

BLWRPG17 - Brushless DC Planetary Gearmotors



FEATURES

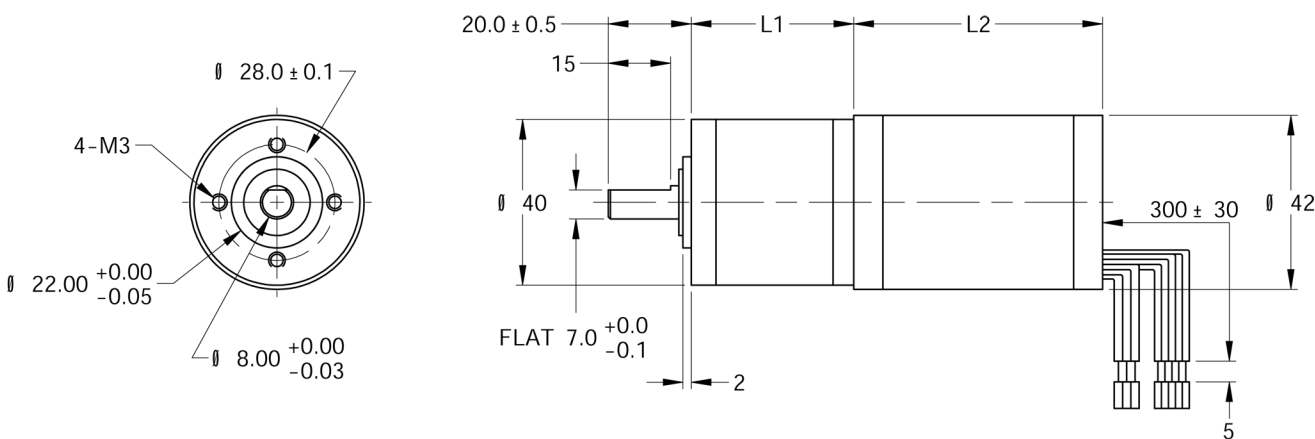
- NEMA Size 17 Motor and Economy Gearbox
- Long Life - Over 3,000 Hour Operation
- Many Gear Ratios Available from 3.6 - 212
- Efficiency Up to 90%
- Backlash Less than 3 Degrees
- Can be Customized for
 - The Speed You are Running
 - The Winding Current You Need
 - The Shaft Options You Want
- CE Certified and RoHS Compliant



DESCRIPTION

The BLWRPG17 Series are cost effective Brushless DC Planetary Gearmotors. These motors were designed keeping the OEM in mind, using state of the art design parameters and low cost manufacturing. This allows us to offer these quality motors at exceptional prices. The BLWRPG17 Series include 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 RPM. These star wound motors come with integrated hall sensors for closed loop control for velocity applications. If the off-the-shelf gearmotors do no 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 any demanding application.

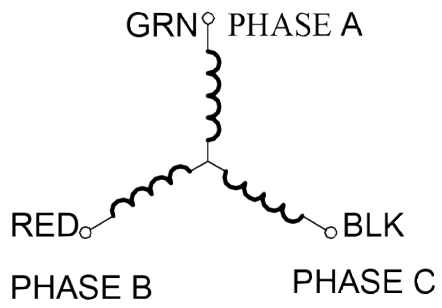
DIMENSIONS



L010402

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

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



- 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:

BLWRPG172S-24V-4200-R3.6

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** (mm)	Torque Constant (oz-in/A)	Rated Speed (RPM)	Peak Torque (oz-in)	Rotor Inertia (oz-in sec ²)
BLWRPG172S-24V-1400	17	24	5.8	1.5	11.9	15	10.71	1.17	60	33.98	1400	16.99	0.00046
BLWRPG172S-24V-2100	17	24	11	2.6	6.0	6.4	7.17	1.17	60	24.98	2100	21.24	0.00046
BLWRPG172S-24V-4200	17	24	25	4.5	1.6	1.94	5.54	1.46	60	16.04	4200	24.07	0.00046
BLWRPG173S-24V-4000	17	24	62	11.5	0.74	0.901	-	1.62	85	5.56	4000	63.73	-

*Weight will vary based on gear ratio selected

**Length of gearmotor will vary based on gear ratio selected

Table 2		Output On Shaft of Gear-Box									
Parameters/Gear Box Ratio	3.8	4.9	15	19	24	56	71	91	116	212	
Peak Torque(oz-in)	208	208	833	833	833	2083	2083	2083	2083	2083	
Number of Gear Trains	1	1	2	2	2	3	3	3	3	4	
"L1" (Length of Gear Box in mm)	35.5	35.5	45.5	45.5	45.5	55.5	55.5	55.5	55.5	66	

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

Winding Type:	Star, 8 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:	331 lbs
Planetary Gear Radial load:	10mm @ 22 lbs	Planetary Gear Shaft axial load:	6.6 lbs