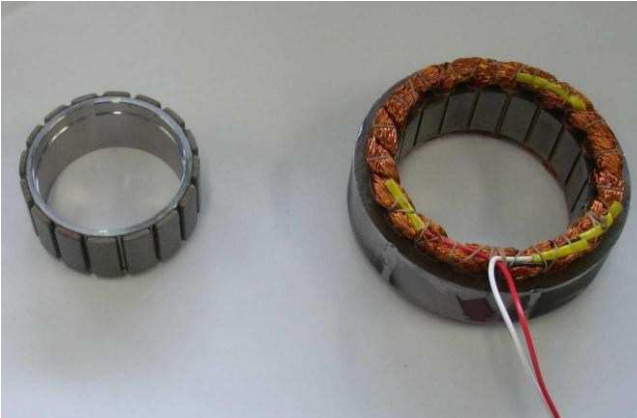


MSK brushless servomotors in kit-form (sizes 1-4)

Datasheet



- No. of poles: 6
- Electrical connections: flying leads, 150 mm
- Thermal protection: PTC, optional: thermal switch 145°C, KTY or NTC
- Rotor with straight through hole, optional: with shaft (tbd)

Designation:

MSK3-0130-30-320-T1

Family: MSK = MACCON Servo kit

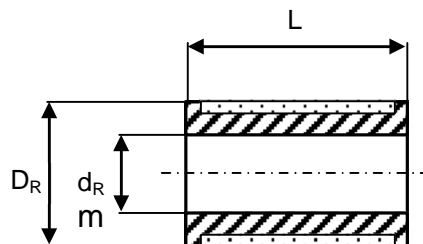
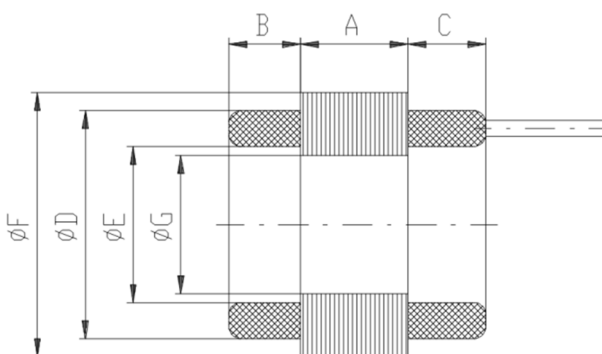
Frame size: 1, 2, 3, 4

Nominal torque in Ncm

Nominal speed ÷ 100 in UpM

Thermal protection Tx: 0=Switch, 1=PTC
2=NTC, 3=KTY83-110° C, 4=KTY84-130° C

Nominal bus voltage in Vdc



Dimensions (mm):

	Stator							Rotor		
	A	B max.	C max.	D max.	E min.	F	G	DR, max.	dR, max.	L max.
MSK1-0010	15	7	8	30	27	34	23	22,1	13	32
MSK1-0020	30	7	8	30	27	34	23	22,1	13	47
MSK1-0030	45	7	8	30	27	34	23	22,1	13	62
MSK2-0020	15	12	13	40	26	44,1	24	22,2	13	32
MSK2-0040	30	12	13	40	26	44,1	24	22,2	13	47
MSK2-0060	45	12	13	40	26	44,1	24	22,2	13	62
MSK2-0080	60	12	13	40	26	44,1	24	22,2	13	77
MSK2-0095	75	12	13	40	26	44,1	24	22,2	13	92
MSK3-0065	18	13	17	62	44	68,1	39	38,2	26	35
MSK3-0130	36	13	17	62	44	68,1	39	38,2	26	53
MSK3-0190	54	13	17	62	44	68,1	39	38,2	26	71
MSK3-0250	72	13	17	62	44	68,1	39	38,2	26	89
MSK3-0300	90	13	17	62	44	68,1	39	38,2	26	107
MSK4-0260	45	18	22	81	52	90,1	47	46,1	33	62
MSK4-0390	60	18	22	81	52	90,1	47	46,1	33	77
MSK4-0530	75	18	22	81	52	90,1	47	46,1	33	93
MSK4-0750	120	18	22	81	52	90,1	47	46,1	33	139
MSK4-0950	175	18	22	81	52	90,1	47	46,1	33	184

Winding data for operation at 90 – 320 Vdc bus voltage:

Motor model	Nominal torque	Nominal current	Nominal speed	Peak torque	Peak current	Voltage constant	Torque constant	Resistance (Ph.-Ph.)	Inductance (Ph.-Ph.)	Rotor inertia	Weight
	M _n	I _n	n _n	M _{max}	I _{max}	K _E	K _T	R _{2ph}	L _{2ph}	J	m
	Nm	A _{eff.}	min ⁻¹	Nm	A _{eff.}	V _{dc} /1000	Nm/ A _{eff.}	Ω	mH	kgcm ²	kg
MSK1-0010-60-320	0.09	0.56	6000	0.4	2.5	14.8	0.17	38.9	9.2	0.06	
MSK1-0020-60-320	0.18	0.92	6000	0.8	4.2	17.7	0.21	18.9	4.5	0.08	
MSK1-0030-60-320	0.27	0.89	6000	1.2	4.1	26.9	0.31	22.9	6.5	0.10	
MSK2-0020-45-320	0.19	0.60	4500	0.8	2.5	29.0	0.34	54.1	32.0	0.06	
MSK2-0040-45-320	0.36	0.88	4500	1.6	4.0	36.8	0.43	26.3	21.4	0.08	
MSK2-0060-45-320	0.55	1.18	4500	2.4	5.3	42.4	0.49	19.9	17.2	0.11	
MSK2-0080-45-320	0.72	1.47	4500	3.2	6.7	43.8	0.51	14.6	14.4	0.13	
MSK2-0095-45-320	0.85	1.71	4500	3.8	7.8	44.5	0.52	10.7	11.3	0.18	
MSK3-0065-30-320	0.60	1.04	3000	2.6	4.6	52.3	0.61	28.2	33.3	0.50	
MSK3-0130-30-320	1.15	1.58	3000	5.2	7.2	66.5	0.78	12.7	21.5	0.65	
MSK3-0190-30-320	1.6	2.22	3000	7.6	10.7	65.1	0.76	6.7	13.1	0.92	
MSK3-0250-30-320	2.2	2.70	3000	10	13.0	70.7	0.83	5.4	11.7	1.4	
MSK3-0300-30-320	2.5	3.05	3000	12	15.0	73.5	0.86	4.1	9.4	1.5	
MSK4-0260-30-320	2.3	3.0	3000	10.4	18.9	70.7	0.83	3.6	15.9	1.9	
MSK4-0390-30-320	3.3	4.35	3000	15.6	28.9	69.3	0.81	2.3	11.8	2.25	
MSK4-0530-30-320	4.6	5.9	3000	21.2	38.8	70.0	0.82	1.7	9.8	2.65	
MSK4-0750-30-320	6.4	8.1	3000	30	54.4	70.7	0.83	0.9	5.6	4.15	
MSK4-0950-30-320	8.5	10.5	3000	38	67.6	72.1	0.84	0.6	4.1	6.05	

Winding data for operation at 320 – 680 Vdc bus voltage:

Motor model	Nominal torque	Nominal current	Nominal speed	Peak torque	Peak current	Voltage constant	Torque constant	Resistance Ph.-Ph.)	Inductance Ph.-Ph.)	Rotor inertia	Weight
	M_n	I_n	n_n	M_{max}	I_{max}	K_E	K_T	R_{2ph}	L_{2ph}	J	m
	Nm	A _{eff.}	min ⁻¹	Nm	A _{eff.}	V _{dc} /1000	Nm/ A _{eff.}	Ω	mH	kgcm ²	kg
MSK2-0020-45-560	0.19	0.48	4500	0.8	2.0	36.1	0.42	84.1	50.0	0.06	
MSK2-0040-45-560	0.36	0.51	4500	1.6	2.3	63.6	0.74	77.0	61.5	0.08	
MSK2-0060-45-560	0.55	0.70	4500	2.4	3.1	70.7	0.83	50.8	45.5	0.11	
MSK2-0080-45-560	0.72	0.86	4500	3.2	3.9	75.0	0.88	38.4	39.7	0.13	
MSK2-0095-45-560	0.85	1.08	4500	3.8	4.9	70.7	0.83	26.9	28.8	0.18	
MSK3-0065-30-560	0.60	0.64	3000	2.6	2.8	84.9	0.99	75.0	88.0	0.50	
MSK3-0130-30-560	1.15	0.95	3000	5.2	4.3	110.3	1.29	34.5	62.0	0.65	
MSK3-0190-30-560	1.6	1.26	3000	7.6	6.1	114.6	1.34	20.9	40.4	0.92	
MSK3-0250-30-560	2.15	1.62	3000	10	7.7	118.8	1.39	15.0	33.2	1.4	
MSK3-0300-30-560	2.5	1.82	3000	12	9.0	123.0	1.44	11.6	26.7	1.5	
MSK4-0260-30-560	2.3	1.85	3000	10.4	11.5	116.0	1.36	9.6	41.5	1.9	
MSK4-0390-30-560	3.3	2.60	3000	15.6	17.3	116.0	1.36	6.3	33.1	2.25	
MSK4-0530-30-560	4.6	3.75	3000	21.2	25.1	110.3	1.29	4.2	24.0	2.65	
MSK4-0750-30-560	6.4	4.35	3000	30	29.4	132.9	1.55	3.0	19.2	4.15	
MSK4-0950-30-560	8.5	6.20	3000	38	39.6	123.0	1.44	1.7	11.7	6.05	

Other windings available on request.

Colour coding:

Motor Phase	Halls	Thermal protection
U	white	U, /U
V	blue	V, /V
W	red	W, /W
		+5V
		GND