



## DC Servo Motors

D.C. Servo Motors may be used to provide a corrective action in remote control positioning systems or in controlled velocity drive mechanisms. They may also be used as a small power drive operating in open loop controls. Normally a servo system will consist of an input command in the form of a voltage and a power amplifier to convert the signal into current to suit the drive motor. The D.C. Servo Motor may operate in open loop where friction damping is minimised and the effect of the permanent magnet can provide satisfactory performance. The linear operating characteristics enable relatively simple control circuits to be used. For fast acting and more efficient systems it may be necessary to provide additional damping and the most convenient form is an electrical feedback signal related to motor speed. This can be provided by a separate D.C. Tacho-Generator coupled to the load or the motor shaft.

Provisionally, we have selected standard models. However, the possibilities for custom-designed motors are limitless. Please contact Muirhead Aerospace who will be pleased to discuss your individual requirement.

**Typical Applications:**

- Infra-red Detector Scanning
- Antenna Drive Systems
- Camera Color Mechanisms
- Optical Scanning Drives
- Valve Actuation



Model No	Standard Voltage	Max No-Load Current	Max No-Load Speed	Rated Torque	Nom Rated Speed	Min Stall Torque	Max Load Current	Max Input Power	Max Output Power	Time Const	Moment of Inertia	Theoretic Accel. at Stall	D	L	W
	Volts	Amps	rev/min	g.cm	rev/min	msec	Amps	Watts	Watts	msec	g.cm <sup>2</sup>	rad/sec <sup>2</sup>	mm	mm	g
07P/6V	6	0.30	14200	30	6650	50	1.20	7.20	2.30	28	1.0	49000	15.88	36.96	40
07P/12V	12	0.14	14000	30	6900	55	0.55	6.60	2.50	28	1.0	54000	15.88	36.96	40
07P/18V	18	0.15	14500	30	8000	65	0.42	7.50	2.70	28	1.0	64000	15.88	36.96	40
07P/28V	28	0.065	14000	30	6900	55	0.25	7.00	2.40	28	1.0	54000	15.88	36.96	40
08P/6V	6	0.35	9500	50	5400	100	1.34	8.05	3.09	26	2.7	36500	19.13	36.69	47
08M/12V	12	0.12	15000	50	7300	115	0.82	9.84	4.00	20	2.3	49000	19.13	34.93	56
08P/12V	12	0.20	9600	50	5450	100	0.67	8.05	3.14	26	2.7	36500	19.13	36.69	47
08P/18V	18	0.15	9300	50	5050	100	0.45	8.10	2.88	26	2.7	36500	19.13	36.69	47
08M/18V	18	0.08	15000	50	7300	120	0.55	9.80	4.00	20	2.3	51000	19.13	34.93	56
08P/28V	28	0.05	15000	50	7300	120	0.35	9.80	4.00	20	2.3	51000	19.13	34.93	56
08P/28V	28	0.09	9400	50	5250	100	0.29	8.15	2.98	26	2.7	36500	19.13	36.69	47
09P/6V	6	0.60	12500	30	5875	55	1.50	9.00	-	44	2.7	23600	23.35	38.81	45
09P/12V	12	0.25	11750	30	5000	65	0.65	7.80	-	44	2.7	23600	23.35	38.81	45
09P/28V	28	0.125	12500	14	7500	65	0.20	5.60	-	44	2.7	23600	23.35	38.81	45
11P/6V	6	0.50	9600	120	5350	270	2.60	15.6	7.30	25	7.0	39500	27.05	59.80	150
11M/12V	12	0.36	10000	120	5300	300	1.35	16.2	7.10	21	7.5	39200	26.97	59.80	125
11P/12V	12	0.28	10000	120	6050	270	1.40	16.8	8.10	25	7.0	39500	27.05	59.80	150
11M/28V	28	0.15	10000	120	5300	300	0.65	18.2	7.10	21	7.5	39200	26.97	59.80	125
11P/28V	28	0.11	9600	120	5500	270	0.54	15.0	7.40	25	7.0	39500	27.05	59.80	150
15P/6V	6	1.00	8900	220	5450	600	4.60	27.6	13.6	17	14	45500	36.58	57.15	312
15P/12V	12	0.50	8500	220	5200	600	2.30	27.6	12.9	17	14	45500	36.58	57.15	312
15P/28V	28	0.20	8000	220	5200	640	0.95	26.6	12.9	17	14	45500	36.58	57.15	312
18P/6V	6	1.00	7700	325	5300	1100	5.60	35.6	19.3	38	56	19300	44.45	62.89	480
18P/12V	12	0.47	7900	325	5150	1000	3.00	36.0	19.0	38	56	17500	44.45	62.89	480
18P/28V	28	0.20	7500	325	5300	1100	1.25	35.0	19.3	38	56	19300	44.45	62.89	480
P100/6V	6	0.75	9900	80	6750	200	2.30	13.8	6.2	100	20.5	9300	32.99	50	130
P100/12V	12	0.40	9900	80	6750	200	1.36	16.2	6.2	100	20.5	9300	32.99	50	130
P100/18V	18	0.32	9500	80	6750	200	0.95	17.1	6.2	100	20.5	9300	32.99	50	130
P100/28V	28	0.21	9900	80	6750	200	0.58	16.2	6.2	100	20.5	9300	32.99	50	130
P100/40V	40	0.13	9500	80	6750	200	0.40	16.0	6.2	100	20.5	9300	32.99	50	130
P100/50V	50	0.12	11000	80	7500	200	0.36	17.5	7.0	100	20.5	9300	32.99	50	130
P100/75V	75	0.082	9900	80	6400	200	0.21	15.8	5.8	100	20.5	9300	32.99	50	130

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