SKYSMotor

User Manual

DM456AI

2-phase Speed Control Stepper Driver

2-phase Speed Control Stepper Drive

## 20-40VDC, 1.0-5.6A peak current, 2-axis motor control,0-10V analog input

Preparation

- 24VDC or 36VDC power supply
- Command source: Simple switch signal, or I/O signal of PLC, or 0-10V analog input
- 24V logical voltage for motor start/stop and motor direction.
- One or two stepper motor

Power Supply Connection

- Rang 20-40VDC, recommend 24-36VDC power supply, higher power voltage brings better performance at high speed.
- Pay attention to polarity of power, otherwise, the drive will burn out.

DM456AI Size (unit: mm)

Motor Connector
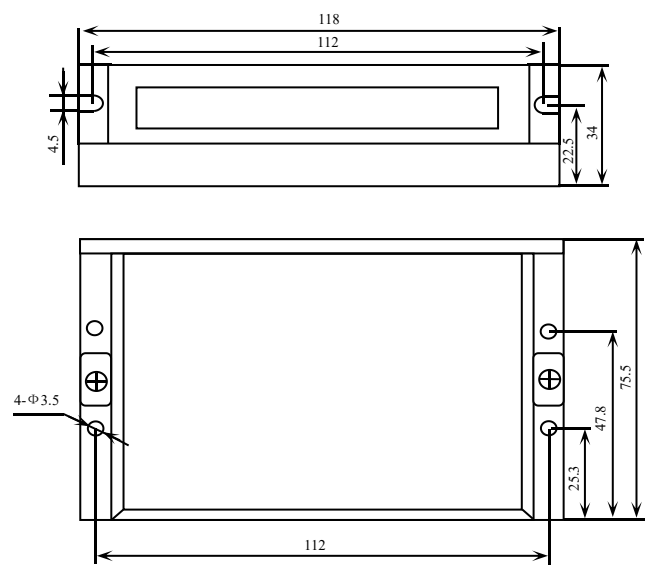
PIN #	Name	Description	PIN #	Name	Description
Power & Motor Connector			**Control Signals Connector**		
1	VDC	Connect to positive terminal of	1	GND	GND of analog input
2	GND	Connect to GND of power supply	2	AIN	0 -10V of analog input
3	B-	Motor 1	3	+10V	Output 10V @ 20mA
4	B+		4	ENA-	Motor Start / Stop input
5	A-		5	DIR-	Motor direction
6	A+		6	OPTO	Common +24V for start/stop and direction
7	B-	Motor 2			-
8	B+				
9	A-				
10	A+				

DIP Switch Setting

Peak	RMS	SW1	SW2	SW3
1.0A	0.7A	on	on	on
1.4A	1.0A	off	on	on
2.1A	1.5A	on	off	on
2.8A	2.0A	off	off	on
3.8A	2.5A	on	on	off
4.2A	3.0A	off	on	off
4.9A	3.5A	on	off	off
5.6A	4.0A	off	off	off

Motor Speed (RPM)	SW4	SW5	SW6
0-100	on	on	on
0-150	off	on	on
0-200	on	off	on
0-250	off	off	on
0-300	on	on	off
0-350	off	on	off
0-400	on	off	off
0-450	off	off	off

0 - 10V Analog Control Connection

DM456AI has three wiring methods, Figure 1 is directly connected to the analog output of the controller, Figure 2 is external potentiometer speed regulation. Figure 3 indicates that if only a fixed speed is required and the drive dials exactly this speed, the AIN can be directly shorted to +10V without a potentiometer.

Figure 1

Figure 2

Figure 3

Figure 4
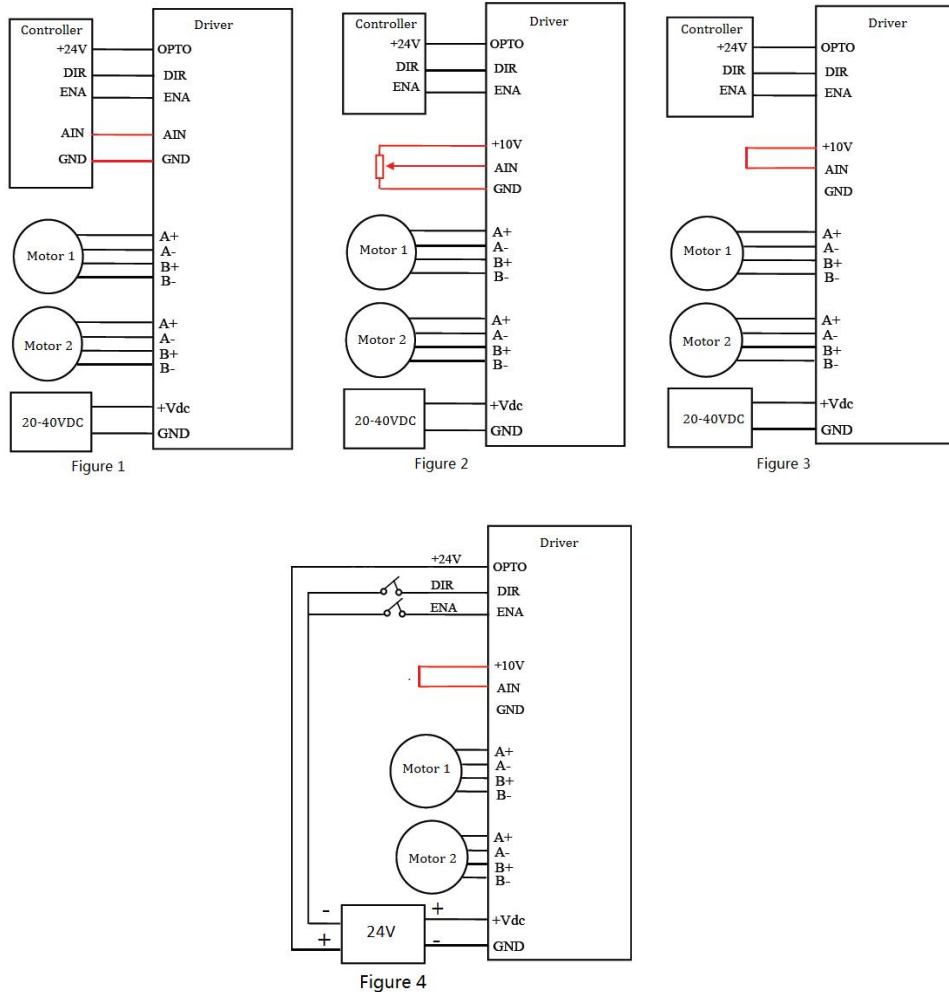
Note:

(1) This driver OPTO can only be connected to 24V, ENA is as start/stop signal, and DIR is as motor rotation direction.

(2) The motor is locked at power on.

(3) If use a potentiometer, the resistance value is recommended to be more than 1KΩ.

(4) Please pay attention to the DIP switch settings and motor wiring before power on.