

SEM / Servo Dynamics Servo Motor Technical Data: MTS30 Series (In stock models highlighted.)

Parameter	Unit	MTS30 E4-52	MTS30 E4-32	MTS30 E4-25	MTS30 E4-20	MTS30 F4-52	MTS30 F4-45	MTS30 F4-39	MTS30 F4-25	MTS30 H4-65	MTS30 H4-44	MTS30 H4-33	MTS30 H4-22	MTS30 M4-59	MTS30 M4-48	MTS30 M4-38
Voltage gradient no load	volts/krpm	52	32	25	20	52	45	39	25	65	44	33	22	59	48	38
Max.terminal voltage	volts	140	130	100	80	140	140	140	100	140	140	130	90	14	140	140
Max. Speed	RPM	2700	4000	4000	4000	2700	3100	3600	4000	2100	3100	4000	4000	2400	3000	3700
Continuous stall torque	Nm	1.2	1.2	1.2	1.2	1.6	1.6	1.6	1.6	2.1	2.1	2.1	2.1	3	3	3
TENV	lb-in	10.6	10.6	10.6	10.6	14	14	14	14	19	19	19	19	26	26	26
Peak Stall Torque	Nm	6	6	6	6	7.5	7.5	7.5	7.5	10	10	10	10	14	14	14
	lb-in	53	53	53	53	66	66	66	66	88	88	88	88	124	124	124
Continuous stall current rms	Amps	2.5	4.1	5.4	7	3.4	3.9	4.4	7	3.5	4.4	6.8	10.5	5.5	6.8	8.6
Rotor Polar Moment of Inertia	Kg.m ²	0.0011	0.0011	0.0011	0.0011	0.0012	0.0012	0.0012	0.0012	0.0014	0.0014	0.0014	0.0014	0.0017	0.0017	0.0017
	lb-in Sec ²	0.01	0.01	0.01	0.01	0.011	0.011	0.011	0.011	0.012	0.012	0.012	0.012	0.015	0.015	0.015
Voltage constant Kv	volts sec rad-1	0.48	0.29	0.22	0.17	0.47	0.41	0.36	0.23	0.61	0.43	0.31	0.2	0.54	0.44	0.35
Torque constant Kt (line-line)	Nm/Amp	0.48	0.29	0.22	0.17	0.47	0.41	0.36	0.23	0.61	0.43	0.31	0.2	0.54	0.44	0.35
	lb-in/Amp	4.2	2.6	1.9	1.5	4.2	3.6	3.2	2	5.4	3.8	2.7	1.7	4.8	3.9	3.1
Armature resistance	Ohms	5.9	2.2	1.25	0.9	4	3.1	2.3	1	4.6	2	1.3	0.4	2	1.3	0.82
Armature inductance	Millihenrys	28	10	6	3.7	22	16	13	5	24	12	6	2.4	15.5	10.5	6.5
Mechanical time constant	Milliseconds	30	30	30	30	23	23	23	23	18	18	18	18	13	13	13
Thermal time constant	Minutes	40	40	40	40	40	40	40	40	50	50	50	50	50	50	50
Static friction torque	Nm	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Motor weight	Kg	5.1	5.1	5.1	5.1					6.5	6.5	6.5	6.5	7.3	7.3	7.3
	lb	11	11	11	11	12	12	12	12	14	14	14	14	16	16	16
Tachometer																
Voltage gradient	volts/krpm	9.5	9.5	7	7	9.5	9.5	7	7	9.5	9.5	7	7	9.5	9.5	7
Ripple	%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	cycles/rev	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Armature resistance	Ohms	36	36	24	24	36	36	24	24	36	36	24	24	36	36	24
Armature inductance	Millihenrys	55	55	36	36	55	55	36	36	55	55	36	36	55	55	36
Maximum current	Amps	0.025	0.025	0.035	0.035	0.025	0.025	0.035	0.035	0.025	0.025	0.035	0.035	0.025	0.025	0.035

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Parameter	Unit	MTS30 M4-24	MTS30 R4-58	MTS30 R4-46	MTS30 R4-42	MTS30 R4-37	MTS30 R4-25	MTS30 U4-57	MTS30 U4-48	MTS30 U4-42	MTS30 U4-36	MTS30 U4-26	MTS30 Z4-85	MTS30 Z4-61	MTS30 Z4-37
Voltage gradient no load	volts/krpm	24	58	46	42	37	25	57	48	42	36	26	85	61	37
Max.terminal voltage	volts	100	140	140	135	140	100	140	140	140	140	100	140	140	140
Max. Speed	RPM	4000	2500	3000	3200	3800	4000	2500	3000	3400	4000	4000	1600	2300	3750
Continuous stall torque	Nm	3	3.5	3.5		3.5	3.5	4.5	4.5		4.5	4.5	5.5	5.5	5.5
TENV	lb-in	26	30	30	30	30	30	40	40	40	40	40	48	48	48
	Nm	14	18	18		18	18	22	22		22	22	26	26	26
Peak Stall Torque	lb-in	124	160	160	160	160	160	195	195	195	195	195	230	230	230
Continuous stall current rms	Amps	13.6	6.1	7.6	8.4	9.5	13.3	8.3	10.2	11.3	13.2	16.6	6.8	8.6	12.6
	Kg.m ²	0.0017	0.002	0.002	0.002	0.002	0.002	0.0023	0.0023	0.0023	0.0023	0.0023	0.003	0.003	0.003
Rotor Polar Moment of Inertia	lb-in Sec ²	0.015	0.018	0.018	0.018	0.018	0.018	0.02	0.02	0.02	0.02	0.02	0.027	0.027	0.027
Voltage constant Kv	volts sec rad-1	0.22	0.57	0.46		0.37	0.24	0.54	0.44		0.34	0.24	0.81	0.58	0.35
Torque constant Kt	Nm/Amp	0.22	0.57	0.46		0.37	0.24	0.54	0.54		0.54	0.54	0.81	0.58	0.35
(line-line)	lb-in/Amp	1.9	5	4	3.5	3.3	2.1	4.8	3.9	3.5	3	2.1	7.2	5.1	3.1
Armature resistance	Ohms	0.33	1.7	0.9		0.72	0.4	1.1	0.72		0.45	0.22	2.2	1.2	0.35
Armature inductance	Millihenrys	2.6	11.5	7		5	2.2	8.1	5.5		3.3	1.7	17	8	3
Mechanical time constant	Milliseconds	13	11	11		12	14	10	11		13	16	12	12	10
Thermal time constant	Minutes	50	60	60		60	60	60	60		60	60	60	60	60
Static friction torque	Nm	0.15	0.2	0.2		0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2
	Kg	7.3	8.3	8.3		8.3	8.3	9.3	9.3		9.3	9.3	11.3	11.3	11.3
Motor weight	lb	16	18	18	18	18	18	20	20	20	20	20	25	25	25
Tachometer															
Voltage gradient	volts/krpm	7	9.5	9.5		7	7	9.5	9.5		7	7	9.5	7	7
	%	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ripple	cycles/rev	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Armature resistance	Ohms	24	36	36		24	24	36	36		24	24	36	24	24
Armature inductance	Millihenrys	36	55	55		36	36	55	55		36	36	55	36	36
Maximum current	Amps	0.035	0.025	0.025		0.035	0.035	0.025	0.025		0.035	0.035	0.025	0.035	0.035

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