

Low Voltage AC Servo Drives



- Advanced control algorithm
- Step & direction or CW/CCW control
- 20-80 VDC voltage input
- Capable of driving 25-750 watts low voltage input AC servo motors
- High precision, smooth & quiet motor movement
- Cost effective

Leadshine designs and manufactures high performance brushless servo drives powering a wide range of servo motors from 25-1,500 W. High performance EL5 series brushless servo drives adopts Leadshine's advanced control algorithm, and offers a lot of advanced features for excellent performance. The economic ACS series brushless servo drives are 32-bit DSP based, capable of driving brushless servo motors up to 400W to the peak speed of 4,000 RPM with high precision.

Model	Series	Control Type	Input Voltage (VDC)	Continuous Output Current (A)	Peak Output Current (A)	Max Rated Power (W)	Communication
ELD5-400	ELD5	Step & Direction ±10 VDC 0-10 VDC	20-80	10	35	400	RS232/RS485
ELD5-400Z	ELD5	Step & Direction ±10 VDC 0-10 VDC	20-80	10	35	400	RS232/RS485



ELD5-400



- Easy tuning
- Automatic identification for motor
- Model following control
- Notch filter, damping filter
- RS485/Modbus
- Up to 30 types motor supported

Power & Environment		
Driver model	ELD5-400	
Size(mm)	125*99*44	
Rated power (kw)	0.4	
Rated output current (A)	10	
Max output current (A)	30	
Main power	Voltage (V)	DC24-60
	Current (A)	10
Control power	Voltage (V)	DC12-24
	Current (A)	≥12mA
Control method	GBT PWM Sinusoida Wave Drive	
Overload	300%	
Brake resistor	External connection	
Communication interface	RS-232, Rs485, Modbus	
Protection rank	IP20	
Communication & Connection		
USB	Mini USB	
Pulse input	2 fast pulse inputs, 5V-24V all compatible	
Pulse encoder output	5V differential outputs, A/B/Z phase (optional frequency divider)	
Digital input/output	4 programmable OC outputs, 5 programmable common-anode	
Analog input	1 analog output : -10V to +10V	
Feedback Supported	2500line incremental encoder (ELD5-400)	
	Serial encoder (ELD5-400)	
Matched Motors		
Power Range	50W - 400W	
Voltage Range	24V - 60V	
Encoder Type	2500-line, 5000-line, Absolute Encoder(17-bit , 23-bit)	
Motor Size	40mm, 60mm Frame	
Other Requirements	Brake. Oil-seal, protection level, shaft & connector can be customized	



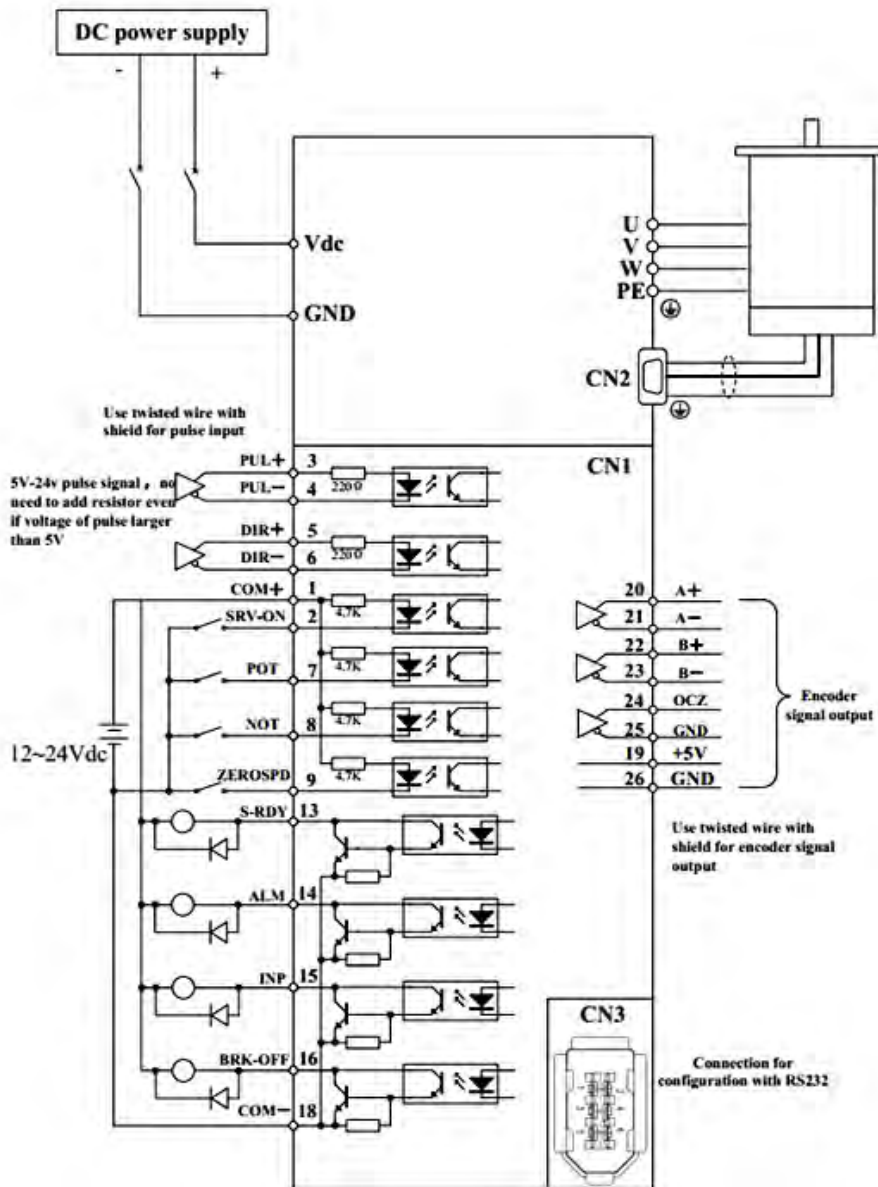
Digital & Analog I/O Connector			
Pin	Signal	Description	I/O
1	COM+	power supply positive terminal of the external input control signal, 12V ~ 24V	I
2	SI1-Svon	Digital input signal 1, default value is servo on signal in position mode , low level available in default , the maximum voltage is 24V input	I
3	PUL+	positive and negative pulse input, respectively. TTL level (5V), the rising edge available in default	I
4	PUL-		I
5	DIR+	positive and negative direction input, respectively. TTL level (5V), optical coupling deadline available in default	I
6	DIR-		I
7	SI2-FL	Digital input signal 2, default value is forward run prohibited (POT) signal in position mode ,high level available in default , max voltage is 24V input	I
8	SI3-RL	Digital input signal 3, default value is reverse run prohibited (NOT) signal in position mode , high level available in default , max voltage is 24V input	I
9	SI4-ZS	Digital input signal 4, default value is zero-speed clamp (ZEROSPD) signal in position mode ,high level available in default , max voltage is 24V input	I
10	SI5-CLR	Digital input signal 5, default value is deviation counter clear input in position mode , low level available in default , max voltage is 24V input	I
11	Vin+	Analog input , voltage input range : -10 - 10V , input resistor 20KΩ	I
12	Vin-		I
13	SO1-RDY	Digital output signal 2 , default value is servo ready output (S-RDY) in position mode , low level available in default	O
14	SO2-ALM	Digital output signal 1 , default value is alarm output (ALM) in position mode , high level available in default	O
15	SO3-INP	Digital output signal 3 , default value is positioning complete (INP) in position mode , high level available in default	O
16	SO4-BRK	Digital output signal 4, default value is external brake release output (BRK-OFF) in position mode , low level available in default	O
17	NC		
18	COM-	Digital output signal commonality ground	I
19	+5V	encoder signal output +5V 50mA	O
20	A+	Positive/negative differential output terminal of motor encoder A phase	O
21	A-		O
22	B+	Positive/negative differential output terminal of motor encoder B phase	O
23	B-		O
24	Z+	Positive/negative differential output terminal of motor encoder Z phase	O
25	Z-		O
26	SGND	Power ground	GND

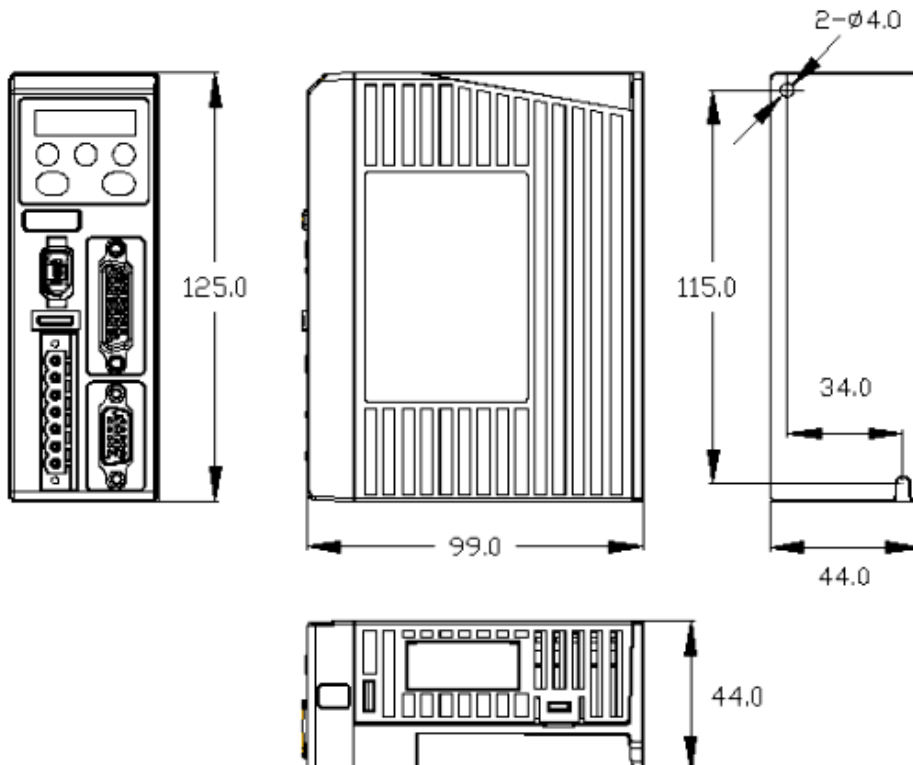
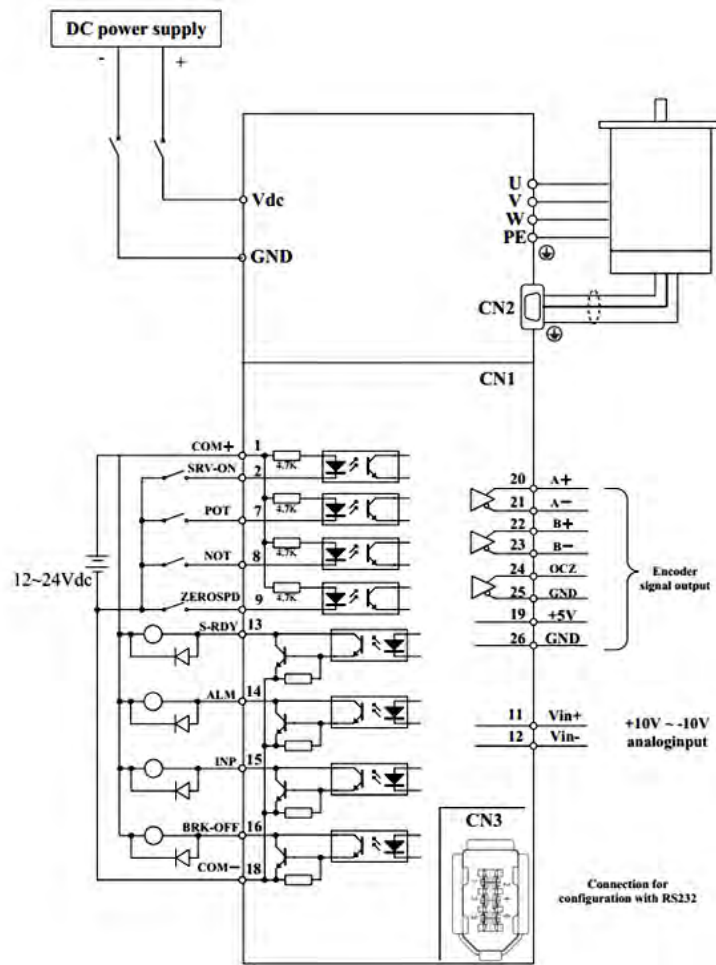


Halls & Encoder Connector			
Pin	Signal	Description	I/O
1	EA+	Encoder channel A+ input	I
2	EB+	Encoder channel B+ input	I
3	EGND	Signal ground	GND
4	HallW+	Hall sensor W+ input	I
5	HallU+	Hall sensor U+ input	I
6	FG	Ground terminal for shielded	GND
7	EZ+	Encoder channel Z+ input	I
8	EZ-	Encoder channel Z- input	I
9	HallV+	Hall sensor V+ input	I
10	HallV-	Hall sensor V- input	I
11	EA-	Encoder channel A- input	I
12	EB-	Encoder channel B- input	I
13	VCC	+5V for encoder power supplyx	O
14	HallW-	Hall sensor W- input	I
15	HallU-	Hall sensor U- input	I
Communication Port			
Pin	Signal	Description	
1	GND	Power ground	
2	TxD	Sending terminal of Rs232	
3	5V	Reserved, the current is less than 50mA	
4	RxD	received terminal of Rs232	
5	Rs485+	Reserve, RS485+/A	
6	RS485-	Reserve, RS485-/B	
Power Port			
Pin	Signal	Description	
1	VDC	+24V ~ +60V	
2	GND	Power Ground	
3	Rbr	Brake input	
4	W	Motor phase W	
5	V	Motor V	
6	U	Motor U	
7	PE	Shield	



BUS Connector		
Pin	Signal	Description
A-1	Rs485+	485data+
A-2	RS485-	485data-
A-3	GND	Ground
A-7	GND	Ground
B-1	RS485+	485data+
B-2	RS485-	485data-
B-3	GND	Ground
B-7	GND	Ground
Others	NC	16pin totally





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A-3	GND	Ground
A-7	GND	Ground
B-1	RS485+	485data+
B-2	RS485-	485data-
B-3	GND	Ground
B-7	GND	Ground
Others	NC	16pin totally

