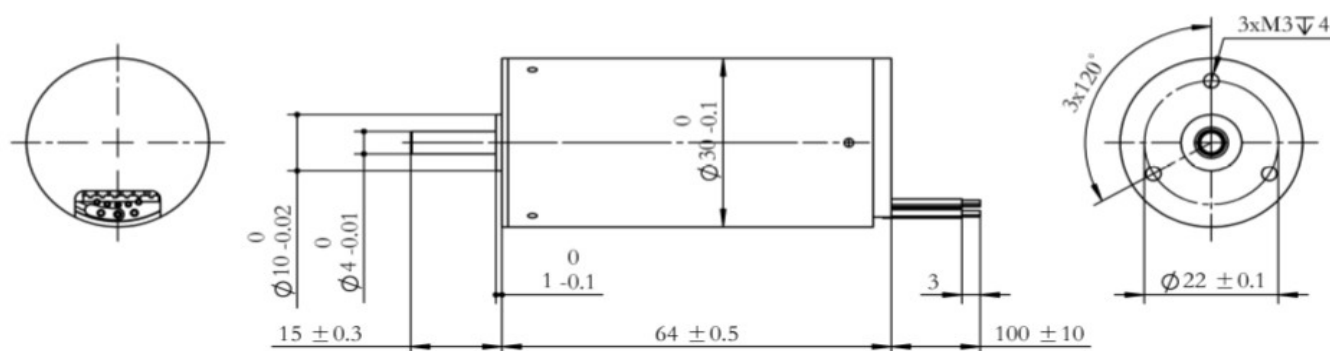


$\Phi 30$ mm brushless motor (high power)



Motor Data		105506412						
Values at nominal voltage								
1	Nominal voltage	U_N	24					V
2	No load speed	n_o	9500					rpm
3	No load current	I_o	200					mA
4	Stall torque	M_H	419.3					mNm
5	Stall current	M_I	17.8					A
6	Max. efficiency	η_{max}	80					%
7	Nominal power	W_N	67					W
8	Nominal speed	n_N	7608					rpm
9	Nominal torque (max.continuous torque)	M_N	83					mNm
10	Nominal current (max.continuous current)	I_N	3.7					A
Characteristics								
11	Terminal resistance phase to phase	R	1.35					Ω
12	Terminal inductance phase to phase	L	0.23					mH
13	Back-EMF constant	K_E	2.50					mV/rpm
14	Torque constant	K_M	23.85					mNm/A
15	Speed constant	K_n	400					rpm/V
16	Current constant	K_I	0.042					A/mNm
17	Speed / torque gradient	$\Delta n / \Delta M$	22.66					rpm/mNm
18	Mechanical time constant	τ_m	9.7					ms
19	Rotor inertia	J	12.25					gcm ²
Specifications								
20	Operating temperature range:							
	-Motor					-20.....+100		°C
	-winding, max permissible					+125		°C
21	Housing material					aluminium, black anodized		
22	Direction of rotation					electronically reversible		
23	Max. speed	n_{max}				35000		rpm
24	Number of pole pairs					1		
25	Number of phases					3		
26	Magnet material					NdFeB		
27	Hall sensors					digital		
Mechanical data								
28	Bearing type					ball bearings, preloaded		
29	Axial play					0 - 0.3		mm
30	Max. axial load (dynamic)					6		N
31	Max. force for press fits (static)					98		N
	(static, shaft supported)					1200		N
32	Max. radial loading, 5 mm from flange					28		N
Product								
33	Weight of motor		280					g

Dimensional drawing



Option, cable and connection information

Connection Motor (Cable AWG20)

Motor winding A	red
Motor winding B	black
Motor winding C	yellow

Connection sensors (Cable AWG24)

V_{hall} 4.5V.....24V	red
GND	black
Hall sensors A	blue
Hall sensors B	green
Hall sensors C	white