YKD2405PR

- 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
- RS-485 bus, support standard ModBus-RTU protocol, mounting 30 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
- Product Diagram
- Baud Rate
- Address Setting
- Terminal Assignment

Description

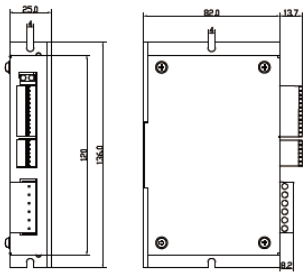
YKD2405PR ModBus stepper drive is based on YKD2405M. It has bus communication and uniaxial controller. YKD2405PR uses RS-485 interface, supporting standard ModBus-RTU protocol.

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.

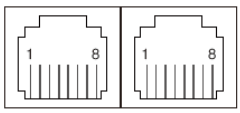
YKD2405PR is particularly suitable for long distance, strong interference environment, and multiple motor control applications. Since it has uniaxial control function, users don't need to purchase controller anymore, thus greatly reduce costs.

Product Diagram

Install size(mm)



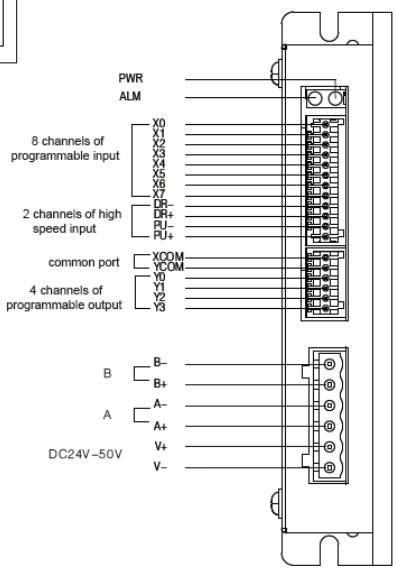
RS-485

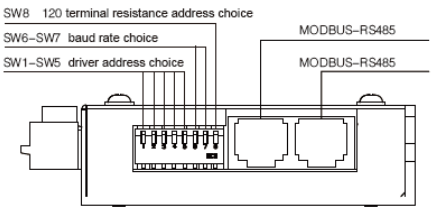


RJ 45 interface

PIN	Definition
1	RS-485-A
2	RS-485-B
3	NC
4	NC
5	RS-485-GND
6	NC
7	NC
8	NC

Driver connection





Baud Rate

YKD2405PR Choice of terminal resistance

120 choice of terminal resistance	invalid	valid
SW8	OFF	ON

YKD2405PR COM baud rate setting

baud rate	9600 (default)	19200	38400	115200
SW7	ON	ON	OFF	OFF
SW6	ON	OFF	ON	OFF

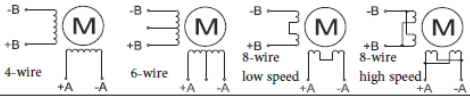
Address Setting

YKD2405PR 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 lighg	Light on once power on
ALM	alarm light	Over-current, flash one time;Over-voltage, flash twice; Under-voltage,flash three times; EEPROMEEPROM error, flash four times;
X0–X7	8 channels of programmable input	Support NPN & PNP wiring modes, requires the pulse width is bigger than 10ms10ms.
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-	motor connection	
B+ B-		