

Industrial performance aluminum motors

Technical data for totally enclosed squirrel cage three phase motors



IP 55 – IC 411 – Insulation class F, temperature rise class B
IE2 efficiency class according to IEC 60034-30, 2008

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007		Efficiency IEC 60034-2;1996		Power factor cos φ 1.00%	Current		Torque			
				Full load	3/4 load	Full load	3/4 load		I _N	I _s	T _N	T _s	T _{max}	
				100%	75%	100%	75%		A	I _N	Nm	T _N	T _N	
1500 r/min = 4-poles			400 V 50 Hz				CENELEC design							
0.12	M3AA	63 A	3GAA 062 311-••C	1400	63.7	58.4	64.1	58.8	0.59	0.46	3.1	0.82	2.6	2.6
0.18	M3AA	63 B	3GAA 062 312-••C	1380	65.6	62.1	66.3	62.6	0.64	0.63	3.1	1.25	2.5	2.6
0.25	M3AA	71 A	3GAA 072 311-••E	1375	66.0	65.5	66.4	65.8	0.78	0.72	3.8	1.74	2.1	1.9
0.37	M3AA	71 B	3GAA 072 312-••E	1375	67.8	67.6	68.2	68.1	0.78	1.05	3.8	2.57	2.1	2.0
0.55	M3AA	80 A	3GAA 082 311-••E	1390	71.0	71.5	71.2	71.8	0.80	1.45	4.3	3.78	2.0	2.3
0.75	M3AA	80 D	3GAA 082 314-••E	1420	81.1	80.7	82.5	81.5	0.75	1.8	5.0	5.05	2.4	2.9
1.1	M3AA	90 LB	3GAA 092 314-••E	1435	83.2	83.8	83.9	82.8	0.81	2.5	6.0	7.3	3.1	3.5
1.5	M3AA	90 LD	3GAA 092 315-••E	1445	84.1	84.6	85.0	85.3	0.81	3.1	6.8	9.9	3.5	4.0
2.2	M3AA	100 LC	3GAA 102 313-••E	1450	86.6	86.2	86.6	86.2	0.81	4.7	7.0	14.5	3.0	3.6
3	M3AA	100 LD	3GAA 102 314-••E	1445	86.4	87.0	87.5	87.6	0.82	6.3	7.0	19.8	2.6	3.3
4	M3AA	112 MB	3GAA 112 312-••E	1450	87.4	87.6	88.3	88.4	0.77	8.6	7.5	26.4	3.7	4.0
5.5	M3AA	132 M	3GAA 132 312-••E	1465	89.0	89.6	90.1	90.5	0.82	11.2	6.4	35.9	2.2	2.8
7.5	M3AA	132 MA	3GAA 132 314-••E	1460	90.0	90.4	90.7	90.8	0.80	15.3	7.0	48.7	2.4	3.0
11	M3AA	160 MLA	3GAA 162 031-••G	1470	90.5	91.0	91.5	92.0	0.84	21	6.8	71	2.4	2.9
15	M3AA	160 MLB	3GAA 162 032-••G	1470	91.4	92.0	92.2	92.8	0.84	28.5	7.5	98	2.5	2.9
18.5	M3AA	180 MLA	3GAA 182 031-••G	1478	91.9	92.3	92.8	93.2	0.84	35	7.7	120	2.6	3.1
22	M3AA	180 MLB	3GAA 182 032-••G	1478	92.1	92.4	93.1	93.4	0.84	41	7.6	142	2.7	3.1
30	M3AA	200 MLA	3GAA 202 031-••G	1480	92.9	93.1	93.5	93.7	0.84	55	7.2	194	2.4	2.8
37	M3AA	225 SMA	3GAA 222 031-••G	1478	93.2	93.4	93.8	94.0	0.84	68	7.6	239	2.5	2.7
45	M3AA	225 SMB	3GAA 222 032-••G	1480	93.6	93.7	94.2	94.3	0.85	82	7.8	290	2.5	2.8
55	M3AA	250 SMA	3GAA 252 031-••G	1480	94.0	94.2	94.5	94.7	0.84	100	7.3	355	2.6	2.7
75	M3AA	280 SMA	3GAA 282 031-••G	1480	94.3	94.6	94.8	95.1	0.84	137	7.7	484	2.7	2.7
90	¹⁾ M3AA	280 SMB	3GAA 282 032-••G	1476	94.2	94.6	95.0	95.3	0.85	162	7.5	582	2.7	2.5
1500 r/min = 4-poles			400 V 50 Hz				High-output design							
0.55	M3AA	71 C	3GAA 072 003-••E	1375	69.0	69.3	69.3	69.8	0.76	1.55	4.2	3.82	2.4	2.4
0.95	¹⁾ M3AA	80 C	3GAA 082 003-••E	1395	76.0	76.9	76.8	77.2	0.80	2.3	5.2	6.5	2.5	2.6
1.1	¹⁾ M3AA	80 C	3GAA 082 004-••E	1395	76.7	77.5	77.3	78.2	0.79	2.65	5.0	7.5	2.5	2.5
1.85	¹⁾ M3AA	90 L	3GAA 092 003-••E	1390	78.3	77.4	79.5	78.1	0.80	4.4	4.5	13	2.2	2.4
2.2	¹⁾ M3AA	90 LB	3GAA 092 004-••E	1390	79.7	80.6	80.3	81.0	0.83	4.85	4.5	15	2.2	2.4
4	¹⁾ M3AA	100 LC	3GAA 102 003-••E	1420	79.9	80.8	81.0	81.7	0.82	8.65	5.5	27	2.5	2.8
5.5	¹⁾ M3AA	112 MB	3GAA 112 102-••E	1420	83.6	84.1	84.0	84.9	0.80	12.5	6.0	36.9	2.7	3.1
9.2	¹⁾ M3AA	132 MBA	3GAA 132 004-••E	1455	89.8	90.5	90.6	91.0	0.84	17.5	7.5	60	2.1	2.8
11	M3AA	132 SMB	3GAA 132 315-••E	1460	90.8	91.0	91.4	91.8	0.81	22	7.5	74	2.9	3.5
15	M3AA	132 SMD	3GAA 132 316-••E	1465	91.2	90.9	92.0	91.7	0.80	30	7.8	97	3.2	4.0
18.5	M3AA	160 MLC	3GAA 162 033-••G	1464	91.2	91.9	92.4	93.1	0.84	34.5	7.0	121	2.6	2.9
22	²⁾ M3AA	160 MLD	3GAA 162 034-••G	1463	91.3	92.1	92.5	93.3	0.84	41	7.0	144	2.5	2.9
30	²⁾ M3AA	180 MLC	3GAA 182 033-••G	1475	92.4	92.7	93.3	93.8	0.83	57	7.7	194	2.7	3.2
37	M3AA	200 MLB	3GAA 202 032-••G	1478	93.0	93.4	93.7	94.1	0.85	68	7.4	239	2.4	2.7
45	¹⁾ M3AA	200 MLC	3GAA 202 033-••G	1478	93.3	93.7	94.2	94.6	0.83	84	7.8	291	2.6	2.9
55	²⁾ M3AA	225 SMC	3GAA 222 033-••G	1475	93.5	93.8	94.2	94.6	0.86	99	7.5	356	2.4	2.5
73	¹⁾ M3AA	225 SMD	3GAA 222 034-••G	1474	93.2	93.5	94.0	94.3	0.84	134	8.1	473	2.6	2.6
75	M3AA	250 SMB	3GAA 252 032-••G	1480	94.4	94.6	94.9	95.1	0.84	136	7.8	484	2.8	2.7
90	¹⁾ M3AA	250 SMC	3GAA 252 033-••G	1476	94.3	94.7	95.0	95.4	0.85	162	7.6	582	2.8	2.6

¹⁾ Temperature rise class F

²⁾ Temperature rise class F by voltage 380 V

The bullets in the product code indicate choice of mounting arrangement, voltage and frequency, generation code (see ordering information page).

Efficiency values are given according to both IEC/EN 60034-2-1; 2007 and IEC 60034-2; 1996.

Please note that the values are not comparable without knowing the testing method. ABB has calculated the new efficiency values according to indirect method, stray losses (additional losses) determined from measuring.