



Economical AC Servo Drives

## EL6-CAN Series

EL6-CAN Series is cost-effective AC servo drives of CANopen protocol designed for accurate control. They can power to 1kW AC servo motors and are ideal for many OEM applications. Many advanced features are implemented such as MFC, vibration suppression, multi filter functions, etc.

When combined with Leadshine servo motors with 23-bit high resolution encoders, they can provide excellent performance to your control systems.



Logistics



Packaging

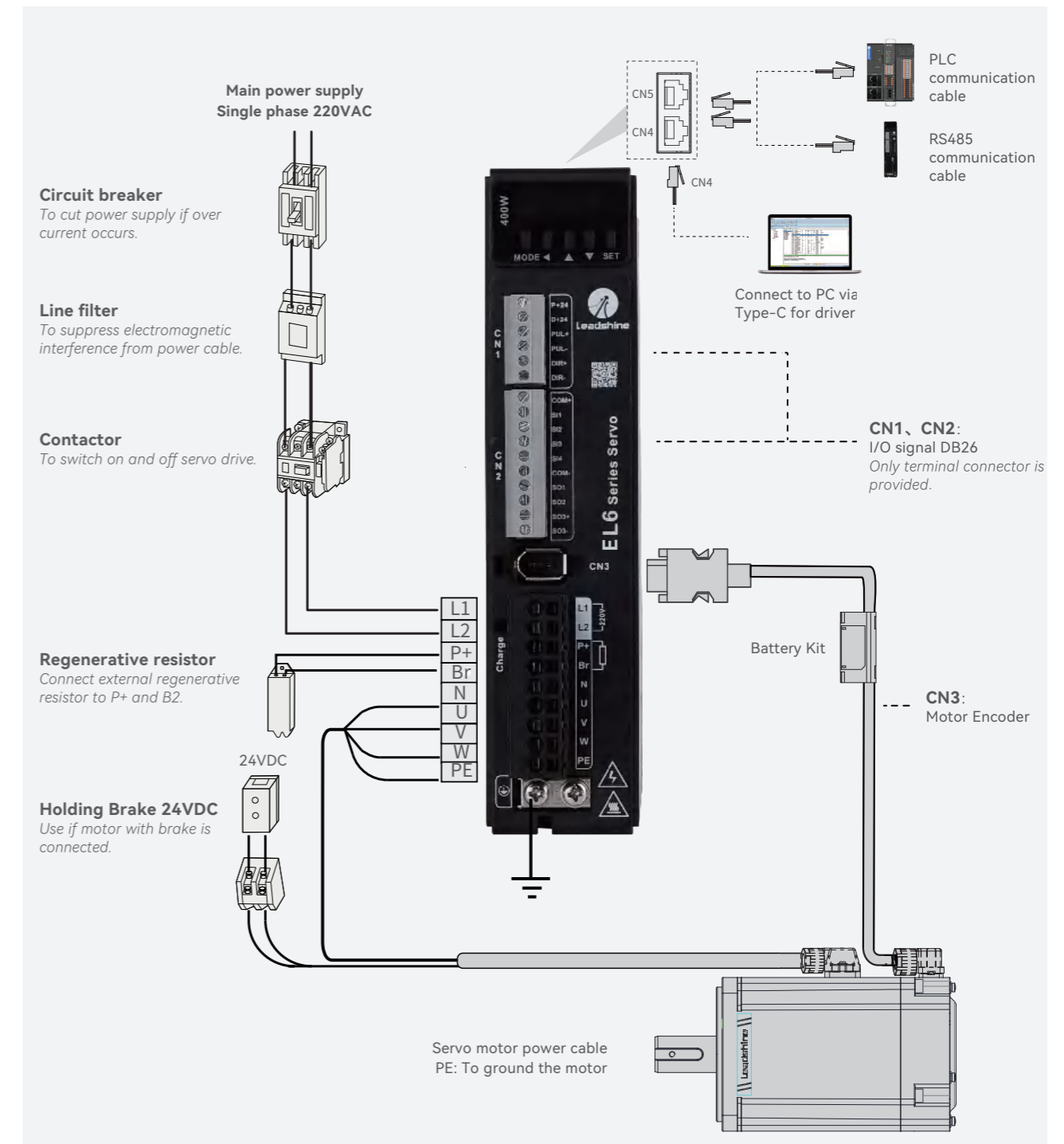


lithium battery



Photovoltaic

### EL6-CAN & Peripheral Wiring Diagram



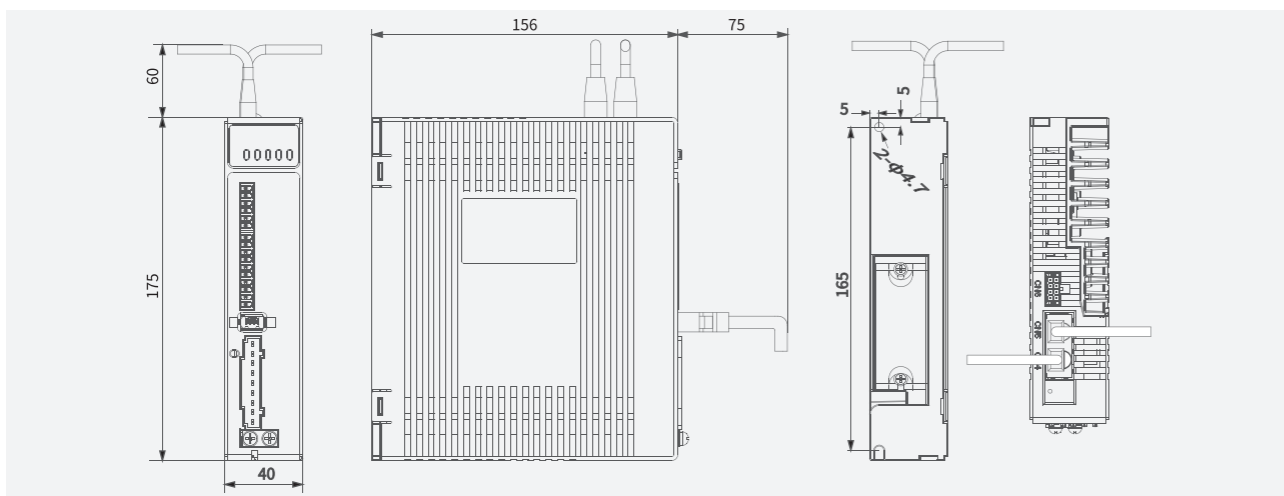
**Part Numbers**

**EL6 - CAN 400 Z**

<b>Series Num</b>		<b>Version</b>	
EL6	EL6 servo drive series	Z	Standard Version
<b>Command Source</b>		<b>Rated Power</b>	
CAN	CANopen	400	400W
		750	750W
		1000	1000W

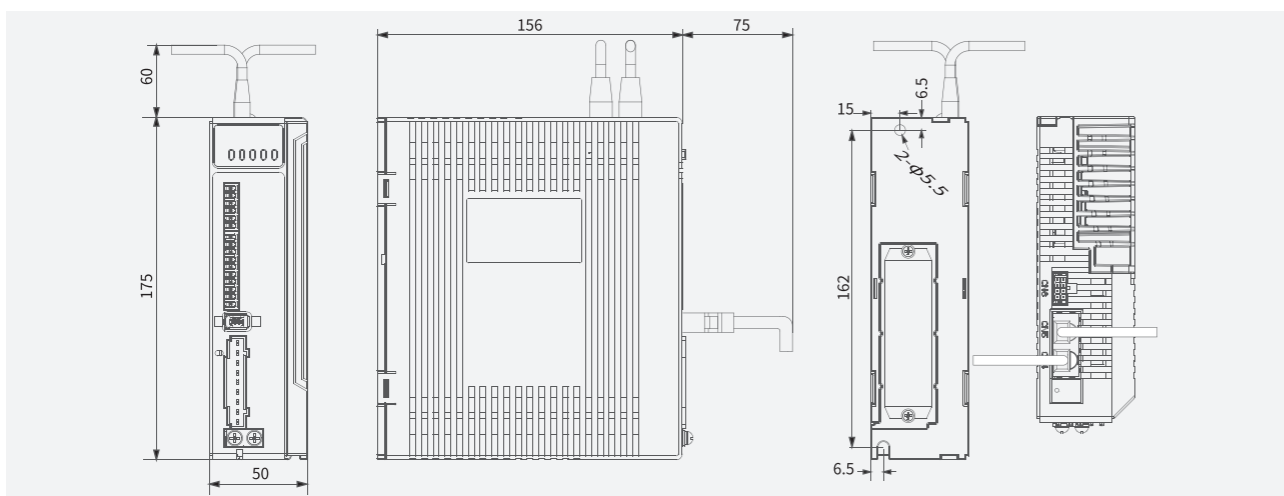
**400W (AC 220V)**

Unit: mm



**750W/1000W (AC 220V)**

Unit: mm



**Specifications**

o **EL6-CAN 220V Models**

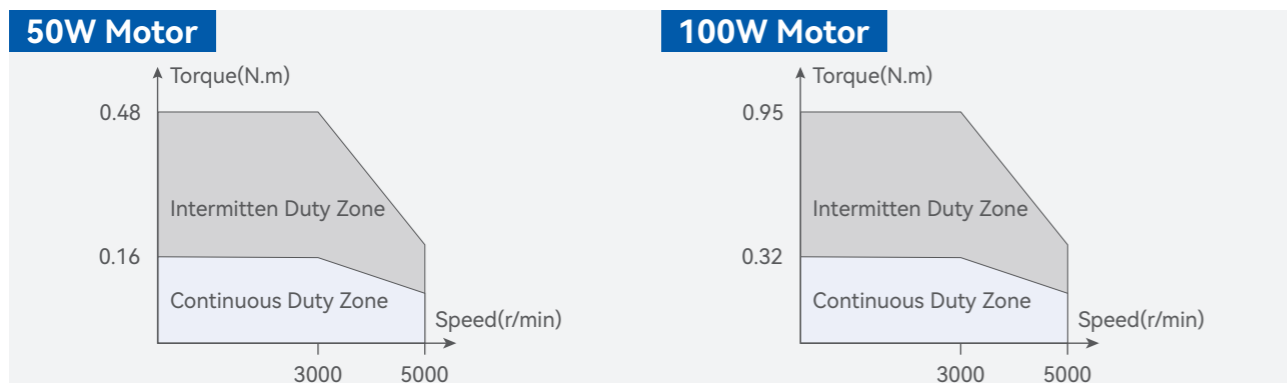
EL6-CAN Series Drive	EL6-CAN400Z	EL6-CAN750Z	EL6-CAN1000Z
Power Rating	400W	750W	1000W
Rated Current (Arms)	3.5	5.5	7.0
Peak Current (Arms)	9.5	16.6	18.7
Control circuit power supply	1-Ph AC 200V~240V, -10% - +10%, 50/60Hz		
Main power supply	1-Ph AC 200V~240V, -10% - +10%, 50/60Hz		
Dimension L*H*W(mm)	175*156*40	175*156*50	

Ports	Descriptions
RJ45 Tuning	Modify or read driver parameters
Crossover Frequency Output	Supports phase A/B/Z differential crossover frequency output Supports phase Z open collector crossover frequency output
Digital I/O	4 Digital Inputs (Supports common anode or cathode connection) DI1~DI8 3 digital outputs (double-ended) DO1~DO5
Communication Port	CANopen protocol (RJ45 port)
<b>Control Mode</b>	
Control	1. Profile Position Mode 2. Profile Velocity Mode 3. Profile Torque Mode 4. Homing Mode
<b>Control Features</b>	
Drive Mode	IGBT SVPWM sinusoidal wave drive
Feedback Method	Encoder: RS485 Protocol
Notch Filter	Mechanical resonance suppression. Supports up to 3 filters, 50Hz~4000Hz
Vibration suppression	End vibration suppression
Alarm	Overcurrent. Overvoltage. Undervoltage. Overheat. Overload. Overtravel. Single-Phasing. Regenerative resistor error. Position deviation error. Encoder feedback error. Excessive braking rate. EEPROM error
Front Panel	5 push buttons, 8-segments display
Software	Driver tuning through <b>Motion Studio</b> Ver. 2.x
Dynamic Brake	Internal dynamic brake
<b>Environmental requirements</b>	
Temperature	Storage: -20~80°C (Condensation free); Not < 72 hours if stored in over 65°C Installation: 0~55°C (Not frozen); Lower performance at over 45°C
Humidity	Under 90%RH (Condensation free)
Altitude	Max. altitude of 2000m; 100% performance at 1000m or below. Performance decreases by 1% with every increase of 100m from 1000m.
Vibration	Less than 0.5G (4.9m/s <sup>2</sup> ) 10~60Hz (non-continuous working)
IP ratings	IP20

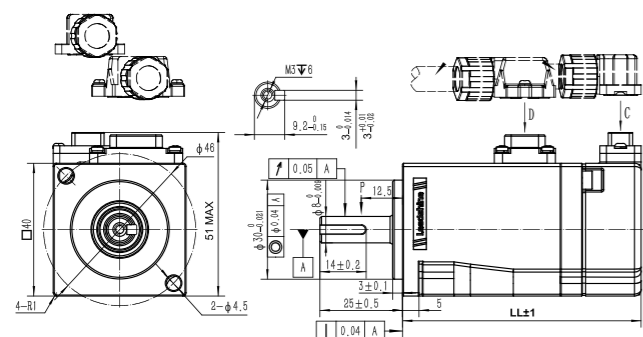
40mm Frame size & 50W~100W

Type Name	Frame Size (mm)	Brake	Voltage (VAC)	Power (W)	Speed (rpm)		Torque (Nm)		Current (Arms)		Permissible load to shaft (N)		Encoder	Inertia (kgm <sup>2</sup> *10 <sup>-4</sup> )	Weight (kg)	Motor Length (mm)				
					Rated	Max	Rated	Max	Rated	Max	Radial	Axial								
ELM1H-0050MA40E	□ 40	√	220	50	3000	5000	0.16	0.48	0.93	2.88	78	54	23-bit magnetic encoder	0.046	0.44	84				
ELM1H-0050MA40F		×												0.036	0.28	56.7				
ELM1H-0100MA40E		√												0.32	0.96	0.92	2.85	0.072	0.54	95
ELM1H-0100MA40F		×																		
ELM2H-0050LA40E		√		50			23-bit optical encoder	0.046	0.44	84										
ELM2H-0050LA40F		×						0.036	0.28	56.7										
ELM2H-0100LA40E		√						0.32	0.96	0.92				2.85	0.072	0.54	95			
ELM2H-0100LA40F		×																0.062	0.38	67.7

Speed-Torque characteristics



Dimensions

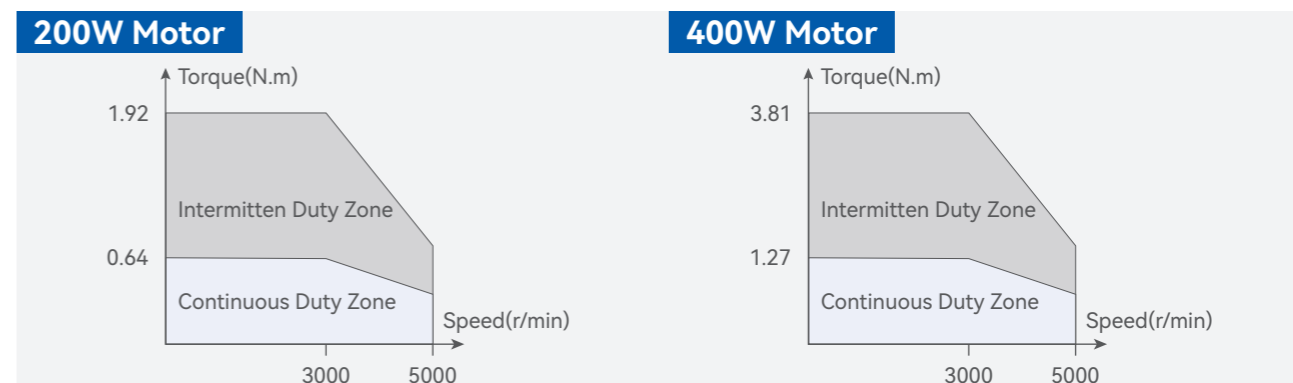


Motor model	LL
ELM*H-0050*A40E	84
ELM*H-0050*A40F	56.7
ELM*H-0100*A40E	95
ELM*H-0100*A40F	67.7

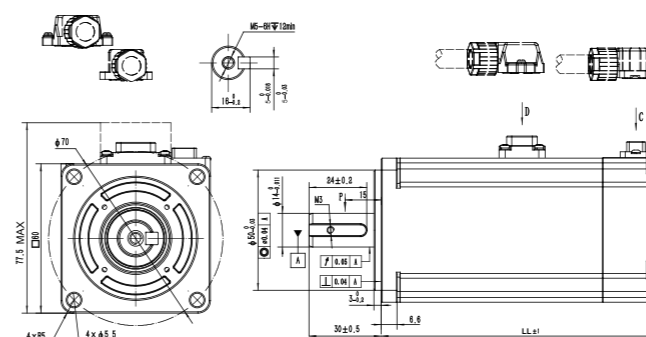
60mm Frame size & 200W~400W

Type Name	Frame Size (mm)	Brake	Voltage (VAC)	Power (W)	Speed (rpm)		Torque (Nm)		Current (Arms)		Permissible load to shaft (N)		Encoder	Inertia (kgm <sup>2</sup> *10 <sup>-4</sup> )	Weight (kg)	Motor Length (mm)				
					Rated	Max	Rated	Max	Rated	Max	Radial	Axial								
ELM1H-0200MA60E	□ 60	√	220	200	3000	5000	0.64	1.92	1.5	4.5	245	74	23-bit magnetic encoder	0.3	1.3	101.1				
ELM1H-0200MA60F		×												0.28	1.0	71.8				
ELM1H-0400MA60E		√												1.27	3.81	2.1	6.5	0.58	1.55	118.1
ELM1H-0400MA60F		×																		
ELM2H-0200LA60E		√		200			23-bit optical encoder	0.3	1.3	101.1										
ELM2H-0200LA60F		×						0.28	1.0	71.8										
ELM2H-0400LA60E		√						1.27	3.81	2.1				6.5	0.58	1.55	118.1			
ELM2H-0400LA60F		×																0.56	1.3	88.8

Speed-Torque characteristics



Dimensions

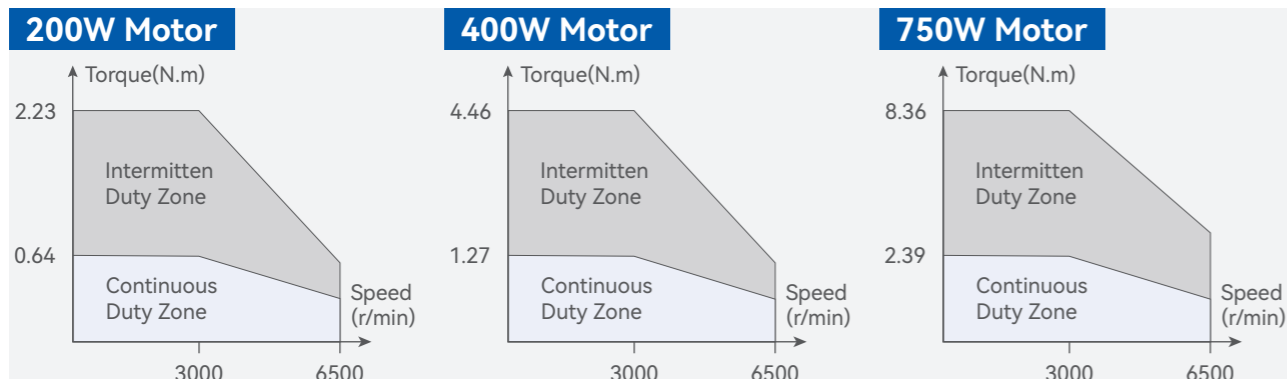


Motor model	LL
ELM*H-0200*A60E	101.1
ELM*H-0200*A60F	71.8
ELM*H-0400*A60E	118.1
ELM*H-0400*A60F	88.8

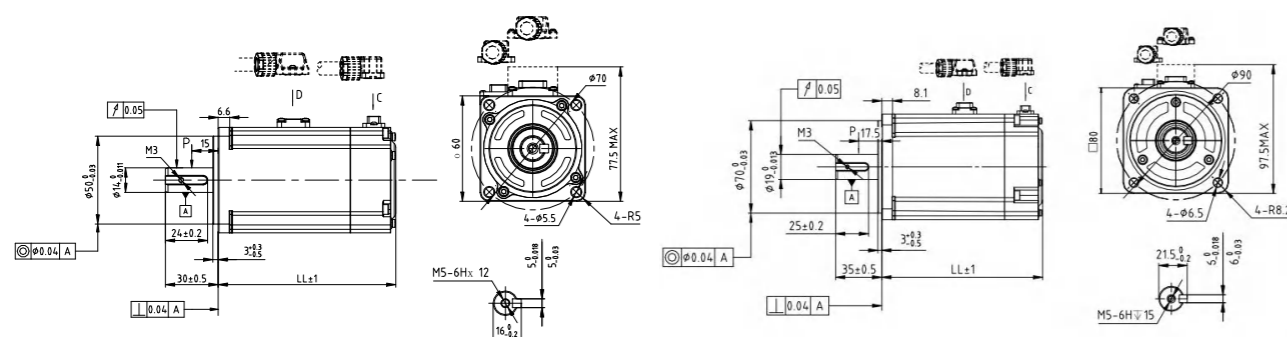
200W~750W

Type Name	Frame Size (mm)	Brake	Voltage (VAC)	Power (W)	Speed (rpm)		Torque (Nm)		Current (Arms)		Permissible load to shaft (N)		Encoder	Inertia (kgm <sup>2</sup> *10 <sup>-4</sup> )	Weight (kg)	Motor Length (mm)
					Rated	Max	Rated	Max	Rated	Max	Radial	Axial				
ELM2L-0200LA60E	□ 60	√	220	200	3000	6500	0.64	2.23	1.5	5.7	245	74	23-bit optical encoder	0.15	1.2	101.2
ELM2L-0200LA60F		x														
ELM2L-0400LA60E		√														
ELM2L-0400LA60F		x														
ELM2L-0750LA80E	□ 80	√	220	750	3000	6500	2.39	8.36	4.2	16.1	392	147	23-bit optical encoder	0.79	2.74	121.9
ELM2L-0750LA80F		x														

Speed-Torque characteristics



Dimensions



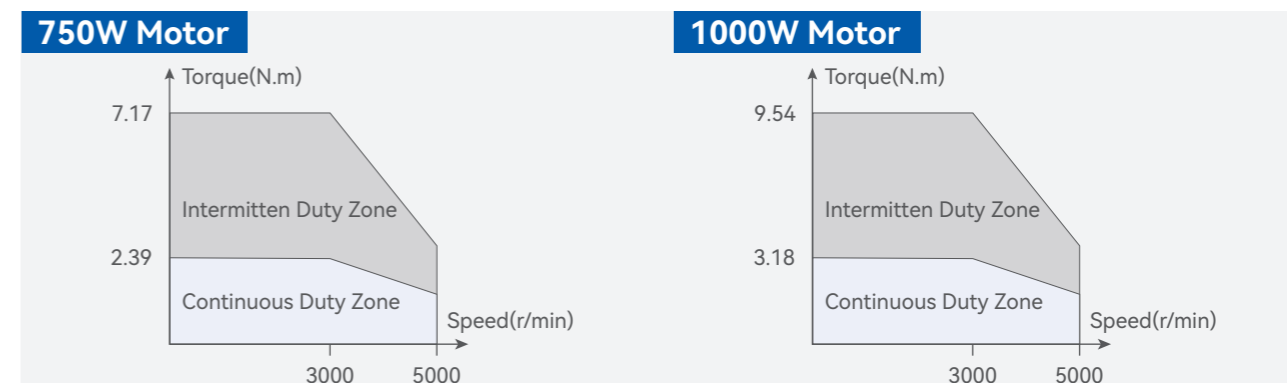
Motor model	LL	Motor model	LL
ELM2L-0200LA60E	101.2	ELM2L-0400LA60E	118.2
ELM2L-0200LA60F	71.8	ELM2L-0400LA60F	88.8

Motor model	LL
ELM2L-0750LA80E	121.9
ELM2L-0750LA80F	90.9

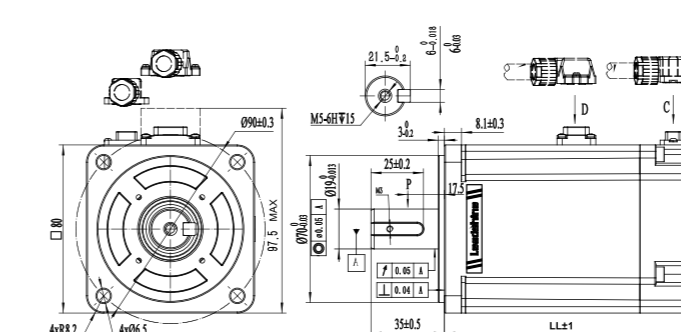
80mm Frame size & 750W~1000W

Type Name	Frame Size (mm)	Brake	Voltage (VAC)	Power (W)	Speed (rpm)		Torque (Nm)		Current (Arms)		Permissible load to shaft (N)		Encoder	Inertia (kgm <sup>2</sup> *10 <sup>-4</sup> )	Weight (kg)	Motor Length (mm)	
					Rated	Max	Rated	Max	Rated	Max	Radial	Axial					
ELM1H-0750MA80E	□ 80	√	220	750	3000	5000	2.39	7.17	4.1	13.4	392	147	23-bit magnetic encoder	1.65	2.7	121.9	
ELM1H-0750MA80F		x															
ELM1H-1000MA80E		√															
ELM1H-1000MA80F		x															
ELM2H-0750LA80E		√		750	3000	5000	2.39	7.17	4.1	13.4	392	147		23-bit optical encoder	1.65	2.7	121.9
ELM2H-0750LA80F		x															
ELM2H-1000LA80E		√															
ELM2H-1000LA80F		x															

Speed-Torque characteristics



Dimensions



Motor model	LL
ELM*H-0750*A80E	121.9
ELM*H-0750*A80F	90.9
ELM*H-1000*A80E	134.9
ELM*H-1000*A80F	103.9





● Headquarters in Shenzhen



● Shanghai Intelligent Industry Park



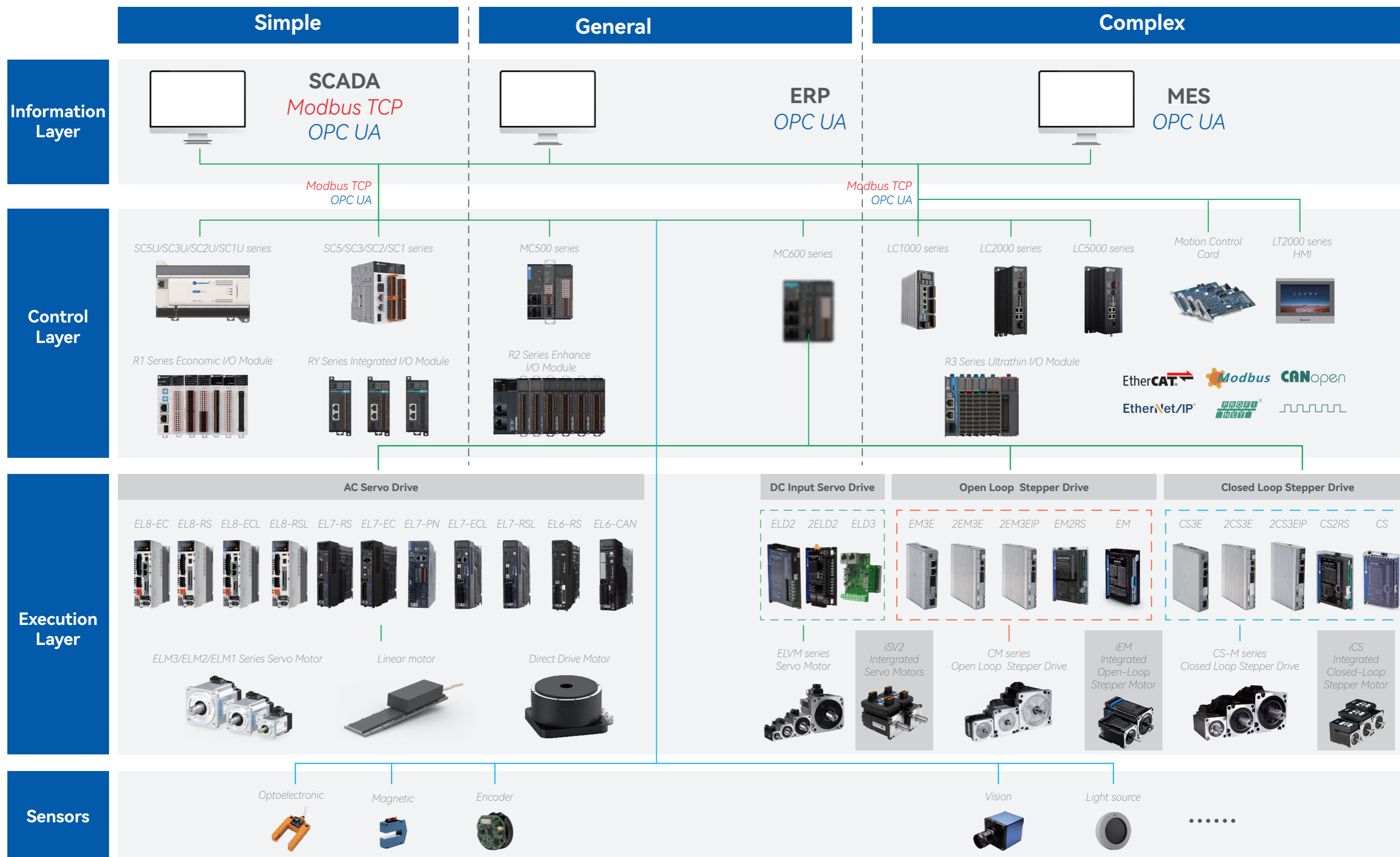
● Production base in Shenzhen

- **Founded in 1997**
- **Public Listed Company in China (002979.SZ)**
- **Dedication in Motion Control**  
Stepper/Servo systems, Motion Controllers, PLC  
Control systems, I/O Modules, Encoders
- **A leading supplier of motion control products and solutions in the world**
- **Customer Oriented, Technology Oriented, Forever Improving, Sharing of Success**

25+ Experience    400+ R&D Engineers    5 Subsidiaries    60+ Countries Clients    10000+ Global Partners    30million+ Installed Axes

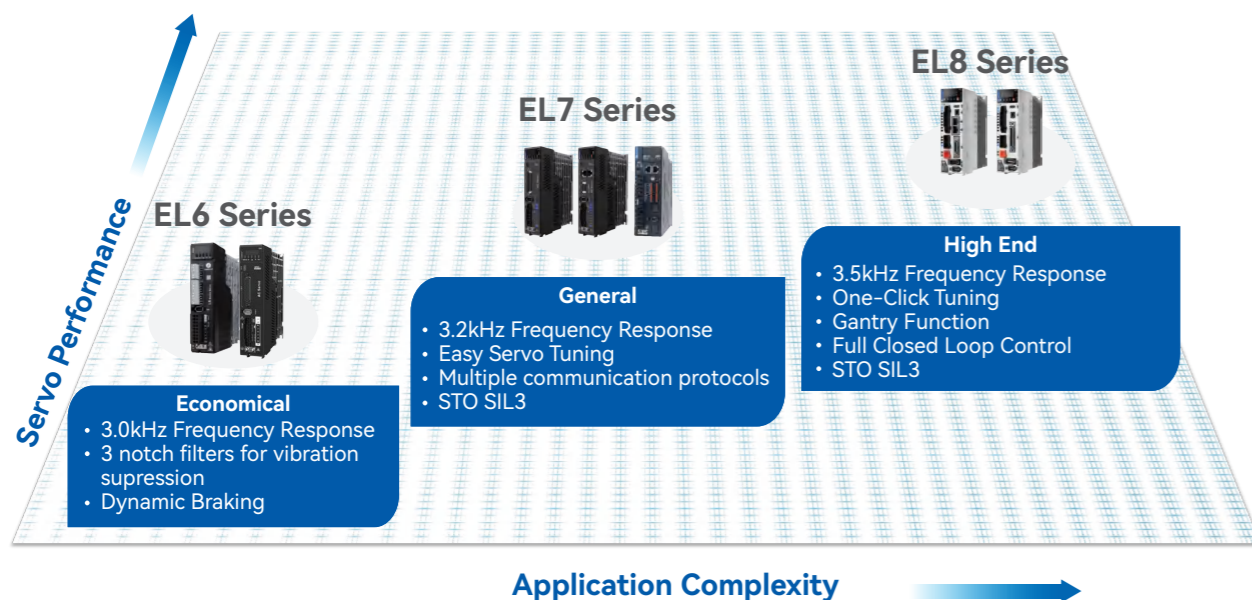


# Leadshine Motion Control Total Product System

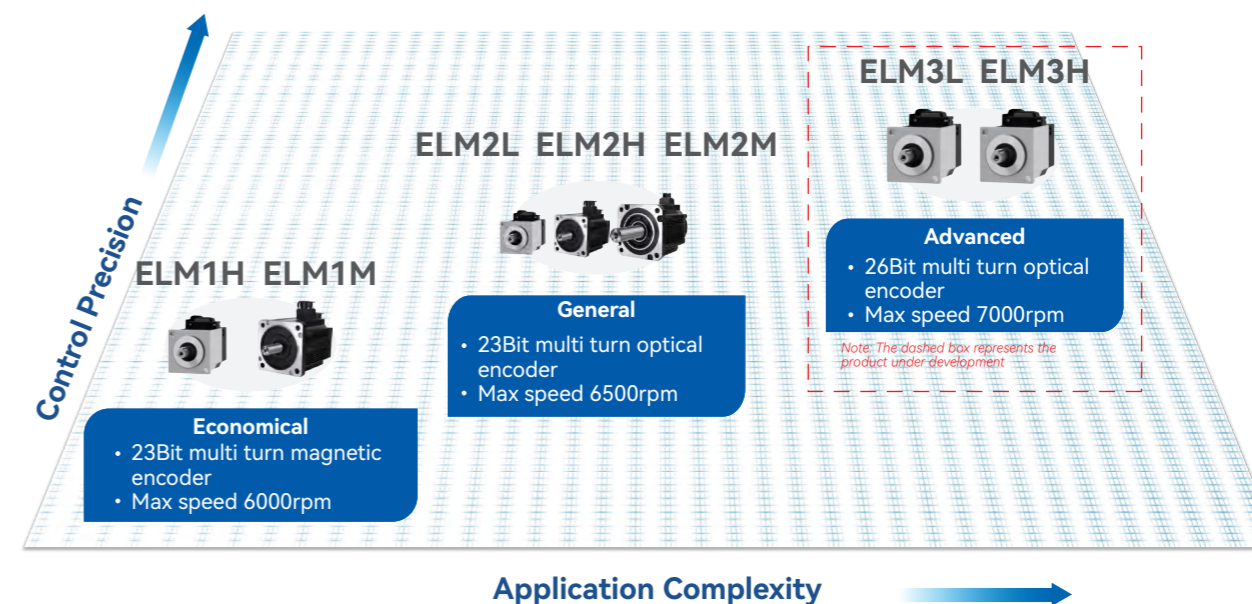


# Leadshine Servo Product

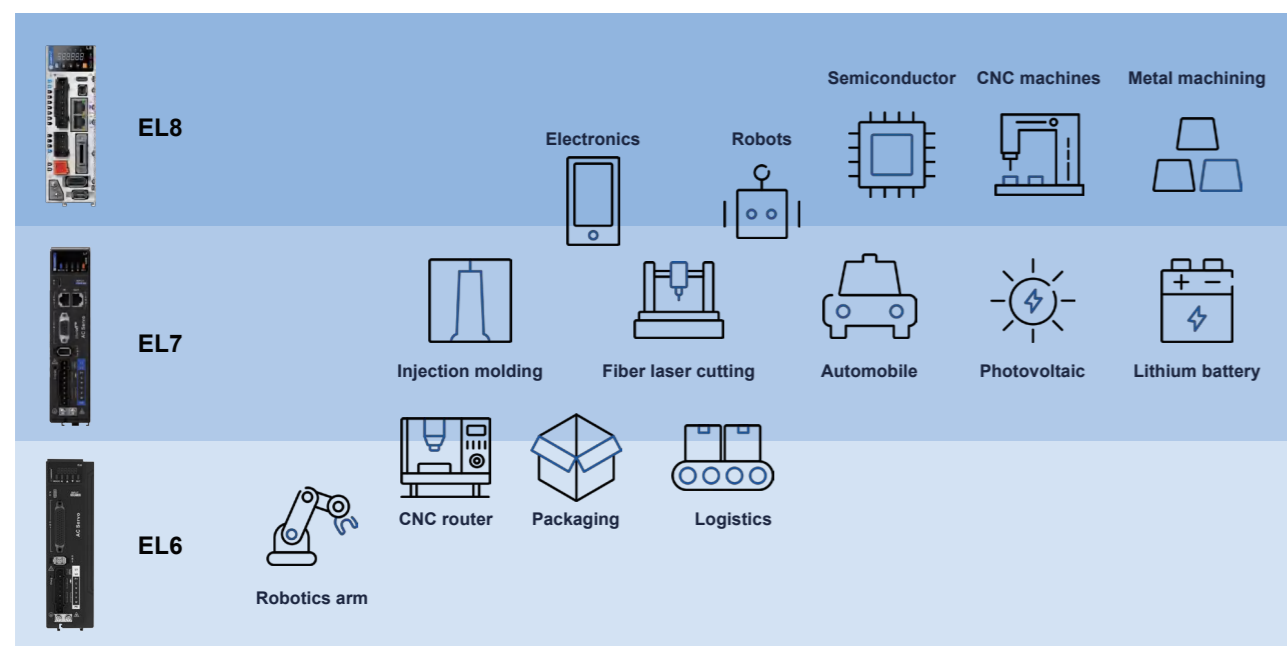
## ● Servo Drive Series



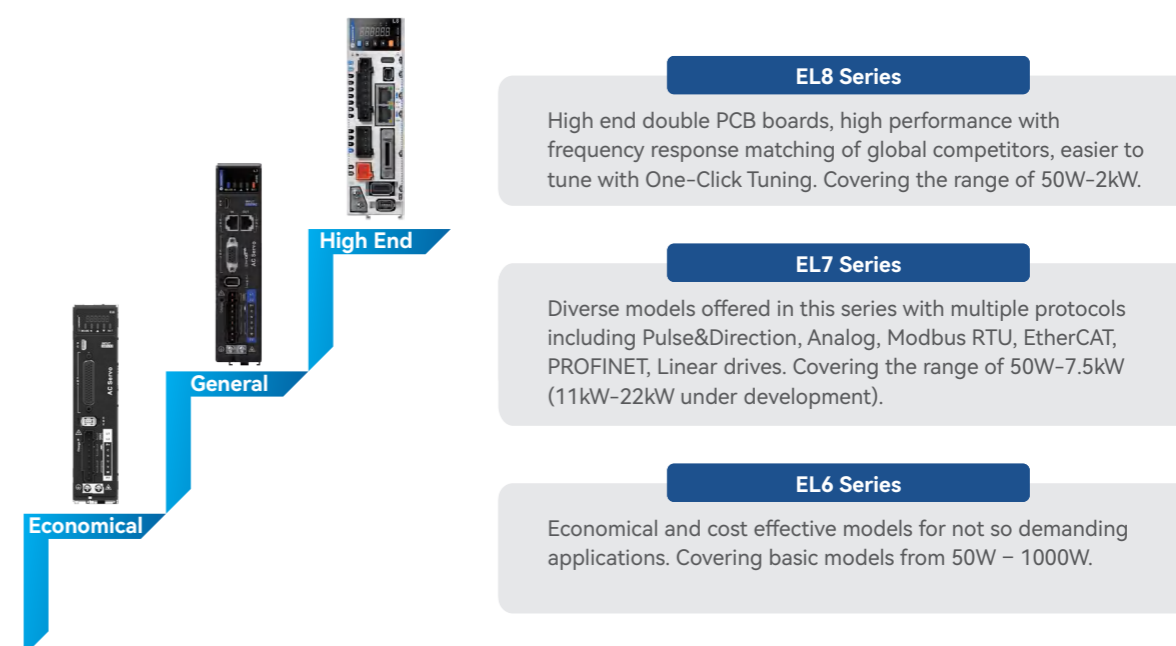
## ● Servo Motor Series



## ● Typical Applications



## ● Simple Introduction



# Leadshine Servo Products Quick Selection

Servo Drive	Model	Power (W)	Voltage (VAC)	Dimensions (mm)	Weight (kg)	Command Source			Command Source			STO	Encoder Output	Brake Output	Digital Inputs (Points)	Digital Outputs (Points)	Analogue Input	Analogue Output	Matched Servo Motors
						Pulse+Dir	Analog Input		RS485	EtherCAT	CANopen								
AC Servo Drive EL8 Series	EL8-EC400F	400	1 Phase/ 3 Phase 220	150*150*43	1						√	√		8	3	2	2	ELM1 and ELM2 Servo Motors Please refer to page 84 to 87 for more information on matching servo motors	
	EL8-RS400F										√		√	√	√	10	6		3
	EL8-EC750F	750		150*160*55	1.2	√	√		√				√	8	3	2	2		
	EL8-RS750F					√	√		√	√		√	√	√	10	6	3		2
	EL8-EC1000F	1000		183*160*80	2							√	√		8	3	2		2
	EL8-RS1000F					√	√		√	√		√	√	√	10	6	3		2
	EL8-EC1500F	1500		183*160*80	2							√	√		8	3	2		2
	EL8-RS1500F					√	√		√	√		√	√	√	10	6	3		2
	EL8-EC2000F	2000		183*160*80	2							√	√		8	3	2		2
EL8-RS2000F	√		√				√	√		√	√	√	10	6	3	2			
AC Servo Drive EL7 Series - 220VAC	EL7-RS400P	400	1 Phase 220	175*156*40	0.9	√	√		√			√		8	5	2	1		
	EL7-RS750P	750		175*156*50	1.1	√	√		√			√		8	5	2	1		
	EL7-RS1000P	1000		175*156*50	1.2	√	√		√			√		8	5	2	1		
	EL7-RS1500P	1500	1 Phase/ 3 Phase 220	175*156*80	2.3	√	√		√			√		8	5	2	1		
	EL7-RS2000P	2000			2.3	√	√		√			√		8	5	2	1		
AC Servo Drive EL7 Series - 400VAC	EL7-RS750PT	750	3 Phase 400	179*175*55	1.3	√	√		√			√		8	5	2	1		
	EL7-RS1000PT	1000				√	√		√			√		8	5	2	1		
	EL7-RS1500PT	1500				√	√		√			√		8	5	2	1		
	EL7-RS2000PT	2000		179*175*80	1.9	√	√		√			√		8	5	2	1		
	EL7-RS3000PT	3000				√	√		√			√		8	5	2	1		
	EL7-RS4400PT	4400		230*250*90	3.3	√	√		√			√		8	5	2	1		
	EL7-RS5500PT	5500				√	√		√			√		8	5	2	1		
	EL7-RS7500PT	7500				√	√		√			√		8	5	2	1		
AC Servo Drive EL7 Series - 220VAC	EL7-EC400N	400	1 Phase 220	175*156*40	0.9					√	√		4	3					
	EL7-EC750N	750		175*156*50	1.2					√	√		4	3					
	EL7-EC1000N	1000	1 Phase/ 3 Phase 220	179*175*55	2.3					√	√		4	3					
	EL7-EC1500N	1500				√	√		4	3									
	EL7-EC2000N	2000				√	√		4	3									
AC Servo Drive EL7 Series - 400VAC	EL7-EC750NT	750	3 Phase 400	179*175*55	1.3					√	√		4	3					
	EL7-EC1000NT	1000				√	√		4	3									
	EL7-EC1500NT	1500				√	√		4	3									
	EL7-EC2000NT	2000		179*175*80	1.9	√	√		√	√		4	3						
	EL7-EC3000NT	3000				√	√		4	3									
	EL7-EC4400NT	4400		230*250*90	3.3	√	√		√	√		4	3						
	EL7-EC5500NT	5500				√	√		4	3									
	EL7-EC7500NT	7500				√	√		4	3									
AC Servo Drive EL6 Series	EL6-RS400P	400	1 Phase 220	175*156*40	0.9	√			√			√	√	8	5				
	EL6-CAN400Z										√			4	3				
	EL6-RS750P	750		175*156*50	1.1	√			√			√	√	8	5				
	EL6-CAN750Z										√			4	3				
	EL6-RS1000P	1000		175*156*50	1.2	√			√			√	√	8	5				
EL6-CAN1000Z									√			4	3						



## Applications

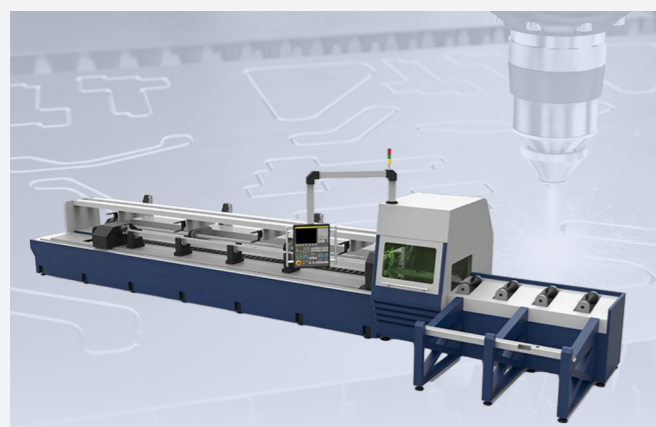
### CNC Router



#### Product Advantages:

- High torque servo motor with 3 times overloading capability
- 23-bit encoders with great impact resistant and harsh environment resistance
- Servo drive optimized for CNC router applications
- Comes with safety features such as Safe Torque Off and Dynamic Braking
- Servo Motors maximum torque ranging from 0.105Nm up to 119Nm

### Fiber Laser Cutting



#### Product Advantages:

- Great Compatibility with renowned laser cutting controller from FScut, Weihong, Beckhoff, Empower, etc.
- Available with most mainstream communication protocols (EtherCAT, Modbus RTU, PROFINET)
- Accurate positioning of 0.02mm and precision up to 0.01mm
- Easy servo tuning features to assist users in setting up the servo systems
- Robust and compact servo motors with high dust- and waterproof ratings



### Wafer Cutting

- Full Closed Loop Control function to realize high accuracy control and real time compensation for lead screw wear.
- Real time control using EtherCAT/PROFINET servo drives.
- Easy-to-use, low maintenance and high reliability.



### Automated Battery Lamination

- Linear Motors, Direct Drive Motors and Rotary Servo Motors are available.
- Production cycle time per part as low as 0.55s.
- High accuracy and precision motion control with servo drive frequency response of 3.5kHz



### Semiconductor Wafer Cleaning

- High following capability with servo frequency response up to 3.5kHz
- Easy servo tuning features for notch filter settings and anti-vibration tunings
- Industrial Ethernet Standard with communication rate up to 100Mbps and compatible with any mainstream PLCs.