Closed-loop stepper drive ZZTCL5705

Features:

1: Using the latest 32 bit DSP chip special for motor control and closed-loop control technology, it can utmostly eliminate the problem of losing step and correct real-time position error.

2: Built-in position and alarm output, convenient for monitoring and controlling

3: It can reduce motor's vibration, noise and heating, and it is more efficient than open-loop stepper motor.

4: Pulse and direction, enable is compatible with 5~24VDC signal input;

5: Single and double pulse selection, default setting: pulse + direction control

6: Pulse input frequency up to 300kpps

7: Over-voltage, over-current, and over position error protections

8: Intelligent adjustment of current, Current is up to 5A

9: supply voltage from DC24V to DC48V

10: 16 micro-step settings in 400~51200

11: It can drive 42mm, 57mm and 60mm closed-loop motor with 1000-line encoder.

12: Net weight: 230g

13: Size:116*77.5*26.5(cm)

Description and application:

ZZTCL5705 is a closed-loop stepper drive. It can drive closed-loop stepper motor 42mm, 57mm and 60mm with 1000-line encoder. Since it can detect the error of commanded target position and real-time position of the motor shaft, thus it can close the position loop between motor and drive and correct the position error. Therefore it can eliminate the problem of step loss in an open loop system. Besides, It is much stable, efficient, with fewer noise and heating than open-loop stepper system. Also it has preferential price which can meet your low cost requirement.

It can be widely used in some low to middle speed stepper control system, such as CNC machines, laser cutting machines, welding machines, engraving machines, packing machines etc.

Microstep resolution(SW1~SW4)

Pulse/revolution	SW1	SW2	SW3	SW4
400	on	on	on	on
800	off	on	on	on
1600	on	off	on	on
3200	off	off	on	on
6400	on	on	off	on
12800	off	on	off	on
25600	on	off	off	on
51200	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
40000	off	off	off	off

Other DIP switches' setting(SW5~SW8)

	Function	off	on
SW5	Motor direction	cw	ccw
SW6	High/low level alarm	open	close
SW7	Pulse mode	Pul&dir	Cw&ccw
SW8	Position error	90°	360°

Pin assignments

	Pin name	Function	Description
	PWR	Power light	Power on, green LED on
	ALM	Alarm light	Wrong connection alarm of motor, encoder, power supplier, or alarm for drive is broken.
Signal connection	PUL+	Pulse signal	+5V/+24V is compatible. If voltage is over +5v, must add resistance to control current
	PUL-		Effects on falling edge, input resistance 220Ω. Requirement: Low level is 0-0.5V, high level is 4-5V, pulse width>2.5μs
	DIR+	Direction signal	+5V/+24V is compatible. If voltage is over +5v, must add resistance to control current
	DIR-		Effects on falling edge, input resistance 220Ω. Requirement: Low level is 0-0.5V, high level is 4-5V, pulse width>2.5μs
	ENA+	Enable signal	This signal is used to enable or disable the drive. Default setting, this signal is left for Unconnected&Enabled
	ENA-		
	ALM+	Alarm signal	Alarm for over voltage, over current and position error.
	ALM-		
Feedback (Encoder Connection)	EB+	Encoder B phase	Encoder B phase input
	EB-		
	EA+	Encoder A phase	Encoder A phase input
	EA-		
	VCC(+5V)	Encoder power	Encoder +5V power supply
	EGND	Encoder GND	

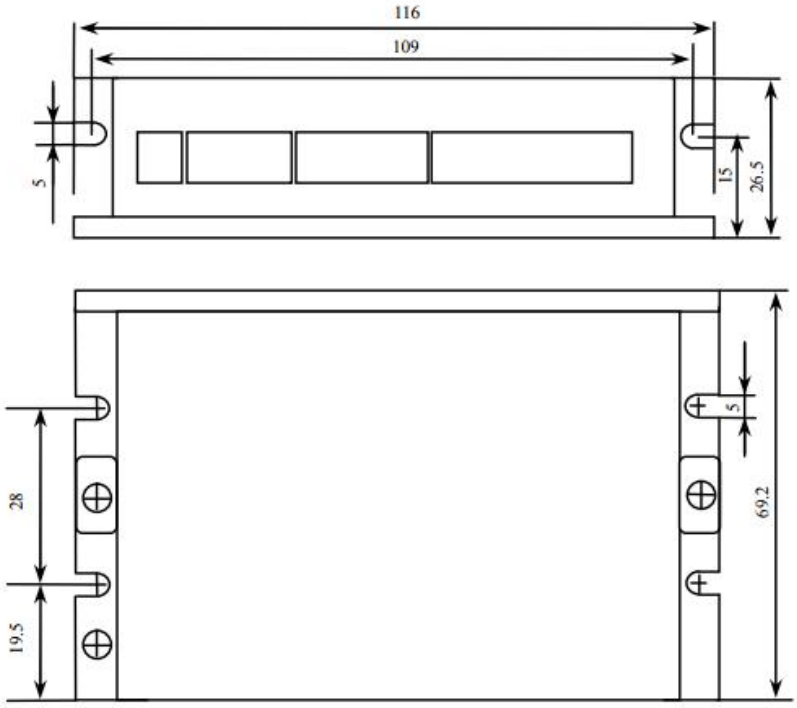
Motor connection	A+	Motor A phase	Connect motor A+ wire to this pin
	A-		Connect motor A-wire to this pin
	B+	Motor B phase	Connect motor B+ wire to this pin
	B-		Connect motor B-wire to this pin
Power supply connection	+VDC	Input DC Power supply	+24v~+48v
	GND	GND	0 V
	NC		No connection

RS232 connection

Pin	Name	Description
1(Left pin)	COM	Common ground
2(Middle pin)	TXD	RS232 transmit
3(Right pin)	RXD	RS232 receive

Remarks: RS232 connection is just for tuning purpose, not for RS232 control command.

Assemble drawing



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