

# 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

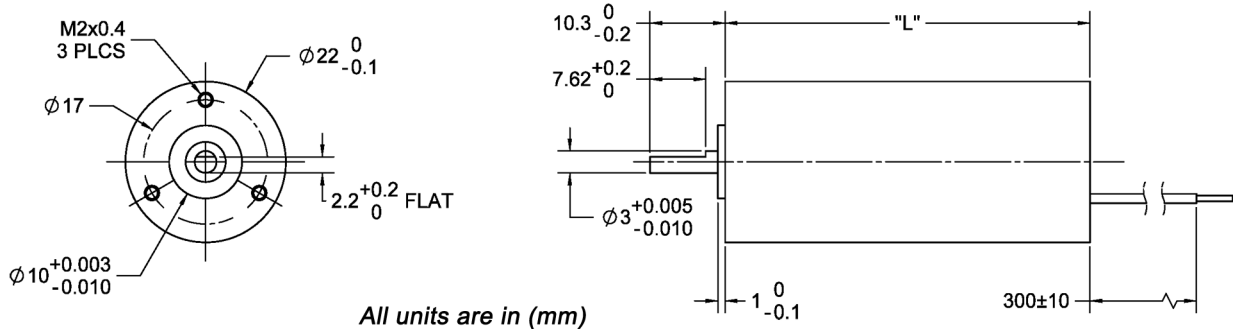
The BLU09 Series Brushless DC Motors come in a compact package with high power density. These motors are cost-effective DC solutions to many velocity control applications. The sensor-less feature can help simplify your design. With its small foot print, it is great for compact applications. We can also 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**

RED	Phase A
BLK	Phase B
WHT	Phase C

**Hall**

Green	Hall Power
Blue	Hall Gnd
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<sub>off</sub>: 10mA max
- Current, I<sub>on</sub>: 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