

Technical Data Summary, SBMAX Frame Sizes 205 mm						
Winding selection for 1700 rpm with 220 Vac 3 phase drive						
Issue 2, 3/2/92						
		Frame 205				Units
Reference data:	SBM	1727	1750	1770	1790	
Nominal torque, cont. duty, zero speed (DT=65oC, in air) 1)	Tn	28	50	70	90	Nmrms
Nominal torque, cont. duty, zero speed (DT=105oC, flange mount) 2)	T105	38,8	70,2	98,0	125,9	Nmrms
Base speed	wn	180	180	180	180	rad/s
Nominal power,1)	Pn	4970	8657	11711	14698	W
Nominal power,2)	P105	6088	10849	14959	19064	W
Torque at max. speed 1)	Tw	27,6	48,1	65,1	81,7	Nmrms
Torque at max. speed 2)	Tw105	33,8	60,3	83,1	105,9	Nmrms
	0 Tpk	122,6	221,9	309,8	398,2	Nmrms
Physical data:						
Maximum speed	wmax	500	500	500	500	rad/s
Rotor inertia	Jm	5	8	11	14	mkgm2
Acceleration at peak torque	apk	24525	27735	28164	28443	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.	500	300	Hz
Mass	M	32,0	44,0	56,0	68,0	kg
Motor lenght	L	372	444	516	588	mm
Insulation						
Cooling						
Protection 4)						
Thermal data:						
Motor losses at nominal power	Ln	260	300	335	380	W
Thermal impedance, motor to air	Rtha	0,25	0,216667	0,19403	0,17105263	oC/W
Thermal impedance, motor to air+flange	Rthf	0,21	0,18	0,16	0,14	oC/W
Thermal capacity	Cth	20093	27628	35162	42697	J/oC
Thermal time constant in air	ta	5023	5986	6823	7303	s
No load losses at base speed	L0	20,1923	40,38464	60,57696	80,7692764	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	0,86429	0,942857	0,942857	0,94285714	Vs
Torque constant	Kt	1,49699	1,633076	1,633076	1,63307648	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	0,39061	0,16564	0,095584	0,06612245	Ohm
Winding inductance	Lw	3,47988	1,913832	1,589857	1,26808163	mH
Nominal voltage	Vn	170	180	180	180	Vrms
EMF at 1000 rpm	V1000	90	99	99	99	Vrms
Nominal current, zero speed	In0	20,1	33,1	46,1	59,0	Arms
Nominal current at rated power 1)	In	19,3	30,8	41,7	52,4	Arms
Peak current	lpk	82	136	190	244	Arms
Frequency	fn	115	115	115	115	Hz
Efficiency at rated power	n	0,950	0,967	0,972	0,975	
Min. demagnetization current, 125oC	Idm	95	175	263	350	Apk