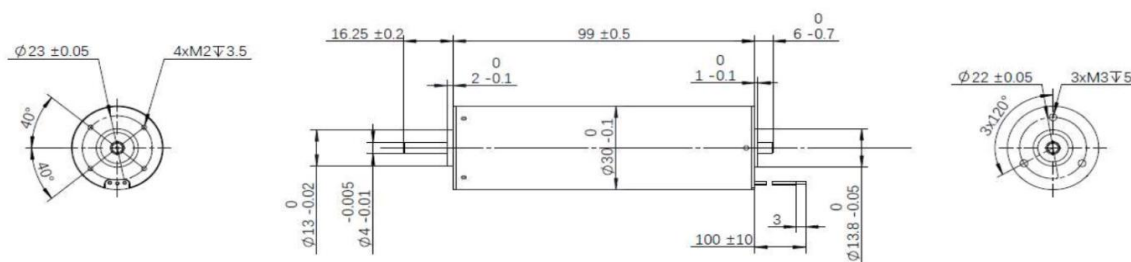


Φ30 mm brushless motor (4pole)



Motor Data		255509902					
Values at nominal voltage							
1 Nominal voltage	U_N	48					V
2 No load speed	n_0	13000					rpm
3 No load current	I_0	450					mA
4 Stall torque	M_H	3647.5					mNm
5 Stall current	M_I	104.3					A
6 Max. efficiency	η_{max}	87					%
7 Nominal power	W_N	207.0					W
8 Nominal speed	n_N	11500					rpm
9 Nominal torque (max.continuous torque)	M_N	180					mNm
10 Nominal current (max.continuous current)	I_N	5.6					A
Characteristics							
11 Terminal resistance phase to phase	R	0.46					Ω
12 Terminal inductance phase to phase	L	64					uH
13 Back-EMF constant	K_E	3.68					mV/rpm
14 Torque constant	K_M	35.11					mNm/A
15 Speed constant	K_n	272					rpm/V
16 Current constant	K_I	0.028					A/mNm
17 Speed / torque gradient	$\Delta n/\Delta M$	3.56					rpm/mNm
18 Mechanical time constant	τ_m	8.2					ms
19 Rotor inertia	J	59.5					gcm ²
Specifications							
20 Operating temperature range:							
-Motor					-20.....+155		°C
-winding, max permissible					+155		°C
21 Direction of rotation					electronically reversible		
22 Max. speed	n_{max}				15000		rpm
23 Number of pole pairs					2		
24 Number of phases					3		
25 Magnet material					NdFeB		
26 Hall sensors					sensorless		
Mechanical data							
27 Bearing type					ball bearings, preloaded		
28 Axial play					0 - 0.3		mm
29 Max. axial load (dynamic)					16		N
30 Max. force for press fits (static)					80		N
(static, shaft supported)					3000		N
31 Max. radial loading, 5 mm from flange					75		N
Product							
32 Weight of motor		373					g

Dimensional drawing



Option, cable and connection information

Connection Motor (Cable AWG20)

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