

MC1237 Series

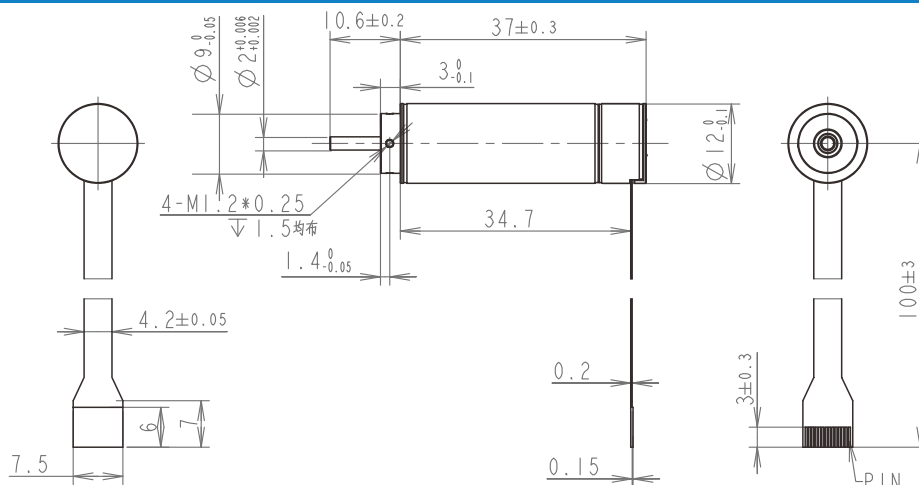
Φ12mm Brushless Coreless Motor

Key Features

- Two magnetic pole
- 19000rpm
- 5mNm
- 8.7mNm/A



Dimensional Drawing



Motor Data (Rated)

Rated voltage (V)	12
No-Load Speed (rpm)	24000
No-Load Current (A)	0.07
Rated speed (rpm)	19000
Rated torque (mNm)	5
Rated current (A)	0.65
Stall torque (mNm)	19
Stall current (A)	2.3
Max. efficiency (%)	68

Motor Constant (Rated)

Phase-to-Phase Resistance (Ω)	10.2
Phase-to-Phase inductance (mH)	0.179
Torque constant (mNm/A)	8.7
Speed constant (rpm/V)	1099
Speed/torque gradient (rpm/mNm)	1338
Mechanical time constant (ms)	2.94
Rotor inertia (gcm^2)	0.239

Thermal Data

Thermal resistance housing-ambient (K/W)	
Thermal resistance winding-housing (K/W)	
Thermal time constant winding (s)	
Thermal time constant motor (s)	
Ambient temperature ($^{\circ}\text{C}$)	-20~+100
Max. winding temperature ($^{\circ}\text{C}$)	125

Mechanical Data (Ball Bearing)

Max. allowable speed (rpm)	40 000
Max. axial play (mm)	< 0.15 N 0 > 0.15 N 0.06 (max)
Radial play	preloaded
Max. axial load dynamic(N)	2
Max. force for press fits (static) (N)	10
Max. radial load (2 mm from flange) (N)	5

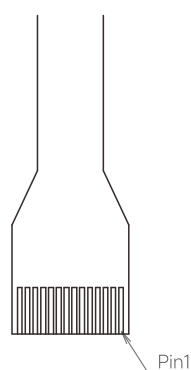
Note: Specifications can be customized per customer requirements.

Terminal Type

Molex 52745-1297

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Terminal Definition



pin 1-2	Motor Winding 1
pin 3-4	Motor Winding 2
pin 5-6	Motor Winding 3
pin 7	Vcc (3.3-5.0 VDC)
pin 8	Grounding
pin 9	A+
pin 10	A-
pin 11	B+
pin 12	B-
pin 13	Z+
pin 14	Z-