

Process performance cast iron motors

Technical data for totally enclosed squirrel cage three phase motors

IP 55 – IC 411 – Insulation class F, temperature rise class B

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure level L _{PA} dB
				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s / I _N	T _N Nm	T _l / T _N	T _b / T _N			
750 r/min = 8-poles			400 V 50 Hz			CENELEC-design									
0.09	M3BP 71 MA	3GBP 074 101-••B	660	49.4	46	38.5	0.59	0.44	2.0	1.3	2.4	2.3	0.00089	11	40
0.12	M3BP 71 MB	3GBP 074 102-••B	670	51.4	47.5	39.9	0.56	0.6	2.1	1.71	2.8	2.4	0.0011	12	43
0.18	M3BP 80 MA	3GBP 084 101-••B	685	63.5	62.0	56.3	0.62	0.65	2.8	2.5	1.6	2.0	0.00187	15	45
0.25	M3BP 80 MB	3GBP 084 102-••B	685	67.1	67.2	63.4	0.63	0.85	2.8	3.4	1.4	1.9	0.00187	17	50
0.37	M3BP 90 SLB	3GBP 094 102-••B	705	66.3	64.0	57.1	0.54	1.49	2.8	5	1.4	2.2	0.00444	24	50
0.55	M3BP 90 SLC	3GBP 094 103-••B	655	61.8	65.6	65.2	0.67	1.91	2.3	8	1.3	1.5	0.00491	25	53
0.75	M3BP 100 LA	3GBP 104 101-••B	710	74.0	73.0	68.2	0.61	2.3	3.6	10	1.8	2.5	0.0072	30	46
1.1	M3BP 100 LB	3GBP 104 102-••B	695	76.0	76.5	74.6	0.66	3.1	3.4	15.1	1.7	2.2	0.00871	30	53
1.5	M3BP 112 M	3GBP 114 101-••B	690	74.4	75.9	74.1	0.70	4.1	3.2	20.7	1.4	1.9	0.0106	39	55
2.2	M3BP 132 SMA	3GBP 134 101-••B	715	79.7	80.8	78.7	0.66	6	3.2	29.3	1.1	1.7	0.03336	70	56
3	M3BP 132 SMB	3GBP 134 102-••B	715	79.9	80.8	79.1	0.64	8.4	3.2	40	1.2	1.8	0.04003	75	58
4	M3BP 160 MLA	3GBP 164 031-••G	728	84.1	85.1	83.7	0.67	10.2	5.4	52.4	1.5	2.6	0.068	120	59
5.5	M3BP 160 MLB	3GBP 164 032-••G	726	84.7	86.0	84.9	0.67	13.9	5.6	72.3	1.4	2.6	0.085	134	59
7.5	M3BP 160 MLC	3GBP 164 033-••G	727	86.1	87.3	86.6	0.65	19.3	4.7	98.5	1.5	2.8	0.132	184	59
11	M3BP 180 MLA	3GBP 184 031-••G	731	86.8	88.4	87.8	0.67	27.3	4.4	143	1.8	2.6	0.214	233	59
15	M3BP 200 MLA	3GBP 204 031-••G	737	90.2	91.3	90.9	0.74	32.4	5.3	194	2.0	2.4	0.45	290	60
18.5	M3BP 225 SMA	3GBP 224 031-••G	739	91.0	92.0	91.5	0.73	40.1	5.2	239	2.0	2.3	0.669	350	63
22	M3BP 225 SMB	3GBP 224 032-••G	738	91.6	92.4	92.0	0.74	46.8	5.5	284	2.0	2.3	0.722	363	63
30	M3BP 250 SMA	3GBP 254 031-••G	742	92.4	92.9	92.3	0.71	66	5.8	386	2.6	2.4	1.404	440	63
37	M3BP 280 SMA	3GBP 284 210-••G	741	92.7	92.7	91.6	0.78	73.8	7.3	476	1.7	3.0	1.85	605	65
45	M3BP 280 SMB	3GBP 284 220-••G	741	93.2	93.2	92.2	0.78	89.3	7.6	579	1.8	3.1	2.2	645	65
55	M3BP 315 SMA	3GBP 314 210-••G	742	93.4	93.5	92.7	0.81	104	7.1	707	1.6	2.7	3.2	830	62
75	M3BP 315 SMB	3GBP 314 220-••G	741	93.7	93.9	93.4	0.82	140	7.1	966	1.7	2.7	4.1	930	62
90	M3BP 315 SMC	3GBP 314 230-••G	741	94.0	94.2	93.6	0.82	168	7.4	1159	1.8	2.7	4.9	1000	64
110	M3BP 315 MLA	3GBP 314 410-••G	740	94.0	94.3	94.0	0.83	203	7.3	1419	1.8	2.7	5.8	1150	72
132	M3BP 355 SMA	3GBP 354 210-••G	744	94.7	94.7	94.0	0.80	251	7.5	1694	1.5	2.6	7.9	1520	69
160	M3BP 355 SMB	3GBP 354 220-••G	744	95.2	95.2	94.5	0.80	303	7.6	2053	1.6	2.6	9.7	1680	69
200	M3BP 355 SMC	3GBP 354 230-••G	743	95.3	95.4	94.8	0.80	378	7.4	2570	1.6	2.6	11.3	1820	69
250	M3BP 355 MLB	3GBP 354 420-••G	743	95.4	95.5	95.0	0.80	472	7.5	3213	1.6	2.7	13.5	2180	72
315 ¹⁾	M3BP 355 LKB	3GBP 354 820-••G	742	95.5	95.6	95.0	0.80	595	7.9	4053	1.7	2.7	16.5	2600	75
315	M3BP 400 LA	3GBP 404 510-••G	744	96.1	96.2	95.8	0.81	584	7.0	4043	1.2	2.6	17	2900	71
315	M3BP 400 LKA	3GBP 404 810-••G	744	96.1	96.2	95.8	0.81	584	7.0	4043	1.2	2.6	17	2900	71
355	M3BP 400 LB	3GBP 404 520-••G	743	96.2	96.3	96.1	0.83	641	6.8	4562	1.2	2.5	21	3200	71
355	M3BP 400 LKB	3GBP 404 820-••G	743	96.2	96.3	96.1	0.83	641	6.8	4562	1.2	2.5	21	3200	71
400	M3BP 400 LC	3GBP 404 530-••G	744	96.3	96.4	96.0	0.82	731	7.4	5134	1.3	2.7	24	3400	71
400	M3BP 400 LKC	3GBP 404 830-••G	744	96.3	96.4	96.0	0.82	731	7.4	5134	1.3	2.7	24	3400	71
450	M3BP 450 LA	3GBP 454 510-••G	744	96.2	96.4	96.2	0.83	813	6.0	5775	1.0	2.5	26	3750	80
500	M3BP 450 LB	3GBP 454 520-••G	744	96.3	96.4	96.2	0.83	902	6.4	6417	1	2.6	29	4000	80
560	M3BP 450 LC	3GBP 454 530-••G	744	96.4	96.5	96.1	0.82	1022	7.0	7187	1.2	2.9	35	4350	80
630 ¹⁾	M3BP 450 LD	3GBP 454 540-••G	745	96.6	96.6	96.2	0.81	1162	7.6	8075	1.3	3.2	41	4800	80
750 r/min = 8-poles			400 V 50 Hz			CENELEC-design									
55	M3BP 280 SMC	3GBP 284 230-••G	741	93.4	93.5	92.8	0.80	106	7.9	708	1.9	3.1	2.85	725	65
132	M3BP 315 LKA	3GBP 314 810-••G	740	94.1	94.4	94.2	0.83	243	7.3	1703	1.8	2.6	7.3	1410	74
150	M3BP 315 LKB	3GBP 314 820-••G	741	94.3	94.6	94.3	0.83	276	7.7	1933	1.9	2.7	8.3	1520	74
160	M3BP 315 LKC	3GBP 314 830-••G	740	94.2	94.6	94.3	0.83	295	7.7	2064	1.9	2.8	9.2	1600	75

¹⁾ Temperature rise class F

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

I_s / I_N = Starting current
T_l / T_N = Locked rotor torque
T_b / T_N = Breakdown torque

Efficiency values are given according to IEC 60034-2-1; 2007. Please note that the values are not comparable without knowing the testing method. ABB has calculated the efficiency values according to indirect method, stray load losses (additional losses) determined from measuring.

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Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure level L _{PA} dB
				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s / I _N	T _N Nm	T _I / T _N	T _b / T _N			
600 r/min = 10-poles			400 V 50 Hz			CENELEC-design									
37	M3BP 280 SMB	3GBP 285 220-••G	593	92.5	92.3	90.9	0.73	79	6.6	595	1.6	3	2.2	645	60
45	M3BP 280 SMC	3GBP 285 230-••G	592	93	92.9	91.7	0.75	93.1	6.7	725	1.6	2.8	2.85	725	60
55	M3BP 315 SMB	3GBP 315 220-••G	594	93.8	93.8	92.9	0.78	108	6.7	884	1.6	2.7	4.1	930	70
75	M3BP 315 SMC	3GBP 315 230-••G	593	93.6	93.7	92.8	0.78	148	6.6	1207	1.5	2.8	4.9	1000	70
90	M3BP 315 MLA	3GBP 315 410-••G	593	93.7	93.8	93	0.78	177	6.6	1449	1.7	2.7	5.8	1150	70
110	M3BP 355 SMA	3GBP 355 210-••G	595	94.5	94.5	93.6	0.76	221	6.6	1765	1.3	2.5	7.9	1520	73
132	M3BP 355 SMB	3GBP 355 220-••G	594	94.8	94.9	94.2	0.79	254	6.6	2122	1.3	2.4	9.7	1680	73
160	M3BP 355 SMC	3GBP 355 230-••G	594	94.8	94.9	94.2	0.77	316	6.9	2572	1.4	2.5	11.3	1820	76
200	M3BP 355 MLB	3GBP 355 420-••G	594	95	95.1	94.5	0.78	389	6.5	3215	1.4	2.4	13.5	2180	77
250 ¹⁾	M3BP 355 LKB	3GBP 355 820-••G	593	95.1	95.3	94.8	0.78	486	6.3	4025	1.4	2.3	16.5	2600	79
250	M3BP 400 LB	3GBP 405 520-••G	595	95.3	95.3	94.5	0.74	511	6.2	4012	1.3	2.3	20	3100	79
250	M3BP 400 LKB	3GBP 405 820-••G	595	95.3	95.3	94.5	0.74	511	6.2	4012	1.3	2.3	20	3100	79
315	M3BP 400 LC	3GBP 405 530-••G	595	95.4	95.4	94.7	0.74	644	6.2	5055	1.3	2.3	24	3400	79
315	M3BP 400 LKC	3GBP 405 830-••G	595	95.4	95.4	94.7	0.74	644	6.2	5055	1.3	2.3	24	3400	79
355	M3BP 450 LA	3GBP 455 510-••G	596	95.9	95.9	95.2	0.72	742	5.8	5687	1.1	2.2	31	4050	82
400	M3BP 450 LB	3GBP 455 520-••G	596	95.9	95.9	95.1	0.72	836	5.7	6408	1	2.1	34	4250	82
450	M3BP 450 LC	3GBP 455 530-••G	596	96.1	96.1	95.4	0.73	925	5.8	7210	1	2.1	38	4550	82
500 ¹⁾	M3BP 450 LD	3GBP 455 540-••G	596	96.1	96.1	95.4	0.71	1057	5.9	8011	1.1	2.2	42	4800	82
500 r/min = 12-poles			400 V 50 Hz			CENELEC-design									
30	M3BP 280 SMB	3GBP 286 220-••G	493	90.2	89.5	86.9	0.59	81.3	5.8	581	1.9	3	2.2	645	71
37	M3BP 280 SMC	3GBP 286 230-••G	493	90.6	89.8	87.2	0.58	101	6.3	716	2	3.2	2.85	725	71
45	M3BP 315 SMB	3GBP 316 220-••G	494	92.8	92.9	92	0.76	92	6.5	869	1.6	2.6	4.1	930	71
55	M3BP 315 SMC	3GBP 316 230-••G	493	93	93.2	92.4	0.77	110	6.5	1065	1.6	2.6	4.9	1000	71
75	M3BP 315 MLA	3GBP 316 410-••G	493	93.2	93.4	92.8	0.76	152	6.3	1452	1.5	2.5	5.8	1150	71
90	M3BP 355 SMA	3GBP 356 210-••G	495	93.5	93.5	92.5	0.72	192	5.7	1736	1.3	2.4	7.9	1520	75
110	M3BP 355 SMB	3GBP 356 220-••G	495	93.8	93.8	92.7	0.71	238	6	2122	1.4	2.5	9.7	1680	75
132	M3BP 355 SMC	3GBP 356 230-••G	495	93.9	93.9	92.9	0.71	285	6	2546	1.4	2.5	11.3	1820	77
160	M3BP 355 MLB	3GBP 356 420-••G	494	93.8	94	93.3	0.74	332	5.7	3092	1.3	2.4	13.5	2180	77
200 ¹⁾	M3BP 355 LKB	3GBP 356 820-••G	494	93.9	94.1	93.4	0.73	421	5.8	3866	1.4	2.4	16.5	2600	79
200	M3BP 400 LB	3GBP 406 520-••G	495	95	95	94.3	0.79	384	5.4	3858	1.1	2.2	20	3100	82
200	M3BP 400 LKB	3GBP 406 820-••G	495	95	95	94.3	0.79	384	5.4	3858	1.1	2.2	20	3100	82
250	M3BP 400 LC	3GBP 406 530-••G	495	95.2	95.2	94.5	0.79	479	5.7	4822	1.1	2.2	24	3400	82
250	M3BP 400 LKC	3GBP 406 830-••G	495	95.2	95.2	94.5	0.79	479	5.7	4822	1.1	2.2	24	3400	82
315	M3BP 450 LB	3GBP 456 520-••G	496	95.6	95.6	94.8	0.76	625	5.5	6064	1	2.1	34	4300	82
355	M3BP 450 LC	3GBP 456 530-••G	495	95.6	95.6	95	0.76	705	5.3	6848	1	2	38	4550	82
400 ¹⁾	M3BP 450 LD	3GBP 456 540-••G	495	95.7	95.8	95.2	0.77	783	5.3	7716	1	2	42	4800	82

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