

# 80 Frame BLDC Motor For AGV

## ● General information

- Compact design
- 8 poles with 3 phases
- High efficiency
- Low cogging
- Light weight



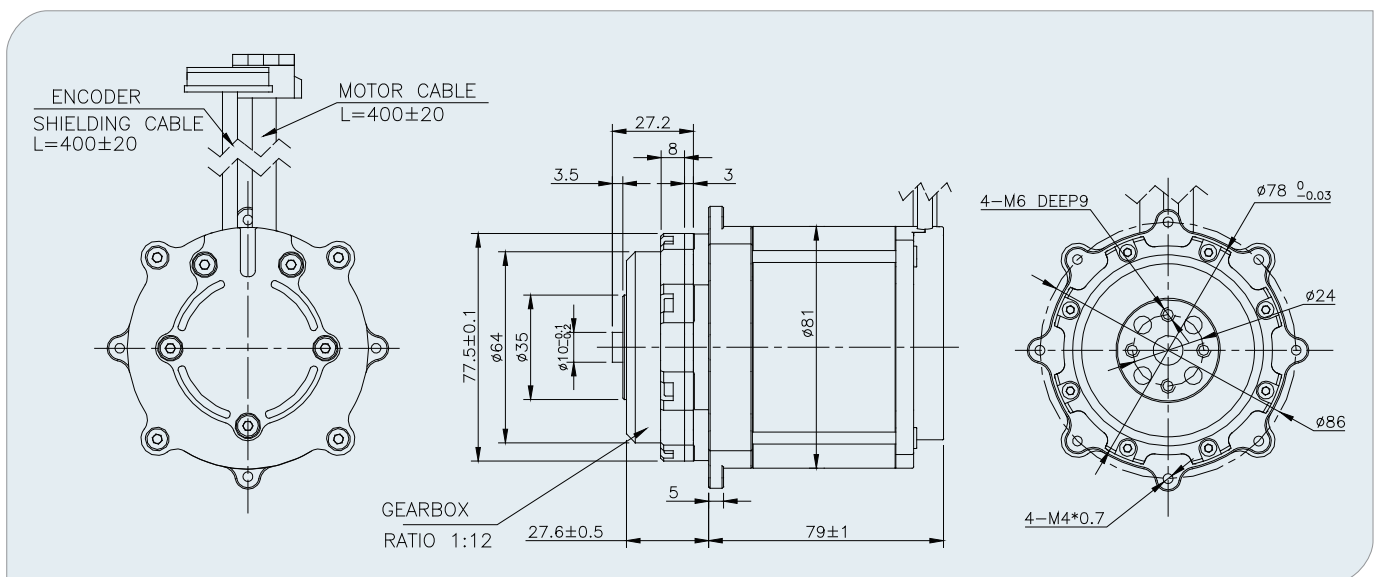
## ● Motor Parameter

Model	Voltage (v)	No Load		Rated Torque (Nm)	Rated Load		R(line to line) (ohms)	L(line to line) (mH)	Ke (Vrms/krpm)	Kt (Nm/A)	No. of Pole
		Speed (rpm)	Current (A)		Speed (rpm)	Current (A)					
SE080AS103-PL0012	20	2600	1	1.2	2100	15	0.19	0.28	5.35	0.08	8

## ● Gearbox Parameter

Gear Ratio	Continuous Torque (Nm)	Peak Torque (Nm)	Efficiency
12 : 1	9.6	20	0.94

## ● Mechanical



# 6.5/8.0 Inch Wheel Hub Servo Motor & Driver

## ● General Information

- ▶ Servo control
- ▶ Direct drive
- ▶ Wide speed range
- ▶ 1024 PPR Incremental encoder
- ▶ High efficiency product design
- ▶ RS485,RS232,CAN communication
- ▶ Two motors be controlled meantime
- ▶ 6.5 Inch and 8.0 Inch wheel option
- ▶ Used for walking/service robot and AGV



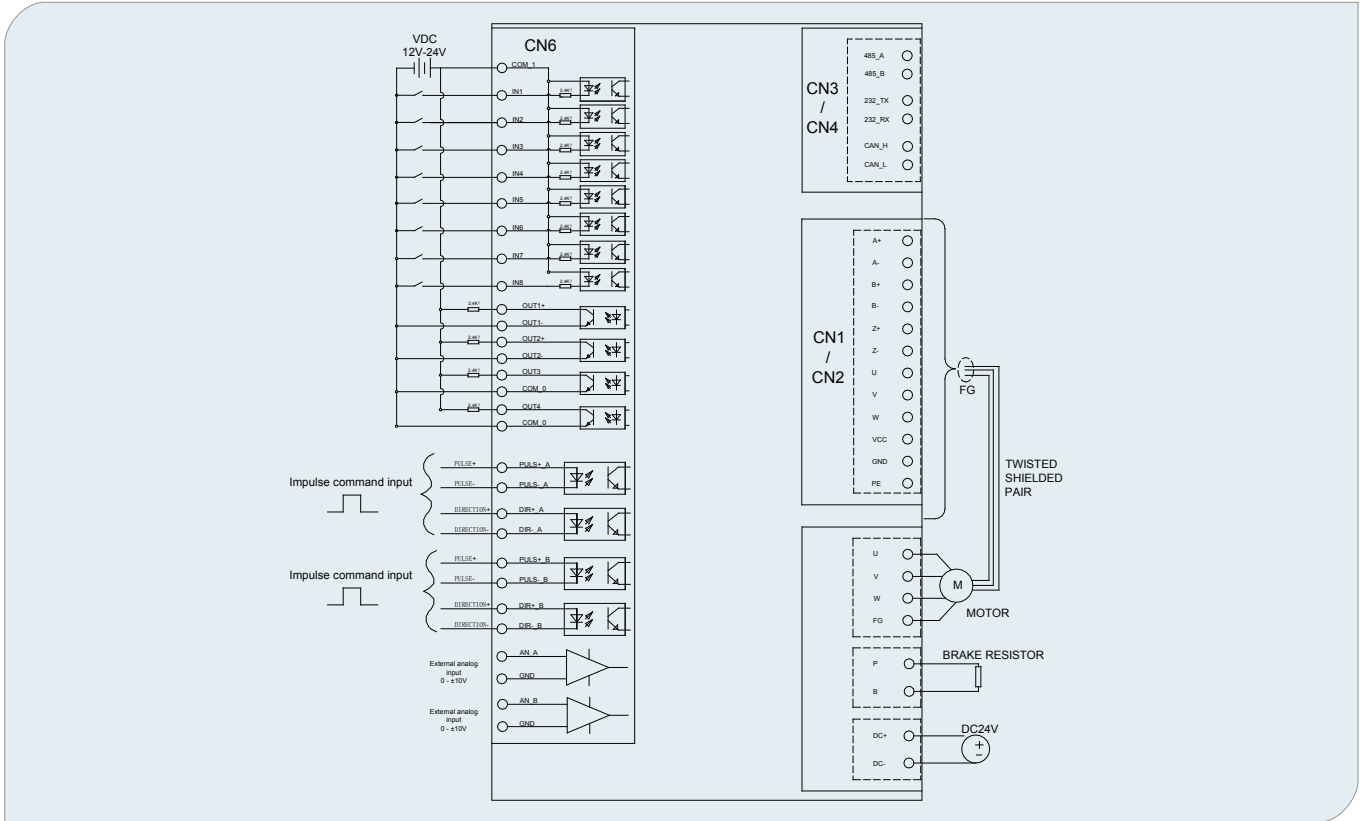
## ● Specification

Model	Voltage (v)	Rated Current (A)	Rated Torque Min (Nm)	Rated Power (W)	No-load Speed (rpm)	Max. Torque (Nm)	Pole Pairs	Encoder Res. (PPR)
LE165/200VS	48	8	5	300	330	15	15	1024

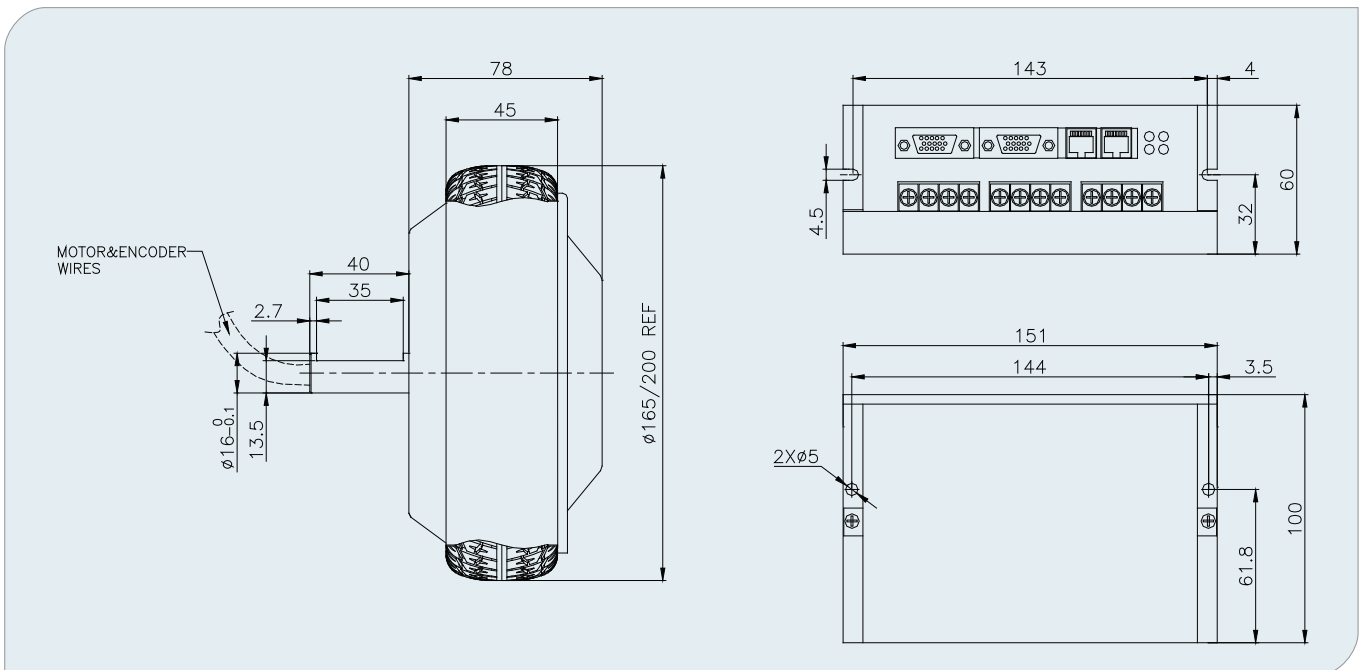
	Item	Units	Description	Notes
	Power Supply	VDC	18-60	
Control Character	Control Mode		SVPWM, Close loop VC	
	Speed Control Accuracy	rpm	±1	
	Electronic Gear		(1~9999) / (1~9999)	
	Position Control Accuracy	pluse	±1	
	Brake Mode		Renewable energy consumption braking	
	Overload Capacity		Double actual current for 15S	
	I/O Port	Digital Input		8-way optocoupler isolates
Digital Output			4-way optocoupler isolates output, OC	
Analog Input			2-way, -10V~+10V	
Encoder Input			Ecremental encoder	
Pulse Input			6 kinds of pulses positive-negative logic	
Communication			RS232, RS485, CAN, Modbus, Canopen	
Operation Ambient	Operation Ambient Temperature	°C	0-40	
	Operation Ambient Humidity		95% Max.	No water drops or rain
	Vibration		Frequency≤20Hz; 9.8m/s <sup>2</sup> ; 20Hz≤Frequency≤50Hz:2m/s <sup>2</sup>	

# Low Voltage DC Dual Servo Driver

## ● Characteristic Diagram



## ● Mechanical



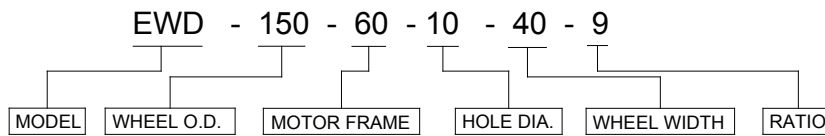
# Wheel Drives

## ● General information

- ▶ Applied to service robots or AGVs
- ▶ Space saving design
- ▶ Low noise
- ▶ High quality bearing
- ▶ Standard interface for 60/80 frame servo motor
- ▶ Withstands high radial loads



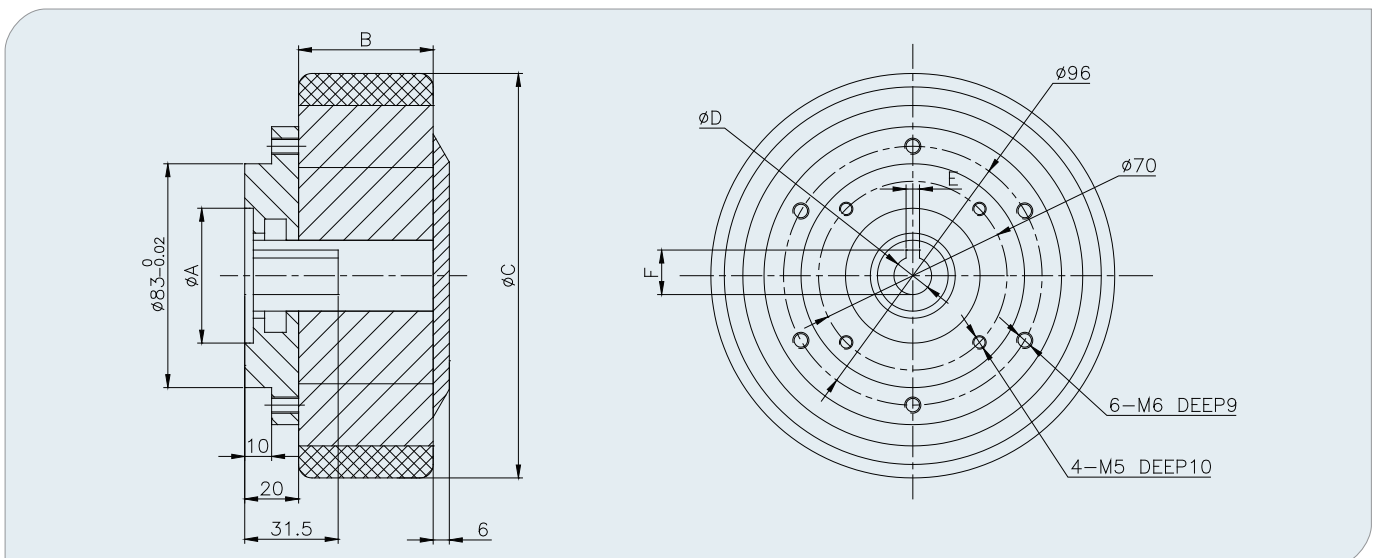
## ● Implication For Name



## ● Specification

Model	A	B	C	D	E	F	Ratio	Load Capacity (Kg/lb)	Rated Output Torque (Nm)	Max. Output Torque (Nm)	For Motor Size
EWD-150-60-10-40-9	50	40	150	10	3	11.5	9	300/660	10	30	60
EWD-150-60-14-40-9	50	40	150	14	5	16.5	9	300/660	10	30	60
EWD-150-60-19-40-9	50	50	150	19	6	22	9	300/660	10	30	60
EWD-150-60-14-50-14.3	50	50	150	14	5	16.5	14.3	800/1760	25	75	60
EWD-150-60-19-50-27	50	50	150	19	6	22	27	800/1760	25	75	60
EWD-160-60-14-50-14.3	50	50	160	14	5	16.5	14.3	800/1760	25	75	60
EWD-160-60-19-50-27	50	50	160	19	6	22	27	800/1760	25	75	60
EWD-180-60/80-14-50-14.3	50/70	50	180	14	5	16.5	14.3	800/1760	25	75	60/80
EWD-180-60/80-19-50-27	50/70	50	180	19	6	22	27	800/1760	25	75	60/80
EWD-200-60/80-14-60-14.3	50/70	60	200	14	5	16.5	14.3	800/1760	25	75	60/80
EWD-200-60/80-19-60-27	50/70	60	200	19	6	22	27	800/1760	25	75	60/80

## ● Mechanical



# 6.5 Inch Wheel Hub Servo Motor & Driver

## ● General Information

- ▶ RS485, RS232, CAN communication
- ▶ PWM, pulse input
- ▶ Two motors be controlled meantime
- ▶ Used for Industrial/inststorage robot, Delivery unmanned vehicle, Education of DIY and AGV
- ▶ FOC drive with encoder
- ▶ Support hall photoelectric encoder and magnetic encoder
- ▶ Suitable for two-wheel drive platforms up to 200Kg



## ● Specification

Model	SVD4830A	SVD48V50A
Power Supply	24-48VDC	24-48VDC
Max. Input continuous Current	20A	40A
Max. Output Iq Current	30A	50A
Motor Power	100-350W	350-800W
Pole Pairs	20	
Speed Support Min/Max	1RPM / 1000RPM	
Power Supply Min/ Max	20VDC / 55VDC	
Control Mode	Speed Mode Position Mode Torque Mode	
Control Input	RS485 RS232 CAN PWM Analog	
Encoder Input	CAN PWM Analog	
Upper Computer Support	SV-Config Upper Computer RS232	
Operation Ambient Temperature	-20~+55°C	
Size	143x80x33mm	

# 6.5 Inch Wheel Hub Servo Motor & Driver

## ● Drive Description



## ● Power interface

Pin	Signal	Description
1	GND	Input power-
2	VCC	Input power+

## ● Motor interface

Pin	Signal	Description
1	U	Motor power U
2	V	Motor power V
3	W	Motor power W

## ● Encoder interface

Pin	Signal	Description
1	A+	Optical encoder A phase positive input
2	A-	Optical encoder A phase negative input
3	B+	Optical encoder B phase positive input
4	B-	Optical encoder B phase negative input
5	Z+(RS485A)	Optical encoder Z phase positive input
6	Z-(RS485B)	Optical encoder Z phase negative input
7	HU	Hall U phase input
8	HV	Hall V phase input
9	HW	Hall W phase input
10	GND	Output power supply ground
11	5V	Output power supply +5V
12	GND	Output power supply ground

# 6.5 Inch Wheel Hub Servo Motor & Driver

- *Communication interface*

Pin	Signal	Description
1	RS485B	RS485 communication B signal
2	RS232_TXD	RS232 send
3	RS232_RXD	RS232 receive
4	NC	NC
5	DGND	Output power supply ground
6	5V	Output power supply +5V
7	RS485A	RS485 communication A signal
8	CANH	CANH signal
9	CANL	CANL signal

- *System wiring diagram*

