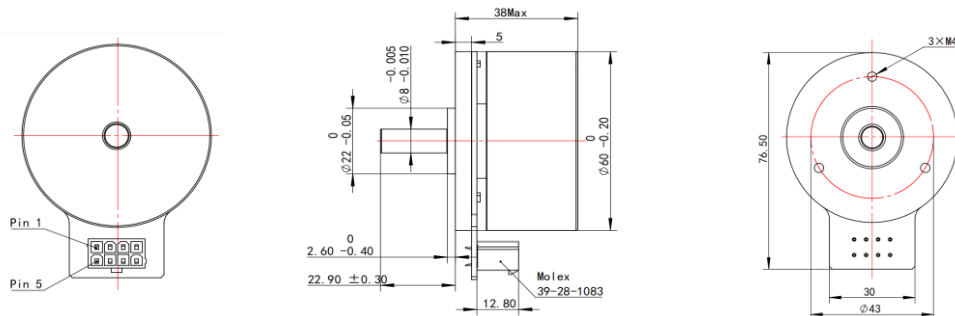


Motor Data	1005003810	1005003811	1005003812				
Values at nominal voltage							
1 Nominal voltage	U_N	12	24	48			V
2 No load speed	n_o	3760	4300	4020			rpm
3 No load current	I_o	820	500	230			mA
4 Stall torque	M_H	3336.5	4312.6	4923.2			mNm
5 Stall current	M_I	111.1	81.9	43.6			A
6 Max. efficiency	η_{max}	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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