

# BLU09 - Brushless Motors



FEATURES

- **Size 09 BLDC Motor**
- **High Speed Motor**
- **Compact Size and Power Density**
- **Cost-Effective Solution**
- **Long Life and Highly Reliable**
- **Cost-Effective Replacement for Brush DC Motors**
- **Can be Customized for**
  - **Maximum Speed**
  - **Winding Current**
  - **Shaft Options**
  - **Cables and Connectors**



DESCRIPTION

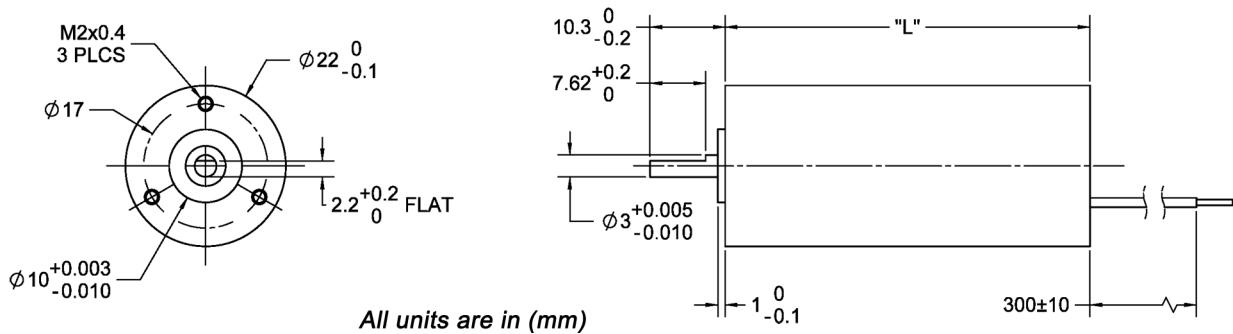
The BLU09 Series Brushless DC Motors come in a compact package with high power density. These motors are cost-effective solutions to many velocity control applications. The sensor-less feature can help simplify your design. With its small foot print, it is great for compact applications. We can also customize the windings to perfectly match your voltage, current, and maximum operating speed. Special shaft modifications, cables and connectors are also available upon request.

SPECIFICATIONS

Model #	FRAME Size	Rated Voltage (V)	Max Speed (RPM)	Max Power (W)	Peak Torque (oz-in)	Peak Current (A)	Line to Line Resistance (ohms)	Line to Line Inductance (mH)	Torque Constant (oz-in/A)	Weight (lbs)	Shaft	"L" Length (mm)
BLU092S-24V-14400	09	24	18000	22	3.68	2.75	5.30	0.34	1.77	0.17	Single	42.93
BLU093S-24V-34400	09	24	40000	84	4.94	4.75	0.90	0.05	0.80	0.20	Single	49.8
BLU093S-32V-34400	09	32	40000	102	5.66	5.00	1.70	0.08	1.07	0.20	Single	49.8

Note: The 7<sup>th</sup> character "S" denotes a single shaft, use "D" for double shaft. Custom leadwires, cables connectors, and windings are available upon request.

L010578



Phases		Hall	
RED	Phase A	Green	Hall Power
BLK	Phase B	Blue	Hall Gnd
WHT	Phase C	Brown	Hall A
		Yellow	Hall B
		Orange	Hall C

Winding Type:	3 Phase, Y Connection	Insulation Resistance:	200M Ohm
Shaft Run Out:	0.02mm	Insulation Class:	Class F
Radial Play:	0.01mm	End Play:	0.1mm
Maximum Radial Force:	16N	Maximum Axial Force:	4N
Dielectric Strength:	500V		

Hall Sensor Specifications
Supply Voltage: 3.8VDC to 30VDC
Current, $I_{off}$ : 10mA max
Current, $I_{on}$ : 10mA max
Rated Sinking Current: 20mA
Saturation Voltage: 0.4VDC max @ 25°C
Output Leakage Current: 10µA
Output Switching Time @ 25°C
Rise, 10% to 90% 1.5µs
Fall, 90% to 10% 1.5µs
Output Type: Open Collector