

BLWR09 - Brushless DC Motors



FEATURES

- **22mm Round Body**
- **3-Phase, 8 Pole Motor**
- **Ball Bearing Design**
- **Strong NFeB Magnets**
- **Long Life - 20,000 Hour Operation**
- **Cost-Effective Replacement for Brush DC Motors**
- **Can be Customized for**
 - **Operating Voltage & Rated Speed**
 - **Cables and Connectors**
- **RoHS Compliant**



DESCRIPTION

The BLWR09 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 star wound motor comes in a standard 8-lead configuration. We can also customize the winding to perfectly match your voltage, current, and maximum operating speed. Special shaft modifications, cables and connectors are also available upon request.

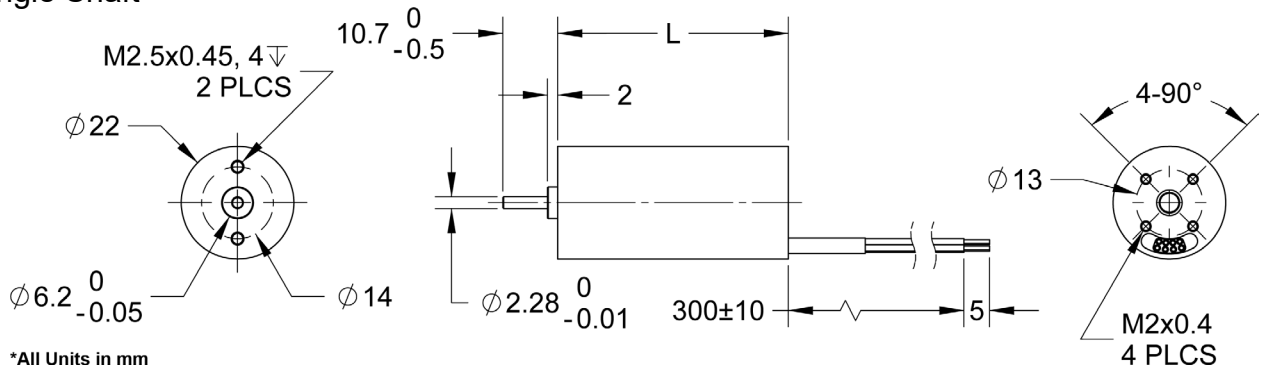
SPECIFICATIONS

Model #	Rated Voltage (V)	Rated Power (W)	Peak Current (A)	Rated Torque (oz-in)	Peak Torque (oz-in)	Rated Speed (RPM)	Line to Line Resistance (ohms)	Line to Line Inductance (mH)	Torque Constant (oz-in/A)	Rotor Inertia (oz-in-sec ²)	"L" Length (mm)	Weight (lbs)
BLWR092S-12V-8000	12	4.2	2.2	0.7	2.8	8000	3.50	0.7	1.25	9.3 x 10 ⁻⁶	45	0.15
BLWR092S-24V-4600	24	3.8	1.1	1.1	3.8	4600	23	6.2	4.28	9.3 x 10 ⁻⁶	45	0.15
BLWR0935-12V-500	12	0.2	0.07	0.6	1.7	500	122	39.8	7.73	18.7 x 10 ⁻⁶	70	0.28
BLWR093S-24V-3500	24	8.0	1.5	3.1	7.1	3500	11.80	4.2	5.03	18.7 x 10 ⁻⁶	70	0.26
BLWR093D-24V-3500	24	8.0	0.07	2.8	8.5	3800	11.6	4.3	5.03	18.7 x 10 ⁻⁶	72	0.28

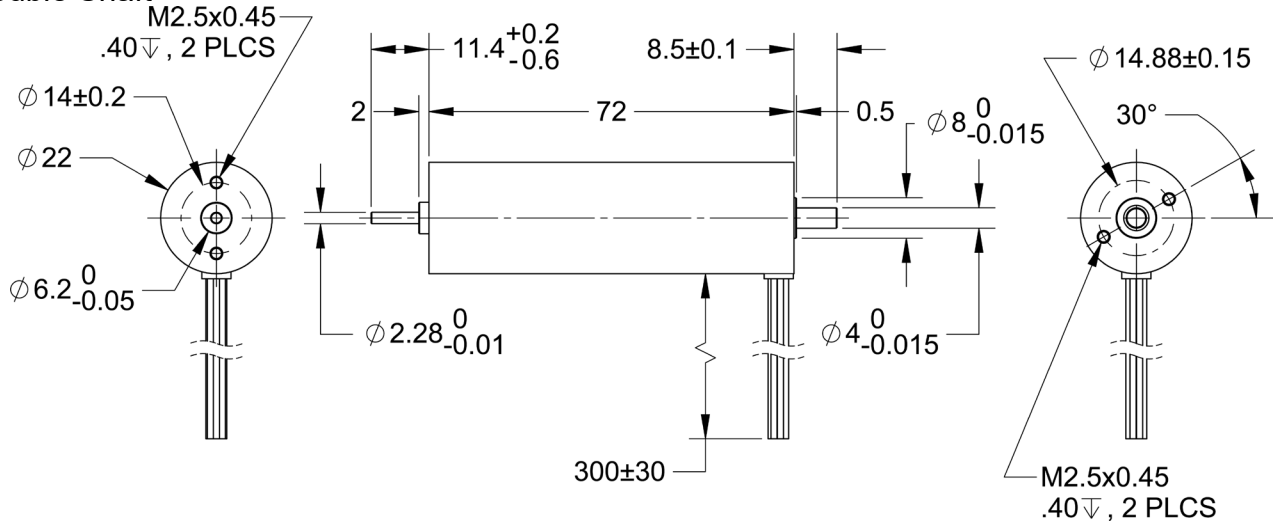
Note: Custom leadwires, cables, connectors and windings are available upon request.

L010396

Single Shaft



Double Shaft

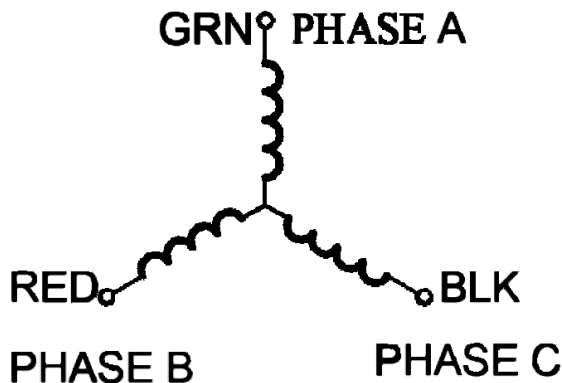


Wire Color	Description
Yellow	Hall Power
Blue	Hall A
Orange	Hall B
Brown	Hall C
White	Ground

Wire Color	Description
Green	Phase A
Red	Phase B
Black	Phase C

Hall Sensor Specifications

- Supply Voltage: 4.5VDC to 28VDC
- Current, I_{off} : 10mA max
- Current, I_{on} : 11.3mA 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



SPECIFICATIONS

Winding Type:	Star, 8 Poles	Max. Radial Force:	10N @ 10mm from the flange
Hall Effect Angle:	120 degree electrical angle	Max. Axial Force:	2N
Shaft Run Out:	0.025mm	Insulation Class:	Class B
Radial Play:	0.02mm@450g	Dielectric Strength:	500VDC for one minute
End Play:	0.08mm@450g	Insulation Resistance:	100MOhm, 500VDC

TORQUE CURVES

