

Parallel-Shaft PMDC Brush Gear Motors

PLB 28 Series

1/8 HP, Multi-Stage Reduction, Spur/Helical, Parallel-Shaft

Allied Motion's PLB 28 series PMDC brush parallel-shaft gear motors are specially designed for battery-fed welding wire-feed, and similar industrial tool applications. The PLB 28 is available as standard wound for 24 VDC. Optional winding voltage from 12 up to 240 VDC are available.

Rated shaft power of the PLB 28 is 1/8 HP (82 W) continuous. Rated output speed at 24 V is 255 RPM and 16.8:1 gear ratio or 130 RPM and 29:1 ratio.

The compact and versatile PLB 28 series is also well suited for lifting and moving tasks such as RV slide-outs, bed lifts, and powered jacks.

Options

- Alternate gear ratio
- Class H (180 °C) high temperature winding insulation
- Electromechanical holding brake
- Custom lead lengths and connector arrangements
- Shaft extension and mounting provisions for an encoder
- Plastic/powdered metal gears
- Custom output shaft configuration
- Internal brush motor



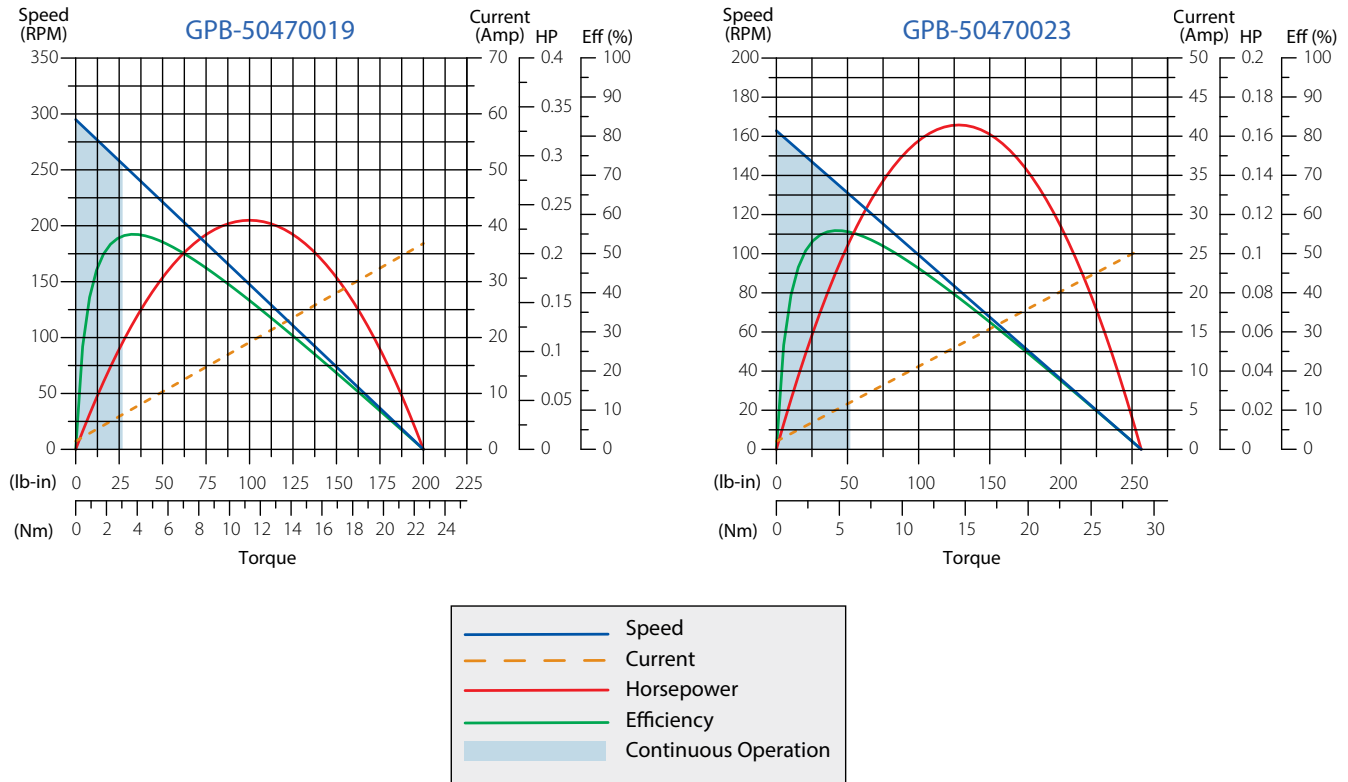
Features & Benefits

- Parallel-shaft gear motor designed for mobile, battery-powered applications
- 24 VDC motor winding and 82 W continuous output power
- 130 or 255 RPM rated speed with up to 52 lb-in rated torque
- Multi-stage gearbox configuration in two standard gear ratios
- Alloy steel gears for good wear characteristics under heavy loads
- Die cast aluminum gearbox adds strength and minimizes weight
- Class A (105 °C) winding insulation
- Cartridge-style brushes for easy maintenance
- Long-life synthetic gear lubricant
- Ball and needle bearing construction for long life
- Compact design fits into tight spaces
- Rugged 2-pole PMDC brush motor with maintainable brushes
- Standard 1/2-inch (12.7 mm) diameter output shaft

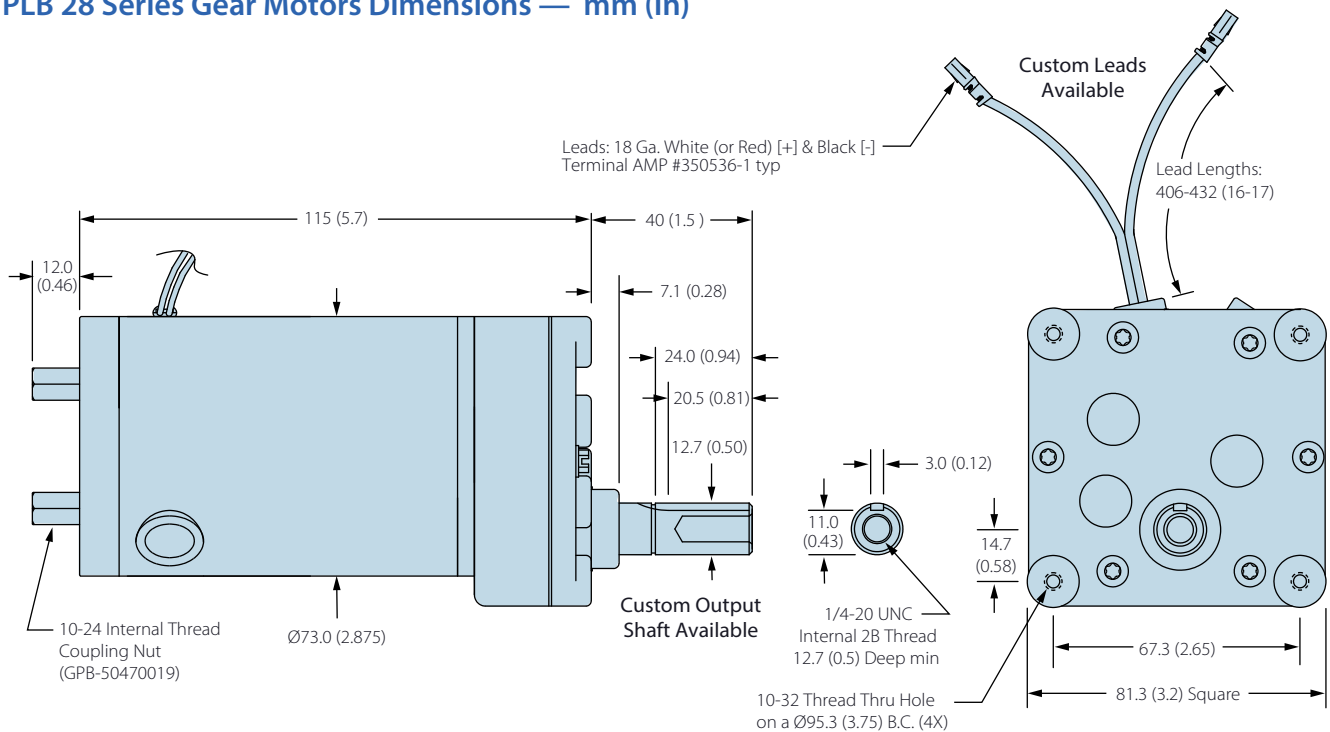
PLB 28 Series Gear Motors – Specifications

Model		GPB-50470019	GPB-50470023
Type		Parallel-shaft	
Motor Type		Permanent-magnet, 2-pole DC brush	
Frame Size		73.0 mm (2.9 in)	
Winding Voltage		24 VDC	
Torque	Rated	3.1 Nm (27 lb.in)	5.9 Nm (52 lb.in)
	Peak	11.3 Nm (100 lb.in)	18.6 Nm (164.6 lb.in)
Rated Speed		255 rpm	130 rpm
No-load Speed		274 - 316 rpm	150 - 172 rpm
Rated Power		82 W (0.11 HP)	
Current — ADC	Rated	6	6
	Peak	19	18
	No-load	1.5	2
Gear Ratio		16.8:1	29:1
Peak Efficiency		55%	56%
Rotation (shaft view)		CCW (positive voltage to positive motor terminal)	CW (positive voltage to positive motor terminal)
Bearing Type		Needle roller bearing	
Backlash (no load)		22.7 - 68.2 arcmin	21.5 - 64.6 arcmin
Weight		1.8 kg (4 lb)	
Ambient Operating Temperature at Rated Duty		22 °C max	
Ambient Storage Temperature		-30 to 80 °C	
IP Rating		IP 52	

PLB 28 Series Gear Motors – Performance



PLB 28 Series Gear Motors Dimensions — mm (in)



Allied Motion Solution Centers

Allied Motion Solution Centers provide support to customers around the world from five geographically-strategic locations. Each facility is staffed by experienced application engineers and customer service teams to assist you with all aspects of your motion control needs. We also have a global network of factory-trained Allied Motion Sales Partners to serve you. For contact information on the location nearest you, please see below or visit our website.

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