

Totally enclosed squirrel cage three phase motors, aluminium frame IP 55 IC 411

400 V 50 Hz

Output kW	Motor type M2AA	Product code 3GAA	Speed r/min	Effi- ciency %	Power factor cos φ	Current		Torque		
						I _N A	I _S I _N	T _N Nm	T _S T _N	T _{max} T _N
1500 r/min = 4 poles										
Basic design										
0.18	63 B	062 001-●	1370	58.7	0.63	0.72	3.0	1.25	2.2	2.6
0.18	63 B ¹⁾	062 002-●	1370	58.7	0.63	0.72	3.0	1.25	2.2	2.6
0.25	71 A	072 001-●	1400	66.8	0.67	0.83	3.5	1.7	2.2	2.7
0.37	71 B	072 002-●	1410	70.5	0.69	1.12	4.0	2.5	2.2	2.7
0.55	80 A	082 001-●	1420	74	0.73	1.45	4.0	3.7	2.2	2.7
0.75	80 B	082 002-●	1420	77	0.74	1.9	4.5	5.0	2.2	2.7
1.1	90 S	092 001-●	1410	77.5	0.81	2.59	5.0	7.5	2.2	2.7
1.5	90 L	092 002-●	1420	80.3	0.79	3.45	5.0	10.0	2.4	2.9
2.2	100 LA	102 001-●	1430	81.7	0.81	4.8	5.5	15.0	2.4	2.9
3	100 LB	102 002-●	1430	83.5	0.81	6.48	5.5	20.0	2.5	2.9
4	112 M	112 001-●	1435	84.5	0.80	8.6	7.0	26.6	2.9	3.1
5.5	132 S	132 001-●	1450	87.0	0.83	11.1	7.3	36.2	2.2	3.0
7.5	132 M	132 002-●	1450	88.0	0.83	14.8	7.9	49.4	2.5	3.2
11	160 M	162 101-●	1460	90.3	0.81	21.5	6.7	72	2.9	2.8
15	160 L	162 102-●	1455	91.1	0.84	28.5	6.8	98	3.0	2.8
18.5	180 M	182 101-●	1470	92.3	0.84	35	7.0	120	3.1	2.7
22	180 L	182 102-●	1470	92.4	0.83	41	7.0	143	2.9	2.8
30	200 MLA	202 001-●	1475	92.9	0.83	56	6.7	194	2.6	2.8
37	225 SMA	222 001-●	1480	93.6	0.84	68	6.6	239	2.4	2.5
45	225 SMB	222 002-●	1480	94.2	0.83	83	6.7	290	2.7	2.6
55	250 SMA	252 001-●	1480	94.6	0.86	98	7.5	355	2.3	2.8

1500 r/min = 4 poles High-output design ²⁾

0.55 ³⁾	71 C	072 003-●	1380	72.5	0.73	1.5	4.0	3.7	2.2	2.4
1.1 ³⁾	80 C	082 003-●	1380	76.1	0.80	2.65	4.5	7.5	2.0	2.2
1.85 ³⁾⁴⁾	90 L	092 003-●	1390	79.5	0.80	4.4	4.5	13.0	2.2	2.4
2.2 ³⁾	90 LB	092 004-●	1390	80.3	0.83	4.85	4.5	15.0	2.2	2.4
4 ³⁾	100 LC	102 003-●	1420	82.7	0.82	8.73	5.5	27.0	2.5	2.8
5.5 ³⁾	112 MB	112 002-●	1425	84.5	0.83	11.4	7.1	36.9	2.8	3.1
9.2 ³⁾	132 MBA	132 004-●	1445	86.5	0.87	17.5	8.0	61	2.5	2.7
11 ³⁾	132 MB	132 003-●	1450	88.0	0.86	21	8.3	72.4	3.0	2.7
18.5 ³⁾	160 LB	162 103-●	1450	90.5	0.84	36	6.9	122	2.9	2.9
30 ³⁾	180 LB	182 103-●	1465	92.5	0.84	56	6.9	195	3.2	2.8
37	200 MLB	202 002-●	1475	93.4	0.84	68	7.8	236	3.6	3.2
55	225 SMC	222 003-●	1480	94.6	0.84	100	7.3	355	3.1	2.8
75	250 SMB	252 002-●	1480	95.0	0.86	132	7.0	484	2.4	3.0

¹⁾ Shaft Ø14 mm, large flange F 130. ²⁾ High-output design The output of these motors is one step higher than the basic design with rated outputs in accordance with CENELEC. Motor sizes 112 to 132 are somewhat longer than the basic design. ³⁾ Temperature rise class F. ⁴⁾ Lower than CENELEC +1.

The bullet indicates a 3-letter product code supplement for choice of mounting arrangement (page 11, pos. 12), voltage and frequency (below) and generation code (page 11, pos. 14).

Code letters for supplementing the product code

Motor size	Code letter for voltage and frequency															
	S					D					H	E	F	T	U	X
	50 Hz		60 Hz			50 Hz		60 Hz								
63-100	220-240 VΔ	380-420 VY	440-480 VY	660-690 VY	380-420 VΔ	440-480 VΔ	-	500 VΔ	500 VY	660 VΔ ¹⁾	690 VΔ ¹⁾	Other rated voltage, connection or frequency, 690 V maximum				
112-132	220-240 VΔ	-	380-420 VY	660-690 VY	380-420 VΔ	440-480 VΔ	415 VΔ	500 VΔ	-	660 VΔ	690 VΔ					
160-250	220, 230 VΔ	-	380,400,415VΔ	440 VΔ	380,400,415VΔ	440 VΔ	415VΔ	500 VΔ	-	660 VΔ	690VΔ					
	380,400,415 VY	440 VY	660, 690 VY	-	660, 690 VY	-	-	-	-	-	-					

¹⁾ On request.

380 V 50 Hz

415 V 50 Hz

Output kW	Speed r/min	Efficiency %	Power factor cos φ	Current I _N A	Speed r/min	Efficiency %	Power factor cos φ	Current I _N A	Moment of inertia J = 1/4 GD ² kgm ²	Weight Foot-mounted motor kg	Sound pressure level L _p dB(A)
1500 r/min = 4 poles Basic design											
0.18	1370	60.6	0.68	0.68	1370	56.9	0.60	0.75	0.00028	4.5	37
0.18	1370	60.6	0.68	0.68	1370	56.9	0.60	0.75	0.00028	4.5	37
0.25	1400	67.9	0.72	0.80	1410	65.4	0.63	0.89	0.00073	5.5	45
0.37	1400	70.8	0.74	1.11	1420	69.7	0.66	1.15	0.00098	6.5	45
0.55	1410	73.6	0.78	1.45	1420	73.5	0.70	1.48	0.0017	9	48
0.75	1410	76.4	0.78	1.90	1430	76.7	0.70	1.95	0.0021	10	48
1.1	1410	76.3	0.83	2.66	1430	77.7	0.76	2.60	0.0032	13	50
1.5	1420	79.9	0.82	3.5	1430	80.3	0.77	3.45	0.0043	16	50
2.2	1430	80.6	0.85	4.96	1430	81.8	0.78	4.85	0.0069	21	54
3	1430	82.6	0.85	6.61	1430	83.1	0.77	6.55	0.0082	24	54
4	1425	84.0	0.83	8.7	1440	85.0	0.75	8.80	0.015	27	56
5.5	1445	86.0	0.85	11.5	1455	87.5	0.81	10.9	0.031	40	59
7.5	1445	87.0	0.86	15.3	1455	88.0	0.82	14.5	0.038	48	59
11	1450	89.9	0.83	22.5	1465	90.5	0.79	21.5	0.067	75	62
15	1445	90.6	0.84	30.0	1460	91.4	0.83	28	0.091	94	62
18.5	1465	91.7	0.85	36.0	1470	92.2	0.83	34.0	0.161	124	62
22	1465	92.1	0.85	42.5	1475	92.6	0.82	40.0	0.191	141	63
30	1470	92.6	0.83	59	1475	93.0	0.83	54	0.29	180	63
37	1475	93.4	0.84	72	1480	93.7	0.81	68	0.37	215	66
45	1475	94.0	0.85	86	1480	94.2	0.81	82	0.42	230	66
55	1475	94.3	0.86	103	1480	94.7	0.84	96	0.72	275	67

1500 r/min = 4 poles High-output design ²⁾

0.55 ³⁾	1370	71.9	0.78	1.51	1390	72.5	0.68	1.55	0.0012	7.5	45
1.1 ³⁾	1370	73.7	0.84	2.76	1400	76.8	0.76	2.6	0.0024	11	48
1.85 ³⁾⁴⁾	1380	78.8	0.83	4.4	1400	79.5	0.76	4.35	0.0043	16	50
2.2 ³⁾	1380	78.4	0.85	5.1	1400	80.8	0.80	4.9	0.0048	17	50
4 ³⁾	1410	81.5	0.85	8.89	1420	82.9	0.77	8.8	0.009	25	54
5.5 ³⁾	1415	84.5	0.85	11.7	1430	85.5	0.79	11.4	0.018	34	56
9.2 ³⁾									0.048	59	
11 ³⁾	1445	87.5	0.87	22	1455	88.5	0.83	21	0.048	59	59
18.5 ³⁾	1440	89.8	0.85	37	1450	90.8	0.83	34	0.102	103	63
30 ³⁾	1465	92.2	0.85	58	1470	92.7	0.82	55	0.225	161	63
37	1475	93.3	0.85	71	1475	93.3	0.82	67	0.34	205	63
55	1475	94.5	0.84	105	1480	94.6	0.82	99	0.49	265	66
75	1475	94.5	0.87	139	1480	95.1	0.86	128	0.88	335	67

³⁾ Temperature rise class F.

⁴⁾ Lower than CENELEC + 1.

Recalculation factors

Recalculation factors for current at rated voltages other than 400 V 50 Hz

Rated voltage at 50 Hz
and motor wound for

Recalculation factor

220 V	1.82
230 V	1.74
415 V	0.96
500 V	0.80
660 V	0.61
690 V	0.58