

Product characteristics

- 15 bit absolute encoder, one pulse up to 32768.
- Multi-circle absolute value, maximum record 65535 laps. (Distribution pool required).
Pulse mode: re-power automatic power back off position.
Communication mode: power off record position.
- Multistage DD motor structure, large torque output.
- Integrated servo, simplified wiring, ultra-small voltage.
- Low noise, low vibration, high speed positioning, high accuracy.
- FOC field oriented vector control, support position / speed / torque control.
- can work at zero hysteresis given pulse state, follow pulse.
- 16-bit electronic gear function.
- support RS485, CAN, Modbus RTU communications (19200,8, N,1).
- Position mode, support pulse + direction signal.
- With blocking, overcurrent protection, overvoltage protection.



Parameters

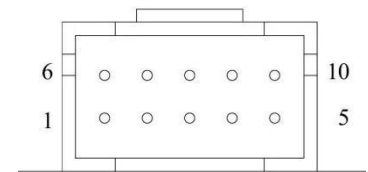
Model parameters		42AIM10	42AIM15	42AIM15H	42AIM30	42AIM30H
Power supply	Voltage	24~36 VDC	24~36 VDC	24~36 VDC	24~36 VDC	24~36 VDC
	Current	1.5 A	2.2 A	2.2 A	A 4.4	A 4.4
Motor parameters	Torque	NM 0.32	NM 0.48	0.24 NM	0.96 NM	NM 0.48
	Rated speed	1000RPM	1000RPM	2500RPM	1000RPM	2500RPM
	Maximum rotational speed	1500RPM	1500RPM	3000RPM	1500RPM	3000RPM
	Power	33W	50W	50W	100W	100W
	Resistance	3.45Ω	2.65Ω	2.65Ω	1.3Ω	1.3Ω
	Inductance	1.18 mH	1.1 mH	1.1 mH	0.5 mH	0.5 mH
	moment of inertia	6.093 x 10 ⁻⁵ KG /M ²	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-loop absolute encoder (single-loop 32768 pulse, single-loop 15 bits)					
Cooling mode	Natural cooling					
Weight						
Position Control Mode	Maximum input pulse frequency	500KHz				
	Pulse instruction mode	Pulse + direction, A phase +B phase				
	Electronic gear ratio	Set up ~65535 to 65535				
	Location sampling frequency	2KHz				
Protection function	Stopping alarm					
Communication interface	RS485(modbus RTU 19200,8, N,1)					
Environment	Ambient	0~40°				

	temperature	
	Maximum permissible temperature of motor	85°
	Humidity	5~95%

Interface definitions

Terminal serial number: facing the terminal, the left is the first.

Terminal serial number	Name of name	Function
1	V +24	Positive DC Power +24 V. Negative and positive connections can either directly short the power supply or damage the driver
2	GND	DC power source. Negative and positive connections can either directly short the power supply or damage the driver
3	PU+(+5 V)	Pulse control signal: pulse rising edge is effective; PU- high power 3.3~5 V, low power 0~0.5 For reliable response to a pulse signal, the pulse width should be greater than $\mu s .1.2$ When using +12 V or +24 V, series resistance is required.
4	PU-(PU)	
5	DIR+(+5 V)	Direction signal: high / low level signal, in order to ensure the reliable commutation of the motor, the direction signal should precede the pulse signal at least 5 μs established.DIR- high power 3.3~5 V, low power 0~0.5 V.
6	DIR-(DIR)	



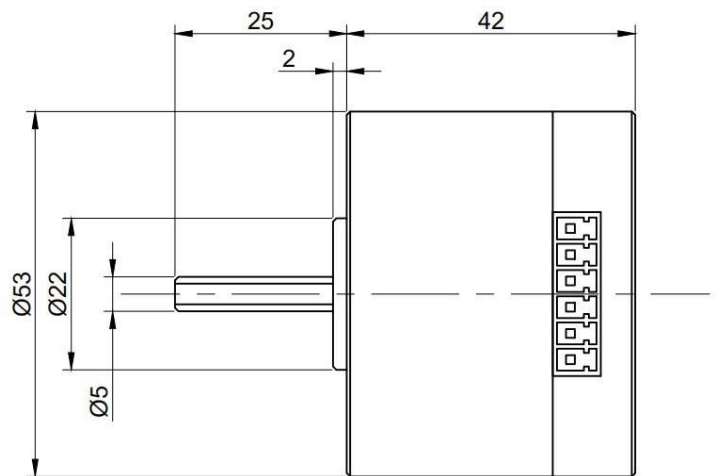
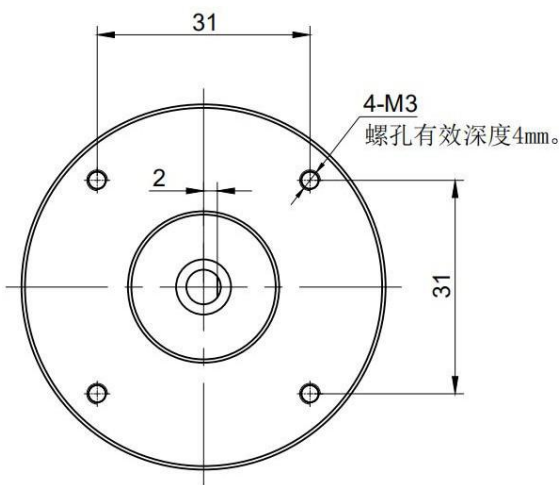
Terminal serial number: facing terminal, lower row from left to right is 12345, upper row from left to right is 6 7 8 9 10.

Terminal serial number	Name of name	Function
1	NC	
2	485A	485 Positive end of communication
3	485B	485 Negative terminal
4	NC	
5	NC	
6	COM	Output signal and 485 power supply common ground.
7	WR	Alarm signal output, internal optocoupler NPN output. Normal high resistance state, alarm with COM conduction.

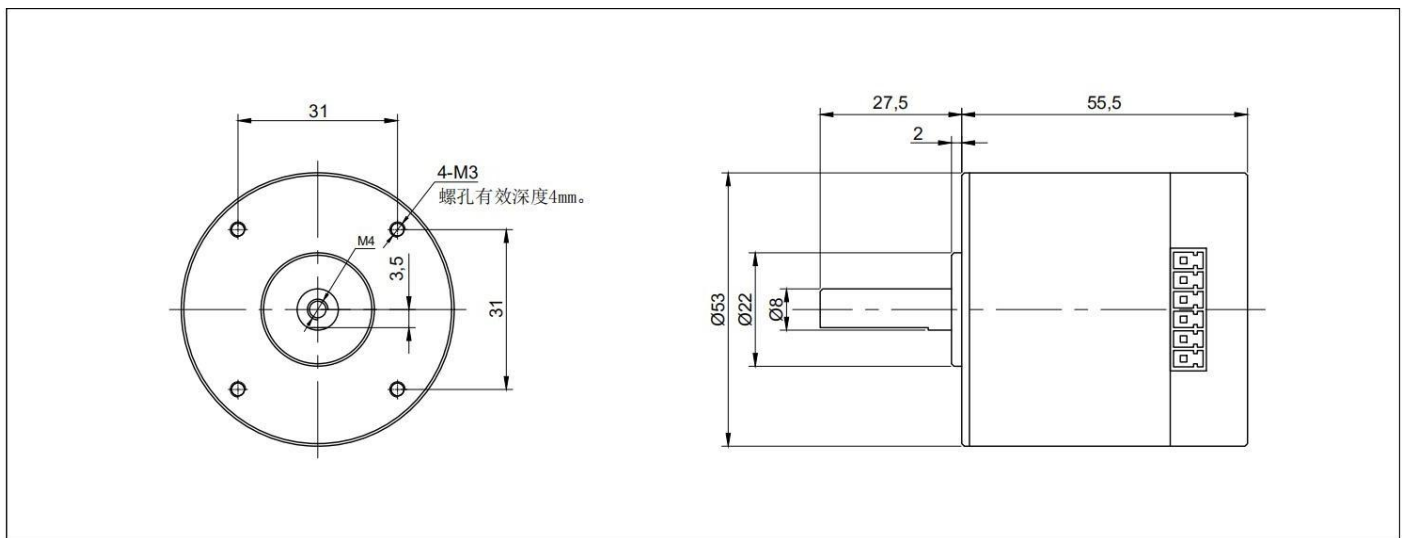
8	RDY/PF	Servo ready signal / in place signal. After automatic operation, there is a signal (conduction), when the following error is less than 0.5° is Have signal (conduction), follow error greater than 0.5° no signal (high resistance state).
9	ZO	encoder zero point output. Have zero point signal optical coupling NPN output conduction signal.
10	485_5 V	485 Communication 5 V power supply, need external power supply. (This power supply is powered by a controller)

Motor size

42AIM10:



42AIM15:



42AIM30:

