



# LCDA257S Closed-loop stepper driver

## User's Guide



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## Table of Contents

一、 Installation .....	2
1、 Electrical indicators .....	2
2、 Environmental indicators .....	2
3、 Installation dimensions .....	2
二、 wiring .....	3
1、 Drive terminal description .....	3
2、 Control port wiring .....	4
3、 Control signal timing diagram .....	5
三、 DIP switch settings .....	6
四、 parameter settings .....	7

## 一、 Installation

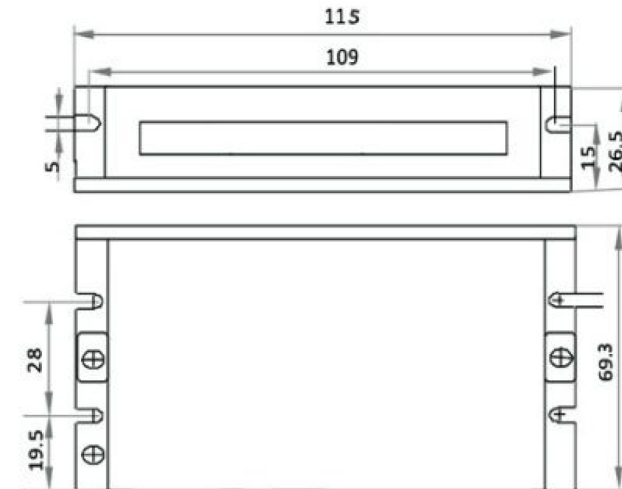
## 1、 Electrical indicators

- Voltage input range : DC:20~50V (Recommended 36V or more)
- Maximum output current:6A
- Pulse form: pulse + direction, CW / CCW
- Logic input current:10~20mA
- Impulse response frequency:0~200KHZ
- Insulation resistance:500M

## 2、 Environmental indicators

- Save the temperature:-20C°~80C°
- Operating temperature:0C°~55C°
- Use humidity:90%RH(No condensation)
- Vibration frequency:Less than0.5G(4.9m/s<sup>2</sup>)10HZ~60HZ(Non-continuous operation)

## 3、 Installation dimensions(unit mm)



Drive installation dimensions

## TWO、 wiring

### 1、 Drive terminal description

#### 1) Power terminal definition

Serial number	symbol	Functional definition
1	A+	Motor power line terminal wiring color See motor on the label
2	A-	
3	B+	
4	B-	
5	+VDC	DC power input terminal recommended DC 36V or more
6	GND	

#### 2) Drive control terminal definition

Pin	symbol	Description
1	PUL+	Pulse input positive
2	PUL-	Pulse input negative
3	DIR+	Direction input positive
4	DIR-	Direction input negative
5	ENA+	Enable input positive

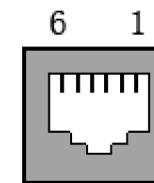
Pin	symbol	Description
6	ENA-	Enable input negative
7	ALM+	Alarm output positive
8	ALM-	Alarm output negative

#### 3) Drive encoder terminal definition

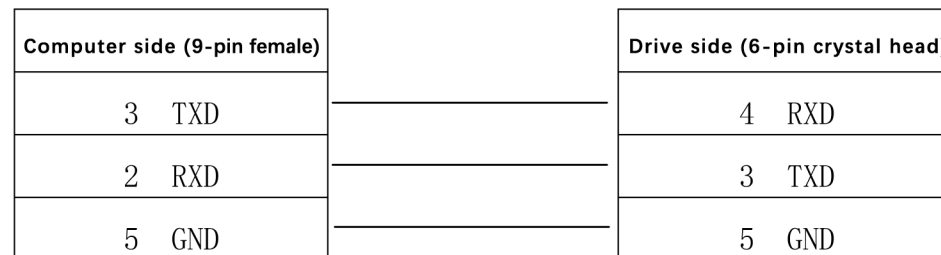
Pin	symbol	Colour	Description
1	EB+	yellow	Encoder B signal is positive
2	EB-	green	Encoder B signal is negative
3	EA+	black	Encoder A signal is positive
4	EA-	blue	Encoder A signal is negative
5	VCC	red	Encoder + 5V input
6	EGND	white	Encoder power ground

### 3) Drive communication terminal definition

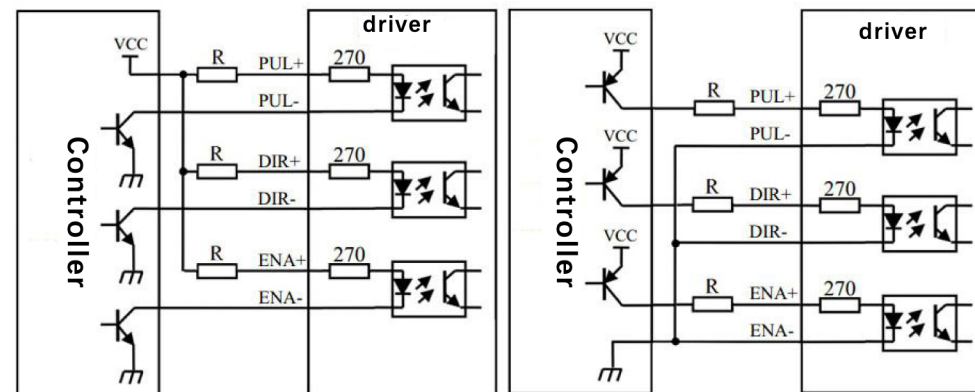
pin	symbol	Remarks
1	NC	No definition
2	GND	Signal ground
3	TXD	RS232 Sending end
4	RXD	RS232 Receiving end
5	GND	Signal ground
6	+5V	Power is positive



#### Drive and computer communication line connection

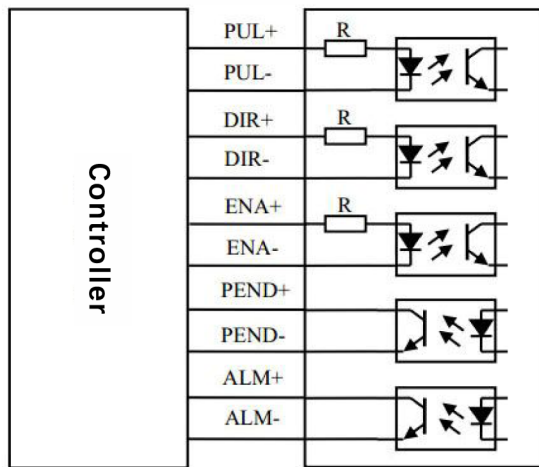


### 2、 Control port wiring



Pic 2 Common anode wiring method

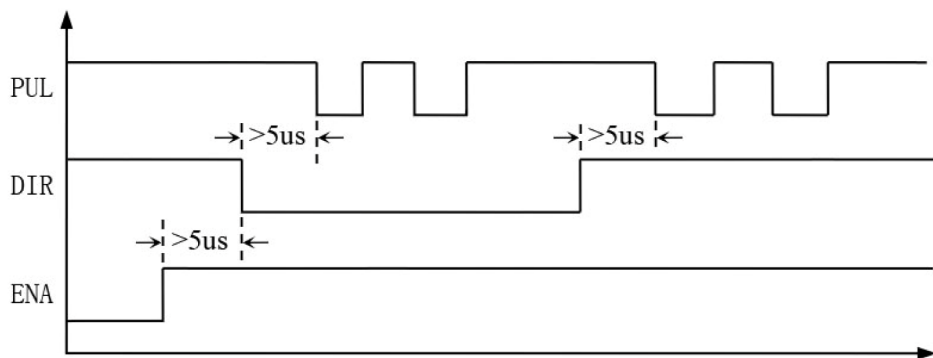
Pic 3 Common cathode wiring method



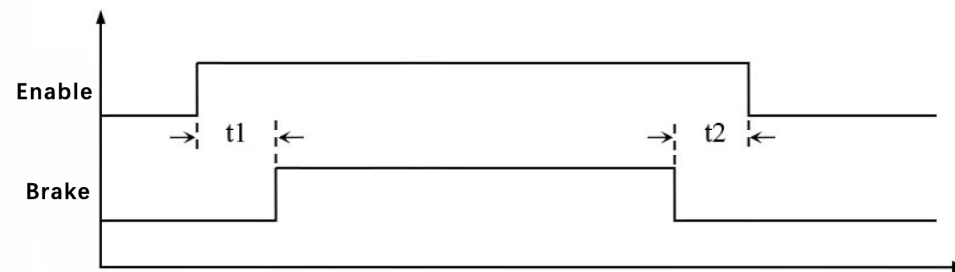
Pic 4 Differential signal input and output signal connection

**Note:** When the control signal voltage VCC = 24V,  
the current limiting resistor R = 3K;  
When the control signal voltage VCC = 5V,  
the current limiting resistor R = 0;

### 3、Control signal timing diagram



Pic 5 Control signal timing diagram



Pic 6 Motor brake signal control timing diagram

**Note:** Hold time delay  
Brake delay time

### Three、DIP switch setting

This series of drive current for the automatic tuning, so do not need to manually set the current, DIP switch corresponding functions are as follows:

- SW1~SW4 : Set the drive subdivision (see details on the driver shell subdivision table)
- SW5 : Set the motor direction
- SW6 : Current self-tuning mode switch
- SW7 : Working mode selection
- SW8 : Pulse input form selection
- SW9 : Pulse edge selection

## Four、Parameter settings

Common parameters are shown in the table below:

Parameter number	Parameter Description	Predetermined area	Remarks
PA_002	Position loop low speed P	1~32767	
PA_003	Position loop high speed P	1~32767	
PA_004	Speed loop low speed P	1~32767	
PA_005	Speed loop high speed P	1~32767	
PA_006	Set the number of pulses per revolution	200~32767	
PA_008	Position error limit	10~32767	
PA_013	Rated current percentage	1~100	
PA_015	Input filter switch	0~1	
PA_016	Input filter time	0~32767	
PA_017	Enable level selection	0~1	
PA_018	Faulty state selection	0~1	
PA_020	Pulse mode selection	0~65536	
PA_021	Restore factory parameters	0~1	
PA_028	Percentage of open loop torque	0~100	
PA_029	Speed loop debounce time	0~65536	
PA_030	Speed loop integral	1~100	

For more parameters see the simple commissioning manual

**Note:** Parameters can be adjusted by adding the debug board or PC host computer debugging software, debugging board adjustment method see simple debugger manual, software adjustment method see the software help instructions.