YKA2608MG/H With microstep Driver (Malfunction signal output)

Features

◆ High performance, low price
◆ Provides 12/8 kinds of equal angle constant torque microstep selection，upmost microstep can be set to 200.
◆ Special circuit design，reduce noise, enhance steadiness.
◆ The upmost pulse response frequence amounts to 200Kpps
◆ Once the pulse stops for 100ms，the phase current will automatically cut by half, which can reduce chances of overheat.
◆ Bipolar constant current chopper control
◆ Photocoupler isolated input/output
◆ Adjustable drive current range from 0.5A/phase～6.0A/phase
◆ Single power input, voltage range from DC24-80V
◆ Protection circuit
 ——Overheat protection
 ——Overcurrent,under voltage protection
◆Small in size
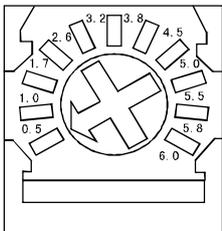YKA2608MG/H is an economic、compact driver, its dimension is only 45x136x92mm

Typical application

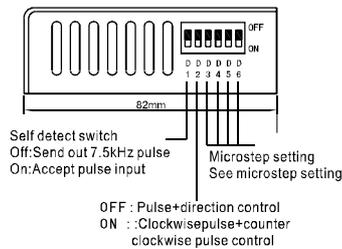Carve machine、laser labeling machine，laser internal carve machine

Description

YKA2608MG/H is a constant torque high performance driver with microstep, voltage range from DC24-80V，single power input. It can match two phase hybri-d step motors whose rated current under 6.0A、flange size range from 57～86mm. Owe to bipolar constant current chopper control of the driver circuit, the m-otor can run smoothly and hardly has any noise. Rising the voltage can greatly improve high speed performance and output torque of the motor. Once the pul-se stops for 100ms，the phase current will automatically cut by half, which can reduce chances of overheat. Users can operate the driver with microstep in lo-w speed occasion. The upmost microstep can be set to 200.
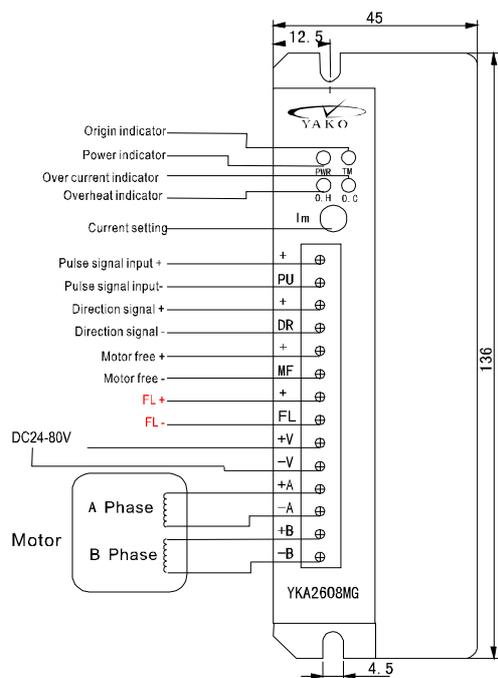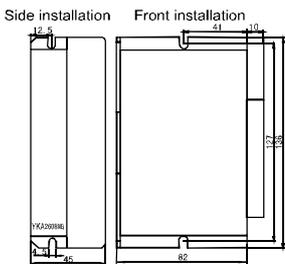
Running current setting

Function setting

82mm

Self detect switch
Off:Send out 7.5kHz pulse
On:Accept pulse input

Microstep setting
See microstep setting

OFF : Pulse+direction control
ON : :Clockwisepulse+counter clockwise pulse control

Instal dimensions（unit：mm）

Side installation   Front installation

YKA2608MG

Input signal timing diagram

PU: Pulse signal

DR: Direction signal

MF: Motor Free Signal

Driver connection

45
12.5

Origin indicator
Power indicator
Over current indicator
Overheat indicator

PWR TM
O.H O.C

Im

Current setting

Pulse signal input +   +
Pulse signal input-   PU
Direction signal +   +
Direction signal -   DR
Motor free +   +
Motor free -   MF
FL +   +
FL -   FL
DC24-80V   +V
                       −V
                       +A
A Phase   −A
                       +B
Motor   B Phase   −B

136

4.5
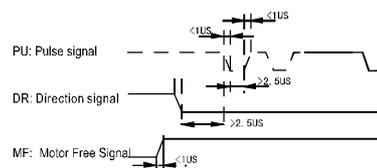
YKA2608MG

YKA2608MG microstep setting

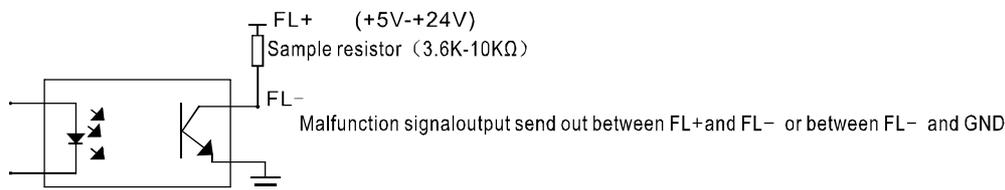| Microstep	1	2	4	5	8	10	20	25	40	50	100	200	200	200	200	200
D6	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
D5	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
D4	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
D3	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
D2	ON: clockwise pulse(PU) + counter clockwise pulse(DR) control															
	OFF: pulse + direction control（PU is pulse signal，DR is direction signal）															
D1	Self detect switch(When "off" receive outside pulse,on send 7.5Hz signalinside,then the microstep should be set to 10-50)															

YKA2608MH microstep setting

Microstep	1	2	4	8	16	32	64	128
D6	ON	OFF	ON	OFF	ON	OFF	ON	OFF
D5	ON	ON	OFF	OFF	ON	ON	OFF	OFF
D4	ON	ON	ON	ON	OFF	OFF	OFF	OFF
D3	Not use							
D2	ON: clockwise pulse(PU) + counter clockwise pulse(DR) control							
	OFF:pulse + direction control（PU is pulse signal,DR is direction signal）							
D1	Self detect switch OFF: Accept pulse input. ON: Send out 7.5KHz pulse by the driver							

Terminal assignment

ITEM	FUNCTION	NOTES
POWER	Power indicator	When power on, the green LED lights
TM	Origin/Pulse output indicator	Passing the origin or there is pulse output, the green LED lights
O.H	Malfunction indicator	When overheat occurs, the red LED lights
O.C	Overcurrent/Under voltage indicator	When current exceeds rated value or voltage lower rated value, the red LED lights
+	Input signal positive side	The signal standard voltage is 5V.Can also change to 24V or others.
PU	D2=OFF, PU is pulse signal	Effects on falling edge ,the motor goes one step as the pulse input change from "high"to "low".Input resistance is 220Ω.Requirement:input low：0－0.5V, input high:4－5V，pulse width>2.5μs
	D2=ON，PU is clockwise pulse signal	
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
DR	D2=OFF，DR is direction control signal	Use to change the direction.Input resistance is 220Ω.Requirement:input low：0～0.5V, input high:4～5V,pulse width>2.5μs,
	D2=ON，DR is counter clockwise pulse signal	
+	Input signal positive side	This signal effects when the motor pass electrical origin
MF	Origin output signal negative side	Once effects, it cut off the motor current,driver stops working and sets the motor free
+	Malfunction signal output positive side	Here need to connect to the external power supply（+5-+24V)
FL-	Malfunction signal output negative side	Once the driver over-current,over-heat or low-voltage , the FL- signal comes into effect,the driver will resume working and clear the FL signal till the heat/current/voltage comes to be normal.
+V	Power+	DC24-80V
-V	Power-	
+A、 -A	Connect to the motor	Four Leads / Six leads / Eight leads（For low speed）/ Eight leads（For high speed）
+B、 -B		

Malfunction signal output connection

FL+   (+5V-+24V)
Sample resistor（3.6K-10KΩ）
FL－

Malfunction signaloutput send out between FL+and FL- or between FL- and GND

! Caution

1. Do not reverse the power input,input voltage should not exceed DC80V。

2. Input logic should be 5V，otherwise it should connect a resistor

3.Due to the special control circuit, this module for 4 leads or 6 leads or 8 leads step motors.

4. O.H is malfunction indicator. Once the driver temperature exceeds 70°C,the current will be cut off automatically and the driver will resume working till the temperature drops to 50°C. If this happens,please install ventil -ation equipment.

5. Once over current (short circuit)/under voltage occur, LED O.C lights, please shut off power and check the electricity circuit to solve the problem, then restore power supply.

6. PWR is power indicator，it lights when power on

7. Passing the origin or there is pulse output, TM LED lights