YKD2408M

- 32 bit DSP control technology, low noise/vibration with excellent stability and low cost
- 16 constant-torque microstep settings, 200 microsteps the highest
- Smooth and accurate current control, effectively reduce motor heats
- 200Kpps pulse response frequency
- After step pulse stops for 200ms, output current automatically halve to reduce motor heat
- Excellent smoothness in low frequency high microstep applications
- Photoelectric isolated signal input/output, high anti-interference ability
- Drive current adjustable (under 4A)
- Input voltage range: DC20~80V
- Fault protection: over current, over voltage, low voltage protection, etc.
- Small size: 118*76*33mm, 0.3kg

Typical Application:

Mainly used in medical equipment, dispensing machines, engraving machine, laser equipment, labeling machines, electronic equipment, advertising equipment and other automation equipments. Works particularly good in the expectations of low heat, small noise

Product Details

- Description
- Product Diagram
- Microstep Setting
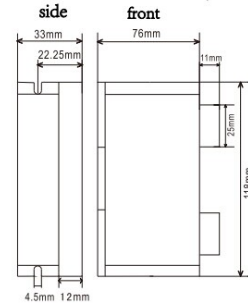- Current Setting
- Terminal Assignment

Description

YKD2405M/YKD2408M is high performance digital step drive based on YAKO's new 32-bit DSP technology. It's designed for various models of two phase 42~86mm (NEMA 17~34) hybrid stepper motors which current are below 4A.
With servo-similar control circuit and superior software algorithm, YKD2405M/YKD2408M has superior performance in smoothness, noise and vibration. Smooth and accurate current control technology greatly reduces motor heat.
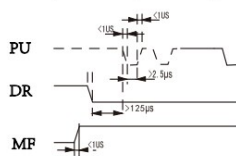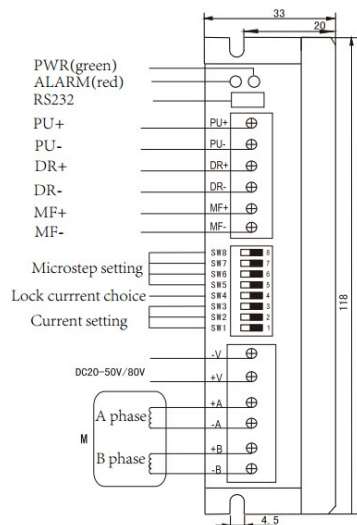
Product Diagram

Installation dimension(unit:mm)

Waveform sequence diagram of input signals

Driver connection

▤ Microstep Setting

Microstep	1	2	4	8	16	32	64	128	5	10	20	25	40	50	100	200
PU/Rev	Default (200)	400	800	1600	3200	6400	12800	25600	1000	2000	4000	5000	8000	10000	20000	40000
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

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SW4 : OFF: Half Current
      ON: Full Current
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▤ Current Setting

Current RMS	Default (1.2)	1.5	1.9	2.3	2.7	3.1	3.5	4.0
Peak	Default (1.7)	2.1	2.7	3.2	3.8	4.3	4.9	5.6
SW3	OFF	OFF	OFF	OFF	ON	ON	ON	ON
SW2	OFF	OFF	ON	ON	OFF	OFF	ON	ON
SW1	OFF	ON	OFF	ON	OFF	ON	OFF	ON

▤ Terminal Assignment

Mark	Function	Instruction
PWR	Power indicator	When power on, the green LED lights
ALARM	Fault indicator	When over voltage, low voltage, or even over current, the red LED lights up.
RS232	Communication port	Used for software updation and on-line.
PU+	Pulse signal +	Connect with +24V or +5V signal power, it should connect with a resistor in PU- side if the voltage over 5V.
PU-	Pulse signal-	Effects on falling edge, the motor moves one step as the pulse input change from high to low. built-in input resistance 220Ω, Requirements: low level 0-0.5V,high level 4-5V,the pulse width>2.5us.
DR+	Direction signal+	Connect with+24V or+5V signal power, it should connect with a resistor in DR- side if the voltage over 5V.
DR-	Direction signal-	Used to change motor direction. Built-in resistance 220Ω.Requirements: low level is 0-0.5V,high level 4-5V, pulse width>2.5us.
MF+	Motor free signal+	Connect with +24V or +5V signal power, it should connect with a resistor in MF- side if the voltage over 5V.
MF-	Motor free signal-	When effective(low level),motor is free.
-V	Power negative	DC20-50V/DC20-80V
+V	Power positive	
+A,-A	Motor connection	
+B,-B		

4 leads   6 leads   8 leads (for low speed)   8 leads (for high speed)