

28 Series Brushless DC Motor

Brushless DC motor featuring a small size and high torque up to 20mN.m, with a wide speed range and high efficiency. It is suited for applications requiring precise speed control, high torque density and reliable performance.



Product Overview

High-Efficiency 28 Series BLDC Motor

The 28 Series Brushless DC motor is a compact and high-performance solution designed for applications requiring precise speed control and high torque density. Featuring a small 28mm diameter frame, these motors deliver high efficiency and a long operational lifespan compared to traditional brushed alternatives. With a wide speed range and robust construction, they are ideal for integration into robotics, automation systems, and precision instruments.

Key Performance Metrics

Performance Highlights

24 V

Operating Voltage

6000 RPM

No Load Speed

20 mN.m

Max Rated Torque

10 W

Max Rated Power

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: 0.02mm		2	YEL	20AWG 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	20AWG UL1569	Hall B
		7	YHI		Hall C
		8	BLA		GND

● ELECTRICAL SPECIFICATION				
Model	28DMW38-2450	28DMW43-2450	28DMW48-2450	
Voltage	V		24	
Number of poles			4	
Rated power	W	6	8	10
No load speed	rpm	6000	6000	6000
Rated torque	Nm	0.01	0.015	0.02
Rated Speed	rpm	5000	5000	5000
Rated Current	A	0.5	0.8	1
Peak Torque	Nm	0.003	0.045	0.06
Weight	Kg	0.08	0.1	0.14
Length	mm	38	43	48

Comprehensive electrical data and wiring diagrams for the 28DMW series.

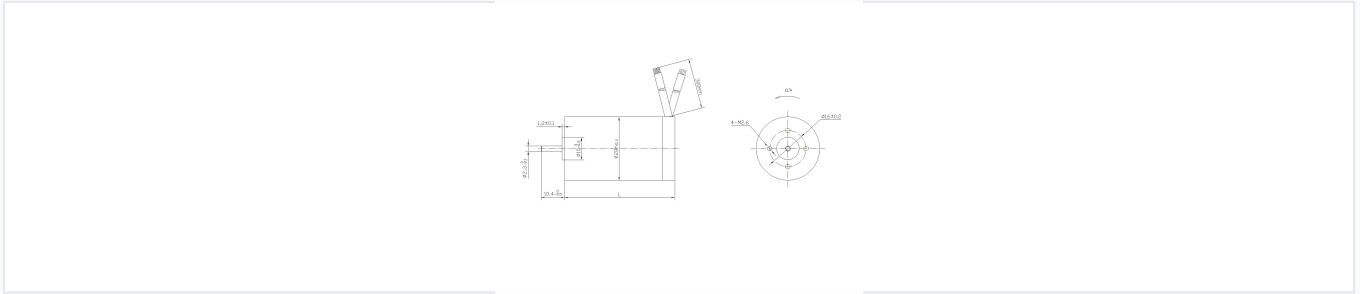
Model Specifications

Model	Rated Power (W)	Rated Torque (Nm)	Rated Current (A)	Length (mm)	Weight (Kg)
28DMW38-2450	6	0.01	0.5	38	0.08
28DMW43-2450	8	0.015	0.8	43	0.1
28DMW48-2450	10	0.02	1	48	0.14

General Characteristics

Insulation Class Class B	
Winding Type	Star
Number of Poles	4
Hall Effect Angle	120° electrical angle
Ambient Temperature Range	-20°C to +40°C

Mechanical & Wiring



Dimensional drawing highlighting the compact 28mm frame and M2.6 mounting holes.

Wiring Configuration

- Phase U: Red (20AWG)
- Phase V: Yellow (20AWG)
- Phase W: Black (20AWG)
- Hall +5V: Red (26AWG)
- Hall A: Blue (26AWG)
- Hall B: Green (26AWG)
- Hall C: White (26AWG)
- Hall GND: Black (26AWG)

Shaft Run Out	0.025 mm
Direction of Rotation	Counter-Clockwise (CCW)
Lead Wire Length	300 mm min