

Highly Cost-effective Brushless DC Servo Motors (25W-180W)

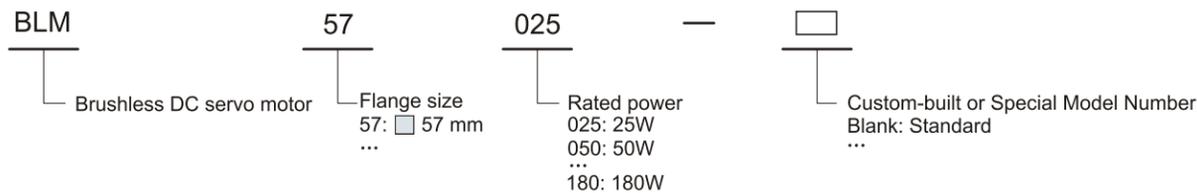
Leadshine's BLM series motors are highly cost-effective brushless DC servo motors. Rated speed of BLM series motors is 3000 rpm, and that of 57BL series is 4000 rpm. Standard model includes a standard 1000 line encoder with differential encoder signals (A, B), and Hall Sensors with standard Hall signals (U, V, W).

When driven by Leadshine ACS series servo drives, the BLM and 57BL series motors can meet requirements of many applications requiring speed from as low as 1 rpm to as high as 4000 rpm. They are able to offer AC-servo-like performance, such as high speed, high precision, low motor noise and low heating performance, while at the cost of normal stepping systems.

BLM series motors are flange mounted motors, and mounting are compatible with NEMA23 stepping motors. The 57BL series are screw mounted motors.



Part Number

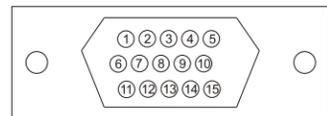
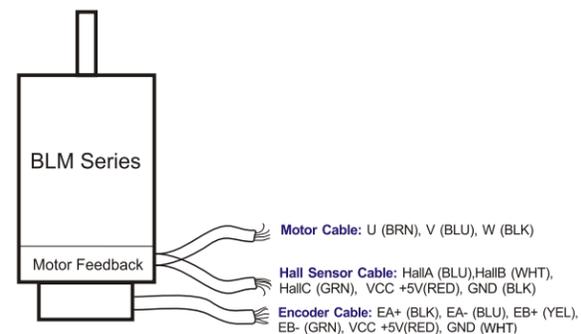


* The 57BL180 is a screw mounted model, above rules inapplicable to this model.

General Specifications

- Winding connection: Δ (Delta connection)
- Hall Sensor: 120°
- Pole Pairs (-): 2
- Phase: 3
- Shaft Radial Play: 0.025 mm
- Shaft Axial Play: 0.025 mm@460g
- Allowable radial load: 75N@20mm from the flange
- Allowable axial load: 15N
- Isolation Level: Class B
- Isolation Strength: 500VDC for one minute
- Isolation Resistance: 100M ohms

Motor Wires



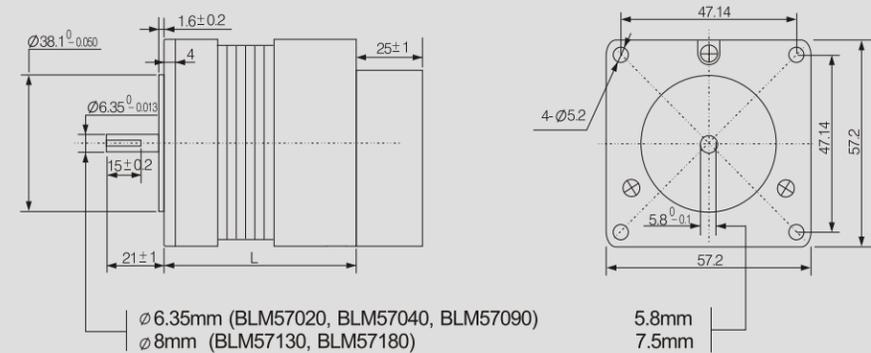
Motor Feedback (D-sub, 15 pin, male)					
Pin	Description	Pin	Description	Pin	Description
1	EA+	6	NC	11	EA-
2	EB+	7	NC	12	EB-
3	GND	8	NC	13	Vcc
4	HallC	9	HallB	14	NC
5	HallA	10	NC	15	NC

Electrical Specifications

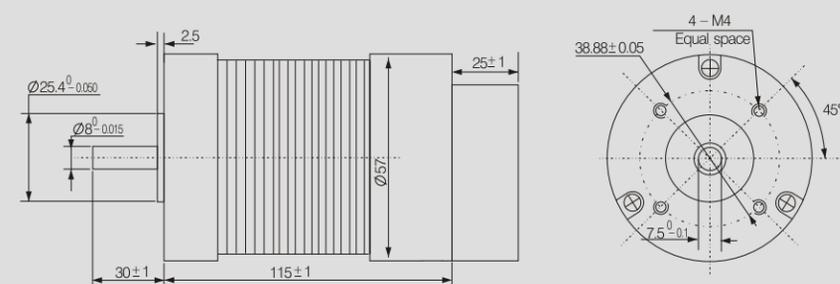
No.	Parameters	BLM57025	BLM57050	BLM57090	BLM57130	BLM57180	57BL180
1	Rated Voltage (VDC)	24	24	36	36	36	36
2	Rated Power (W)	25	50	90	130	180	180
3	Rated Torque (N.M)	0.08	0.16	0.29	0.41	0.57	0.43
4	Peak Torque (N.M)	0.24	0.48	0.87	1.23	1.71	1.27
5	Rated Speed (RPM)	3000	3000	3000	3000	3000	4000
6	Rated Current (A)	1.6	3	3.45	5.3	6.7	7
7	Peak Current (A)	4.8	9	10.35	15.9	20	20.5
8	Torque Const. (N.M/A)	0.05	0.053	0.084	0.078	0.085	0.063
9	Back EMF Const. (V/RPM)	5.2	5.55	8.8	8.2	8.9	6.6
10	Resistance (ohms)	1.73	0.88	1.35	0.63	0.9	0.35
11	Inductance (mH)	3.36	2.2	4.1	2.17	2	1
12	Inertia ($\text{kgm}^2 \times 10^{-4}$)	30	75	119	173	230	230
13	Motor Length (mm)	45	55	75	95	115	115
14	Mass (Kg)	0.25	0.5	0.75	1	1.25	1.25

Mechanical Specifications (Unit:mm 1 inch = 25.4 mm)

(a). Mechanical specification of the BLM57xxx series motors.



(b). Mechanical specification of the 57BL180.



Note: Please note that the screw length of 4-M4 is 3.5 mm. Do not screw into more than 3.5 mm, or else will damage the motor.

Order Information

Part	Model	Description
BLM Series Motors	BLM57025	Brushless DC Servo Motor, Rated Voltage: 24 VDC, Rated Power: 25W, Shaft Diameter: 6.35 mm
	BLM57050	Brushless DC Servo Motor, Rated Voltage: 24 VDC, Rated Power: 50W, Shaft Diameter: 6.35 mm
	BLM57090	Brushless DC Servo Motor, Rated Voltage: 36 VDC, Rated Power: 90W, Shaft Diameter: 6.35 mm
	BLM57130	Brushless DC Servo Motor, Rated Voltage: 36 VDC, Rated Power: 130W, Shaft Diameter: 8 mm
	BLM57180	Brushless DC Servo Motor, Rated Voltage: 36 VDC, Rated Power: 180W, Shaft Diameter: 8 mm
	57BL180	Brushless DC Servo Motor, Rated Voltage: 36 VDC, Rated Power: 180W, Shaft Diameter: 8 mm