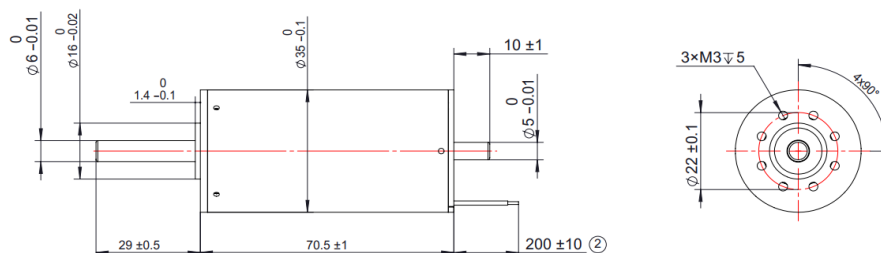


Φ35 mm brushless motor (high power)



Motor Data		106507015						
Values at nominal voltage								
1	Nominal voltage	U_N	24					V
2	No load speed	n_0	12000					rpm
3	No load current	I_0	500					mA
4	Stall torque	M_H	1329.1					mNm
5	Stall current	M_I	70.6					A
6	Max. efficiency	η_{max}	84					%
7	Nominal power	W_N	110.0					W
8	Nominal speed	n_N	11000					rpm
9	Nominal torque (max.continuous torque)	M_N	100					mNm
10	Nominal current (max.continuous current)	I_N	4					A
Characteristics								
11	Terminal resistance phase to phase	R	0.34					Ω
12	Terminal inductance phase to phase	L	84					uH
13	Back-EMF constant	K_E	1.99					mV/rpm
14	Torque constant	K_M	18.96					mNm/A
15	Speed constant	K_n	504					rpm/V
16	Current constant	K_I	0.053					A/mNm
17	Speed / torque gradient	$\Delta n/\Delta M$	9.03					rpm/mNm
18	Mechanical time constant	τ_m	39.0					ms
19	Rotor inertia	J	26.8					gcm ²
Specifications								
20	Operating temperature range:							
	-Motor					-40.....+100		°C
	-winding, max permissible					+125		°C
21	Direction of rotation					electronically reversible		
22	Max. speed	n_{max}				15000		rpm
23	Number of pole pairs					1		
24	Number of phases					3		
25	Magnet material					NdFeB		
26	Hall sensors					digital		
Mechanical data								
27	Bearing type					ball bearings, preloaded		
28	Axial play					0 - 0.3		mm
29	Max. axial load (dynamic)					6		N
30	Max. force for press fits (static)					90		N
	(static, shaft supported)					1200		N
31	Max. radial loading, 5 mm from flange					28		N
Product								
32	Weight of motor		340					g

Dimensional drawing



Option, cable and connection information

Connection Motor (Cable AWG20)

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

Vhall 4.5V.....24V	red
GND	black
Hall sensors A	blue
Hall sensors B	green
Hall sensors C	white

