60	125	150	C2-2Δ	**3,996**	C21-2Δ	**4,755**	C23-2Δ	**5,215**
192	A210	60	75	150	200	D2-2Δ	**4,650**	D21-2Δ	**5,580**	D23-2Δ	**6,255**
248	A260	75	100	200	250	E2-2Δ	**5,436**	E21-2Δ	**7,615**	E23-2Δ	**8,355**
302	A300	100	100	250	300	F2-2Δ	**6,190**	F21-2Δ	**8,070**	F23-2Δ	**8,835**
414	AF400	125	150	350	400	G2-70Δ	**7,980**	G21-70Δ	**15,450**	G23-70Δ	**16,125**
480	AF460	150	200	400	500	H2-70Δ	**14,550**	H21-70Δ	**22,482**	H23-70Δ	**23,230**
590	AF580	200	250	500	600	T2-70Δ	**19,755**	T21-70Δ	**25,800**	T23-70Δ	**26,250**
810	AF750	250	300	600	700	U2-70Δ	**21,105**	U21-70Δ	**29,250**	U23-70Δ	**30,225**
NEMA rated											
NEMA size	Contactor size	Continuous current	200V	230V	460/575V						
00	A9	9	1.5	1.5	2	J2-2Δ	**$ 342**	J21-2Δ	**$ 510**	J23-2Δ	**$ 630**
0	A16	18	3	3	5	K2-2Δ	**443**	K21-2Δ	**630**	K23-2Δ	**750**
1	A26	27	7.5	7.5	10	L2-2Δ	**503**	L21-2Δ	**810**	L23-2Δ	**900**
2	A50	45	10	15	25	M2-2Δ	**1,152**	M21-2Δ	**1,395**	M23-2Δ	**1,763**
3	A75	90	25	30	50	N2-2Δ	**1,620**	N21-2Δ	**1,905**	N23-2Δ	**2,813**
4	A145	135	40	50	100	P2-2Δ	**2,997**	P21-2Δ	**3,570**	P23-2Δ	**4,275**
5	A260	270	75	100	200	Q2-2Δ	**5,436**	Q21-2Δ	**7,615**	Q23-2Δ	**8,355**
6	AF460	540	150	200	400	R2-70Δ	**14,550**	R21-70Δ	**22,482**	R23-70Δ	**23,230**
7	AF750	810	—	300	600	S2-70Δ	**21,105**	S21-70Δ	**29,250**	S23-70Δ	**30,225**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7.

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the suffix code after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 starter: 92-4F

D.C. operated starters

If DC operation is required, consult factory.

Factory modifications

See page 3.3

Control transformer option

Contactor size	VA rating	List price adder
A9 – A40	50	**$ 360**
A50 – A75	75	**435**
A95 – A110	100	**560**
A145 – A185	150	**720**
A210 – A300	250	**795**
AF400 – AF460	150	**720**
AF580 – AF750	250	**795**

Reference page 3.3 for Extra VA under all (Control Transformer Options chart)

Coil voltage selection – A9 - A300

Hz	Contactor type	Volts 24	110	120	208	220	240	440	480	500	600
60	A	1		2	3		4	5	6		7
50	A	1	2			4				7	

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts 100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz		Volts 200-208/120	240/120	460 – 480/120	575 – 600/120
	Type	200-208/120	240/120	460 – 480/120	575 – 600/120
	A/AF	A	B	C	D
50/60	Type	200-208/24	240/24	460 – 480/24	575 – 600/24
	A/AF	E	F	G	H

NOTE: For AF50 – AF 300 starters, consult factory.
① AF400 - AF750 only.

Discount schedule — Open: AA [OA], AEA [OC] — Enclosed: AAE [EA], AEAE [EC]
AA [OA] AAE [EA] – A9 - A110
AEA [OC] AEAE [EC] – A145 - AF1650

Reversing
A9 - AF750
Three phase

UL Type 12 (Metal dustight)		UL Type 4 (Watertight)		UL Type 4X (Stainless steel)		UL Type 1, 3R, 4, 4X & 12 (Plastic)	
Catalog number	List price	Catalog number	List price	Catalog number	List price	Catalog number	List price
UL rated							
122-2Δ	**$ 630**	124-2Δ	**$ 810**	12X-2Δ	**$ 1,125**	12P-2Δ	**$ 608**
222-2Δ	**705**	224-2Δ	**915**	22X-2Δ	**1,230**	22P-2Δ	**683**
322-2Δ	**750**	324-2Δ	**990**	32X-2Δ	**1,313**	32P-2Δ	**765**
422-2Δ	**900**	424-2Δ	**1,125**	42X-2Δ	**1,725**	42P-2Δ	**960**
522-2Δ	**1,043**	524-2Δ	**1,313**	52X-2Δ	**1,868**	52P-2Δ	**1,103**
622-2Δ	**1,305**	624-2Δ	**1,500**	62X-2Δ	**2,010**	62P-2Δ	**1,230**
722-2Δ	**1,763**	724-2Δ	**1,875**	72X-2Δ	**2,213**	72P-2Δ	**1,530**
822-2Δ	**2,310**	824-2Δ	**2,588**	82X-2Δ	**3,143**	82P-2Δ	**1,695**
922-2Δ	**2,813**	924-2Δ	**3,113**	92X-2Δ	**3,600**	92P-2Δ	**2,250**
A22-2Δ	**3,630**	A24-2Δ	**3,900**	A2X-2Δ	**4,479**	A2P-2Δ	**3,230**
B22-2Δ	**4,275**	B24-2Δ	**4,650**	B2X-2Δ	**5,665**	B2P-2Δ	**3,804**
C22-2Δ	**5,215**	C24-2Δ	**5,550**	C2X-2Δ	**6,555**	C2P-2Δ	**4,640**
D22-2Δ	**6,255**	D24-2Δ	**6,640**	D2X-2Δ	**7,680**	D2P-2Δ	**5,566**
E22-2Δ	**8,355**	E24-2Δ	**9,340**	E2X-2Δ	**11,995**	E2P-2Δ	**7,434**
F22-2Δ	**8,835**	F24-2Δ	**10,015**	F2X-2Δ	**12,055**	F2P-2Δ	**7,861**
G22-70Δ	**16,125**	G24-70Δ	**17,100**	G2X-70Δ	**20,690**	Consult factory	**—**
H22-70Δ	**23,230**	H24-70Δ	**23,625**	H2X-70Δ	**24,250**	Consult factory	**—**
T22-70Δ	**26,250**	T24-70Δ	**27,000**	T2X-70Δ	**28,500**	Consult factory	**—**
U22-70Δ	**30,225**	U24-70Δ	**31,275**	U2X-70Δ	**32,625**	Consult factory	**—**
NEMA rated							
J22-2Δ	**$ 630**	J24-2Δ	**$ 810**	J2X-2Δ	**$ 1,125**	J2P-2Δ	**$ 608**
K22-2Δ	**750**	K24-2Δ	**990**	K2X-2Δ	**1,313**	K2P-2Δ	**765**
L22-2Δ	**900**	L24-2Δ	**1,125**	L2X-2Δ	**1,725**	L2P-2Δ	**960**
M22-2Δ	**1,763**	M24-2Δ	**1,875**	M2X-2Δ	**2,213**	M2P-2Δ	**1,530**
N22-2Δ	**2,813**	N24-2Δ	**3,113**	N2X-2Δ	**3,600**	N2P-2Δ	**2,250**
P22-2Δ	**4,275**	P24-2Δ	**4,650**	P2X-2Δ	**5,665**	P2P-2Δ	**3,804**
Q22-2Δ	**8,355**	Q24-2Δ	**9,340**	Q2X-2Δ	**11,995**	Q2P-2Δ	**7,434**
R22-70Δ	**23,230**	R24-70Δ	**23,625**	R2X-70Δ	**24,250**	Consult factory	**—**
S22-70Δ	**30,225**	S24-70Δ	**31,275**	S2X-70Δ	**32,625**	Consult factory	**—**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7.

2 Speed, 1 winding
A9 - AF750
Three phase

UL motor switching current	Contactor size	Maximum ratings - UL Listed Maximum motor horsepower ratings 200/208V	230/240V	480/480V	575/600V	Open type Catalog number	List price	UL Type 1 (Indoor metal) Catalog number	List price	UL type 3R (Outdoor metal) Catalog number	List price
UL rated											
9	A9	2	2	5	7.5	13-2Δ1Δ	**$ 504**	131-2Δ1Δ	**$ 690**	133-2Δ1Δ	**$ 810**
11	A12	3	3	7.5	10	23-2Δ1Δ	**525**	231-2Δ1Δ	**771**	233-2Δ1Δ	**891**
17	A16	5	5	10	15	33-2Δ1Δ	**581**	331-2Δ1Δ	**837**	333-2Δ1Δ	**957**
28	A26	7.5	10	20	25	43-2Δ1Δ	**752**	431-2Δ1Δ	**1,097**	433-2Δ1Δ	**1,187**
34	A30	10	10	25	30	53-2Δ1Δ	**1,038**	531-2Δ1Δ	**1,316**	533-2Δ1Δ	**1,406**
42	A40	10	15	30	40	63-2Δ1Δ	**1,259**	631-2Δ1Δ	**1,577**	633-2Δ1Δ	**1,802**
54	A50	15	20	40	50	73-2Δ1Δ	**1,697**	731-2Δ1Δ	**1,940**	733-2Δ1Δ	**2,307**
65	A63	20	25	50	50	83-2Δ1Δ	**2,150**	831-2Δ1Δ	**2,195**	833-2Δ1Δ	**2,945**
80	A75	25	30	60	75	93-2Δ1Δ	**2,307**	931-2Δ1Δ	**2,592**	933-2Δ1Δ	**3,500**
110	A110	30	40	75	100	A3-2Δ1Δ	**2,681**	A31-2Δ1Δ	**3,851**	A33-2Δ1Δ	**4,511**
130	A145	40	50	100	125	B3-2Δ1Δ	**4,506**	B31-2Δ1Δ	**5,079**	B33-2Δ1Δ	**5,784**
156	A185	50	60	125	150	C3-2Δ1Δ	**5,845**	C31-2Δ1Δ	**6,605**	C33-2Δ1Δ	**7,059**
192	A210	60	75	150	200	D3-2Δ1Δ	**6,895**	D31-2Δ1Δ	**7,825**	D33-2Δ1Δ	**8,500**
248	A260	75	100	200	250	E3-2Δ1Δ	**8,535**	E31-2Δ1Δ	**10,710**	E33-2Δ1Δ	**11,455**
302	A300	100	100	250	300	F3-2Δ1Δ	**9,171**	F31-2Δ1Δ	**11,391**	F33-2Δ1Δ	**12,155**
414	AF400	125	150	350	400	G3-70Δ1Δ	**10,100**	G31-70Δ1Δ	**19,460**	G33-70Δ1Δ	**20,135**
480	AF460	150	200	400	500	H3-70Δ1Δ	**17,995**	H31-70Δ1Δ	**28,910**	H23-70Δ1Δ	**29,652**
590	AF580	200	250	500	600	T3-70Δ1Δ	**23,735**	T31-70Δ1Δ	**35,400**	T33-70Δ1Δ	**35,850**
810	AF750	250	300	600	700	U3-70Δ1Δ	**26,645**	U31-70Δ1Δ	**39,195**	U33-70Δ1Δ	**40,170**
NEMA rated											
NEMA size	Contactor size	Continuous current	200V	230V	460/575V						
00	A9	9	1.5	1.5	2	J3-2Δ1Δ	**$ 504**	J31-2Δ1Δ	**$ 690**	J33-2Δ1Δ	**$ 810**
0	A16	18	3	3	5	K3-2Δ1Δ	**581**	K31-2Δ1Δ	**837**	K33-2Δ1Δ	**957**
1	A26	27	7.5	7.5	10	L3-2Δ1Δ	**752**	L31-2Δ1Δ	**1,097**	L33-2Δ1Δ	**1,187**
2	A50	45	10	15	25	M3-2Δ1Δ	**1,697**	M31-2Δ1Δ	**1,940**	M33-2Δ1Δ	**2,307**
3	A75	90	25	30	50	N3-2Δ1Δ	**2,307**	N31-2Δ1Δ	**2,589**	N33-2Δ1Δ	**3,500**
4	A145	135	40	50	100	P3-2Δ1Δ	**4,506**	P31-2Δ1Δ	**5,079**	P33-2Δ1Δ	**5,784**
5	A260	270	75	100	200	Q3-2Δ1Δ	**8,535**	Q31-2Δ1Δ	**10,710**	Q33-2Δ1Δ	**11,455**
6	AF460	540	150	200	400	R3-70Δ1Δ	**17,995**	R31-70Δ1Δ	**28,910**	R33-70Δ1Δ	**29,652**
7	AF750	810	—	300	600	S3-70Δ1Δ	**26,645**	S31-70Δ1Δ	**39,195**	S33-70Δ1Δ	**40,170**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7. 1st Δ low speed; 2nd Δ high speed.

Description

Motors that have separate windings for each speed provide more combinations of speed variations. Multi-speed starters from ABB Control are available for constant horsepower, constant torque and variable torque motors.

Constant horsepower

Motors that maintain the same horsepower regardless of speed are called constant horsepower motors. These motors are used in applications like metal working.

Constant torque

Motors that maintain constant torque at all speeds are called constant torque motors. In applications like conveyors, horsepower varies directly with speed.

Variable torque motors

Motors that produce a torque characteristic which varies as the square of the speed are called variable torque motors and are used in applications like blowers and fans.

Control transformer option

Contactor size	VA rating	List price adder
A9 – A40	50	**$ 360**
A50 – A75	75	**435**
A95 – A110	100	**560**
A145 – A185	150	**720**
A210 – A300	250	**795**
AF400 – AF460	150	**720**
AF580 – AF750	250	**795**

Reference page 3.3 for Extra VA under all (Control Transformer Options chart)

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the suffix code after the last dash in the catalog number.

Ex.: A 240V coil is required for an A110 starter: A3-4Δ1Δ

D.C. operated starters

If DC operation is required, consult factory.

Factory modifications

See page 3.3

Coil voltage selection – A9 - A300

Hz	Contactor type	Volts 24	110	120	208	220	240	440	480	500	600
60	A	1		2	3		4	5	6		7
50	A	1	2			4				7	

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts 100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz		Volts 200-208/120	240/120	460 – 480/120	575 – 600/120
	Type	A/AF A	B	C	D
50/60	Type	200-208/24	240/24	460 – 480/24	575 – 600/24
	A/AF	E	F	G	H

NOTE: For AF50 – AF 300 starters, consult factory.
① AF400 - AF750 only.

2 Speed, 1 winding
A9 - AF750
Three phase

UL Type 12 (Metal dustight)		UL Type 4 (Watertight)		UL Type 4X (Stainless steel)		UL Type 1, 3R, 4, 4X & 12 (Plastic)	
Catalog number	List price	Catalog number	List price	Catalog number	List price	Catalog number	List price
UL rated							
132-2Δ1Δ	**$ 810**	134-2Δ1Δ	**$ 1,020**	13X-2Δ1Δ	**$ 1,305**	13P-2Δ1Δ	**$ 788**
232-2Δ1Δ	**891**	234-2Δ1Δ	**1,095**	23X-2Δ1Δ	**1,416**	23P-2Δ1Δ	**869**
332-2Δ1Δ	**957**	334-2Δ1Δ	**1,215**	33X-2Δ1Δ	**1,520**	33P-2Δ1Δ	**972**
432-2Δ1Δ	**1,187**	434-2Δ1Δ	**1,515**	43X-2Δ1Δ	**2,012**	43P-2Δ1Δ	**1,247**
532-2Δ1Δ	**1,406**	534-2Δ1Δ	**1,688**	53X-2Δ1Δ	**2,231**	53P-2Δ1Δ	**1,466**
632-2Δ1Δ	**1,802**	634-2Δ1Δ	**2,100**	63X-2Δ1Δ	**2,507**	63P-2Δ1Δ	**1,727**
732-2Δ1Δ	**2,307**	734-2Δ1Δ	**2,528**	73X-2Δ1Δ	**2,757**	73P-2Δ1Δ	**2,075**
832-2Δ1Δ	**2,945**	834-2Δ1Δ	**3,285**	83X-2Δ1Δ	**3,777**	83P-2Δ1Δ	**2,330**
932-2Δ1Δ	**3,500**	934-2Δ1Δ	**3,788**	93X-2Δ1Δ	**4,287**	93P-2Δ1Δ	**2,835**
A32-2Δ1Δ	**4,511**	A34-2Δ1Δ	**4,800**	A3X-2Δ1Δ	**5,358**	A3P-2Δ1Δ	**4,300**
B32-2Δ1Δ	**5,784**	B34-2Δ1Δ	**6,265**	B3X-2Δ1Δ	**7,175**	B3P-2Δ1Δ	**5,513**
C32-2Δ1Δ	**7,059**	C34-2Δ1Δ	**7,440**	C3X-2Δ1Δ	**8,400**	C3P-2Δ1Δ	**6,729**
D32-2Δ1Δ	**8,500**	D34-2Δ1Δ	**8,890**	D3X-2Δ1Δ	**9,925**	D3P-2Δ1Δ	**8,103**
E32-2Δ1Δ	**11,455**	E34-2Δ1Δ	**12,940**	E3X-2Δ1Δ	**15,090**	E3P-2Δ1Δ	**10,919**
F32-2Δ1Δ	**12,155**	F34-2Δ1Δ	**13,425**	F3X-2Δ1Δ	**16,275**	F3P-2Δ1Δ	**11,586**
G32-70Δ1Δ	**20,135**	G34-70Δ1Δ	**21,600**	G3X-70Δ1Δ	**24,700**		
H32-70Δ1Δ	**29,652**	H34-70Δ1Δ	**30,000**	H3X-70Δ1Δ	**30,675**		
T32-70Δ1Δ	**35,850**	T34-70Δ1Δ	**36,225**	T3X-70Δ1Δ	**38,097**		
U32-70Δ1Δ	**40,170**	U34-70Δ1Δ	**40,875**	U3X-70Δ1Δ	**42,570**		
NEMA rated							
J32-2Δ1Δ	**$ 810**	J34-2Δ1Δ	**$ 1,020**	J3X-2Δ1Δ	**$ 1,305**	J3P-2Δ1Δ	**$ 788**
K32-2Δ1Δ	**957**	K34-2Δ1Δ	**1,215**	K3X-2Δ1Δ	**1,520**	K3P-2Δ1Δ	**972**
L32-2Δ1Δ	**1,187**	L34-2Δ1Δ	**1,515**	L3X-2Δ1Δ	**2,012**	L3P-2Δ1Δ	**1,247**
M32-2Δ1Δ	**2,307**	M34-2Δ1Δ	**2,528**	M3X-2Δ1Δ	**2,757**	M3P-2Δ1Δ	**2,075**
N32-2Δ1Δ	**3,500**	N34-2Δ1Δ	**3,788**	N3X-2Δ1Δ	**4,287**	N3P-2Δ1Δ	**2,835**
P32-2Δ1Δ	**5,748**	P34-2Δ1Δ	**6,265**	P3X-2Δ1Δ	**7,175**	P3P-2Δ1Δ	**5,513**
Q32-2Δ1Δ	**11,455**	Q34-2Δ1Δ	**12,940**	Q3X-2Δ1Δ	**15,090**	Q3P-2Δ1Δ	**10,919**
R32-70Δ1Δ	**29,652**	R34-70Δ1Δ	**30,000**	R3X-70Δ1Δ	**30,675**		
S32-70Δ1Δ	**40,170**	S34-70Δ1Δ	**40,875**	S3X-70Δ1Δ	**42,570**		

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7. 1st Δ low speed; 2nd Δ high speed.

2 Speed, 2 winding
A9 - AF750
Three phase

UL motor switching current	Contactor size	Maximum ratings - UL Listed Maximum motor horsepower ratings 200/208V	230/240V	480/480V	575/600V	Open type Catalog number	Open type List price	UL Type 1 (Indoor metal) Catalog number	UL Type 1 (Indoor metal) List price	UL type 3R (Outdoor metal) Catalog number	UL type 3R (Outdoor metal) List price
UL rated											
9	A9	2	2	5	7.5	13-2Δ2Δ	**$ 396**	131-2Δ2Δ	**$ 582**	133-2Δ2Δ	**$ 702**
11	A12	3	3	7.5	10	23-2Δ2Δ	**426**	231-2Δ2Δ	**657**	233-2Δ2Δ	**777**
17	A16	5	5	10	15	33-2Δ2Δ	**476**	331-2Δ2Δ	**702**	333-2Δ2Δ	**822**
28	A26	7.5	10	20	25	43-2Δ2Δ	**552**	431-2Δ2Δ	**882**	433-2Δ2Δ	**972**
34	A30	10	10	25	30	53-2Δ2Δ	**747**	531-2Δ2Δ	**1,025**	533-2Δ2Δ	**1,115**
42	A40	10	15	30	40	63-2Δ2Δ	**834**	631-2Δ2Δ	**1,152**	633-2Δ2Δ	**1,377**
54	A50	15	20	40	50	73-2Δ2Δ	**1,224**	731-2Δ2Δ	**1,467**	733-2Δ2Δ	**1,835**
65	A63	20	25	50	50	83-2Δ2Δ	**1,587**	831-2Δ2Δ	**1,632**	833-2Δ2Δ	**2,382**
80	A75	25	30	60	75	93-2Δ2Δ	**1,692**	931-2Δ2Δ	**1,977**	933-2Δ2Δ	**2,885**
110	A110	30	40	75	100	A3-2Δ2Δ	**1,872**	A31-2Δ2Δ	**3,042**	A33-2Δ2Δ	**3,702**
130	A145	40	50	100	125	B3-2Δ2Δ	**3,069**	B31-2Δ2Δ	**3,642**	B33-2Δ2Δ	**4,347**
156	A185	50	60	125	150	C3-2Δ2Δ	**4,068**	C31-2Δ2Δ	**4,827**	C33-2Δ2Δ	**5,285**
192	A210	60	75	150	200	D3-2Δ2Δ	**4,722**	D31-2Δ2Δ	**5,652**	D33-2Δ2Δ	**6,327**
248	A260	75	100	200	250	E3-2Δ2Δ	**5,500**	E31-2Δ2Δ	**7,685**	E33-2Δ2Δ	**8,427**
302	A300	100	100	250	300	F3-2Δ2Δ	**6,340**	F31-2Δ2Δ	**8,142**	F33-2Δ2Δ	**8,905**
414	AF400	125	150	350	400	G3-70Δ2Δ	**6,855**	G31-70Δ2Δ	**15,522**	G33-70Δ2Δ	**16,197**
480	AF460	150	200	400	500	H3-70Δ2Δ	**13,560**	H31-70Δ2Δ	**22,554**	H23-70Δ2Δ	**23,300**
590	AF580	200	250	500	600	T3-70Δ2Δ	**18,660**	T31-70Δ2Δ	**25,872**	T33-70Δ2Δ	**26,332**
810	AF750	250	300	600	700	U3-70Δ2Δ	**20,025**	U31-70Δ2Δ	**29,332**	U33-70Δ2Δ	**30,297**
NEMA rated											
NEMA size	Contactor size	Continuous current	200V	230V	460/575V						
00	A9	9	1.5	1.5	2	J3-2Δ2Δ	**$ 396**	J31-2Δ2Δ	**$ 582**	J33-2Δ2Δ	**$ 702**
0	A16	18	3	3	5	K3-2Δ2Δ	**476**	K31-2Δ2Δ	**702**	K33-2Δ2Δ	**822**
1	A26	27	7.5	7.5	10	L3-2Δ2Δ	**552**	L31-2Δ2Δ	**882**	L33-2Δ2Δ	**972**
2	A50	45	10	15	25	M3-2Δ2Δ	**1,224**	M31-2Δ2Δ	**1,467**	M33-2Δ2Δ	**1,835**
3	A75	90	25	30	50	N3-2Δ2Δ	**1,692**	N31-2Δ2Δ	**1,977**	N33-2Δ2Δ	**2,885**
4	A145	135	40	50	100	P3-2Δ2Δ	**3,069**	P31-2Δ2Δ	**3,642**	P33-2Δ2Δ	**4,347**
5	A260	270	75	100	200	Q3-2Δ2Δ	**5,508**	Q31-2Δ2Δ	**7,685**	Q33-2Δ2Δ	**8,427**
6	AF460	540	150	200	400	R3-70Δ2Δ	**13,560**	R31-70Δ2Δ	**22,554**	R33-70Δ2Δ	**23,300**
7	AF750	810	—	300	600	S3-70Δ2Δ	**20,025**	S31-70Δ2Δ	**29,322**	S33-70Δ2Δ	**30,297**

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7. 1st Δ low speed; 2nd Δ high speed.

Description

Motors that have separate windings for each speed provide more combinations of speed variations. Multi-speed starters from ABB Control are available for constant horsepower, constant torque and variable torque motors.

Constant horsepower

Motors that maintain the same horsepower regardless of speed are called constant horsepower motors. These motors are used in applications like metal working.

Constant torque

Motors that maintain constant torque at all speeds are called constant torque motors. In applications like conveyors, horsepower varies directly with speed.

Variable torque motors

Motors that produce a torque characteristic which varies as the square of the speed are called variable torque motors and are used in applications like blowers and fans.

Control transformer option

Contactor size	VA rating	List price adder
A9 – A40	50	**$ 360**
A50 – A75	75	**435**
A95 – A110	100	**560**
A145 – A185	150	**720**
A210 – A300	250	**795**
AF400 – AF460	150	**720**
AF580 – AF750	250	**795**

Reference page 3.3 for Extra VA under all (Control Transformer Options chart)

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the suffix code after the last dash in the catalog number.

Ex.: A 240V coil is required for an A110 starter: A3-4Δ2Δ

D.C. operated starters

If DC operation is required, consult factory.

Factory modifications

See page 3.3

Coil voltage selection – A9 - A300

Hz	Contactor type	Volts 24	110	120	208	220	240	440	480	500	600
60	A	1		2	3		4	5	6		7
50	A	1	2			4				7	

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts 100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz		Volts 200-208/120	240/120	460 – 480/120	575 – 600/120
	Type				
	A/AF	A	B	C	D
50/60	Type	200-208/24	240/24	460 – 480/24	575 – 600/24
	A/AF	E	F	G	H

NOTE: For AF50 – AF 300 starters, consult factory.
① AF400 - AF 750 only.

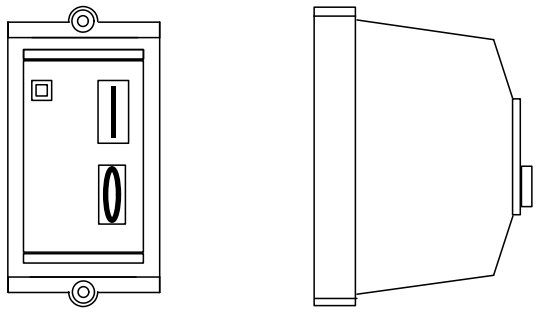
Discount schedule Open: AA [OA], AEA [OC] – A9 - A110; Enclosed: AAE [EA], AEAE [EC] – A145 - AF1650

2 Speed, 2 winding
A9 - AF750
Three phase

UL Type 12 (Metal dustight)		UL Type 4 (Watertight)		UL Type 4X (Stainless steel)		UL Type 1, 3R, 4, 4X & 12 (Plastic)	
Catalog number	List price	Catalog number	List price	Catalog number	List price	Catalog number	List price
UL rated							
132-2Δ2Δ	**$ 702**	134-2Δ2Δ	**$ 915**	13X-2Δ2Δ	**$ 1,197**	13P-2Δ2Δ	**$ 680**
232-2Δ2Δ	**777**	234-2Δ2Δ	**990**	23X-2Δ2Δ	**1,302**	23P-2Δ2Δ	**755**
332-2Δ2Δ	**822**	334-2Δ2Δ	**1,065**	33X-2Δ2Δ	**1,385**	33P-2Δ2Δ	**837**
432-2Δ2Δ	**972**	434-2Δ2Δ	**1,200**	43X-2Δ2Δ	**1,797**	43P-2Δ2Δ	**1,032**
532-2Δ2Δ	**1,115**	534-2Δ2Δ	**1,388**	53X-2Δ2Δ	**1,940**	53P-2Δ2Δ	**1,175**
632-2Δ2Δ	**1,377**	634-2Δ2Δ	**1,545**	63X-2Δ2Δ	**2,082**	63P-2Δ2Δ	**1,302**
732-2Δ2Δ	**1,835**	734-2Δ2Δ	**1,988**	73X-2Δ2Δ	**2,285**	73P-2Δ2Δ	**1,602**
832-2Δ2Δ	**2,382**	834-2Δ2Δ	**2,513**	83X-2Δ2Δ	**3,215**	83P-2Δ2Δ	**1,767**
932-2Δ2Δ	**2,885**	934-2Δ2Δ	**3,090**	93X-2Δ2Δ	**3,672**	93P-2Δ2Δ	**2,200**
A32-2Δ2Δ	**3,702**	A34-2Δ2Δ	**3,863**	A3X-2Δ2Δ	**4,550**	A3P-2Δ2Δ	**3,300**
B32-2Δ2Δ	**4,347**	B34-2Δ2Δ	**4,650**	B3X-2Δ2Δ	**5,735**	B3P-2Δ2Δ	**3,919**
C32-2Δ2Δ	**5,285**	C34-2Δ2Δ	**5,740**	C3X-2Δ2Δ	**6,627**	C3P-2Δ2Δ	**4,857**
D32-2Δ2Δ	**6,327**	D34-2Δ2Δ	**6,510**	D3X-2Δ2Δ	**7,752**	D3P-2Δ2Δ	**5,899**
E32-2Δ2Δ	**8,427**	E34-2Δ2Δ	**9,150**	E3X-2Δ2Δ	**12,065**	E3P-2Δ2Δ	**7,512**
F32-2Δ2Δ	**8,905**	F34-2Δ2Δ	**9,750**	F3X-2Δ2Δ	**13,025**	F3P-2Δ2Δ	**7,990**
G32-70Δ2Δ	**16,197**	G34-70Δ2Δ	**17,100**	G3X-70Δ2Δ	**20,760**		
H32-70Δ2Δ	**23,300**	H34-70Δ2Δ	**23,700**	H3X-70Δ2Δ	**24,320**		
T32-70Δ2Δ	**26,322**	T34-70Δ2Δ	**27,000**	T3X-70Δ2Δ	**28,570**		
U32-70Δ2Δ	**30,297**	U34-70Δ2Δ	**30,900**	U3X-70Δ2Δ	**32,697**		
NEMA rated							
J32-2Δ2Δ	**$ 702**	J34-2Δ2Δ	**$ 915**	J3X-2Δ2Δ	**$ 1,197**	J3P-2Δ2Δ	**$ 680**
K32-2Δ2Δ	**822**	K34-2Δ2Δ	**1,065**	K3X-2Δ2Δ	**1,385**	K3P-2Δ2Δ	**837**
L32-2Δ2Δ	**972**	L34-2Δ2Δ	**1,200**	L3X-2Δ2Δ	**1,797**	L3P-2Δ2Δ	**1,032**
M32-2Δ2Δ	**1,835**	M34-2Δ2Δ	**1,988**	M3X-2Δ2Δ	**2,285**	M3P-2Δ2Δ	**1,602**
N32-2Δ2Δ	**2,885**	N34-2Δ2Δ	**3,090**	N3X-2Δ2Δ	**3,672**	N3P-2Δ2Δ	**2,200**
P32-2Δ2Δ	**4,347**	P34-2Δ2Δ	**4,650**	P3X-2Δ2Δ	**5,735**	P3P-2Δ2Δ	**3,919**
Q32-2Δ2Δ	**8,427**	Q34-2Δ2Δ	**9,150**	Q3X-2Δ2Δ	**12,065**	Q3P-2Δ2Δ	**7,512**
R32-70Δ2Δ	**23,300**	R34-70Δ2Δ	**23,700**	R3X-70Δ2Δ	**24,320**		
S32-70Δ2Δ	**30,297**	S34-70Δ2Δ	**30,900**	S3X-70Δ2Δ	**32,697**		

Δ Overload relay suffix code. Select from the overload relay selection chart on pages 3.6 - 3.7. 1st Δ low speed; 2nd Δ high speed.

Plastic enclosed, IP65
A9 - A16
Three phase & single phase



Enclosed – Three phase

Maximum motor horsepower ratings				Catalog number with blank cover	List price	Catalog number with reset only	List price	Catalog number with start & stop/reset	List price
208V	240V	480V	575V/600V						
2	2	5	7.5	A9SD-84Δ	**$ 233**	A9SD-84ΔR	**$ 240**	A9SD-84ΔA	**$ 278**
3	3	7.5	10	A12SD-84Δ	**248**	A12SD-84ΔR	**255**	A12SD-84ΔA	**293**
5	5	10	15	A16SD-84Δ	**278**	A16SD-84ΔR	**293**	A16SD-84ΔA	**330**

Δ Overload Relay suffix code. Select from the overload relay selection chart on page 3.6.

Enclosed – Single phase

Maximum motor horsepower ratings		Catalog number with blank cover	List price	Catalog number with reset only	List price	Catalog number with start & stop/reset	List price
115V	230V						
1/2	1	A9SSD-84Δ	**$ 233**	A9SSD-84ΔR	**$ 240**	A9SSD-84ΔA	**$ 278**
3/4	2	A12SSD-84Δ	**248**	A12SSD-84ΔR	**255**	A12SSD-84ΔA	**293**
1	3	A16SSD-84Δ	**278**	A16SSD-84ΔR	**293**	A16SSD-84ΔA	**330**

Overload relay selection chart

For contactor sizes	Current range (motor fla)	Catalog number	Starter suffix code
A9	0.1 – 0.16	TA25DU0.16	A
A9	0.16 – 0.25	TA25DU0.25	B
A9	0.25 – 0.4	TA25DU0.4	C
A9	0.4 – 0.63	TA25DU0.63	D
A9	0.63 – 1.0	TA25DU1.0	E
A9	1.0 – 1.4	TA25DU1.4	F
A9	1.4 – 1.8	TA25DU1.8	G
A9	1.7 – 2.4	TA25DU2.4	H
A9	2.2 – 3.1	TA25DU3.1	J
A9	2.8 – 4.0	TA25DU4.0	K
A9	3.5 – 5.0	TA25DU5.0	L
A9	4.5 – 6.5	TA25DU6.5	M
A9	6.0 – 8.5	TA25DU8.5	N
A9	7.5 – 11	TA25DU11	P
A12	10 – 14	TA25DU14	Q
A16	13 – 19	TA25DU19	R

Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the suffix code after the last dash in the catalog number.

Ex.: A 240V coil is required for an A9 starter: A9SD-80E

D.C. operated starters

If DC operation is required, consult factory.

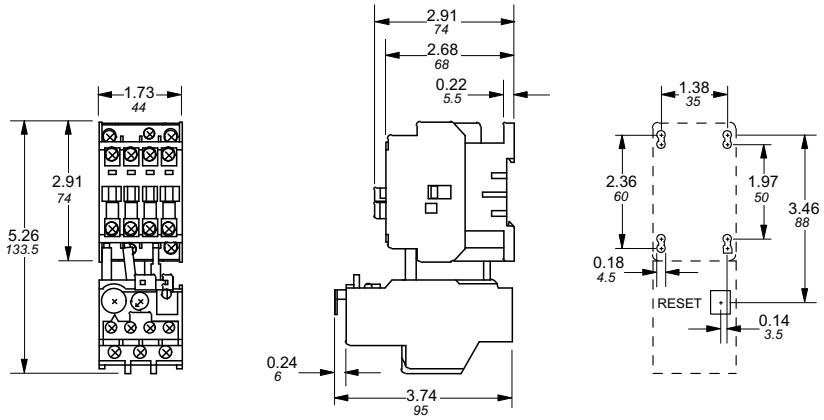
Coil voltage selection – A9 - A16 starters

	Cntr	Volts															
Hz	type	12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55
50	A		81	83	84				80			85	86			55	

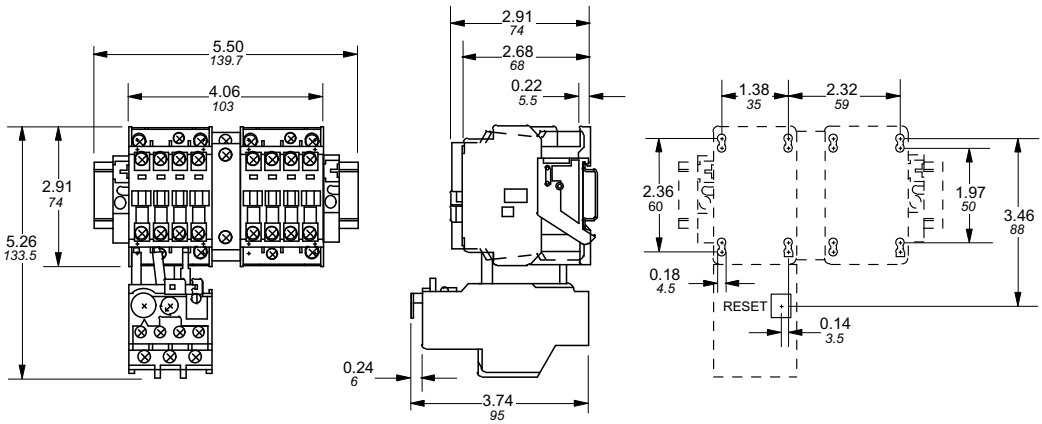
Approximate dimensions
A/AE9 – A/AE16 ①
AC/DC operated, 3 pole

00.00
00.00
Inches
[Millimeters]

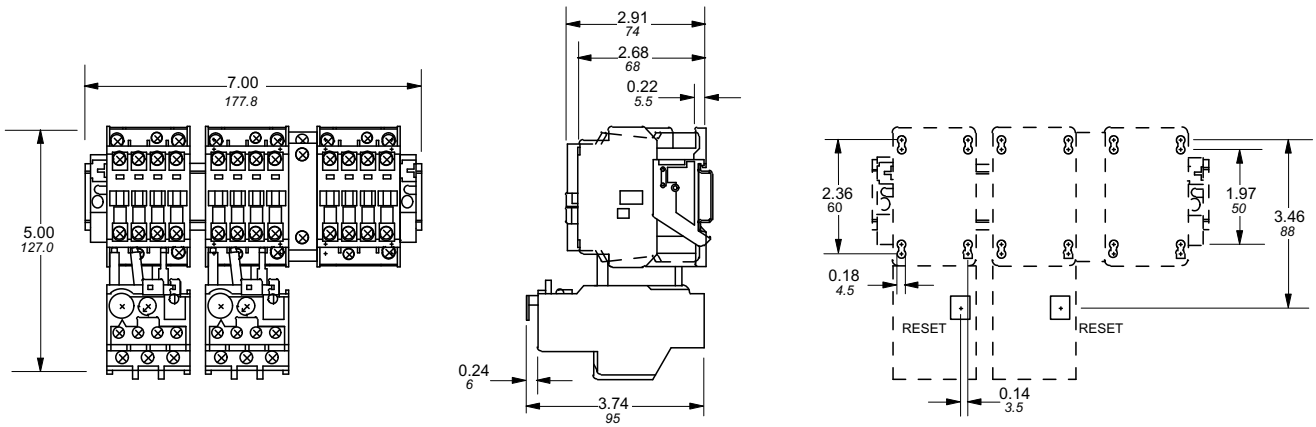
A/AE9 – A/AE16 + TA25 — Starter



A/AE9 – A/AE16 + VM5 or VE5 + TA25 — Reversing starter



A/AE9 – A/AE16 — 2 Speed, 1 winding starter

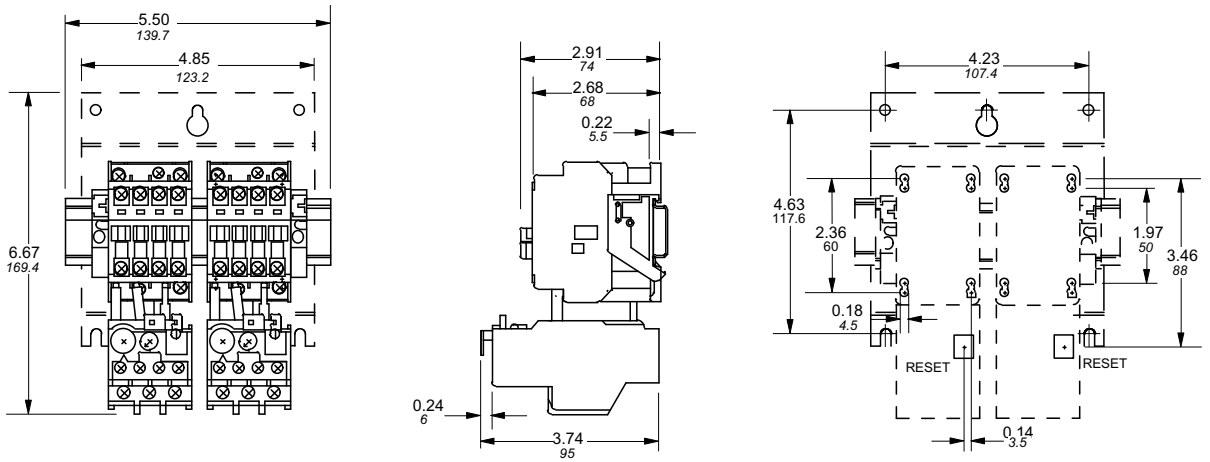


① Starter/contactor size.

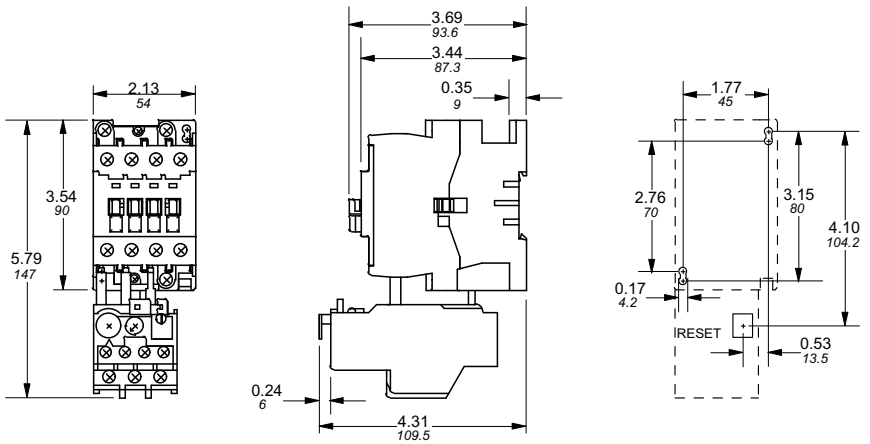
Approximate dimensions
A/AE9 – A/AE26 ①
AC/DC operated, 3 pole

00.00 / 00.00 Inches [Millimeters]

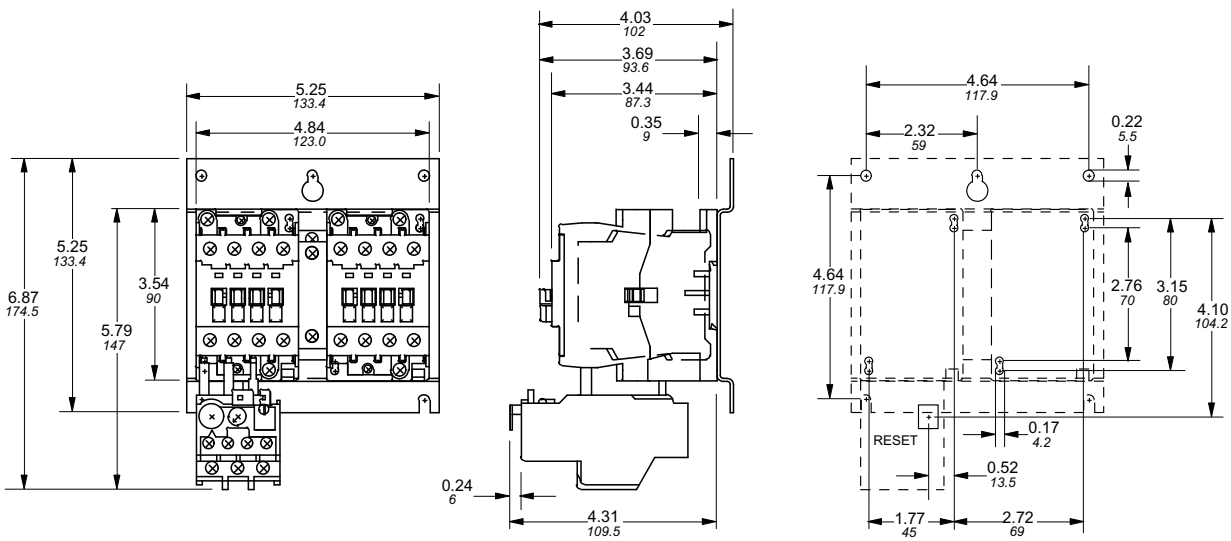
A/AE9 – A/AE16 — 2 Speed, 2 winding starter



A/AE26 + TA25 — Starter



A/AE26 + VM5 or VE5 + TA25 — Reversing starter

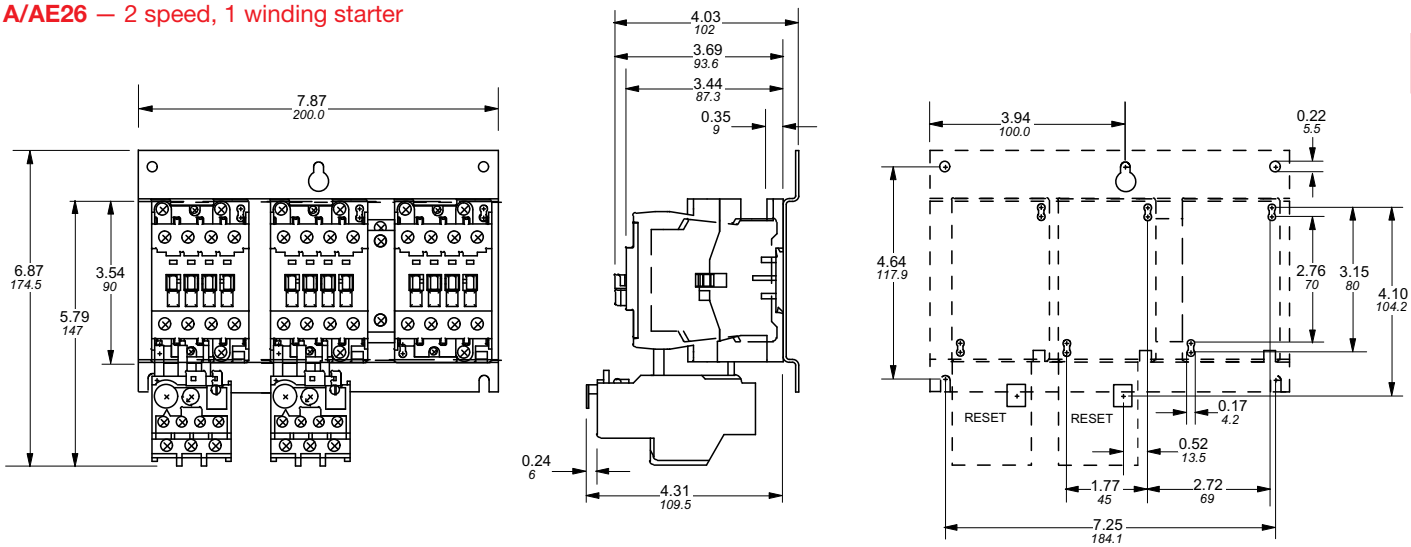


① Starter/contactor size.

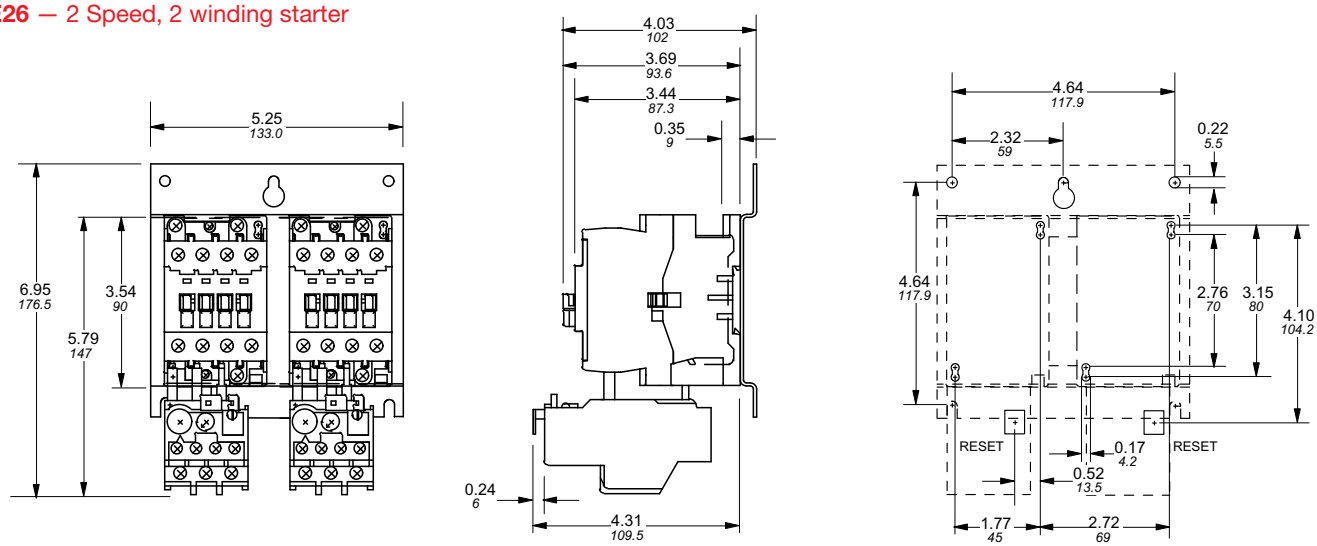
Approximate dimensions
A/AE26 to A/AE40 ①
AC/DC operated, 3 pole

00.00 / 00.00 Inches [Millimeters]

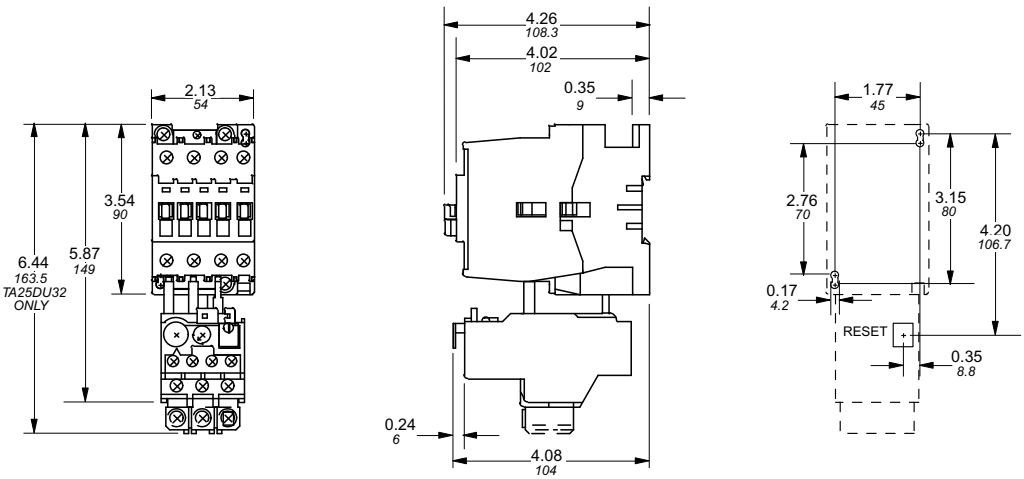
A/AE26 — 2 speed, 1 winding starter



A/AE26 — 2 Speed, 2 winding starter



A/AE30 & A/AE40 + TA25 — Starter

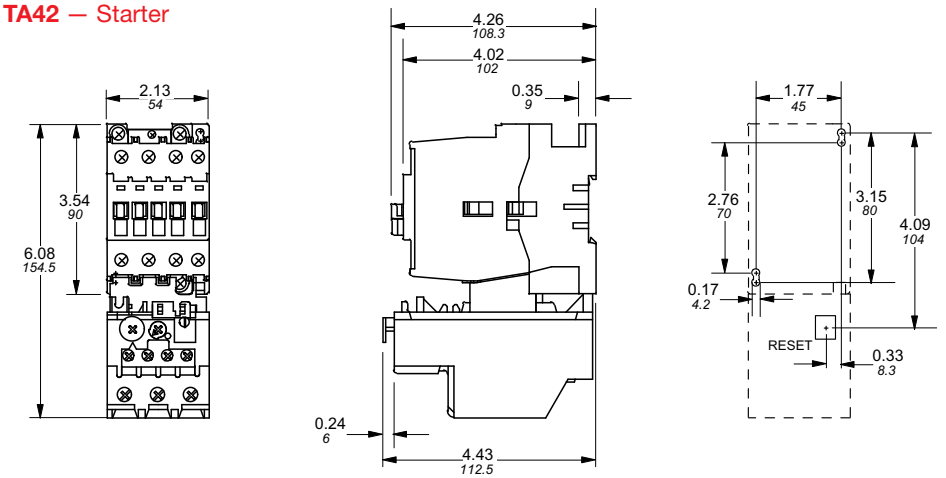


① Starter/contactor size.

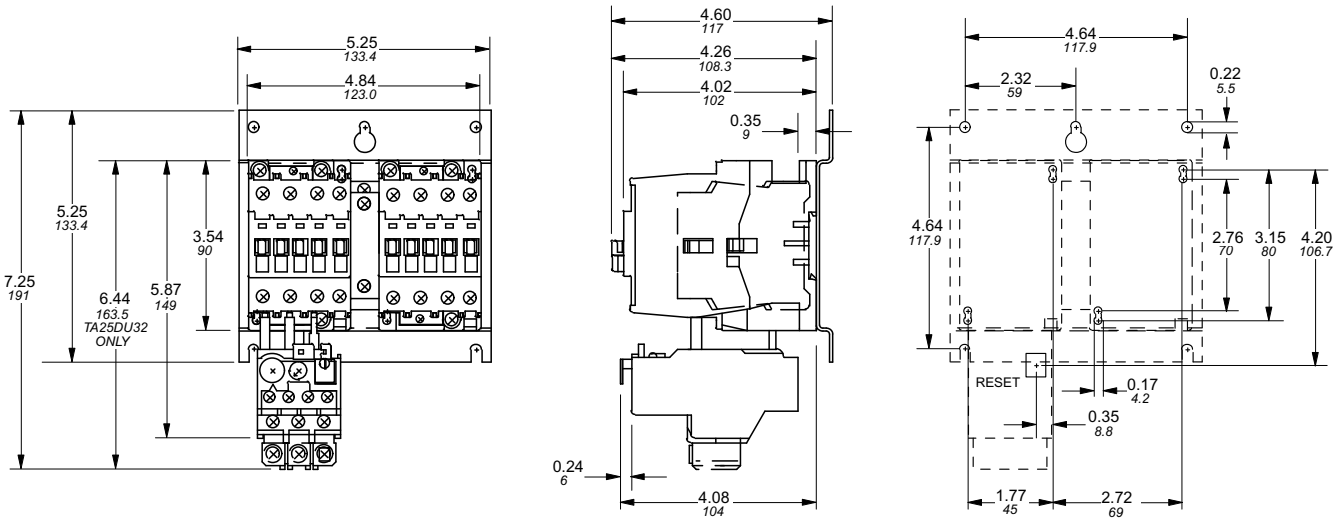
Approximate dimensions
A/AE30 – A/AE40 ①
AC/DC operated, 3 pole

00.00 / 00.00 Inches [Millimeters]

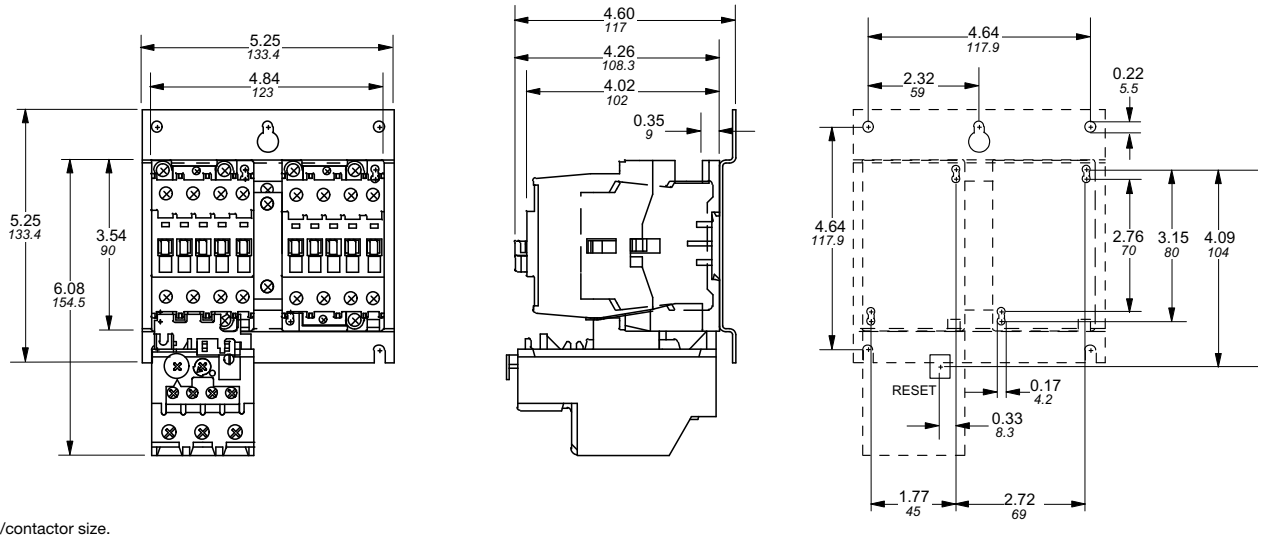
A/AE30 & A/AE40 + TA42 — Starter



A/AE30 & A/AE40 + VM5 or VE5 + TA25 — Reversing starter



A/AE30 & A/AE40 + VM5 or VE5 + TA42 — Reversing starter

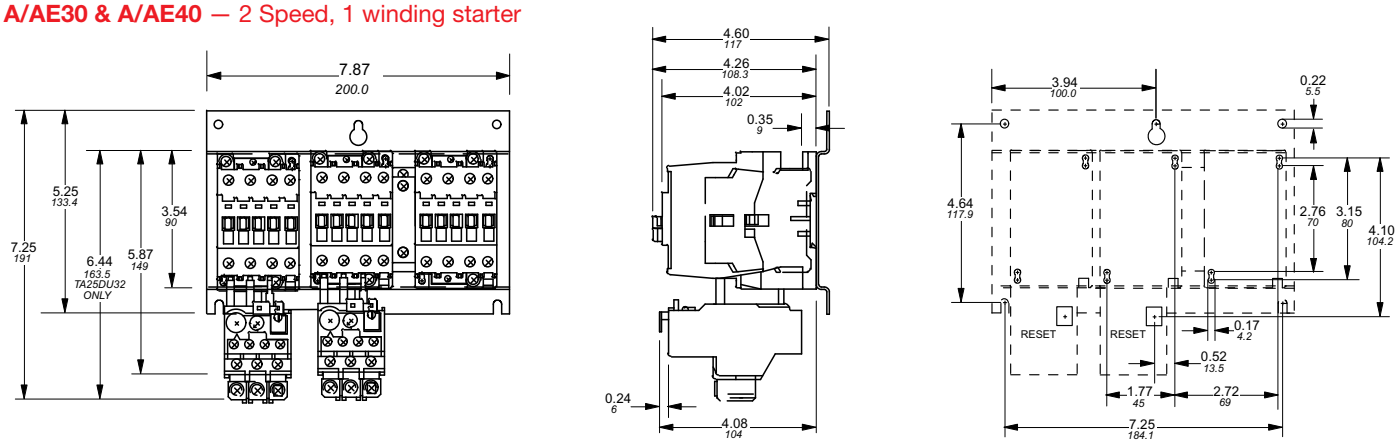


① Starter/contactor size.

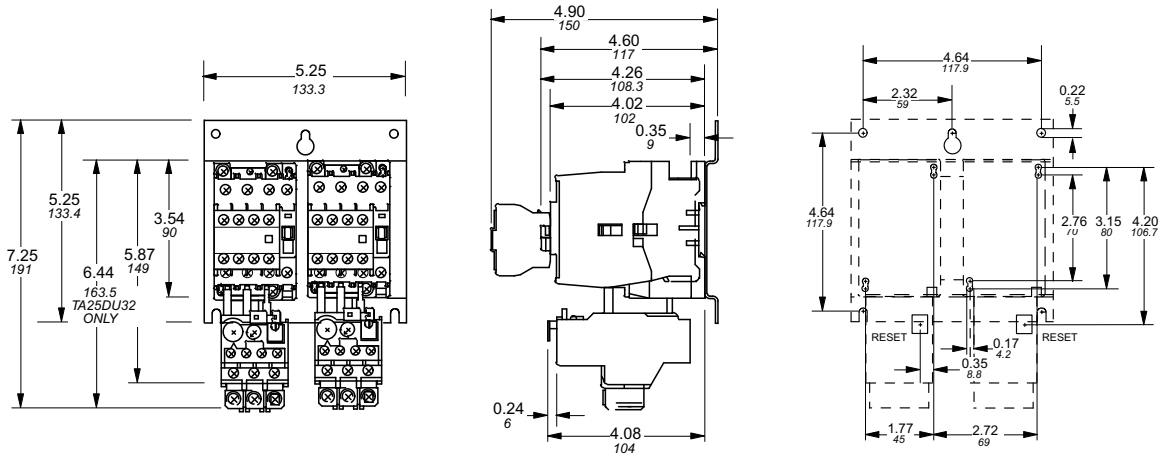
Approximate dimensions
A/AE30 – A/AE75 ①
AC/DC operated, 3 pole

00.00 / 00.00 Inches [Millimeters]

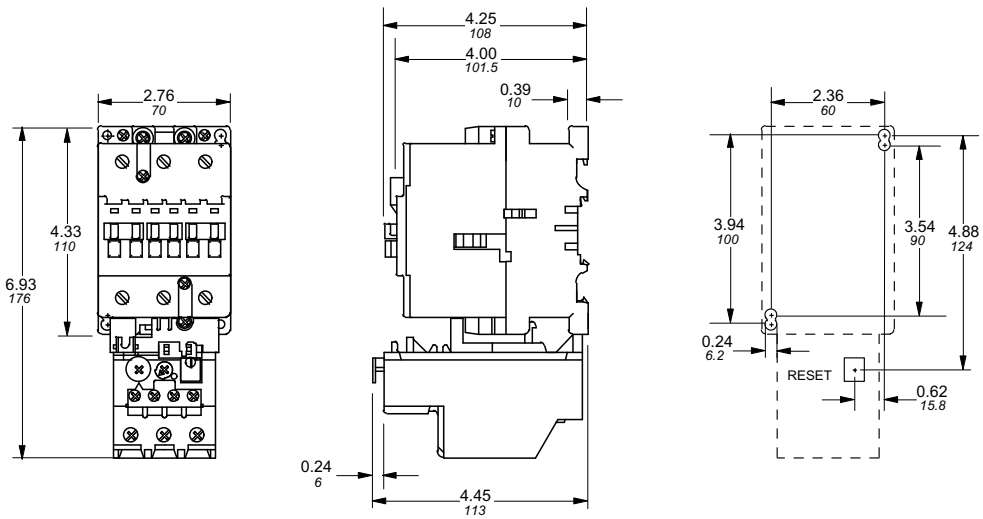
A/AE30 & A/AE40 — 2 Speed, 1 winding starter



A/AE30 & A/AE40 — 2 Speed, 2 winding starter



A/AE50 – A/AE75 + TA75 — Starter

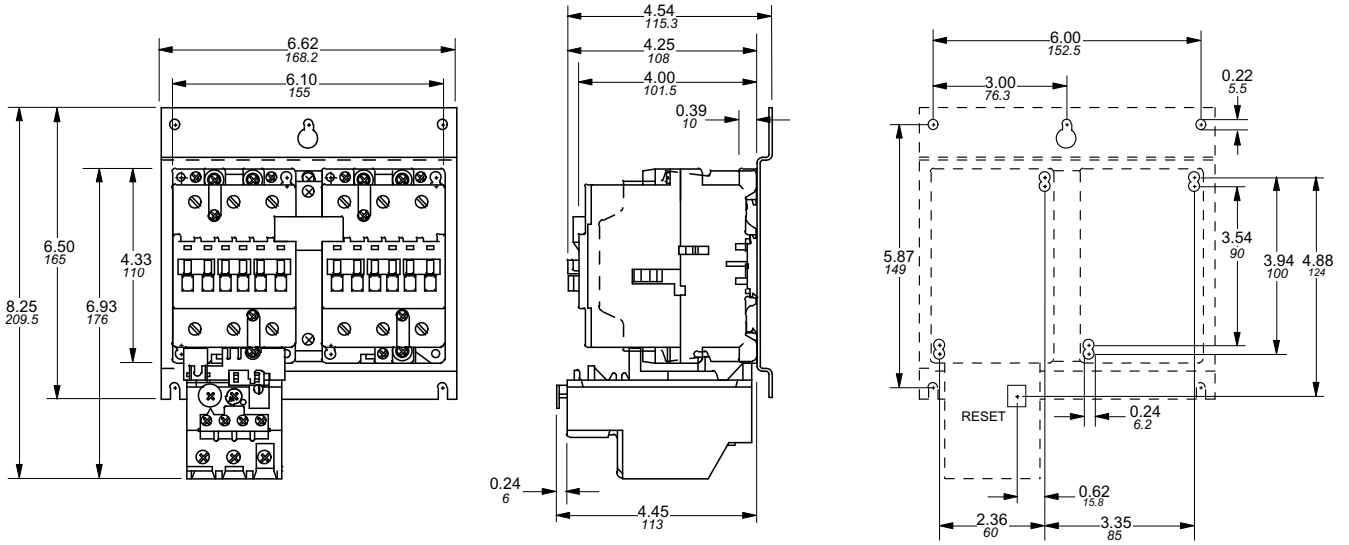


① Starter/contactor size.

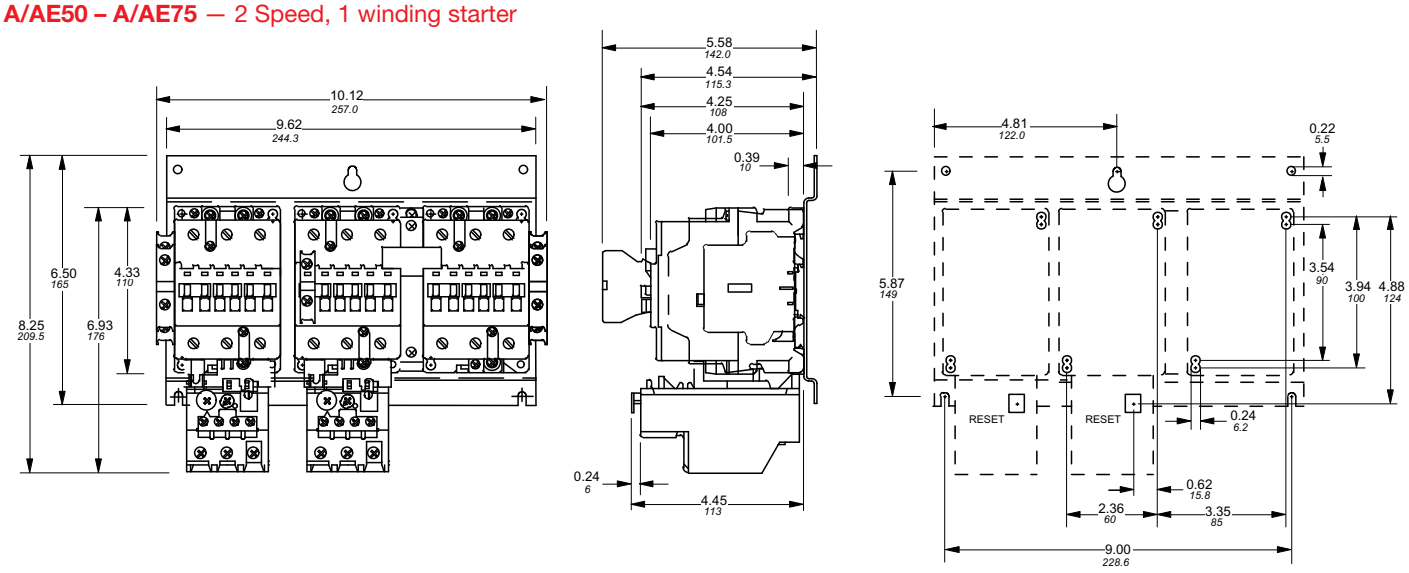
Approximate dimensions
A/AE50 – A/AE75 ①
AC/DC operated, 3 pole

00.00 / 00.00 Inches [Millimeters]

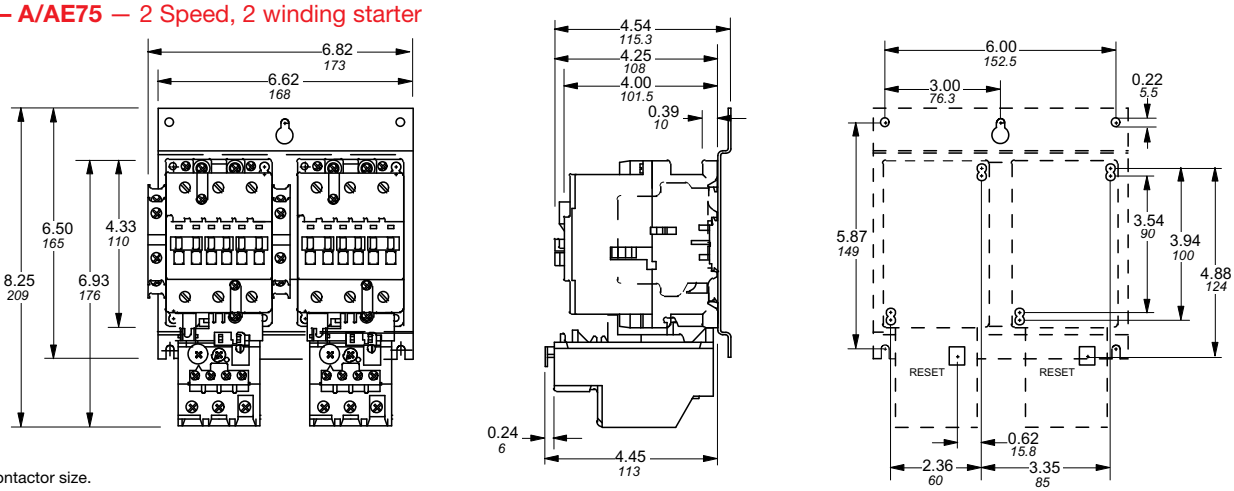
A/AE50 – A/AE75 + VM5 or VE5 + TA75 — Reversing starter



A/AE50 – A/AE75 — 2 Speed, 1 winding starter



A/AE50 – A/AE75 — 2 Speed, 2 winding starter

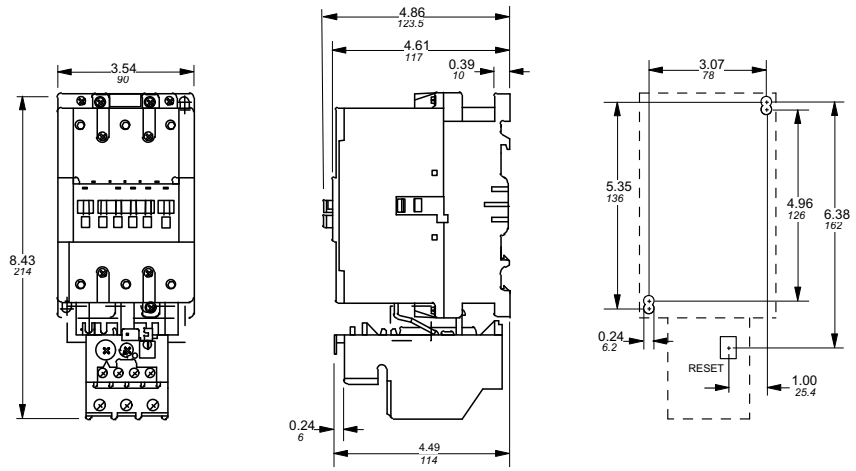


① Starter/contactor size.

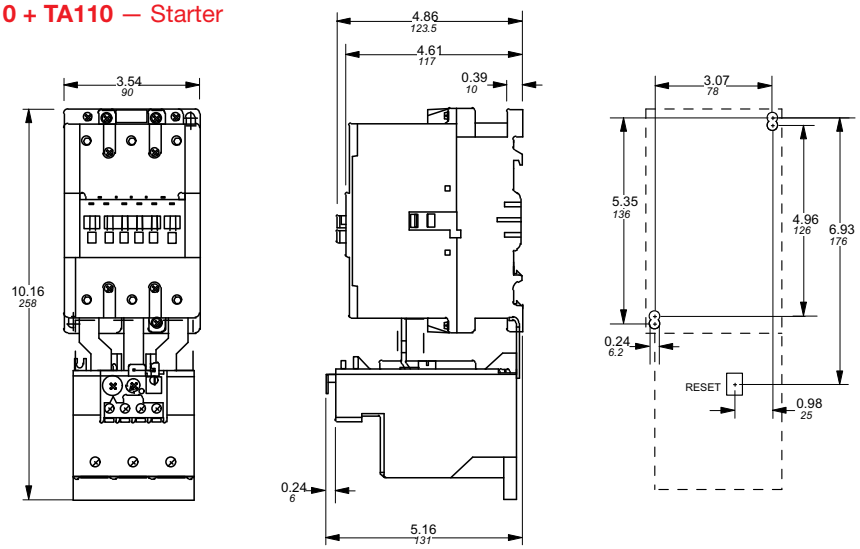
Approximate dimensions
A/AE/AF95 & A/AE/AF110 ①
AC/DC operated, 3 pole

00.00 / 00.00 Inches [Millimeters]

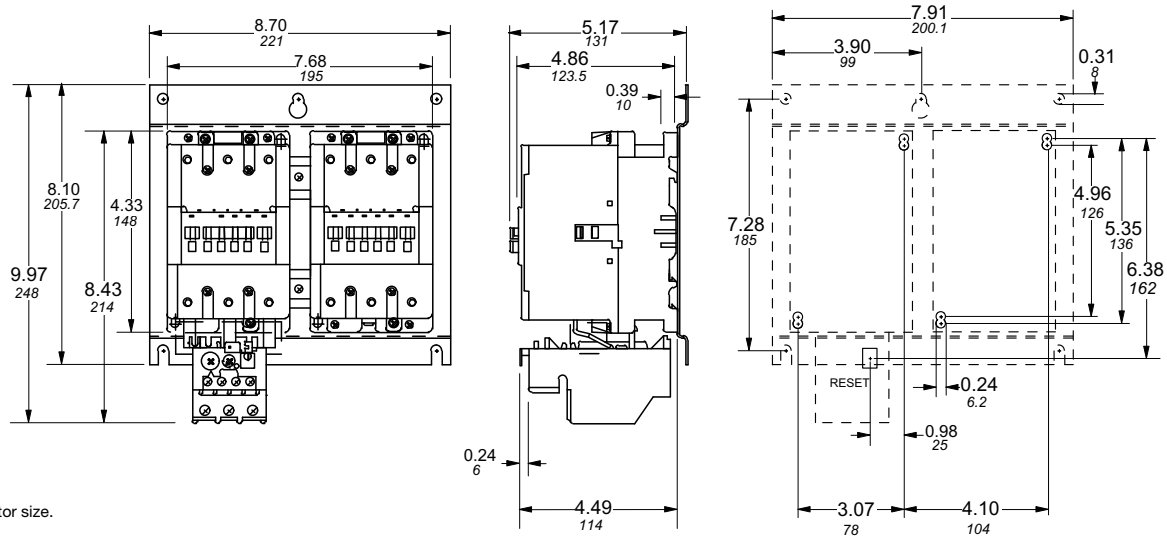
A/AE/AF95 & A/AE/AF110 + TA80 — Starter



A/AE/AF95 & A/AE/AF110 + TA110 — Starter



A/AE/AF95 & A/AE/AF110 + VE5 + TA80 — Reversing starter

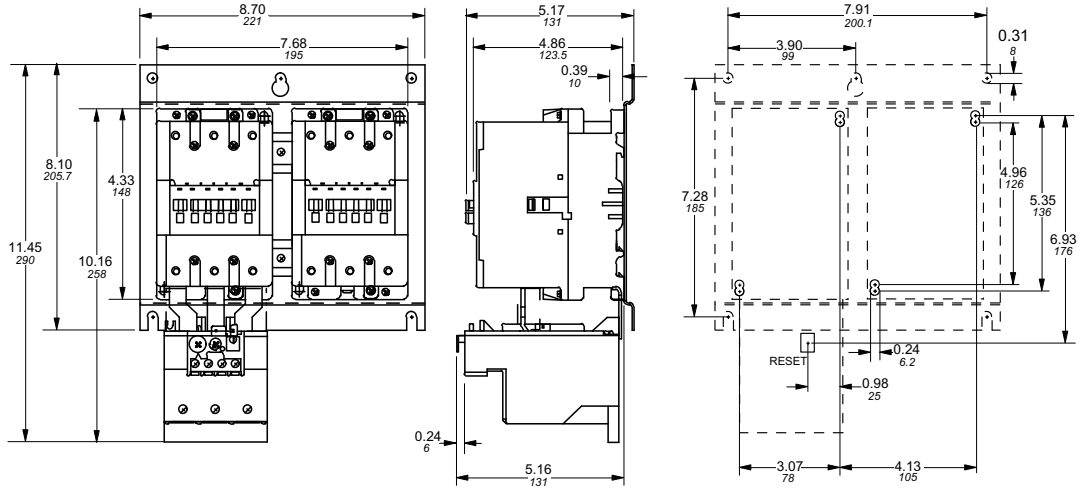


① Starter/contactor size.

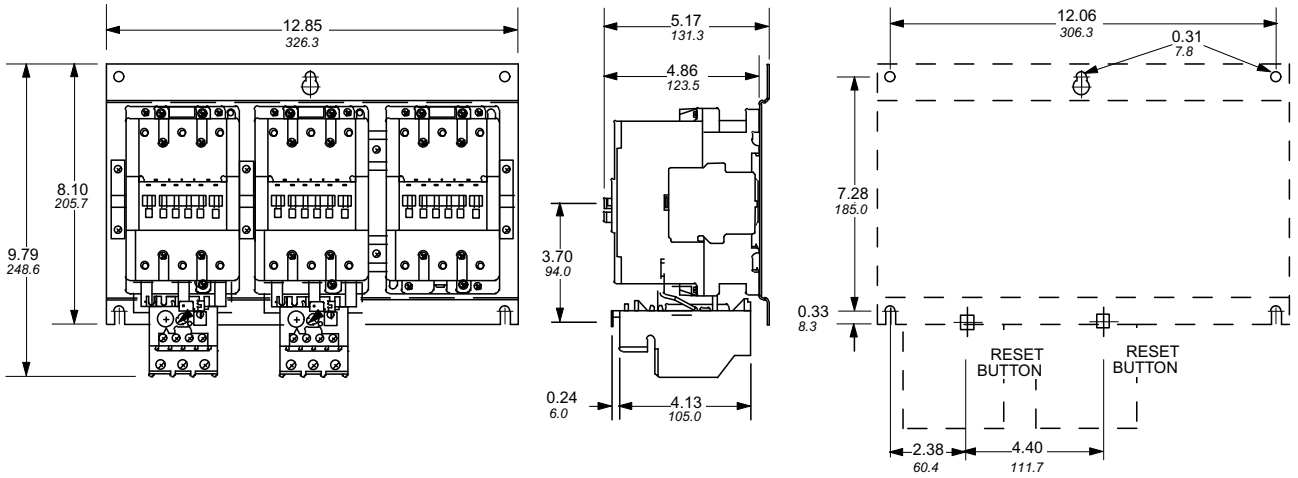
Approximate dimensions
AC/DC operated, 3 pole
A/AE/AF95 & A/AE/AF110 ①

00.00 / 00.00 Inches [Millimeters]

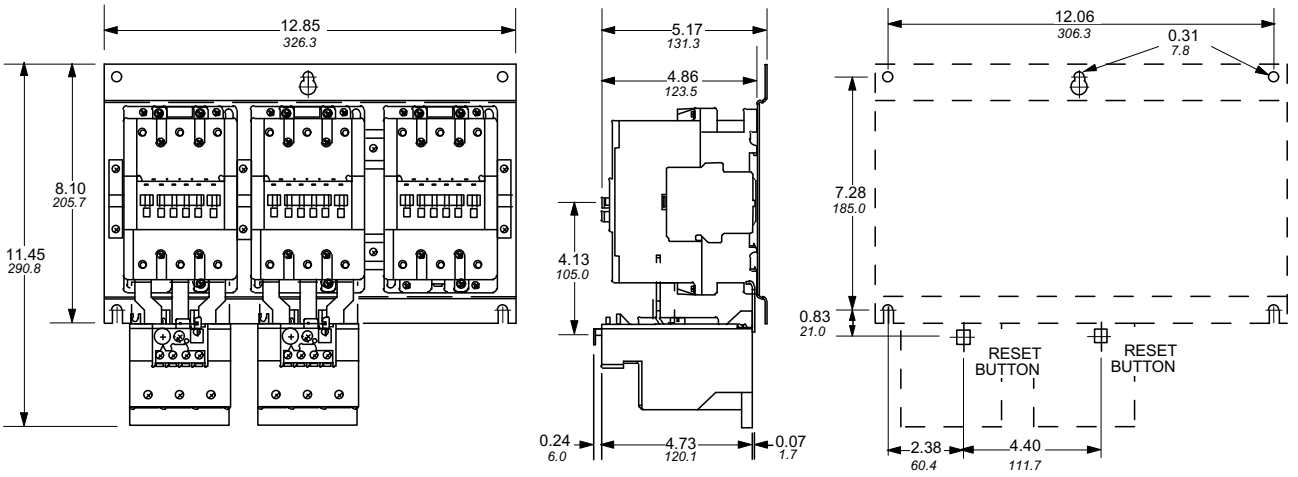
A/AE/AF95 & A/AE/AF110 + VE5 + TA110 — Reversing starter



A/AE/AF95 & A/AE/AF110 + TA80 — 2 Speed, 1 winding starter



A/AE/AF95 & A/AE/AF110 + TA110 — 2 Speed, 1 winding starter

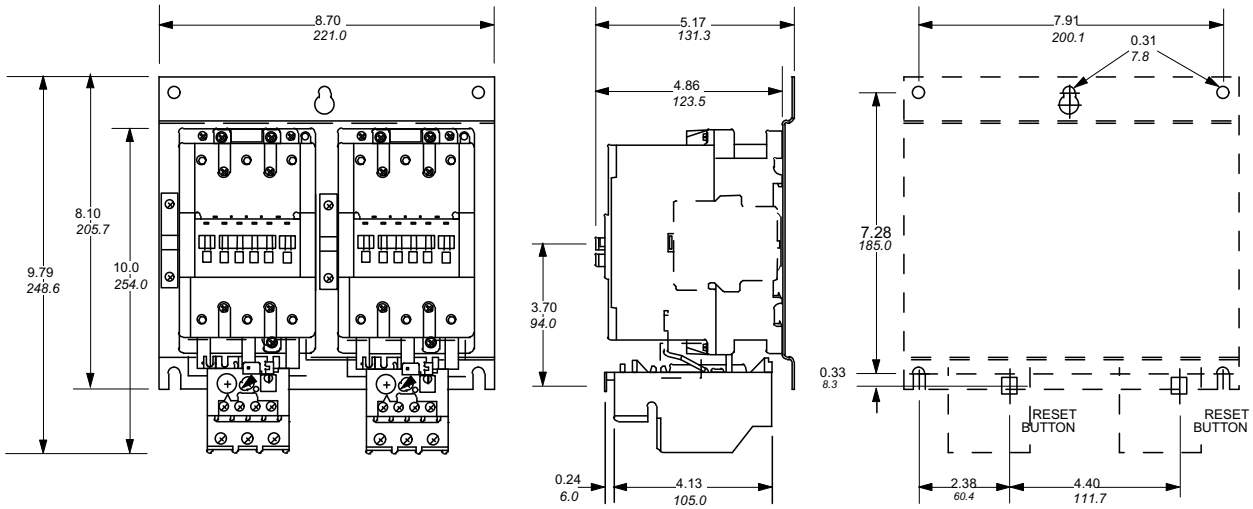


① Starter/contactor size.

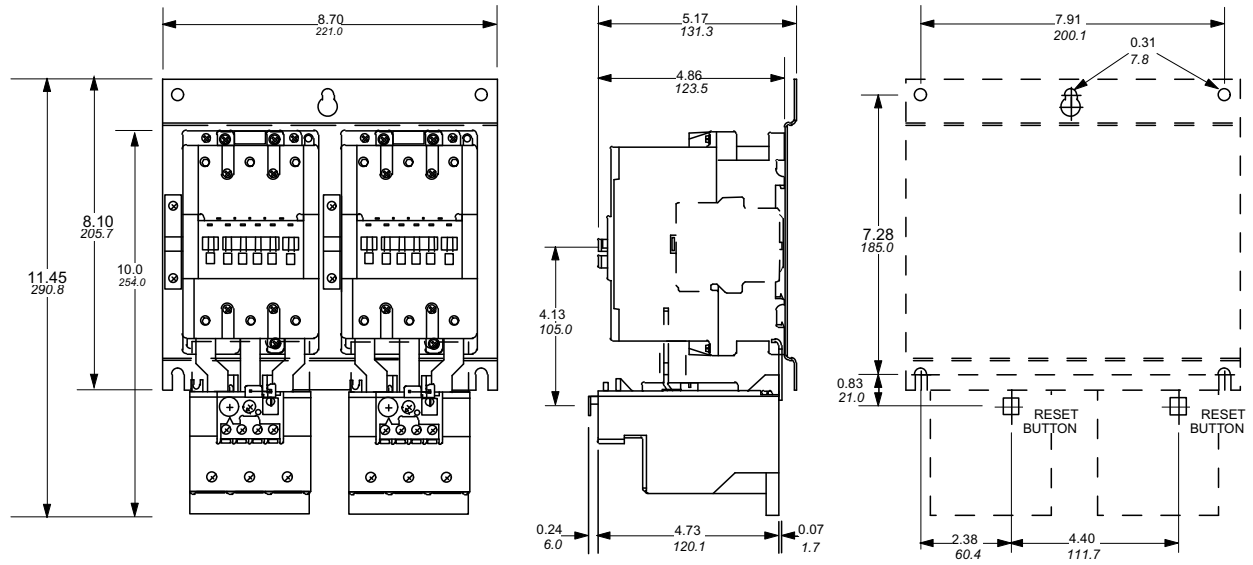
Approximate dimensions
AC/DC operated, 3 pole
A/AE/AF95 & A/AE/AF110 ①

00.00 Inches
00.00 [Millimeters]

A/AE/AF95 & A/AE/AF110 + TA80 — 2 Speed, 2 winding starter



A/AE/AF95 & A/AE/AF110 + TA110 — 2 Speed, 2 winding starter

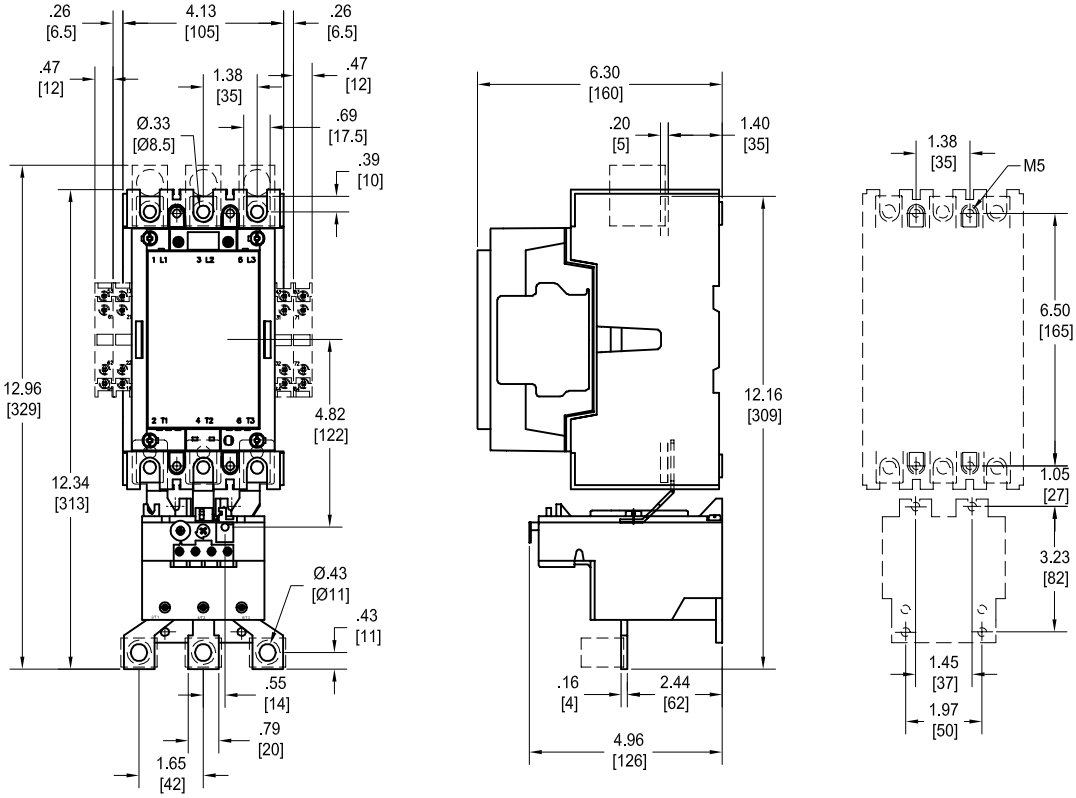


① Starter/contactor size.

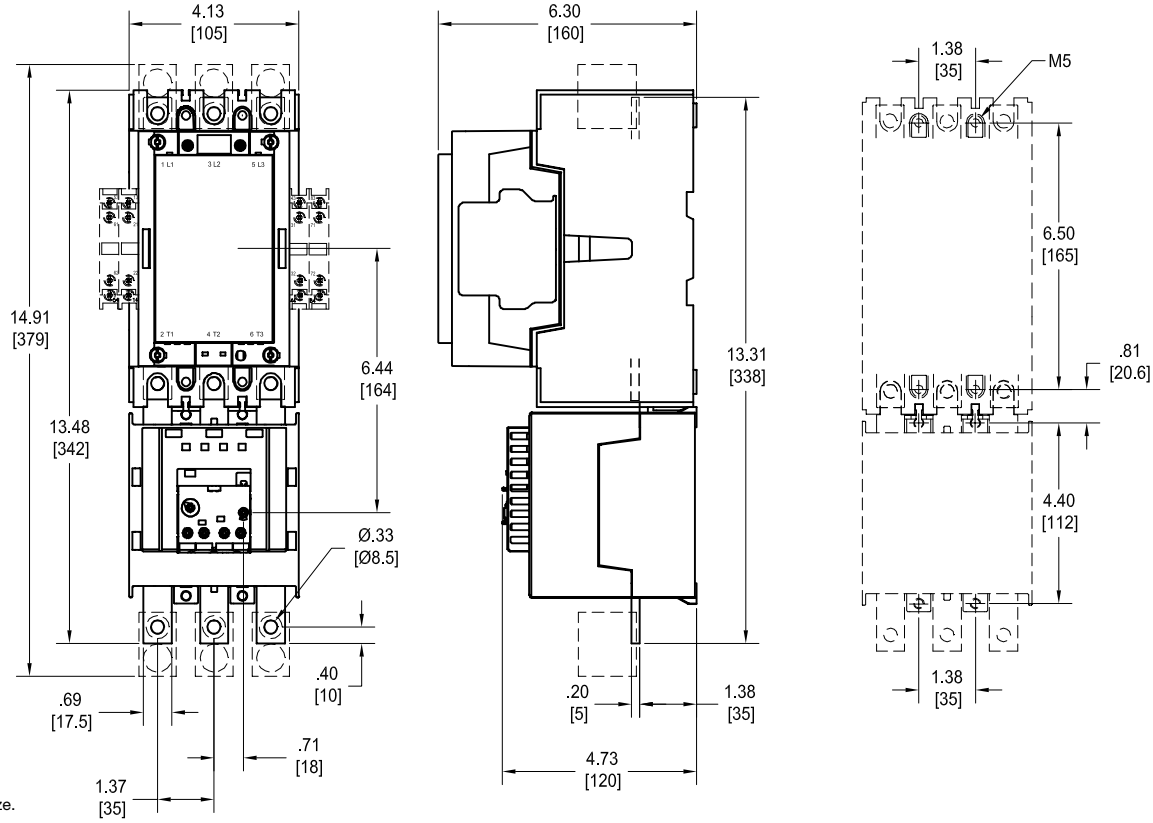
Approximate dimensions
AC/DC operated, 3 pole
A/AF145 & A/AF185 ①

00.00 / 00.00 Inches [Millimeters]

A/AF145 – A/AF185 + TA200 — Starter



A/AF145 – A/AF185 + E200 — Starter

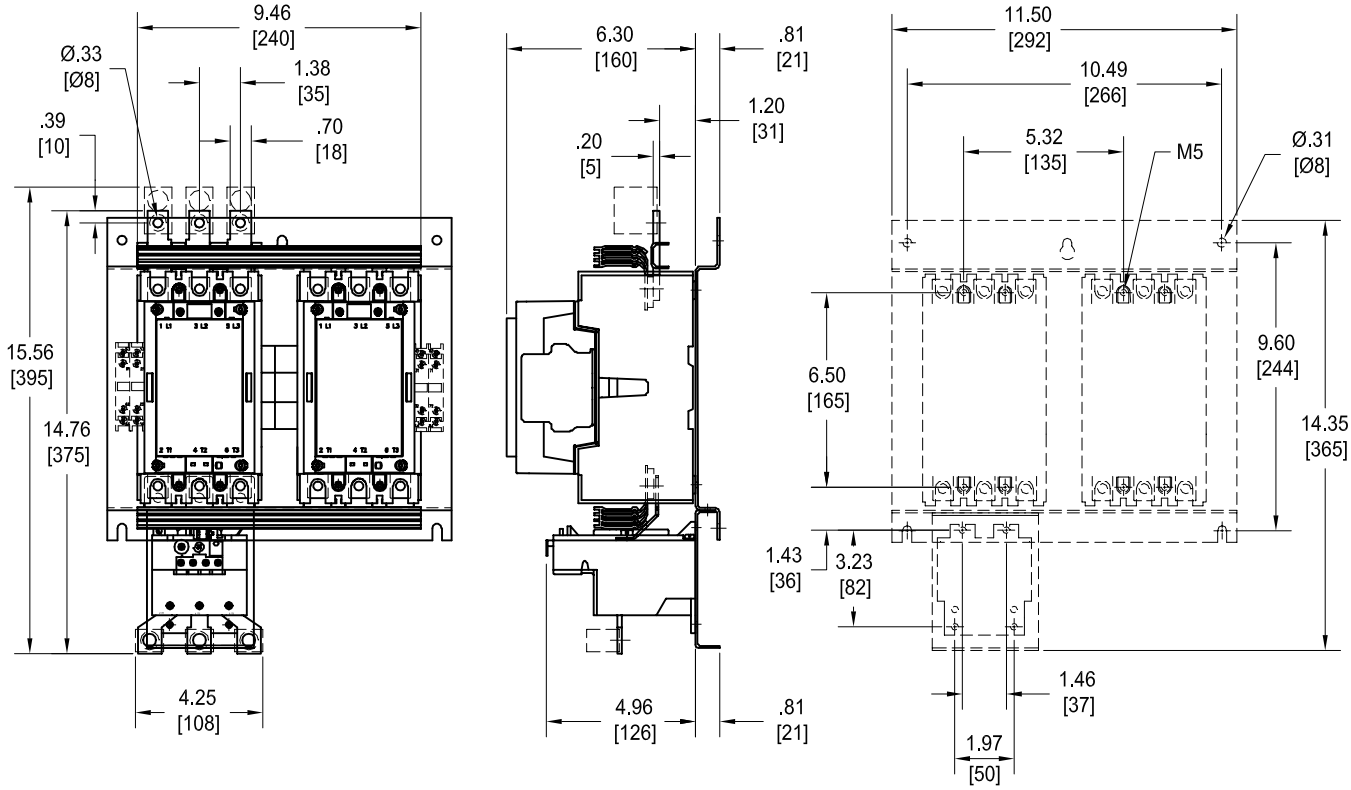


① Starter/contactor size.

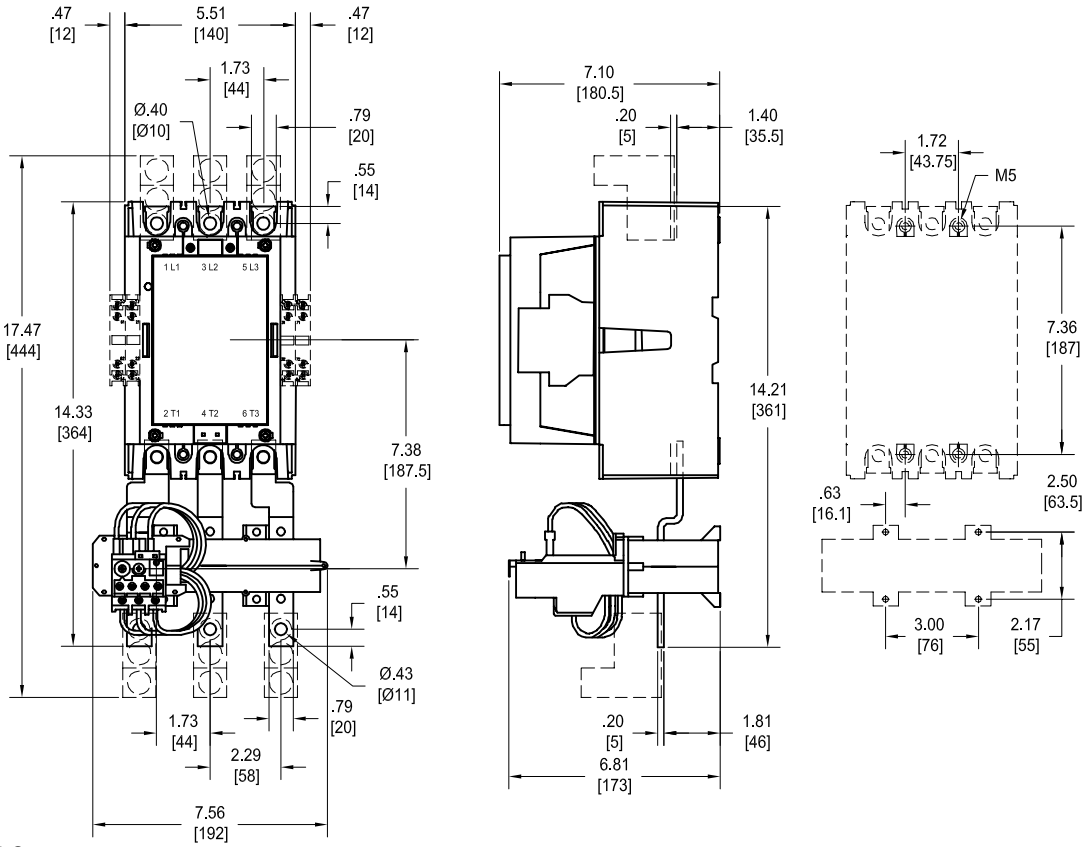
Approximate dimensions
AC/DC operated, 3 pole
A/AF145 & A/AF210 ①

00.00 / 00.00 Inches [Millimeters]

A/AF145 – A/AF185 + TA200 – Reversing starter



A210 – A300 + TA450 — Starter

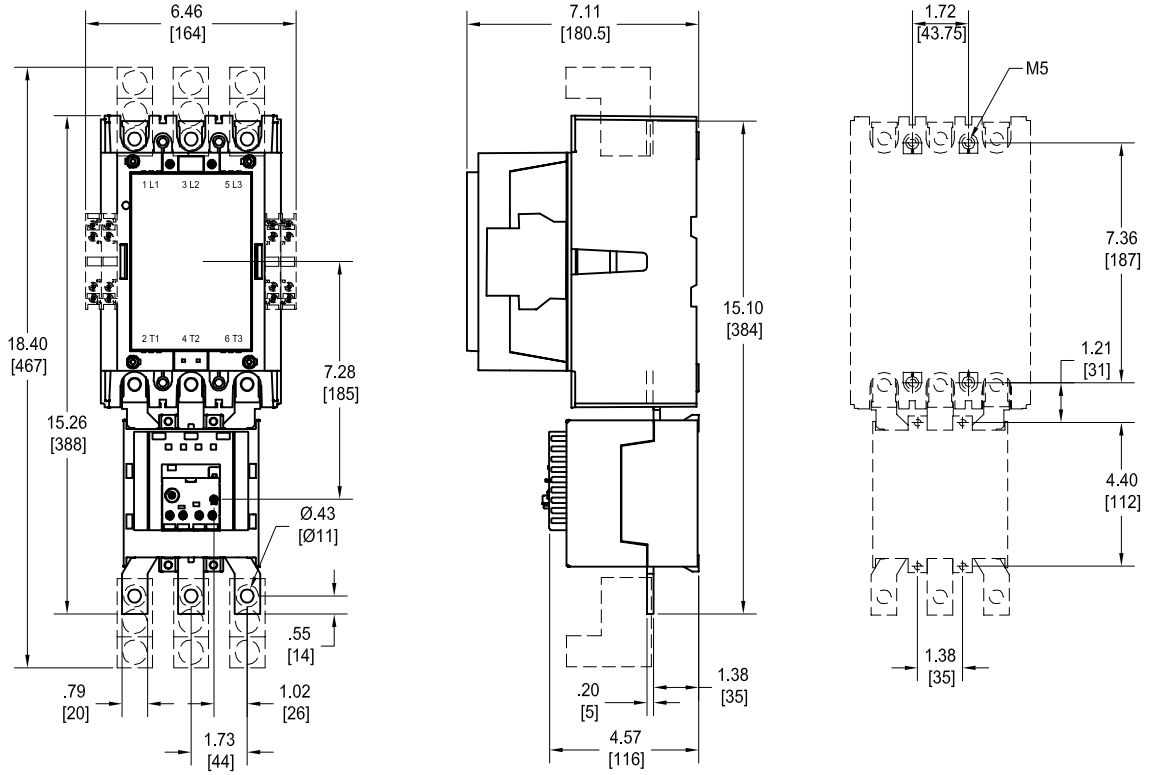


① Starter/contactor size.

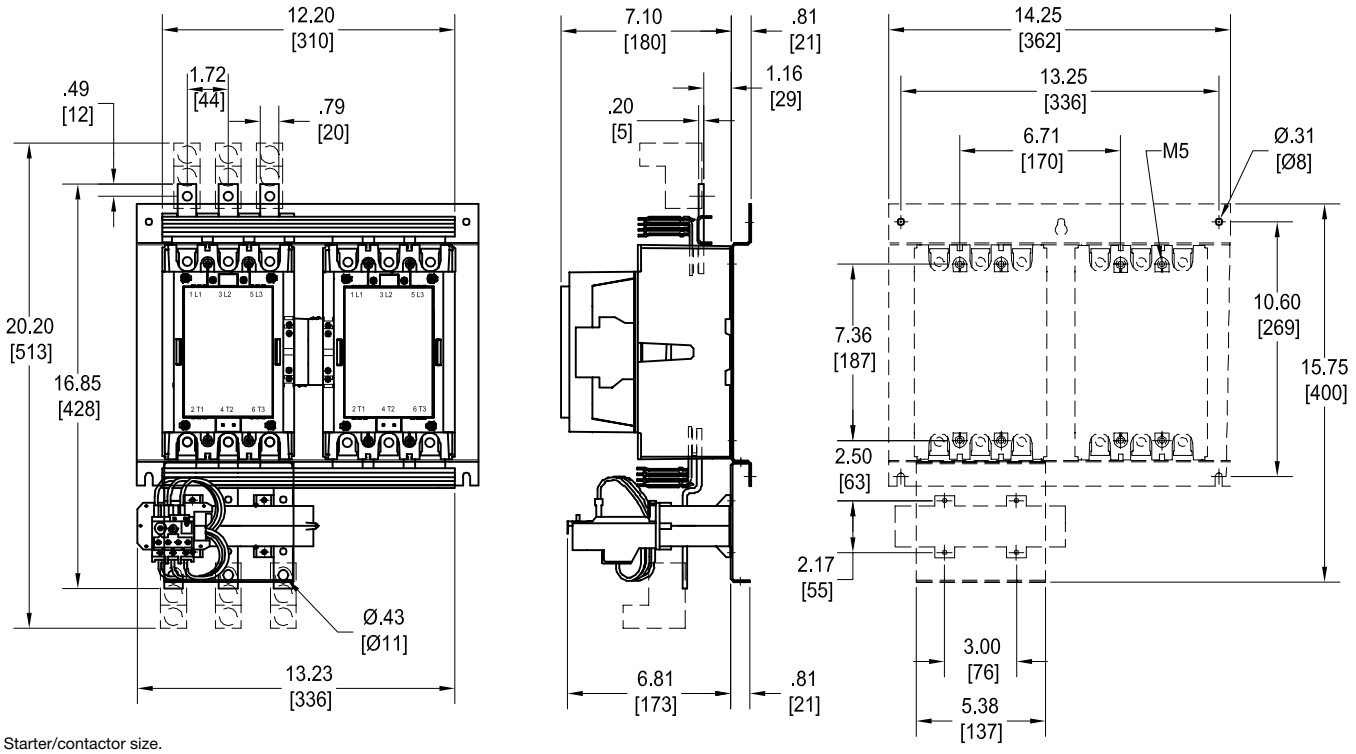
Approximate dimensions
AC/DC operated, 3 pole
A/AF210 ①

00.00 / 00.00 Inches [Millimeters]

A210 – A300 + E320 — Starter



A210 – A300 + TA450 — Reversing starter

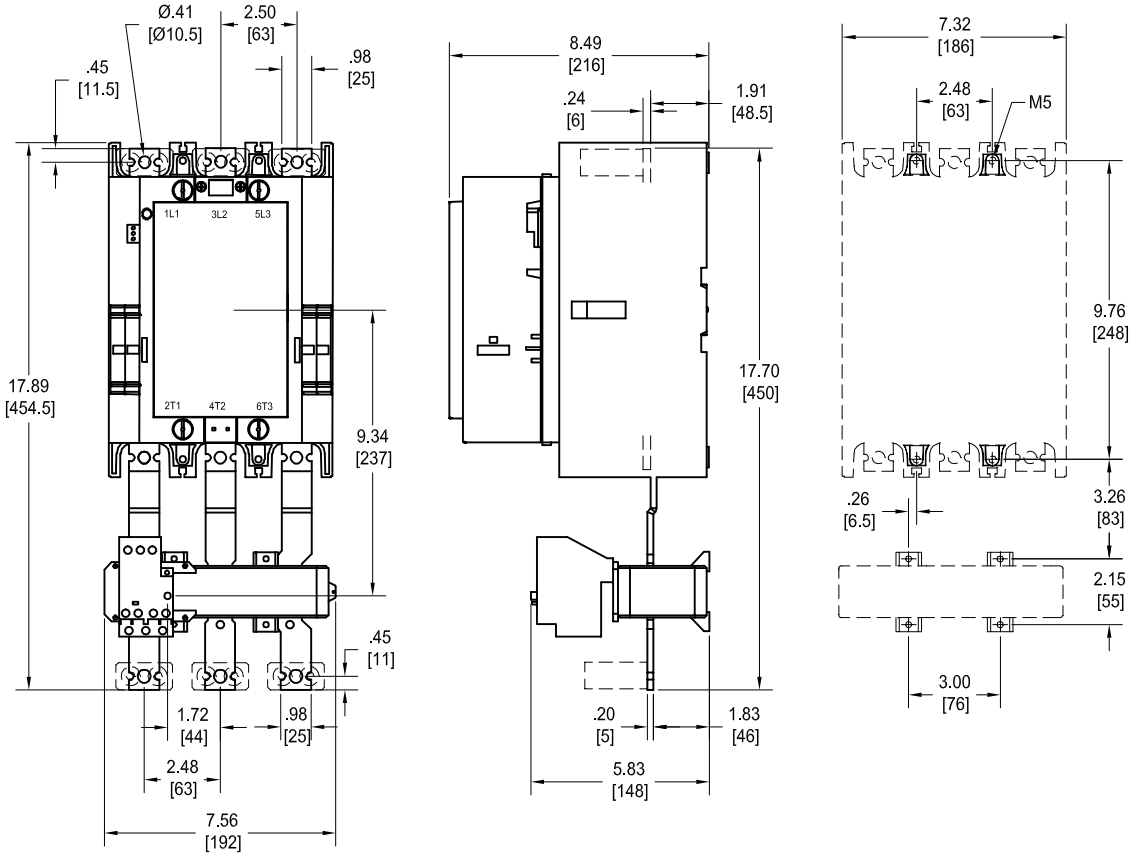


① Starter/contactor size.

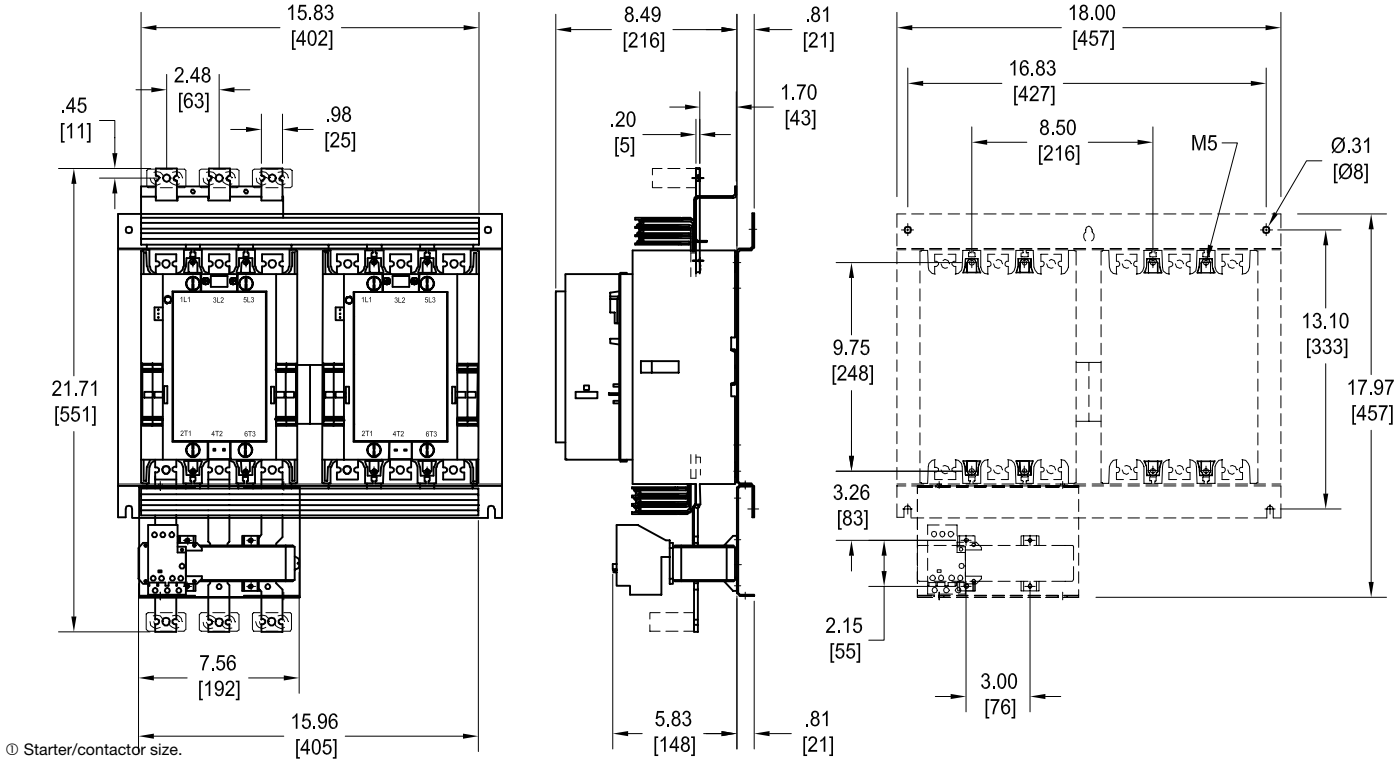
Approximate dimensions
AC/DC operated, 3 pole
A/AF400 & A/AF460 ①

00.00 / 00.00 Inches [Millimeters]

AF400 – AF460 + E500 — Starter



AF400 – AF460 + E500 — Reversing starter

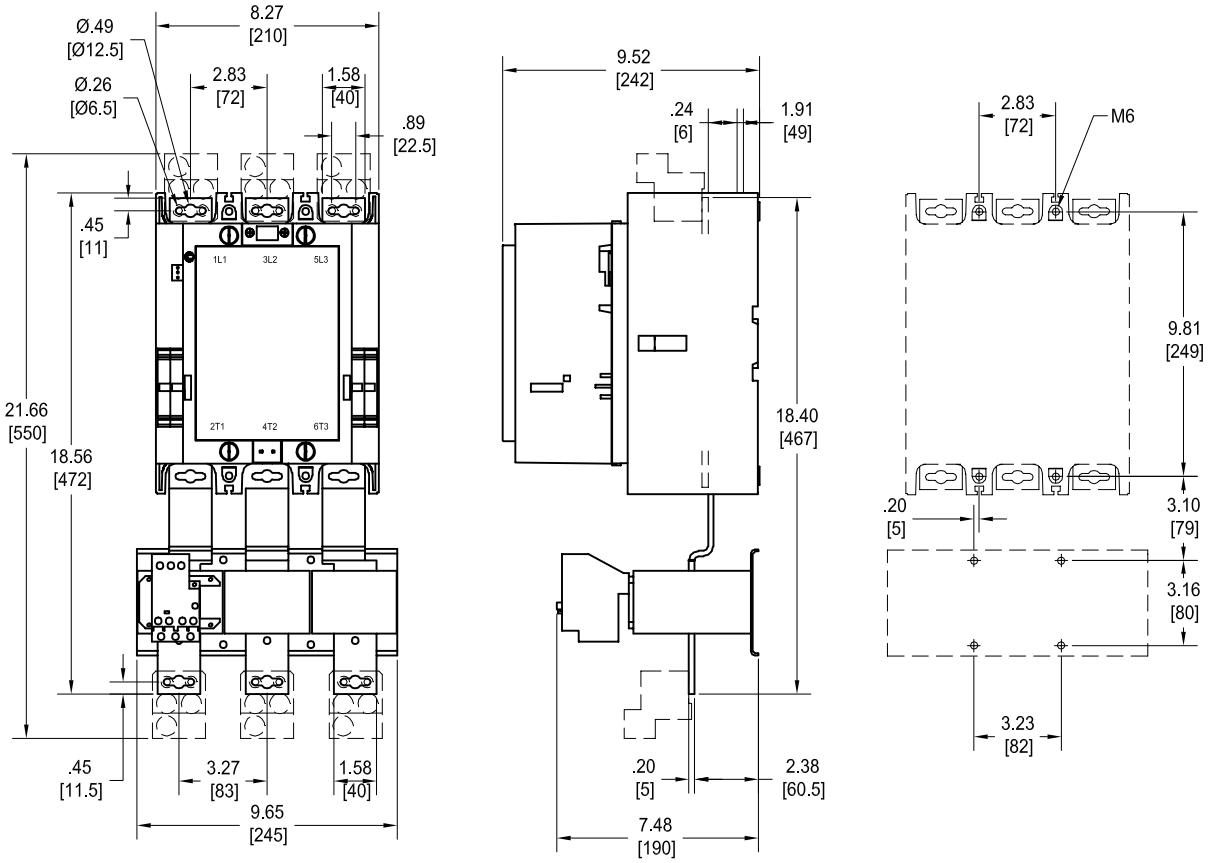


① Starter/contactor size.

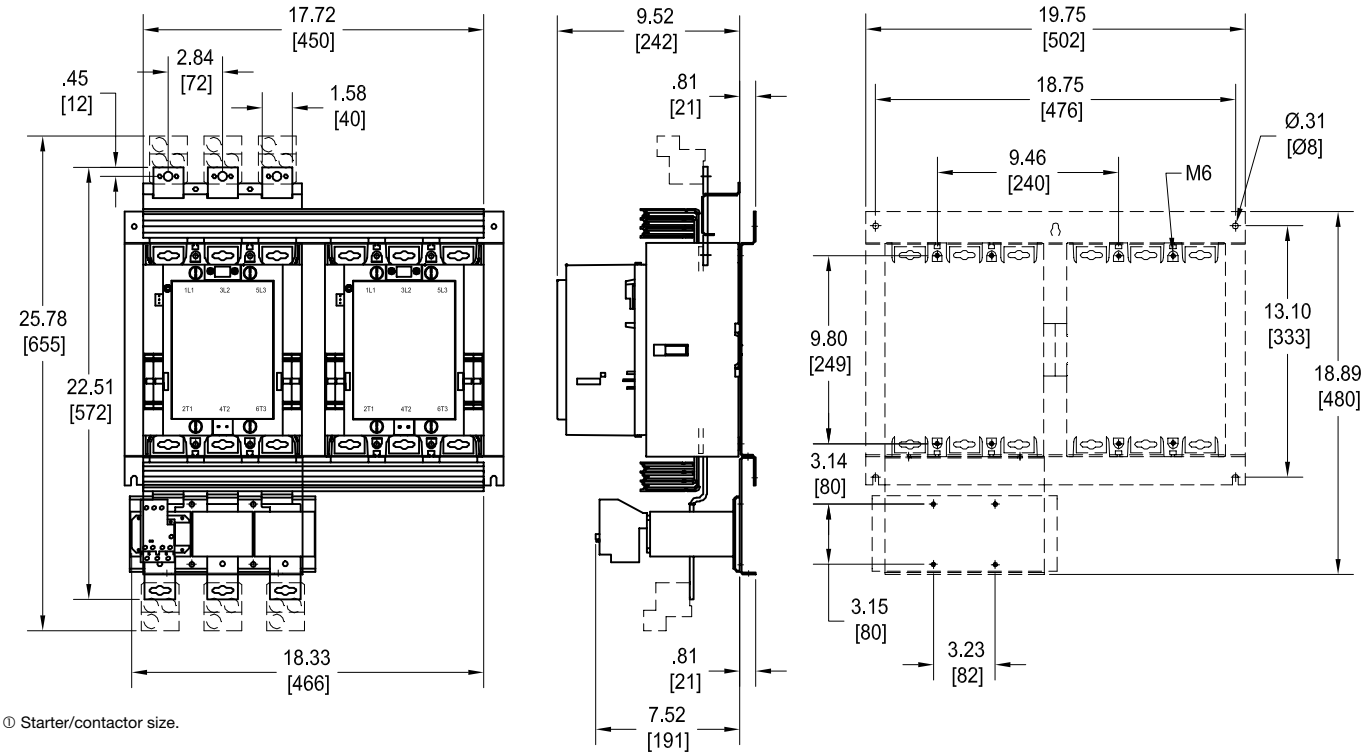
Approximate dimensions
AC/DC operated, 3 pole
A/AF580 & A/AF750 ①

00.00 / 00.00 Inches [Millimeters]

AF580 – AF750 + E800 — Starter



AF580 – AF750 + E800 — Reversing starter

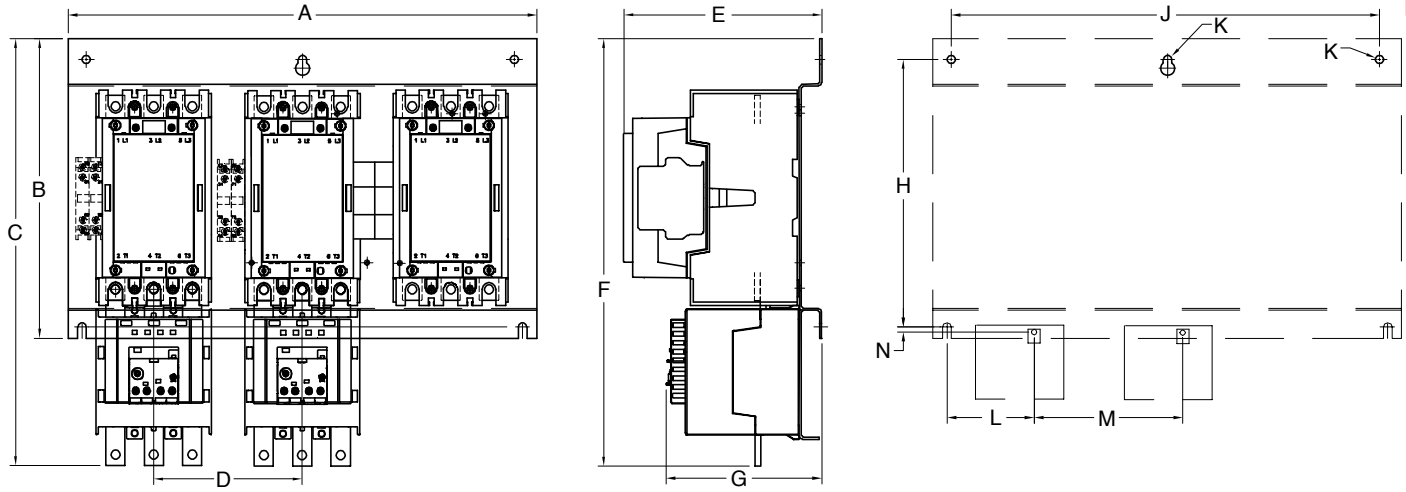


① Starter/contactor size.

Approximate dimensions
2 speed, 1 winding
A/AE26 – AF750, AC & DC operated, 3 pole ①

00.00 / 00.00 Inches [Millimeters]

A26 – AF750 — 2 Speed, 1 winding starter



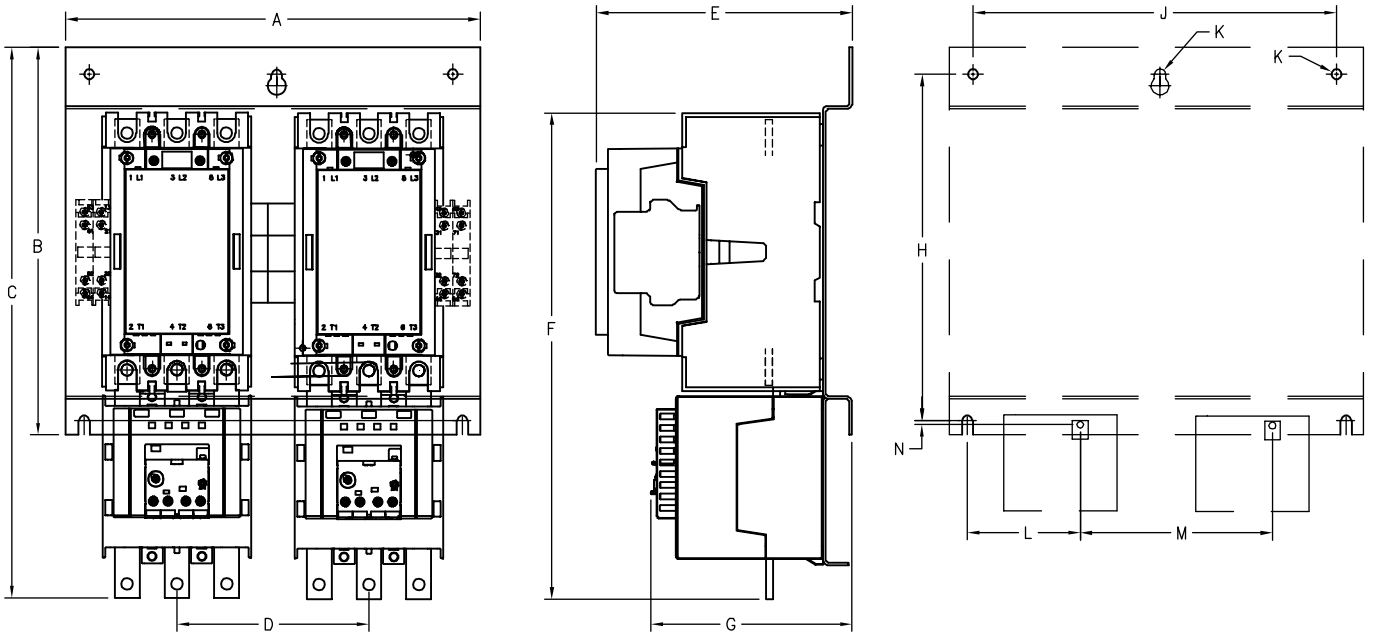
Item	A	B	C	D	E	F	G	H	J	K	L	M	N
A26	7.87 *200*	5.25 *133*	6.87 *175*	2.6 *66*	4.03 *102*	5.78 *147*	4.64 *118*	4.64 *118*	7.23 *184*	0.22 *6*	1.54 *39*	2.35 *60*	0.36 *9*
A30 - A40	7.87 *200*	5.25 *133*	7.25 *191*	2.43 *62*	4.6 *117*	5.85 *149*	4.42 *112*	4.64 *118*	7.23 *184*	0.22 *6*	1.56 *40*	2.33 *59*	0.36 *9*
A50 - A75	9.62 *244*	6.5 *165*	8.25 *210*	3.13 *80*	5.58 *142*	6.9 *175*	4.45 *113*	5.87 *149*	9 *229*	0.22 *6*	1.88 *48*	3 *76*	0.2 *5*
A110+TA80	12.85 *326*	8.1 *206*	9.79 *249*	4.08 *104*	5.17 *131*	8.34 *212*	4.93 *125*	7.28 *185*	12.06 *306*	0.31 *8*	2.38 *60*	4.4 *112*	0.33 *8*
A95-A110+TA110	12.85 *326*	8.1 *206*	11.45 *291*	4 *102*	5.17 *131*	9.4 *239*	5.4 *137*	7.28 *185*	12.06 *306*	0.31 *8*	2.38 *60*	4.4 *112*	0.83 *21*
A145-A185+TA200	16.81 *427*	10.75 *273*	14.6 *371*	5.33 *135*	7.1 *180*	14.73 *374*	5.77 *147*	9.6 *244*	15.36 *390*	0.31 *8*	2.57 *65*	5.33 *135*	0.42 *11*
A145-A185+E200	16.81 *427*	10.75 *273*	15.33 *371*	5.33 *135*	7.1 *180*	15.34 *389*	5.58 *142*	9.6 *244*	15.36 *390*	0.31 *8*	– –	– –	– –
A210-A300+E320	20.92 *531*	11.75 *298*	16.98 *431*	6.71 *170*	7.92 *201*	17.02 *432*	5.6 *142*	10.6 *269*	19.62 *498*	0.31 *8*	– –	– –	– –
AF400-AF460+E500	26.33 *669*	14.25 *362*	19.61 *498*	4.96 *126*	9.27 *235*	19.53 *496*	6.62 *168*	13.1 *333*	25.33 *643*	0.31 *8*	– –	– –	– –
AF580-AF750+E800	29.75 *756*	14.25 *362*	20.2 *513*	6.54 *166*	10.3 *269*	20.25 *514*	8.33 *212*	13.1 *333*	28.75 *730*	0.31 *8*	– –	– –	– –

① Starter/contactor size.

Approximate dimensions
2 speed, 2 winding
A/AE26 – AF750, AC & DC operated, 3 pole ①

00.00 / 00.00 Inches [Millimeters]

A26 – AF750 – 2 Speed, 2 winding starter



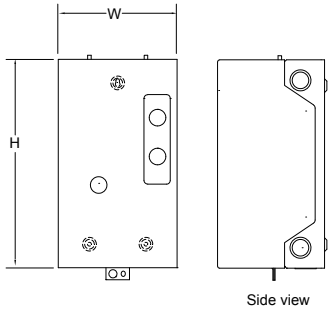
Item	A	B	C	D	E	F	G	H	J	K	L	M	N
A26	5.25 *133*	5.79 *147*	6.95 *177*	2.6 *66*	4.02 *102*	5.78 *147*	4.64 *118*	4.64 *118*	4.64 *118*	0.22 *6*	1.77 *45*	2.72 *69*	0.36 *9*
A30 - A40	5.25 *133*	5.25 *133*	7.25 *191*	2.43 *62*	4.9 *150*	5.85 *149*	4.42 *112*	4.64 *118*	4.64 *118*	0.22 *6*	1.77 *45*	2.72 *69*	0.36 *9*
A50 - A75	6.62 *168*	6.5 *165*	8.25 *210*	3.42 *87*	4.54 *115*	6.9 *175*	4.82 *122*	5.87 *149*	6 *152*	0.22 *6*	2.36 *60*	335 *85*	0.2 *5*
A110	8.7 *221*	8.1 *206*	11.45 *291*	4.14 *105*	5.17 *131*	9.39 *239*	5.42 *138*	7.28 *185*	7.91 *200*	0.31 *8*	2.36 *60*	4.4 *111*	0.83 *21*
A145-A185+TA200	11.5 *292*	10.75 *273*	14.6 *371*	3.31 *84*	7.03 *179*	12.69 *322*	5.7 *145*	9.6 *244*	10.09 *256*	0.31 *8*	3.13 *80*	5.33 *135*	0.51 *13*
A145-A185+E200	11.5 *292*	10.75 *273*	15.27 *388*	2.76 *70*	7.11 *181*	13.48 *342*	5.58 *142*	9.6 *244*	10.09 *256*	0.31 *8*	– –	– –	– –
A210-A300+TA450	11.5 *292*	10.75 *273*	14.35 *364.5*	2.76 *70*	7.11 *180*	14.18 *360*	6.81 *173*	9.6 *244*	10.09 *256*	0.31 *8*	– –	– –	– –
A210-A300+E320	14.25 *362*	11.75 *298*	16.98 *431*	3.45 *88*	7.92 *201*	15.29 *388*	5.6 *142*	10.6 *269*	12.84 *326*	0.31 *8*	– –	– –	– –
AF400-AF460+E500	18 *457*	14.25 *362*	19.61 *498*	2.48 *63*	9.3 *236*	16.68 *423*	6.62 *168*	11.32 *288*	16.83 *427*	0.31 *8*	– –	– –	– –
AF580-AF750+E800	19.75 *502*	14.25 *362*	20.2 *513*	3.27 *83*	10.05 *255*	17.41 *442*	8.33 *212*	13.1 *333*	18.75 *476*	0.31 *8*	– –	– –	– –

① Starter/contactor size.

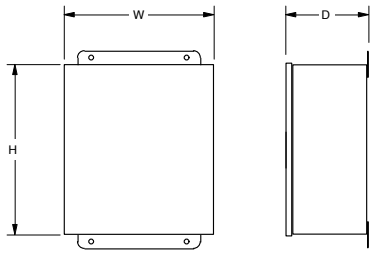
Approximate dimensions
Across the line w/CCT
Across the line, reversing w/CCT

00.00 / 00.00 Inches [Millimeters]

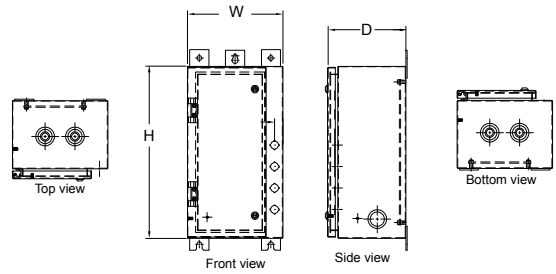
Enclosure A



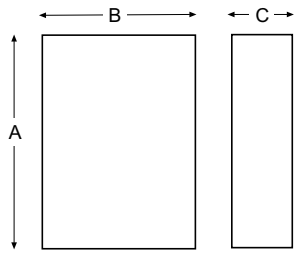
Enclosure B



Enclosure C



Enclosure D



Across the line with CCT

Starter Size	Enclosure type	Encl Dwg	H	W	D
A9 - A40	1	A	11	6	5
	3R	B	10	8	6
	4	B	10	8	6
	12	B	10	8	6
	4X Stainless	D	10	8	6
	4X plastic	D	10	8	6
	w/o CCT 7 ①	D	10	6	4
A30 - A75	1	A	13	9	7
A50 - A75	3R	C	18	10	8
	4	C	18	10	8
	12	C	18	10	8
	4X Stainless	D	14	12	6
	4X plastic	D	14	12	7
	7 ①	D	14	10	6
A95 - A110	1	C	24	12	8
	3R	C	24	12	8
	4	C	24	12	8
	12	C	24	12	8
	4X Stainless	D	20	16	8
	4X plastic	D	20	16	8
	7 ①	D	18	12	6
A145 - A185	1	C	36	24	13
	3R	C	36	24	13
	4	C	36	24	13
	12	C	36	24	13
	4X Stainless	D	30	24	8
	4X plastic	D	30	20	12
	7 ①	D	30	18	8
A210 - A300	1	C	36	24	13
	3R	C	36	24	13
	4	C	36	24	13
	12	C	36	24	13
	4X Stainless	D	36	24	12
	4X plastic	D	40	20	12
	7 ①	D	36	18	8
AF400 - AF460	1	C	48	24	13
	3R	C	48	24	13
	4	C	48	24	13
	12	C	48	24	13
	4X Stainless	D	42	30	10
AF580 - AF750	1	C	48	24	13
	3R	C	48	24	13
	4	C	48	24	13
	12	C	48	24	13
	4X Stainless	D	48	36	16

① Type 7 explosion-proof enclosure inside dimensions.

Across the line, reversing with CCT

Starter Size	Enclosure type	Encl Dwg	H	W	D
A9 - A40	1	C	18	10	8
	3R	C	18	10	8
	4	C	18	10	8
	12	C	18	10	8
A9-A16	4X Stainless	D	10	8	6
	4X plastic	D	10	8	6
A26-A75	4X Stainless	D	14	12	6
	4X plastic	D	14	12	7
A50 - A110	1	C	24	12	8
	3R	C	24	12	8
	4	C	24	12	8
	12	C	24	12	8
A95-A110	4X Stainless	B	20	16	8
	4X plastic	D	20	16	8
A145 - A185	1	C	36	24	13
	3R	C	36	24	13
	4	C	36	24	13
	12	C	36	24	13
	4X Stainless	D	30	24	8
	4X plastic	D	30	20	12
A210 - A300	1	C	48	24	13
	3R	C	48	24	13
	4	C	48	24	13
	12	C	48	24	13
	4X Stainless	D	36	24	12
	4X plastic	D	40	20	12
AF400 - AF460	1	C	48	24	13
	3R	C	48	24	13
	4	C	48	24	13
	12	C	48	24	13
	4X Stainless	D	42	30	10
AF580-AF750	1	C	48	24	13
	3R	C	48	24	13
	4	C	48	24	13
	12	C	48	24	13
	4X Stainless	D	60	36	16

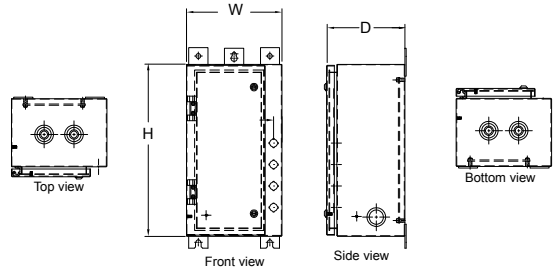
Dimensions subject to change; please consult factory for construction dimension.

Enclosures have KO's in:
- Type 1-Top & Bottom
- Type 3R- Bottom Only
- Type 4,12- None

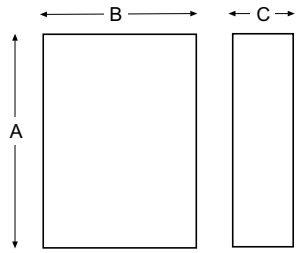
Approximate dimensions
2 Speed, 1 Winding w/CCT
2 Speed, 2 Winding w/CCT

00.00
00.00
Inches
[Millimeters]

Enclosure A



Enclosure B



Across the line and 2 speed, 1 wind with CCT

Starter Size	Enclosure type	Encl Dwg	H	W	D
A9 - A40	1	A	24	12	8
	3R	A	24	12	8
	4	A	24	12	8
	12	A	24	12	8
	4X Stainless	B	14	12	6
	4X plastic	B	14	12	7
A50 - A110	1	A	36	24	12
	3R	A	36	24	12
	4	A	36	24	12
	12	A	36	24	12
	4X Stainless	B	20	16	8
	4X plastic	B	20	16	8
A145 - A185	1	A	36	24	12
	3R	A	36	24	12
	4	A	36	24	12
	12	A	36	24	12
	4X Stainless	B	30	24	8
	4X plastic	B	30	20	12
A210 - A300	1	A	48	24	13
	3R	A	48	24	13
	4	A	48	24	13
	12	A	48	24	13
	4X Stainless	B	36	24	12
	4X plastic	B	40	30	20
AF400 - AF460	1	B	42	36	12
	3R	B	42	36	12
	4	B	42	36	12
	12	B	42	36	12
	4X Stainless	B	42	30	10
AF580 - AF750	1	B	48	36	16
	3R	B	48	36	16
	4	B	48	36	16
	12	B	48	36	16
	4X Stainless	B	48	36	16

Across the line and 2 speed, 2 wind with CCT

Starter Size	Enclosure type	Encl Dwg	H	W	D
A9 - A40	1	A	18	10	8
	3R	A	18	10	8
	4	A	18	10	8
	12	A	18	10	8
A50 - A75	1	A	24	12	8
	3R	A	24	12	8
	4	A	24	12	8
	12	A	24	12	8
A9 - A75	4X Stainless	B	14	12	6
	4X plastic	B	14	12	7
A95 - A110	1	A	24	12	8
	3R	A	24	12	8
	4	A	24	12	8
	12	A	24	12	8
	4X Stainless	B	20	16	8
	4X plastic	B	20	16	8
A145 - A185	1	A	36	24	12
	3R	A	36	24	12
	4	A	36	24	12
	12	A	36	24	12
	4X Stainless	B	30	24	8
	4X plastic	B	30	20	12
A210 - AF750	1	A	48	24	13
	3R	A	48	24	13
	4	A	48	24	13
	12	A	48	24	13
A210 - A300	4X Stainless	B	36	24	12
	4X plastic	B	40	20	12
AF400 - AF460	4X Stainless	B	42	30	10
AF580 - AF750	4X Stainless	B	48	36	16

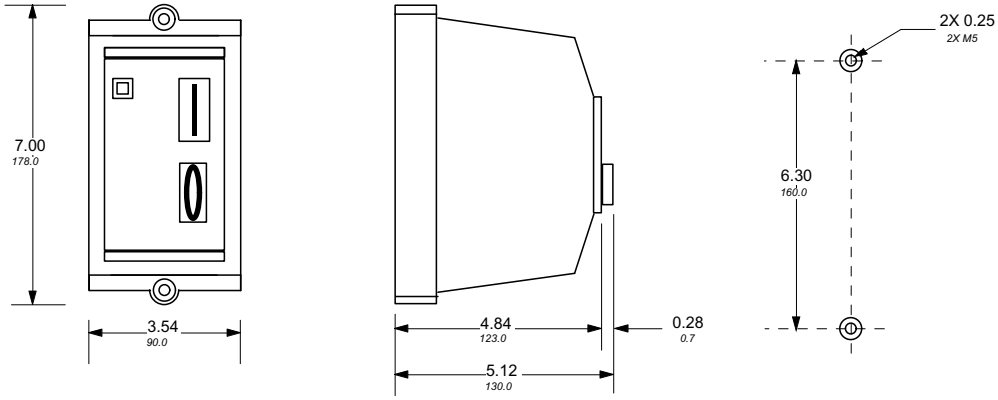
Dimensions subject to change; please consult factory for construction dimension.

Enclosures have KO's in:
- Type 1-Top & Bottom
- Type 3R- Bottom Only
- Type 4,12- None

Approximate dimensions
Plastic enclosed, IP65

00.00
00.00
Inches
[Millimeters]

Plastic enclosed, IP65

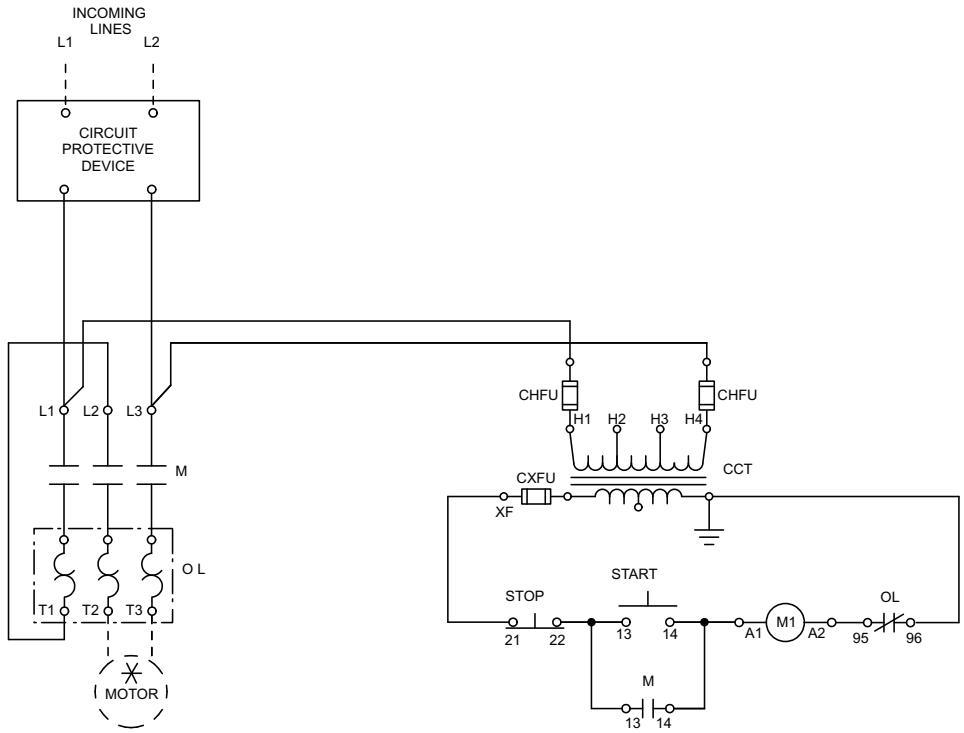


Circuit diagrams
Non-reversing, single phase
A9 – A185

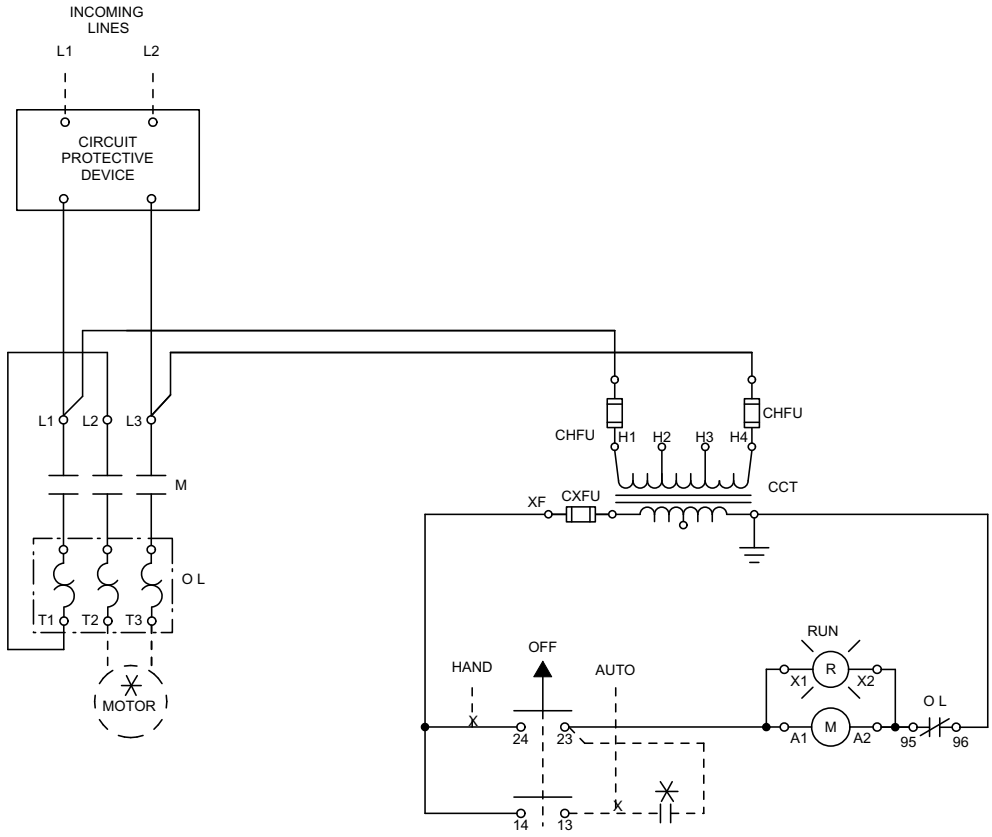
00.00 / 00.00 Inches [Millimeters]

3

Non-reversing, single phase – A9 - A185 shown with control circuit transformer, START-STOP

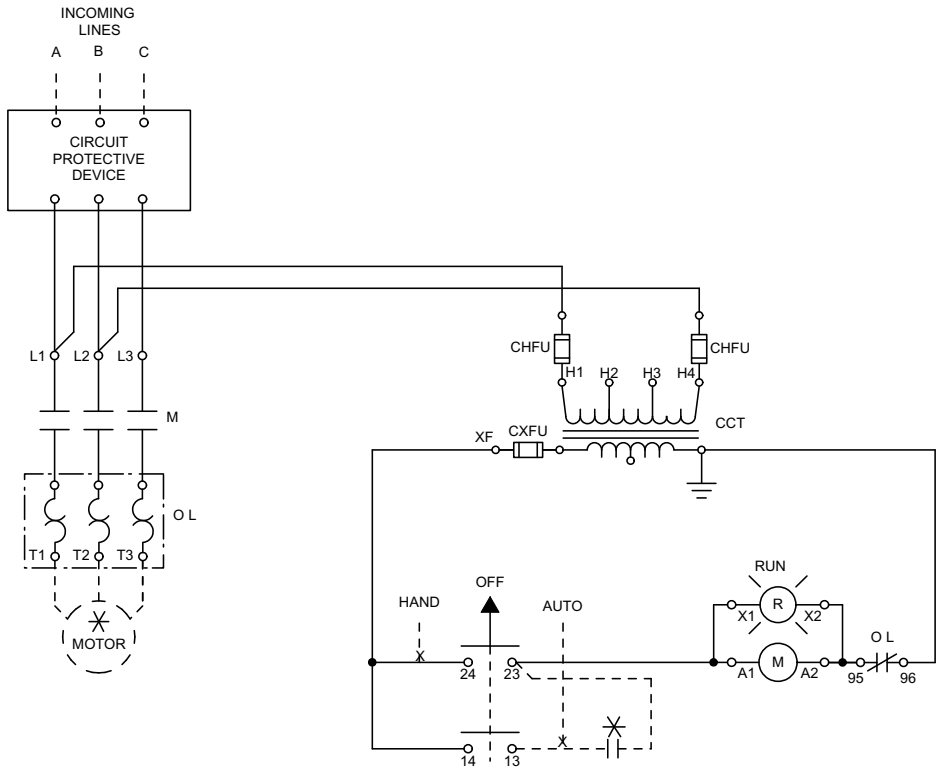


Non-reversing, single phase – A9 - A185 shown with control circuit transformer, HOA, pilot light



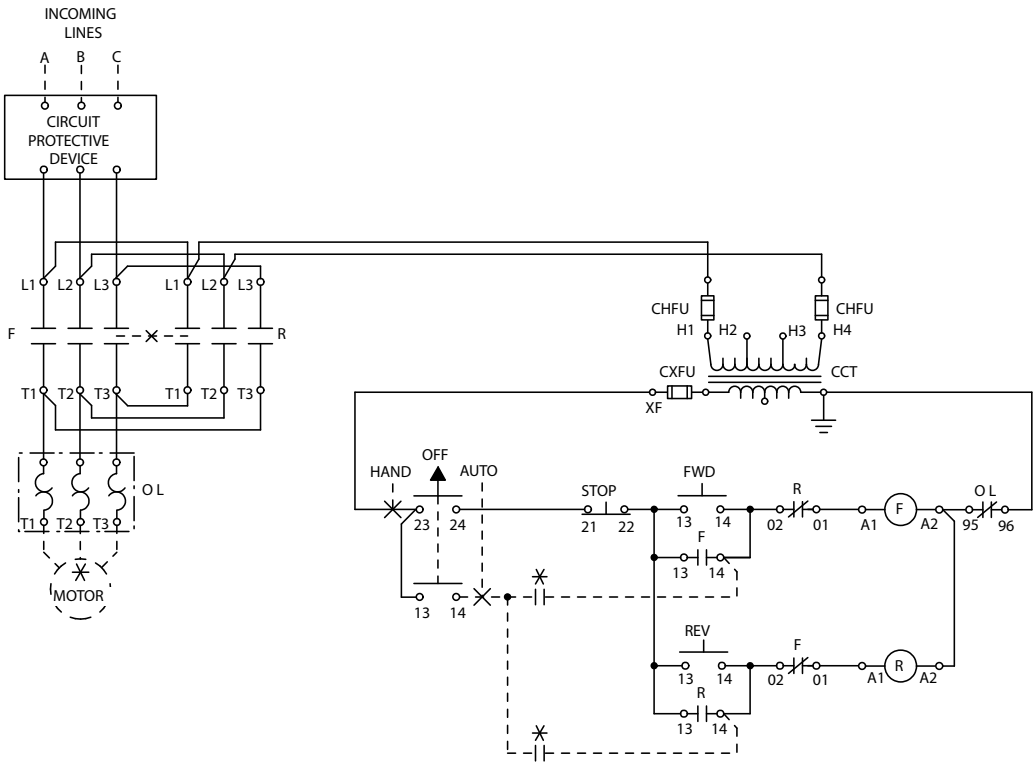
Non-reversing

A9 – AF750 shown with control circuit transformer, HOA, pilot light



Reversing

A9 – AF750 shown with control circuit transformer, HOA, STOP, FWD, REV



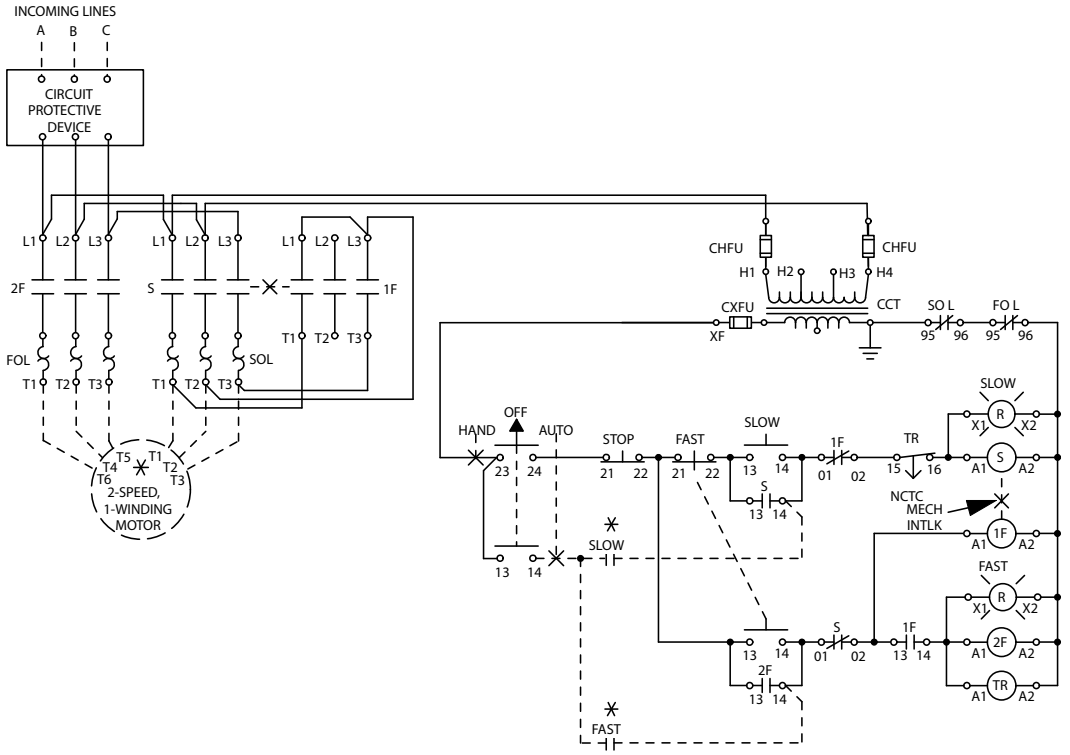
Circuit diagrams
2 Speed, 1 Winding; 2 Speed, 2 Winding
A9 – AF750

00.00 / 00.00 Inches [Millimeters]

3

2 Speed, 1 winding — constant or variable torque, selective control

A9 – AF750 shown with control circuit transformer, HOA, STOP-FAST-SLOW, pilot lights



2 Speed, 2 winding

A9 – AF750 shown with control circuit transformer, FAST-SLOW-OFF-AUTO