

# YKB3606MA Microstep Stepping driver



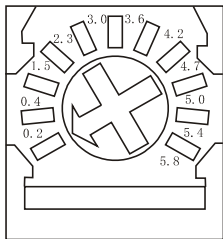
## Feature

- High performance, low price
- Provides 16 kinds microstep selection, resolution can be set to 60000pulse/rev.
- Once the pulse stops for 100ms, phase current automatically reduce to a half.
- 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
- Dimension: 25x136x92mm<sup>3</sup>, Net Weight:0.3kg

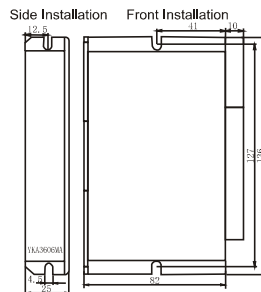
## Description

YKB3606MA(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.

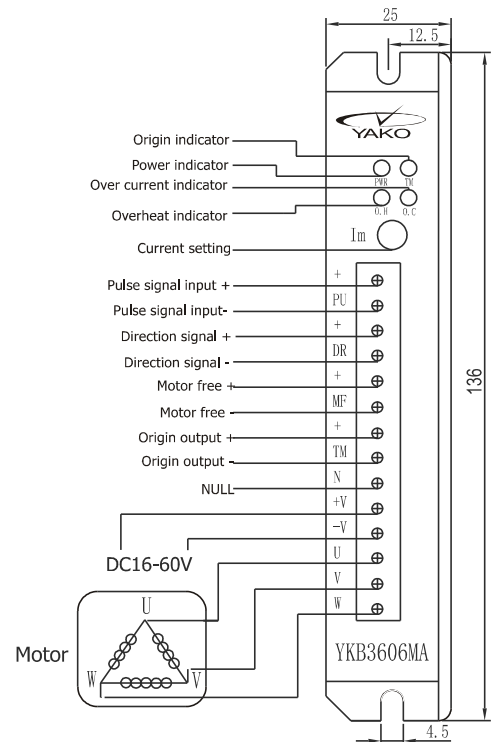
## Running current setting



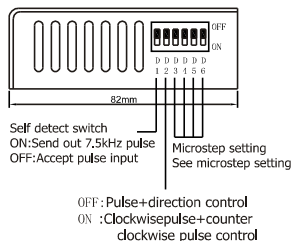
## Installation dimensions(Unit:mm)



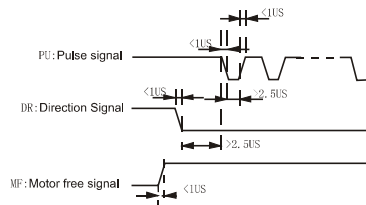
## Driver Connection



## Function setting



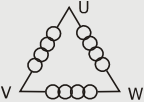
## Input signal timing diagram



## YKB3606MA/B Microstep Setting

YKB3606MA Pulse/Rev	400	500	600	800	1000	1200	2000	3000	4000	5000	6000	10000	12000	20000	30000	60000
YKB3606MB 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

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	Turning it clockwise will increase the current, clockwise decrease current.
+	Input signal positive side	+5V is standard signal input voltage. But we can revise it according to clients' request.
PU	D2=OFF, PU is pulse signal	Effects on falling edge, the motor goes one step as the pulse input change from "high" to "low". Input resistance is 220Ω. Requirement: input low: 0-0.5V, input high: 4-5V, pulse width > 2.5μs
	D2=ON, PU is clockwise pulse signal	
+	Input signal positive side	+5V is standard signal input voltage. But we can revise it according to clients' request.
DR	D2=OFF, DR is direction control signal	Use it to change the direction. Input resistance is 220Ω. Requirement: low level: 0-0.5V, high level: 4-5V, pulse width > 2.5μs
	D2=ON, PU is counter clockwise pulse signal	
+	Input signal positive side	+5V is standard signal input voltage. But we can revise it according to clients' request.
MF	Motor free signal	When effects, it cut off motor current, the driver stops working and sets the motor free
+	Common signal output ground	The signal effects when the motor pass electrical origin.
TM	Common signal output ground	TM+ connects to resistor, TM- connects to GND. Max output current 50mA, max voltage 50V.
+V	Power+	DC16-60V
-V	Power-	
U	Connect to the motor	
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