YKD2204M

- 32 bit DSP control technology, low noise/vibration with excellent stability and low cost
- 4 constant-torque microstep settings, 32 microsteps the highest
- Smooth and accurate current control, effectively reduce motor heats
- 100Kpps 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 2.2A)
- Input voltage range: DC18~36V
- Fault protection: over voltage protection, low voltage protection, etc.
- Small size: 86*55*21mm, 0.12kg

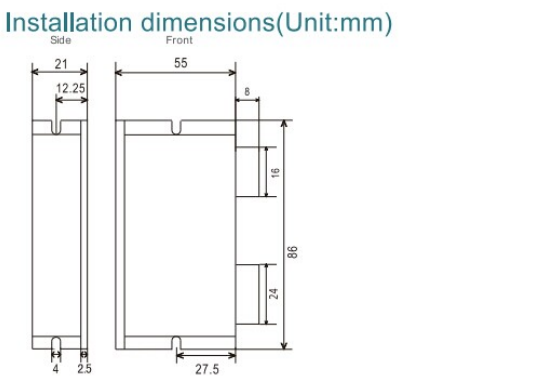
Typical Application:

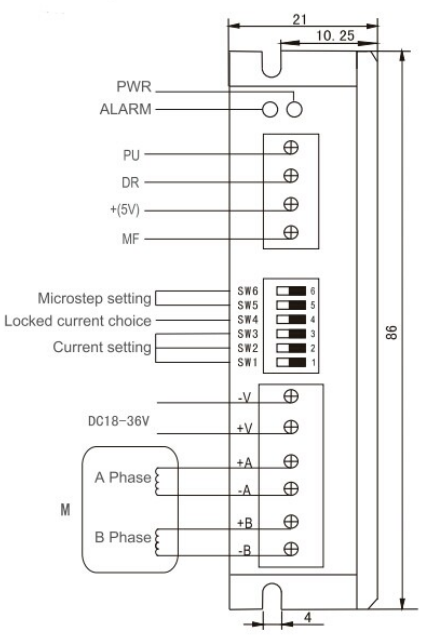
Mainly used in medical equipment, dispensing machines, engraving machine, laser equipment, labeling machines, electronic equipment, advertising equipment and other automation equipments. Works particularly good in the expectations of low heat, small noise

Description

YKD2204M is high performance digital step driver based on YAKO's new 32-bit DSP technology. It's designed for various models of two phase 42mm (NEMA 17) hybrid stepper motors which current are below 2.2A.
With servo-similar control circuit and superior software algorithm, YKD2204M has superior performance in smoothness, noise and vibration. Smooth and accurate current control technology greatly reduces motor heat.

Product Diagram





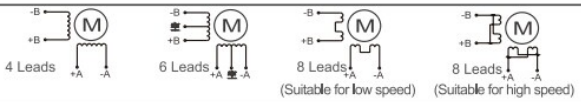
Microstep Set

Microstep	1	8	16	32
PU/Rev	Default (200)	1600	3200	6400
SW6	ON	ON	OFF	OFF
SW5	ON	OFF	ON	OFF

Current Setting

RMS	Default (0.2)	0.4	0.5	0.7	0.9	1.1	1.4	1.6
Peak	Default (0.3)	0.5	0.7	1.0	1.3	1.6	1.9	2.2
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 Assignment

Mark	Function	Instruction
PWR	Power indicator	When power on, the green LED lights
ALARM	Error indicator	When over voltage, under voltage, or even over current, the red LED lights up.
PU	Connect with pulse photoelectric isolation negative head	Effects on falling edge, the motor moves one step as the pulse input change from high to low. Built-in resistance 384Ω. Requirements: low level 0-0.5V, high level is the same as PU+, the pulse width ＞2.5us.
DR	Connect with direction photoelectric isolation negative head	Used to change motor direction. Built-in resistance 384Ω. Requirements: Low level is 0-0.5V, the high level is the same as DR+, pulse width ＞2.5us.
+5V	Connect with Signal power positive head	+3.3V-24V can drive, must add resistance to control current if the voltage is higher than +5V. No need to connect with resistance if the voltage is 3.3V and 5V, but 24V connects resistance 2KΩ, 12V connects 820Ω.
MF	Connect with Signal power positive head	When effective(low level), motor is free. Built-in input resistance 384Ω. Requirements: low level 0-0.5V, the high level is the same as MF+, pulse width ＞ 2.5us.
-V	Power negative	DC18-36V, ＞100W
+V	Power positive	
+A,-A	Connect with motor	
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