

SNAC872-2

8A 80VAC

Closed Loop Stepping System

SNAC872 is a new generation hybrid servo driver, it combines the advantage of the servo system and stepper system, the system acts as nothing more than a high pole servo motor, the classic stepper motor noises and resonances vanish. Because the position is controlled, the motor can also no longer lose any steps up to its maximum torque.

Features

- Closed-loop control, no longer lose any steps, up to its maximum torque;
- higher torque and higher speed;
- Fast response;
- Reduced motor heating and more efficient;
- Zero-speed stability;
- Smooth motion and super-low motor noise;
- No Tuning and always stable;
- Lower cost.

Applications

SNAC872 is a low-cost, high-performance servo systems, suitable for a variety of large-scale automated equipments and instruments, such as low-cost, low vibration, noise, high-precision, high-speed devices, And it is ideal for applications where the equipment uses a belt-drive mechanism or otherwise has low rigidity and you don't want it to vibrate when stopping.

Electrical Specifications

Parameter	Min	Typical	Max	Unit
Input Voltage(DC)	30	-	110	VDC
Input Voltage(AC)	20	-	80	VAC
Output Current	0	-	8.0	A
Pulse Signal Frequency	0	-	200	kHz
Logic Signal Current	7	10	16	mA
Insulation resistance	500	-	-	mΩ
Encoder current providing	-	-	50	mA

step/rev	SW1	SW2	SW3	SW4
Default	on	on	on	on
800	off	on	on	on
1600	on	off	on	on
3200	off	off	on	on
6400	on	on	off	on
12800	off	on	off	on
25600	on	off	off	on
51200	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
40000	off	off	off	off

SW5 : on Motor direction is positive
SW5 : off Motor direction is negative

SW6 : on **PULS + DIR**
pulses to PLS input makes the motor step
DIR signal controls the direction

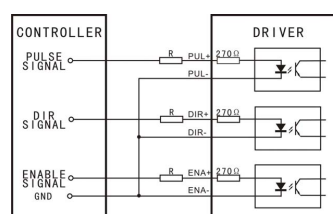
SW6 : off **CW + CCW**
pulses to PLS(CW) turns the motor left
pulses to the DIR(CCW) makes it turn right

Connectors

The **SNAC872** has four connectors, connector for control signals connections, connector for stator signal connections, connector for encoder feedback and connector for power and motor connections.

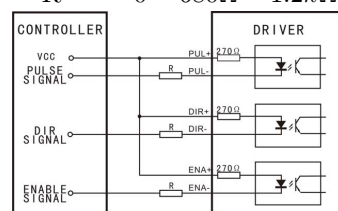
PUL+/PUL- Pulse signal
DIR+/DIR- Direction signal
ENA+/ENA- not Enable - free motor

Typical Connection



Common-Cathode

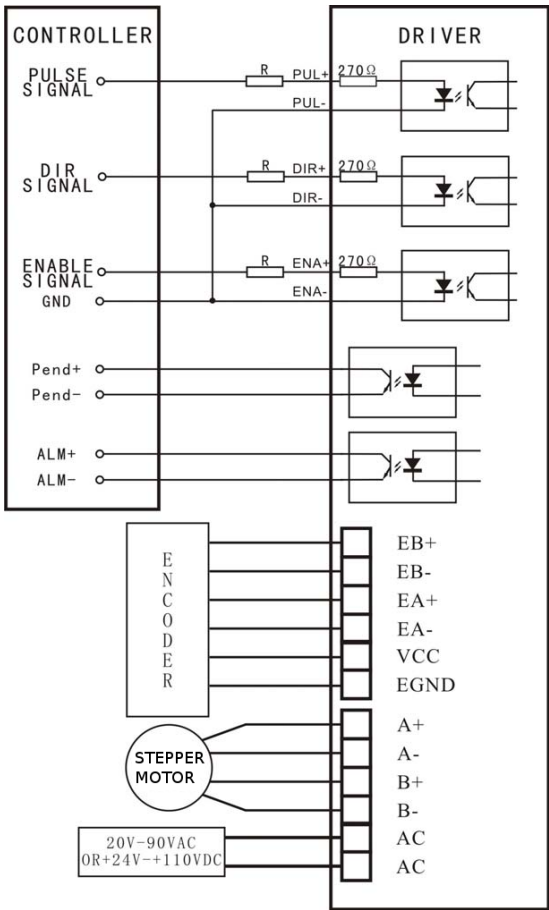
Vcc= 5V 12V 24V
R= 0 680Ω 1.2kΩ



Common-Anode

Attention: resistance R is not required to be connected to external signal control input port if the control signal level is +5V. R shorts out in the figure. Signal control input port should be connected with external $R = 680\Omega \dots 1k\Omega$ resistance when the signal control level is +12V; Signal control input port should be connected with external $R = 1.8k\Omega \dots 2k\Omega$ resistance when the signal control level is +24V.

Typical Connection



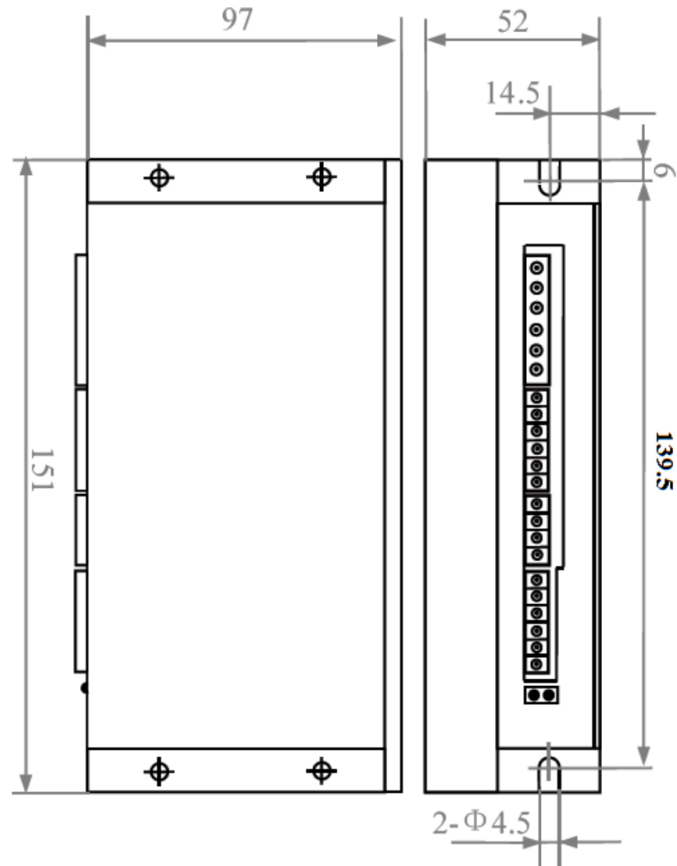
Encoder Cable Pin Out

- EGND 3 White
- VCC 2 Red
- EA- 13 Blue
- EA+ 1 Black
- EB- 12 Green
- EB+ 11 Yellow

Power and Motor Connector

- A+ Motor Phase A+(Blue)
- A- Motor Phase A- (Yellow)
- B+ Motor Phase B+ (Black)
- B- Motor Phase B- (Red)
- AC Power Supply Input
- AC Power Supply Input

Mechanical Specifications



Output Alarm Signal

- Pend+ OC output, Normally open, positive
- Pend- OC output, Normally open, negative
- ALM+ OC output, Normally closed, positiv
- ALM- OC output, Normally closed, negative
- ALM load current $\leq 50mA$

Green LED & Red LED

Green LED indicator turns on when power-up, it keeps light when the drive is in an energized state. Green LED goes out when the power of drive is cut off. Red LED is the fault indicating lamp, it keeps black when the fault is eliminated. When drive protection is activated, the red LED blinks periodically to indicate the error type. The flash frequency of red LED is 2Hz. Among which, it will be black for 300ms when LED shines 200 ms. The shining time of red LED within 5 seconds means different fault information. The specific relationship is showed in the following table:

blink	waveform of Red LED	Fault
1		Overcurrent protection
2		Overvoltage protection
7		Position tracing error

The drive will halt when there is fault. The user need to disconnect power source and reconnect the power source to eliminate the fault.