USER MANUAL

60W/120W Brushless BLDC Geared Motor & Speed Controller Kit

3000RPM | 3:1–50:1 Ratio | 60–1000RPM

Motor Features

Brushless DC Motor: Available in 60W and 120W configurations with 60mm and 80mm flange sizes.

Multiple Gear Ratios: 1:3 to 1:50 options for different speed and torque requirements.

Speed and Torque: Output speeds from 60–1000RPM and rated output torque up to 8N·m.

Speed Control: Compatible controller kit options with digital display and adjustable speed.

Geared Drive Design: Parallel shaft configuration for conveying, packaging, automation, and mechanical drive applications.

Motor Specifications

Motor Power:60W / 120W

Rated Voltage:DC24V

Rated Motor Speed:3000RPM

Motor Flange Size:60mm / 80mm

Gear Ratio:1:3 / 1:5 / 1:10 / 1:15 / 1:20 / 1:25 / 1:30 / 1:40 / 1:50

Output Speed:60–1000RPM

60W Output Torque:0.50–3.00N·m

120W Output Torque:1.00–8.00N·m

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ELD120A 24V BLDC Motor Driver Speed Controller

120W | 150–3000RPM | PWM/PLC Speed Control

Features

Digital speed display

Rotary knob for speed adjustment

Supports PLC-based speed adjustment

Speed and alarm signal output

Panel-mounted installation

Supports PWM and pulse-frequency control methods

Specifications

Model:ELD120A

Product Type:BLDC Motor Speed Controller

Mounting Type:Panel Mount

Power Supply:DC24V

Compatible Motor Power:≤120W

Speed Range:150–3000RPM

Operating Temperature:-10°C to +45°C

Signal Output:Speed / Alarm

Speed Adjustment Methods:Panel Knob / PWM / Pulse Frequency

Display Type:Digital Display

Control Method:Rotary Knob / PLC Control

Driver Dimensions

Front Panel Width:53.50mm

Front Panel Height:90.00mm

Overall Depth:97.30mm

Body Depth:85.00mm

Body Height:81.50mm

Mounting Holes:2-M4

Parallel Shaft BLDC Geared Motor

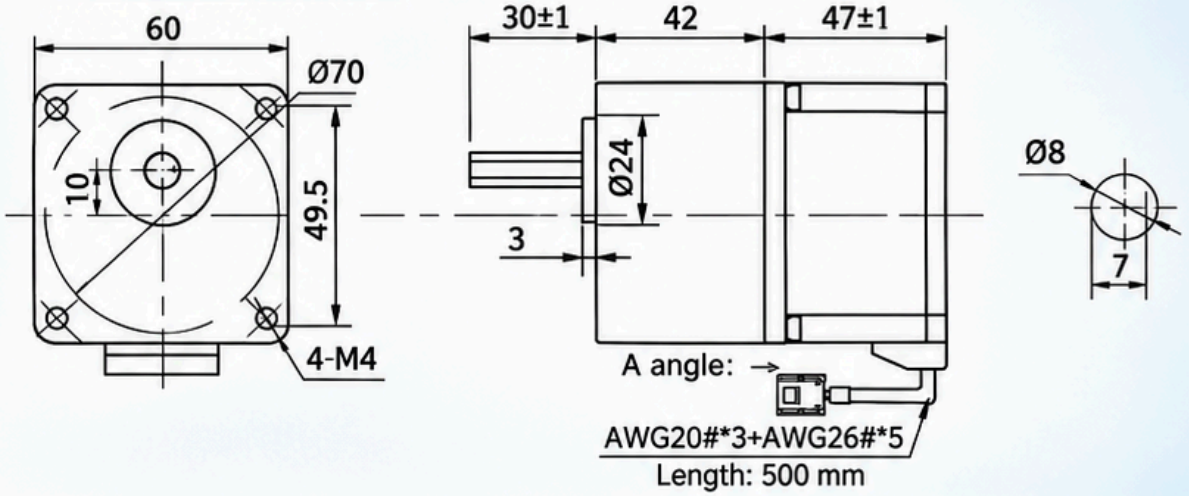
60 W – 120 W



60 W

BLDC Geared Motor

Dimensions (Unit: mm)

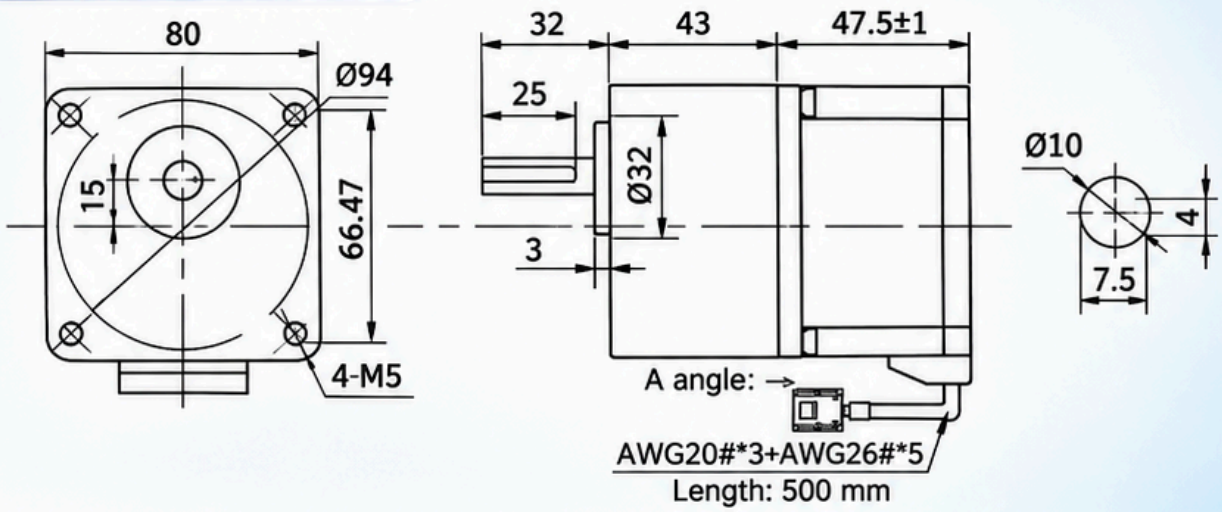




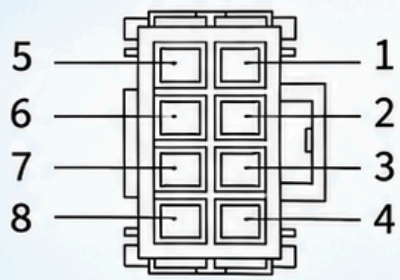
120 W

BLDC Geared Motor

Dimensions (Unit: mm)



Motor Phase



1	2	3	4	5	6	7	8
U	V	W	5V	HU	HV	HW	GND
YE	GN	BU	RD	YE	GN	BU	BK

Parallel Shaft BLDC Geared Motor

60~120W
60 / 80 mm

Model Overview

Motor Type	Parallel Shaft BLDC Geared Motor
Power	60 W / 120 W
Frame Size	60 mm / 80 mm
Voltage	DC 24 V / AC 220 V
Rated Speed	3000 RPM
Gear Ratio (X)	3 – 50
Matched Driver	ELD120A / BLR60A / EH200A / EHD200A



Motor Model Parameters

Motor Model	Rated Voltage (V)	Power (W)	Rated Current (A)	Rated Speed (RPM)	Rated Torque (N·m)	Gear Ratio (Max)	Net Weight (Kg)	Matched Driver
2GNXK-60BLK0630-24-21AC	DC 24	60	2.5	3000	0.2	20	0.5	ELD120A / BLR60A
2GNXK-60BLK0630-220-21AC	AC 220	60	0.2	3000	0.2	20	0.5	EH200A / EHD200A
4GNXK-80BLK1230-24-21AC	DC 24	120	5	3000	0.4	25	0.75	ELD120A / BLR120A
4GNXK-80BLK1230-220-21AC	AC 220	120	0.5	3000	0.4	25	0.75	EH200A / EHD200A

Gear Ratio and Torque Table

Gear Ratio		1:3	1:5	1:10	1:15	1:20	1:25	1:30	1:40	1:50
Max Speed (RPM)		1000	600	300	200	150	120	100	75	60
Torque (N·m)	**60 W**	0.50	0.80	1.60	2.40	3.00	3.00	3.00	3.00	3.00
	120 W	1.00	1.60	3.20	4.40	6.40	8.00	8.00	8.00	8.00

Notes

- The torque after gearbox = Motor torque × Gear Ratio × Efficiency.
- Real rated speed = 3000 / Gear Ratio.
- The minimum output speed = 150 / Gear Ratio.
- X is the gear ratio.
- The net weight is the motor weight before adding gearbox.

60W Controller Kit

1× Brushless Gear Motor – 60mm Flange
1× Controller

Gear Ratio and Torque Table

Gear Ratio	1:3	1:5	1:10	1:15	1:20	1:25	1:30	1:40	1:50
Max Speed (RPM)	1000	600	300	200	150	120	100	75	60
Torque (N·m) – 60W	0.50	0.80	1.60	2.40	3.00	3.00	3.00	3.00	3.00
Torque (N·m) – 120W	1.00	1.60	3.20	4.40	6.40	8.00	8.00	8.00	8.00

Note: Output speed is calculated from rated speed divided by gear ratio. Actual speed may vary with load conditions.



120W Controller Kit

1× Brushless Gear Motor – 80mm Flange
1× Controller



Main Specifications

Motor Power:	120W
Power Supply:	DC24V
Rated Speed:	3000RPM
Motor Flange:	80mm
Motor Type:	Brushless DC Gear Motor

Gear Ratio and Torque Table

Gear Ratio		1:3	1:5	1:10	1:15	1:20	1:25	1:30	1:40	1:50
Max Speed RPM		1000	600	300	200	150	120	100	75	60
Torque N.m	60W	0.50	0.80	1.60	2.40	3.00	3.00	3.00	3.00	3.00
	120W	1.00	1.60	3.20	4.40	6.40	8.00	8.00	8.00	8.00

The real speed is rated speed/gear ratio. The actual speed will vary with the load.

Multiple Gear Ratios

Speed Range: 60-1000RPM

Torque Range: 1.00-8.00N.m

Flange Size: 80mm