ADSD-S series production

AC permanent magnet synchronous servo drives and motors

大连安迪数控技术有限公司

DALIAN A&D NUMERICAL CONTROL TECHNOLOGY CO., LTD.

ADSD-S

◪ Company introduction

Dalian A&D numerical control technology co., ltd is a high-tech enterprise which is formed by Japan doctor and automation scholar. Specializing in permanent magnet AC synchronous servo systems and the exchange of asynchronous servo systems, including R & D, manufacturing, sales and service. The company provides high precision and reliable quality servo control products and optimal overall automation solution.

A&D servo drive can fit most kinds of NC systems in including import NC systems such as **SIEMENS、FAGOR，** and local NC systems such as the **GSK、HNC、Delta、Dalia CNC**.

◪ Product features

High-precision, high-speed, high-efficiency

Based on DSP+FPGA+IPM hardware platform

Fast response frequency

Precisely adjustment for eliminating vibration

Perfect function

Position / speed / torque / toe index control mode

Mechanical resonance suppression function

Flexible external terminal operation mode

Novel self-adaptive control

Facilitate self-definition function of operation signal

Perfect protection function

Convenient and practical communication software

Fault log query

Real-time status parameter display

Writing and reading of parameters

Online oscillograph function

Excellent structer   Reliable operation

Wiring flexibility

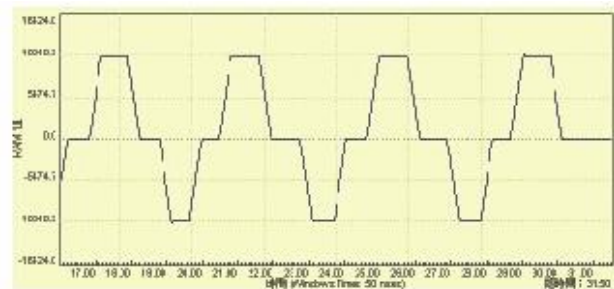Space-saving

Anti-electromagnetic interference performance
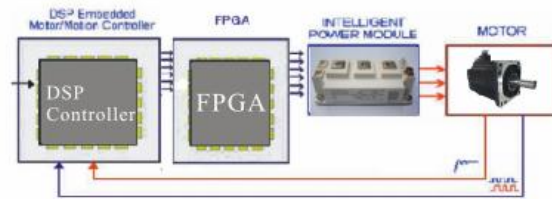
Automatic inspection of manufactering process

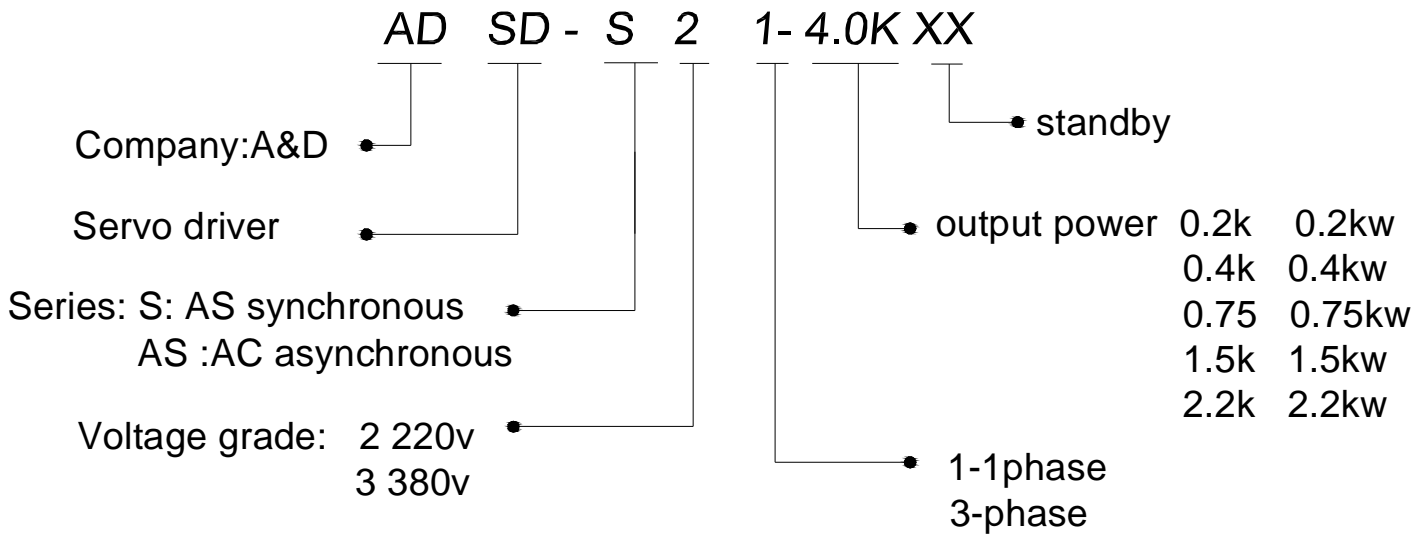**Simple lectotype   Flexible application   Convenient operation**

Independent control function, e.g. used for rotary tables controller
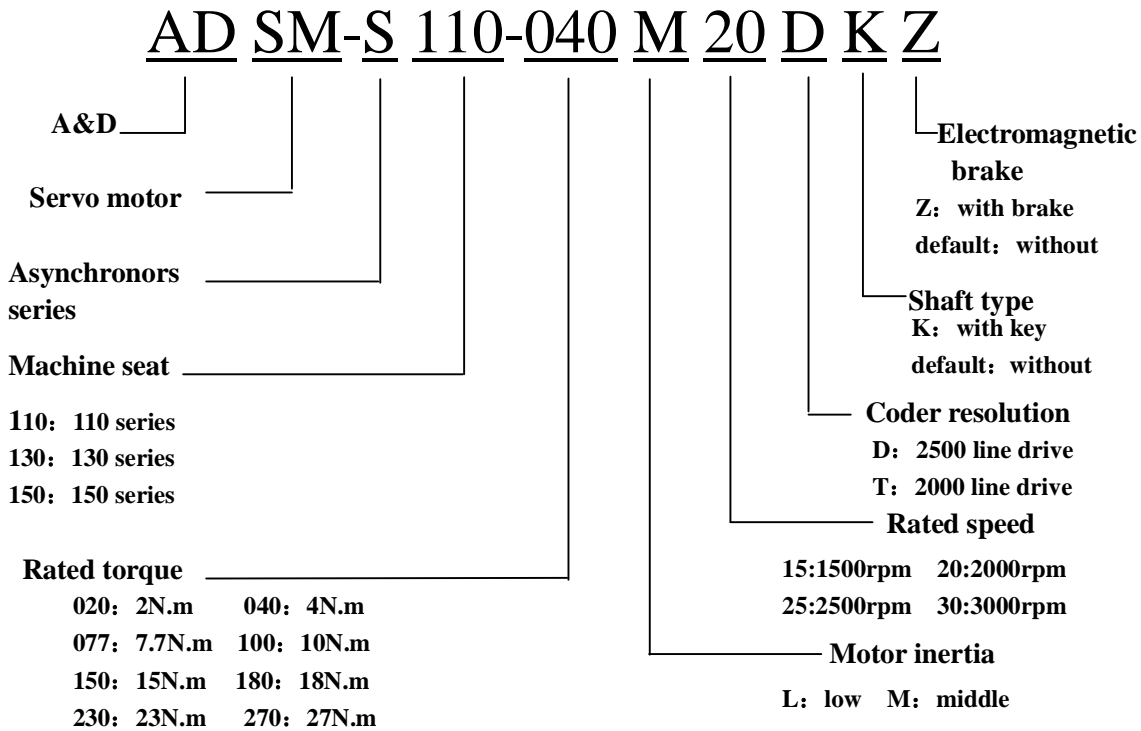
Fit most kinds of NC systems

Fit PLC

A&D
PERFECTION IN MOTION

⬛ Servo drive model instruction

AD SD - S 2 1- 4.0K XX

- Company:A&D
- Servo driver
- Series: S: AS synchronous
  AS :AC asynchronous
- Voltage grade: 2 220v
  3 380v

- standby
- output power
0.2k	0.2kw
0.4k	0.4kw
0.75	0.75kw
1.5k	1.5kw
2.2k	2.2kw
- 1-1phase
  3-phase

⬛ Servo motor model instruction

AD SM-S 110-040 M 20 D K Z

- A&D
- Servo motor
- Asynchronors series
- Machine seat
  - 110：110 series
  - 130：130 series
  - 150：150 series
- Rated torque
  - 020：2N.m   040：4N.m
  - 077：7.7N.m   100：10N.m
  - 150：15N.m   180：18N.m
  - 230：23N.m   270：27N.m
- Motor inertia
  - L：low   M：middle
- Rated speed
  - 15:1500rpm   20:2000rpm
  - 25:2500rpm   30:3000rpm
- Coder resolution
  - D：2500 line drive
  - T：2000 line drive
- Shaft type
  - K：with key
  - default：without
- Electromagnetic brake
  - Z：with brake
  - default：without

A&D PERFECTION IN MOTION

☑ Suited tabale of servo motor and drive model

Drive Power	Drive Model	Motor Model
400W	ADSD-S23-0.4K	ADSM-S80-013M30
		ADSM-S80-024M30
750W	ADSD-S23-0.75K	ADSM-S80-033M30
		ADSM-S110-020M30
		ADSM-S130-040M25
		ADSM-S130-050M20
1500W	ADSD-S23-1.5K	ADSM-S110-040M30
		ADSM-S130-050M25
		ADSM-S110-060M20
		ADSM-S110-050M30
		ADSM-S130-060M25
		ADSM-S110-060M30
		ADSM-S130-077M20
		ADSM-S130-077M25
		ADSM-S130-100M15
2200W	ADSD-S23-2.2K	ADSM-S130-077M30
		ADSM-S130-100M25
		ADSM-S130-150M15
4000W	ADSD-S23-4.0K	ADSM-S130-150M15
		ADSM-S150-150M25
		ADSM-S150-180M20
		ADSM-S150-230M20
		ADSM-S150-270M20

☑ Servo drive standerds（ADSD-S series）

Item		Norms	
Power	Voltage/Frequency grade	1-phase220V，50/60HZ　　3-phase220V，50/60HZ	
	Allowed fluctuation	voltage：±15%　　frequency：±5%	
Control function	Control system	High-performance vector control controller based on 32-bit DSP	
	Control mode	Position control mode，speed control mode，torquecontrol mode position/speed mode，position/torque mode，torque/speed mode	
	Torque control	Torque precision	±5% rated torque
		Torque limit	0～300%rated torque setting
		Speed limit	Parameter settings or Analog input
	Speed control range	1：5000 above	

		The highest precision	±1 pulse
	Position control	Most input pulse frequency	500KPPS
		Position control range	0~231 pulse setting
		Input mode	2-phase A/B orthogonal pulse, pulse+direction, CW+CCW pulse
		Electronic Gear	1/50~200
	Acceleration/deceleration control		Straight, smooth filtering, S-curve Acc/Dec
	Speed response frequency		450HZ
	Overload ability		Ratad current 300%-5s
operation	Input signals	Operation way	keyboard/terminal/communication method
		Speed setting	A variety of speed settings: keyboard, analog, communication
		Programmable Digital Input	multi-functional input such as Servo On, Alarm reset. Support the collector input, a total of 8 points
		Programmable Analog Input	Two-channel analog input can be analog speed, torque, the position reference
	Output signals	Operation mode	Motor status display, stop, acceleration and deceleration, speed, the program running
		Programmable analog output	frequency/current/voltage output
		Programmable digital output	Up to 6 output signals, each on the road there were 32 kinds of signals to choose from
			A,B,Z line drive output
	DC current brake		External energy consumption braking resistor,in the premise of flow, to ensure adequate braking torque
Protect function	Controller protection		Overvoltage protection, undervoltage protection, overcurrent protection, overload protection, over-temperature protection, over-speed protection, missing phase, external fault, communication error, PID feedback signal abnormalities, PG Fault
	Parameter protection function		By setting an administrator password and decoding, the controller protect the parameters
display	LCD display in English and Chinese+ LED keyboard	operation message	Set frequency，actual frequency，actual current，actual current percentage, DC bus voltage, motor actual speed, torque and so om.
		Error message	Save up to 10 error message, you can query fault type on the fault moment
communation	RS485		Optional fully isolated RS485 communication module can be realized with PC networking communications
Environment	Ambient temperature		-10℃ - 40℃
	Storage temperature		-20℃ - 65℃
	Ambient humidity		No more than 90% RH .
	height•vibration		1，000m below，5.9m/s² (=0.6g) below
	Apply position		No sunlight or corrosive, explosive gases and water vapor
Cooling Method			Forced air and natural air-cooled

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ADSD-S

ADSM-S synchronous servo motors have four series of dimensions, 80mm、110mm、130mm、150mm; four series of rated speeds 1500rpm、2000rpm、2500rpm、3000rpm. Motor configure standard 2500P/R incremental encoder. Selection of high temperature resistance, high-energy product quality permanent magnetic material，optimal design of the electromagnetic parameters, can maintain the motor a good working condition and fast response on long-running. IP65 protection, the motor apply to the industrial environment in particular.

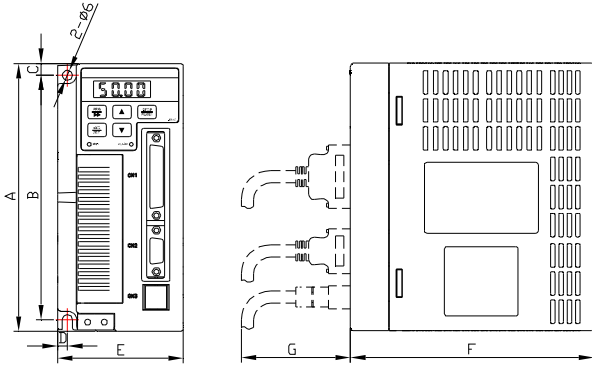110 Family Motor   130 Family motor   150 Family Motor

☑ Servo motor standards

Motor series	Motor	Power (KW)	Rated torque (N.m)	Rated speed (Rpm)	Rated current (A)	Rotor inertia (Kgm^2)	Mechanical time constant (Ms)	Motor weight (Kg)
80 series	80-010M30	0.3	1	3000	2	0.0658×10-3	2.05	1.82（2.32）
	80-014M30	0.4	1.4	3000	3	0.088×10-3	2.25	2.1（2.6）
110 series	110-020M30	0.6	2	3000	4.0	0.425×10-3	4.995	4.2（5.8）
	110-040M30	1.2	4	3000	6.0	0.828×10-3	3.45	6.0（7.6）
	110-050M30	1.5	5	3000	7.0	0.915×10-3	3.671	6.8（8.4）
	110-060M20	1.2	6	2000	6.0	1.111×10-3	2.205	7.8（9.4）
	110-060M30	1.6	6	3000	8.5	1.111×10-3	1.852	7.8（9.4）
130 series	130-040M25	1.0	4	2500	5.0	1.101×10-3	5.042	6.0（8.6）
	130-050M20	1.0	5	2000	5.5	1.333×10-3	4.186	6.9（9.5）
	130-050M25	1.3	5	2500	6.0	1.333×10-3	3.677	6.9（9.5）
	130-060M25	1.5	6	2500	7.0	1.544×10-3	3.122	7.6（10.2）
	130-077M20	1.6	7.7	2000	6.5	2.017×10-3	2.344	8.6（11.2）
	130-077M25	2.0	7.7	2500	8.5	2.017×10-3	2.624	8.6（11.2）
	130-077M30	2.4	7.7	3000	10.5	2.017×10-3	2.354	8.6（11.2）
	130-100M15	1.5	10	1500	6.5	2.595×10-3	2.162	10.6（13.2）
	130-100M25	2.6	10	2500	11.5	2.595×10-3	1.903	10.6（13.2）
	130-150M15	2.3	15	1500	9.5	4.32×10-3	2.396	14.6（17.2）
	130-150M25	3.9	15	2500	16.5	4.32×10-3	1.764	14.6（17.2）
150 series	150-150M25	3.8	15	2500	16.5	6.15×10-3	2.59	15.7（20.2）
	150-180M20	3.6	18	2000	16.5	6.33×10-3	2.106	17.8（22.3）
	150-230M20	4.7	23	2000	20.5	8.94×10-3	2.062	21.4（25.9）
	150-270M20	5.5	27	2000	26	11.19×10-3	1.932	23.7（28.2）

A&D PERFECTION IN MOTION

☑ Servo drive dimensions

power（KW）	dimensions			Installation					weight（kg）
	longth（E）	width(F)	height(A)	B	C	D	installation	G	
0.1～0.4	75	146	162	148	5	5	2-Φ6	75	1.7
0.75～1.5	100	196	162	149	5	10	2-Φ6	75	2.2
2.2～4	116	210	244	232	5	6	4-Φ6	75	4.5

☑ Servo driver application field

Widely used in CNC machine tools, woodworking machinery, plastic machinery, textile machinery, printing equipment, dyeing and finishing equipment, paper making equipment.