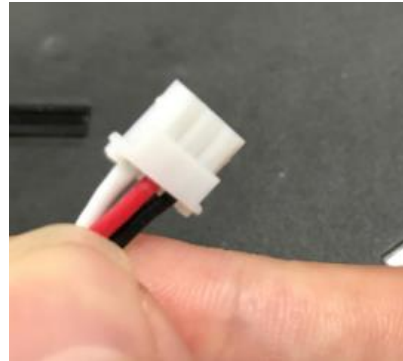


## Performance parameters

1. Weight: about 60g
2. Speed: 0.15 seconds / 60 degrees (8.4V)
3. Torque: 15kg·cm
4. Range: 180 degrees, 270 degrees, 360 degrees can be set
5. Use temperature: 0~+55 degrees Celsius
6. Operating voltage: 4.8V-8.4V.

## Servo interface description:



1 is the signal line interface, 3 power supplies are negative, and the middle is the power supply.

White is the signal line, black is the power supply, and red is the power supply.

## The current version of the complete communication protocol:

No.	Command	Return	Description
1	#1P1500T100\r\n	None	Control the servo No. 1 to rotate to 1500 within 100 milliseconds from the current position. The time range is 0-50000.
2	#1P500#2P600#3P700#8P1500T1000\r\n	None	Control No. 1 Servo to 500, No. 2 to 600, No. 3 to 700, and No. 8 to 1500 for 1000ms
3	#1PRAD\r\n	#001P0980\r\n	Read the position of the servo. The position is fixed at 4 digits.
4	#1PULK\r\n	#OK\r\n	Release the steering gear's torque. Inability to rotate the servo manually
5	#1PULR\r\n	#OK\r\n	Restoring torque at the current position of the servo
6	#1PID002\r\n	#002P\r\n	Change the ID of the No. 1 servo to 2. 002 is fixed to three digits.
7	#1PBD1\r\n	#OK\r\n	Modify the servo's baud rate is 9600 //1:9600 , 2:19200 , 3:38400 , 4:57600 , 5:115200 , 6:128000,7:256000 , 8:1000000
8	#1PCSD\r\n	#OK\r\n	Set the current servo position to the initial

			position. After the servo is powered on, it will slow down (1500ms) to this position you set.
9	#1PCSM\r\n	#OK\r\n	Disable the initial position.
10	#1PCSR\r\n	#OK\r\n	The initial position set before the restoration
11	#1PDST\r\n	#OK\r\n	The steering gear stops suddenly and stops immediately.
12	#1PDPT\r\n	#OK\r\n	Servo suspension
13	#1PDCT\r\n	#OK\r\n	The servo continues (continues to execute the command at the time of the pause)
14	#1PVER\r\n	#001PV0.99\r\n	Read the program version of the first servo
15	#1PSCK\r\n	#OK\r\n	Set the current position to 1500, which is the role of fine-tuning. From the fine-tuning effect, the actual installation error should not be too large.
16	#1PSMI\r\n	#OK\r\n	Set the current position to the smallest range and limit the range.
17	#1PSMX\r\n	#OK\r\n	Set the current position to the largest range and limit the range.
18	#1PMOD1\r\n	#OK\r\n	Set the steering mode. 1:270 degree Counterclockwise 2:270 degree Clockwise 3:180 degree Counterclockwise 4:180 degree Clockwise 5:360 degree Counterclockwise ( for circle ) 6:360 degree Clockwise ( for circle ) 7:360 degree Counterclockwise ( for time ) 8:360 degree Clockwise ( for time )
19	#1PSBH=0\r\n	#OK\r\n	Turn on stall protection (opens by default)
20	#1PSBH=1\r\n	#OK\r\n	Turn off stall protection
21	#1PCLE\r\n	#OK\r\n	All parameters are all restored to factory settings
22	#1PCLE0\r\n	#OK\r\n	With the exception of the ID parameter, all parameters are reset to factory settings.

The above protocol #1P indicates that the command was given to the No. 1 servo. If it is #255P, it is a group command and all servos are valid.

However, if it is a group command, all servos will not return information after receiving the command.

The \r\n in the above command is the terminator of the command. It is 0x0d and 0x0a in the hexadecimal number. Please pay special attention to it, \r\n cannot be used directly on the serial debugging assistant of many computers.

In order to consider that some users use the serial debugging assistant to send commands, all the above

commands are supported for use! As the terminator of the command.

Such as **#1P1500T100!** you can control the steering gear rotation. This method is convenient for user input. (! is an English symbol, not a Chinese symbol, please note)

Special note on item 17 of the above agreement:

Reverse and forward indicate the steering direction of the servo. Reverse: The pulse signal is from 500 to 2500, and the servo rotates counterclockwise. Forward: The pulse signal is from 500 to 2500 and the servo rotates clockwise.

The continuous rotation mode is an ordinary 360-degree servo, which continuously rotates and can not control the angle. In this mode, the effect of the command to control the servo command such as #1P1500T100 is changed. The following actions of this command in this mode are:

The middle parameter 1500 is in the range of 500-2500, 500-1500 of which controls the forward rotation of the servo, and 1500-2500 controls the reversal of the steering gear. The closer to 1500, the slower, the faster you get away from 1500 (500 and 2500 are the fastest, and 1500 is stopped).

The last parameter, 100, indicates the number of revolutions of the servo, 100 is 100 (there is a round of error, normal!), if this parameter is changed to 0, it is infinite rotation.

T100 in the circle setting mode means 100 laps.

T100 in the timer mode indicates 100 seconds.

All 360-degree models cannot be accurately positioned. There will be an error of about 1 round. In this mode, the position of the servo is read. The returned results are for reference only and have no practical significance.