

80mm Brushless DC Motor

This brushless DC motor provides high torque up to 1.45Nm. It features a wide speed range, high efficiency, and long service life.



Overview

High-Performance 80mm Brushless DC Motor

This 80mm round series brushless DC motor is designed for demanding industrial applications requiring high torque and precise motion control. It features a robust star winding configuration and high-efficiency operation, making it ideal for robotics, automation, and precision machinery. With a long service life and a wide speed range, this motor provides reliable performance in diverse environmental conditions.

Key Performance

Key Performance Metrics

1.45 Nm

Max Rated Torque

450 W

Max Rated Power

3000 rpm

Rated Speed

72 V

Voltage

Technical Specifications

● GENERAL SPECIFICATION		● WIRE DIAGRAM			
Winding type: Star		Lead No.	Lead Color	Lead Gauge	Function
Hall effect angle: 120 degree electrical angle		1	RED		Phase U
Shaft run out: 0.025mm		2	YEL	16AWG UL1569	Phase V
Insulation Class: Class B		3	BLA		Phase W
Dielectric strength: 500VDC for one minute		4	RED		+5V
Ambient temperature: -20 ~ +40 °C		5	BLU		Hall A
		6	GRE	26AWG UL1569	Hall B
		7	WHI		Hall C
		8	BLA		GND

● ELECTRICAL SPECIFICATION				
Model	80DMWR58-7230	80DMWR78-7230	80DMWR98-7230	
Voltage	V	22		
Number of poles		6		
Rated power	W	150	300	450
No load speed	rpm	2800	3000	3800
Rated torque	Nm	0.45	0.9	1.45
Rated Speed	rpm	3000	3000	3000
Rated Current	A	4	8	15
Peak Torque	Nm	1.35	2.7	4.35
Weight	Kg	0.9	1.2	1.5
Length	mm	58	78	98

Comprehensive electrical data and color-coded wiring assignments for phases and Hall sensors.

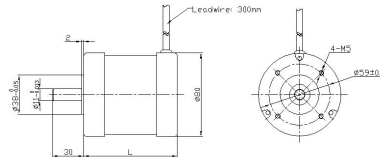
Model Specifications Table

Model	Rated Power (W)	Rated Torque (Nm)	Rated Current (A)	Length (mm)	Weight (kg)
80DMWR58-7230	150	0.45	4	58	0.9
80DMWR78-7230	300	0.9	8	78	1.2
80DMWR98-7230	450	1.45	15	98	1.5

General Characteristics

Insulation Class Class B	
Winding Type	Star
Hall Effect Angle	120 degree electrical angle
Shaft Run Out	0.025 mm

Physical Dimensions



Detailed mechanical dimensions showing the 80mm housing, 11mm shaft, and M5 mounting hole pattern.

Housing Diameter	80 mm
Shaft Diameter	11mm (-0.013mm tolerance)
Lead Wire Length	300 mm

Electrical & Wiring

Wiring Configuration

- Phase U: Red (16AWG)
- Phase V: Yellow (16AWG)
- Phase W: Black (16AWG)
- Hall +5V: Red (26AWG)
- Hall A: Blue (26AWG)
- Hall B: Green (26AWG)
- Hall C: White (26AWG)
- Hall GND: Black (26AWG)

Environmental

Ambient Temperature Range	-20°C to +40°C
Dielectric Strength	500VDC for one minute