

Technical Data Summary, SBMAX Frame Sizes 105 mm						
Winding selection for 2500 rpm with 220 Vac 3 phase drive						
Issue 3, 22/10/98						
		Frame 105				Units
Reference data:	SBM	2502	2504	2506	2508	
Nominal torque, cont. duty, zero speed Tn (DT=65oC, in air) 1)		2,2	4,0	6,0	8,0	Nmrms
Nominal torque, cont. duty, zero speed T105 (DT=135oC, flange mount) 2)		3,6	6,3	8,5	10,3	Nmrms
Base speed	wn	262	262	262	262	rad/s
Nominal power,1)	Pn	560	971	1438	1897	W
Nominal power,2)	P105	829	1410	1870	2245	W
Torque at max. speed 1)	Tw	2,1	3,7	5,5	7,2	Nmrms
Torque at max. speed 2)	Tw105	3,2	5,4	7,1	8,6	Nmrms
Peak torque,zero speed S.I.R.10% 2)	Tpk	11,5	19,8	26,8	32,7	Nmrms
Physical data:						
Maximum speed	wmax	700	700	700	700	rad/s
Rotor inertia	Jm	0,19	0,335	0,48	0,6205	mkgm2
Acceleration at peak torque	apk	60302	59211	55750	52627	rad/s2
Max. shock on motor, any direction	S	200	200	200	200	m/s2
Max. vibration, radial	Vr	200	200	200	200	m/s2
Max. vibration, axial	Va	50	40	40	40	m/s2
Shaft torsional resonance frequency 3)	fm	N.A.	N.A.	N.A.	N.A.	Hz
Mass	M	4,9	7,0	9,1	11,2	kg
Thermal data:						
Motor losses at nominal power	Ln	65	75	97	120	W
Thermal impedance, motor to air	Rtha	1	0,8667	0,6701	0,5417	oC/W
Thermal impedance, motor to air+flange	Rthf	0,6	0,57	0,55	0,53	oC/W
Thermal capacity	Cth	3077	4395	5714	7032	J/oC
Thermal time constant in air	ta	3077	3809	3829	3809	s
No load losses at base speed	L0	6,527	13,054	19,581	26,108	W
Treshold of built-in PTC	PTCt	130	130	130	130	oC
Electrical data:						
Pole number	PN	8	8	8	8	
Connection		Y	Y	Y	Y	
Back E.M.F. between phases	Ke	0,6405	0,651	0,6615	0,6615	Vs
Torque constant	Kt	1,1094	1,1276	1,1458	1,1458	Nm/Arms
Temperature coefficient of E.M.F. and	dKe/dT	-0,09	-0,09	-0,09	-0,09	%/oC
Winding resistance, 20oC	Rw	8,6003	3,1202	1,8345	1,2784	Ohm
Winding inductance	Lw	22,326	11,532	7,938	5,9535	mH
Nominal voltage	Vn	191	186	187	187	Vrms
EMF at 1000 rpm	V1000	67	68	69	69	Vrms
Nominal current, zero speed	In0	2,1	3,8	5,7	7,5	Arms
Nominal current at rated power 1)	In	2,0	3,5	5,1	6,7	Arms
Peak current	Ipk	10	18	23	29	Arms
Frequency	fn	167	167	167	167	Hz
Efficiency at rated power	n	0,896	0,928	0,937	0,940	
Min. demagnetization current, 125oC	Idm	19	38	56	75	Apk