

42 Series Brushless DC Motor

This brushless DC motor delivers high torque up to 0.25Nm. It features a wide speed range, high efficiency, and long service life.



Overview

High-Efficiency 42 Series BLDC Motor

The 42 Series Brushless DC Motor is designed for high-performance applications requiring high torque up to 0.25Nm and a wide speed range. These motors offer exceptional efficiency and a long service life, making them ideal for precision motion control in robotics and automation. With a compact square flange design and multiple power options, they provide a versatile solution for modern industrial needs.

Key Performance Metrics

Performance Highlights

24 V

Operating Voltage

5000 rpm

No Load Speed

0.25 Nm

Max Rated Torque

100 W

Max Rated Power

General Specifications

Insulation Class

Class B

Winding Type

Star

Hall Effect Angle

120 degree electrical angle

Operating Temperature

-20 to +40

Dielectric Strength

500VDC for one minute

Electrical Data by Model

Model Comparison

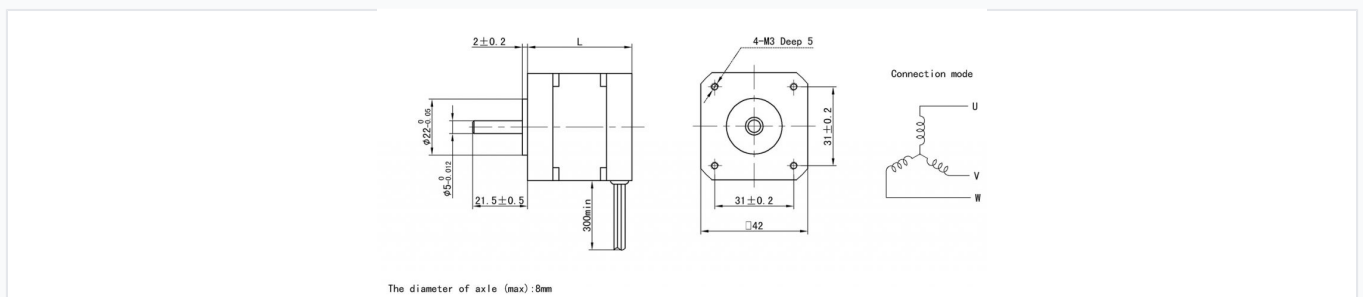
Model	Rated Power (W)	Rated Torque (Nm)	Rated Current (A)	Resistance (ohm)
42DMW41-2440	25	0.063	1.7	1.5
42DMW51-2440	40	0.096	2.4	1
42DMW61-2440	50	0.125	3.5	0.74
42DMW81-2440	75	0.18	4.6	0.56
42DMW101-2440	100	0.25	6	0.4

Wiring & Connectivity

Lead Wire Configuration

Lead No.	Color	Gauge	Function
1	RED	20AWG UL1569	Phase U
2	YEL	20AWG UL1569	Phase V
3	BLA	20AWG UL1569	Phase W
4	RED	26AWG UL1569	+5V
5	BLU	26AWG UL1569	Hall A
6	GRE	26AWG UL1569	Hall B
7	WHI	26AWG UL1569	Hall C
8	BLA	26AWG UL1569	GND

Mechanical Dimensions



Detailed mechanical dimensions and connection diagram for the 42 series motor.

Mounting Features

- 4-M3 Deep 5 mounting holes
- 31mm x 31mm mounting hole spacing
- 42mm square flange
- 5mm shaft diameter
- 300mm minimum lead length

Shaft Run Out

0.025 mm