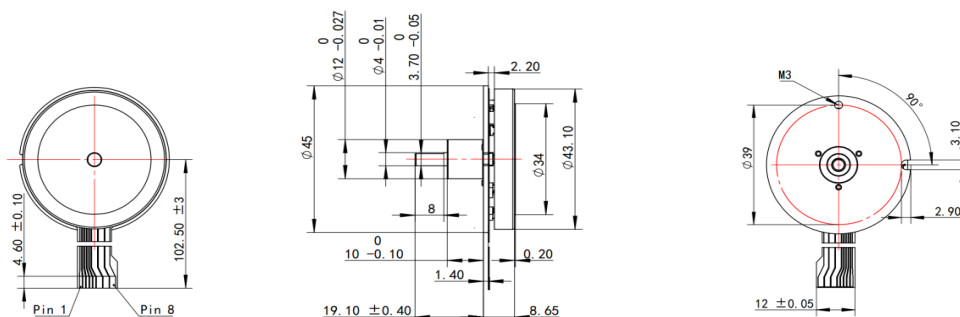


Motor Data	1004000901	1004000903	1004000904				
Values at nominal voltage							
1 Nominal voltage	U_N	24	9	12			V
2 No load speed	n_o	7800	7990	8130			rpm
3 No load current	I_o	70	112	180			mA
4 Stall torque	M_H	108.8	84.5	58.0			mNm
5 Stall current	M_I	3.8	8.6	4.5			A
6 Max. efficiency	η_{max}	75	76	72			%
7 Nominal power	W_N	11.7	11.0	8.0			W
8 Nominal speed	n_N	4680	4830	4270			rpm
9 Nominal torque (max.continuous torque)	M_N	25	22.8	18.7			mNm
10 Nominal current (max.continuous current)	I_N	1.4	1.96	1.3			A
Characteristics							
11 Terminal resistance phase to phase	R	6.25	1.05	2.45			Ω
12 Terminal inductance phase to phase	L	2.2	0.29	0.37			mH
13 Back-EMF constant	K_E	3.02	1.11	1.42			mV/rpm
14 Torque constant	K_M	28.85	10.62	13.58			mNm/A
15 Speed constant	K_n	331	900	703			rpm/V
16 Current constant	K_I	0.035	0.094	0.074			A/mNm
17 Speed / torque gradient	$\Delta n/\Delta M$	71.72	94.56	140.17			rpm/mNm
18 Mechanical time constant	τ_m	39.0	50.8	70.1			ms
19 Rotor inertia	J	52.3	52.3	52.3			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}			10000			rpm
23 Number of pole pairs				8			
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)				4.8			N
30 Max. force for press fits (static)				45			N
(static, shaft supported)				1000			N
31 Max. radial loading, 5 mm from flange				5.5			N
Product							
32 Weight of motor		57					g

Dimensional drawing



Option, cable and connection information

Connector: FPC,11-pol,Pitch,1.0mm,top contact style

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

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