

2ELD2 series DC Servo Drive

The 2ELD2 series is a new low voltage DC servo drive, dual axis, that one 2ELD2 drive can drive two DC servo motors at the same time.

It is suitable for use in the compact scenarios, it reduces the installation volume by 30% compared to two single-axis drives.

Feature:

- ◆ Each axis power range up to 1.2kw
- ◆ Each axis current range up to 90Amp
- ◆ STO and Auxiliary input power
- ◆ Simple, flexible to control
- ◆ Modbus RTU/CANopen
- ◆ PR-Mode
- ◆ Notch filter, damping filter
- ◆ ABZ+hall uvw incremental encoder / 17bit and 23bit Serial signal encoder

Technical Specification

Power & Environment		
Drive model	2ELD2-RS7020B 2ELD2-CAN7020B	2ELD2-RS7030B 2ELD2-CAN7030B
Size(mm)	194*103*41	
Input main voltage(V)	DC24~70	
Input auxiliary power(V)	DC24~70	
Rated power(kw) / Axis	0.75	1.2
Rated output current(Arms) / Axis	20	30
Max output current(Apeak) / Axis	60	90
Main power	Voltage(V)	DC24V-70V
	Current(A)	40Arms ($\leq 48Vdc$) 28Arms ($> 48Vdc$)
Control power	Voltage(V)	DC12-24
	Current(mA)	≥ 12
Control method	IGBT PWM sinusoidal Wave Drive	
Overload	300%	
Regenerative resistor	External connection	
Safe function	STO	
Protection rank	IP20	

Communication & Connection		
Type	2ELD2-RS***	2ELD2-CAN***
Pulse input	2 fast pulse input, 5V only	---
Analog input	---	1 analog input: -10V to +10V
Digital input/output	4programmable OC inputs, 24V 2 programmable OC outputs, 24V	
Communication interface	RS485	CAN
Feedback Supported	1000. 2500lines incremental TTL encoder and Serial signal encoder	

Matched Motors	
Power Range	Up to 1.2kw
Voltage Range	24 - 70Vdc
Encoder Type	1000-Line, 2500 -Line, 17-Bit
Motor Size	40mm,42mm,57mm,60mm,80mm frame or other size
Other Requirements	Brake. oil-seal. protection level. Shaft & connector can be customized

Operating Environment

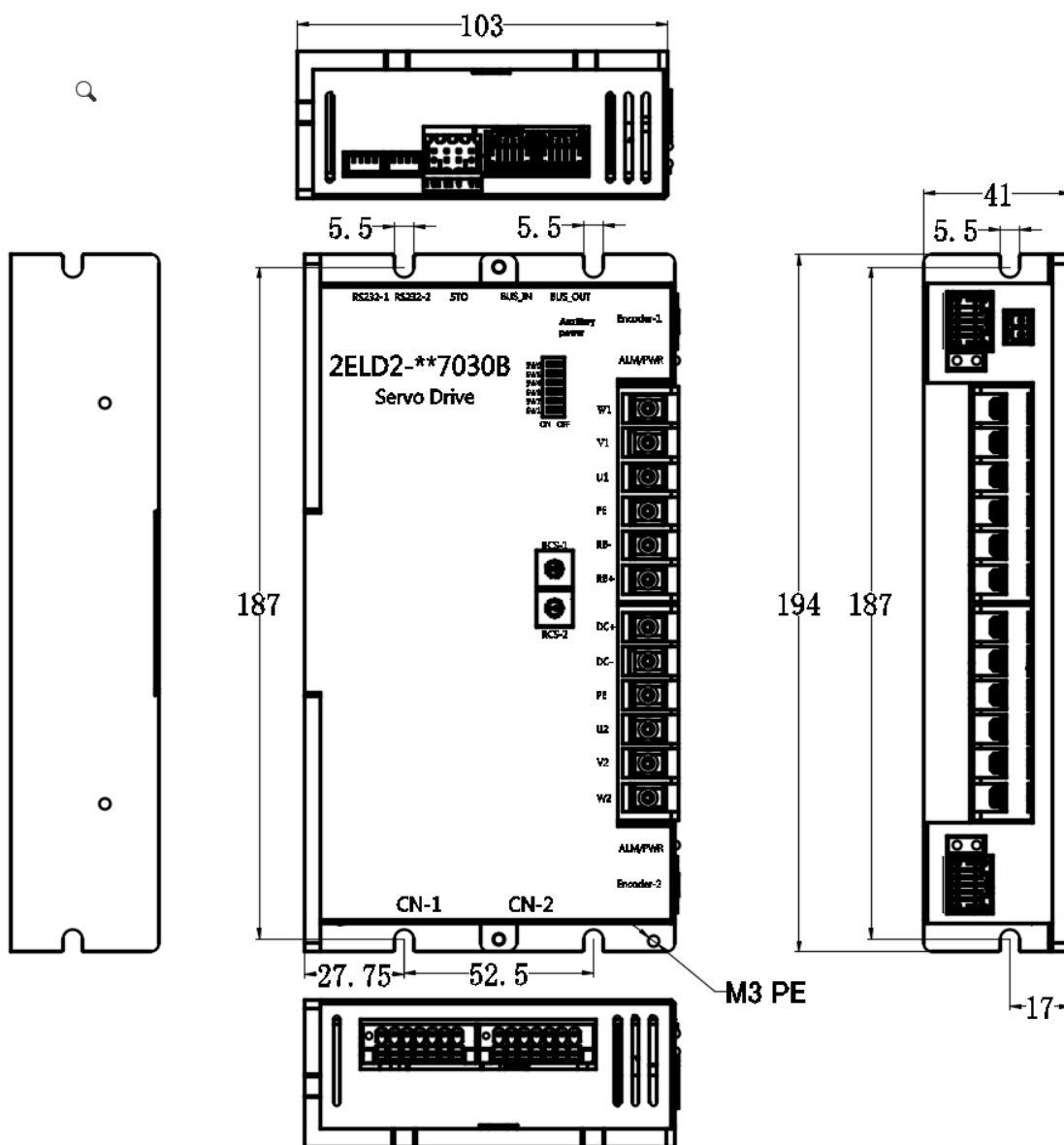
Servo Drive, Servo Motor Storage Circumstance Requirement

Item	2ELD2 series drive
Temperature	-20-65℃
Humidity	Under 90%RH (free from condensation)
Atmospheric environment	Indoor(no exposure)no corrosive gas or flammable gas, no oil or dust
Altitude	Lower than 1000m
Protection level	IP20(no protection)

Servo Drive, Servo Motor Installation Circumstance Requirement

Item	2ELD2 series drive
Temperature	0-45℃
Humidity	Under 90%RH (free from condensation)
Atmospheric environment	Indoor(no exposure)no corrosive gas or flammable gas, no oil or dust
Altitude	Lower than 1000m
Protection level	IP20(no protection)

Model

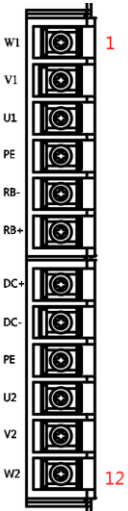


Size: (mm)

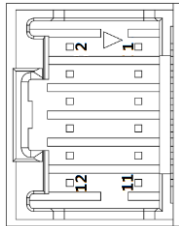
L*W*H=194*103*41

Connectors and Pin Assignment

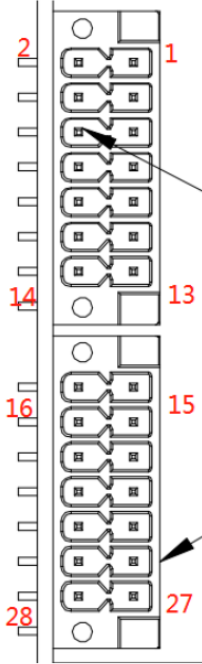
Power terminal

Power terminal	Pin	Signal	Input / Output	Details
	1	W1	Output	Power for motor 1
	2	V1	Output	
	3	U1	Output	
	4	PE	Output	
	5	RB-	Input	Regenerative resistor
	6	RB+	Input	
	7	DC+	Output	Power for Drive: DC24~70V
	8	DC-	Output	
	9	PE	Output	Power for motor 2
	10	U2	Output	
	11	V2	Output	
	12	W2	Output	

Encoder Input Port- Axis 1 or Axis 2

Encoder	Pin	Signal	IO	Detail
	1	SHIELD	Input	Ground terminal for shielded
	2	HU	Input	Hall sensor U input
	3	HW	Input	Hall sensor W input
	4	HV	Input	Hall sensor V input
	5	VCC	Input	+5V for encoder power supply
	6	GND	Input	
	7	EZ+/D+	Input	Encoder channel Z+ put/ Serial encoder signal
	8	EZ-/D-	Input	Encoder channel Z- input/ Serial encoder signal
	9	EB+	Input	Encoder channel B+ input
	10	EB-	Input	Encoder channel B- input
	11	EA+	PE	Encoder channel A+ input
	12	EA-	Input	Encoder channel A- input

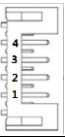
Signal Explanation of Control Signal Port -I/O

I/O	Axis	Pin	Signal	IO	Detail	
					2ELD2-RS***	2ELD2-CAN***
	Axis 1	1	DI1+	Input	Differential pulse input , 5V, 500KHz, Default pulse	NA
		2	DI1-	Input		
		3	DI2+	Input	Differential pulse input , 5V, 500KHz Default direction	Analog input: -10V to +10V
		4	DI2-	Input		
		5	COM_IN	Input	Power supply positive terminal of the external input control signal, 12V ~ 24V	
		6	DI3	Input	Digital input signal 3, default value is forward enable signal , low level available in default , max voltage is 24V input 20KHz	
		7	DI4	Input	Digital input signal 4, default value is alarm clear signal , low level available in default , max voltage is 24V input 20KHz	
		8	DI5	Input	Digital input signal 5, default value is forward run prohibited (POT)signal in position mode , low level available in default , max voltage is 24V input 20KHz	
		9	DI6	Input	Digital input signal 6, default value is reverse run prohibited (NOT) signal in position mode , low level available in default , max voltage is 24V input 20KHz	
		10	DO1	Output	Digital output signal 1 , (ALARM) , 24V, 8mA	
		11	DO2	Output	Digital output signal 2 , (Servo-Ready) , 24V, 8mA	
		12	COM_OUT	Output	Digital output signal commonality ground, 24V	
		13	DO+	Output	Brake output, 24V/1A	
		14	DO-	Output		
	Axis 2	15	DI1+	Input	Differential pulse input , 5V, 500KHz, Default pulse	NA
		16	DI1-	Input		
		17	DI2+	Input	Differential pulse input , 5V, 500KHz Default direction	Analog input: -10V to +10V
		18	DI2-	Input		
		19	COM_IN	Input	Power supply positive terminal of the external input control signal, 12V ~ 24V	
		20	DI3	Input	Digital input signal 3, default value is forward enable signal , low level available in default , max voltage is 24V input 20KHz	
		21	DI4	Input	Digital input signal 4, default value is alarm clear signal , low level available in default , max voltage is 24V input 20KHz	
		22	DI5	Input	Digital input signal 5, default value is forward run prohibited (POT)signal in position mode , low level available in default , max voltage is 24V input 20KHz	

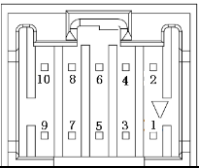
Datasheet of 2ELD2 Series Drive

			23	DI6	Input	Digital input signal 6, default value is reverse run prohibited (NOT) signal in position mode , low level available in default , max voltage is 24V input 20KHz
			24	DO1	Output	Digital output signal 1 , (ALARM) , 24V, 8mA
			25	DO2	Output	Digital output signal 2 , (Servo-Ready) , 24V, 8mA
			26	COM_OUT	Output	Digital output signal commonality ground, 24V
			27	DO+	Output	Brake output, 24V/1A
			28	DO-	Output	

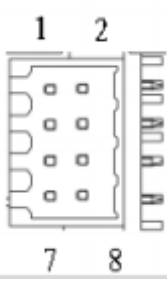
RS232 Communication port- Axis 1 or Axis 2

RS232		Pin	Detail
RS232		1	5V
		2	TX
		3	GND
		4	RX


Bus connector- IN or OUT

BUS		Pin	Modbus(RS485)	CANopen
Modbus(RS485) / CANopen		1	485data+	CANH
		3	485 data-	CANL
		5	GND	GND
		other	NC	NC

STO connector

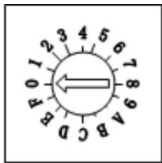
STO		Pin	Detail
STO		1	GND
		2	5V
		3	STO 1-
		4	STO 1+
		5	STO 2-
		6	STO 2+
		7	EDM-
		8	EDM+

Auxiliary power


Auxiliary power		Pin	Detail
Auxiliary power		1	VCC+
		2	GND

Switch

Rotary Code Switch- Axis 1 or Axis 2

RCS		NO	Slave ID	NO	Slave ID
RCS		0	Modbus: Default Pr5.31=16 CANopen: Default Pr0.23=16	8	8
		1	1	9	9
		2	2	A	10
		3	3	B	11
		4	4	C	12
		5	5	D	13
		6	6	E	14
		7	7	F	15

Dip Switch

Switch		Pin	Detail																				
SW		SW1	Axis 1 Slave -ID selection (MSB) OFF: MSB=0. Slave ID = RCS- Axis 1 ON: MSB=1. Slave ID = 16 + RCS Axis 1																				
		SW2	Axis 2 Slave -ID selection (MSB) OFF: MSB=0. Slave ID = RCS- Axis 2 ON: MSB=1. Slave ID = 16 + RCS- Axis 2																				
		SW3	Modbus / CANopen baud rate- Axis 1 and Axis 2 <table border="1" data-bbox="584 1182 1273 1422"> <thead> <tr> <th>SW3</th> <th>SW4</th> <th>Modbus Baud rate</th> <th>CANopen Baud rate</th> </tr> </thead> <tbody> <tr> <td>off</td> <td>off</td> <td>Default Pr5.30=9600Hz</td> <td>Default Pr0.24=1M Hz</td> </tr> <tr> <td>on</td> <td>off</td> <td>19200</td> <td>500K</td> </tr> <tr> <td>off</td> <td>on</td> <td>38400</td> <td>250K</td> </tr> <tr> <td>on</td> <td>on</td> <td>57600</td> <td>125K</td> </tr> </tbody> </table>	SW3	SW4	Modbus Baud rate	CANopen Baud rate	off	off	Default Pr5.30=9600Hz	Default Pr0.24=1M Hz	on	off	19200	500K	off	on	38400	250K	on	on	57600	125K
		SW3	SW4	Modbus Baud rate	CANopen Baud rate																		
		off	off	Default Pr5.30=9600Hz	Default Pr0.24=1M Hz																		
		on	off	19200	500K																		
		off	on	38400	250K																		
on	on	57600	125K																				
SW4																							
SW5	NA																						
SW6	Terminal resistors OFF: Null ON : 120Ω																						