

## 2 Speed, 2 winding A9 - AF750 Three phase

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UL motor switching current	Contactor size	Maximum ratings - UL Listed				Open type	UL Type 1 (Indoor metal)		UL type 3R (Outdoor metal)			
		Maximum motor horsepower ratings					Catalog number	List price	Catalog number	List price	Catalog number	List price
		200/208V	230/240V	480/480V	575/600V							
<b>UL rated</b>												
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	29,322	U33-70Δ2Δ	30,297	

<b>NEMA rated</b>											
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)

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

### 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 Ⓢ

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

## 2 Speed, 2 winding A9 - AF750 Three phase

Starters

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

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.