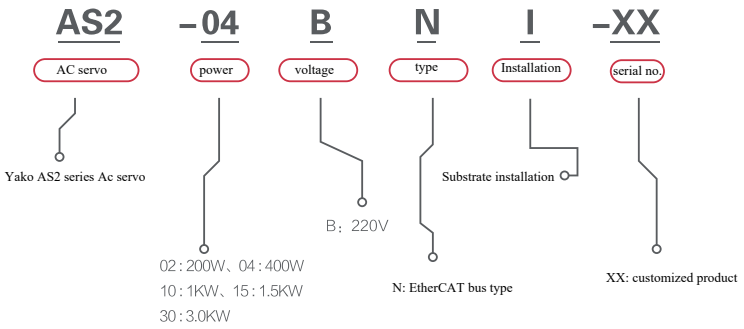
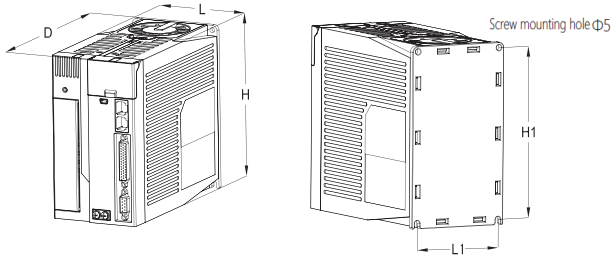
Servo Drive Naming Rules



Drive Specs and Dimensions



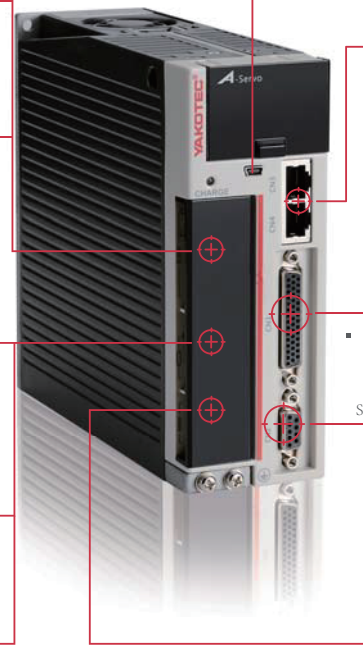
Model	L(mm)	H(mm)	D(mm)	L1(mm)	H1(mm)	D1(mm)	screw hole
AS2 Frame B	58	160	177	48	150	75	2-M4
AS2 Frame C	90	160	188	80	150	75	2-M4

Structure Size	SIZE B			SIZE C	
Drive Model	AS2-02BNI	AS2-04BNI	AS2-10BNI	AS2-15BNI	AS2-30BNI
Output Current Arms	1.6	2.8	5.5	7.6	11.6
Maximum Output Current Arms	5.8	10	17	17	28
Main Circuit Power Supply	Single-phase AC200V-240V		single-phase or 3-phase AC200V-240V,+10%		
Regenerative Loop Function	External brake resistor		~-10%,50/60Hz Built-in braking resistor		
Control Circuit Power Supply	Single-phase AC200V-240V,+10%~-10%,50/60Hz				

Servo Drive Basic Specifications

■ Basic Specifications			
Working Environment	Temperature		Operating：0℃~50℃
			Storage：-：-20℃~85℃
	Humidity		<0~90% RH（No dew environment）
	Working Altitude		<1000m above sea level
	Vibration/Shock		<1G
	IP Rating/Pollution degree		IP20/ Pollution degree 2
Control Method			IGBT PWM space vector control
Encoder			17-bit incremental / 23-bit absolute
Input and output port	IO signal	Input	8（General）
		Output	5（General）
Communication Function		RS232（USB）	Connect with PC for debugging servo drive
Panel Operator			LED display
Regenerative Loop Function			Built-in braking resistor for ⩾1000W models
Protect Function			Over current, overload, over voltage, low voltage, over speed, over temperature, encoder abnormality, communication abnormality, excessive position deviation, etc.
Control mode			Cycle synchronous position control (CSP); Cycle synchronous speed control (CSV); Cycle synchronous torque control (CST); Return to zero mode (HM);
■ Functions Specifications			
Position Control Mode	Position Command Format		EtherCAT bus digital
	Smoothing Filter		Smoothing the position command to make the motor run smoother and more stable
	Vibration Suppression Filter		It can effectively suppress external signal interference and system resonance frequency, to ensure stable operation of equipment
Speed Control Mode	Command Form		EtherCAT bus digital
	Speed Change Rate	Voltage Fluctuation	Rated voltage±10%：0.5%（Rated speed）
		Load Fluctuation	0-100% load：⩽0.5%(Rated speed)
		Temperature Fluctuation	25±25℃：⩽0.5%(Rated speed)
	Acceleration Deceleration Setting Range		0-10S
Torque Control Mode	Command Form		EtherCAT bus digital
Return to zero mode	Command Form		EtherCAT bus digital
	Zero return method setting		Through the EtherCAT bus configuration, support a variety of zero return mode
Common	Self-tuning Function		Inertia identification, rigidity tuning
	Encoder Feedback Electronic Gear		Setting freely
	Abnormal Information Record		8 groups of historical information records

Servo Drive Connection to Peripheral Devices



Wiring Circuit Breaker

- Used to protect the power supply, cut off the circuit when an overcurrent occurs.

EMI Filter

- Install a noise filter to prevent external noise from the power cord.

Electromagnetic Contactor

- Turn the servo power on/off. Install a surge suppressor when using it.

Braking Resistor

- When the internal resistor capacityis insufficient, connect the P-C terminal to an external braking resistor.

Brake Power Supply

- 24VDC power supply, use when the servo motor has a brake.

Electromagnetic Contactor

- Break control signal and turn the brake power on/off. Install a surge suppressor when using it.

PC port connection

- Servo drive PC communication cable (please prepare by yourself)

Communication Network Interface CN3/CN4

- Servo drive multi-machine parallel
  CN3 is the bus parallel input port (IN)
  CN4 is the bus parallel output port (OUT)

Servo Drive Input/Output Port CN1

- input and output cable (please prepare by yourself)

Servo Motor Encoder Cable CN2

- E1/E2-AS2-****

Servo Motor

- Main Circuit Terminal Definition

Name	Terminal Mark	Function Specification
Main Circuit Power Input Terminal	R、S	Single-phase AC220V power input
	R、S、T	Three-phase AC220V power input
Control Power Input Terminal	L1C、L2C	Control circuit power input terminal
External Regenerative Resistor Connection Terminal	P⊕、D、C	The external regenerative resistor defaults to short wiring between P ⊕ -D. When the braking capacity is insufficient, make an open circuit between P ⊕ -D (remove the short wiring) and connect an external braking resistor between P ⊕ -C. Please purchase an external braking resistor separately
Common DC Bus Terminal	P⊕、⊖	Common bus connection when multiple units are connected in parallel
Servo Motor Connection Terminal	U、V、W	Servo motor connection terminal, connected to U, V, W.
Ground Terminal	PE	Two grounding terminals are connected to the power grounding terminal and the motor grounding terminal. Be sure to ground the entire system.

Servo Drive Terminal Definition

- CN1 control port--probe input

Definition	PIN	Function
TP-1	39	Probe 1 (wiring method is the same as DI terminal)
TP-2	43	Probe 1 (wiring method is the same as DI terminal)

- CN1 Control Terminal - General Input and Output Signal

Definition	PIN	Function	
DI1	9	P-OT	Forward drive forbidden
DI2	10	N-OT	Backward drive forbidden
DI3	34	INHIBIT	Pulse inhibit
DI4	8	ALM-RST	Alarm reset (edge valid function)
DI5	33	S-ON	Servo enable
DI6	32	ZCLAMP	Zero fixed
DI7	31	GAIN-SEL	Gain select
DI8	30	Home Switch	Home switch
+24	17		Internal 24V power supply, voltage range +20~28V, Maximum output current 200mA
COM-	14		Internal 24V ground; open collector pulse input ground
COM+	11		Power input, 12~24V
DO1+	7	S-RDY+	Servo ready
DO1-	6	S-RDY-	
DO2+	5	COIN+	Position reached
DO2-	4	COIN-	
DO3+	3	ZERO+	Zero speed
DO3-	2	ZERO-	
DO4+	1	ALM+	Error output
DO4-	26	ALM-	
DO5+	28	BKOFF+	Brake output
DO5-	27	BKOFF-	

- CN1 Control Terminal - Encoder Output

Definition	PIN	Function
PAO+	21	Encoder pulse division output
PAO-	22	
PBO+	25	
PBO-	23	
PZO+	13	
PZO-	24	
PZ-OUT	44	Home point pulse open collector output
GND	29	Home point pulse collector open circuit output signal ground; differential signal ground
+5V	15	Internal 5V power supply, maximum output current 200mA
GND	16	
PE	Shell	

- CN2 Encoder Cable Servo Driver Side Terminal Pin Distribution

PIN	Encoder Signal	Function
1	--	Encoder Signal
2	--	
3	SD+	
4	SD-	
5	--	
6	--	
7	+5V	+5V Power Output
8	GND	Power GND output
9	--	
Shell	PE	

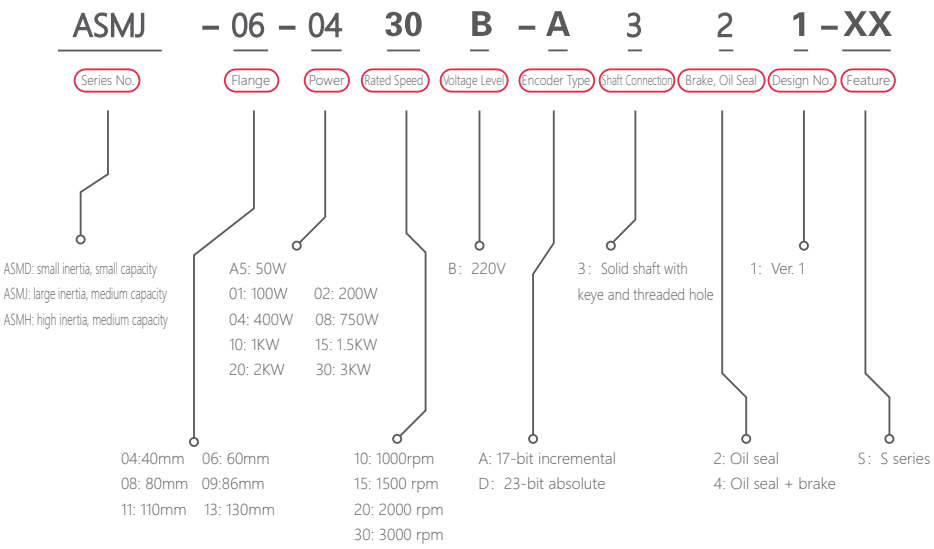
- CN3 and CN4 - Industrial Bus Communication Port Uses

PIN	Color	Signal Name	Direction
1	white/orange	TxData+	Output
2	orange	TxData-	Output
3	white/green	RecvData+	Input
4	blue	Unused	Unused
5	white/blue	Unused	Unused
6	green	RecvData-	Input
7	white/brown	Unused	Unused
8	brown	Unused	Unused

Servo System Configuration Table

Single-phase 220V		Three-phase 220V	Three-phase 220V	
 Size B		 Size B	 Size C	
AS2-02BNI	AS2-04BNI	AS2-10BNI	AS2-15BNI	AS2-30BNI
				
ASMD-04-A530B ASMD-04-0130B	ASMJ-06-0430B	ASMJ-08-0830B ASMJ-08-1030B	ASMJ-11-1230B ASMJ-11-1530B ASMJ-11-1830B	ASMJ-13-1525B ASMH-13-0915B ASMJ-13-1025B	ASMJ-13-2025B ASMJ-13-2625B ASMH-13-1315B

Motor Naming Rules



Motor Parameters

- 17-bit Encoder Motor Parameters

Parameters / Model	Rated Output (KW)	Rated Torque (Nm)	Maximum Torque (Nm)	Rated Current (Arms)	Maximum Current (Arms)	Rated Speed (min^{-1})	Maximum Speed (min^{-1})	Rotor Inertia ($10^{-4}Kgm^2$)	Voltage (V)	Matched Drive Model
40 Flange										
ASMD-04-A530B-A321	0.05	0.159	0.477	0.69	2.07	3000	5000	0.025	220	AS2-02BNI
ASMD-04-0130B-A321	0.1	0.318	0.954	1.27	3.81	3000	5000	0.046	220	AS2-02BNI
ASMD-04-0130B-A341	0.1	0.318	0.954	1.27	3.81	3000	5000	0.048	220	AS2-02BNI
ASMJ-04-0130B-A321-S	0.1	0.32	1.12	0.97	3.3	3000	6000	0.061	220	AS2-02BNI
ASMJ-04-0130B-A341-S	0.1	0.32	1.12	0.97	3.3	3000	6000	0.069	220	AS2-02BN
60 Flange										
ASMJ-06-0230B-A321	0.2	0.64	1.92	1.7	5.1	3000	5000	0.42	220	AS2-02BNI
ASMJ-06-0230B-A341	0.2	0.64	1.92	1.7	5.1	3000	5000	0.44	220	AS2-02BNI
ASMJ-06-0430B-A321	0.4	1.27	3.81	2.8	8.4	3000	5000	0.68	220	AS2-04BNI
ASMJ-06-0430B-A341	0.4	1.27	3.81	2.8	8.4	3000	5000	0.7	220	AS2-04BNI
ASMD-06-0230B-A321-S	0.2	0.64	1.91	1.7	5.2	3000	6000	0.14	220	AS2-02BNI
ASMD-06-0230B-A341-S	0.2	0.64	1.91	1.7	5.2	3000	6000	0.17	220	AS2-02BNI
ASMD-06-0430B-A321-S	0.4	1.27	3.82	2.7	8.5	3000	6000	0.23	220	AS2-04BNI
ASMD-06-0430B-A341-S	0.4	1.27	3.82	2.7	8.5	3000	6000	0.26	220	AS2-04BN
ASMJ-06-0430B-A321-S	0.4	1.27	3.82	2.7	8.5	3000	6000	0.71	220	AS2-04BNI
80 Flange										
ASMJ-08-0830B-A321	0.75	2.39	7.17	4.5	13.5	3000	4500	1.53	220	AS2-10BNI
ASMJ-08-0830B-A341	0.75	2.39	7.17	4.5	13.5	3000	4500	1.59	220	AS2-10BNI