
SYNTEC SERVO PRODUCTS

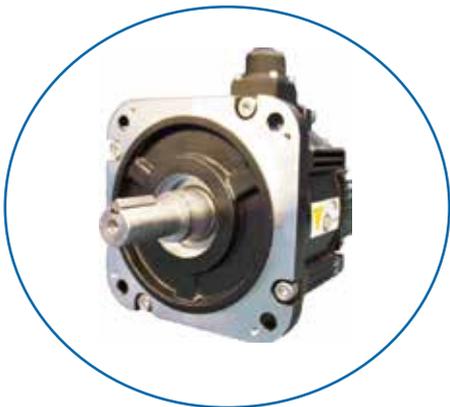
TRUSTED TECHNICAL SERVICE





Universal Drive

SYNTEC Drives feature powerful product flexibility that supports motors and encoders of major brands, providing applications in multiple realms.



About Us

SYNTEC has become one of the most influential and development potential controller brand in the Asia-Pacific market. With smart manufacturing system among its core strengths, SYNTEC is well experienced in lean and diverse manufacturing, the digital and physical integration, and on-site services. With the support of multiple distributions, we are the ideal one-stop shop for complete solutions and we hope all the small and medium manufacturers can join us in stepping into Industry 4.0.

SYNTEC
TECHNOLOGY CO.,LTD.

“ TRUSTED TECHNICAL SERVICE ”



Multi-axis Servo Drive



Multi-axis Servo Drive (XL)

- Supports up to 3+1 axis servo control.
- Supports up to 18.5kW for spindle drive, 3kW for axial drive .
- Supports versatile serial encoders.
- Extensive integration of axis control functions and synchronous control of multiple axes.
- Simple wiring. Space saving.
- Applicable to lathe, milling machine, and similar realms of industrial control.

Multi-axis Servo Drive (M)

- Supports versatile serial encoders.
- Supports M3 controller communication interface.
- Extensive integration of axis control functions and synchronous control of multiple axes.
- Offers IO card options of versatile specifications for optimal scalability.
- Provides customer a better choice of driver with controller integrated.
- Simple wiring. Space saving.
- Applicable to automation, woodworking and similar realms of industrial control



Mini Multi-axis Servo Drive (XS)

- Supports versatile serial encoders.
- Supports M3 controller communication interface.
- Integrates high-speed upper (master) serial communication interface.
- Extensive integration of axis control functions and synchronous control of multiple axes.
- Simple wiring and space saving; applied to automatic facilities.

Servo Drive System



SPD/SVD Series

- Supports up to 30kW spindle drive.
- Supports up to 3kW for axial drive.
- Supports versatile serial encoders.
- Supports M2/M3 controller communication interface
- High speed high precision controller, supports both scalar control and field oriented control.
- Capable of high speed positioning, precision processing and resonance elimination functions.

SYNTEC Spindle System

- High-speed and stable speed control provides outstanding, processing performance and high-efficiency power transmission.
- In combination with SYNTEC serial HD encoder.
- Both vertical and horizontal installation for high compatibility.
- Supports KTY84 temperature detection. Optional 220V and 380V voltage inputs.
- Versatile spindle motor for satisfactory application.



SYNTEC Servo Solution



- 16 million resolution encoder, high-speed, high precision positioning.
- Significantly reduces processing time, providing exceptional machining performances.
- Simple wiring. Space saving. Up to IP67 protection class
- Applicable to CNC machine, automation and versatile machining applications.

Accessories



SYNTEC Encoder

- Serial communication type encoder resolution up to 990,000.
- Features high precision, high definition and robust environmental tolerance.
- No-touch sensing technology; compact design, high compatibility.
- Various magnetic ring sizes for versatile applications.
- Suitable for machine spindle, lathe dual feedback and built-in motor applications.

Analog/Digital Converter Option Module

FC temperature sensor module

- Supports commonly used KTY84 temperature sensors.
- Features adjustable temperature protection limits for both safety and convenience.
- Real time surveillance over machine temperature, ensures safety of motor and control electronics.

AD/DA Module

- Multiple AD/DA ports for satisfying integration needs of various industries.
SYNTEC AD/DA modules provide users with versatile applications.



Encoder Option Module

- Supports third party encoders via simple installation.
- SYNTEC Encoder expansion modules provide serial and non-serial encoders of other makes.
- Applicable to dual feedback or external measurement, satisfying requirements of users in all layers.

Fine-tuning Software

The controller supports servo fine-tuning

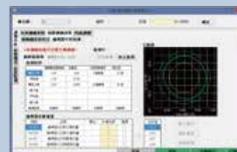


User-friendly Fine-tuning

One-touch fine-tuning



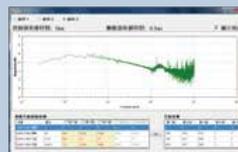
Simplified fine-tuning procedure; automatic fine-tuning for optimal servo parameters by pressing a single key.



Installation test



Advanced inertia



Resonance tuning



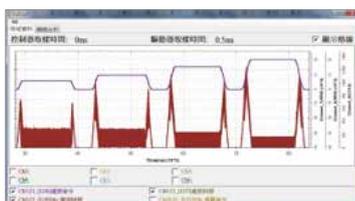
Automatic gain tuning



List of parameters

Versatile Application And Analysis Functions

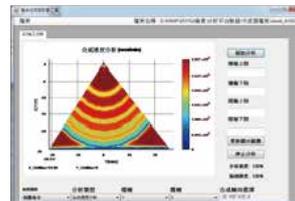
Provides data analysis functions for fast troubleshooting of processing problems.



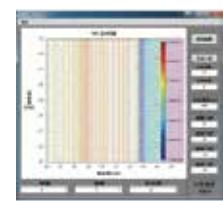
Oscilloscope



Quad-Peak compensation



2D machining analysis



NC analysis

SYNTEC Sizing Software

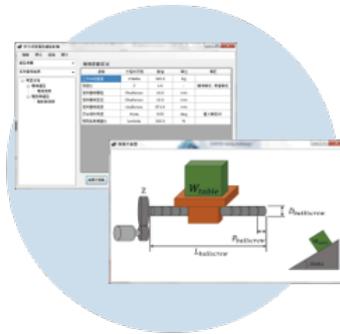
Recommend suitable SYNTEC motor and drive according to user demand and business operation. Automatically update product information after network connection, providing the user with the latest information.



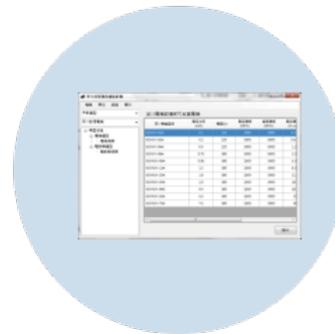
Motion planning



Mechanism setting



Comparison with similar products



Tackles with tormenting model selection issues, providing optimal motors and drives.

- Appropriate model selection provides trouble-free machining.
- Modular Package features easy tuning, assured safety and perfect reliability.

Syntec Motor		
Model No.	Watt(KW)	Voltage(V)
AMS-40-E12-F3	1.1	380
AMS-80-E12-M1	1.2	220
AMS-40-E12-F3	1.7	380
AMS11-40-E12-F3	2.4	380

Recommended SYNTEC packages

Drive Selection				
Single-Axis Drive		Multi-Axis Drive		
Model No.	Watt(KW)	Voltage(V)	RatedCurrent(A)	MaxCurrent(A)
SVD-3281-020	2	280	8.4	19.8
SPD-E281-050	5	380	15	28

Recommended SYNTEC drives

Spindle Combination Overview

Model	Flange size	Shaft diameter	Rated Torque	Max. Torque	Rated speed	Max. speed	Encoder	Single axis drive	Multi-axis drive
	mm	mm	N-m		rpm				
Tapping									
L5.5-12-B□-0-00	178	28	11.67	17.35	3000	12000	SYNTEC 18bit serial HD encoder	SPD-32B1-110	SMD-34B-2550(SPD)
L5.5-18-B□-0-00	178	28	11.67	17.35	3000	18000			
L5.5-24-B□-0-00	150	24	11.6	17.35	3000	24000			
L7.5-15-B□-0-00	198	32	17.35	23.66	3000	15000			SMD-33B-2575(SPD)
SL5.5-24-B□-0-00	150	24	7	10.5	5000	24000			SMD-34B-3575(SPD)
									SMD-34B-2550(SPD)
Machining center									
M5.5-12-B□-0-00	178	28	23.3	34.7	1500	12000	SYNTEC 18bit serial HD encoder	SPD-32B2-110	SMD-34B-2550(SPD)
M7.5-10-B□-0-00	198	32	34.7	47.3	1500	10000			SMD-33B-2575(SPD)
M7.5-12-B□-0-00	198	32	34.7	58.9	1500	12000			SMD-34B-3575(SPD)
M11-08-B□-0-00	198	48	47.3	69.4	1500	8000		SPD-32B1-185	SMD-34B-2550(SPD)
M11-12-B□-0-00	198	32	47.8	71.7	1500	12000			SMD-33B-35100(SPD)
M15-07-B□-0-00	260	48	69.4	94.6	1500	7000			SMD-34B-50150(SPD)
M18-07-B□-0-00	260	48	94.6	116.7	1500	7000			
Lathing (for mainland China only)									
M5.5-08-A4-0-10	180	28	17.7	26.5	2000	8000	SYNTEC 18bit serial HD encoder	SPD-32B1-075	SMD-34B-2550(SPD)
M7.5-08-A4-0-10	180	28	26.3	39.5	2000	8000		SPD-32B1-110	SMD-33B-2575(SPD)
M11-08-A4-0-10	210	32	35.8	53.7	2000	8000			SMD-34B-3575(SPD)
M15-08-A4-0-10	210	48	52.5	77.8	2000	8000		SPD-32B1-185	SMD-33B-35100(SPD)
									SMD-34B-50150(SPD)
High-speed motor(for CNC mill and lathe)									
M5.5-08-C□-0-01	178	28	17.51	26.03	2000	8000	SYNTEC 18bit serial HD encoder	SPD-32B1-110	SMD-33B-2575(SPD)
M7.5-08-C□-0-01	178	28	26.3	35.5	2000	8000			
M9-06-C4-0-01	260	38	42	56.8	1500	6000			
M12-06-C4-0-01	260	42	56	75.7	1500	6000		SPD-32B1-185	SMD-34B-3575(SPD)
M7.5-12-C□-0-01	178	28	17.51	23.8	3000	12000			SMD-33B-35100(SPD)
M11-08-B□-0-01	220	32	35.5	52.06	2000	8000			
M15-08-B4-0-01	220	48	52.06	71	2000	8000			SMD-34B-50150(SPD)

Spindle Designation

S08 – SP – M 5.5 – 12 – A 4 – 0 – 00

1st 2nd 3rd 4th 5th 6th 7th 8th 9th

Item	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
	S08	SP	M	5.5	12	A	4	0	00
Definition	Relevant Servo Product	SYNTEC SP Series Induction Spindle	SL: Super Low Inertia L: Low Inertia M: Medium-High /Medium-Low Inertia	Max. Power (kW) 5.5→5.5kW	Max. RPM (*1000rpm) 12→12000rpm	Mounting A: Foot mount B: B5 Flange Mount C: Vertical and Horizontal	Input Voltage 2: 200V 4: 400V	0: Optic Axis 2: Central Outlet	Ver.

Servo Combination Overview

380V-Class

Model	Flange size mm	Shaft diameter mm	Rated Torque N-m	Max. Torque	Rated speed rpm	Max. speed	Encoder	Optional accessories	Single axis drive	Multi-axis servo drive	
AM06-50-E12-□-Z3	60	14	0.64	1.92	3000	5000	Nikon24bit absolute encoder	B: Brake K: Key Way BK: Brake + Key Way	SVD-32B1-020	SMD-34B-2550(Axial)	
AM3-50-E12-□-Z3	80	19	3.5	10.5	3000	5000			SPD-32B1-020	SMD-33B-35100(Axial) SMD-34B-3575(Axial)	
AM3-60-E12-□-F3	90	19	3.2	10	3000	6000			SVD-32B1-020	SMD-33B-2575(Axial)	
AM5-40-E12-□-F3	130	19	5.39	14.9	2000	4000			SVD-32B1-020	SMD-34B-2550(Axial)	
AM8-40-E12-□-F3	130	22	8.34	30.8	2000	4000			SVD-32B1-020	SMD-33B-35100(Axial) SMD-34B-3575(Axial)	
AM11-40-E12-□-F3	130	24	11.5	34	2000	4000			SPD-32B1-050	SMD-34B-50150(Axial)	
AM15-40-E12-□-F3	130	24	15	45	2000	4000			SPD-32B1-110	--	
AM18-40-E12-□-F4	180	35	18.6	48.5	2000	4000					
AM28-40-E12-□-F4	180	35	28.4	76	2000	3000					
for mainland China only											
AM35-20-E12-□-F4	180	42	35	91.4	1500	2000	Nikon24bit absolute encoder	B: Brake K: Key Way BK: Brake+Key Way	SPD-32B1-110	--	
AM48-20-E12-□-F4	180	42	48	120.9	1500	2000			B: Brake	SPD-32B1-110	--
AM19-40-E12-□-M1	180	35	19	57	2000	4000				SPD-32B1-110	--
AM27-30-E12-□-M1	180	35	27	81	1500	3000					
AM35-20-E12-□-M1	180	42	35	70	1500	2000				SPD-32B1-185	--

220V-Class

Model	Flange size mm	Shaft diameter mm	Rated Torque N-m	Max. Torque	Rated Speed rpm	Max. Speed	Encoder	Optional accessories	Single axis drive	Multi-axis servo drive
AM6-30-E12-□-M1	110	19	6	18	2000	3000	Nikon24bit absolute encoder	B: Brake	SVD-22B1-010	SMD-24A-2020 SCD-□□-24A-2020 SMD-2□□B-2020
AM06-50-E12-□-Z3	60	14	0.64	1.92	3000	5000		B: Brake K: Key Way BK: Brake+Key Way		
AM1-50-E12-□-Z3	60	14	1.9	5.7	3000	5000				
AM3-50-E12-□-Z3	80	19	3.5	10.5	3000	5000				

Note: Accessory suitable for this motor model

Servo Motor Designation

S08 – AM – 5 – 40 – E 12 – B – F1

1st 2nd 3rd 4th 5th 6th 7th 8th

Item	1st S08	2nd AM	3rd 5	4th 40	5th E	6th 12	7th B	9th F1
Definition	Relevant Servo Product	AM: Axial Motor	Rated torque Prefix 0 if rated torque <1Nm 5: for rated torque = 5Nm 06: for rated torque = 0.6Nm	Max. RPM (*100rpm) 40*100=4000rpm	Encoder Type E: Encoder	Encoder 12: Nikon	Options B: Brake S: Oil Seal K: Key Way BS: Brake + Oil Seal BK: Brake + Key Way SK: Oil Seal + Key Way BSK: Brake + Oil Seal +Key Way	Ver.

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