

40mm Brushless DC Motor



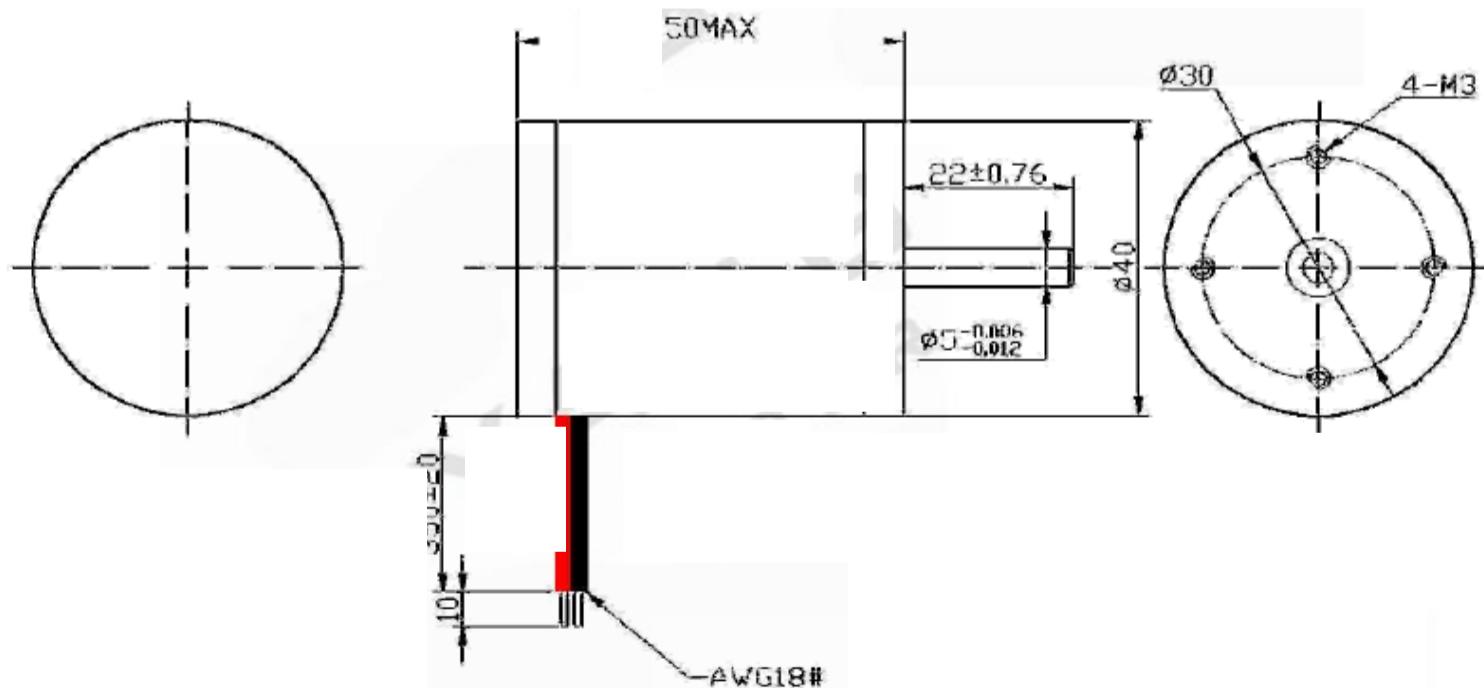
4050

General Specifications

Number of phases	3
Number of poles	2
Operating temperature range	-30°C ~ 85°C
Commutation	Electrically commutated
Bearing type	Shielded ball bearing and 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
Body length option	32mm, 50mm

Model		TBL4050-12-10	TBL4050-12-30	TBL4050-12-60	TBL4050-24-100	TBL4050-24-120
Rated Voltage	V	12	12	12	24	24
Rated Speed	RPM	3000	6000	10000	15000	20000
Rated Current	A	1.2	3.5	10	8	11
Rated Torque	mNm	40	80	100	100	100
Output Power	P	10	30	60	100	120
No-Load Speed	RPM	4,000	7,000	12000	17,000	22,000
No-Load Current	A	0.2	0.4	1.1	0.7	1.1
Weight	g	70	70	70		
Motor Body Length	"L"	32	32	32		

Outline Drawing



40mm Brushless DC Motor



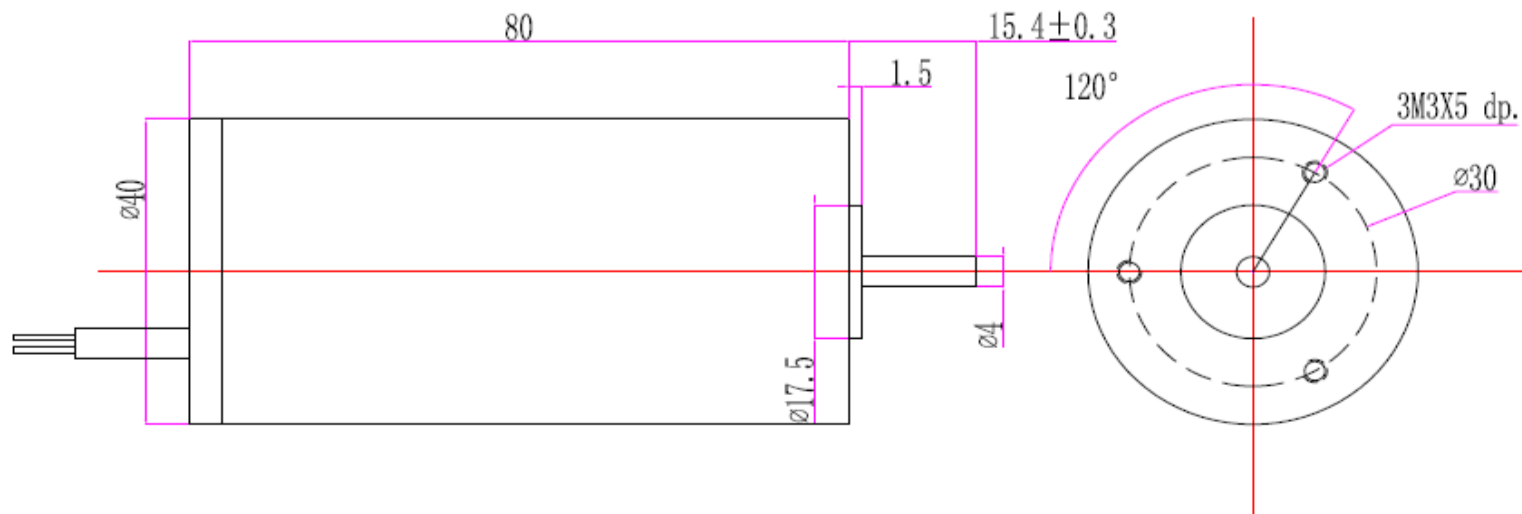
4080

General Specifications

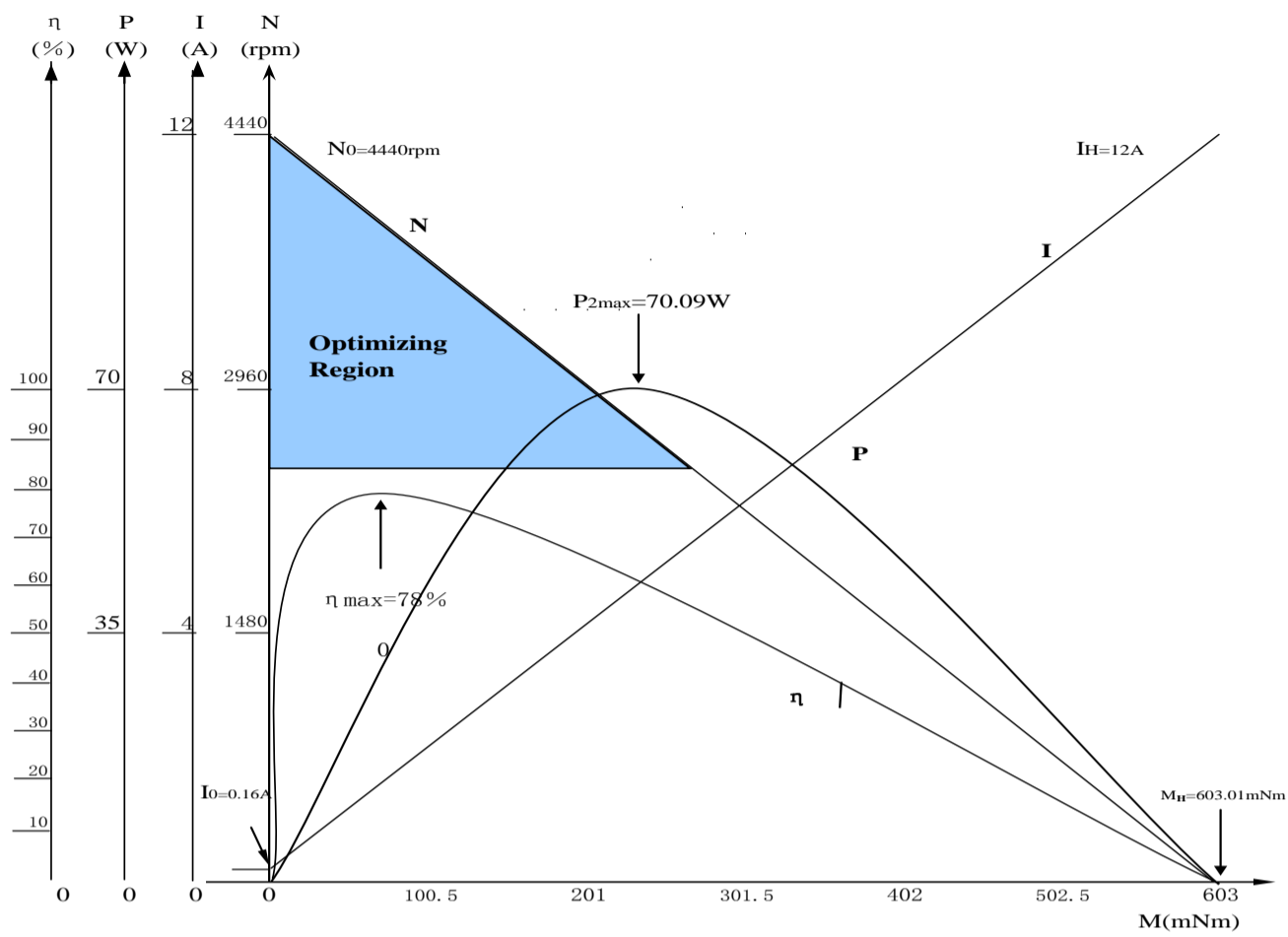
Number of phases	3
Number of poles	2
Operating temperature range	-30°C ~ 85°C
Commutation	Electrically commutated
Bearing type	Shielded ball bearings
Housing material	Black anodized aluminum
Magnet material	Sintered Nd-Fe-B
Direction of rotation	Reversible
Insulation Class	Class B (130°C max.)
Dielectric strength	500 VDC for one minute
Insulation resistance	100Mohms min., 500VDC
Body length option	32mm, 50mm

Model		DM4080-24-070	DM4080-24-100			
Nominal Voltage	V	24	24			
Rated Speed	RPM	3924	6078			
Rated Current	A	1.54	2.1			
Rated Torque	mNm	70.1	62.41			
Rated Efficiency	%	78	79			
Phase Resistance	W	2	1.4			
Output Power	P	70.09	100.35			
Max. Efficiency	%	78	79			
No-Load Speed	RPM	4,440	6,840			
No-Load Current	A	0.16	0.21			
Stall Torque	mNm	603.01	560.41			
Friction Torque	mNm	8.15	6.95			
Back EMF Constant	mV/RPM	5.33	3.47			
Torque Constant	mNm/A	50.93	33.1			
Slope of Speed vs. Torque Curve	RPM/mNm	7.36	12.21			
Mechanical time Constant	mS	7.39	12.25			
Rotor Inertia	g-cm ²	95.88	95.88			
Max. Angular Acceleration	10 ³ rad/s ²	62.89	58.45			
Sensor		Hall Sensor	Hall Sensor			
Driver Recommendation		DR2404	DR2404			
Weight	g	440	440			
Motor Body Length	"L"	80	80			

Outline Drawing



Specification



40mm Brushless DC Motor



4032

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	32mm, 50mm

Model		TBL4032-08	TBL4032-11	TBL4032-11		
Nominal Voltage	V	8.4	11.5	11.5		
Rated Speed	RPM	≥5000	≥4300	≥3700		
Rated Current	A	≤10	≤12.5	≤13.5		
Rated Torque	mNm	1047 propeller	1147 Propeller	1280 Propeller		
No-Load Speed	RPM	≥7500	≥7300	≥6500		
No-Load Current	A	≤1.5	≤1.5	≤1.5		
Weight	g	70	70	70		
Motor Body Length	"L"	32	32	32		

Outline Drawing

