
SYNTEC SERVO PRODUCTS

TRUSTED TECHNICAL SERVICE

About Syntec PROFILE

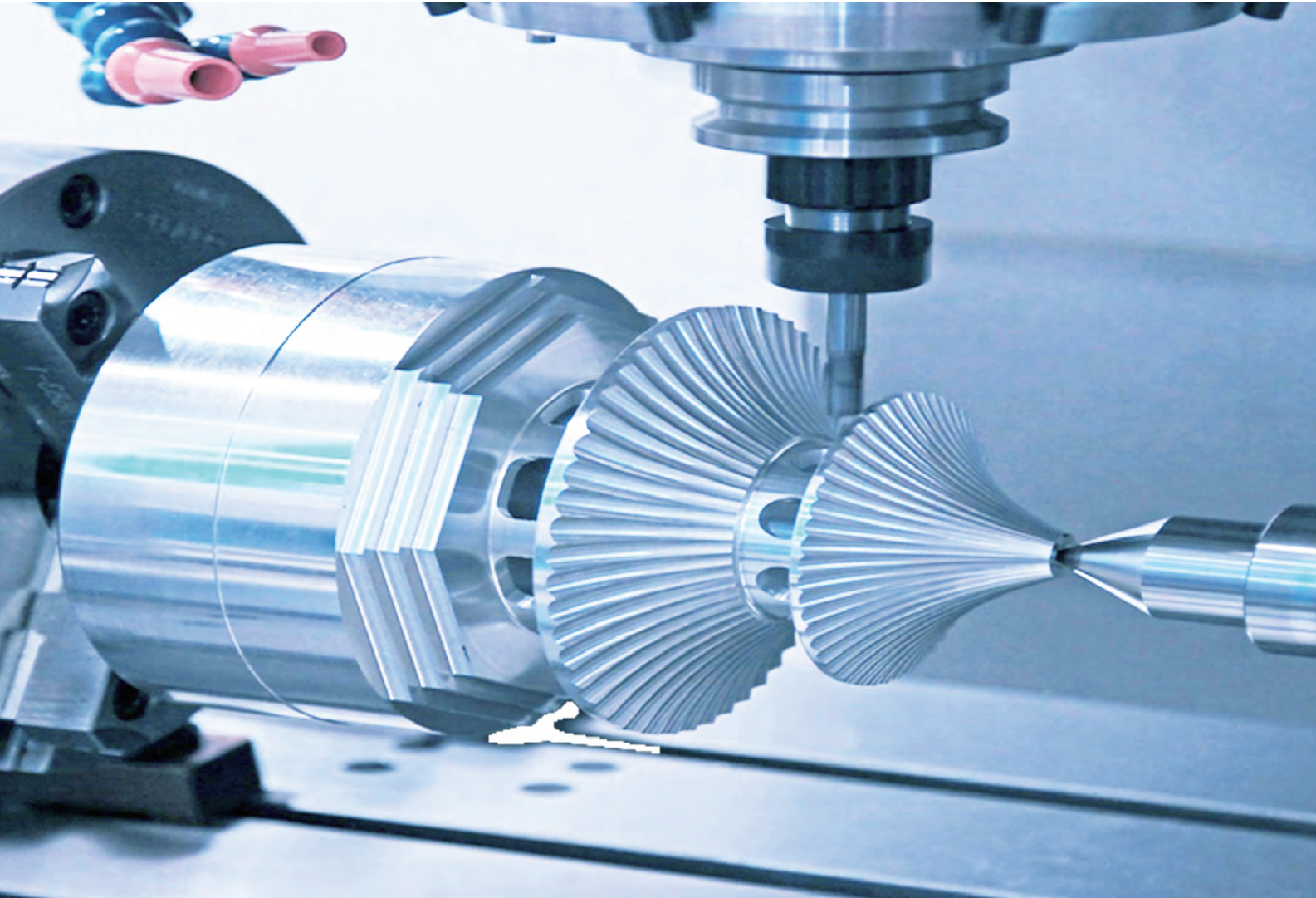
TRUSTED TECHNICAL SERVICE

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.

Universal Drive



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



Product Introduction

Multi-axis Servo Drive



Multi-axis Servo Drive (XL)

- Applicable to lathe, milling machine, and similar realms of industrial control.
- Up to 18.5kW for spindle drive, 3kW for axial drive.
- Up to 3+1 axis servo control.
- Supports versatile serial encoders.
- Supports M3 controller communication interface.
- High speed high precision controller, supports both scalar control and field oriented control.
- Extensive integration of axis control functions and synchronous control of multiple axes.
- Simple wiring. Space saving.

Multi-axis Servo Drive (M)

- Applicable to engraving and milling machines, woodworking and similar realms of industrial control.
- Drive and control in one, more Integration, improve reliabilities.
- Offers IO card options of versatile specifications for optimal scalability.
- Supports versatile serial encoders.
- Supports M3 controller communication interface.
- High speed high precision controller, supports both scalar control and field oriented control.
- Extensive integration of axis control functions and synchronous control of multiple axes.
- Simple wiring. Space saving.



Mini Multi-axis Servo Drive (XS)



- Applicable to professional equipment, automation and similar realms of industrial control.
- Small volume, numerous feature, combine convenience with practicality perfectly.
- Supports versatile serial encoders.
- Supports M3 controller communication interface.
- High speed high precision controller, supports both scalar control and field oriented control.
- Extensive integration of axis control functions and synchronous control of multiple axes.
- Simple wiring. Space saving.



Single-axis Servo Drive and Motor

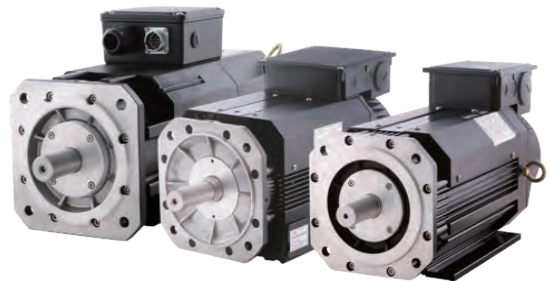


SPD/SVD Series

- Up to 30kW spindle drive.
- Up to 3kW for axial drive.
- 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.
- Supports versatile serial encoders.

SYNTEC Spindle System

- Versatile spindle motor for satisfactory application such as lathe, drilling, machining center, engraving and milling machines.
- Both vertical and horizontal installation for high compatibility.
- Maximum speed up to 24000rpm, maximum torque up to 116Nm, Satisfy the requirement of different industries.
- Supports KTY84 temperature detection. Optional 220V and 380V voltage inputs.
- In combination with SYNTEC serial HD encoder for more control stability and better machining.



SYNTEC Servo Solution

- Support 16 million resolution encoder, high speed, high precision positioning.
- IP67 protection class, significantly reduces motor failure rate.
- Maximum speed up to 6000rpm, maximum torque up to 120Nm, Satisfy the requirement of different industries.
- Significantly reduces processing time, providing exceptional machining performances.
- Applicable to CNC machine, automation and versatile machining applications.

Accessories

SYNTEC Encoder

Magnetic encoder reading head and magnetic ring



- Serial communication type encoder resolution up to 1,330,000.
- 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.

Gear encoder reading head

- Be compatible with gear ring of client, simple replacement and easy installation.
- No-touch sensing technology; ensure system no wear and tear, outstanding product reliability.
- Small size reading head is suitable for small space installation.
- High protection level(IP67) design, applicable to all kinds of harsh environments.

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 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.



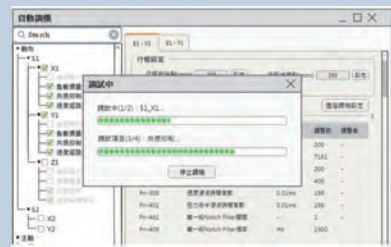
Servo Tuning Software

The controller supports servo tuning

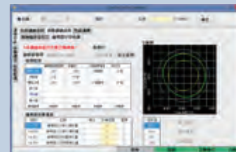


User-friendly Servo Tuning

One-touch Servo Tuning



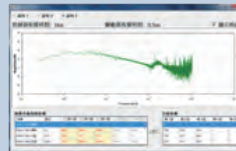
Simplified servo tuning procedure; automatic servo tuning for optimal servo parameters by pressing a single key.



Installation test



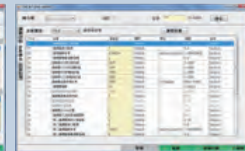
Advanced inertia



Vibration Suppression



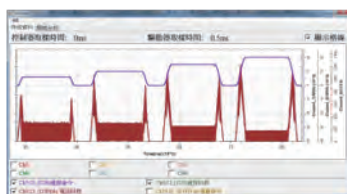
Automatic gain tuning



List of parameters

Versatile Application and Analysis Functions

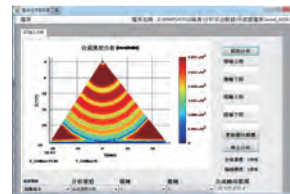
Provides data analysis functions for fast troubleshooting of processing problems.



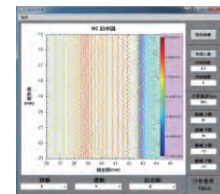
Oscilloscope



Quad-Peak compensation



2D machining analysis



NC analysis

SYNTEC Sizing Software

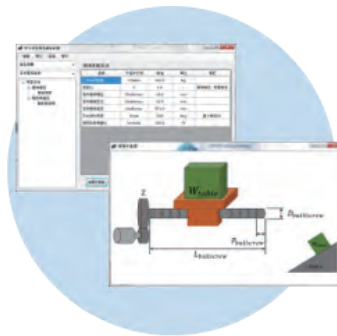
Recommend suitable SYNTEC motor and drive according to user demand and application. Automatically update product information after network connection, providing the user with the latest information.



Motion planning



Mechanism setting



Comparison with similar products



Provide optimal motors and drives.

- Easy tuning
- Perfect reliability.

Drive Selection		
Single-Axis Drive		Multi-Axes Drive
Model No.	SupportAxes	Voltage(V)
SMD-33B-2575-□□	3	380
SMD-34A-2550-□□	4	380

Recommended SYNTEC packages

Syntec Motor		
Model No.	Watt(KW)	Voltage(V)
AM4-30-E12-M1	0.8	380
AM3-60-E12-F3	1	380
AM5-40-E12-F3	1.1	380
AM8-40-E12-F3	1.7	380
AM11-40-E12-F3	2.4	380

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							
α series motor (Applicable to vertical machining center)									
M5.5-12-B□-0-00	178	28	23.3	34.7	1500	12000	SYNTEC 18bit serial HD encoder	SPD-32B1-110	SMH-25/25-75-M SMH-50/50/50-150-XL
M7.5-10-B□-0-00	198	32	34.7	47.3	1500	10000			
M7.5-12-B□-0-00	198	32	34.7	58.9	1500	12000			
M11-08-B□-0-00	198	48	47.3	69.4	1500	8000		SPD-32B1-185	SMH-35/35-100-M SMH-50/50/50-150-XL
M11-12-B□-0-00	198	32	47.8	71.7	1500	12000			
M15-07-B□-0-00	260	48	69.4	94.6	1500	7000			
M18-07-B□-0-00	260	48	94.6	116.7	1500	7000			
β series motor (Applicable to lathing)									
M5.5-08-C□-0-01	178	28	17.51	26.03	2000	8000	SYNTEC 18bit serial HD encoder	SPD-32B2-110	SMH-25/25-75-M SMH-35/35/35-100-XL
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			
β series motor (for mainland China only) (Applicable to lathing)									
M5.5-08-A4-0-10	180	28	17.7	26.5	2000	8000	SYNTEC 18bit serial HD encoder	SPD-32B1-050	SMH-25/25/35-75-XL
M7.5-08-A4-0-10	180	28	26.3	39.5	2000	8000		SPD-32B1-110	SMH-25/25-75-M SMH-35/35/35-100-XL
M11-08-A4-0-10	210	32	35.8	53.7	2000	8000		SPD-32B1-185	SMH-35/35-100-M SMH-50/50/50-150-XL
M15-08-A4-0-10	210	48	52.5	77.8	2000	8000			
C series motor (Applicable to Small vertical machining center)									
M7.5-12-B□-0-01	178	28	17.51	23.8	3000	12000	SYNTEC 18bit serial HD encoder	SPD-32B1-110	SMH-25/25-75-M SMH-35/35/35-100-XL
M7.5-20-B4-0-01	178	28	17.51	23.8	3000	20000			
M11-08-B□-0-01	220	32	35.5	52.06	2000	8000		SPD-32B1-185	SMH-35/35-100-M SMH-50/50/50-150-XL
M12-12-B4-0-01	178	28	26	38	3000	12000			
M12-20-B4-0-01	178	28	26	38	3000	20000			
M15-08-B4-0-01	220	48	52.06	71	2000	8000			
M15-12-B4-0-01	178	28	34.7	47.3	3000	12000			
H series motor (Applicable to Drilling)									
L5.5-12-B□-0-00	178	28	11.67	17.35	3000	12000	SYNTEC 18bit serial HD encoder	SPD-32B1-050	SMH-25/25/35-75-XL
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			
SL5.5-24-B□-0-00	150	24	7	10.5	5000	24000		SPD-32B1-110	SMH-25/25-75-M SMH-35/35/35-100-XL
L7.5-15-B□-0-00	198	32	17.35	23.66	3000	15000			
M11-24-B4-0-01	178	24	14	21	5000	24000			

Spindle Designation

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

Item	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
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	A 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	Shaft diameter	Rated Torque	Max. Torque	Rated speed	Max. speed	Encoder	Optional accessories	Single-axis drive	Multi-axis servo drive	
	mm	mm	N·m		rpm						
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	SMH-25/25/35-75-XL	
AM3-50-E12-□-Z3	80	19	3.5	10.5	3000	5000			SPD-32B1-020	SMH-35/35-100-M SMH-35/35/35-100-XL	
AM3-60-E12-□-F3	90	19	3.2	10	3000	6000			SVD-32B1-020	SMH-25/25-75-M SMH-25/25/35-75-XL	
AM5-40-E12-□-F3	130	19	5.39	14.9	2000	4000			SVD-32B1-020	SMH-35/35-100-M SMH-35/35/35-100-XL	
AM8-40-E12-□-F3	130	22	8.34	30.8	2000	4000			SPD-32B1-050	SMH-50/50/50-150-XL	
AM11-40-E12-□-F3	130	24	11.5	34	2000	4000			SPD-32B1-110	--	
AM15-40-E12-□-F3	130	24	15	45	2000	4000					
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					
AM27-30-E12-□-M1	180	35	27	81	1500	3000					
AM35-20-E12-□-M1	180	42	35	70	1500	2000					
AM48-20-E12-□-M1	180	42	48	70	1500	2000					

220V-Class

Model	Flange size	Shaft diameter	Rated Torque	Max. Torque	Rated Speed	Max. Speed	Encoder	Optional accessories	Single-axis drive	Multi-axis servo drive		
	mm	mm	N·m		rpm							
AM4-30-E12-□-M1	110	19	4	12	2000	3000	Nikon24bit absolute encoder	B:Brake K: Key Way BK: Brake + Key Way	SVD-22B1-030	--		
AM6-30-E12-□-M1	110	19	6	18	2000	3000						
AM03-50-E12-□-Z3	40	8	0.32	0.96	3000	5000			SVD-22B1-010	SMD-30/30/30/30-M SCD-30/30/30/30-M SMD-30/30/30/30-XS		
AM06-50-E12-□-Z3	60	14	0.64	1.92	3000	5000			SVD-22B1-030	--		
AM1-50-E12-□-Z3	60	14	1.9	5.7	3000	5000			Hcfa17bit absolute encoder	K: Key Way BK: Brake + Key Way	SVD-22B1-010	SMD-30/30/30/30-M SCD-30/30/30/30-M SMD-30/30/30/30-XS
AM03-50-E22-□-H1	40	8	0.32	1.12	3000	6000						
AM06-50-E22-□-H1	60	14	0.64	1.91	3000	5000					SVD-22B1-030	--
AM1-50-E22-□-H1	60	14	1.27	3.82	3000	5000						
AM2-50-E22-□-H1	80	19	2.39	7.1	3000	4500						
AM5-50-E22-□-H1	130	19	5.39	16.2	1500	3000	SVD-22B1-030	--				
AM8-50-E22-□-H1	130	22	8.28	24.84	1500	3000						
AM11-50-E22-□-H1	130	24	11.5	34.5	1500	3000	SVD-22B1-030	--				

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

	1st	2nd	3rd	4th	5th	6th	7th	9th
Item	S08	AM	5	40	E	12	B	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.



Global Locations

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