

RPM6000

Technical Data Summary, SBMAX Frame Sizes 105 mm						
Winding selection for 6000 rpm with 380 Vac 3 phase drive						
Issue 3, 22/10/98						
		Frame 105				Units
Reference data:	SBM	6002	6004	6006	6008	
Nominal torque, cont. duty, zero speed (DT=65oC, in air) 1)	Tn	2,2	4,0	6,0	8,0	Nmrms
Nominal torque, cont. duty, zero speed (DT=105oC, flange mount) 2)	T105	3,6	6,2	8,4	10,3	Nmrms
Base speed	wn	628	628	628	628	rad/s
Nominal power,1)	Pn	1107	1510	1942	2243	W
Nominal power,2)	P105	1870	3007	3693	4128	W
Torque at max. speed 1)	Tw	1,8	2,4	3,1	3,6	Nmrms
Torque at max. speed 2)	Tw105	3,0	4,8	5,9	6,6	Nmrms
Peak torque,zero speed S.I.R.10% 2)	Tpk	11,4	19,8	26,4	32,4	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	59893	58989	55046	52275	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	3fm	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	98	120	W
Thermal impedance, motor to air	Rtha	1	0,8667	0,6633	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	3790	3809	s
No load losses at base speed	L0	23,875	47,751	71,626	95,501	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	0,4778	0,4932	0,5012	0,5093	Vs
Torque constant	Kt	0,8275	0,8542	0,868	0,882	Nm/Arms
Temperature coefficient of E.M.F. and	dKe/dT	-0,09	-0,09	-0,09	-0,09	%/oC
Winding resistance, 20oC	Rw	4,8504	1,8043	1,0801	0,7679	Ohm
Winding inductance	Lw	12,422	6,6185	4,5563	3,5284	mH
Nominal voltage	Vn	319	319	322	326	Vrms
EMF at 1000 rpm	V1000	50	52	52	53	Vrms
Nominal current, zero speed	In0	2,8	5,0	7,4	9,7	Arms
Nominal current at rated power 1)	In	2,3	3,0	3,8	4,4	Arms
Peak current	Ipk	14	23	30	37	Arms
Frequency	fn	400	400	400	400	Hz
Efficiency at rated power	n	0,945	0,953	0,952	0,949	
Min. demagnetization current, 125oC	Idm	20	39	57	75	Apk