

Technical Data Summary, SBMAX Frame Sizes 205 mm							
Winding selection for 3000 rpm with 380 Vac 3 phase drive							
Issue 2, 3/2/92							
				Frame 205			Units
Reference data:	SBM	3015	3027	3050	3070	3090	
Nominal torque, cont. duty, zero speed (DT=65oC, in air) 1)	Tn	15	28	50	70	90	Nmrms
Nominal torque, cont. duty, zero speed (DT=105oC, flange mount) 2)	T105	21,9	38,8	70,2	98,0	125,9	Nmrms
Base speed	wn	314	314	314	314	314	rad/s
Nominal power,1)	Pn	4714	8055	13079	16428	19338	W
Nominal power,2)	P105	5948	10262	17782	23914	29928	W
Torque at max. speed 1)	Tw	15,0	25,7	41,7	52,3	61,6	Nmrms
Torque at max. speed 2)	Tw105	18,9	32,7	56,6	76,2	95,3	Nmrms
Peak torque, zero speed S.I.R.10% 2)	Tpk	69,1	122,6	221,9	309,8	398,2	Nmrms
Physical data:							
Maximum speed	wmax	500	500	500	500	500	rad/s
Rotor inertia	Jm	3,5	5	8	11	14	mkgm2
Acceleration at peak torque	apk	19742	24525	27735	28164	28443	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.	500	300	Hz
Mass	M	32,0	32,0	44,0	56,0	68,0	kg
Motor lenght	L	336	372	444	516	588	mm
Insulation							
Cooling							
Protection 4)							
Thermal data:							
Motor losses at nominal power	Ln	250	260	300	335	380	W
Thermal impedance, motor to air	Rtha	0,26	0,25	0,217	0,194	0,171	oC/W
Thermal impedance, motor to air+flange	Rthf	0,21	0,21	0,18	0,16	0,14	oC/W
Thermal capacity	Cth	20093	20093	27628	35162	42697	J/oC
Thermal time constant in air	ta	5224	5023	5986	6823	7303	s
No load losses at base speed	L0	26	52	104	156	208	W
Treshold of built-in PTC	PTCt	130	130	130	130	130	oC
Electrical data:							
Pole number	PN	8	8	8	8	8	
Connection		Y	Y	Y	Y	Y	
Back E.M.F. between phases +- 10 %	Ke	0,9036	0,8643	0,943	0,943	0,943	Vs
Torque constant +- 10 %	Kt	1,565	1,497	1,633	1,633	1,633	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 +- 10 %	Rw	1,3446	0,3906	0,166	0,096	0,066	Ohm
Winding inductance +- 30 %	Lw	7,1305	3,4799	1,914	1,59	1,268	mH
Nominal voltage	Vn	311	289	307	307	305	Vrms
EMF at 1000 rpm +- 10 %	V1000	95	90	99	99	99	Vrms
Nominal current, zero speed	In0	10,6	20,1	33,1	46,1	59,0	Arms
Nominal current at rated power 1)	In	10,0	18,0	26,8	33,7	39,7	Arms
Peak current	lpk	44	82	136	190	244	Arms
Frequency	fn	200	200	200	200	200	Hz
Efficiency at rated power	n	0,950	0,969	0,978	0,980	0,981	
Min. demagnetization current, 125oC	ldm	46	95	175	263	350	Apk