

M430D

Stepper Motor Driver Specification

Overview

The M430D is a new generation microstep stepper motor driver. Due to the adoption of the advanced bipolar constant-current chopper driver technology, it shows stable operation, provides excellent high torque. Moreover, it significantly reduces the noises and vibration of the operating motor. The M430D has the feature of low-noise, low-vibration and low-heating. The M430D is DC18-40V power supply. It applies to 2-phase hybrid stepper motor under 3.0A current. The M430D has seven kinds of microsteps. The maximum step number is 12800 steps/rev (microstep is 1/64). The peak operating current ranges from 0.9A to 3.0A., and the output current has 8 stalls. The M430D has automatic semi-flow, motor misconnected protection functions and so on.

Applications

It can be applied in a variety of small scale automation equipment and instruments, such as labeling machine, cutting machine, packing machine, drawing machine, engraving machine, CNC machine and so on. It always performs well when it is used in equipment which requires for low-vibration, low-noise, high-precision and high-velocity.

Microstep selection

Pulse/Rev	SW1	SW2	SW3
200	off	off	off
400	on	off	off
800	off	on	off
1600	on	on	off
3200	off	off	on
6400	on	off	on
12800	off	on	on

Current selection

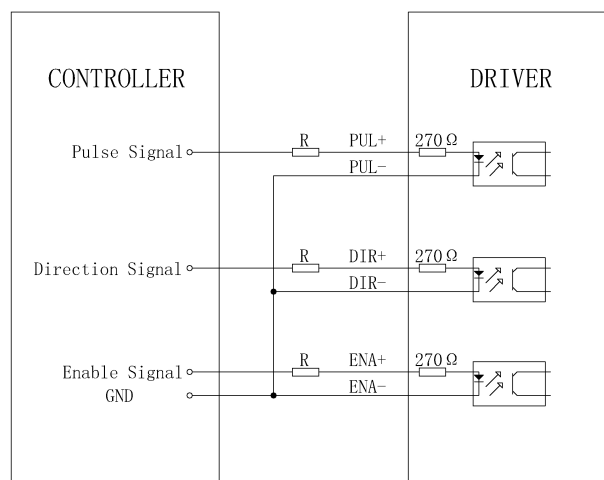
Peak	RMS	SW5	SW6	SW7
0.9A	0.65A	on	on	on
1.2A	0.86A	on	on	off
1.5A	1.10A	on	off	on
1.8A	1.28A	on	off	off
2.1A	1.50A	off	on	on
2.4A	1.72A	off	on	off
2.7A	1.93A	off	off	on
3.0A	2.14A	off	off	off

Driver functions descriptions

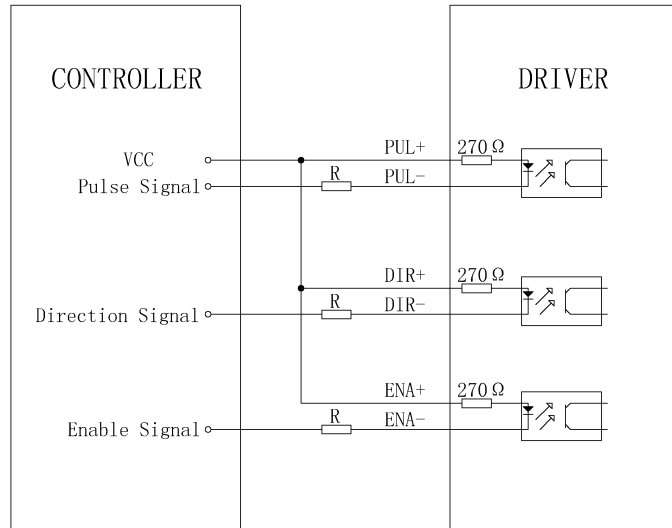
Driver function	Operating instructions
Output current setting	Users can set the driver output current by SW5-SW7 three switches. The setting of the specific output current, please refer to the instructions of the driver panel figure.
Microstep setting	Users can set the driver Microstep by the SW1-SW3 three switches. The setting of the specific Microstep subdivision, please refer to the instructions of the driver panel figure. SW4 and SW8 is vacancy, they do not need to be adjusted.
Signal interfaces	PUL is the setting pulse input; DIR is the stepper motor direction input; OPTO is the power supply for signal port + 5V; ENA is the motor free input.
Motor interfaces	A+ and A- are connected to a phase winding of motor; B+ and B- are connected to another phase winding of motor. If you need to backward, one of the phase windings can be reversed.
Power interfaces	It uses DC power supply. Recommended operating voltage is 18VDC-40VDC, and power consumption should be greater than 100W.
Installation instructions	Driver dimensions: $117 \times 71 \times 35$ mm, please refer to dimensions diagram. Please leave 10CM space for heat dissipation. During installation, it should be close to the metal cabinet for heat dissipation.

Signal interface details:

The internal interface circuits of the driver are isolated by the opt coupler signals, R in the figure is an external current limiting resistor. The connection is differential. And it has a good anti-jamming performance.



common cathode connection



common anode connection

Control signal and external interface:

Signal amplitudes	External current limiting resistor R
5V	Without R
12V	680 Ω
24V	1.8K Ω

Outline and installation size (unit: mm)

