

# BLWSG23 Series - Brushless DC Spur Gearmotors

FEATURES

- **NEMA Size 23 BLDC Motors**
- **Compact Size and Power Density**
- **Cost-Effective Solution**
- **Integrated Spur Gearbox**
- **Available in Dual Shaft: BLYSG23xD**
- **Can be Customized for**
  - **Maximum Speed/Winding Current**
  - **Shaft Options**
  - **Cables and Connectors**
- **CE Certified and RoHS Compliant**



DESCRIPTION

The BLWSG23 Series Brushless DC Motors come in a compact package with high power density. These motors are cost-effective solutions to many velocity control applications. They come in four different stack lengths to provide you with just the right torque for your application. A number of windings are available off-the-shelf and the motors can be customized to fit your machine requirements. The motors come in a standard 8- lead configuration. 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.

DIMENSIONS

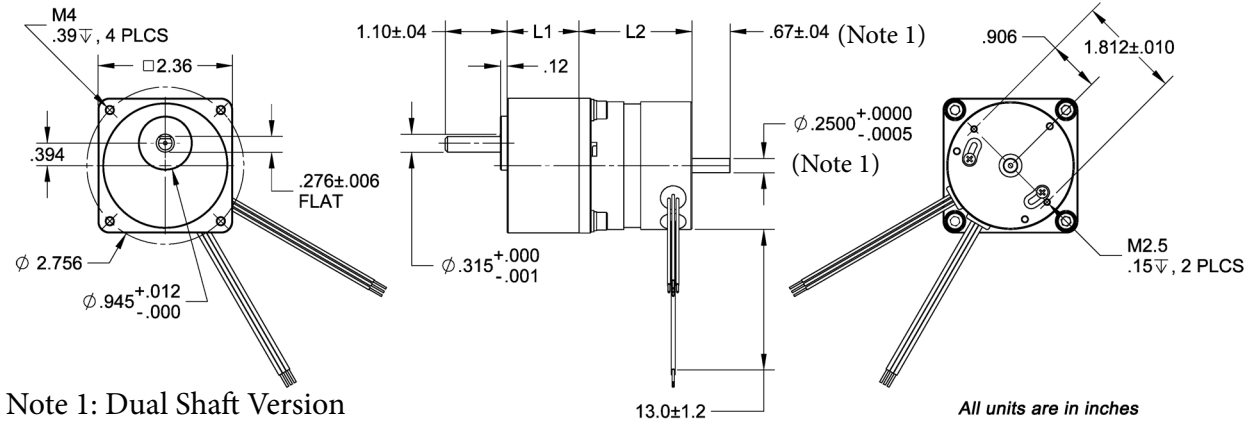
Model #	FRAME Size	Rated Voltage (V)	Rated Speed (RPM)	Rated Power (W)	Peak Torque (oz-in)	Peak Current (A)	Torque Constant (oz-in/A)	Back EMF Voltage (V/KRPM)	Reflected Inertia (oz-in-sec <sup>2</sup> )	Weight* (lbs)	L1 (in)	L2** (in)	Total Length (in)
BLWSG231D-36V-4000-R75	NEMA 23	36	53	25	694	6.8	8.50	4.5	2.36	1.46	1.57	1.92	3.49
BLWSG232D-36V-4000-R7.5	NEMA 23	36	533	50	694	11.5	8.50	4.5	0.06	1.62	1.26	2.32	3.58
BLWSG232D-36V-4000-R75	NEMA 23	36	53	50	694	11.5	8.50	4.5	5.96	1.62	1.57	2.32	3.89
BLWSG233D-36V-4000-R7.5	NEMA 23	36	533	95	694	16.5	8.50	4.8	0.10	2.38	1.26	3.07	4.33
BLWSG233D-36V-4000-R75	NEMA 23	36	53	95	694	16.5	8.50	4.8	9.50	2.38	1.57	3.07	4.64
BLWSG234D-36V-4000-R3	NEMA 23	36	1333	135	540	20.5	8.92	4.8	0.02	2.72	1.26	3.90	5.16
BLWSG234D-36V-4000-R50	NEMA 23	36	80	135	694	20.5	8.92	4.8	6.13	2.72	1.57	3.90	5.47
BLWSG234D-36V-4000-R7.5	NEMA 23	36	533	135	694	20.5	8.92	4.8	0.14	2.72	1.26	3.90	5.16
BLWSG234D-36V-4000-R75	NEMA 23	36	53	135	694	20.5	8.92	4.8	13.8	2.72	1.57	3.90	5.47
BLWSG235D-36V-4000-R12.5	NEMA 23	36	320	180	694	22.5	8.92	4.6	0.51	3.32	1.26	4.69	5.95
BLWSG235D-36V-4000-R3	NEMA 23	36	1333	180	602	22.5	8.92	4.6	0.03	3.32	1.26	4.69	5.95
BLWSG235D-36V-4000-R50	NEMA 23	36	80	180	694	22.5	8.92	4.6	8.15	3.32	1.57	4.69	6.26
BLWSG235D-36V-4000-R7.5	NEMA 23	36	533	180	694	22.5	8.92	4.6	0.18	3.32	1.26	4.69	5.95

Gear Ratio	Exact Gear Ratio
3	3.649
7.5	7.5
12.5	12.353
15	15
25	26.25
30	30.333
50	53.75
75	75.469
90	90
100	99.418
120	126.295
150	150.612

**Available Gearbox Ratios:** 3, 7.5, 12.5, 15, 25, 30, 50, 75, 90, 100, 120, 150  
 Notes: The above specs are for motors hooked up with the star configuration. For different rated speeds, please contact the factory. Custom leadwires, cables, connectors, and windings are available upon request.  
 \*Weight will vary based on gear ratio selected  
 \*\*Length of gearmotor will vary based on gear ratio selected

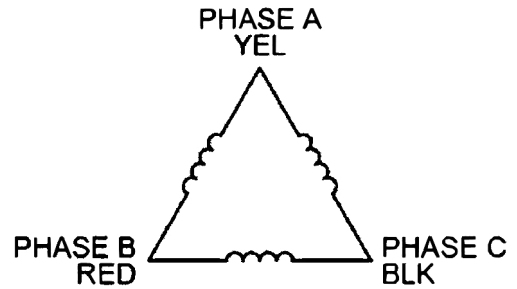
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DIMENSIONS



WIRING INFORMATION

Wire Color	Description
Red	Hall Supply
Blue	Hall A
Green	Hall B
White	Hall C
Black	Hall Ground
Yellow	Phase A
Red	Phase B
Black	Phase C



SPECIFICATIONS

Hall Effect:	120° Electrical Angle	Number of Poles:	4
Insulation Class:	Class B	Number of Phases:	3
Dielectric Strength:	500VDC for one minute	Temperature Rise:	70°C
Insulation Resistance:	100MOhms Min, 500VDC	Life Expectancy:	Over 2,000 Hours

Ratio:	3.0	7.5	12.5	15	25	30	50	75	90	100	120	150
Average Backlash at No Load:	4 deg			3.5 deg			3.0 deg			2.5 deg		