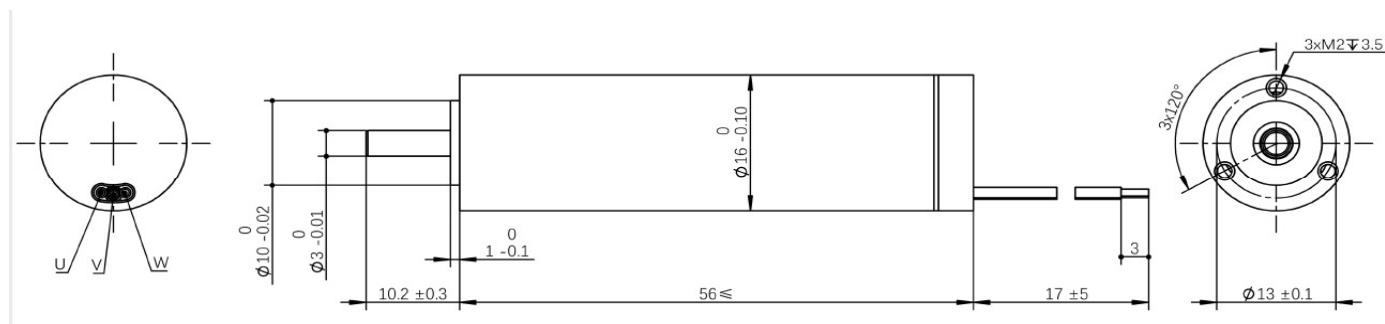


# Φ16 mm brushless motor (Standard)



Motor Data		103005601					
<b>Values at nominal voltage</b>							
1	Nominal voltage	$U_N$	24				V
2	No load speed	$n_o$	40000				rpm
3	No load current	$I_o$	130				mA
4	Stall torque	$M_H$	104.3				mNm
5	Stall current	$M_I$	18.5				A
6	Max. efficiency	$\eta_{max}$	84				%
7	Nominal power	$W_N$	40				W
8	Nominal speed	$n_N$	35920				rpm
9	Nominal torque (max.continuous torque)	$M_N$	11				mNm
10	Nominal current (max.continuous current)	$I_N$	2				A
<b>Characteristics</b>							
11	Terminal resistance phase to phase	$R$	1.3				Ω
12	Terminal inductance phase to phase	$L$	0.07				mH
13	Back-EMF constant	$K_E$	0.60				mV/rpm
14	Torque constant	$K_M$	5.69				mNm/A
15	Speed constant	$K_n$	1678				rpm/V
16	Current constant	$K_I$	0.176				A/mNm
17	Speed / torque gradient	$\Delta n/\Delta M$	383.54				rpm/mNm
18	Mechanical time constant	$\tau_m$	9.7				ms
19	Rotor inertia	$J$	1.2				gcm <sup>2</sup>
<b>Specifications</b>							
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	$n_{max}$				50000	rpm
24	Number of pole pairs					1	
25	Number of phases					3	
26	Magnet material					NdFeB	
27	Hall sensors					sensorless	
<b>Mechanical data</b>							
28	Bearing type					ball bearings, preloaded	
29	Axial play					0 - 0.3	mm
30	Max. axial load (dynamic)					3	N
31	Max. force for press fits (static) (static, shaft supported)					35 250	N N
32	Max. radial loading, 5 mm from flange					10	N
<b>Product</b>							
33	Weight of motor		52				g

## Dimensional drawing



## Option, cable and connection information

### Connection Motor (Cable FF46-1(0.3mm<sup>2</sup>))

Motor winding A		red
Motor winding B		black
Motor winding C		white