

BLWRPG23 - Brushless DC Planetary Gearmotors



FEATURES

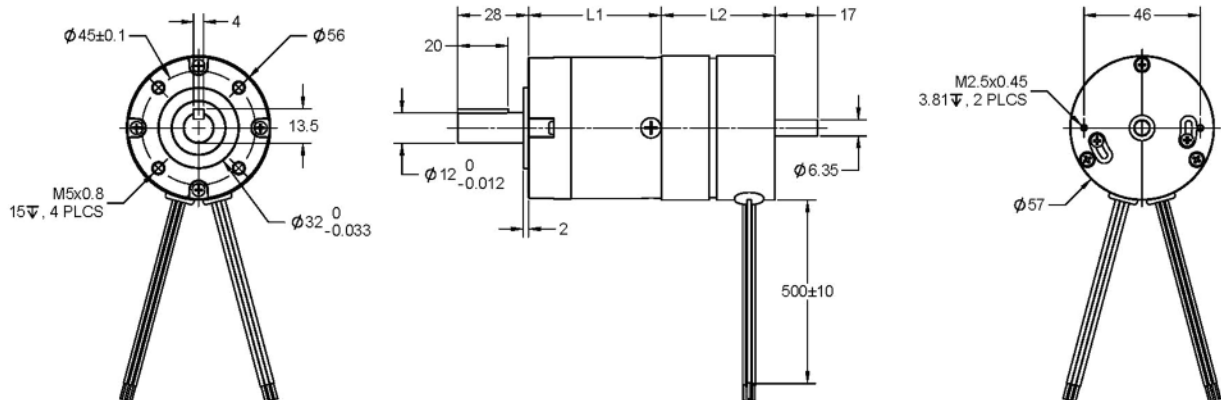
- NEMA Size 23 Brushless DC Motor and Economy Gearbox
- Over 3,000 Hour Operation
- 14 Gear Ratios Available from 3.6 to 326
- Efficiency Up to 90%
- Backlash Less than 3°
- Can be Customized for
 - Speed Requirements
 - Winding Current Requirements
 - Special Shaft Options You Want
 - Cables and Connectors
- CE Certified and RoHS Compliant



DESCRIPTION

The BLWRPG23 Series are cost-effective Brushless DC Planetary Gearmotors. These motors were designed keeping the OEM customer in mind, using state-of-the-art design parameters and low-cost manufacturing. This allows for Anaheim Automation to offer quality motors at exceptional prices. The BLWRPG23 Series includes a planetary gearbox and a brushless DC motor in a compact fully integrated package. The brushless DC gearmotor is a perfect solution for applications requiring high torque or speeds under 500 RMP. These star wound motors come with integrated hall sensors for closed-loop control for velocity applications. If the off-the-shelf gearmotors do not match your application, a motor can be wound or a gearbox can be selected to meet your specific requirements. We specialize in providing both off the shelf and custom solutions to handle demanding application.

DIMENSIONS



L010407

- Rated Speed of the output shaft (after gear-box) = (Rated Motor Speed)/(Gear Ratio)
- Torque of the output shaft (after gear-box) = (Peak Motor Torque) X (Gear Ratio)
- Rotor Inertia of the output (shaft after gear-box) = (Rotor Motor Inertia) X (Gear Ratio)²
- Create a complete Model Number by selecting a motor from Table 1 and a Gear Box from Table 2.

Example:

BLWRPG231S-24V-4000-R3.7

Table 1		Output On Shaft of Motor Before Gear-Box												
Model #	FRAME Size	Rated Voltage (V)	Rated Power (W)	Peak Current (A)	Line to Line Resistance (ohms)	Line to Line Inductance (mH)	Back EMF Voltage (V/kRPM)	Weight* (lbs)	"L2" Length** (in)	Torque Constant (oz-in/A)	Rated Speed (RPM)	Peak Torque (oz-in)	Rotor Inertia (oz-in-sec ²)	
BLWRPG231S-36V-4000	23	36	25	3.5	4.1	10.0	5.5	2.7	1.77	7.5	4000	25	0.00042	
BLWRPG232S-36V-4000	23	36	50	7.0	1.5	4.2	6.6	2.9	2.16	9.0	4000	55	0.00106	
BLWRPG233S-36V-4000	23	36	95	15.0	0.7	2.2	6.6	3.5	2.95	9.0	4000	100	0.00169	
BLWRPG234S-36V-4000	23	36	135	18.0	0.45	1.4	6.6	4.0	3.74	9.0	4000	145	0.00245	
BLWRPG235S-36V-4000	23	36	180	22.5	0.35	1.0	6.6	4.82	4.53	9.0	4000	185	0.00326	
BLWRPG235S-24V-4000	23	24	92	33.8	0.35	1.0	3.5	4.82	4.53	5.5	4000	185	0.00160	

Max Speed: 15,000 RPM

Notes: Many other motor options available. Contact the factory for details.

*Weight will vary based on the gear ratio selected.

**The length of the gearmotor will vary based on the gear ratio selected.

Table 2		Output On Shaft of Gear-Box													
Parameters/Gear Box Ratio	3.6	4.25	13	15	18	47	55	65	77	168	198	234	276	326	
Rated Torque (oz-in)	210	210	695	695	695	1390	1390	1390	1390	2080	2080	2080	2080	2080	
Peak Torque(oz-in)	625	625	2083	2083	2083	4166	4166	4166	4166	6249*	6249*	6249*	6249*	6249*	
Number of Gear Trains	1	1	2	2	2	3	3	3	3	4	4	4	4	4	
"L1" (Length of Gear Box in Inches)	2.07	2.07	2.07	2.07	2.07	2.52	2.52	2.52	2.52	3.29	3.29	3.29	3.29	3.29	
Efficeincy (%)	90	90	81	81	81	73	73	73	73	66	66	66	66	66	

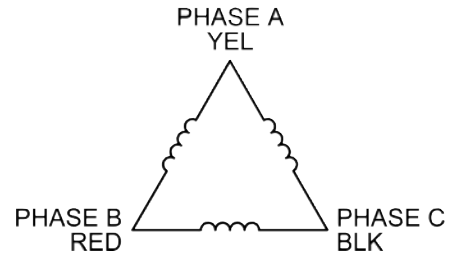
Notes: Custom leadwires, cables, connectors, and windings are available upon request.

* Higher Torque Options Available

SPECIFICATIONS (BUILD A PART NUMBER)

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

Winding Type:	Delta, 4 Poles	Planetary Gear Radial play of shaft :	0.04mm
Planetary Gear Housing:	Metal	Planetary Gear Thrust play of shaft:	0.3mm
Planetary Gear at output:	Ball Bearings	Planetary Gear Shaft press fit force,max:	66 lbs
Planetary Gear Radial load:	10mm @ 44 lbs	Planetary Gear Shaft axial load:	22 lbs