

Technical Data Summary, SBMAX Frame Sizes 105 mm						
Winding selection for 1600 rpm with 220 Vac 3 phase drive						
Issue 3, 22/10/98						
		Frame 105				Units
Reference data:	SBM	1602	1604	1606	1608	
Nominal torque, cont. duty, zero speed Tn (DT=65oC, in air) 1)		2,2	4,0	6,0	8,0	Nmrms
Nominal torque, cont. duty, zero speed T105 (DT=135oC, flange mount) 2)		3,7	6,2	8,4	10,4	Nmrms
Base speed	wn	167	167	167	167	rad/s
Nominal power,1)	Pn	374	650	972	1297	W
Nominal power,2)	P105	542	904	1217	1497	W
Torque at max. speed 1)	Tw	2,2	3,9	5,8	7,8	Nmrms
Torque at max. speed 2)	Tw105	3,2	5,4	7,3	9,0	Nmrms
Peak torque,zero speed S.I.R.10% 2)	Tpk	11,6	19,5	26,5	32,9	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	61256	58343	55257	52941	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 3)	fm	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	76	97	118	W
Thermal impedance, motor to air	Rtha	1	0,8553	0,6701	0,5508	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	3759	3829	3874	s
No load losses at base speed	L0	3,0354	6,0709	9,1063	12,142	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	0,9386	0,9545	0,9545	0,9545	Vs
Torque constant	Kt	1,6258	1,6533	1,6533	1,6533	Nm/Arms
Temperature coefficient of E.M.F. and	dKe/dT	-0,09	-0,09	-0,09	-0,09	%/oC
Winding resistance, 20oC	Rw	17,899	6,9095	3,8883	2,6305	Ohm
Winding inductance	Lw	47,949	24,794	16,529	12,397	mH
Nominal voltage	Vn	188	181	179	177	Vrms
EMF at 1000 rpm	V1000	98	100	100	100	Vrms
Nominal current, zero speed	In0	1,5	2,6	3,9	5,2	Arms
Nominal current at rated power 1)	In	1,4	2,5	3,7	4,9	Arms
Peak current	Ipk	7	12	16	20	Arms
Frequency	fn	106	106	106	106	Hz
Efficiency at rated power	n	0,852	0,895	0,909	0,917	
Min. demagnetization current, 125oC	Idm	19	38	56	75	Apk