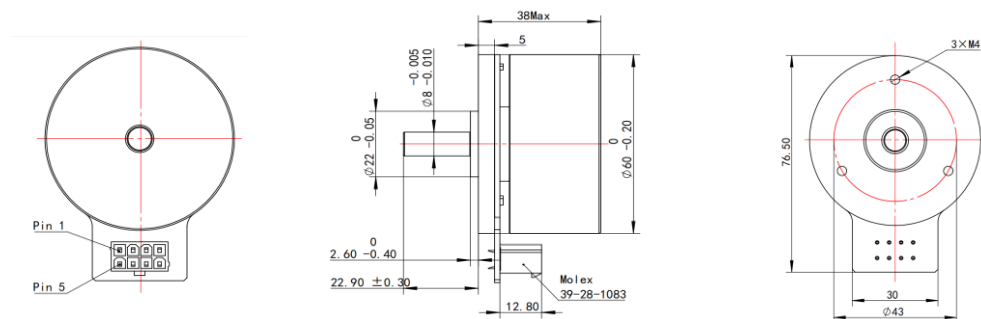


Motor Data		1005003810	1005003811	1005003812				
Values at nominal voltage								
1 Nominal voltage	U_N	12	24	48				V
2 No load speed	n_0	3760	4300	4020				rpm
3 No load current	I_0	820	500	230				mA
4 Stall torque	M_H	3336.5	4312.6	4923.2				mNm
5 Stall current	M_I	111.1	81.9	43.6				A
6 Max. efficiency	η_{max}	84	85	86				%
7 Nominal power	W_N	86.6	139.5	141.2				W
8 Nominal speed	n_N	2290	3480	3230				rpm
9 Nominal torque (max.continuous torque)	M_N	378	401	437				mNm
10 Nominal current (max.continuous current)	I_N	12	7.4	3.7				A
Characteristics								
11 Terminal resistance phase to phase	R	0.108	0.293	1.1				Ω
12 Terminal inductance phase to phase	L	0.056	0.16	0.82				mH
13 Back-EMF constant	K_E	3.17	5.55	11.88				mV/rpm
14 Torque constant	K_M	30.25	52.97	113.42				mNm/A
15 Speed constant	K_n	316	180	84				rpm/V
16 Current constant	K_I	0.033	0.019	0.009				A/mNm
17 Speed / torque gradient	$\Delta n/\Delta M$	1.13	1.00	0.82				rpm/mNm
18 Mechanical time constant	τ_m	24.8	26.5	26.1				ms
19 Rotor inertia	J	1210.0	1210.0	1210.0				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}			6000				rpm
23 Number of pole pairs				7				
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)				12				N
30 Max. force for press fits (static)				170				N
(static, shaft supported)				6000				N
31 Max. radial loading, 5 mm from flange				100				N
Product								
32 Weight of motor		460						g

Dimensional drawing



Option, cable and connection information

Connector Molex 39-28-1083

Hall sensors A		Pin 1	Hall sensors C		Pin 5
Hall sensors B		Pin 2	GND		Pin 6
V_{hall} 4.5V.....24V		Pin 3	Motor winding A		Pin 7
Motor winding C		Pin 4	Motor winding B		Pin 8

Note:About the torque curves,please contact us for more information.
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