



### YKD2405PC

- 32 bit DSP control technology, low noise/vibration with excellent stability and low cost
- Built-in single-axis controller and digital drive function, supporting position control, speed control and multi-position control mode
- CAN-Bus, support standard CANopen protocol, mounting 127 devices the most
- 16 constant-torque microstep settings, 200 microsteps the highest
- Excellent smoothness in low frequency high microstep applications
- Photoelectric isolated signal input/output, high anti-interference ability
- Drive current adjustable (under 4.2A)
- Input voltage range: DC24-50V
- Fault protection: over voltage protection, low voltage protection, etc.

#### Typical Application:

Widely used in textile machines, embroidery machines, security equipment, stage lighting, robots, medical equipment, laser equipment, marking machines, plotters and other automation equipments.

#### Product Details

##### Description

YKD2405PC CAN-Bus stepper drive is based on YKD2405M. It has bus communication and uniaxial controller. YKD2405PC uses CAN-Bus interface, and support standard CANopen CiA301 and CiA402 protocol.

It has 2 photoelectric isolated programmable high-speed differential input terminals, 8 photoelectric isolated programmable input terminals and 4 photoelectric isolated output terminals. With those multiple input/output terminals, it's used to carry out current setting, position control, speed control, home position return and other uniaxial motion control.

YKD2405PC is particularly suitable for long distance, strong interference environment, and multiple motor control applications. Since it has uniaxial control function, users don't need to purchase controller anymore, thus greatly reduce costs.

##### Description

##### Product Diagram

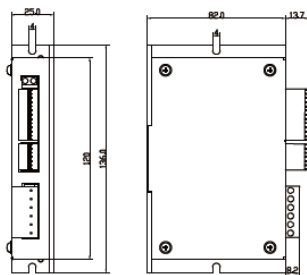
##### Baud Rate

##### Address Setting

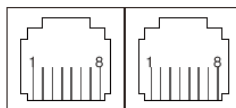
##### Terminal Assignment

##### Product Diagram

#### Install size(mm)



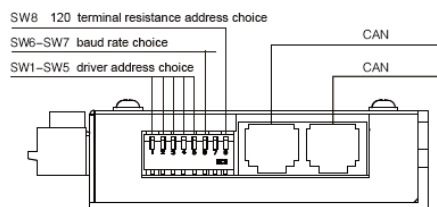
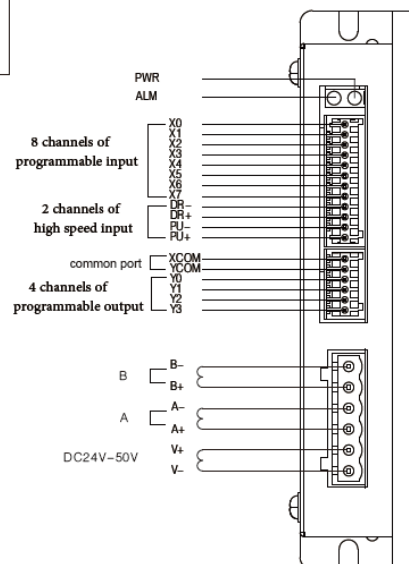
#### CAN



RJ 45 interface

| PIN | Definition |
|-----|------------|
| 1   | GAN-H      |
| 2   | GAN-L      |
| 3   | NC         |
| 4   | NC         |
| 5   | GND        |
| 6   | NC         |
| 7   | NC         |
| 8   | NC         |

#### Driver connection



## Baud Rate

### ● YKD2405PC Choice of terminal resistance

| 120 choice of terminal resistance | invalid | valid |
|-----------------------------------|---------|-------|
| SW8                               | OFF     | ON    |

### ● YKD2405PC COM baud rate setting

| baud rate | 125kbit/s/500(m)(default) | 250kbit/s/250(m) | 500kbit/s/100(m) | 1Mbit/s/25(m) |
|-----------|---------------------------|------------------|------------------|---------------|
| SW7       | ON                        | ON               | OFF              | OFF           |
| SW6       | ON                        | OFF              | ON               | OFF           |

## Address Setting

### ● YKD2405PC The COM address setting

| add. | custom | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  |
|------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SW5  | OFF    | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| SW4  | OFF    | OFF | OFF | OFF | OFF | OFF | OFF | OFF | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  |
| SW3  | OFF    | OFF | OFF | OFF | ON  | ON  | ON  | ON  | OFF | OFF | OFF | OFF | ON  | ON  | ON  | ON  |
| SW2  | OFF    | OFF | ON  | ON  | OFF | OFF | ON  | ON  | OFF | OFF | ON  | ON  | OFF | OFF | ON  | ON  |
| SW1  | OFF    | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  |

| add. | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| SW5  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON |
| SW4  | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | ON  | ON  | ON  | ON  | ON  | ON  | ON  | ON |
| SW3  | OFF | OFF | OFF | OFF | ON  | ON  | ON  | ON  | OFF | OFF | OFF | OFF | ON  | ON  | ON  | ON |
| SW2  | OFF | OFF | ON  | ON  | OFF | OFF | ON  | ON  | OFF | OFF | ON  | ON  | OFF | OFF | ON  | ON |
| SW1  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON  | OFF | ON |

## Terminal Assignment

| Mark           | Function                          | Remark   |
|----------------|-----------------------------------|--|
| PWR            | power light                       | Light on once power on   |
| ALM            | alarm light                       | Over-current, flash one time; Over-voltage, flash twice; Under-voltage, flash three times; EEPROM error, flash four times;   |
| X0-X7          | 8 channels of programmable input  | Support NPN & PNP wiring modes, requires the pulse width is bigger than 10ms   |
| DR-            |                                   | Effects on falling edge. Input resistance 220Ω. Requirements: low level 0-0.5V, high level 4-5V, pulse width > 2.5μs   |
| DR+            |                                   | +5V~+24V can drive, must add resistance on PU- to control current if the voltage is higher than +5V.   |
| PU-            |                                   | Effects on falling edge. Input resistance 220Ω. Requirements: low level 0-0.5V, high level 4-5V, pulse width > 2.5μs   |
| PU+            |                                   | +5V~+24V can drive, must add resistance on PU- to control current if the voltage is higher than +5V.   |
| XCOM           | common input port                 | Support NPN & PNP wiring modes.  |
| YCOM           | common output port                | Support NPN & PNP wiring modes.  |
| Y0-Y3          | 4 channels of programmable output |  |
| V+             | power+                            | DC 24-50V  |
| V-             | power-                            |  |
| A+ A-<br>B+ B- | motor connection                  | <p>The diagram shows four motor connection schemes for a motor (M):<br/> 1. 4-wire: A+, A-, B+, B- terminals.<br/> 2. 6-wire: A+, A-, B+, B-, X+, X- terminals.<br/> 3. 8-wire low speed: A+, A-, B+, B-, X+, X-, Y+, Y- terminals.<br/> 4. 8-wire high speed: A+, A-, B+, B-, X+, X-, Y+, Y- terminals.</p> |