

Technical Data Summary, SBMAX Frame Sizes 205 mm							
Winding selection for 2000 rpm with 380 Vac 3 phase drive							
Issue 2, 3/2/92							
				Frame 205			Units
Reference data:	SBM	Prov. 2015	20527	2050	2070	2090	
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	209	209	209	209	209	rad/s
Nominal power,1)	Pn	3168	5705	9830	13162	16373	W
Nominal power,2)	P105	4019	7036	12479	17136	21745	W
Torque at max. speed 1)	Tw	15,1	27,3	47,0	62,9	78,3	Nmrms
Torque at max. speed 2)	Tw105	19,2	33,6	59,6	81,9	104,0	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	10742	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	240	260	300	335	380	W
Thermal impedance, motor to air	Rtha	0,2708	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	5442	5023	5986	6823	7303	s
No load losses at base speed	L0	13,1	26,1	52,2	78,3	104,1	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	Ke	1,375	1,3357	1,414	1,414	1,257	Vs
Torque constant	Kt	2,3816	2,3135	2,45	2,45	2,177	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	3,1136	0,9329	0,373	0,215	0,118	Ohm
Winding inductance	Lw	18,626	8,8714	4,959	3,306	2,254	mH
Nominal voltage	Vn	325	305	315	311	276	Vrms
EMF at 1000 rpm	V1000	144	140	148	148	132	Vrms
Nominal current, zero speed	In0	6,8	13,0	22,1	30,7	44,3	Arms
Nominal current at rated power 1)	In	6,6	12,3	20,1	26,9	37,7	Arms
Peak current	lpk	29	53	91	126	183	Arms
Frequency	fn	133	133	133	133	133	Hz
Efficiency at rated power	n	0,930	0,956	0,970	0,975	0,977	
Min. demagnetization current, 125oC	Idm	31	63	119	179	268	Apk