

Technical Data Summary, SBMAX Frame Sizes 70 mm							
Winding selection for 7500 rpm with 220 Vac 3 phase drive							
Issue 1, 19/7/93							
		Frame 70 Volt.220					Units
Reference data:	SBM	75005	7501	75015	7502	75025	
Nominal torque, cont. duty, zero speed (DT=65oC, in air) 1)	Tn	0,5	1,0	1,5	2,0	2,5	Nmrms
Nominal torque, cont. duty, zero speed (DT=105oC, flange mount) 2)	T105	0,9	1,7	2,2	2,7	3,0	Nmrms
Base speed	wn	785	785	785	785	785	rad/s
Nominal power,1)	Pn	276	401	518	466	447	W
Nominal power,2)	P105	537	911	1135	1276	1246	W
Torque at max. speed 1)	Tw	0,4	0,5	0,7	0,6	0,6	Nmrms
Torque at max. speed 2)	Tw105	0,7	1,2	1,4	1,6	1,6	Nmrms
Peak torque,zero speed S.I.R.10% 2)	Tpk	2,9	5,2	6,8	8,4	9,5	Nmrms
Physical data:							
Maximum speed	wmax	700	700	700	700	700	rad/s
Rotor inertia	Jm	0,026	0,040	0,054	0,068	0,081	mkgm2
Acceleration at peak torque	apk	108996	130521	127151	125085	117079	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	f <sub>fm</sub>	N.A.	N.A.	N.A.	N.A.	N.A.	Hz
Mass	M	2,0	2,75	3,5	4,25	4,25	kg
Thermal data:							
Motor losses at nominal power	Ln	31	41	55	65	78	W
Thermal impedance, motor to air	R <sub>tha</sub>	2,0968	1,5854	1,1818	1	0,8333	oC/W
Thermal impedance, motor to air+flange	R <sub>thf</sub>	1,1	0,99	0,95	0,9	0,9	oC/W
Thermal capacity	C <sub>th</sub>	1256	1727	2198	2669	2669	J/oC
Thermal time constant in air	t <sub>a</sub>	2633	2737	2597	2669	2224	s
No load losses at base speed	L0	14,537	29,075	43,612	58,149	72,687	W
Treshold of built-in PTC	PTCt	130	130	130	130	130	oC
Electrical data:							
Pole number	PN	4	4	4	4	4	
Connection		Y	Y	Y	Y	Y	
Back E.M.F. between phases	K <sub>e</sub>	0,219	0,226	0,228	0,226	0,221	Vs
Torque constant	K <sub>t</sub>	0,3791	0,3913	0,3944	0,391	0,382	Nm/Arms
Temperature coefficient of E.M.F. and	dK <sub>e</sub> /dT	-0,09	-0,09	-0,09	-0,09	-0,09	%/oC
Winding resistance, 20oC	R <sub>w</sub>	10,3	3,6	2,1	1,4	1,1	Ohm
Winding inductance	L <sub>w</sub>	15,531	8,2747	5,603	4,5135	3,9457	mH
Nominal voltage	V <sub>n</sub>	184	184	183	180	175	Vrms
EMF at 1000 rpm	V1000	23	24	24	24	23	Vrms
Nominal current, zero speed	I <sub>n0</sub>	1,37	2,65	4,07	5,36	6,77	Arms
Nominal current at rated power 1)	I <sub>n</sub>	1,00	1,43	1,85	1,74	1,77	Arms
Peak current	I <sub>pk</sub>	7,5	13,3	17,3	21,6	24,9	Arms
Frequency	f <sub>n</sub>	250	250	250	250	250	Hz
Efficiency at rated power	η	0,899	0,907	0,904	0,878	0,851	
Min. demagnetization current, 125oC	I <sub>dm</sub>	7,4	14,4	21,3	28,4	35,6	Apk