

**THE 2-PHASE & 3-PHASE
STEPPING MOTOR DRIVER & STEPPING MOTOR
SPECIFICATION, FUNCTIONS**

SHENZHEN YAKO AUTOMATION TECHNOLOGY CO. , LTD.
4F, No. 39 Keji C.Rd.2nd, Hi-tech Industrial Park, Nanshan District, Shenzhen, P.R. Of China

Table of Content

Introduction	2
Stepping motor driver	
2 phases hybrid stepping motor driver	5
YKA2204MA Microstep Driver	5
YKA2304ME Microstep Driver	7
YKA2404S Full/half step driver	9
YKA2404MA/B Microstep driver	11
YKA2404MC/D Microstep driver	13
YKA2608S Full/half step step driver	15
YKA2608MC/D Microstep driver	17
YKA2608MG/H Microstep driver	19
YKA2609MA Microstep driver	21
YKA2811S Full/half step step driver	23
YKA2811MA Microstep driver	25
3 phases hybrid stepping motor driver	27
YKA3606MA/B Microstep driver	27
YKA3611MA Microstep driver	29
YKA3722MA Microstep driver	31
Stepping motor	
2 phases hybrid stepping motor	33
2 phases 42mm stepping motor	33
2 phases 57mm stepping motor	34
2 phases 60mm stepping motor	35
2 phases 86mm stepping motor	36
2 phases 110mm stepping motor	37
2 phases 130mm stepping motor	38
3 phases hybrid stepping motor	39
3 phases 57mm stepping motor	39
3 phases 86mm stepping motor	40
3 phases 110mm stepping motor	41
3 phases 130mm stepping motor	42

Thank you for choosing YAKO Driver.

This instruction manual gives handling information and precautions for use of this equipment. Incorrect handling might cause an unexpected fault. Before using the driver, please read this manual carefully to use the equipment to its optimum.

Please forward this manual to the end user.

This section is specifically about safety matters. Do not attempt to install, operate, maintain or inspect the driver until you have read through this instruction manual and appended documents carefully and can use the equipment correctly. Do not use the driver until you have a full knowledge of the equipment, safety information and instructions. In this instruction manual, the safety instruction levels are classified into "WARNING" and "CAUTION"

SAFETY INSTRUCTIONS

WARNING

Assumes that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

CAUTION

Assumes that incorrect handling may cause hazardous conditions, resulting in medium or slight injury, or may cause physical damage only.

Note that the CAUTION level may lead to a serious consequence according to conditions. Please follow the instructions of both levels because they are important to personnel safety.

1. Electric Shock Prevention

WARNING

- While power is on or when the driver is running, do not open the cover. You may get an electric shock.
- Do not run the driver with the cover removed. Otherwise, you may access the exposed high-voltage terminals or the charging part of the circuitry and get an electric shock.
- If power is off, do not remove the cover except for wiring or periodic inspection. You may access the charged driver circuits and get an electric shock.
- Before starting wiring or inspection, switch power off, wait for at least 10 minutes and check for the presence of any residual voltage with a meter.
- Use class 3 (200V) or special class 3 (400V) or higher earthing method to earth the driver.
- Any person who is involved in the wiring or inspection of this equipment should be fully competent to do the work.
- Always install the driver before wiring. Otherwise, you may get an electric shock or be injured.
- Operate the switches with dry hands to prevent an electric shock.
- Do not subject the cables to scratches, excessive stress, heavy loads or pinching. Otherwise, you may get an electric shock.
- Do not change the cooling fan while power is on. To do so will entail a hazardous condition.

2. Fire Prevention

CAUTION

- Mount the driver on an incombustible surface. Installing the driver directly on or near a combustible surface could lead to a fire.
- If the driver has become faulty, switch off the driver power. A continuous flow of large current could cause a fire.

3. Injury Prevention

CAUTION

- Apply only the voltage specified in the instruction manual to each terminal to prevent damage.
- Ensure that the cables are connected to the correct terminals. Otherwise, damage may occur.
- Always make sure that polarity is correct to prevent damage.
- After the driver has been operating for a relatively long period of time, do not touch the driver as it may be hot and you may get burnt.

4. Additional instructions

Also note the following points to prevent an accidental failure, injury, electric shock, etc.:

(1) Transportation and installation

CAUTION

- When carrying products, use correct lifting gear to prevent injury.
- Do not stack the driver boxes higher than the number recommended.
- Ensure that installation position and material can withstand the weight of the driver.
- Install according to the information in the Instruction Manual.
- Do not operate if the driver is damaged or has parts missing.
- Do not stand or rest heavy objects on the driver.
- Prevent screws, wire fragments, conductive bodies, oil or other flammable substances from entering the driver.
- Do not drop the driver, or subject it to impact.
- Use the driver under the following environmental conditions:
Environment: -10° C to +50° C (14° F to 122° F) (non-freezing)
(-10° C to +40° C with FR-A5CV.. attachment)
Ambient temperature -10° C to +40° C (14° F to 104° F)
(non-freezing)(-10° C to +30° C with FR-A5CV.. attachment)
Ambient humidity 90%RH or less (non-condensing)
Storage temperature -20° C to +65° C*(-4° F to 149° F)
Ambience Indoors (free from corrosive gas, flammable gas, oil mist, dust and dirt) Altitude, vibration Maximum 1000m (3280.80 feet.)
above sea level for standard operation.
..*Temperatures applicable for a short time, e.g. in transit.

(2) Wiring CAUTION

- Do not fit capacitive equipment such as a power factor correction capacitor, noise filter or surge suppressor to the output of the driver.
- The connection orientation of the output cables U, V, W to the motor will affect the direction of rotation of the motor.

(3) Trial run

CAUTION

- Check all parameters, and ensure that the machine will not be damaged by a sudden start-up.

(4) Operation

CAUTION

- The load used should be a stepper motor only. Connection of any other electrical equipment to the driver output may damage the equipment.
- Do not perform any modification to the driver
- Before running an driver which had been stored for a long period, always perform inspection and test operation.

(5) Emergency stop

CAUTION

- Provide a safety backup such as an emergency brake which will prevent the machine and equipment from hazardous conditions if the driver fails.

(6) Disposing of the driver

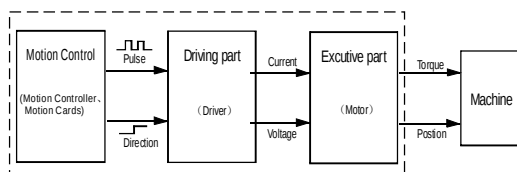
CAUTION

- Treat as industrial waste.

★ Motion Control system brief introduction

Motion controller is a technology which exactly control the position and speed of a subject. The typical motion control system is built up by three parts: control part; drive part; execute part;

Shows as below:



The executive part are always stepping motors or servo motors. Stepping motor can transfer electronic pulse to angle displacement. The characteristic is it's without accumulated error, so they're broadly used in many kinds of open-loop control system. When a stepping driver receives a pulse signal, the stepping motor will turn a fixed angle at a direction. It turns a fixed angle step by step. We can control the motor's displacement by the pulse quantity; this is the way to locate the position exactly. Also, we control the pulse frequency to control the motor's running speed and acceleration; this is the way to adjust the speed.

Stepping motor needs an electronic equipment to drive up. This equipment is a stepping motor driver. The stepping motor driver zooms out the pulse which the control system sends. The stepping motor's turning speed is directly proportional with the pulse signal frequency. We can adjust the motor's speed by controlling the pulse's quantity. So typical stepping motor's driving and control system are built up by 3 parts:

1. Pulse controller, realised by SCM
2. Driver, zooms out the SCM's pulse, and to drive the stepping motor
3. Stepping motor.

Step angle: The rotation of the rotor caused by each step, measured in degrees.

Full step: The basic driving type. In this driving type, every pulse drives the motor to move a basic angle. For example, standard 2 phases motor are with 200 steps/revolution, so in the full step driving type, every pulse it will move 1.8°.

Half step: With a half-step drive, the stepper motor can be positioned midway between the magnetic stop positions. This doubles the resolution and allows the motor to advance to the next magnetic position when the power is disconnected.

Microstepping: Many bipolar drives offer a feature called microstepping. Microstepping electronically divides a full step into smaller steps. For instance, if one step of a linear actuator is 0.001 inch, this can be driven to have 10 microsteps per step. In this case, one microstep would normally be 0.0001 inch. Microstepping effectively reduces the step increment of a motor. However, the accuracy of each microstep has a larger percentage of error as compared to the accuracy of a full step. As with full steps, the incremental errors of microsteps are non-cumulative.

Holding Torque: The maximum steady torque that can be applied to the shaft of an energized motor without causing rotation.

Detent Torque: The maximum torque that can be applied to the shaft of a non-energized motor without causing rotation.

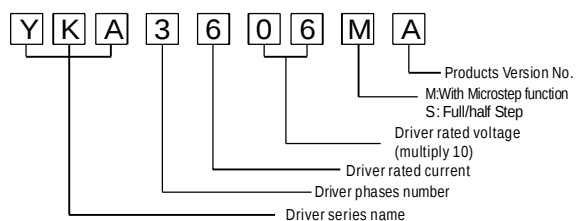
Pull in torque: The load a motor can move without missing steps when started at a constant pulse rate.

Pull out torque: The load a motor can move when at operating speed. This is normally substantially greater than the Pull in torque.

Speed-torque Curve: The speed-torque characteristics of a stepping motor are a function of the drive circuit, excitation method and load inertia.

Pulses per second (PPS): The number of steps that the motor takes in one second (sometimes called "steps per second"). This is determined by the frequency of pulses produced by the motor drive.

★ Naming policy



The example above shows: YKA series, 3 phases, rated current value is 6A, rated current value is 60V, with microstep function, and the products version is "A"

Choosing model policy

Driver's current: The current is a important guide for choosing stepping driver model. Usually the driver' maximum current should be higher than motor's current. Ordinarily the drivers' current are 2.0A, 3.5A, 6.0A, 8.0A and so on.

Driver's input voltage: We can judge speedup by the voltage. Usually voltage input are 4VDC、40VDC、60VDC、80VDC、110VAC、220VAC and so on.

Drivers's microstep: Microstep is the sign of accuracy. We can promote the accuracy by control microstep. Stepping motor always vibrate in low frequency, so if your motor have to work in low frequency sympathetic vibration area, chooing microstep driver is good. Beside, the driver with microstep is better performance than the one without microstep.

★ Main Control signal

Input signal

All inputs are photo coupler isolated. A minimum 15mA driving current is required to guaranty the photo coupler to function at the specified higher speed. When the input signal voltage level is higher then 5VDC, a series resistor have to be used to limit the drive current not exceed 25mA.

The resistors value are showed as below when controller/Executor's output signal voltage is:

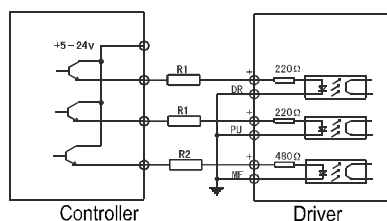
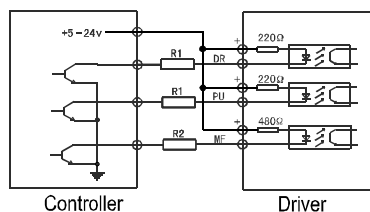
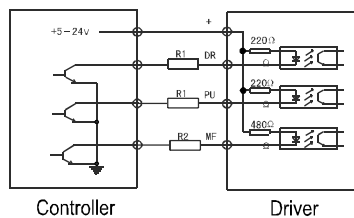
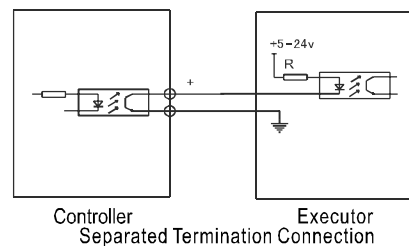
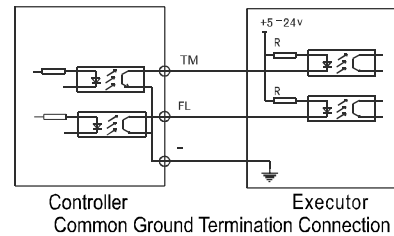
When it is +5V: $R_1=0$, $R_2=0$

When it is +12V: $R_1=510\ \Omega$, $R_2=820\ \Omega$

When it is +24V: $R_1=1.2K\ \Omega$, $R_2=1.8K\ \Omega$

Output signal

All output circuits are photo coupler isolated with a 50mA drive capability. Output ON means the photo coupler is activated.



YKA2204MA Driver with microstep



Features

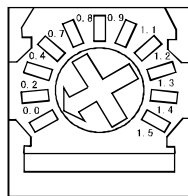
- ◆ High performance, low prices
- ◆ Provides 10 kinds of microstep selection
- ◆ Special control circuit, greatly amounts to 200Kpps.
- ◆ Upmost response frequency amounts to 200Kpps
- ◆ Once the pulse stops for 100ms, the phase current will automatically cut by half
- ◆ Bipolar constant current chopper control
- ◆ photocoupler isolated input/output
- ◆ Drive current from 0.0A/phase to 1.5A/phase
- ◆ Single power input, voltage range from DC12-40V
- ◆ Protection circuit
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Small Size

YKA2204MA is an economic, compact driver, its dimension is only 96x56.5x21(mm³), Net weight : 0.13kg

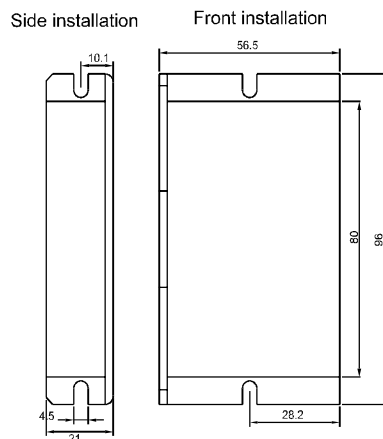
Typical application

Weave machine, laser labeling machine, laser internal carve machine, Carve machine.

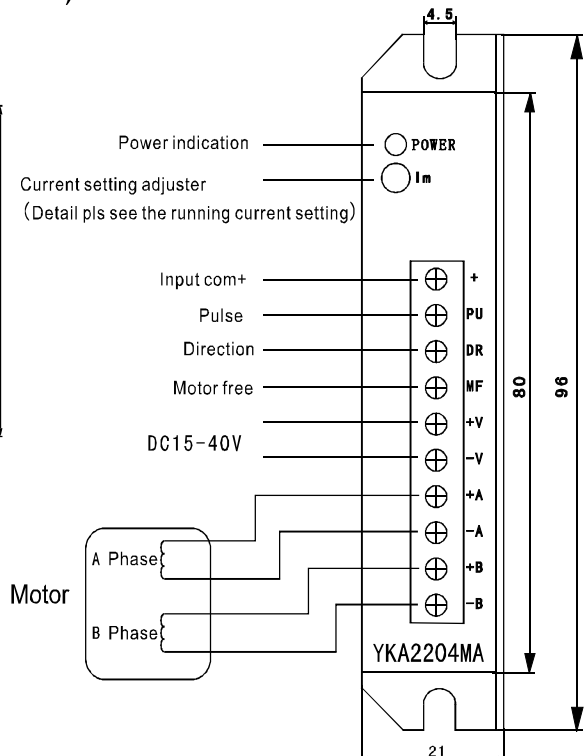
Running current setting



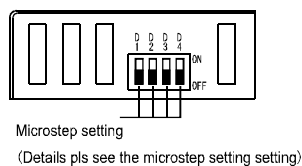
Installation dimensions(Unit:mm)



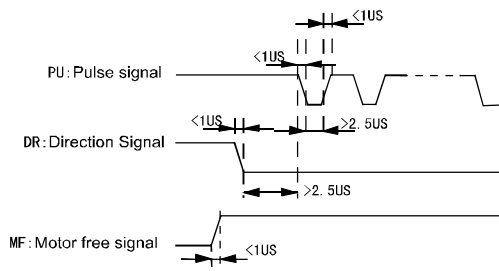
Diver connection



Microstep Setting



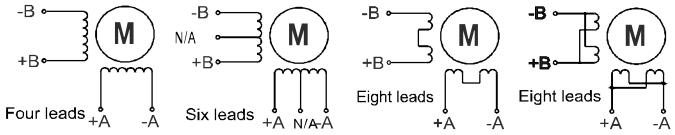
Input signal timing diagram



YKA2204MA Microstep setting List

Microstep	5	10	20	40	40	40	40	40	2	4	8	16	32	64	64	64
D4	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
D3	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON
D2	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON
D1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON

Terminal assignment

MARK	FUNCTION	Remark
POWER	Origin indication	When power on,indicator light turns on.
I m	Current setting adjuster	when adjust anticlockwise,current turns down.
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
PU	Pulse signal	Effects on falling edge ,the motor goes one step as the pulse input change from "high"to "low".Input resistance is 220 Ω . Requirement: input low: 0—0.5V, input high:4—5V, pulse width>2.5 μ s
DR	Direction control signal	Use to change the direction. Input resistance is 220 Ω . Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5 μ s
MF	Motor free signal	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
+V	Power +	DC15—40V
-V	Power -	
+A、-A	Connect to the motor	 Four leads Six leads Eight leads Eight leads (Suitable for low speed) (Suitable for low speed)
+B、-B		

! Caution

1. Do not reverse the power input,input voltage should not exceed DC40V。
2. Input logic should be 5V, otherwise it should connect a resistor
- 3.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 ventilation equipment.
6. PWR is power indicator, it lights when power on.

YKA2304ME Driver with microstep



Features

- ◆ High performance, low prices
- ◆ Provides 6 kinds of microstep selection
- ◆ Special control circuit, greatly amounts to 200Kpps.
- ◆ Upmost response frequency amounts to 200Kpps
- ◆ Once the pulse stops for 100ms, the phase current will automatically cut by half
- ◆ Bipolar constant current chopper control
- ◆ photocoupler isolated input/output
- ◆ Drive current from 0.6A/phase to 3.0A/phase
- ◆ Single power input, voltage range from DC12-40V
- ◆ Protection circuit
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Small Size

YKA2304ME is an economic, compact driver, its dimension is only 25x136x92mm³

Typical application

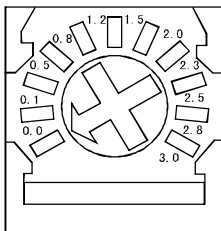
Carve machine, laser labeling machine, laser internal carve machine

Description

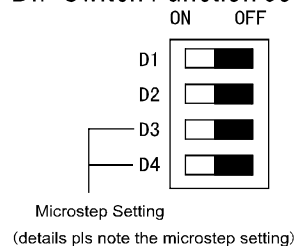
YKA2304ME is a constant torque driver with microstep, voltage range from DC12-40V, single power input. It can match 6 leads or 8 leads two phase hybrid step motors whose rated current under 3.0A, flange size range from 42~86mm.

Owe to bipolar constant current chopping circuit, the motor 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 pulse 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 low speed occasion. The upmost microstep can be set to 64 x.

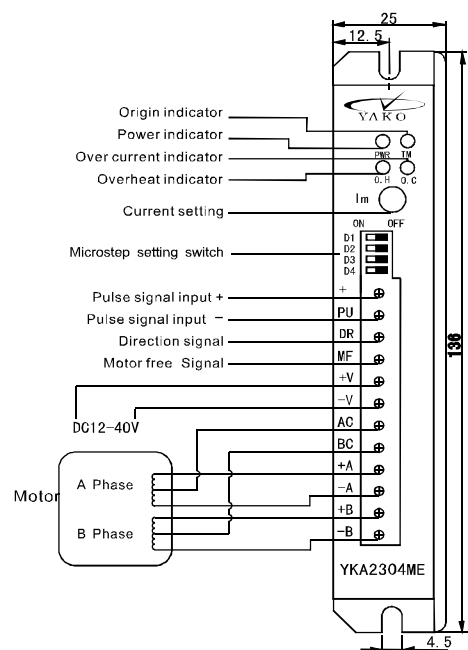
Running current setting



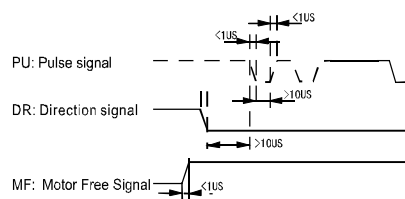
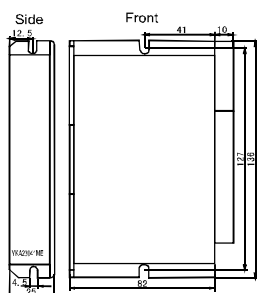
DIP Switch Function setting



Driver Connection



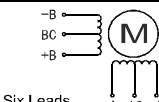
Installation dimensions(Unit:mm) Input signal timing diagram



YKA2304ME Microstep Setting

Microstep	8	16	32	64
D4	ON	OFF	ON	OFF
D3	ON	ON	OFF	OFF
D2	NULL			
D1	NULL			

Terminal assignment

Mark	Function	Instruction
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	Overheat 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
Im	Phase current setting adjuster	Adjust phase current. Turning it clockwise will increase the current output, counter clockwise decrease
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor, standard is 5V input signal voltage.
PU	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 220 Ω . Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5 μ s
DR	DR is direction control signal	Use to change the direction. Input resistance is 220 Ω . Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5 μ s
MF	Motor free signal	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
+V	Power+	DC12~40V
-V	Power-	
AC、BC	Connect to the motor	
+A、-A		
+B、-B		

! Caution

1. Do not reverse the power input,input voltage should not exceed DC40V.
2. Input logic should be 5V, otherwise it should connect a resistor
3. Due to the special control circuit, this module only for 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 ventilation 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

YKA2404S Full/Half Step Driver



Features

- ◆ Special control circuit, greatly reduce noise, increase steadiness
- ◆ Upmost response frequency amounts to 50Kpps
- ◆ Once the pulse stops for 100ms, the phase current will automatically cut by half
- ◆ Bipolar constant current chopper control
- ◆ Photocoupler isolated input/output
- ◆ Drive current range from 0.5A/phase~4.0A/phase
- ◆ Single power input, voltage range from DC12-40V
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Small in size: 25x136x92mm³

Typical application

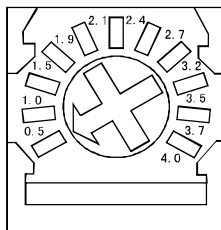
Carve machine, laser labeling machine, laser internal carve machine, wire barker

Description

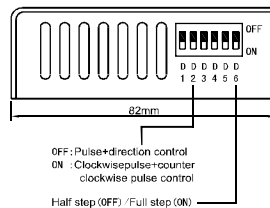
YKA2404S is a full/half step driver, voltage range from DC12-40V, single power input. It can match 6 leads or 8 leads two phase hybrid step motors whose rated current under 4.0A, flange size range from 42~86mm.

Owe to bipolar constant current chopping circuit, the motor 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 pulse stops for 100ms, the phase current will automatically cut by half, which can reduce chances of overheat.

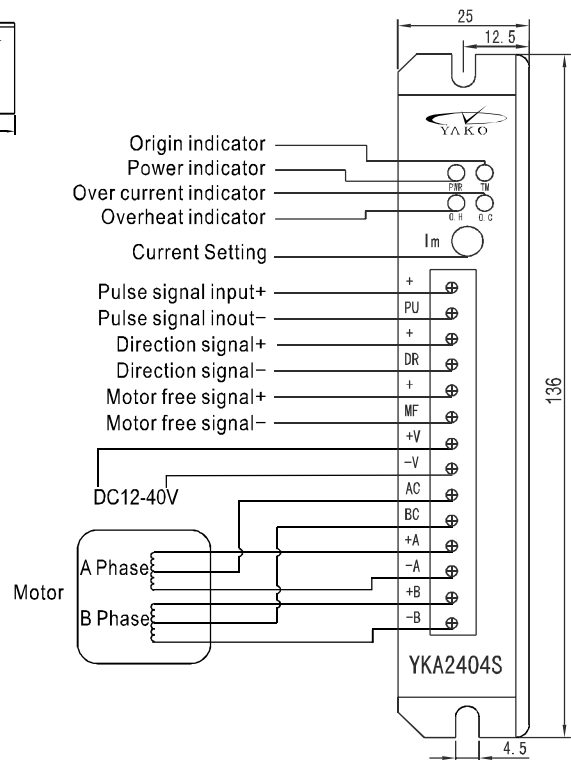
Running current setting



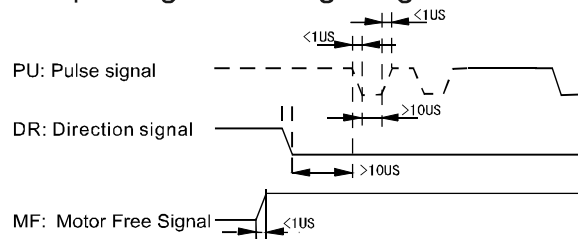
Function setting



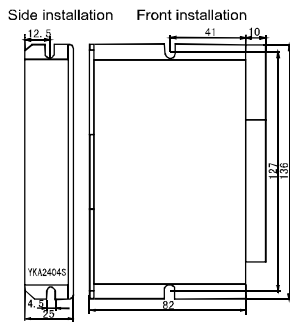
Driver Connection



Input signal timing diagram



Installation dimensions (unit: mm)



YKA2404S MICROSTEP SETTING

Microstep	1 (Full step)	2 (Full step)
D6	ON	OFF
D5	NULL	
D4	NULL	
D3	NULL	
D2	ON: clockwise pulse(PU) + counter clockwise pulse(DR) control OFF: pulse + direction control (PU is pulse signal, DR is direction signal)	
D1	NULL	

Indication LED & Idle state current adjuster description

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
Im	Phase current setting adjuster	Adjust phase current. Turning it clockwise will increase the current output, counter clockwise decrease

Terminal assignment

ITEM	FUNCTION	NOTES
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
PU	D2=OFF, PU is pulse signal D2=ON, PU is clockwise 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 > 10μs
+	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 D2=ON, DR is counter clockwise pulse signal	Use to change the direction. Input resistance is 220Ω. Requirement: input low: 0~0.5V, input high: 4~5V, pulse width > 10μs
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
MF	Motor free signal	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
+V	Power+	DC12-40V
-V	Power-	
AC、BC +A、-A +B、-B	Connect to the motor	Six leads Eight leads

! Caution

1. Do not reverse the power input, input voltage should not exceed DC40V.
2. Input logic should be 5V, otherwise it should connect a resistor
3. Due to the special control circuit, this module only for 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 ventilation 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

YKA2404MA/B Microstep Stepping driver

Features



- ◆ Low noise and runs smoothly
- ◆ Provides 12/8 kinds of microstep selection, upmost microstep can be set to 200 x, enhance resolution
- ◆ Special control circuit, greatly reduce noise, increase steadiness
- ◆ Upmost response frequency amounts to 200Kpps
- ◆ Once the pulse stops for 100ms, the phase current will automatically cut by half
- ◆ can match two phase hybrid step motors whose rated current under 4.0A
- ◆ Photo coupler isolated input/output
- ◆ Drive current range from 0.1A/phase~4.0A/phase
- ◆ Single power input, voltage range from DC12-40V
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Small in size

YKA2404MA(B) is an economic, compact driver, its dimension is only

Typical application

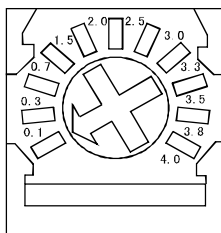
25x136x92mm³ ; Weight: 0.3kg

Carve machine, laser labeling machine, laser internal carve machine

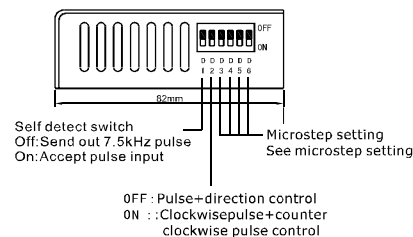
Description

YKA2404MA/B is a constant torque driver with microstep, voltage range from DC12-40V, single power input. It can match 6 leads or 8 leads two phase hybrid step motors whose rated current under 4.0A, flange size range from 42~86mm. Owe to bipolar constant current chopping circuit, the motor 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 pulse 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 low speed occasion. The upmost microstep can be set to 200X.

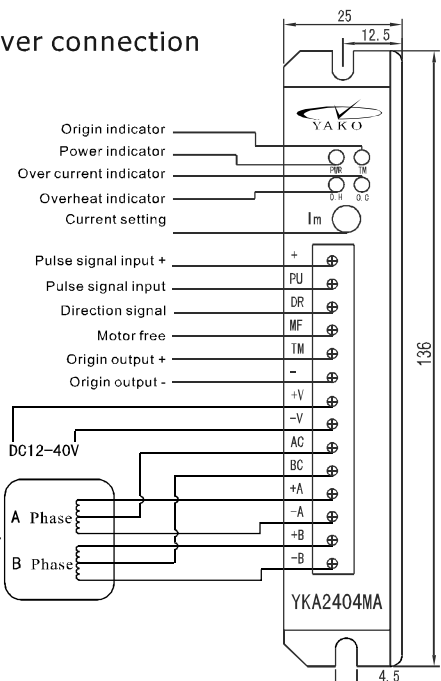
Running current setting



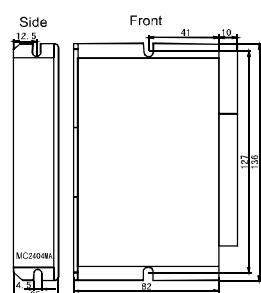
Function setting



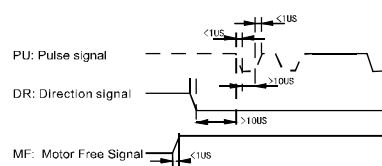
Driver connection



Installation dimensions (mm)



Input signal timing diagram



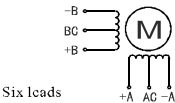
YKA2404MA microstep setting

Microstep	1	2	4	5	8	10	20	25	40	50	100	200	200	200	200
D6	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
D5	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
D4	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF
D3	ON	ON	ON	ON	ON	ON	ON	ON	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														

YKA2404MB 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

Mark	Function	Instruction
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
Im	Phase current setting adjuster	Adjust phase current. Turning it clockwise will increase the current output, counter clockwise decrease
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor, standard is 5V input signal voltage.
PU	D2=OFF, PU is pulse signal D2=ON, PU is clockwise 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
DR	D2=OFF, DR is direction pulse D2=ON, DR is counter clockwise pulse	Use to change the direction. Input resistance is 220Ω. Requirement: input low: 0~0.5V, input high: 4~5V, pulse width > 2.5μs
MF	Motor free signal	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
TM	Origin output signal	This signal effects when the motor pass electrical origin
-	Output signal ground	
+V	Power+	DC12-40V
-V	Power-	
AC, BC	Connect to the motor	 Six leads
+A, -A		
+B, -B		

! Caution

- Do not reverse the power input, input voltage should not exceed DC40V.
- Input logic should be 5V, otherwise it should connect a resistor
- Due to the special control circuit, this module only for 6 leads or 8 leads step motors.
- 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 ventilation equipment.
- 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
- PWR is power indicator, it lights when power on
- Passing the origin or there is pulse output, TM LED lights

YKA2404MC/D Microstep Stepping driver

Features



- ◆ Low noise and runs smoothly
- ◆ Provides 12/8 kinds of microstep selection, upmost microstep can be set to 200 x, enhance resolution
- ◆ Special control circuit, greatly reduce noise, increase steadiness
- ◆ Upmost response frequency amounts to 200Kpps
- ◆ Once the pulse stops for 100ms, the phase current will automatically cut by half
- ◆ can match two phase hybrid step motors whose rated current under 4.0A
- ◆ Photo coupler isolated input/output
- ◆ Drive current range from 0.1A/phase~4.0A/phase
- ◆ Single power input, voltage range from DC12-40V
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Small in size

YKA2404MC/D is an economic, compact driver, its dimension is only

Typical application

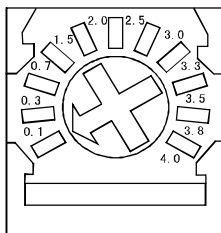
25x136x92mm³ ; Weight: 0.3kg

Carve machine, laser labeling machine, laser internal carve machine

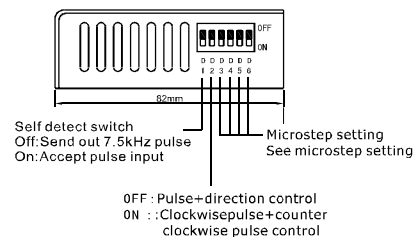
Description

YKA2404MC/D is a constant torque driver with microstep, voltage range from DC12-40V, single power input. It can match 6 leads or 8 leads two phase hybrid step motors whose rated current under 4.0A, flange size range from 42~86mm. Owe to bipolar constant current chopping circuit, the motor 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 pulse 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 low speed occasion. The upmost microstep can be set to 200X.

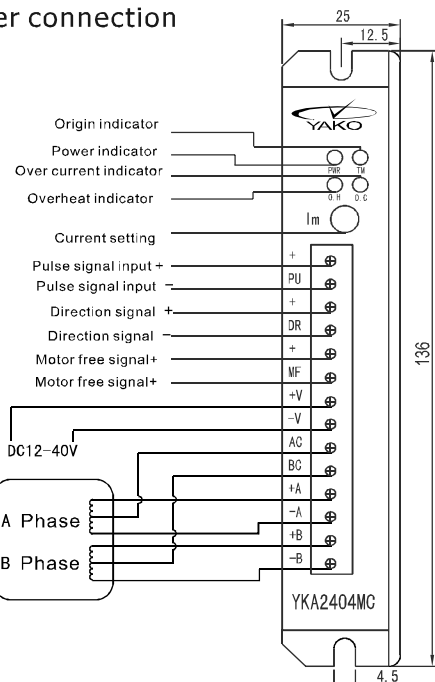
Running current setting



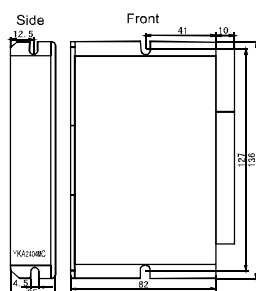
Function setting



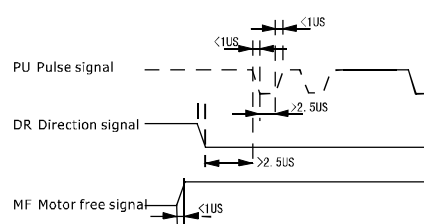
Driver connection



Installation dimensions (mm)



Input signal timing diagram



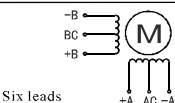
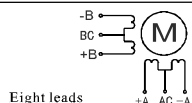
YKA2404MC microstep setting

Microstep	1	2	4	5	8	10	20	25	40	50	100	200	200	200	200
D6	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
D5	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
D4	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF
D3	ON	ON	ON	ON	ON	ON	ON	ON	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														

YKA2404MD 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

Mark	Function	Instruction
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
Im	Phase current setting adjuster	Adjust phase current. Turning it clockwise will increase the current output, counter clockwise decrease
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor, standard is 5V input signal voltage.
PU	D2=OFF, PU is pulse signal D2=ON, PU is clockwise 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
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor, standard is 5V input signal voltage.
DR	D2=OFF, DR is direction pulse D2=ON, DR is counter clockwise pulse	Use to change the direction. Input resistance is 220Ω. Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5μs
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor, standard is 5V input signal voltage.
MF	Motor free signal	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
-	Output signal ground	
+V	Power+	DC12-40V
-V	Power-	
AC, BC +A, -A +B, -B	Connect to the motor	  Six leads Eight leads

! Caution

1. Do not reverse the power input,input voltage should not exceed DC40V。
2. Input logic should be 5V, otherwise it should connect a resistor
3. Due to the special control circuit, this module only for 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 ventilation 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

YKA2608S Full/Half step Driver



Features

- ◆ High performance, low price
- ◆ Special circuit design, reduce noise, enhance steadiness.
- ◆ 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 phase current range from 0.0A~6.0A
- ◆ Single power input, voltage range from DC24-80V
- ◆ The upmost pulse response frequency amounts to 50Kpps
- ◆ Protection circuit
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Small in size

YKA2608S is an economic, compact driver, its dimension is only 45x136x92mm³

Typical application

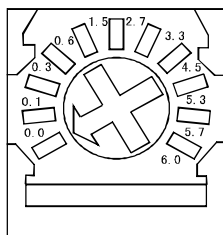
Advertisement machine, Packing machine, electronic machine

Description

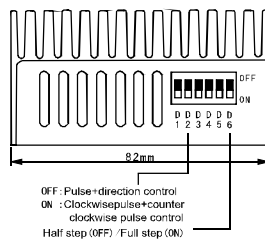
YKA2608S is a constant torque driver voltage range from DC24-80V, single power input. It can match two phase 6 leads or 8 leads hybrid step motors whose rated current under 6.0A, flange size range from 57~86mm. Owe to bipolar constant current chopping circuit, the motor can run smoothly and hardly has any noise.

Rising the voltage can greatly improve high speed performance and output torque of the motor. Once the pulse stops for 100ms, the phase current will automatically cut by half, which can reduce chances of overheat.

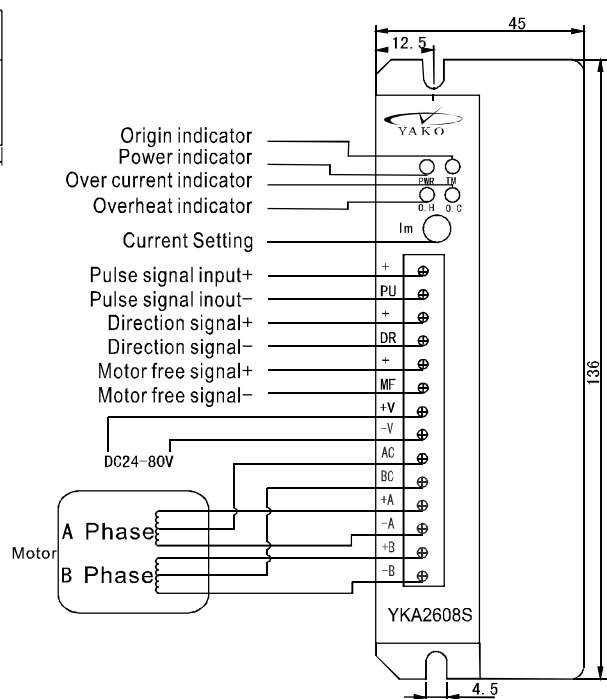
Running current setting



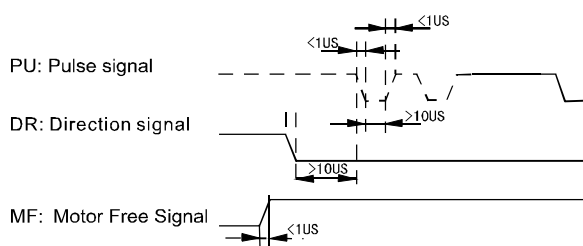
Function setting



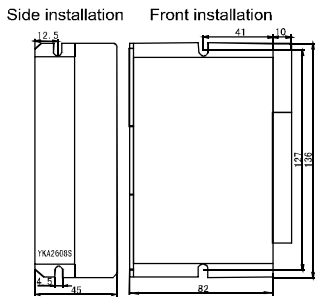
Driver connection



Input signal timing diagram



Installation dimensions (unit: mm)



YKA2608S MICROSTEP SETTING

Microstep	1 (Full step)	2 (Full step)
D6	ON	OFF
D5	NULL	
D4	NULL	
D3	NULL	
D2	ON: clockwise pulse(PU) + counter clockwise pulse(DR) control OFF: pulse + direction control (PU is pulse signal, DR is direction signal)	
D1	NULL	

Indication LED & Idle state current adjuster description

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
Im	Phase current setting adjuster	Adjust phase current. Turning it clockwise will increase the current output, counter clockwise decrease

Terminal assignment

ITEM	FUNCTION	NOTES
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
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>10μs
	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>10μs
	D2=ON, DR is counter clockwise pulse signal	
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
MF	Motor free signal	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
+V	Power+	DC12-40V
-V	Power-	
AC、BC	Connect to the motor	
+A、-A		
+B、-B		

! Caution

1. Do not reverse the power input,input voltage should not exceed DC40V。
2. Input logic should be 5V, otherwise it should connect a resistor
- 3.Due to the special control circuit, this module only for 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 ventilation 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

YKA2608MC/D With microstep Driver



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 frequency 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
- YKA2608MC/D is an economic, compact driver, its dimension is only 45x136x92mm

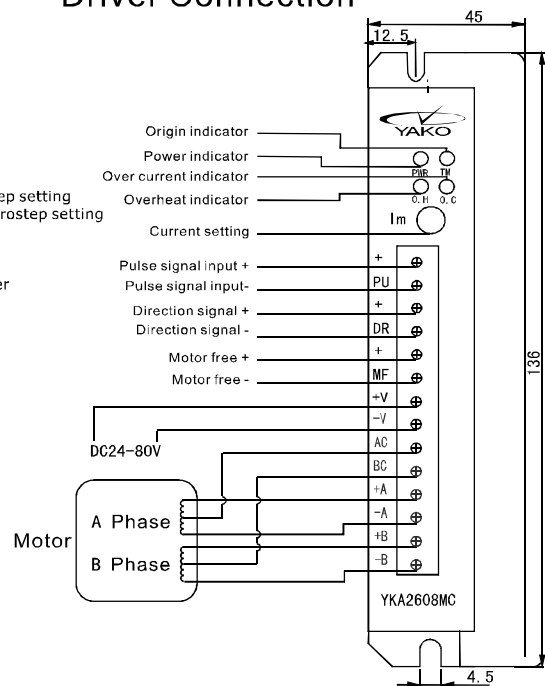
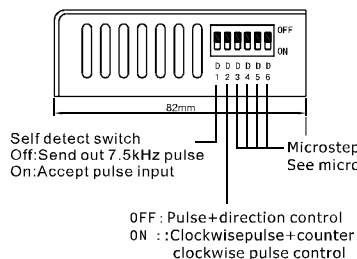
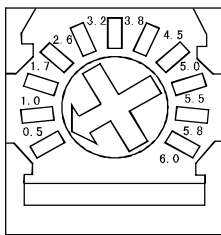
Typical application

Carve machine, laser labeling machine, laser internal carve machine

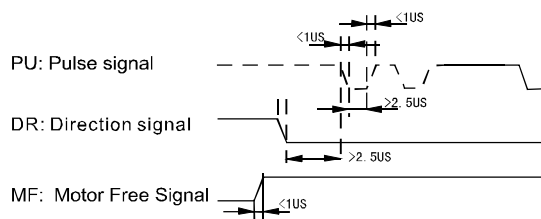
Description

YKA2608MC/D is a constant torque high performance driver with microstep, voltage range from DC24-80V, single power input. It can match two phase hybrid 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 motor 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 pulse 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 low speed occasion. The upmost microstep can be set to 200.

Running current setting Function setting Driver Connection



Input signal timing diagram



YKA2608MC 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 signal inside,then the microstep should be set to 10-50)															

YKA2608MD 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 D2=ON, PU is clockwise 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
+	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 D2=ON, DR is counter clockwise pulse signal	Use to change the direction.Input resistance is 220Ω .Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5μs ,
+	Input signal positive side	This signal effects when the motor pass electrical origin
MF	Origin output signal negative side	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
+V	Power+	DC24-80V
-V	Power-	
+A、-A +B、-B	Connect to the motor	

! 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℃,the current will be cut off automatically and the driver will resume working till the temperature drops to 50℃. If this happens,please install ventilation 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

YKA2608MG/H With microstep Driver



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 frequency 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

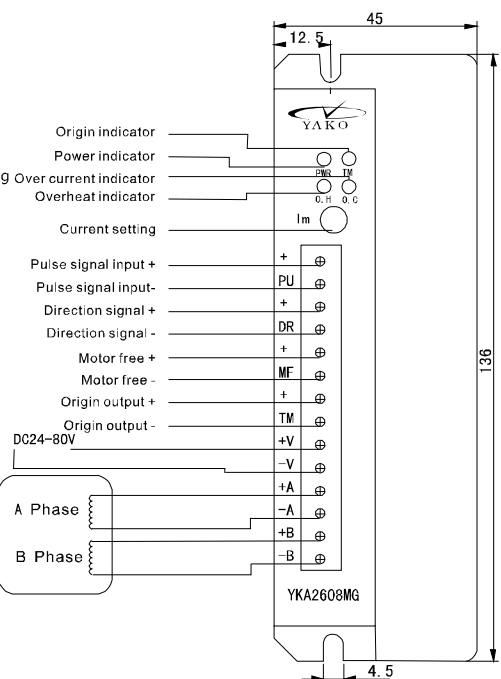
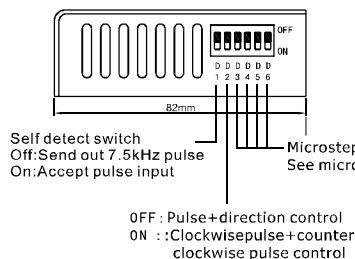
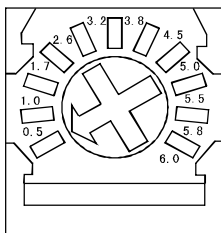
YKA2608MG/H is a constant torque high performance driver with microstep, voltage range from DC24-80V, single power input. It can match two phase hybrid step motors whose rated current under 6.0A, flange size range from 57~86mm.

Owe to bipolar constant current chopper control of the driver circuit, the motor 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 pulse 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 low speed occasion. The upmost microstep can be set to 200.

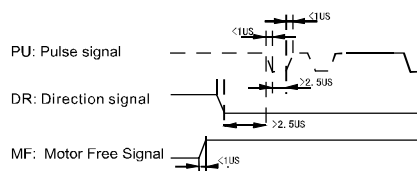
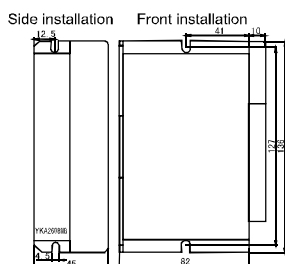
Running current setting

Function setting

Driver connection



Instal dimensions (unit: mm) Input signal timing diagram



Motor

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 signal inside,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 D2=ON, PU is clockwise 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
+	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 D2=ON, DR is counter clockwise pulse signal	Use to change the direction.Input resistance is 220Ω . Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5μs,
+	Input signal positive side	This signal effects when the motor pass electrical origin
MF	Origin output signal negative side	Once effects, it will cut off the motor current, the driver stops working and sets the motor free
+	Origin output signal positive side	This signal effects when the motor pass electrical origin
TM	Origin output signal negative side	TM+ connects to the resistor, TM- connects to GND. Max output current 50mA, max voltage 50V.
+V	Power+	DC24~80V
-V	Power-	
+A、-A +B、-B	Connect to the motor	

! 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 ventilation 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

YKA2609MA With microstep Driver

Features

- ◆ High performance, low price
- ◆ Provides 16 kinds of equal angle constant torque microstep selection
- ◆ Special circuit design, reduce noise, enhance steadiness.
- ◆ The upmost pulse response frequency 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 0.2A/phase~6.0A/phase
- ◆ Single power input, voltage range from AC40-90V
- ◆ Protection circuit
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Small in size
YKA2609MA is an economic, compact driver, its dimension is only 68x178x118.5mm

Typical application

Carve machine, Avertisement machine, spin machine, ceramic making machine, laser labeling machine, laser internal carve machine

Description

YKA2609MA is a constant torque high performance driver with microstep, voltage range from AC40~90V, the upmost microstep can up to 200, single power input. It can match two phase hybrid step motors whose rated current under 6.0A, flange size range from 86~110mm.

Current setting

- 1, STOP/Im is idle state current adjuster, it can be set to 20%~80% of the normal output current (Turning it clockwise will increase the current output, counter clockwise decrease)
- 2, RUN/Im is normal running current adjuster (The following table shows the information in detail)

RUN/Im	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Im(A)	0.2	0.5	0.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6	4.0	4.4	4.8	5.2	5.6	6.0

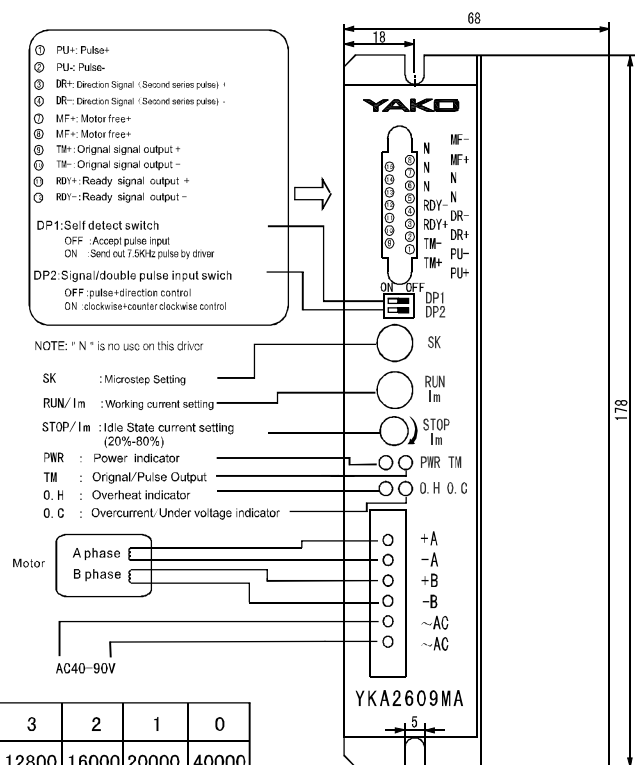
DIP Switch setting

DP1	OFF: Accept pulse input ON: Send out 7.5KHz pulse by the driver
DP2	OFF: pulse + direction control (PU is pulse signal, DR is direction signal) ON: clockwise pulse + counter clock pulse control (PU is clockwise pulse, DR is counter clockwise pulse)

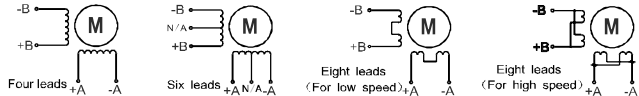
YKA2609MA Microstep setting

SK	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
Pu/Rev	200	400	800	1000	1600	2000	3200	4000	5000	6400	8000	10000	12800	16000	20000	40000

Driver connection



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
Im	Phase current setting adjuster	Turning it clockwise will increase the current output, counter clockwise decrease
PU+	Input signal positive side	It can connect +5V or +24V or 12V, +12V or 24V should add an extra resistor
PU-	DP2=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.
	DP2=ON,DR is counter clockwise pulse signal	
DR+	Input signal positive side	It can connect +5V or +24V or 12V, +12V or 24V should add an extra resistor
DR-	DP2=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.
	DP2=ON,DR is counter clockwise pulse signal	
MF+	Input signal positive side	It can connect +5V or +24V or 12V, +12V or 24V should add an extra resistor
MF-	Motor free signal	Once effects, it will cut off the motor current, the Driver stops working and sets the motor free
TM+	Origin output signal positive side	This signal effects when the motor pass electrical origin
TM-	Origin output signal negative side	TM+ connects to the resistor, TM- connects to GND. Max output current 50mA, max voltage 50V.
RDY+	Driver ready signal positive side	The driver at normal state and ready for accepting control signals from controller
RDY-	Driver ready signal negative side	
AC	AC power	AC40-90V
+A、-A	Connect to the motor	
+B、-B		

! Caution

1. Do not reverse the power input, input voltage should not exceed AC90V.
2. Input logic should be 5V, otherwise it should connect a resistor
3. 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 ventilation equipment.
4. 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
5. PWR is power indicator, it lights when power on
6. Passing the origin or there is pulse output, TM LED lights

YKA2811S Microstep Stepping driver



Features

- ◆ High performance, low price
- ◆ Can run on full step or half step
- ◆ Once the pulse stops for 100ms, the phase current will automatically reduce to preset value
- ◆ Bipolar constant current chopper control
- ◆ Photocoupler isolated input/output
- ◆ Adjustable drive current range from 0.5A/phase ~ 8A/phase
- ◆ Single power input, voltage range from AC60V~130V
- ◆ The upmost pulse response frequency amounts to 200Kpps
- ◆ Protection of overvoltage, overheat and overcurrent
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ size:80*200*156mm Weight:2.0Kgs

Typical application

Carve machine, Middle size digital lathe, Packing machine, embroidering machine, Constant speed application

Description

YKA2811S is a full step/half step driver, the voltage range from AC60V~AC130V, can match two phase hybrid step motors whose rated current under 8A, flange size range from 86~130mm.

Current setting

1. STOP/Im is idle state current adjuster, it can be set to 20%~80% of the normal output current (Turning it clockwise will increase the current output, counter clockwise decrease)
2. RUN/Im is normal running current adjuster (The following table shows the information in detail)

RUN/Im	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Im(A)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0

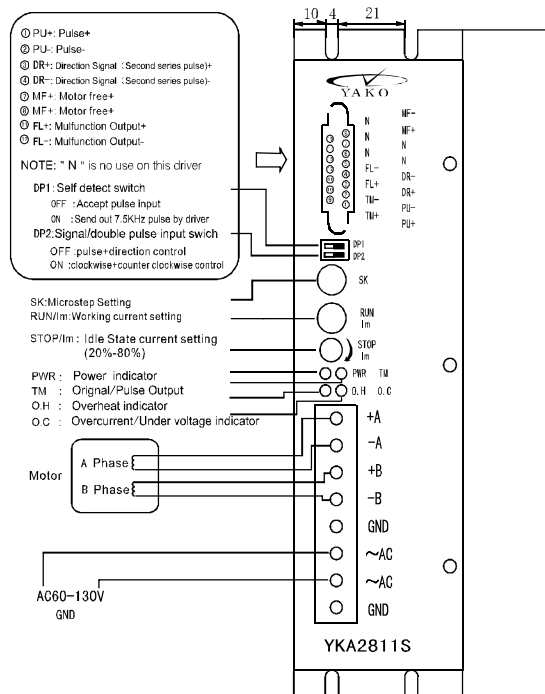
DIP Switch setting

DP1	OFF: Accept pulse input ON: Send out 7.5KHz pulse by the driver
DP2	OFF: pulse + direction control (PU is pulse signal, DR is direction signal) ON: clockwise pulse + counter clock pulse control (PU is clockwise pulse, DR is counter clockwise pulse)

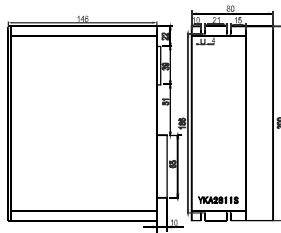
Microstep Setting

SK	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
Microstep	1	2	4	5	8	10	F	F	F	F	F	F	F	F	F	F

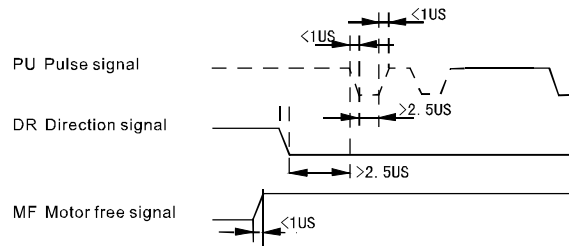
Driver Connection



Installation dimensions(mm)



Input signal timing diagram



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
PU+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
PU-	DP2=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 220 Ω . Requirement: input low: 0—0.5V, input high:4—5V, pulse width>2.5 μ s
	DP2=ON, PU is clockwise pulse signal	
DR+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
DR-	DP2=OFF,DR is direction control signal	Use to change the direction. Input resistance is 220 Ω . Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5 μ s
	DP2=ON,DR is counter clock pulse signal	
MF+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
MF-	Motor free signal	Once effects, it cut off the motor current, driver stops working and sets the motor free
TM		NULL
TM-		NULL
FL+	Overheat/voltage low protection positive side	Once the driver temperature exceeds 70°C,the current will be cut off automatically and the FL- signal comes into effect. the driver will resume working and clear the FL signal till the temperature drops to 50°C. FL+ connects the output resistor, FL- connects to ground; the max current is 50mA, max voltage is 50V.
FL-	Overheat/voltage low protection negative side	
AC	AC power	AC60~130V
+A、-A	Connect to the motor	
+B、-B		

! Caution

- Do not reverse the power input,input voltage should not exceed AC130V。
- Input logic should be 5V, otherwise it should connect a resistor
- 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 ventilation equipment.
- 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
- PWR is power indicator, it lights when power on
- Passing the origin or there is pulse output, TM LED lights

YKA2811MA Microstep Stepping driver



Features

- ◆ High performance, low price
- ◆ Provides 32 kinds of microstep selection
- ◆ Once the pulse stops for 100ms, the phase current will automatically reduce to preset value
- ◆ Bipolar constant current chopper control
- ◆ Photocoupler isolated input/output
- ◆ Adjustable drive current range from 0.5A/phase ~ 8A/phase
- ◆ Single power input, voltage range from AC60V~130V
- ◆ The upmost pulse response frequency amounts to 200Kpps
- ◆ Protection of overvoltage, overheat and overcurrent
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ size:80*200*156mm³ Weight:2.0Kgs

Typical application

Carve machine, Middle size digital lathe, Packing machine, Polish machine, Constant speed application

Description

MC2811MA is a constant torque driver with microstep, the upmost microstep amounts to 200, voltage range from AC60V~AC130V, can match two phase hybrid step motors whose rated current under 8A, flange size range from 86~130mm.

Electricity specification

Item	Minimum	Typical	Maximum
Supply voltage V (AC)	60	110	130
Normal output (A)	0.5	—	8.0
Logical input (mA)	—	15	—
Response frequency (KHz)	—	—	200
Pulse low state time (μS)	2.5	—	—

Current setting

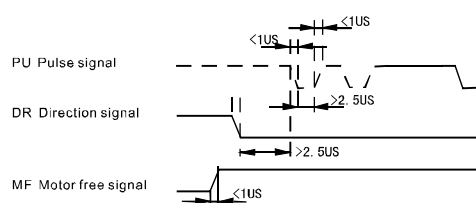
1. STOP/Im is idle state current adjuster, it can be set to 20%~80% of the normal output current (Turning it clockwise will increase the current output, counter clockwise decrease)
2. RUN/Im is normal running current adjuster (The following table shows the information in detail)

R-1	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Im(A)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0

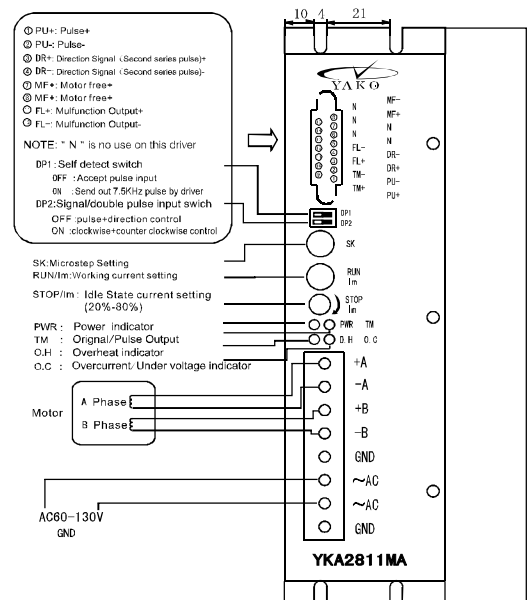
Microstep setting

SK	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
Microstep	1	2	4	5	8	10	16	20	25	32	40	50	64	80	100	200

Input signal timing diagram



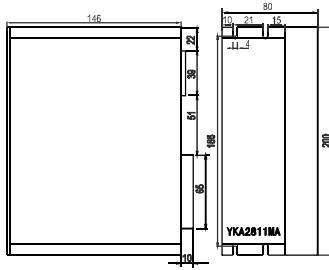
Driver connection



DIP Switch setting

DP1	OFF: Accept pulse input ON: Send out 7.5KHz pulse by the driver
DP2	OFF: pulse + direction control (PU is pulse signal, DR is direction signal) ON: clockwise pulse + counter clock pulse control (PU is clockwise pulse, DR is counter clockwise pulse)

Installation dimensions(mm)



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

Terminal assignment

Item	FUNCTION	Notes
PU+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
PU-	DP2=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 220 Ω . Requirement: input low: 0—0.5V, input high:4—5V, pulse width>2.5 μ s
	DP2=ON, PU is clockwise pulse signal	
DR+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
DR-	DP2=OFF,DR is direction control signal	Use to change the direction. Input resistance is 220 Ω . Requirement: input low: 0~0.5V, input high:4~5V, pulse width>2.5 μ s
	DP2=ON,DR is counter clock pulse signal	
MF+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
MF-	Motor free signal	Once effects, it cut off the motor current, driver stops working and sets the motor free
TM+	Origin output signal positive side	This signal effects when the motor pass electrical origin
TM-	Origin output signal negative side	TM+ connects to the resistor, TM- connects to GND. Max output current 50mA, max voltage 50V.
FL+	Overheat/voltage low protection positive side	Once the driver temperature exceeds 70°C,the current will be cut off automatically and the FL- signal comes into effect, the driver will resume working and clear the FL signal till the temperature drops to 50°C. FL+ connects the output resistor, FL- connects to ground; the max current is 50mA, max voltage is 50V.
FL-	Overheat/voltage low protection negative side	
AC	AC power	AC60~130V
+A、-A	Connect to the motor	Four Leads Six leads Eight leads (For low speed) Eight leads (For high speed)
+B、-B		

! Caution:

- 1, Power should not exceed AC130V
- 2, Input logic should be 5V, otherwise it should connect a resistor
- 3, O.H is overheat 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 ventilation equipment.
- 4, PWR is power indicator, it lights when power on

YKA3606MA Microstep Stepping driver



Features

- ◆ High performance, low price
- ◆ Provides 16 kinds of microstep selection. resolution can be set to 60000pulse/rev
- ◆ Once the pulse stops for 100ms. the phase current will automatically reduce to preset value
- ◆ Bipolar constant current chopper control
- ◆ Photocoupler isolated input/output
- ◆ Adjustable drive current range from 0.2A~5.8A
- ◆ Single power input, voltage range from DC16-60V
- ◆ The upmost pulse response frequency amounts to 200Kpps
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ YKA3606MA is an economic,compact driver, its size is only 25x136x92mm³.

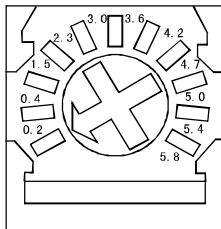
Typical application

Medicare industry, Robot, Meters, Carve machine, Laser labeling machine, Laser inner carve machine

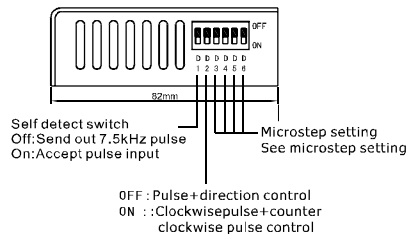
Discription

YKA3606MA(B) is a constant torque driver with microstep. Single power supply, voltage range from DC16-60V. can match three phase hybrid step motors whose rated current under 5.8A. flange size range from 42~86mm. This driver use bipolar constant current chopper control and runs smoothly, hardly has any noise. High voltage input makes it possible to enhance the motor speed and output torque. Further more, if the pulse output stops for 100ms, phase current will be automatically cut by half, which prevents the motor from overheat. By microstep setting, resolution of the motor can be enhanced. The microstep can be set to 60000pulse/rev.

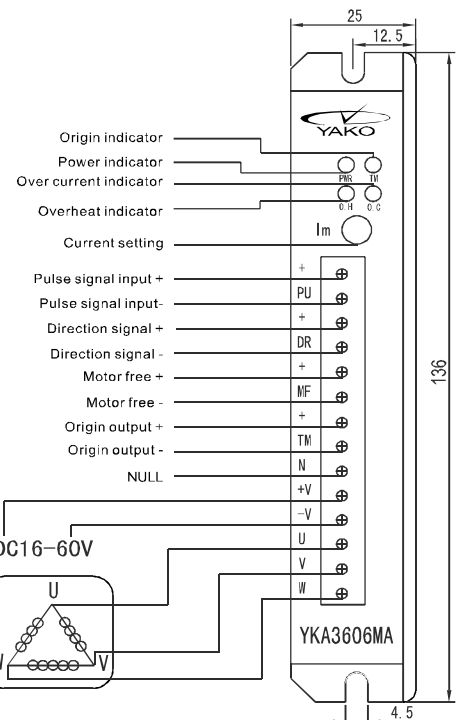
Current Setting



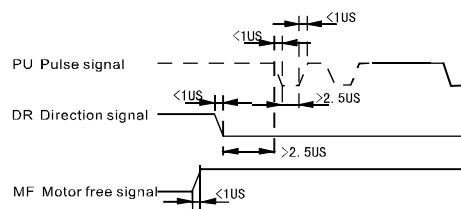
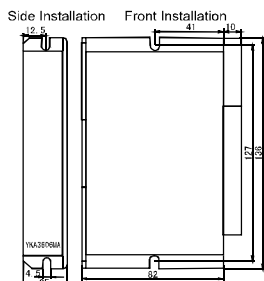
DIP Switch setting



Driver Connection



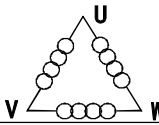
Install dimention setting(mm) Input signal timing diagram



YK3606MA/B Microstep Setting

YKA3606MA pulse/rev	400	500	600	800	1000	1200	2000	3000	4000	5000	6000	10000	12000	20000	30000	60000
YKA3606MB pulse/rev	400	800	1600	3200	6400	12800	25600	51200								
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(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
I.m	Phase current setting adjuster	Turning it clockwise will increase the current output, counter clockwise decrease
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
PU	DP2=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
	DP2=ON, PU is clockwise pulse signal	
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
DR	DP2=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
	DP2=ON, DR is counter clock pulse signal	
+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
MF	Motor free signal	Once effects, it cut off the motor current, driver stops working and sets the motor free
+	Origin output signal positive side	This signal effects when the motor pass electrical origin
TM	Origin output signal negative side	+ connects to the resistor, TM connects to GND. Max output current 50mA, max voltage 50V.
+V	Power+	DC16-60V
-V	Power-	
U	Motor Connection	
V		
W		

! Caution

1. Do not reverse the power input, input voltage should not exceed DC60V.
2. Input logic should be 5V, otherwise it should connect a resistor
3. 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 ventilation equipment.
4. 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
5. PWR is power indicator, it lights when power on
6. Passing the origin or there is pulse output, TM LED lights

YKA3611MA Microstep Stepping driver



Features

- ◆ High performance, low price
- ◆ Provides 16 kinds of microstep selection. resolution can be set to 60000pulse/rev
- ◆ Once the pulse stops for 100ms, the phase current will automatically reduce to preset value
- ◆ Bipolar constant current chopper control
- ◆ Photocoupler isolated input/output
- ◆ Adjustable drive current range from 0.6A/phase ~ 5.2A/phase
- ◆ Single power input, voltage range from AC60V~130V
- ◆ The upmost pulse response frequency amounts to 200Kpps
- ◆ Phase memorize (Notes: Once the pulse stops for 5s or more, the Driver will memorize the current phases automatically so that it can be resume after restart or MF signal changes from valid to invalid.)
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Size:68x178x108. 5mm Weight:2. 0Kgs

Typical application

Carve machine, Precise large size & middle size lathe, Packing machine, Computer control embroidering machine, Constant speed application

Discription

YKA3611MA is a constant torque driver with microstep, voltage range from AC60V~130V, can match three phase hybrid step motors whose rated current under 5.2A, flange size range from 86~110mm. This driver integrates high technology which similar to servo technology in theory, and can run the motor smoothly in low speed and hardly makes any noise or vibration. Further more the motor output torque is well larger than that of two phase and five phase motor. The microstep can be set to 60000pulse/rev.

Current setting

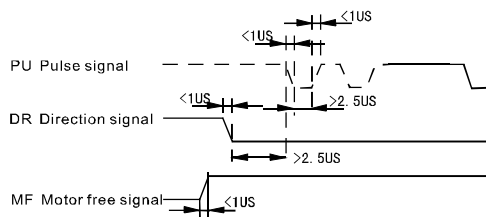
1. STOP/Im is idle state current adjuster, it can be set to 20%~80% of the normal output current (Turning it clockwise will increase the current output, counter clockwise decrease)
2. RUN/Im is normal running current adjuster (The following table shows the information in detail)

R-1	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Im(A)	0.6	0.8	1.0	1.5	1.8	2.0	2.3	2.6	2.9	3.2	3.5	3.8	4.0	4.5	4.8	5.2

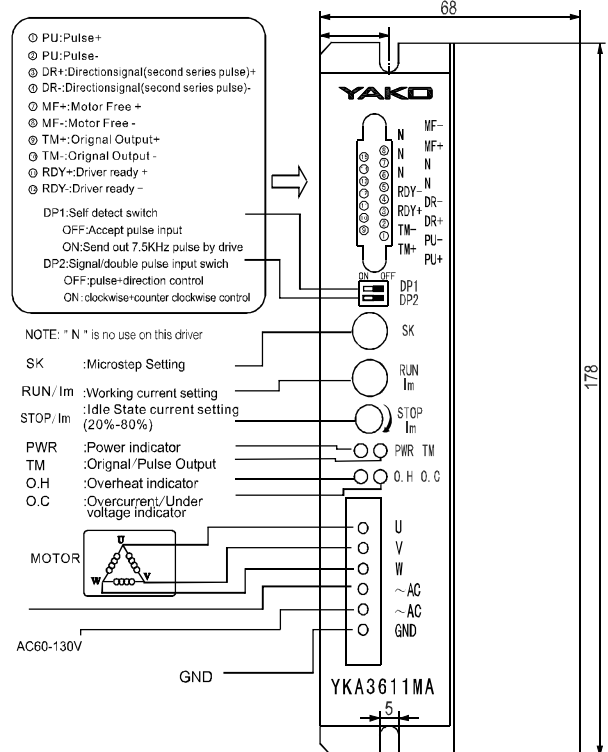
DIP Switch setting

DP1	OFF: Accept pulse input ON: Send out 7.5KHz pulse by the Driver
DP2	OFF: pulse + direction control (PU is pulse signal, DR is direction signal) ON: clockwise pulse + counter clockwise pulse control

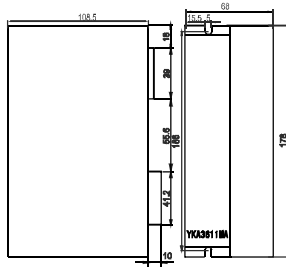
Input signal timing diagram



Driver Connection



Install dimention setting(mm) Microstep setting



SK	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
Pu/rev	400	500	600	800	1000	1200	2000	3000	4000	5000	6000	10000	12000	20000	30000	60000

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
PU+	Input signal positive side	It can connect +5V or +24V or 12V, +12V or 24V should add an extra resistor
PU-	DP2=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.
	DP2=ON,DR is counter clockwise pulse signal	
DR+	Input signal positive side	It can connect +5V or +24V or 12V, +12V or 24V should add an extra resistor
DR-	DP2=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.
	DP2=ON,DR is counter clockwise pulse signal	
MF+	Input signal positive side	It can connect +5V or +24V or 12V, +12V or 24V should add an extra resistor
MF-	Motor free signal	Once effects, it will cut off the motor current, the Driver stops working and sets the motor free
TM+	Origin output signal positive side	This signal effects when the motor pass electrical origin
TM-	Origin output signal negative side	TM+ connects to the resistor, TM- connects to GND. Max output current 50mA, max voltage 50V.
RDY+	Driver ready signal positive side	The driver at normal state and ready for accepting control signals from controller
RDY-	Driver ready signal negative side	
AC	AC power	AC60-130V
U	Connect to the motor	
V		
W		

! Caution

1. Do not reverse the power input,input voltage should not exceed AC130V.
2. Input logic should be 5V, otherwise it should connect a resistor
3. 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 ventilation equipment.
4. 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
5. PWR is power indicator, it lights when power on
6. Passing the origin or there is pulse output, TM LED lights

YKA3722MA Microstep Stepping driver



Features

- ◆ High performance, low price
- ◆ Provides 16 kinds of microstep selection. resolution can be set to 60000pulse/rev
- ◆ Once the pulse stops for 100ms, the phase current will automatically reduce to preset value
- ◆ Bipolar constant current chopper control
- ◆ Photocoupler isolated input/output
- ◆ Adjustable drive current divided into 16 grades range from 0.7A/phase ~ 7A/phase
- ◆ Single power input, voltage range from AC110V~220V
- ◆ The upmost pulse response frequency amounts to 200Kpps
- ◆ Phase memorize (Notes: Once the pulse stops for 5s or more, the Driver will memorize the current phases automatically so that it can be resume after restart or MF signal changes from valid to invalid.)
- ◆ Protection circuit:
 - Overheat protection
 - Overcurrent, under voltage protection
- ◆ Size:80*156*200mm³ Weight:2.3Kgs

Typical application

Carve machine, Precise large size & middle size lathe, Packing machine, Computer control embroidering machine, Constant speed application

Description

YKA3722MA is a constant torque Driver with microstep, voltage range from AC110V~220V, can match three phase hybrid step motors whose rated current under 7A、flange size range from 86~110mm. This Driver integrates high technology which similar to servo technology in theory, and can run the motor smoothly in low speed and hardly makes any noise or vibration. Further more the motor output torque is well larger than that of two phase and five phase motor. The microstep can be set to 60000pulse/rev.

Current setting

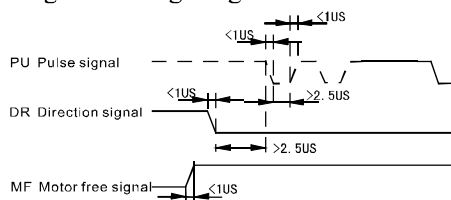
1. STOP/Im is idle state current adjuster, it can be set to 20%~80% of the normal output current (Turning it clockwise will increase the current output, counter clockwise decrease)
2. RUN/Im is normal running current adjuster (The following table shows the information in detail)

R-1	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Im(A)	0.7	1.1	1.5	2.0	2.4	2.8	3.2	3.6	4.0	4.5	5.0	5.4	5.8	6.2	6.6	7.0

DIP Switch setting

DP1	OFF: Accept pulse input ON: Send out 7.5KHz pulse by the Driver
DP2	OFF: pulse + direction control (PU is pulse signal, DR is direction signal) ON: clockwise pulse + counter clockwise pulse control

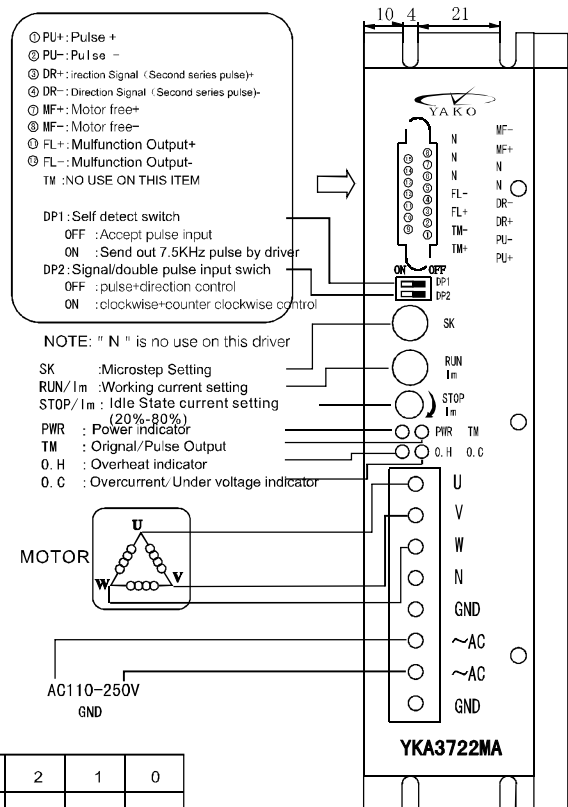
Input signal timing diagram



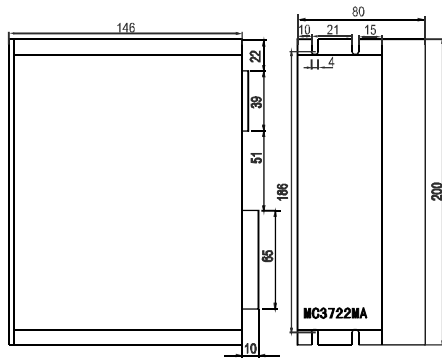
YKA3722MA Microstep setting

SK	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
Pu/rev	400	500	600	800	1000	1200	2000	3000	4000	5000	6000	10000	12000	20000	30000	60000

Driver connection



Installation dimensions (mm)



Indication LED description

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

Terminal assignment

Item	FUNCTION	NOTES
PU+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
PU-	DP2=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
	DP2=ON, PU is clockwise pulse signal	
DR+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
DR-	DP2=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
	DP2=ON, DR is counter clockwise pulse signal	
MF+	Input signal positive side	It can connect +5V or +24V, but +24V should add an extra resistor
MF-	Motor free signal	Once effects, it will cut off the motor current, the Driver stops working and sets the motor free
TM+	Origin output signal positive side	This signal effects when the motor pass electrical origin
TM-	Origin output signal negative side	TM+ connects to the resistor, TM- connects to GND. Max output current 50mA, max voltage 50V.
RDY+	Driver ready signal positive side	The Driver at normal state and ready for accepting control signals from controller
RDY-	Driver ready signal negative side	
AC	AC power	AC110-250V
U	Connect to the motor	
V		
W		

! Caution:

1. Power should not exceed 250V.
2. Input logic should be 5V, otherwise it should connect a resistor
3. 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 ventilation equipment.
4. Once over current (short circuit) occur, LED O.C lights, please shut off power and check the electricity circuit to solve the problem, then restore power supply
5. If supply voltage lower AC110V, LED O.C also lights
6. PWR is power indicator, it lights when power on

□42mm Series YAKO 2-phases hybrid stepping motor



General specifications

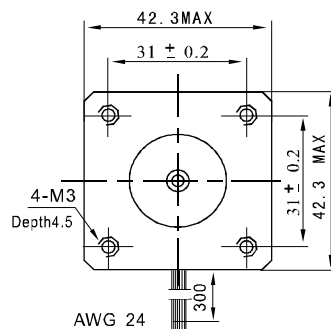
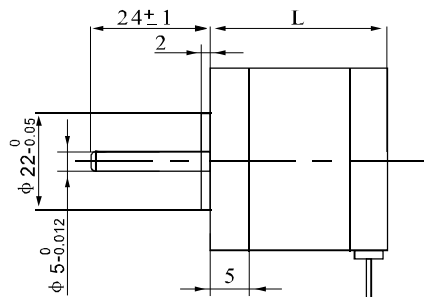
Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.06mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

Specifications

Model	Step Angle (°)	Voltage (V)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Motor Leads
YK42HB33-01A	1.8	4	33	0.16	0.95	4.2	2.5	35	0.22	6
YK42HB38-01A		4	38	0.26	1.2	3.3	3.2	54	0.28	6
YK42HB47-01A		4	47	0.32	1.2	3.3	2.8	68	0.35	6
YK42HB60-01A		7.2	60	0.65	1.2	6	7	102	0.5	6

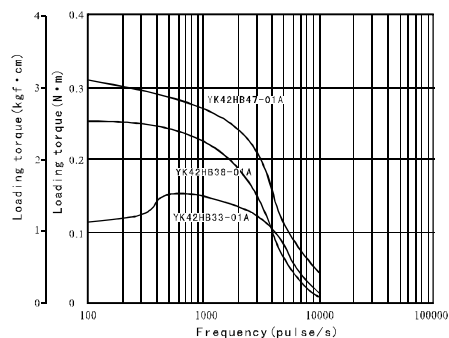
Please note that the last letter the motor item "A" refers to single shaft and "B" refers to double shaft.

Dimention



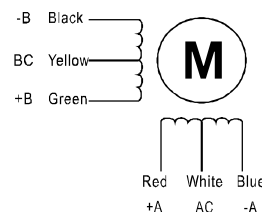
Item	Shaft Length
YK42HB33-01A	5.0mm
YK42HB38-01A	5.0mm
YK42HB47-01A	5.0mm
YK42HB60-01A	5.0mm

Frequency-torque characteristics

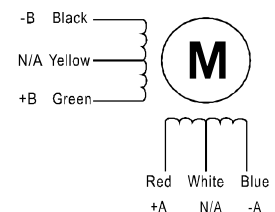


Connections

6 leads



4 leads



□57mm Series YAKO 2-phases hybrid stepping motor



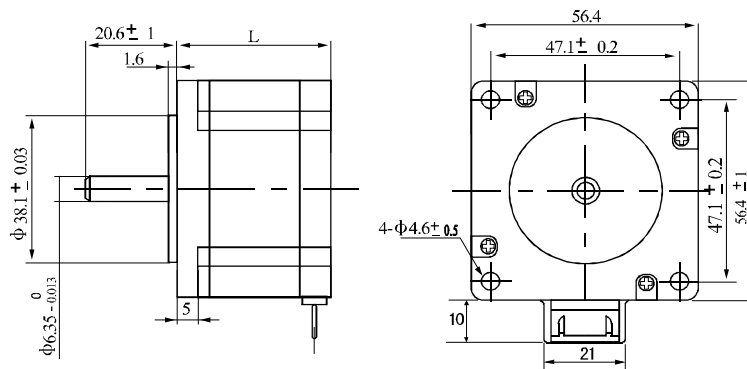
General specifications

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.06mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

Specifications

Model	Step Angle (°)	Voltage (V)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Motor Leads
YK57HB41-02A	1.8	2.8	41	0.39	2.0	1.4	1.4	120	0.45	6
YK57HB51-03A		2.2	51	0.72	3.0	0.74	0.9	275	0.65	6
YK57HB56-03A		2.3	56	0.90	3.0	0.75	1.1	300	0.7	6
YK57HB76-03A		3	76	1.35	3.0	1.0	1.6	480	1.0	6

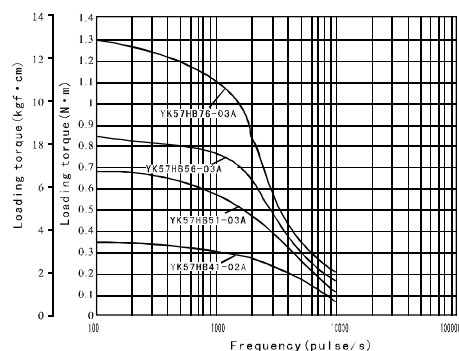
Dimention



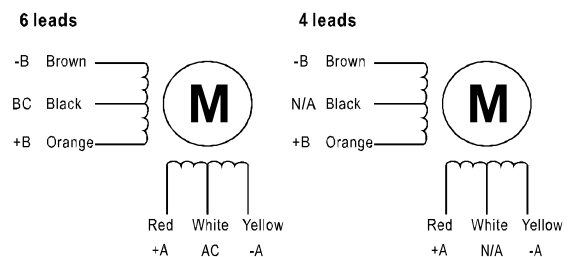
Item	Shaft Length	D-CUT
YK57HB41-02A	6.35mm	0.5*15mm
YK57HB51-03A	6.35mm	0.5*15mm
YK57HB56-03A	6.35mm	0.5*15mm
YK57HB76-03A	6.35mm	0.5*15mm

6.35

Frequency-torque characteristics



Connections



□ 60mm Series YAKO 2-phases hybrid stepping motor



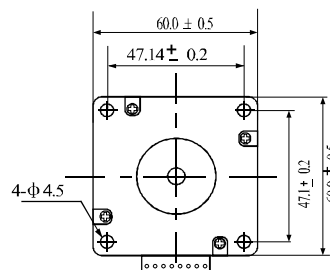
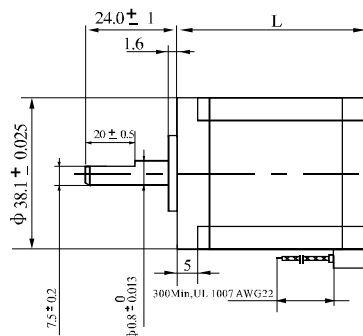
General specifications

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.06mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

Specifications

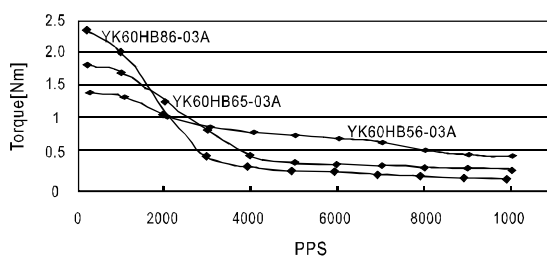
Model	Step Angle (°)	Voltage (V)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Motor Leads
YK60HB56-03A	1.8	2.52	56	1.65	2.8	0.9	3.6	300	0.85	6
YK60HB65-03A		3.36	67	2.1	2.8	1.2	4.6	570	1.2	6
YK60HB86-03A		4.17	88	3.1	2.8	1.5	6.8	840	1.4	6

Dimension



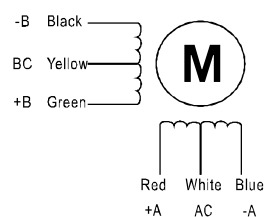
Item	Shaft Length	D-CUT
YK60HB56-03A	8.0mm	0.5*20mm
YK60HB65-03A	8.0mm	0.5*20mm
YK60HB86-03A	8.0mm	0.5*20mm

Frequency-torque characteristics

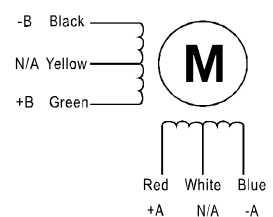


Connections

6 leads



4 leads



□86mm Series YAKO 2-phases hybrid stepping motor



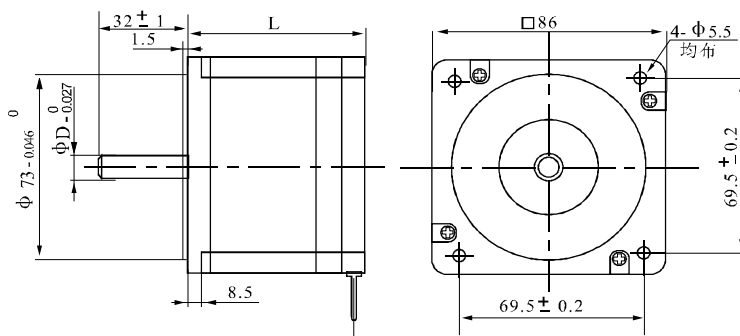
General specifications

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.06mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

Specifications

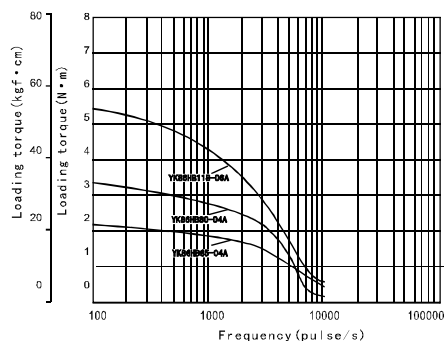
Model	Step Angle ($^{\circ}$)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm 2)	Weight (kg)	Motor Leads
YK86HB65-04A	1.8	65	3.4	2.8	1.4	3.9	1000	1.7	8
YK86HB80-04A		80	4.6	4.2	0.75	3.4	1400	2.3	8
YK86HB118-06A		118	8.7	4.2	0.9	6.0	2700	3.8	8
YK86HB156-06A		156	12.2	4.2	1.25	8.0	4000	5.4	8

Dimention



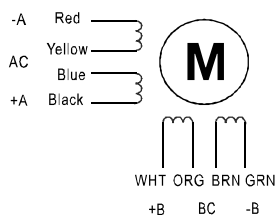
Item	Shaft Length	Shaft D-cut&Parallel slide
YK86HB65-04A	9.5mm	D-cut 1*25mm
YK86HB80-04A	12.7mm	D-cut 1*25mm
YK86HB118-06A	12.7mm	Parallel Slide0.5*5*25mm
YK86HB156-06A	15.875mm	Parallel Slide0.5*5*25mm

Frequency-torque characteristics

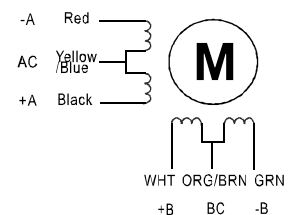


Connections

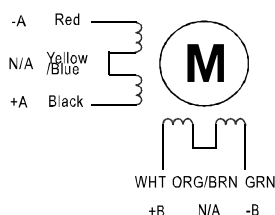
8 leads



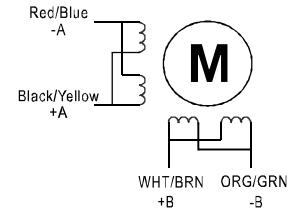
6 leads



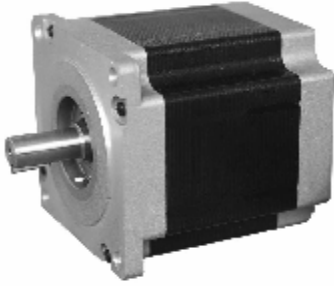
4 leads



4 leads



□110mm Series YAKO 2-phases hybrid stepping motor



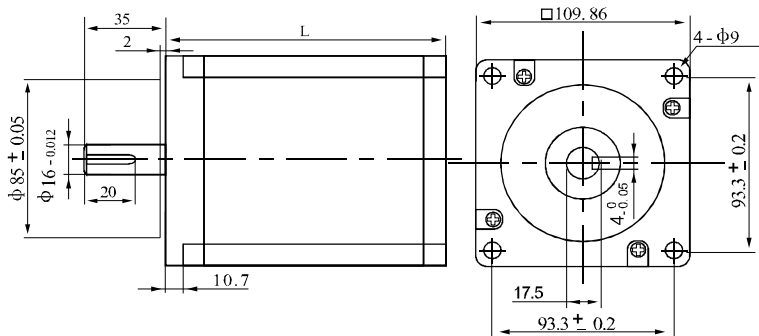
General specifications

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.06mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

Specifications

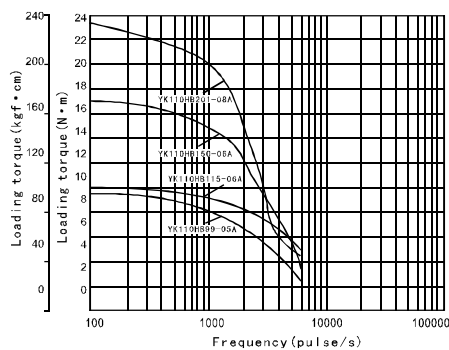
Model	Step Angle (°)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Motor Leads
YK110HB99-05A	1.8	99	11.2	5.5	0.9	12	5500	5.0	4
YK110HB115-06A		115	12	6.0	0.44	4.9	7200	6.0	4
YK110HB150-06A		150	21	6.5	0.8	15	10900	8.4	4
YK110HB201-08A		201	28	8.0	0.67	12	16200	12	4

Dimention

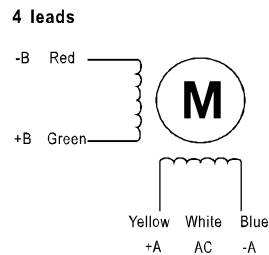


Item	Shaft Length	Parallel slide
YK110HB99-05A	16mm	Parallel Slide4*4*20mm
YK110HB115-06A	16mm	Parallel Slide4*4*20mm
YK110HB150-06A	16mm	Parallel Slide4*4*20mm
YK110HB201-08A	16mm	Parallel Slide4*4*20mm

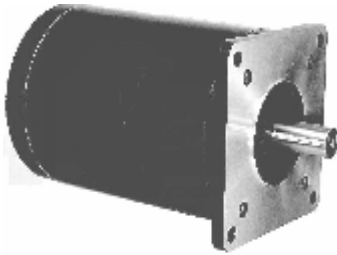
Frequency-torque characteristics



Connections



□130mm Series YAKO 2-phases hybrid stepping motor



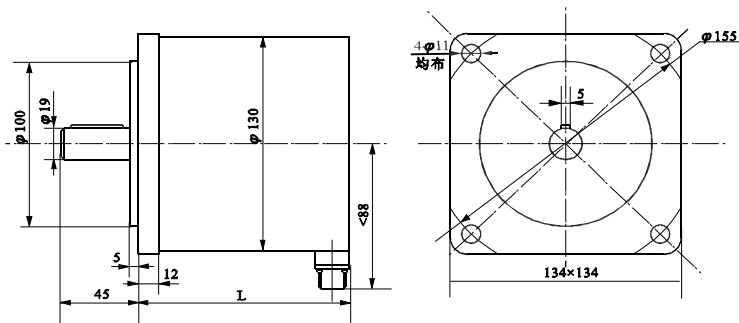
General Specification

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.06mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

Specification

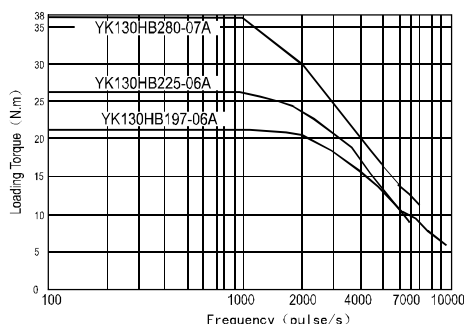
Model	Step Angle (°)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Motor Leads
YK130HB197-06A	1.8	197	22	6.0	0.75	14	30000	11	Five-connector plug
YK130HB225-06A		225	27	6.0	0.77	14	35000	13	Five-connector plug
YK130HB280-07A		280	37	7.0	0.64	11	45500	16	Five-connector plug

Dimention



Item	Shaft Length	Parallel slide
YK130HB197-06A	19mm	Parallel Slide6*6*30mm
YK130HB225-06A	19mm	Parallel Slide6*6*30mm
YK130HB280-06A	19mm	Parallel Slide6*6*30mm

Frequency-torque characteristics



Connections

Phase	A+	A-	B+	B-	GND	Remark
Item	1	2	3	4	5	Five-connector plug

□57mm Series YAKO 3-phases hybrid stepping motor



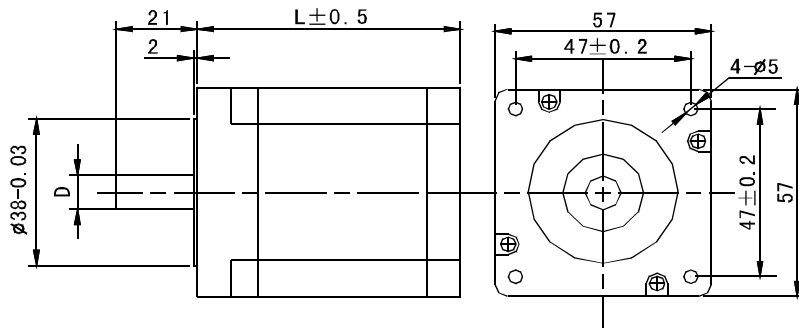
General Specification

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.02mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

Specifications

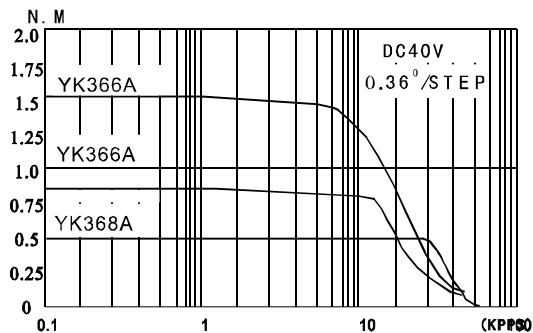
Model	Step Angle (°)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Matched Driver
YK364A	1.8	40.5	0.45	5.2	0.242	0.22	100	0.5	YKA3606MA
YK366A		53.5	0.9	5.6	0.24	0.267	220	0.75	YKA3606MA
YK368A		76.4	1.5	5.8	0.29	0.39	380	1.1	YKA3606MA
YK3610A		102	2.0	5.8	0.376	0.5	530	1.57	YKA3606MA

Dimension

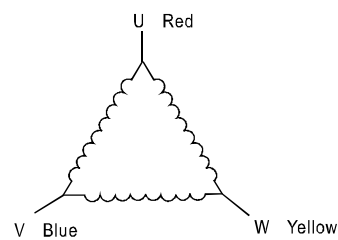


Item	Shaft Length	D-Cut
YKA364A	6.35mm	D-Cut 0.5*10mm
YKA366A	6.35mm	D-Cut 0.5*10mm
YKA368A	8.0mm	D-Cut 0.5*10mm
YKA3610A	8.0mm	D-Cut 0.5*10mm

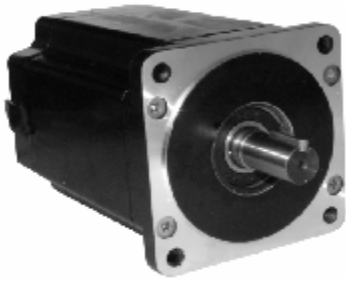
Frequency-torque characteristics



Connections



□86mm Series YAKO 3-phases hybrid stepping motor



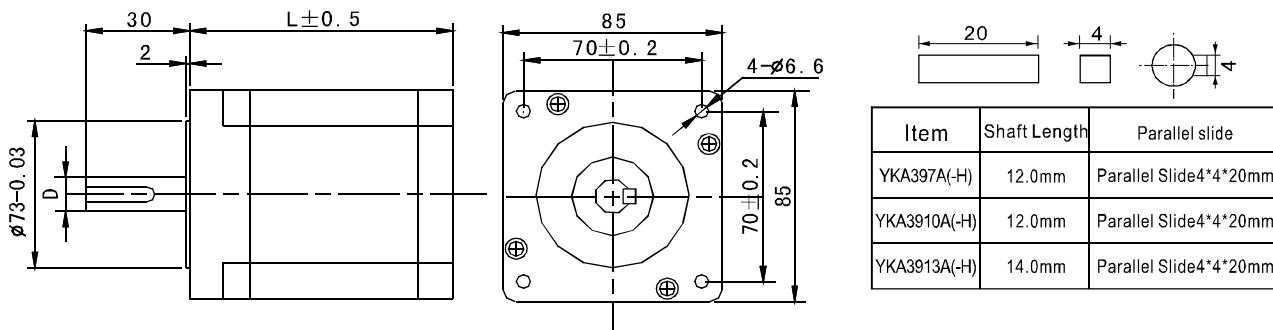
General Specification

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.02mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

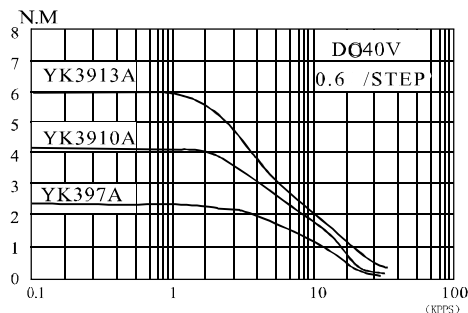
Specifications

Model	Step Angle (°)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Matched Driver
YK397A-H	1.2	69	2.0	1.75	3.77	11.6	1320	2.0	YKA3611MA
YK397A		69	2.0	5.8	0.5	0.9	1320	2.0	YKA3611MA
YK3910A-H		97	4.0	2.0	4.65	14.6	2400	3.0	YKA3722MA
YK3910A		97	4.0	5.8	0.7	1.5	2400	3.0	YKA3611MA
YK3913A-H		125	6.0	2.25	2.0	8.0	3480	4.0	YKA3722MA
YK3913A		125	6.0	5.8	0.9	2.17	3480	4.0	YKA3611MA

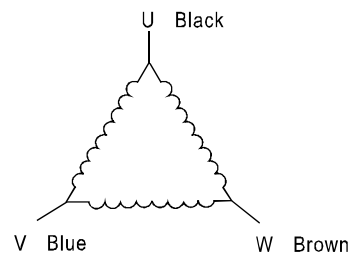
Dimention



Frequency-torque characteristics



Connections



□110mm Series YAKO 3-phases hybrid stepping motor



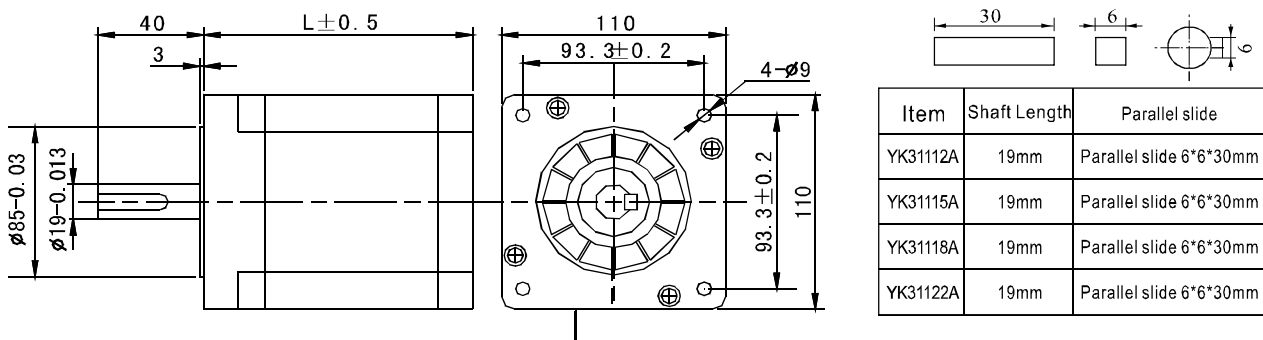
General Specification

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.02mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

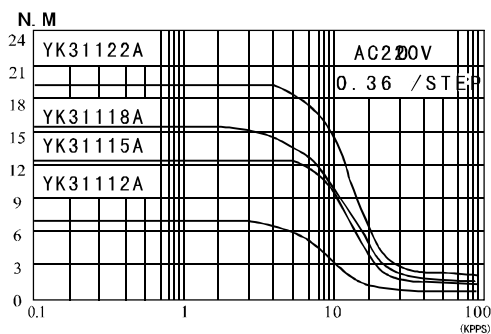
Specifications

Model	Step Angle (°)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Matched Driver
YK31112A	1.2	124.5	8.0	2.5	1.25	4.49	6000	5.0	YKA3722MA
YK31115A		148	12	3.5	1.89	8.34	9720	6.6	YKA3722MA
YK31118A		182	16	3.7	1.89	8.73	13560	9.0	YKA3722MA
YK31122A		216	20	4.0	1.859	7.26	17400	11.1	YKA3722MA

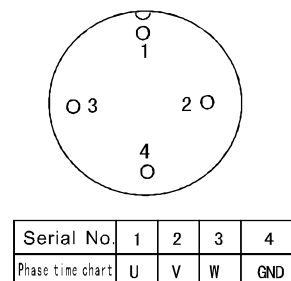
Dimention



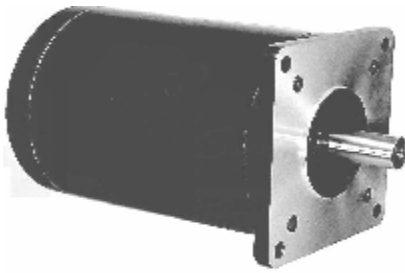
Frequency-torque characteristics



Connections



□130mm Series YAKO 3-phases hybrid stepping motor



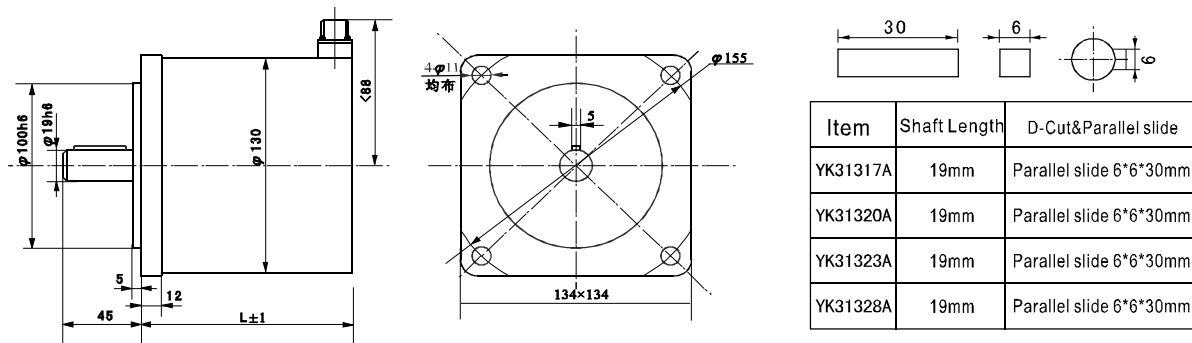
General Specification

Step angle accuracy:	5%
Temperature:	80 C Max
Ambient Temperature:	-20 C-+50 C
Insulation Resistance:	100M Ω Min 500VDC
Voltage endurance:	500V AC 1minute
Shaft Radial Play:	Max0.02mm(450g)
Shaft Axial Play:	Max0.08mm (450g)

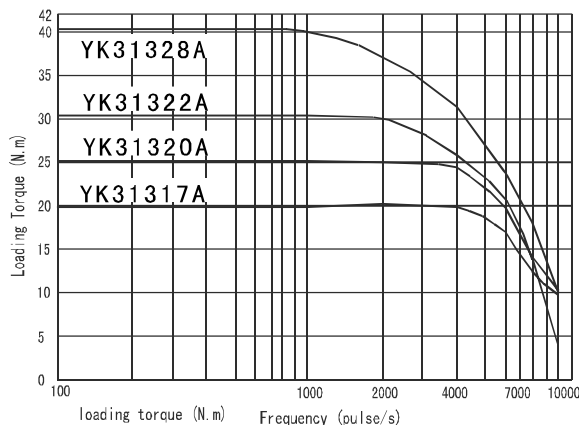
Specification

Model	Step Angle (°)	Length L(mm)	Holding torque (N.m)	Current (A/phase)	Resistance (Ω)	Inductance (mH)	Rotor inertia (g.cm ²)	Weight (kg)	Matched Driver
YK31317A	1.2	168	23	5.0	1.859	7.26	25000	13	YKA3722MA
YK31320A		197	30	5.0	1.1	4.9	30000	16	YKA3722MA
YK31323A		225	36	6.0	2.8	17.9	35000	19	YKA3722MA
YK31328A		280	50	6.0	3.3	21.52	45500	23	YKA3722MA

Dimention



Frequency-Torque Characteristics



Connections

Phase	U		V		W		GND	Remark
Mark	1	2	3	4	5	6	7	seven-connector plug

Shenzhen YAKO Automation Technology Co., Ltd

Add: 4F, No. 39 Keji C. Rd. 2nd, Hi-tech Industrial Park, Nanshan District, Shenzhen

Tel: 86-755-86142288

Fax: 86-755-86142266

Website: www.yankong.com

E-mail: info@yankong.com

Printed in China Aug-08