

Technical Data Summary, SBMAX Frame Sizes 70 mm						
Winding selection for 2000 rpm with 220 Vac 3 phase drive						
Issue 1, 19/7/93						
		Frame 70 Volt.220				Units
Reference data:	SBM	20005	2001	20015	2002	
Nominal torque, cont. duty, zero speed (DT=65oC, in air) 1)	Tn	0,5	1,0	1,5	2,0	Nmrms
Nominal torque, cont. duty, zero speed (DT=105oC, flange mount) 2)	T105	0,9	1,7	2,1	2,7	Nmrms
Base speed	wn	209	209	209	209	rad/s
Nominal power,1)	Pn	100	202	312	410	W
Nominal power,2)	P105	152	282	375	467	W
Torque at max. speed 1)	Tw	0,5	1,0	1,5	2,0	Nmrms
Torque at max. speed 2)	Tw105	0,7	1,3	1,8	2,2	Nmrms
Peak torque, zero speed S.I.R.10% 2)	Tpk	2,8	5,3	6,7	8,4	Nmrms
Physical data:						
Maximum speed	wmax	700	700	700	700	rad/s
Rotor inertia	Jm	0,026	0,040	0,054	0,068	mkgm2
Acceleration at peak torque	apk	107385	131255	125351	125161	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	40	40	40	40	m/s2
Shaft torsional resonance frequency 3)	fm	N.A.	N.A.	N.A.	N.A.	Hz
Mass	M	2,0	2,75	3,5	4,25	kg
Thermal data:						
Motor losses at nominal power	Ln	31	41	57	67	W
Thermal impedance, motor to air	Rtha	2,09677	1,58537	1,14035	0,97015	oC/W
Thermal impedance, motor to air+flange	Rthf	1,1	0,99	0,95	0,9	oC/W
Thermal capacity	Cth	1256	1727	2198	2669	J/oC
Thermal time constant in air	ta	2633	2737	2506	2589	s
No load losses at base speed	LO	1,53269	3,06538	4,59808	6,13077	W
Treshold of built-in PTC	PTCt	130	130	130	130	oC
Electrical data:						
Pole number	PN	4	4	4	4	
Connection		Y	Y	Y	Y	
Back E.M.F. between phases	Ke	0,674	0,720	0,731	0,784	Vs
Torque constant	Kt	1,1679	1,24739	1,26574	1,357	Nm/Arms
Temperature coefficient of E.M.F. and Kt	dKe/dT	-0,09	-0,09	-0,09	-0,09	%/oC
Winding resistance, 20oC	Rw	101,1	36,6	21,9	16,9	Ohm
Winding inductance	Lw	160,798	91,7157	62,9554	54,3074	mH
Nominal voltage	Vn	186	183	182	192	Vrms
EMF at 1000 rpm	V1000	71	75	77	82	Vrms
Nominal current, zero speed	In0	0,44	0,84	1,27	1,57	Arms
Nominal current at rated power 1)	In	0,43	0,80	1,22	1,50	Arms
Peak current	lpk	2,4	4,2	5,3	6,2	Arms
Frequency	fn	67	67	67	67	Hz
Efficiency at rated power	n	0,764	0,832	0,845	0,860	
Min. demagnetization current, 125oC	ldm	2,4	4,5	6,7	8,2	Apk