

30mm Brushless DC Motor



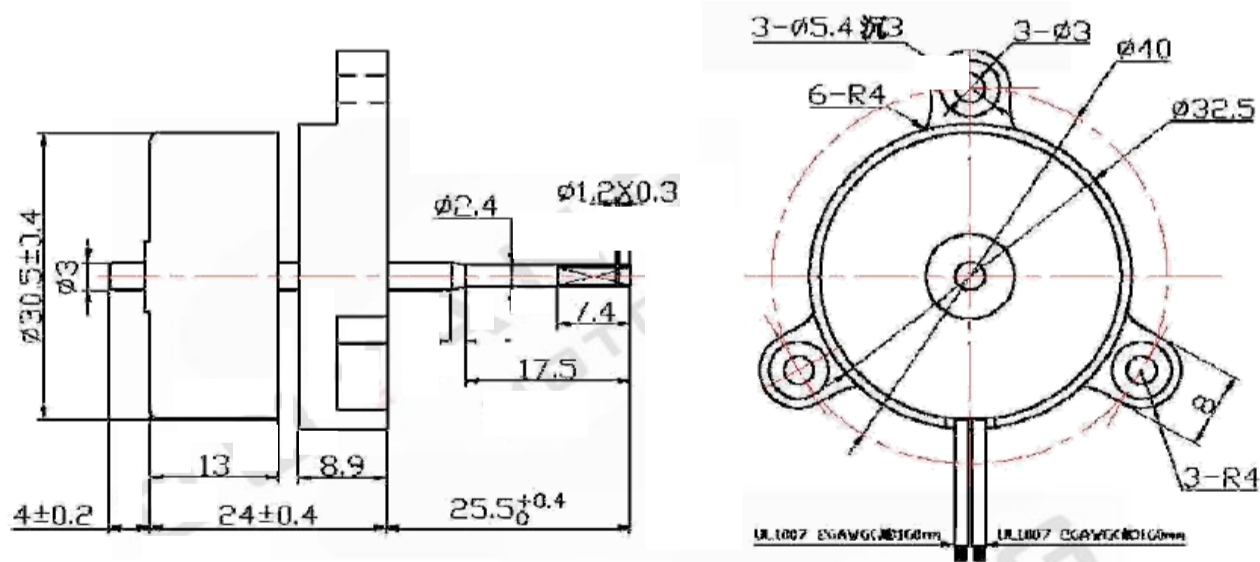
3024

General Specifications

Number of phases	3
Number of poles	8
Operating temperature range	-30°C ~ 85°C
Commutation	Electrically commutated
Bearing type	Shielded ball bearing or sleeve bearing
Housing material	Black anodized aluminum
Magnet material	Sintered Nd-Fe-B
Direction of rotation	Reversible
Insulation Class	Class B (130°C max.)
Dielectric strength	500 VDC for one minute
Insulation resistance	100Mohms min., 500VDC
Shaft Option	Double shaft

Model		DM3024-12-001-02	DM3024-12-001-01			
Rated Voltage	V	12	12			
Rated Speed	RPM	2500	1500			
Rated Current	A	0.15	0.15			
Rated Torque	mNm	90	90			
Output Power	W	1	1			
No-Load Speed	RPM	4500	2700			
No-Load Current	A	0.07	0.07			

Outline Drawing



30mm Brushless DC Motor



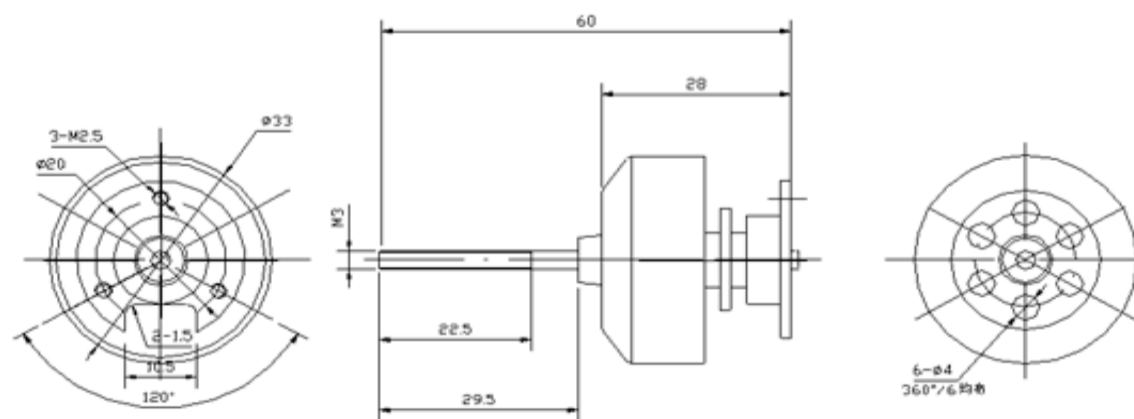
3025

General Specifications

Number of phases	3
Number of poles	2
Operating temperature range	-15°C ~ 45°C
Commutation	Electrically commutated
Bearing type	Shielded ball bearings
Housing material	Black anodized aluminum
Magnet material	Sintered Nd-Fe-B
Direction of rotation	Reversible
Insulation Class	Class B (130°C max.)
Dielectric strength	500 VDC for one minute
Insulation resistance	100Mohms min., 500VDC
Shaft Option	Double shaft

Model		DM3025-08	DM3025-11			
Nominal Voltage	V	8.5	11.5			
Rated Speed	RPM	≥4200	≥8800			
Rated Current	A	≤8.5	≤12			
Rated Torque	mNm	1047 Propeller	9040 Propeller			
No-Load Speed	RPM	≥6500	≥11500			
No-Load Current	A	≤1	≤1.5			
Weight	g	50	60			
Motor Body Length	"L"	25	25			

Outline Drawing



30mm Brushless DC Motor



3056

General Specifications

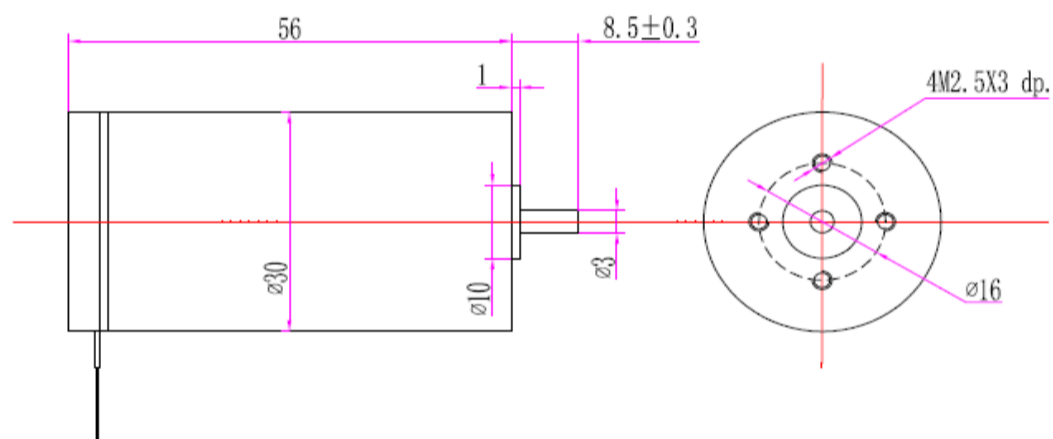
Number of phases	3
Number of poles	2
Operating temperature range	-30°C ~ 85°C
Commutation	Electrically commutated
Bearing type	Shielded ball bearings
Housing material	Black anodized aluminum
Magnet material	Sintered Nd-Fe-B
Direction of rotation	Reversible
Insulation Class	Class B (130°C max.)
Dielectric strength	500 VDC for one minute
Insulation resistance	100Mohms min., 500VDC
Body length option	12mm, 25mm

Model		DM3056-12-016	DM3056-18-014	DM3056-24-011	DM3056-24-025	DM3056-24-029
Nominal Voltage	V	12	18	24	24	24
Rated Speed	RPM	4949	3232	3374	4691	5501
Rated Current	A	1.14	0.66	0.5	0.79	1.01
Rated Torque	mNm	17.99	23.88	21.05	27.34	28.8
Rated Efficiency	%	68	68	62	71	69
Phase Resistance	W	2.1	5.5	12	5.5	4.7
Output Power	W	16.14	13.84	10.94	24.88	28.86
Max. Efficiency	%	68	68	62	71	69
No-Load Speed	RPM	6000	3930	4310	5590	6660
No-Load Current	A	0.17	0.1	0.09	0.11	0.15
Stall Torque	mNm	102.74	134.53	96.99	170	165.55
Friction Torque	mNm	3.15	4.24	4.57	4.4	5.01
Back EMF Constant	mV/RPM	1.94	4.44	5.32	4.19	3.5
Torque Constant	mNm/A	18.53	42.4	50.78	39.97	33.4
Slope of Speed vs. Torque Curve	RPM/mNm	58.4	29.21	44.44	32.88	40.23
Mechanical time Constant	mS	9.79	4.89	7.45	5.51	6.74
Rotor Inertia	g-cm ²	16	16	16	16	16
Max. Angular Acceleration	10 ³ rad/s ²	64.21	84.08	60.62	106.25	103.47
Sensor		Hall Sensor	Hall Sensor	Hall Sensor	Hall Sensor	Hall Sensor
Driver Recommendation		DR2404	DR2404	DR2404	DR2404	DR2404
Weight	g	200	200	200	200	200
Motor Body Length	"L"	56	56	56	56	56

Model		DM3056-24-039	DM3056-24-047	DM3056-24-060	DM3056-24-091	DM3056-24-153
Nominal Voltage	V	24	24	24	24	24
Rated Speed	RPM	7161	7065	8671	14789	17943
Rated Current	A	1.2	2.11	1.63	3.1	4.51
Rated Torque	mNm	27.36	42.59	31.91	33.06	41.62
Rated Efficiency	%	72	63	74	69	72
Phase Resistance	W	3.5	2.8	2.3	1.5	0.9
Output Power	W	39.25	47.08	60.23	90.68	153
Max. Efficiency	%	72	63	74	69	72
No-Load Speed	RPM	8470	8970	10080	17820	21120
No-Load Current	A	0.16	0.37	0.2	0.45	0.59
Stall Torque	mNm	176.98	200.5	228.24	194.36	276.71
Friction Torque	mNm	4.23	9.05	4.46	5.62	6.26
Back EMF Constant	mV/RPM	2.77	2.56	2.34	1.31	1.11
Torque Constant	mNm/A	26.43	24.45	22.3	12.5	10.61
Slope of Speed vs. Torque Curve	RPM/mNm	47.86	44.74	44.16	91.68	76.33
Mechanical time Constant	mS	8.02	7.5	7.4	15.36	12.79
Rotor Inertia	g-cm ²	16	16	16	16	16
Max. Angular Acceleration	10 ³ rad/s ²	110.62	125.31	142.65	121.48	172.94
Sensor		Hall Sensor	Hall Sensor	Hall Sensor	Hall Sensor	Hall Sensor
Driver Recommendation		DR2404	DR2404	DR2404	DR2404	DR2404
Weight	g	200	200	200	200	200
Motor Body Length	"L"	56	56	56	56	56

Model		DM3056-24-002			
Nominal Voltage	V	24			
Rated Speed	RPM	2072			
Rated Current	A	0.23			
Rated Torque	mNm	10.42			
Rated Efficiency	%	44			
Phase Resistance	W	46			
Output Power	W	2.45			
Max. Efficiency	%	44			
No-Load Speed	RPM	3240			
No-Load Current	A	0.06			
Stall Torque	mNm	28.91			
Friction Torque	mNm	3.76			
Back EMF Constant	mV/RPM	6.56			
Torque Constant	mNm/A	62.6			
Slope of Speed vs. Torque Curve	RPM/mNm	112.09			
Mechanical time Constant	mS	18.78			
Rotor Inertia	g-cm ²	16			
Max. Angular Acceleration	10 ³ rad/s ²	18.07			
Sensor		Hall Sensor			
Driver Recommendation		DR2404			
Weight	g	200			
Motor Body Length	"L"	56			

Outline Drawing



Performance Curve

