Stepper Motor Driver CW2283

1. Introduction

Descriptions

CW2283 is subdivided and high-performance stepper motor drive using constant angle and constant torque，which is designed for 130BYG、110BYG and other 8A following two-phase, four-phase hybrid stepping motor. The driver uses the circuit which is **Similar to the principle of servo control** with the features of smooth running, low noise, low vibration, low temperature rise of the motor .It has 16 kinds of micro-step, and the micro-step can be set from full step to 51200steps/rev.The working current can be set from 2.0A to 8.3A, and the output current has 16 stalls, the current resolution is about 0.5A; with automatic semi-flow, self-test, overvoltage, under-voltage and over-current protection. This driver is AC power, Voltage does not exceed 240VAC not less than 120VAC.

Features

- High-performance, low price
- micro-step
- Automatic idle-current reduction
- Optical isolating signal I/O
- Max response frequency up to 200Kpps
- Low temperature rise, smooth motion
- Online adaptive PID technology

Applications

Suitable for a variety of large-scale automation equipments and instruments. For example: labeling machine, cutting machine, packaging machine, plotter, engraving machine, CNC machine tools and so on. It always performs well when applied for equipment which requires for low-vibration, low-noise, high-precision and high-

velocity.

Electrical Specifications

Parameter	Min	Typical	Max	Unit
Input Voltage(AC)	150	-	220	VAC
Output current	0	-	8.3	A
Pulse Signal Frequency	0	-	200	KHZ
Logic Signal Current	7	10	16	MA

2 . parameter setting

Current setting

Dial switch：ON=0;OFF=1

Phase current	SW5	SW6	SW7	SW8
2.0	1	1	1	1
2.4	0	1	1	1
2.8	1	0	1	1
3.2	0	0	1	1
3.6	1	1	0	1
4.2	0	1	0	1
4.8	1	0	0	1
5.2	0	0	0	1
5.6	1	1	1	0
6.0	0	1	1	0
6.4	1	0	1	0
6.8	0	0	1	0
7.2	1	1	0	0
7.6	0	1	0	0
8.0	1	0	0	0

8.3	0	0	0	0

Standstill Current Setting

Half current is default .

Micro-step Setting

Dial switch：ON=0;OFF=1

Subdivision	SW1	SW2	SW3	SW4
400	0	0	0	0
800	1	0	0	0
1600	0	1	0	0
3200	1	1	0	0
6400	0	0	1	0
12800	1	0	1	0
25600	0	1	1	0
51200	1	1	1	0
1000	0	0	0	1
2000	1	0	0	1
4000	0	1	0	1
5000	1	1	0	1
8000	0	0	1	1
10000	1	0	1	1
20000	0	1	1	1
50000	1	1	1	1

3. Connectors and Pin Assignment

Control signal Connector

signal	function
FAULT-	Common anode input positive terminal
FAULT+	Common anode input positive terminal(+5V)
ENA-	Enable signal terminal motor is offline when Enable signal is active, no internal current.
ENA+	
DIR-	Direction signal terminal Direction control signal control the motor running direction.
DIR+	
PUL-	Pulse signal terminal Pulse signal control the motor to run motor run 1 step after each pulse.
PUL+	

Power and Motor Connector

AC	Power supply, 150~220VAC
AC	
A+	Motor phase A
A-	
B+	Motor phase B

B-	

Control Signal Connector Interface

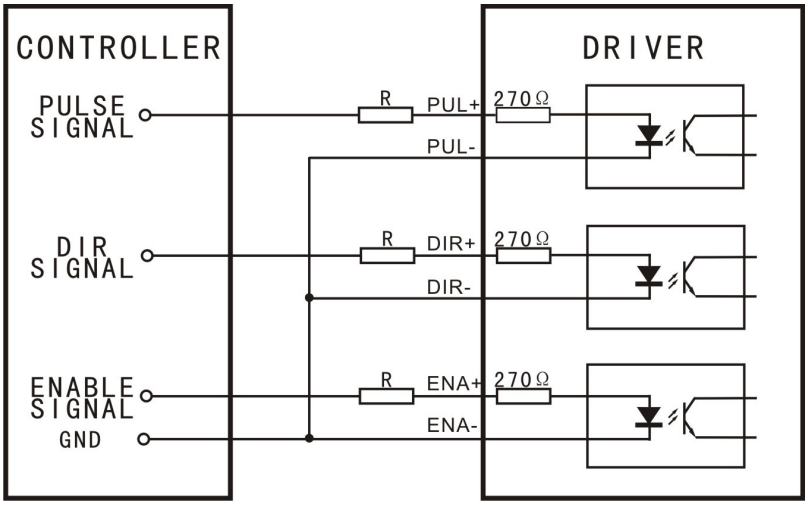

Figure1: Common-Cathode

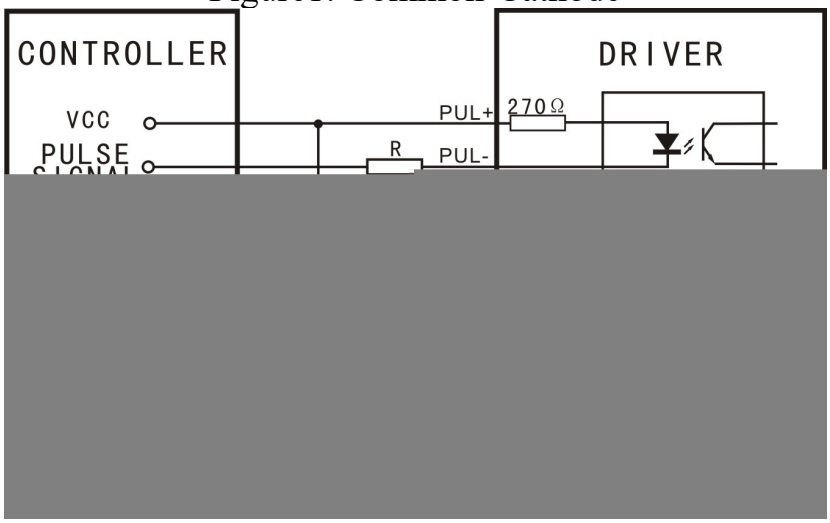

Figure2: Common-Anode

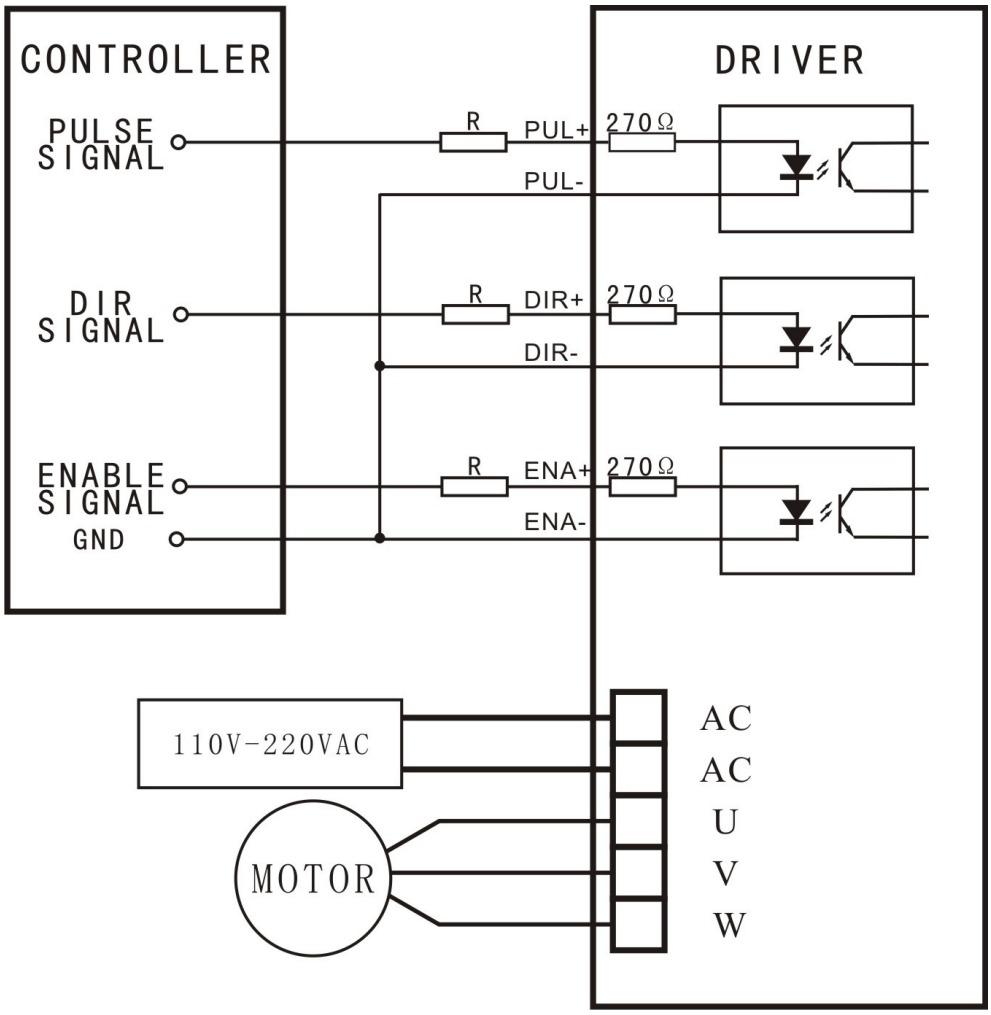

Figure 3: Typical connection

VCC	R
5V	不加
12V	1KΩ
24V	2KΩ

Table1

4. Problems and Solutions

Phenomenon	Possible Cause	Solutions
Fault indicator brightens red for a long time (over-current)	Electrical wire shorted	Check the motor lines and eliminate short circuit
	Motor failure	Replace motor
	Other reasons	Check back

5. Mechanical Specifications **(unit: mm(inch),1 inch = 25.4mm)**