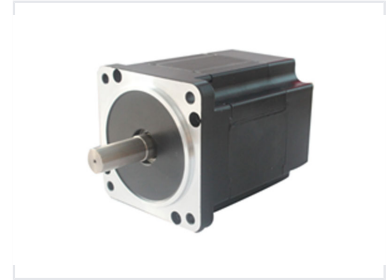


# 86 Series Brushless DC Motor

This brushless DC motor provides high torque up to 2.5Nm with power ranging from 200-780W. It offers a wide speed range, high efficiency, and extended operational life.



## Overview

### High-Performance 86 Series BLDC Motor

The 86 Series Brushless DC Motor is engineered for high-torque industrial applications, delivering up to 2.5Nm of torque with power outputs ranging from 200W to 780W. Designed for long-life and high efficiency, this motor offers a wide speed range and smooth operation, making it ideal for robotics, automation, and precision machinery. Its robust construction ensures reliable performance in demanding professional environments.

## Performance Highlights

### Key Performance Metrics

**780 W**

Max Power

**2.5 Nm**

Max Rated Torque

**3500 RPM**

No Load Speed

**8**

Number of Poles

## General Specifications

### Insulation Class

Class B

### Winding Type

Star

### Hall Effect Angle

120 ° electrical

### Shaft Run Out

0.025 mm

### Dielectric Strength

500VDC for one minute

### Operating Temperature

-20 to +40

## Electrical Data

### Model Comparison Table

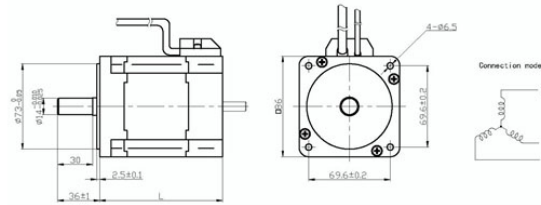
Model	Rated Power (W)	Rated Torque (Nm)	Rated Current (A)	Resistance (ohm)
86DMW70-4830	200	0.67	5.5	0.43
86DMW80-4830	300	1	8.6	0.32
86DMW90-4830	400	1.3	11	0.21
86DMW105-4830	550	1.8	14.8	0.15
86DMW130-4830	780	2.5	20	0.1

## Wiring & Connectivity

### Lead Wire Configuration

Function	Color	Gauge
Phase U	Red	14AWG UL1569
Phase V	Yellow	14AWG UL1569
Phase W	Black	14AWG UL1569
Hall +5V	Red	26AWG UL1569
Hall A	Blue	26AWG UL1569
Hall B	Green	26AWG UL1569
Hall C	White	26AWG UL1569
Hall GND	Black	26AWG UL1569

## Physical Dimensions



Detailed mechanical dimensions and connection diagram for the 86 series brushless DC motor.

### Mechanical Dimensions

- Flange Size:  $69.6 \pm 0.2$  mm square
- Mounting Holes: 4 x 6.5 mm diameter
- Shaft Diameter: 14 mm ( $-0.009$  to  $-0.025$  mm)
- Shaft Length: 30 mm
- Pilot Diameter: 73 mm ( $-0.005$  to  $-0.02$  mm)