



3A Brushless DC Motor Controller

ASSUN MOTOR

2015 edition. Specifications are subject to change without notice.

PRODUCT FEATURES

1.1 System Characteristics:

Input Voltage: 12~28V DC

Continuous Current: 3A

Temperature - Operation: 0 ~ +45°C

Temperature - Storage: -20 ~ +85°C

Humidity: ≤85% (non-condensing)

1.2 Information:

Dimension: Length: 34mm. width: 28mm

Cooling Method: Natural Cooling

Protective Function: Current limit, Undervoltage

Weight: 8.5g

1.3 Installation Notes:

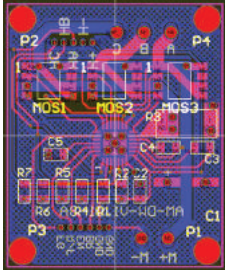
a) Please install in dry and ventilated place

b) Avoid vibration and collision

c) Do not let metal dust and iron cut falling on controller

d) Fix installation is needed

e) Use qualify connection cables



INTERFACE & CONTROL SIGNALS

P1: Electric Connections

Number	Name	Note
1	M+	Positive pole
2	M-(GND)	Negative pole

P2: Motor Sensor Connections

Number	Name	Note
1	H+	Hall sensor power supply positive terminal
2	H-	Hall sensor power supply earth terminal
3	HA	Hall Sensor A
4	HB	Hall Sensor B
5	HC	Hall Sensor C

P3: Control Signal Connections

Number	Name	Note (Low: 0~0.8VDC; High: 2.2~5.0VDC; Null: Not Connect)
1	GND	Electric Ground
2	GND	Electric Ground
3	BR	Braking (Low-Brake; High/Null-Release)
4	EN	Enable port (Low-Motor rotate; High/Null-motor stop). This port can be used as PWM control (PWM requirement: 20KHz, the lower the duty cycle, the higher the speed)
5	F/R	Direction port (Low-Positive; High/Null-Negative), Turning direction refer to motor
6	PG	Negative pole

P4: Motor Connections

Number	Name	Note
1	A	Motor Winding A (U)
2	B	Motor Winding B (V)
3	C	Motor Winding C (W)

NOTE ON USAGE

1. Controller should be installed with 20mm space for cooling. The environment should be ventilated
2. When using the braking function, please calculate the braking speed. Ensure that the motor speed is lower than the braking speed to avoid high back EMF which will damage the components.
3. Change direction only when motor stopped completely to prevent damage of electronic components.
4. The controller is a two-quadrant operation mode, it cannot be use when speed change is rapid.
5. Please read this manual before installation. Whenever there is problem, please stop the current immediately. Then check carefully the connections.

REMARKS

Clients can choose gearbox and encoder to match with this motor. Some combinations are listed here for reference.

Motor Data Tested at 25°. Motor Operation exceeds continuous limits of operating range will compromise the life of the device.