

ASSUN

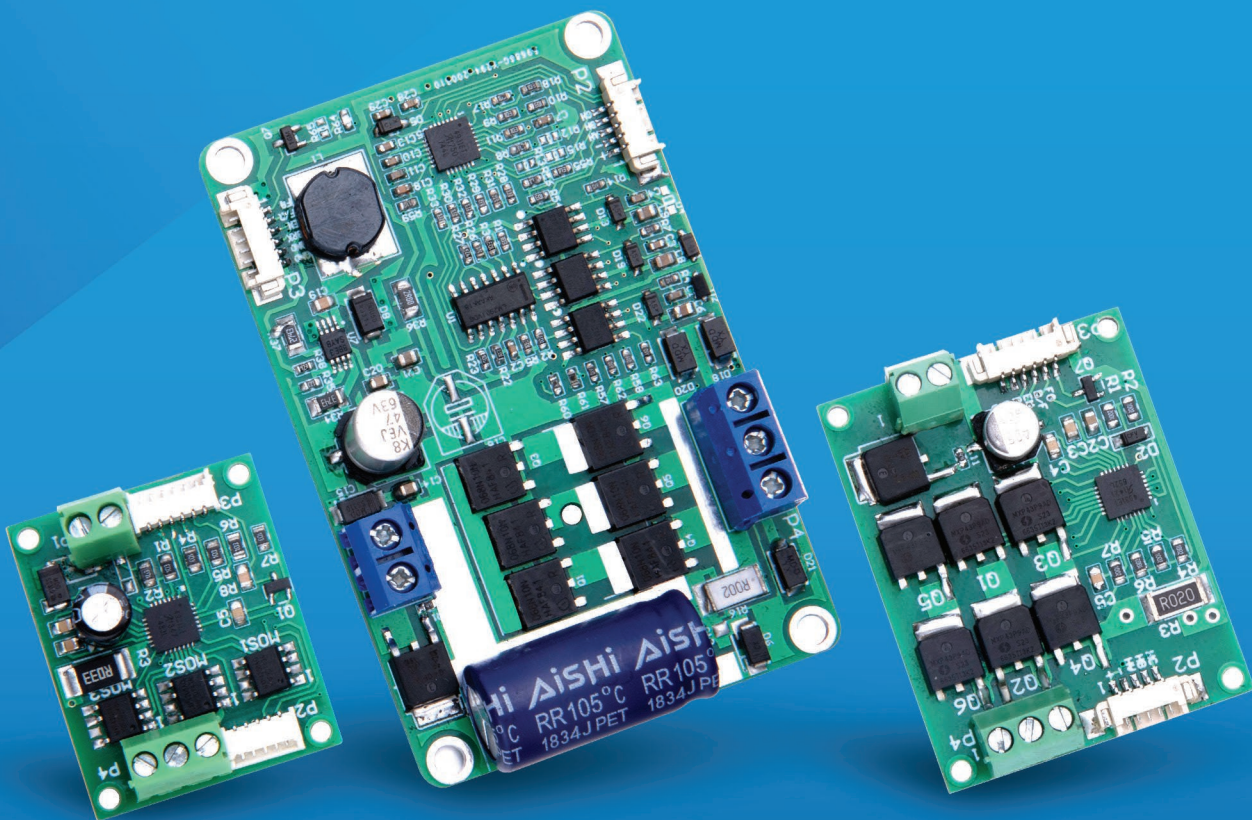
DRIVING THE FUTURE



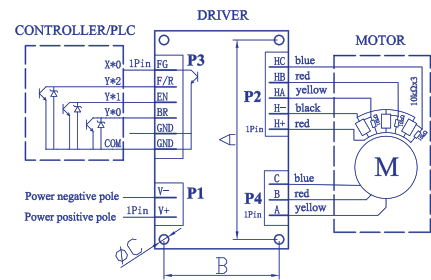
TOTAL SOLUTION for Precision
DC Drive System 2020

CONT ROLLER SPEED DRIVER

Assun Speed Drivers are made to drive the brushless DC motors with several potential control functions like speed control, rotation direction control and speed feedback. Customer can choose different models based on the specific current rating.



AM-CDN-0305-LAAS (3 Amps)



SYSTEM CHARACTERISTICS:	INFORMATION:	INSTALLATION NOTES:
Input Voltage: 12~28V DC	Dimension: Length: 34mm. width: 28mm	a) Please install in dry and ventilated place
Continuous Current: 3A	Hole Size: A: 30.0mm; B: 24.0mm; C: 2.1mm	b) Avoid vibration and collision
Temperature - Operation: 0 ~+45°C	Cooling Method: Natural Cooling	c) Do not let metal dust and iron cut falling on controller
Temperature - Storage: -20 ~+85°C	Protective Function: Current limit, Undervoltage	d) Fix installation is needed
Humidity: ≤85% (non-condensing)	Weight: 8.5g	e) Use quality connection cables

INTERFACE & CONTROL SIGNALS

P1: Electric Connections

Number	Name	Note
1	M+	Power Vcc
2	M-(GND)	Power GND

P2: Motor Sensor Connections

Number	Name	Note
1	H+	Hall sensor power supply Vcc
2	H-	Hall sensor power supply GND
3	HA	Hall Sensor Phase A
4	HB	Hall Sensor Phase B
5	HC	Hall Sensor Phase C

P3: Control Signal Connections

Number	Name	Note (Low: 0~0.8VDC; High: 2.2~5.0VDC; Null: Not Connect)
1	FG	Motor Speed Signal Output (3 pul/turn)
2	F/R	Direction port (Low-CW; High/Null-CCW); Direction defined when looking from motor front.
3	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).
4	BR	Brake port (Low-Brake; High/Null-Release)
5	GND	Control GND
6	GND	Control GND

P4: Motor Electric Connection

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

NOTE ON USAGE

- Controller should be installed with 20mm space for cooling. The environment should be ventilated
- 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
- Change direction only when motor stopped completely to prevent damage of electronic components.
- The controller is a two-quadrant operation mode, it cannot be use when speed change is rapid.
- Please read this instruction carefully before installation. Whenever there is problem, please stop the current immediately.

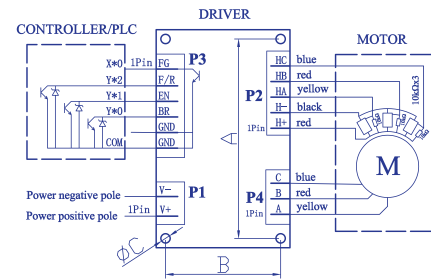
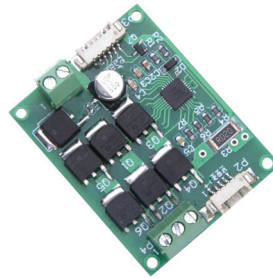
REMARKS

Data Tested at 25°.

Operation exceeds continuous limits of operating range will compromise the life of the device.

Download datasheet: <https://assunmotor.com/documents-download>

AM-CDN-0815-LAAS (8 Amps w/ optional signal or manual control.)



SYSTEM CHARACTERISTICS:	INFORMATION:	INSTALLATION NOTES:
Input Voltage: 12~48V DC	Dimension: Length: 50mm. width: 35mm	a) Please install in dry and ventilated place
Max. Continuous Current: 8A	Installation Hole Diameter: 2.5mm	b) Avoid vibration and collision
Recommended Operation Temp: -20~+45°C	Cooling Method: Natural Cooling	c) Do not let metal dust and iron cut falling on controller
Recommended Storage Temp: -20 ~+85°C	Protective Function: Current limit, Undervoltage	d) Fix installation is needed
Humidity: ≤85% (non-condensing)	Weight: 25g	e) Use quality connection cables

INTERFACE & CONTROL SIGNALS

P1: Electric Connections

Number	Name	Note
1	M+	Power Vcc
2	M-(GND)	Power GND

P2: Motor Sensor Connections

Number	Name	Note
1	H+	Hall sensor power supply Vcc
2	H-	Hall sensor power supply GND
3	HA	Hall Sensor Phase A
4	HB	Hall Sensor Phase B
5	HC	Hall Sensor Phase C

P5: Manual Controls

Number	Name	Note
1	Potential Meter Knob	Rotate to control speed Manually.
2	Direction Button	Default in CCW; Switch direction for each click of button.

P3: Control Signal Connections

Number	Name	Note (Low: 0~0.8VDC; High:2.2~5.0VDC; Null: Not Connect)
1	FG	Motor Speed Signal Output (1 pulse/turn)
2	F/R	Direction port (Low-CW; High/Null-CCW); Direction defined when looking from motor front.
3	EN	PWM speed control signal input (PWM requirement: 30KHz, the higher the duty cycle, the higher the speed).
4	BR	Brake port (Low-Brake; High/Null-Release)
5	GND	Control GND

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:
Manual control knob and buttons will be connected to the board by lead wire;
User must select Signal Control or Manual Control upon order. Choosing one mode will dis-able the other mode.
***Only one model available with end users.**

NOTE ON USAGE

- Controller should be installed with 20mm space for cooling. The environment should be ventilated
- 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
- Change direction only when motor stopped completely to prevent damage of electronic components.
- The controller is a two-quadrant operation mode, it cannot be use when speed change is rapid.
- Please read this instruction carefully before installation. Whenever there is problem, please stop the current immediately.

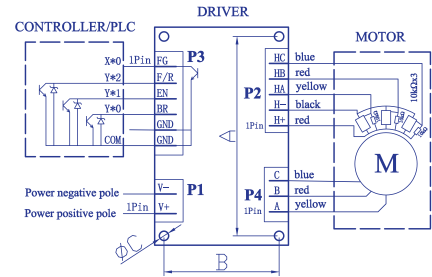
REMARKS

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AM-CDN-1525-NAAS (15 Amps, w/ signal & manual controls.)



SYSTEM CHARACTERISTICS:	INFORMATION:	INSTALLATION NOTES:
Input Voltage: 12~48V DC	Dimension: Length: 60mm. width: 50mm	a) Please install in dry and ventilated place
Max. Continuous Current: 15A	Installation Hole Diameter: 3.4mm	b) Avoid vibration and collision
Recommended Operation Temp: -20 ~+45°C	Cooling Method: Natural Cooling	c) Do not let metal dust and iron cut falling on controller
Recommended Storage Temp: -20 ~+85°C	Control: Manual Control/Signal Control	d) Fix installation is needed
Humidity: ≤85% (non-condensing)	Weight: 40g	e) Use quality connection cables

INTERFACE & CONTROL SIGNALS

P1: Electric Connections

Number	Name	Note
1	M+	Power Vcc
2	M-(GND)	Power GND

P2: Motor Sensor Connections

Number	Name	Note
1	H+	Hall sensor power supply Vcc
2	H-	Hall sensor power supply GND
3	HA	Hall Sensor Phase A
4	HB	Hall Sensor Phase B
5	HC	Hall Sensor Phase C

P5: Manual Controls

Number	Name	Note
1	Potential Meter Knob	Rotate to control speed Manually.
2	Direction Button	Default in CCW; Switch direction for each click of button.

P3: Control Signal Connections

Number	Name	Note (Low: 0~0.8VDC; High: 2.2~5.0VDC; Null: Not Connect)
1	FG	Motor Speed Signal Output (1 pulse/turn)
2	F/R	Direction port (Low-CW; High/Null-CCW); Direction defined when looking from motor front.
3	PWM	PWM speed control signal input (PWM requirement: 30KHz, the higher the duty cycle, the higher the speed).
4	BR	Brake port (Low-Brake; High/Null-Release)
5	GND	Control GND

P4: Motor Electric Connection

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

Note:
User could use the driver either with manual control or with PWM and analogue signal control;
Both control models available with end users.

NOTE ON USAGE

- Controller should be installed with 20mm space for cooling. The environment should be ventilated
- 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
- Change direction only when motor stopped completely to prevent damage of electronic components.
- The controller is a two-quadrant operation mode, it cannot be use when speed change is rapid.
- Please read this instruction carefully before installation. Whenever there is problem, please stop the current immediately.

REMARKS

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

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