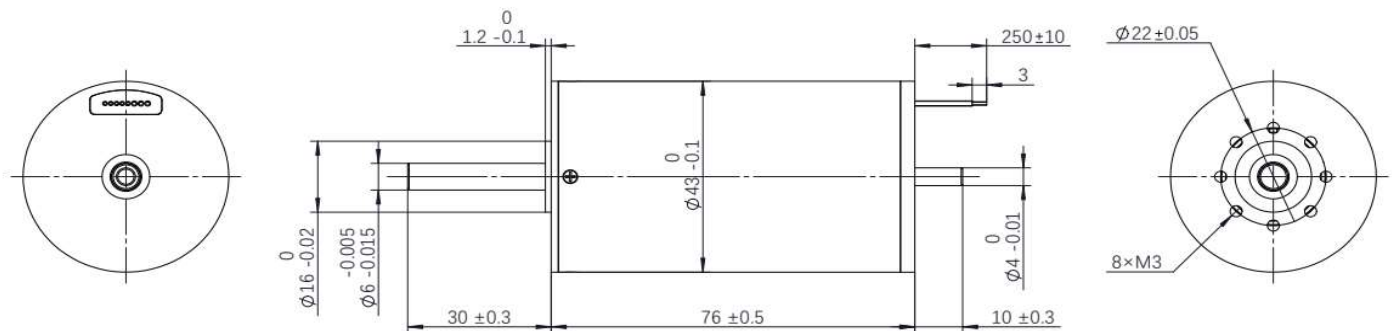


Φ43 mm brushless motor (high power)

Motor Data		107007601					
Values at nominal voltage							
1	Nominal voltage	U_N	24				V
2	No load speed	n_o	12000				rpm
3	No load current	I_o	450				mA
4	Stall torque	M_H	1680.5				mNm
5	Stall current	M_I	88.9				A
6	Max. efficiency	η_{max}	86				%
7	Nominal power	W_N	145				W
8	Nominal speed	n_N	11111				rpm
9	Nominal torque (max.continuous torque)	M_N	124				mNm
10	Nominal current (max.continuous current)	I_N	7				A
Characteristics							
11	Terminal resistance phase to phase	R	0.27				Ω
12	Terminal inductance phase to phase	L	0.0625				mH
13	Back-EMF constant	K_E	1.99				mV/rpm
14	Torque constant	K_M	19.00				mNm/A
15	Speed constant	K_n	503				rpm/V
16	Current constant	K_I	0.053				A/mNm
17	Speed / torque gradient	$\Delta n/\Delta M$	7.14				rpm/mNm
18	Mechanical time constant	τ_m	9.7				ms
19	Rotor inertia	J	89.0				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}				15000	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) (static, shaft supported)					90 1200	N N
32	Max. radial loading, 5 mm from flange					28	N
Product							
33	Weight of motor		550				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