

Technical Data Summary, SBMAX Frame Sizes 70 mm							
Winding selection for 7000 rpm with 380 Vac 3 phase drive							
Issue 1, 19/7/93							
		Frame 70 Volt.380					Units
Reference data:	SBM	70005	7001	70015	70015	70025	
Nominal torque, cont. duty, zero speed (DT=65oC, in air) 1)	Tn	0,5	1,0	1,5	2,0	2,5	Nmrms
Nominal torque, cont. duty, zero speed (DT=105oC, flange mount) 2)	T105	0,9	1,6	2,2	2,6	3,1	Nmrms
Base speed	wn	733	733	733	733	733	rad/s
Nominal power,1)	Pn	264	413	623	779	853	W
Nominal power,2)	P105	493	842	1094	1285	1433	W
Torque at max. speed 1)	Tw	0,4	0,6	0,8	1,1	1,2	Nmrms
Torque at max. speed 2)	Tw105	0,7	1,1	1,5	1,8	2,0	Nmrms
Peak torque,zero speed S.I.R.10% 2)	Tpk	2,8	5,1	6,8	8,4	9,9	Nmrms
Physical data:							
Maximum speed	wmax	700	700	700	700	700	rad/s
Rotor inertia	Jm	0,026	0,040	0,054	0,068	0,081	mkgm2
Acceleration at peak torque	apk	106263	126611	126881	123745	122329	rad/s2
Max. shock on motor, any direction	S	200	200	200	200	200	m/s2
Max. vibration, radial	Vr	200	200	200	200	200	m/s2
Max. vibration, axial	Va	40	40	40	40	40	m/s2
Shaft torsional resonance frequency 3)	fm	N.A.	N.A.	N.A.	N.A.	N.A.	Hz
Mass	M	2,0	2,75	3,5	4,25	5,00	kg
Thermal data:							
Motor losses at nominal power	Ln	31	41	57	67	77	W
Thermal impedance, motor to air	Rtha	2,096774	1,58537	1,14035	0,970149	0,844156	oC/W
Thermal impedance, motor to air+flange	Rthf	1,1	0,99	0,95	0,9	0,85	oC/W
Thermal capacity	Cth	1256	1727	2198	2669	3140	J/oC
Thermal time constant in air	ta	2633	2737	2506	2589	2650	s
No load losses at base speed	L0	12,93847	25,8769	38,8154	47,04898	58,81123	W
Treshold of built-in PTC	PTCt	130	130	130	130	130	oC
Electrical data:							
Pole number	PN	4	4	4	4	4	
Connection		Y	Y	Y	Y	Y	
Back E.M.F. between phases	Ke	0,408	0,417	0,418	0,431	0,424	Vs
Torque constant	Kt	0,706244	0,72153	0,72459	0,745989	0,734	Nm/Arms
Temperature coefficient of E.M.F. and Kt	dKe/dT	-0,09	-0,09	-0,09	-0,09	-0,09	%/oC
Winding resistance, 20oC	Rw	37,8	13,2	7,0	5,2	3,8	Ohm
Winding inductance	Lw	58,8	30,6865	20,6314	16,4011	15,86777	mH
Nominal voltage	Vn	323	319	318	326	320	Vrms
EMF at 1000 rpm	V1000	43	44	44	45	44	Vrms
Nominal current, zero speed	In0	0,72	1,39	2,25	2,82	3,56	Arms
Nominal current at rated power 1)	In	0,55	0,85	1,27	1,54	1,73	Arms
Peak current	lpk	3,9	7,0	9,4	11,2	13,5	Arms
Frequency	fn	233	233	233	233	233	Hz
Efficiency at rated power	n	0,895	0,910	0,916	0,921	0,917	
Min. demagnetization current, 125oC	Idm	4,0	7,8	11,6	15,1	19,2	Apk