

Miniature Brushless DC Motor

DBH-0472-A-1S Model



TYPICAL APPLICATIONS

- Medical
- Robotics
- Unmanned Aerial Vehicle (UAV)

FEATURES

- High temperature tolerance
- High torque density
- Stainless steel shaft
- Rear lead exits

BENEFITS

- Ultra compact in size
- Ruggedized construction
- Low power consumption
- High dynamic response
- Supports miniature assemblies
- Benefits high speed applications beyond 10,000 rpm

High torque density in a small package

Our DBH motor offers the largest torque density available in a miniaturized package. The high technology motor uses Neo magnets in a unique magnetic circuit to deliver maximum power for the application. We have packaged these in a ruggedized housing/bearing structure and used a high temperature insulating scheme to offer superior environmental robustness. The design is intended to fill the need for a small motor with exceptional direct drive performance.

Please contact our applications engineer for more information and to discuss your specific needs.

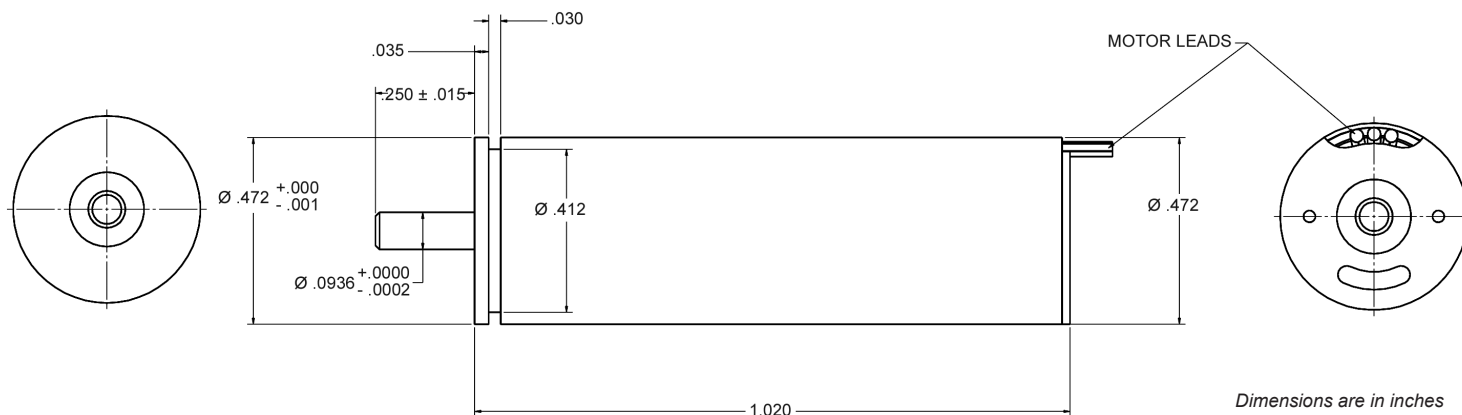
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Brushless Motors

DBH-0472-A-1S SPECIFICATIONS @ 25°C

Size Constants	Value inches (metrics)	Units inches (metrics)
Peak Torque, T_P	1.4 (9.88)	oz-in (m-Nm)
Motor Constant, K_M	0.39 (2.75)	oz-in/ \sqrt{W} (m-Nm/ \sqrt{W})
Number of Poles	4	
Number of Phases	3	
Weight	0.40 (12.44)	oz (gm)
Motor Inertia, J_M	1.5×10^{-6} (.106)	oz-in-s ² (gm-cm ²)
Friction Torque, T_F	0.1 (.706)	oz-in (m-Nm)
Electrical Time Constant, τ_E	0.05	ms
Mechanical Time Constant, τ_M	1.41	ms
Temperature Rise, Housed TPR'	52.4	°C/W
Winding Constants	Value inches (metrics)	Units inches (metrics)
Torque Sensitivity, K_T	1.4 (9.88)	oz-in/amp (m-Nm/amp)
Back EMF, K_E	.0098	V per rad/s
Terminal Resistance, R_M	12.5	ohms (nom)
Terminal Inductance, L_M	1.0	mH (nom)
Voltage, Stalled at Peak Torque, V_P	12	volts
Amps at Peak Torque, I_P	1.0	amps
Max. Winding Temperature	180	°C

DBH-0472-A-1S Typical Outline Drawing



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