All-in-one Servo Motor 57AIM 系列

Product Features:

1. 15 bit absolute encoder, one cycle pulse up to 32768.
2. Absolute value of multiple turns, the maximum record is 65535 turns. (battery required).
Pulse mode: power on again and return to power off position automatically.
Communication mode: power off recording position.
3. Multistage DD motor structure, large torque output.
4. Integrated servo, simplified wiring, ultra small volume.
5. Low noise, low vibration, high speed positioning, high reliability.
6. FOC field oriented vector control, supporting position / speed closed-loop.
7. It can work in the given pulse state of zero lag and follow the zero lag.
8. 16 bit electronic gear function.
9. Modbus RTU communication (19200, 8, N, 1).
10. Position mode, support pulse + direction signal
11. Has locked rotor, over-current and over-voltage protection.

Specifications:

Model No.		57AIM15	57AIM15H	57AIM30	57AIM30H
Power	Voltage	24~36VDC	24~36VDC	24~36VDC	24~36VDC
	Current	2.2A	2.2A	4.4A	4.4A
Motor parameter	Torque	0.48NM	0.24NM	0.96NM	0.48NM
	Rated speed	1000RPM	2500RPM	1000RPM	2500RPM
	Max speed	1500RPM	3000RPM	1500RPM	3000RPM
	Power	50W	50W	100W	100W
	Resistance	2.65 Ω	2.65 Ω	1.3 Ω	1.3 Ω
	Inductance	1.1mH	1.1mH	0.5mH	0.5mH
	Rotor inertia	$9.139 x 10^{-5}$ KG/M^2	$9.139 x 10^{-5}$ KG/M^2	$1.184 x 10^{-5}$ KG/M^2	$1.184 x 10^{-5}$ KG/M^2
Feedback signal		Multi turn absolute encoder (single turn 32768 pulse, single turn 15 bit)			
Cooling mothed		Natural cooling			
Weight					
Position control mode	Max pulse input frequency	500KHz			
	Pulse instruction mode	Pulse + Direction， A phase +B phase			
	Electronic gear ratio	Setting range from 1~65535 to 1~65535			
	Position sampling frequency	2KHz			
Protect function		Blocked alarm			
Communication interface		RS485（modbusRTU 19200,8,N,1）			

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Using environment	Temperature	0~40°

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	Motor allowed max temperature	85°
	Humidity	5~95%

Interface Definition:

Terminal No.:Face to terminal,the left one is the first.

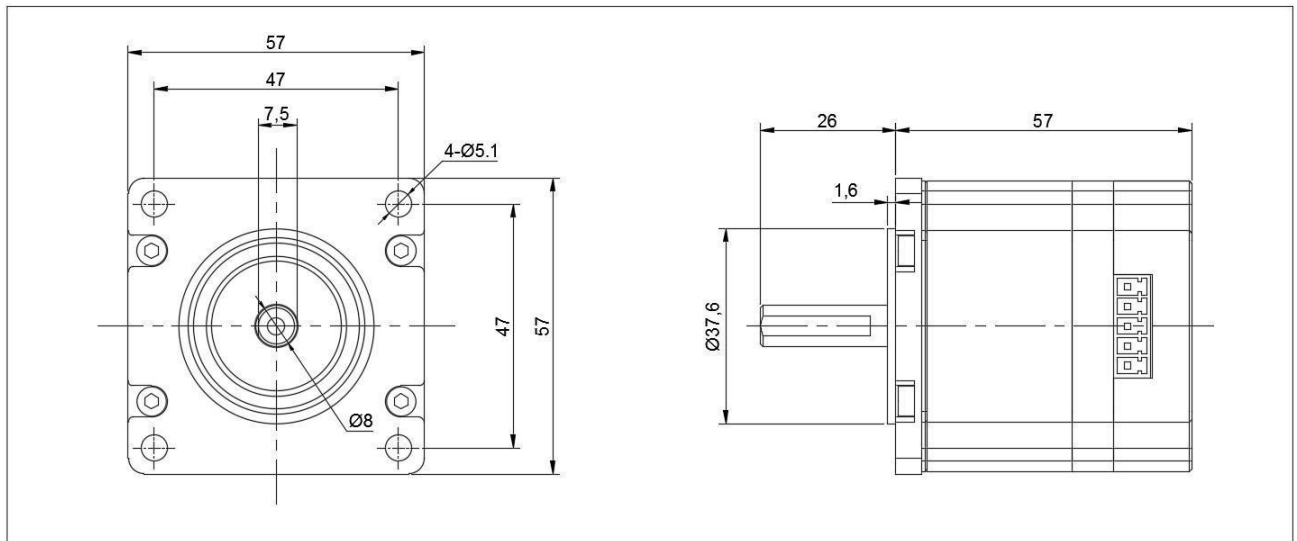| Terminal No.	Name	Function
1	+24V	Positive pole of DC power，+24V。May short circuit or damage driver if positive and negative connect wrong
2	GND	DC power gound (May short circuit or damage driver if positive and negative connect wrong)
3	PU+ (+5V)	Pulse control the signal:pulse rising edge is effective;PU-high power usually 3.3-5V,low power usually 0-0.5V.In order to reliablity respond to the pulse,the pulse width should greater than 1.2µs.If use +12V or +24V,resistance is required.
4	PU- (PU)	
5	DIR+ (+5V)	Direction signal:High/low level signal,to ensure reliable reversing of the motor, the direction signal should be established at least 5µs before the pulse signal.DIR-high power usually 3.3-5V,low power usually 0-0.5V.
6	DIR- (DIR)	
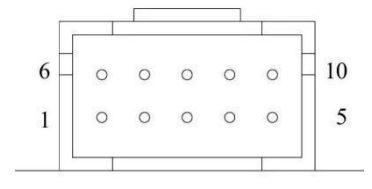
Terminal No.:Face to terminal, from left to right, the low row is 12345, the up row is 678910

Terminal No.	Name	Function
1	NC	
2	485A	485 communication positive pole
3	485B	485 communication negative pole
4	NC	
5	NC	
6	COM	Output signal and 485 power supply are common ground.
7	WR	Alarm signal output, internal for optocoupler NPN output.Normal for high resistance state,when alarm,conect with COM.
8	RDY/PF	Servo ready for signal.After the servo works normally, the output communication number of optocoupler NPN is generated. After the power is cut off, the battery is in a high resistance state.
9	ZO	Encoder zero point output.Zero signal optically coupled NPN output signal.
10	485_5V	485 communication 5V power supply,external power supply is requested.(The power supply is powered by the controller)

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Motor Dimension:

57AIM15:

57AIM30：