KL - 11080 Stepper Motor Driver

Overview:

The KL-11080 driver is cost-effective constant torque high performance step driver, which applies to two-phase or four-phase hybrid stepper motor below 8A, such as NEMA34, NEMA42 Motors. The design is based on servo control circuit, features stable operation, low noise, low vibration and low temperature rise of motor. Due to the high operating voltage, the torque is larger than the other two-phase or four-phase hybrid step motor at high speed. It has 16 kinds of microstep, the maximum number of microstep is 1/256; its current range is 0.5A-8A, and the current resolution is about 0.5A> It has Half Current, Self-Test, Over voltage, Under-Voltage and Over-Current Protection functions. The drive is the AC power supply, the operating voltage should be 110VAC.

Application. It is suitable for a variety of large-scale automation equipment and instruments, such as labeling machine, cutting machine, packing machine, plotter, engraving machine, CNC machine and so on.

Current resolution： switch ON=0，OFF=1

Phase current	SW1	SW2	SW3	SW4
0.5A	0	0	0	0
1.0A	0	0	0	1
1.5A	0	0	1	0
2.0A	0	0	1	1

2.5A	0	1	0	0
3.0A	0	1	0	1
3.5A	0	1	1	0
4.0A	0	1	1	1
4.5A	1	0	0	0
5.0A	1	0	0	1
5.5A	1	0	1	0
6.0A	1	0	1	1
6.5A	1	1	0	0
7.0A	1	1	0	1
7.5A	1	1	1	0
8.0A	1	1	1	1

Microstep Resolution： Switch ON=0，OFF=1

Microstep	SW5	SW6	SW7	SW8
1	0	0	0	0
2	0	0	0	1
4	0	0	1	0
5	0	0	1	1
6	0	1	0	0
8	0	1	0	1
10	0	1	1	0
16	0	1	1	1
18	1	0	0	0
20	1	0	0	1
32	1	0	1	0
40	1	0	1	1
50	1	1	0	0
64	1	1	0	1
128	1	1	1	0
256	1	1	1	1

Signal interface details:

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

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

Drive functions descriptions:

Driver functions	Operating instructions
Output Current Setting	Users can set the drive output current by SW1-SW4 four dial switches. The setting of the specific output current, please refer to the illustrations of the drive panel figure.
Microstep setting	Users can set the drive Microstep by SW7-SW10 four dial switches. The setting of the specific Micro-step subdivision, please refer to the illustrations of the drive panel figure. Steps / rev = 200 * microstep
Half current function	Users can set the drive half flow function by SW6. "1" indicates that it is set to half of the dynamic current, that is to say, 0.5 seconds , current reduced to about half automatically; "0" indicates that full current when it is idle. Users should set SW6 to "1", in order to reduce motor and drive heating and improve reliability.
Signal interfaces	PUL+ and PUL- is the positive and negative side of control pulse signal; Dir + and Dir - is the positive and negative side of direction signal; EN + and EN- is the positive and negative side of enable signal.
Motor interfaces	A + and A- is connected to a phase winding of motor; B + and B- is connected to another phase winding of motor. If you need to backward, one of the phase windings can be reversed.
Indicator lights	There are three indicator lights. Power indicator(POW) is green. When the drive power on, the green light will always been lit. Fault indicator (ALT) is red, when there is over-voltage or over-current fault, the red light flashes or constant light; when the drive fault is cleared, if re-power the red light will be off. Pulse indicator is green. when received pulse signal, the light is green; no pulse signal, the lamp goes out.
Installation instructions	Drive Dimensions: 195X108X84mm, please refer to dimensions diagram. If you need to install vertically,

there is fan cooling on side, please leave more than 10CM space for heat dissipation. During installation, it should be close to the metal cabinet for heat dissipation.

faults		
code	error	Solution
Fault indicator(ALT) is red (over-current)	1、 Motor line short-circuit. 2、Motor damage. 3、other.	1、check motor line. 2、change motor. 3、return.