Product Features

1. 15_bit absolute encoder， pulse up to 32768。
2. Multi-stage DD motor structure, large torque output。
3. Integrated servo, simplified wiring, small size。
4. Low noise, low vibration, high speed positioning, high reliability.
5. FOC field orientation vector control, support position/speed closed loop.
6. Can work in zero lag given pulse state, follow zero lag.
7. 16 position electronic gear function.
8. modbus RTU /CANOPEN
9. Position mode, support pulse + direction signal
10. With blocked rotation,overcurrent protection, overvoltage protection.

Parameter List

Model Specification		42AIM10	42AIM15	42AIM15H	42AIM30	42AIM30H
power supply	voltage	24~36VDC	24~36VDC	24~36VDC	24~36VDC	24~36VDC
	electricity	1.5A	2.2A	2.2A	4.4A	4.4A
electric machine parameter	torque	0.32NM	0.48NM	0.24NM	0.96NM	0.48NM
	Rated speed	1000RPM	1000RPM	2500RPM	1000RPM	2500RPM
	Maximum speed	1500RPM	1500RPM	3000RPM	1500RPM	3000RPM
	power	33W	50W	50W	100W	100W
	resistance	3.45 Ω	2.65 Ω	2.65 Ω	1.3 Ω	1.3 Ω
	inductance	1.18mH	1.1mH	1.1mH	0.5mH	0.5mH
	moment of inertia	$6.093x10^{-5}$ KG/M^2	$9.139x10^{-5}$ KG/M^2	$9.139x10^{-5}$ KG/M^2	$1.184x10^{-5}$ KG/M^2	$1.184x10^{-5}$ KG/M^2
feedback signal		Multi-turn absolute encoder （ 32768 pulses per lap, 15 positions per lap ）				
type of cooling		air cooling				
weight						
Position control mode	**Maximum input pulse frequency**	500KHz				
	Pulse command mode	Pulse + direction, phase A + phase B				
	Electronic gear ratio	The value ranges from 1 to 65535				

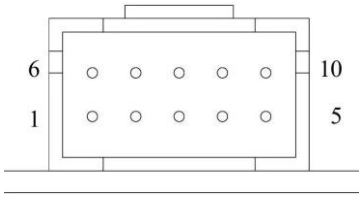
	Position sampling frequency	2KHz
protect function		Motor blocking alarm
communication interface		RS485（modbus RTU）/ CANOPEN
working environment	**environment temperature**	0~40°
	Motor allows maximum temperature	85°
	humidity	5~95%

Interface Function

port number: Facing the port, the left side is the first。

Port number	name	function
1	+24V	Dc power supply positive, +24V. The positive and negative connection will directly short circuit the power supply and may damage the driver
2	GND	Direct current source. The positive and negative connection will directly short circuit the power supply and may damage the driver
3	PU+ (+5V)	Pulse control signal: pulse rising edge effective; PU- high power usually 3.3 ~ 5V, low power usually 0 ~ 0.5V. In order to reliably respond to the pulse signal, the pulse width should be greater than 1.2μs. If +12V or +24V is used, a series resistor is required.
4	PU- (PU)	
5	DIR+ (+5V)	Direction signal: high/low level signal, in order to ensure the reliable commutation of the motor, the direction signal should precede the pulse signal Establish at least 5μs. DIR- 3.3 ~ 5V in high power, 0 ~ 0.5V in low power.
6	DIR- (DIR)	

Port number: Facing the port, the lower row is 12345 from left to right, and the upper row is 6 7 8 9 10 from left to right。



The 485 version plug is defined as follows：

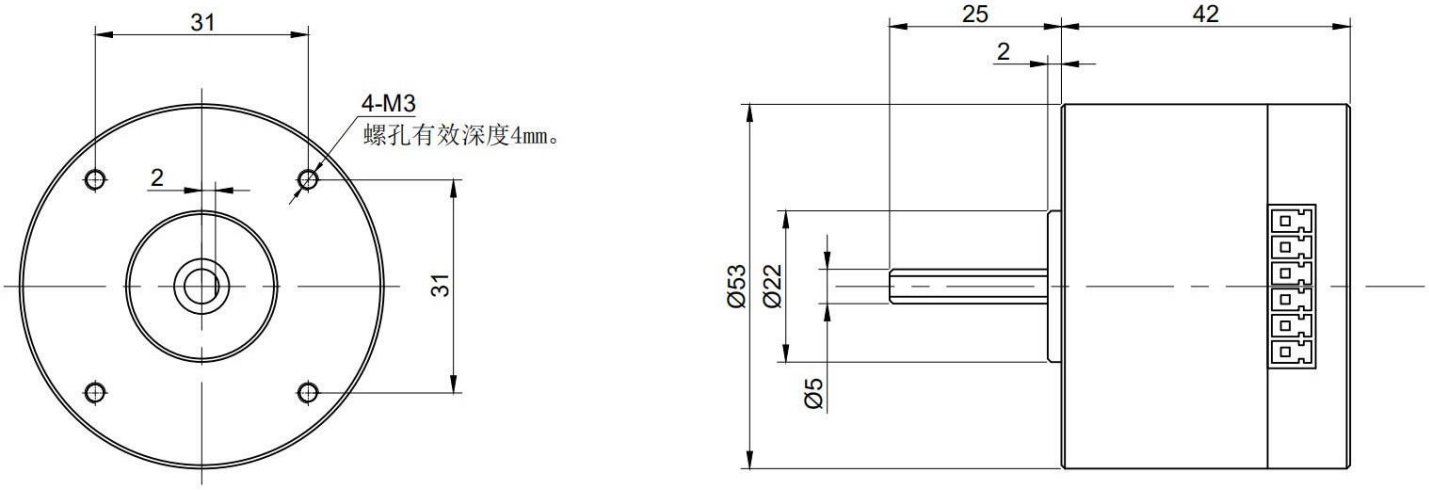
Port number	Name	function
1	NC	
2	485A	485 communication +
3	485B	485 communication -
4	EN+	EN+
5	EN-	EN-
6	COM	The output signal is grounded with the 485 power supply
7	WR	Alarm signal output, the internal optical coupling NPN output. Normally, it is in high resistance state, and COM is on with alarm.
8	RDY/PF	Servo ready signal/position signal. There is a signal (conduction) after the power-on automatic work, when the following error is less than 0.5°, there is a signal (conduction), and when the following error is greater than 0.5°, there is no signal (high resistance).
9	ZO	Encoder zero output. There is zero signal optical coupling NPN output guide communication number
10	485_5V	485 Communication 5V power supply. External power supply is required. (This power supply is supplied through the controller)

CAN version plug is defined as follows：

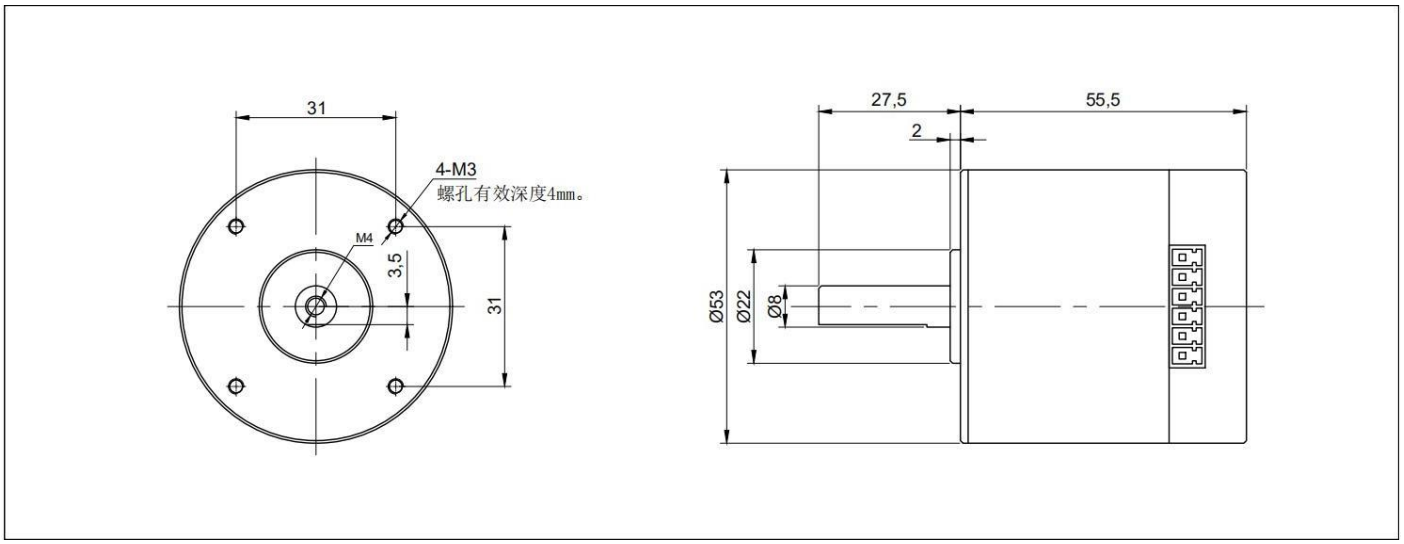
Port number	Name	function
1	CANL	Can communication port， Use CAN communication, CAN_5V,COM need 5V
2	NC	
3	NC	
4	CANH	Can communication port， Use CAN communication, CAN_5V,COM need 5V
5	NC	
6	COM	Output signal and CAN Ground connection
7	WR	Alarm signal output, the internal optical coupling NPN output. Normally, it is in high resistance state, and COM is on with alarm.
8	RDY/PF	Servo ready signal/position signal. There is a signal (conduction) after the power-on automatic work, when the following error is less than 0.5°, there is a signal (conduction), and when the following error is greater than 0.5°, there is no signal (high resistance).
9	ZO	Encoder zero output. There is zero signal optical coupling NPN output guide communication number.
10	CAN_5V	CAN communication 5V power supply, external power supply is required. (This power supply is supplied through the controller)

Motor size

42AIM10:



42AIM15:



42AIM30：