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

400 V 50 Hz

Output kW		Motor type		Product code		Speed r/min	Effi-ciency %	Power factor cos φ	Current I_N A	Current $\frac{I_s}{I_N}$	Torque T_N Nm	Torque $\frac{T_s}{T_N}$	Torque $\frac{T_{max}}{T_N}$
3000 r/min = 2 poles				**Basic design**									
0.37	2)	**QU**	**71 M2 AT**	GST	071 310-••C	2770	67.0	0.82	0.97	4.3	1.28	2.3	2.4
0.55	2)		**71 M2 BT**		071 320-••C	2790	71.0	0.83	1.35	4.6	1.88	2.3	2.4
0.75	3)		**80 M2 AT**		081 310-••C	2830	77.0	0.88	1.6	5.5	2.53	2.5	2.1
1.1	3)		**80 M2 BT**		081 320-••C	2835	80.0	0.88	2.25	5.7	3.7	2.6	2.3
1.5	4)		**90 S2 AT**		091 110-••C	2850	81.5	0.88	3.0	6.2	5.0	2.6	2.5
2.2	4)		**90 L2 AT**		091 510-••C	2840	84.0	0.88	4.3	6.7	7.4	2.8	3.0
3	4)		**100 L2 AT**		101 510-••C	2870	85.0	0.88	5.8	7.0	10	2.7	3.1
4	4)		**112 M2 AT**		111 310-••C	2880	85.0	0.89	7.6	7.4	13	2.5	3.0
5.5	4)		**132 S2 AT**		131 110-••C	2900	87.0	0.88	10.4	6.7	18	2.5	3.0
7.5	4)		**132 S2 BT**		131 120-••C	2900	87.5	0.89	13.9	6.9	24.5	2.5	3.1
11		**M2BA**	**160 MA**	3GBA	161 310-••D	2930	91.2	0.88	20	6.3	36	1.9	2.5
15			**160 M**		161 300-••D	2920	91.7	0.90	26.5	6.6	49	2.3	2.5
18.5			**160 L**		161 500-••D	2920	92.4	0.91	32	7.3	60	2.6	2.7
22			**180 M**		181 300-••D	2930	92.8	0.89	38.5	7.2	71	2.5	2.7
30			**200 MLA**		201 410-••D	2955	93.2	0.88	53	7.3	97	2.4	3.1
37			**200 MLB**		201 420-••D	2950	93.6	0.89	64	7.3	120	2.5	3.2
45			**225 SMB**		221 220-••D	2960	93.9	0.88	79	7.3	145	2.5	2.8
55			**250 SMA**		251 210-••D	2970	94.4	0.89	95	7.5	177	2.0	3.0
75			**280 SMA**		281 210-••A	2977	94.9	0.88	131	7.5	241	2.3	3.3
90			**280 SMB**		281 220-••A	2975	95.1	0.90	152	7.6	289	2.3	3.1
110			**315 SMA**		311 210-••A	2982	95.1	0.86	194	7.6	352	2.0	3.0
132			**315 SMB**		311 220-••A	2982	95.4	0.88	228	7.4	423	2.2	3.0
160			**315 SMC**		311 230-••A	2981	96.1	0.89	269	7.5	513	2.3	3.0
200			**315 MLA**		311 410-••A	2978	96.3	0.90	334	7.8	641	2.6	3.0
250			**355 S**		351 100-••A	2980	96.1	0.92	410	6.6	801	1.3	3.0
315			**355 SMA**		351 210-••A	2978	96.6	0.92	510	7.7	1010	1.3	3.3
355	1)		**355 SMB**		351 220-••A	2975	96.4	0.92	580	7.1	1140	1.2	3.2
400			**355 MLA**		351 410-••A	2982	96.6	0.92	655	7.7	1281	1.6	3.3
450	1)		**355 MLC**		351 430-••A	2977	96.6	0.92	730	7.9	1444	1.2	3.2
400			**400 M**		401 300-••A	2982	96.6	0.92	655	7.7	1281	1.6	3.3
450	1)		**400 MA**		401 310-••A	2977	96.6	0.92	730	7.9	1444	1.2	3.2
500	1)		**400 LKA**		401 510-••A	2980	96.6	0.93	795	7.0	1602	0.8	2.8
560	1)		**400 LKB**		401 520-••A	2983	96.7	0.92	910	7.3	1793	0.7	3.4
3000 r/min = 2 poles				**High-output design**									
22	1)	**M2BA**	**160 LB**	3GBA	161 520-••D	2920	92.1	0.91	38	7.1	72	2.6	2.6
30	1)		**180 LB**		181 320-••D	2945	93.7	0.89	53	8.3	97	3.1	3.4
45			**200 MLC**		201 430-••D	2950	93.8	0.89	78	7.3	146	2.6	3.3
55			**225 SMC**		221 230-••D	2960	94.3	0.89	95	7.0	177	2.5	2.9
75			**250 SMB**		251 220-••D	2970	95.2	0.90	127	7.3	241	2.1	3.0
110			**280 SMC**		281 230-••A	2977	95.8	0.90	184	8.0	353	2.6	3.1

The two bullets in the product code indicate choice of mounting arrangement (page 15, pos 12), voltage and frequency (below).

Code letters for supplementing the product code for voltage and frequency:

A	B	D	E	F	H
380 VY 50 Hz	380 VΔ 50 Hz	380-420 VΔ 50 Hz 660-690 VY 50 Hz 440-480 VΔ 60 Hz	500 VΔ 50 Hz 575 VΔ 60 Hz	500 VY 50 Hz 575 VY 60 Hz	415 VΔ 50 Hz

S	T	U	X
220-240 VΔ 50 Hz 380-420 VY 50 Hz 440-480 VY 60 Hz	660 VΔ 50 Hz	690 VΔ 50 Hz	Other rated voltage, connection or frequency, max. 690 V

Output kW		Motor type		380 V 50 Hz Speed r/min	Effi-ciency %	Power factor cos φ	Current I_N A	415 V 50 Hz Speed r/min	Effi-ciency %	Power factor cos φ	Current I_N A	Moment of inertia J = ¼ GD² kgm²	Weight kg	Sound pressure level L_P dB(A)
3000 r/min = 2 poles			**Basic design**											
0.37	2)	**QU**	**71 M2 AT**	2730	64.5	0.84	1.04	2790	66.2	0.80	0.97	0.00031	11	57
0.55	2)		**71 M2 BT**	2750	68.6	0.85	1.43	2810	70.3	0.81	1.34	0.0004	11	57
0.75	3)		**80 M2 AT**	2795	74.8	0.90	1.69	2845	76.5	0.86	1.59	0.00097	17	58
1.1	3)		**80 M2 BT**	2800	77.9	0.90	2.4	2850	79.6	0.86	2.25	0.0012	18	58
1.5	4)		**90 S2 AT**	2820	79.7	0.89	3.2	2865	81.2	0.87	2.95	0.0015	22	61
2.2	4)		**90 L2 AT**	2810	82.3	0.89	4.55	2855	83.8	0.87	4.2	0.002	25	61
3	4)		**100 L2 AT**	2845	83.5	0.89	6.1	2880	84.9	0.87	5.7	0.0044	34	65
4	4)		**112 M2 AT**	2855	83.7	0.89	8.2	2890	85.0	0.89	7.4	0.0075	45	68
5.5	4)		**132 S2 AT**	2880	85.9	0.88	11.1	2910	87.2	0.88	10	0.013	61	73
7.5	4)		**132 S2 BT**	2880	86.5	0.89	14.8	2910	87.9	0.89	13.3	0.016	68	73
11		**M2BA**	**160 MA**	2915	90.8	0.89	20.5	2935	91.3	0.86	19.4	0.039	105	70
15			**160 M**	2905	91.2	0.90	27.5	2925	92.0	0.89	25.5	0.047	118	70
18.5			**160 L**	2910	92.0	0.91	33.5	2930	92.6	0.90	31	0.054	133	70
22			**180 M**	2930	92.4	0.90	40.5	2945	93.0	0.88	37.5	0.077	178	72
30			**200 MLA**	2955	93.1	0.89	55	2960	93.3	0.86	52	0.15	250	74
37			**200 MLB**	2950	93.4	0.89	68	2955	93.7	0.87	63	0.18	270	74
45			**225 SMB**	2955	93.7	0.89	82	2965	93.9	0.87	77	0.26	335	74
55			**250 SMA**	2960	94.3	0.89	100	2970	94.5	0.88	92	0.49	420	75
75			**280 SMA**	2974	94.8	0.89	137	2980	94.8	0.87	127	0.8	590	77
90			**280 SMB**	2970	95.1	0.90	159	2978	95.1	0.89	147	0.9	630	77
110			**315 SMA**	2980	95.1	0.87	202	2983	95.1	0.85	190	1.2	860	80
132			**315 SMB**	2980	95.4	0.89	238	2983	95.4	0.87	222	1.4	920	80
160			**315 SMC**	2979	96.1	0.90	282	2982	96.1	0.89	262	1.7	1010	80
200	1)		**315 MLA**	2977	96.3	0.90	350	2981	96.4	0.90	321	2.1	1170	80
250			**355 S**	2978	96.0	0.92	430	2982	96.1	0.92	395	3.8	1550	83
315			**355 SMA**	2975	96.5	0.92	540	2980	96.6	0.92	490	4.8	1750	83
355	1)		**355 SMB**	2973	96.4	0.92	610	2977	96.4	0.92	560	4.8	1750	83
400			**355 MLA**	2980	96.5	0.92	690	2983	96.6	0.91	635	6	2150	83
450	1)		**355 MLC**	2975	96.5	0.92	770	2979	96.6	0.92	705	6	2150	83
400			**400 M**	2980	96.5	0.92	690	2983	96.6	0.91	635	6	2200	83
450	1)		**400 MA**	2975	96.5	0.92	770	2979	96.6	0.92	705	6	2200	83
500	1)		**400 LKA**	2977	96.5	0.93	840	2982	96.6	0.93	770	7.5	2850	85
560	1)		**400 LKB**	2981	96.7	0.92	965	2984	96.8	0.91	885	8.5	2900	85
3000 r/min = 2 poles			**High-output design**											
22	1)	**M2BA**	**160 LB**	2910	91.6	0.91	40	2925	92.4	0.90	37	0.059	140	70
30	1)		**180 LB**	2940	93.5	0.90	55	2950	93.8	0.87	52	0.092	194	72
45			**200 MLC**	2935	93.5	0.89	82	2955	93.8	0.88	76	0.19	280	74
55			**225 SMC**	2950	94.2	0.89	100	2965	94.3	0.88	92	0.29	355	74
75			**250 SMB**	2965	95.0	0.90	134	2970	95.3	0.89	123	0.57	465	75
110	1)		**280 SMC**	2974	95.7	0.91	193	2979	95.8	0.90	179	1.15	690	77

1) Temperature rise class F.
2) Voltage code letters E, S only.
3) Voltage code letters E, S only.
Motors with terminal box on top, code letter E on request.
4) Voltage code letters D, E, S only.
Motors with terminal box on top, code letter E on request.

Further details or special designs on request.

Please note that the frequency converter application in critical conditions may require special rotor design within 355 and 400 frame motors. We therefore recommend a separate checking.