YAKOTEC

Review and
Model
Selection

Stepper
Drive
2 Phase

Stepper
Drive
3 Phase

Close-Loop
Stepper
Drive

Close-Loop
Stepper
Motor
2 Phase

Servo-
Stepper
Drive

Close-Loop
Stepper
Motor
3 Phase

EtherCAT
Drive

Bus-Type
Drive
2 Phase

Integrated
Motor
Open-Loop

Integrated
Motor
Close-Loop

Stepper
Motor
2 Phase

Stepper
Motor
3 Phase

Speed-
Torque
Curve
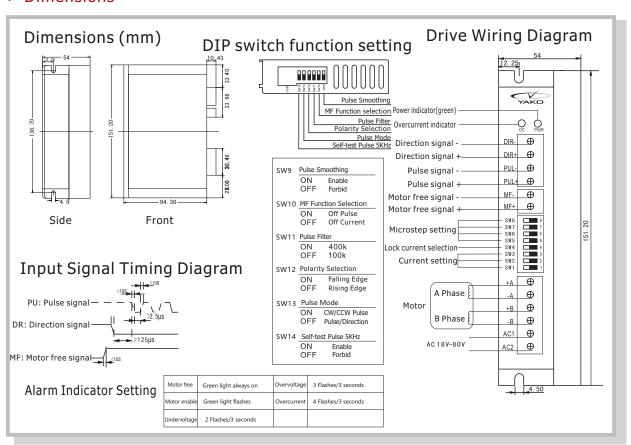
Accessories

YKD2608Ⓔ   2 Phase DSP Stepper Drive

▶ Features

- 32-bit DSP control, low noise and superior vibration performance
- 16 constant torque microstep setting, up to 256 microsteps
- Smooth and accurate current control, effectively reduce motor heating
- The highest pulse response frequency is 400KHz
- When the pulse stops over 200ms, 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 6.0A
- Voltage input range: AC18~80V
- With over voltage, under voltage etc. fault protection
- Small size, volume 151*94*54 (mm³), weight 0.65kg
- Suitable for 57-86mm(NEMA23-34) 2 phase open-loop stepper motors.
- Compared with the standard version, enhanced version adds the following 6 functions: Pulse smoothing, MF function selection, pulse filter, polarity selection, pulse mode, self-test pulse 5HKz

Application: Mainly used in engraving machines, laser equipment, labeling machines, electronic equipment, advertising equipment, packaging equipment

▶ Dimensions

Dimensions (mm)

Side   Front

DIP switch function setting

Pulse Smoothing
MF Function selection
Pulse Filter
Polarity Selection
Pulse Mode
Self-test Pulse 5KHz

SW9	Pulse Smoothing	
	ON	Enable
	OFF	Forbid
SW10	MF Function Selection	
	ON	Off Pulse
	OFF	Off Current
SW11	Pulse Filter	
	ON	400k
	OFF	100k
SW12	Polarity Selection	
	ON	Falling Edge
	OFF	Rising Edge
SW13	Pulse Mode	
	ON	CW/CCW Pulse
	OFF	Pulse/Direction
SW14	Self-test Pulse 5KHz	
	ON	Enable
	OFF	Forbid

Drive Wiring Diagram

Power indicator(green)
Overcurrent indicator
Direction signal -   DIR-
Direction signal +   DIR+
Pulse signal -   PUL-
Pulse signal +   PUL+
Motor free signal -   MF-
Motor free signal +   MF+
Microstep setting   SW8 / SW7 / SW6 / SW5
Lock current selection   SW4 / SW3
Current setting   SW2 / SW1
Motor A Phase +A / -A
B Phase +B / -B
AC1
AC 18V~80V   AC2

Input Signal Timing Diagram

PU: Pulse signal   <1US   <1US   ≥2.5μs
DR: Direction signal   ≥125μs
MF: Motor free signal   <1US

Alarm Indicator Setting

Motor free	Green light always on	Overvoltage	3 Flashes/3 seconds
Motor enable	Green light flashes	Overcurrent	4 Flashes/3 seconds
Undervoltage	2 Flashes/3 seconds		

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▶ YKD2608Ⓔ Microstep Setting

Microstep	2	4	8	16	32	64	128	256	5	10	20	25	40	50	100	200
PU/REV	400	800	1600	3200	6400	12800	25600	51200	1000	2000	4000	5000	8000	10000	20000	40000
SW5	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
SW6	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW7	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW8	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

▶ YKD2608Ⓔ Current Setting

Current RMS	2.00	2.57	3.14	3.71	4.28	4.86	5.43	6.00
Current Peak	2.40	3.08	3.77	4.45	5.14	5.83	6.52	7.20
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

SW4:OFF=Half Current
　　　ON=Full Current

▶ Terminal Introduction

Symbol	Function	Specification
PWR	Power indicator	When power on, the green indicator lights up.
O.C	Fault indicator	When over current, under voltage or over voltage, the red indicator lights up.
DR-	SW13=OFF, it's direction control signal	Used to change motor direction. Input resistance 220Ω, requirements: low level 0~0.5V, high level 4~5V,
	SW13=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.
DR+	Input signal +	Connect with power supply, 5V~24V can drive, need to connect a current limiting resistor with DR- when >5V
PU-	SW13=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.
	SW13=ON, it's CW pulse signal	
PU+	Input signal +	Connect with power supply, 5V~24V can drive, need to connect a current limiting resistor with PUL- when >5V
MF-	Motor free signal -	When effective (low level), the motor coil current is turned off, the driver stops working and the motor is free.
MF+	Motor free signal +	Connect with 5V power supply, 5V~24V can drive, need to connect a current limiting resistor when >5V
+V	Power supply +	AC18~80/DC24~110V
-V	Power supply -	
+A,-A	Motor connection	
+B,-B		

⚠ Notice　1. Do not reverse the power supply, input voltage should not exceed AC48V.

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.