

Flameproof motors for Hazardous Environments Ex d/EEEx d

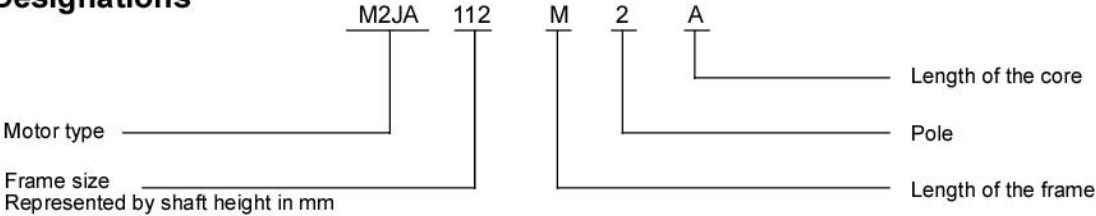


ABB Motors

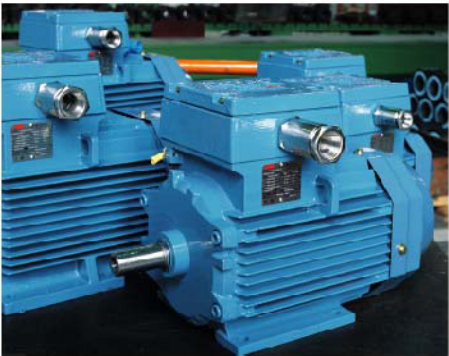
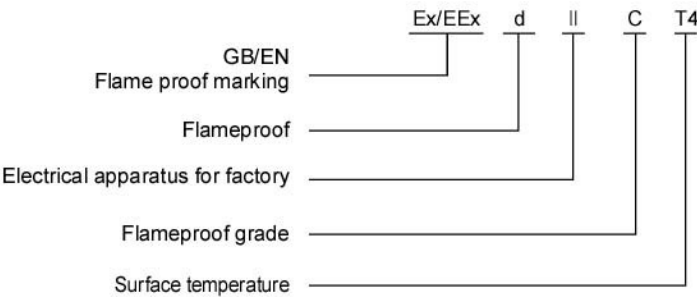


**M2JA Cast Iron Totally-enclosed
Three Phase Flameproof Induction Motors**

Type Designations



The marking of flameproof motors is



Mounting Arrangement (IM)

- ❖ B3 Foot-mounted motor
- ❖ B5 Flange-mounted motor
- ❖ B35 Foot-mounted and flange-mounted motor

Fundamental arrangement	IMB3 (IM1001)					
Mounting arrangement	IMB3 (IM1001)	IMB6 (IM1051)	IMB7 (IM1061)	IMB8 (IM1071)	IMV5 (IM1011)	IMV6 (IM1031)
Diagram						
Range of manufacture (frame size)	80 ~ 355	80 ~ 225				

Fundamental arrangement	IMB5 (IM3001)			IMB35 (IM2001)		
Mounting arrangement	IMB5 (IM3001)	IMV1 (IM3011)	IMV3 (IM3031)	IMB35 (IM2001)	IMV15 (IM2011)	IMV36 (IM2031)
Diagram						
Range of manufacture (frame size)	80 ~ 355	80 ~ 355	80 ~ 225	80 ~ 355	80 ~ 225	

Working conditions

Ambient temperature: to be altered with the change of seasons, but do not exceed $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}^*$

Altitude: to be used lower than 1,000 meters above sea level.

Rated frequency: 50Hz/60Hz

Rated voltage: 220V ~ 690V

Duty: Continuous (S1)

Method of Starting: can be started on full voltage motors and can be started with Y- Δ starter or reactor.

Driving method: flexible coupling or spur gear can be used for driving.

Insulation and temperature rise: class F. But the temp. rise of the stator windings is limited at 80K, i.e. treated as class B (resistance method). Permissible working temp. of bearing should not be over 95°C (thermometer method).

Cooling method: IC 411

Ex certification applies to a fixed speed motor without frequency converter.

* Direct starting under range -40°C to -20°C is prohibited.

Appropriate measures should be taken to preheat motors to keep the temperature on the motor enclosure above -20°C by space heaters and heating stator windings with low voltage supply for a certain time. This direct current generating in the windings shall not exceed the rated current on the nameplate.

Bearings and cable entry

Type	poles	Standard bearing type		Cable entry (mm)		Type	poles	Standard bearing type		Cable entry (mm)	
		D-end	N-end	Main	Auxiliary*			D-end	N-end	Main	Auxiliary*
80M	2,4,6	6204 DDUC3	6204 DDUC3	1-M25 $\times$ 1.5	2-M20 $\times$ 1.5	250M	2,4,6,8	6315 C3	6313 C3	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
90S	2,4,6	6205 DDUC3	6205 DDUC3	1-M25 $\times$ 1.5	2-M20 $\times$ 1.5	280S	2	6316 C4	6316 C4	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
90L	2,4,6	6205 DDUC3	6205 DDUC3	1-M25 $\times$ 1.5	2-M20 $\times$ 1.5	280S	4,6,8	6316 C3	6316 C3	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
100L	2,4,6,8	6206 DDUC3	6206 DDUC3	1-M32 $\times$ 1.5	2-M20 $\times$ 1.5	280M	2	6316 C4	6316 C4	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
112M	2,4,6,8	6207 DDUC3	6207 DDUC3	1-M32 $\times$ 1.5	2-M20 $\times$ 1.5	280M	4,6,8	6316 C3	6316 C3	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
132S	2,4,6,8	6208 DDUC3	6208 DDUC3	1-M32 $\times$ 1.5	2-M20 $\times$ 1.5	315S	2	6316 C4	6316 C4	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
132M	2,4,6,8	6208 DDUC3	6208 DDUC3	1-M32 $\times$ 1.5	2-M20 $\times$ 1.5	315S	4,6,8	6319 C3	6316 C3	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
160M	2,4,6,8	6309 C3	6309 C3	2-M40 $\times$ 1.5	2-M20 $\times$ 1.5	315M	2	6316 C4	6316 C4	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
160L	2,4,6,8	6309 C3	6309 C3	2-M40 $\times$ 1.5	2-M20 $\times$ 1.5	315M	4,6,8	6319 C3	6316 C3	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
180M	2,4,6,8	6310 C3	6309 C3	2-M40 $\times$ 1.5	2-M20 $\times$ 1.5	315L	2	6316 C4	6316 C4	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
180L	2,4,6,8	6310 C3	6309 C3	2-M40 $\times$ 1.5	2-M20 $\times$ 1.5	315L	4,6,8	6319 C3	6316 C3	2-M63 $\times$ 1.5	2-M20 $\times$ 1.5
200L	2,4,6,8	6312 C3	6310 C3	2-M50 $\times$ 1.5	2-M20 $\times$ 1.5	355M	2	6319M C4	6319M C4	2-M80 $\times$ 1.5	2-M20 $\times$ 1.5
225S	2,4,6,8	6313 C3	6312 C3	2-M50 $\times$ 1.5	2-M20 $\times$ 1.5	355M	4,6,8	6322 C3	6319 C3	2-M80 $\times$ 1.5	2-M20 $\times$ 1.5
225M	2,4,6,8	6313 C3	6312 C3	2-M50 $\times$ 1.5	2-M20 $\times$ 1.5	355L	2	6319M C4	6319M C4	2-M80 $\times$ 1.5	2-M20 $\times$ 1.5
						355L	4,6,8	6322 C3	6319 C3	2-M80 $\times$ 1.5	2-M20 $\times$ 1.5

* Auxiliary cable entries are available when PTC and heating component are needed. There are the max. auxiliary cable entries listing in the table and can be chosen by customers. The standard motor only have main cable entry if there are no special requirements.

Voltage and Technical Data

M2JA series allow a wide-range operational supply voltage, The efficiency, power factor, and speed show minimum changes within the specified voltage ranges.

Non-standard voltages are available on request.

**M2JA Cast Iron Totally-enclosed
Three Phase Flameproof Induction Motors**

IP55 IC411

Insulation class F
Temperature rise class B

400V 50Hz													
Output kW	Type designation	Product code	Speed n r/min	Efficiency			Power factor cos φ	Current		Torque			
				Class η	Full load 100% η	3/4 load 75% η		I _N A	I _s I _N	T _N N _m	T _s T _N	T _{MAX} T _N	
3000r/min=2 poles Basic design													
0.75	M2JA	80M2A 3GJA	081301-	2840		75	75.48	0.85	1.70	6.1	2.52	2.2	2.2
1.1		80M2B	081302-	2855	2	78	77.86	0.845	2.40	7.0	3.68	2.2	2.2
1.5		90S2A	091101-	2850	2	79	78.96	0.87	3.15	7.0	5.03	2.2	2.2
2.2		90L2A	091501-	2850	2	81.5	81.82	0.86	4.53	7.0	7.37	2.2	2.2
3		100L2A	101501-	2860	2	83	83.16	0.88	5.93	7.0	10.02	2.2	2.2
4		112M2A	111301-	2900	2	85	84.56	0.90	7.55	7.0	13.17	2.2	2.2
5.5		132S2A	131101-	2920	2	87.5	87.87	0.89	10.2	7.0	17.99	2.2	2.2
7.5		132S2B	131102-	2920	2	88.5	90.12	0.9	13.6	7.0	24.53	2.2	2.2
11		160M2A	161301-	2930	2	90	90.52	0.89	19.82	6.5	35.85	2.5	3.0
15		160M2B	161302-	2920	2	90	90.10	0.89	27.03	6.5	49.06	2.5	3.2
18.5		160L2A	161501-	2930	2	90.5	90.86	0.90	32.78	6.5	60.30	2.5	3.2
22		180M2A	181301-	2940	2	90.8	91.02	0.90	38.86	6.5	71.46	2.3	2.8
30		200L2A	201501-	2955	2	91.4	91.10	0.90	52.64	6.5	96.95	2.2	2.7
37		200L2B	201502-	2955	2	92.2	91.83	0.90	64.36	6.5	119.6	2.3	2.7
45		225M2A	221301-	2970	2	92.6	92.16	0.89	78.81	7.0	144.7	2.5	2.8
55		250M2A	251301-	2960	2	93.4	91.7	0.89	96.50	7.5	177.4	2.4	3.0
75		280S2A	281101-	2972	2	94	92.3	0.90	128	7.5	241.0	2.5	3.3
90		280M2A	281301-	2972	2	94.3	92.4	0.90	153.5	7.5	289.2	2.3	3.2
110		315S2A	311101-	2980		94	92.16	0.91	187	7.1	352.5	1.8	2.2
132		315M2A	311301-	2980		94.5	92.96	0.91	223	7.1	423.0	1.8	2.2
160		315L2A	311501-	2979		94.6	93.52	0.92	267	7.2	512.9	1.8	2.2
200		315L2B	311502-	2978		94.8	93.95	0.92	332	7.2	641.4	1.8	2.2
250		355M2A	351301-	2980		95.4	94.50	0.92	415.7	7.1	802	2.3	2.8
315		355L2A	351501-	2980		96.0	95.25	0.92	520.4	6.9	1011	2	2.8
400V 50Hz													
Output kW	Type designation	Product code	Speed n r/min	Efficiency			Power factor cos φ	Current		Torque			
				Class η	Full load 100% η	3/4 load 75% η		I _N A	I _s I _N	T _N N _m	T _s T _N	T _{MAX} T _N	
1500r/min=4 poles Basic design													
0.55	M2JA	80M4A 3GJA	082301-	1410		73.5	71.39	0.72	1.50	5.2	3.73	2.4	2.0
0.75		80M4B	082302-	1415		74.5	75.15	0.755	1.93	6.0	5.06	2.4	2.2
1.1		90S4A	092101-	1400	2	77.5	77.82	0.775	2.56	6.0	7.50	2.3	2.2
1.5		90L4A	092501-	1390	2	78.5	79.16	0.79	3.50	6.0	10.31	2.3	2.2
2.2		100L4A	102501-	1430	2	81.5	82.32	0.805	4.85	6.0	14.69	2.3	2.2
3		100L4B	102502-	1420	2	82.8	82.51	0.83	6.30	6.5	20.18	2.3	2.2
4		112M4A	112301-	1430	2	85	84.63	0.82	8.29	6.5	26.71	2.3	2.2
5.5		132S4A	132101-	1430	2	86	87.07	0.85	10.9	6.5	36.73	2.3	2.2
7.5		132M4A	132301-	1440	2	88.5	88.26	0.85	14.4	6.5	49.74	2.3	2.2
11		160M4A	162301-	1460	2	89.5	90.01	0.85	20.87	6.5	71.95	2.4	2.8
15		160L4A	162501-	1460	2	90	90.38	0.86	27.97	6.5	98.12	2.3	2.4
18.5		180M4A	182301-	1470	2	91	90.88	0.86	34.12	6.5	120.2	2.3	3.0
22		180L4A	182501-	1470	2	92	89.98	0.88	39.44	6.5	142.9	2.4	3.0
30		200L4A	202501-	1470	2	92.2	91.83	0.88	53.37	6.5	194.9	2.2	2.8
37		225S4A	222101-	1480	2	92.6	91.16	0.85	67.85	7.0	238.8	2.2	2.8
45		225M4A	222301-	1480	2	92.8	91.66	0.87	80.45	7.0	290.4	2.2	2.8
55		250M4A	252301-	1480	2	93.4	91.3	0.87	98.5	7.0	354.9	2.4	3.0
75		280S4A	282101-	1480	2	94	93.9	0.87	133	6.5	484	2.4	2.6
90		280M4A	282301-	1480		94.3	94.6	0.87	158.7	7.2	580.7	2.3	2.8
110		315S4A	312101-	1486		94.5	93.51	0.88	192	6.9	706.9	2.1	2.2
132		315M4A	312301-	1486		94.8	94.01	0.88	229	6.9	848.3	2.1	2.2
160		315L4A	312501-	1485		94.9	94.51	0.89	275	6.9	1029	2.1	2.2
200		315L4B	312502-	1485		95	94.18	0.89	343	6.9	1286	2.1	2.2
250		355M4A	352301-	1490		95.3	94.5	0.90	420.7	6.9	1594	2.1	2.6
315		355L4A	352501-	1490		95.6	94.83	0.90	528.4	7.0	2008	2.1	2.3

**M2JA Cast Iron Totally-enclosed
Three Phase Flameproof Induction Motors**

IP55 IC411

Insulation class F
Temperature rise class B

380V 50Hz						415V 50Hz						
Output kW	Type designation	Speed n r/min	Efficiency η %	Power factor $\cos \phi$	Current A	Speed n r/min	Efficiency η %	Power factor $\cos \phi$	Current A	Moment of inertia $J=GD^2/4$ kgm ²	Weight kg	Sound pressure level Lp dB(A)
3000r/min=2 poles						Basic design						
0.75	80M2A	2825	75.5	0.86	1.75	2855	75	0.85	1.64	0.00091	30	57
1.1	80M2B	2840	77.5	0.855	2.52	2870	78	0.83	2.37	0.00107	31	58
1.5	90S2A	2835	79	0.895	3.23	2865	79	0.86	3.08	0.00135	34	61
2.2	90L2A	2835	81.5	0.89	4.61	2865	81	0.83	4.56	0.00163	40	61
3	100L2A	2845	83	0.895	6.14	2875	83.5	0.855	5.85	0.00402	46	65
4	112M2A	2885	85	0.915	7.82	2915	85	0.87	7.53	0.00671	61	67
5.5	132S2A	2905	87.5	0.90	10.7	2935	88	0.875	9.94	0.01241	79	70
7.5	132S2B	2905	87.5	0.90	14.5	2935	89	0.9	13.1	0.01491	84	70
11	160M2A	2918	90	0.91	20.41	2930	90	0.87	19.54	0.0436	149	72
15	160M2B	2917	90	0.91	27.82	2932	90	0.88	26.35	0.0551	161	72
18.5	160L2A	2920	90.5	0.91	34.13	2935	90.5	0.89	31.95	0.06549	185	72
22	180M2A	2940	90.8	0.91	40.45	2955	90.8	0.88	38.30	0.08805	216	75
30	200L2A	2950	91.2	0.91	54.90	2960	91.3	0.89	51.38	0.14821	312	81
37	200L2B	2950	91.7	0.91	67.36	2960	92.3	0.89	62.65	0.16822	329	81
45	225M2A	2965	92.2	0.90	82.39	2975	92.6	0.87	77.71	0.29345	406	81
55	250M2A	2956	93.2	0.90	100	2962	93.5	0.88	93.50	0.3784	488	84
75	280S2A	2967	94	0.91	131.9	2975	93.8	0.91	133.5	0.587	630	85
90	280M2A	2967	94.3	0.91	159	2975	94.1	0.91	159.7	0.615	700	85
110	315S2A	2978	94	0.92	193	2982	94	0.90	181	1.4083	1138	88
132	315M2A	2978	94.5	0.92	231	2982	94.5	0.90	216	1.5584	1263	88
160	315L2A	2976	94.6	0.93	276	2980	94.6	0.91	259	1.7256	1338	88
200	315L2B	2976	94.8	0.93	345	2980	94.8	0.91	323.0	1.9405	1400	88
250	355M2A	2978	95.4	0.92	435.1	2982	95.4	0.91	405.1	3.05	1798	89
315	355L2A	2978	96.0	0.92	544.8	2982	96.0	0.91	507.2	3.6	2158	89
380V 50Hz						415V 50Hz						
Output kW	Type designation	Speed n r/min	Efficiency η %	Power factor $\cos \phi$	Current A	Speed n r/min	Efficiency η %	Power factor $\cos \phi$	Current A	Moment of inertia $J=GD^2/4$ kgm ²	Weight kg	Sound pressure level Lp dB(A)
1500r/min=4 poles						Basic design						
0.55	80M4A	1400	73.5	0.75	1.52	1420	72.5	0.68	1.55	0.00145	30	46
0.75	80M4B	1405	74.5	0.78	1.97	1425	74	0.72	1.96	0.00174	31	46
1.1	90S4A	1390	77	0.80	2.72	1410	77.5	0.745	2.65	0.00254	34	52
1.5	90L4A	1380	78.5	0.80	3.64	1400	78.5	0.765	3.48	0.00317	41	52
2.2	100L4A	1420	81.5	0.824	4.98	1440	81.4	0.775	4.85	0.00679	45	53
3	100L4B	1410	82.5	0.85	6.5	1430	82.7	0.818	6.17	0.00862	52	53
4	112M4A	1420	84.5	0.84	8.57	1440	85	0.795	8.24	0.01306	64	56
5.5	132S4A	1420	85.5	0.87	11.3	1440	86.5	0.83	10.7	0.02673	81	59
7.5	132M4A	1430	88	0.85	15.2	1450	88	0.84	14.1	0.03432	94	59
11	160M4A	1455	89.5	0.87	21.46	1463	89.5	0.83	20.60	0.06543	152	66
15	160L4A	1452	90	0.88	28.78	1461	90	0.85	27.28	0.09349	181	66
18.5	180M4A	1465	91	0.88	35.10	1470	91	0.82	34.49	0.16049	214	66
22	180L4A	1465	91.5	0.90	40.59	1475	91.5	0.86	38.90	0.18046	232	66
30	200L4A	1465	92.3	0.89	55.47	1470	86.8	0.87	55.25	0.2819	312	71
37	225S4A	1475	92.3	0.85	71.65	1480	92	0.82	68.23	0.37	358	73
45	225M4A	1475	92.6	0.88	83.90	1480	92.8	0.85	79.37	0.42	396	73
55	250M4A	1477	93.2	0.88	102	1482	93.6	0.86	95.2	0.78	563	76
75	280S4A	1475	93.8	0.88	138	1485	94.1	0.86	128.9	1.10	668	78
90	280M4A	1475	94.1	0.88	165.1	1485	94.4	0.86	154.2	1.35	740	78
110	315S4A	1483	94.5	0.89	199	1488	94.5	0.87	186	2.8596	1163	80
132	315M4A	1483	94.8	0.89	238	1488	94.8	0.87	223	3.1848	1288	80
160	315L4A	1482	94.9	0.90	285	1487	94.9	0.88	267	3.6765	1313	86
200	315L4B	1482	95	0.90	355	1487	95	0.88	333	4.2516	1375	86
250	355M4A	1488	95.3	0.905	440.4	1492	95.3	0.895	407.8	6.77	1933	87
315	355L4A	1488	95.6	0.905	553.2	1492	95.6	0.895	506.5	8.2	2275	87

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IP55 IC411

Insulation class F
Temperature rise class B

400V 50Hz												
Output kW	Type designation	Product code	Speed n r/min	Efficiency		Power factor cos φ	Current		Torque			
				Full load 100% η	3/4 load 75% η		I _N A	I _s I _N	T _N N _m	T _s T _N	T _{MAX} T _N	
1000r/min=6 poles Basic design												
0.37	M2JA	80M6A 3GJA	083301-	930	63	63.22	0.66	1.29	5.0	3.80	1.9	1.8
0.55		80M6B	083302-	925	65	65.08	0.68	1.80	5.0	5.68	1.9	1.8
0.75		90S6A	093101-	920	71	70.22	0.72	2.12	5.0	7.79	2.0	2.2
1.1		90L6A	093501-	920	73	73.06	0.74	2.94	5.0	11.42	2.0	2.2
1.5		100L6A	103501-	940	76	75.28	0.765	3.78	5.5	15.24	2.0	2.2
2.2		112M6A	113301-	940	80	81.16	0.76	5.23	5.5	22.35	2.0	2.2
3		132S6A	133101-	960	82.5	83.55	0.78	6.73	6.5	29.84	2.0	2.2
4		132M6A	133301-	960	84	84.18	0.77	8.93	6.5	39.79	2.0	2.2
5.5		132M6B	133302-	960	86	85.63	0.79	11.7	6.5	54.71	2.0	2.2
7.5		160M6A	163301-	970	88	85.28	0.78	15.77	6.0	73.84	2.0	2.3
11		160L6A	163501-	970	88.5	88.56	0.78	23.00	6.0	108.3	2.2	2.3
15		180L6A	183501-	980	89	89.12	0.82	29.67	6.0	146.3	2.3	2.8
18.5		200L6A	203501-	980	90.3	90.22	0.82	36.06	6.0	180.3	2.2	2.8
22		200L6B	203502-	980	90.4	90.32	0.83	42.32	6.0	214.4	2.1	2.8
30		225M6A	223301-	980	90.8	89.20	0.78	61.14	6.6	292.3	2.2	2.8
37		250M6A	253301-	980	92.2	92.4	0.88	66.5	6.8	360.6	2.3	2.8
45		280S6A	283101-	982	92.6	91.3	0.86	82	6.5	437.6	2.3	2.4
55		280M6A	283301-	982	93	91.2	0.87	98.4	7.0	534.9	2.3	2.5
75		315S6A	313101-	990	93.5	93.21	0.86	135	7.4	723.5	2.0	2.0
90		315M6A	313301-	990	93.8	91.86	0.86	162	7.4	868.2	2.0	2.0
110		315L6A	313501-	990	94.3	93.52	0.87	194	6.8	1061.1	2.0	2.0
132		315L6B	313502-	990	94.5	93.82	0.87	232	6.8	1273.3	2.0	2.0
160		355M6A	353301-	990	94.7	83.85	0.89	274	6.8	1530	2.1	2.4
200		355M6B	353302-	990	94.9	93.95	0.89	341.8	6.7	1913	2.0	2.3
250		355L6A	353501-	990	95.1	94.15	0.89	421.6	6.7	2391	2.0	2.4
400V 50Hz												
Output kW	Type designation	Product code	Speed n r/min	Efficiency		Power factor cos φ	Current		Torque			
				Full load 100% η	3/4 load 75% η		I _N A	I _s I _N	T _N N _m	T _s T _N	T _{MAX} T _N	
750r/min=8 poles Basic design												
0.18	M2JA	80M8A 3GJA	084301-	700	51	50.12	0.60	0.85	3.3	2.46	1.8	1.9
0.25		80M8B	084302-	700	54.5	53.28	0.60	1.11	3.6	3.41	1.8	1.9
0.37		90S8A	094101-	700	62.5	62.07	0.605	1.42	4.4	5.05	1.8	1.9
0.55		90L8A	094501-	700	63.5	63.34	0.605	2.07	4.7	7.50	1.8	2.0
0.75		100L8A	104501-	700	70	70.08	0.64	2.42	5.0	10.23	1.8	2.0
1.1		100L8B	104502-	700	71.5	70.28	0.645	3.45	5.0	15.01	1.8	2.0
1.5		112M8A	114301-	700	75	75.39	0.675	4.27	5.0	20.46	1.8	2.0
2.2		132S8A	134101-	710	81	81.78	0.70	5.60	5.5	29.59	1.8	2.0
3		132M8A	134301-	710	81	81.38	0.75	7.13	5.5	40.35	1.8	2.0
4		160M8A	164301-	720	84	83.98	0.73	9.42	5.5	53.06	2.1	2.5
5.5		160M8B	164302-	720	85.5	85.62	0.74	12.55	5.5	72.95	2.1	2.5
7.5		160L8A	164501-	720	86.5	85.82	0.74	16.91	5.5	99.5	2.1	2.5
11		180L8A	184501-	730	87.7	86.96	0.77	23.51	5.4	143.9	2.0	2.8
15		200L8A	204501-	730	89	89.38	0.76	32.01	5.5	196.2	2.3	2.8
18.5		225S8A	224101-	740	90	89.12	0.75	39.56	5.5	238.8	2.1	2.8
22		225M8A	224301-	740	90.5	8.16	0.75	46.78	6.0	283.9	2.2	2.8
30		250M8A	254301-	740	91.3	90.10	0.79	60	6.5	387.2	2.3	2.6
37		280S8A	284101-	740	91.8	91.7	0.79	74.2	6.0	477.5	2.1	2.6
45		280M8A	284301-	740	92.4	91.1	0.79	89.5	6.0	580.5	2.1	2.7
55		315S8A	314101-	740	92.8	91.52	0.82	105	6.9	709.8	1.8	2.0
75		315M8A	314301-	740	93	9193	0.82	143	7.0	967.9	1.8	2.0
90		315L8A	314501-	740	93.8	93.22	0.82	170	7.1	1161.5	1.8	2.0
110		315L8B	314502-	740	94	92.38	0.82	204	6.4	1419.6	1.8	2.0

**M2JA Cast Iron Totally-enclosed
Three Phase Flameproof Induction Motors**

IP55 IC411

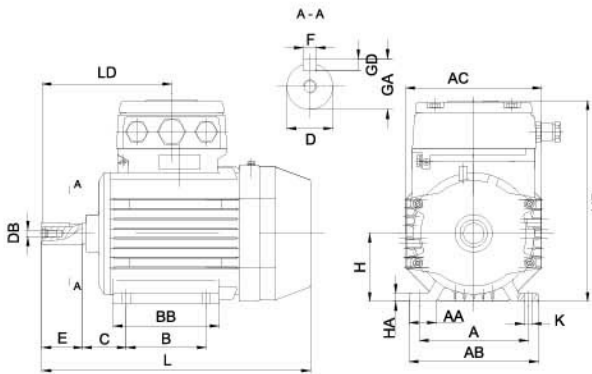
Insulation class F
Temperature rise class B

380V 50Hz						415V 50Hz						Moment of inertia J=GD ² /4 kgm ²	Weight kg	Sound pressure level Lp dB(A)
Output kW	Type designation	Speed n r/min	Efficiency η %	Power factor cos φ	Current A	Speed n r/min	Efficiency η %	Power factor cos φ	Current A					
1000r/min=6 poles														
0.37	80M6A	925	63.5	0.695	1.29	935	62	0.625	1.33	0.00159	31	45		
0.55	80M6B	920	65	0.71	1.82	930	65.5	0.655	1.79	0.00196	32	45		
0.75	90S6A	915	71	0.755	2.13	925	70.5	0.69	2.15	0.00292	34	48		
1.1	90L6A	915	73	0.77	2.98	925	73	0.705	2.98	0.00379	41	48		
1.5	100L6A	935	76	0.79	3.8	945	75.5	0.755	3.73	0.00999	45	51		
2.2	112M6A	935	79	0.77	5.5	945	80	0.745	5.14	0.01559	59	54		
3	132S6A	955	82	0.81	6.87	965	82.5	0.76	6.66	0.03116	76	56		
4	132M6A	955	84	0.77	9.39	965	84	0.75	8.84	0.04074	86	56		
5.5	132M6B	945	85.5	0.795	12.3	955	86	0.78	11.4	0.05332	96	56		
7.5	160M6A	968	88	0.79	16.39	975	88	0.75	15.81	0.09231	153	61		
11	160L6A	966	88.5	0.80	23.61	975	88.5	0.75	23.06	0.12970	181	62		
15	180L6A	980	89	0.84	30.48	985	89	0.79	29.68	0.2418	225	63		
18.5	200L6A	975	90.6	0.84	36.94	980	90.1	0.79	36.16	0.34174	294	64		
22	200L6B	975	90.9	0.84	43.79	980	90.1	0.81	41.93	0.46837	308	64		
30	225M6A	980	90.5	0.78	64.57	980	90.9	0.76	60.41	0.62691	385	66		
37	250M6A	978	92	0.90	68.5	982	92.3	0.86	64.9	0.97	478	68		
45	280S6A	977	92.4	0.87	85.1	985	92.7	0.85	79.5	1.25	603	69		
55	280M6A	977	92.8	0.88	102.3	985	93.1	0.86	95.6	1.485	665	70		
75	315S6A	988	93.5	0.87	140	991	93.5	0.84	133	3.1942	1150	70		
90	315M6A	988	93.8	0.87	168	991	93.8	0.84	159	3.723	1263	70		
110	315L6A	988	94.3	0.88	201	991	94.3	0.85	191	4.2564	1325	70		
132	315L6B	988	94.5	0.88	241	991	94.5	0.85	229	5.1577	1400	70		
160	355M6A	988	94.7	0.9	285.2	992	94.7	0.88	267.1	7.8	1700	72		
200	355M6B	988	94.9	0.9	355.8	992	94.9	0.88	333.2	9.1	1939	72		
250	355L6A	988	95.1	0.905	441.3	992	95.1	0.89	410.9	11.4	2571	72		

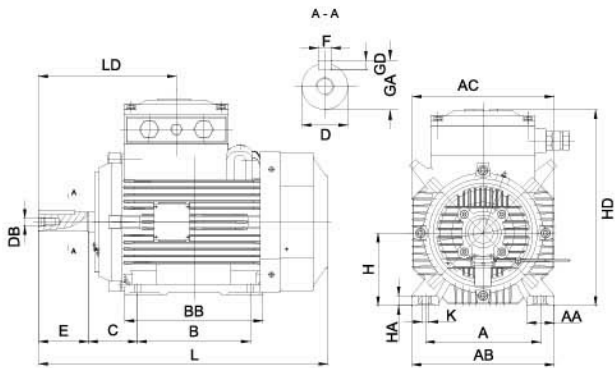
380V 50Hz						415V 50Hz						Moment of inertia J=GD ² /4 kgm ²	Weight kg	Sound pressure level Lp dB(A)
Output kW	Type designation	Speed n r/min	Efficiency η %	Power factor cos φ	Current A	Speed n r/min	Efficiency η %	Power factor cos φ	Current A					
750r/min=8 poles														
0.18	80M8A	695	51	0.61	0.88	705	51.5	0.595	0.82	0.00111	30	42		
0.25	80M8B	695	54	0.61	1.16	705	54.5	0.595	1.08	0.00326	31	42		
0.37	90S8A	695	62	0.61	1.49	705	62.5	0.60	1.38	0.00541	34	46		
0.55	90L8A	695	63	0.61	2.18	705	63.5	0.60	2.01	0.00756	40	46		
0.75	100L8A	695	70	0.67	2.43	705	69	0.635	2.39	0.00971	44	53		
1.1	100L8B	695	71.5	0.68	3.45	705	70.5	0.625	3.47	0.01186	50	53		
1.5	112M8A	695	75	0.68	4.47	705	75	0.67	4.16	0.01559	61	55		
2.2	132S8A	705	80.5	0.745	5.6	715	80.5	0.685	5.55	0.03625	77	55		
3	132M8A	705	81	0.78	7.22	715	81	0.725	7.11	0.04141	85	56		
4	160M8A	715	84	0.76	9.52	720	84	0.70	9.46	0.0676	139	58		
5.5	160M8B	715	85.5	0.76	12.86	720	85.5	0.70	12.78	0.09524	151	58		
7.5	160L8A	715	86.5	0.77	17.11	722	86.5	0.70	17.23	0.12122	177	58		
11	180L8A	725	87.7	0.79	24.12	730	87.7	0.74	23.58	0.23645	222	61		
15	200L8A	725	88.9	0.78	32.86	730	88.8	0.74	31.75	0.37103	308	63		
18.5	225S8A	740	89.9	0.75	41.69	745	90.3	0.71	40.14	0.53287	341	65		
22	225M8A	740	90.4	0.76	48.65	745	90.3	0.71	47.74	0.65825	383	65		
30	250M8A	738	91.1	0.80	63	741	91.4	0.78	58.6	0.975	490	67		
37	280S8A	735	91.6	0.80	76.7	740	91.9	0.78	71.8	1.25	610	68		
45	280M8A	735	92.2	0.80	92.7	740	92.5	0.78	86.8	1.485	685	68		
55	315S8A	736	92.8	0.83	108	741	92.8	0.80	103	3.6842	1163	65		
75	315M8A	736	93	0.83	148	741	93	0.80	140	4.9591	1263	68		
90	315L8A	736	93.8	0.83	176	741	93.8	0.80	167	5.825	1338	68		
110	315L8B	736	94	0.84	212	741	94	0.80	204	6.7537	1425	68		

**M2JA Cast Iron Totally-enclosed
Three Phase Flameproof Induction Motors**

Dimension drawing

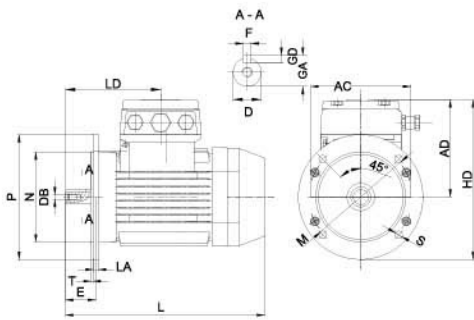


M2JA80-132

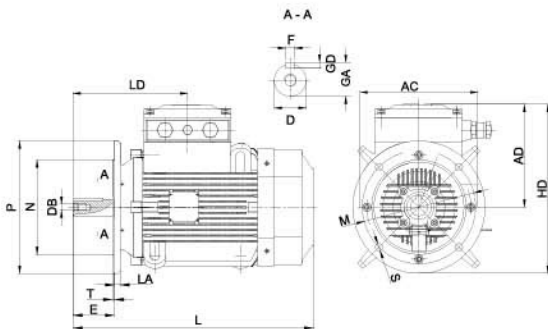


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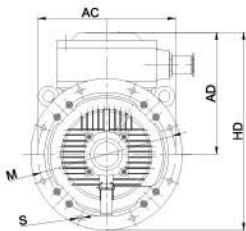
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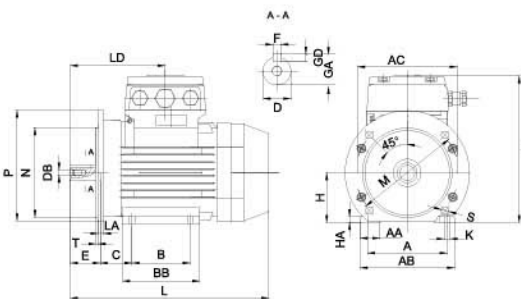


M2JA160-225

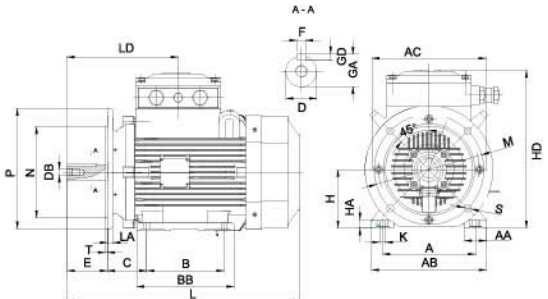


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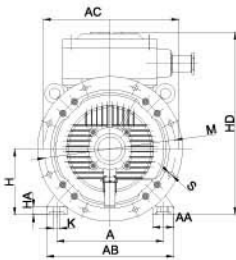
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M2JA80-132



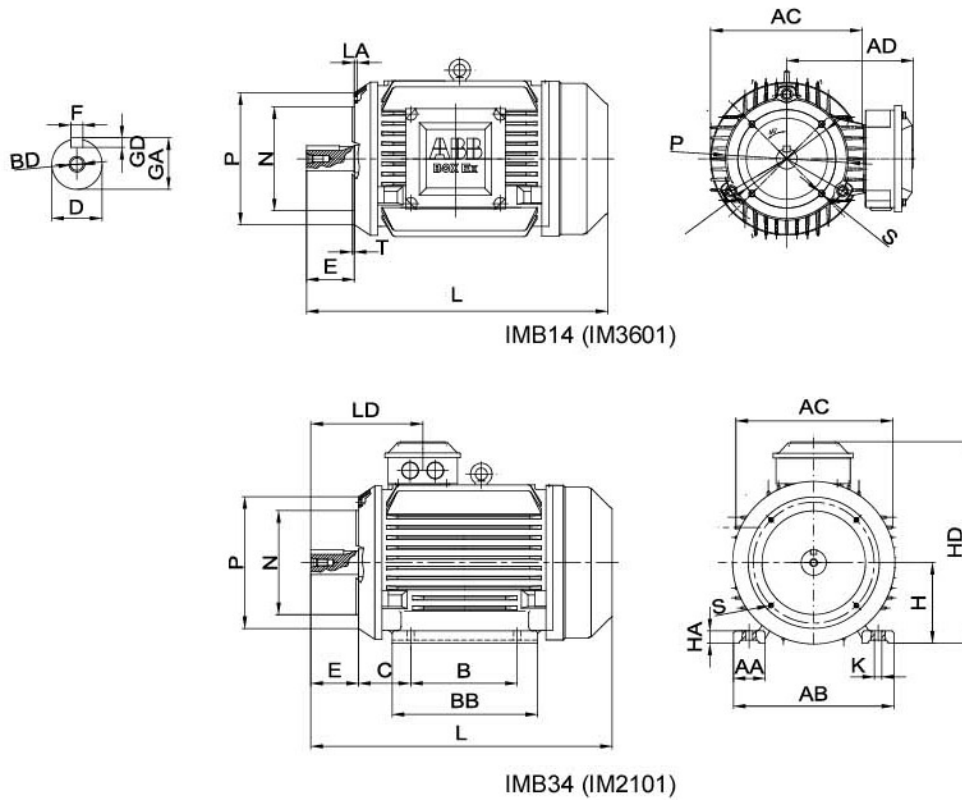
M2JA160-225



M2JA250-355

IMB35 (IM2001)

**M2JA Cast Iron Totally-enclosed
Three Phase Flameproof Induction Motors**



Type	Poles	A	AA	AB	AC	B	BB	C	D	E	F	GA	GD	H	HA	HD	K	L	LD	AD	LA	M	N	P	S	T
80M	2-8	125	35	160	165	100	135	50	19	40	6	21.5	6	80	12	260	10	340	155	176	12	165	130	200	12	3.5
90S	2-8	140	35	175	180	100	140	56	24	50	8	27	7	90	12	355	10	350	165	181	12	165	130	200	12	3.5
90L	2-8	140	35	175	180	125	165	56	24	50	8	27	7	90	12	380	10	375	165	181	12	651	130	200	12	3.5
100L	2-8	160	40	200	205	140	180	63	28	60	8	31	7	100	14	300	12	450	190	195	11	215	180	250	15	4
112M	2-8	190	50	235	225	140	190	70	28	60	8	31	7	112	15	320	12	490	205	202	11	215	180	250	15	4
132S	2-8	216	55	270	265	140	205	89	38	80	10	41	8	132	18	360	12	485	205	220	12	265	230	300	15	4
132M	2-8	216	55	270	265	178	240	89	38	80	10	41	8	132	18	360	12	520	225	220	12	265	230	300	15	4
160M	2-8	254	60	325	330	210	265	108	42	110	12	45	8	160	22	450	15	650	305	284	15	300	250	350	19	5
160L	2-8	254	60	325	330	254	310	108	42	110	12	45	8	160	22	450	15	690	305	284	15	300	250	350	19	5
180M	2-4	279	70	350	355	241	315	121	48	110	14	51.5	9	180	22	480	15	725	315	295	18	300	250	350	19	5
180L	4-8	279	70	350	355	279	350	121	48	110	14	51.5	9	180	22	480	15	765	315	295	18	300	250	350	19	5
200L	2-8	318	70	390	395	305	380	133	55	110	16	59	10	200	25	610	19	815	365	404	20	350	300	400	19	5
225S	4-8	356	75	435	440	286	380	149	60	140	18	64	11	225	28	650	19	845	395	421	20	400	350	450	19	5
225M	2	356	75	435	440	311	405	149	55	110	16	59	10	225	28	650	19	840	395	421	20	400	350	450	19	5
225M	4-8	356	75	435	440	311	405	149	60	140	18	64	11	225	28	650	19	870	395	421	20	400	350	450	19	5
250M	2	406	80	490	515	349	455	168	60	140	18	64	11	250	30	700	24	970	420	447	22	500	450	550	19	5
250M	4-8	406	80	490	515	349	455	168	65	140	18	69	11	250	30	700	24	970	420	447	22	500	450	550	19	5
280S	2	457	85	555	585	368	490	190	65	140	18	69	11	280	35	750	24	1030	450	472	22	500	450	550	19	5
280S	4-8	457	85	555	585	368	490	190	75	140	20	79.5	12	280	35	750	24	1030	450	470	22	500	450	550	19	5
280M	2	457	85	555	585	419	540	190	65	140	18	69	11	280	35	750	24	1080	450	470	22	500	450	550	19	5
280M	4-8	457	85	555	585	419	540	190	75	140	20	79.5	12	280	35	750	24	1080	450	470	22	500	450	550	19	5
315S	2	508	120	640	630	406	575	216	65	140	18	69	11	315	45	1010	28	1240	440	685	24	600	550	660	24	6
315S	4-8	508	120	640	630	406	575	216	80	170	22	85	14	315	45	1010	28	1240	470	685	24	600	550	660	24	6
315M	2	508	120	640	630	457	685	216	65	140	18	69	11	315	45	1010	28	1380	440	685	24	600	550	660	24	6
315M	4-8	508	120	640	630	457	685	216	80	170	22	85	14	315	45	1010	28	1380	470	685	24	600	550	660	24	6
315L	2	508	120	640	630	508	685	216	65	140	18	69	11	315	45	1010	28	1380	440	685	24	600	550	660	24	6
315L	4-8	508	120	640	630	508	685	216	80	170	22	85	14	315	45	1010	28	1380	470	685	24	600	550	660	24	6
355M	2	610	120	730	710	560	750	254	70	140	20	74.5	12	355	52	1080	35	1550	470	695	25	600	680	800	24	6
355M	4-6	610	120	730	710	560	750	254	100	210	28	106	16	355	52	1080	35	1620	540	695	25	600	680	800	24	6
355L	2	610	120	730	710	560	750	254	70	140	20	74.5	12	355	52	1080	35	1550	470	695	25	600	680	800	24	6
355L	4-6	610	120	730	710	560	750	254	100	210	28	106	16	355	52	1080	35	1620	540	695	25	600	680	800	24	6

ติดต่อบริษัท :



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