YKD3606M 3 Phase DSP Stepper Drive

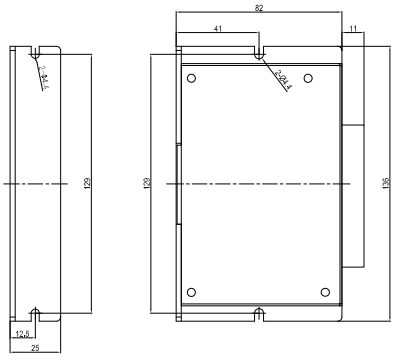
Features

- 32-bit DSP control, low noise and superior vibration performance
- 16 constant torque microstep setting, up to 200 microsteps
- Smooth and accurate current control, effectively reduce motor heating
- The highest pulse response frequency is 200Kpps
- When the pulse stops over 400ms, the motor current is halved
- Excellent smoothness in low frequency microsteps
- Optically isolated differential signal input, strong anti-interference ability
- Drive current is adjustable below 5.9A
- Voltage input range: DC20~60V
- With over voltage, under voltage etc. fault protection
- Small size, volume 136*82*65 (mm³), weight 0.65kg
- Suitable for 42-86mm(NEMA17-34) 3 phase open-loop stepper motors.

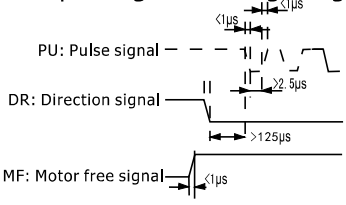
Application: Mainly used in CNC machine tools, engraving machines, packaging equipment, woodworking machinery, laser cutting machines, textile equipment, ceramic equipment, electronic equipment constant speed applications

Dimensions

Dimensions (mm)



Input Signal Timing Diagram

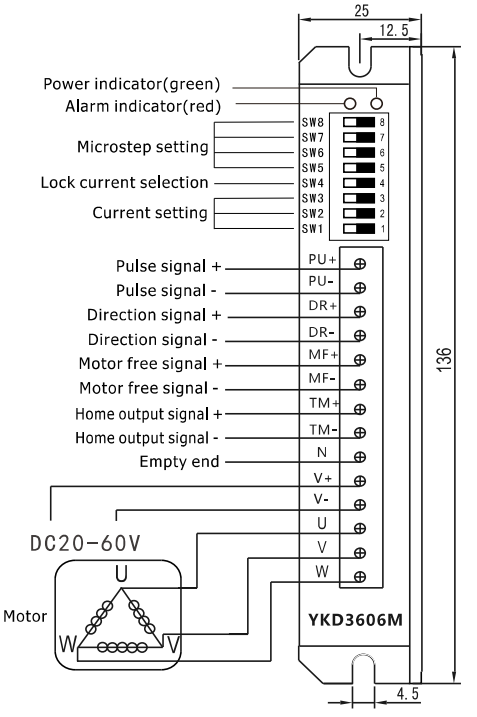


Alarm Indicator Setting

Overcurrent	1 Flashes/3 seconds
Overvoltage	2 Flashes/3 seconds
Undervoltage	3 Flashes/3 seconds

SW9	Motor Selection	
	ON	86mm
	OFF	57mm
SW10	Pulse Smoothing	
	ON	Enable
	OFF	Forbid
SW11	Pulse Filter	
	ON	400k
	OFF	100k
SW12	Pulse Mode	
	ON	CW/CCW Pulse
	OFF	Pulse/Direction

Drive Wiring Diagram



YKD3606M Microstep Setting

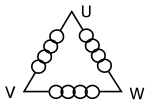
PU/Rev	400	500	600	800	1000	1200	2000	3000	4000	5000	6000	10000	12000	20000	30000	60000
SW8	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SW7	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW6	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW5	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF

SW4 :OFF=Half Current
ON=Full Current

YKD3606M Current Setting

Current RMS	Default	2.3A	2.9A	3.5A	4.1A	4.6A	5.2A	5.9A
Current Peak	Default	3.2A	4.0A	4.9A	5.7A	6.4A	7.3A	8.3A
SW3	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW2	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW1	ON	OFF	ON	OFF	ON	OFF	ON	OFF

Terminal Introduction

Symbol	Function	Specification
PWR	Power indicator	When power on, the green indicator lights up.
ALM	Fault indicator	When over current, under voltage or over voltage, the red indicator lights up.
PU+	Pulse signal +	Connect with the signal power supply, 5V~24V can drive, need to connect a current limiting resistor with PU- when >5V
PU-	SW12=OFF, it's pulse signal	Effects on falling edge, the motor moves a step when the pulse goes from high to low. The input resistance is 220Ω. It requires: low level 0~0.5V, high level 4~5V, pulse width>2.5us.
	SW12=ON, it's CW pulse signal	
DR+	Input signal +	Connect with the signal power supply, 5V~24V can drive, need to connect a current limiting resistor with DR- when >5V
DR-	SW12=OFF, it's direction control signal	Used to change motor direction, requirements: low level 0~0.5V, high level 4~5V
	SW12=ON, it's CCW pulse signal	Effects on falling edge, the motor moves a step when the pulse goes from high to low. The input resistance is 220Ω. It requires: low level 0~0.5V, high level 4~5V, pulse width>2.5us.
MF+	Input signal +	Connect with the signal power supply, 5V~24V can drive, need to connect a current limiting resistor with MF- when >5V
MF-	Motor free signal	When effective (low level), the motor coil current is turned off and motor free.
TM+	Home output signal +	The motor coil is energized at the origin to be active; opto-isolated output (high level)
TM-	Home output signal -	TM+ connect with the resistor, TM- connect to output GND. Maximum drive current 50mA, and maximum voltage 50V.
+V	Power supply +	DC20-60V
-V	Power supply -	
U	Motor connection	
V		
W		

Notice

1. Do not reverse the power supply, input voltage should not exceed DC60V.
2. The input control signal level is 5V. The current limiting resistor needs to be connected when > 5V. (Please refer to page 4 for connection)
3. When overcurrent, overvoltage or undervoltage, the O.C light flashes, please restart the power supply after eliminating motor connection and other short-circuit faults.
4. The green PWR indicator lights up when the drive is powered on.