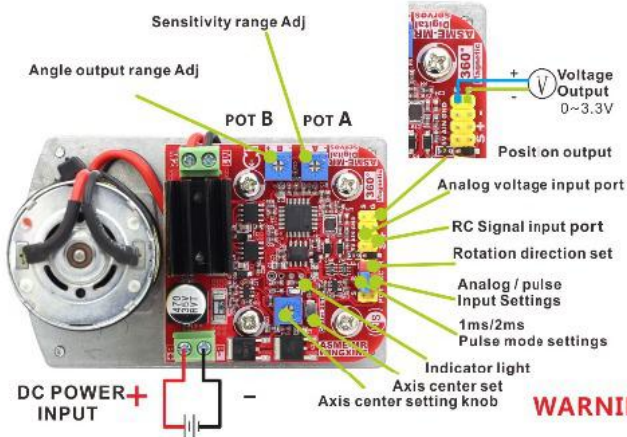
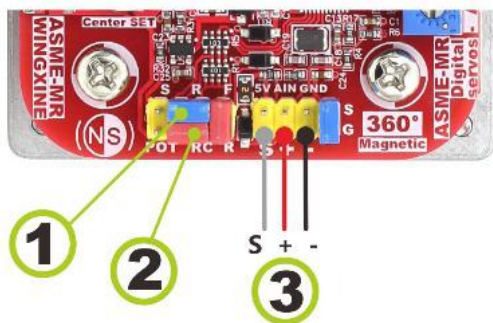


# Magnetic High torque servo series ASME-MR series RC PULSE/Analog Voltage Control



1. Power steering line basis having indicated polarity wiring.
2. Potentiometer A: used to adjust the servo motion sensitivity.
3. Potentiometer B: used to adjust the rotation angle range of the steering gear shaft.  
Turn the steering angle and contraction ratio of the input signal. With mechanical steering midpoint symmetry contraction.
4. Center adj: press the "center set" button once to enter the setting state. Adjust the potentiometer next to the button to reach the desired position. Press "center set" again to save the settings and the memory location will be saved permanently.  
This operation can be repeated to update the central location.
5. position output: for external devices coarse detection steering angle is actually running. Input voltage range of 0V ~ 3.3V.  
The effective operation of the correspondence between the angle and voltage is: 0° to 0V, 360° to 3.3V
6. Indicator light: LED is flashing, servos work properly.
7. Mode settings: See description below.

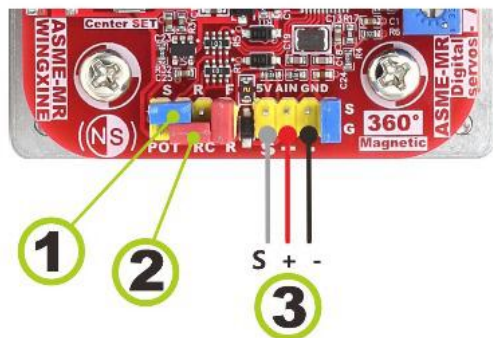
**WARNING: The power input reverse will burn servos directly, please check when wiring!**



## RC MODE ("1ms" Pulse Width Mode)

- 1, the jumper settings "NC" position.
- 2, the jumper settings "RC" position.
- 3, the jumper is set in "R" position.
- 4, (1) "RC" pin is signal input.  
(Servo controller "S" pin or RC receiver "S" pin, generally are used on model aircraft "S" indicates)  
(2) "GND" pin connected to negative signal line.  
(Servo controller "-" foot or remote control receiver "-" feet, generally are used on model aircraft "-" indicates)

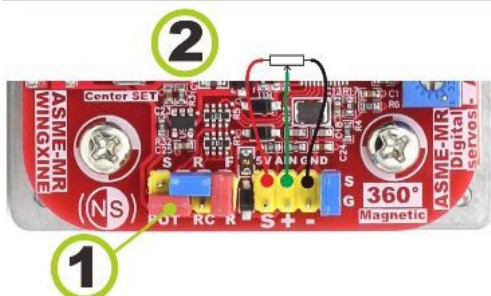
**WARNING: The servo an independent power supply, so "+" does not require wiring.**



## RC MODE ("2ms" Pulse Width Mode)

- 1, the jumper settings "NC" position.
- 2, the jumper settings "RC" position.
- 3, the jumper is set in "S" position.
- 4, (1) "RC" pin is signal input.  
(Servo controller "S" pin or RC receiver "S" pin, generally are used on model aircraft "S" indicates)  
(2) "GND" pin connected to negative signal line.  
(Servo controller "-" foot or remote control receiver "-" feet, generally are used on model aircraft "-" indicates)

**WARNING: The servo an independent power supply, so "+" does not require wiring.**



## Voltage input or Potentiometer input MODE

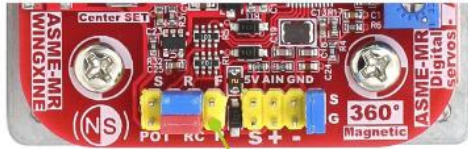
- 1, the jumper settings "5V" position.
- 2, the jumper settings "POT" position.
- 3, (1) signal input terminal labeled "POT" pin is connected to the potentiometer wiper.  
(2) labeled "5V" and "GND" pins are connected to the potentiometer two fixed ends.

If the input voltage directly controls the time to pick "5V" pin "the 1st position" jumpers set in the "NC" position, just pick "POT" and "GND" pin. Input voltage range of 0V to +5 V (DC).

**WARNING:** 1, the steering gear output "+5 V" power supply can only meet the potentiometer, Do not use servos to supply power to other equipment.  
2, the potential selection: 10k, 50k, 100k, potentiometer which resistance greater than 10k.

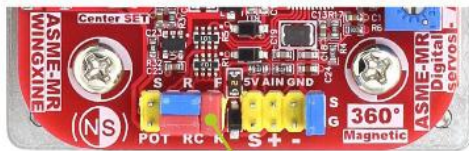
# Magnetic High torque servo series ASME-MR series RC PULSE/Analog Voltage Control

## Set the direction of operation



### Disconnect the F / R jumper

Change the direction of rotation by setting the F / R jumper. In the same input signal simply change the jumper setting to change the relative direction of rotation. This mode applies to "RC" mode and "POT" mode.



### Short-circuit F / R jumper



1.0ms 2.0ms  
0.5ms 2.5ms  
0.0V 5.0V



1.0ms 2.0ms  
0.5ms 2.5ms  
0.0V 5.0V

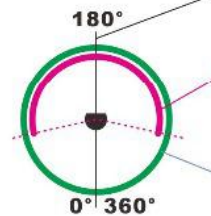
Note: Since the center point of the servo is random when the center point is not set, the picture is only used as a schematic to understand the setting of the servo.

## Set the steering range of the servo



The range of the working angle of the steering gear is changed by adjusting the B potentiometer. This serves to constrain the operation of the steering gear. After reducing the working angle of the servo, it still maintains the ratio of the input signal. The input signal is still full stroke corresponding to the servo setting angle. This feature is available in "RC" mode and "POT" mode.

The B potentiometer is adjusted counterclockwise to the minimum value, and the rudder opportunity is limited to the 180 degree position and stops working.



The purple line is the range of motion after the B potentiometer adjusts the working stroke of the restraining servo 60% counterclockwise.

The green line is the maximum working angle range of the servo, and the B potentiometer is adjusted clockwise to the maximum working range.

The angular contraction setting is linearly adjusted.

Note: Since the center point of the servo is random when the center point is not set, the picture is only used as a schematic to understand the setting of the servo.

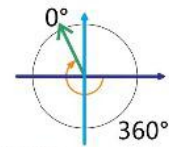
## Center adjustment knob

Center setting button



Note: The center point of the servo is set. As long as it is done once, it can be saved permanently. It does not need to be adjusted every time.

## Set the steering center point



### STEP:

1. The steering gear shaft is suspended to ensure any mechanical connection.
2. Power the servos from 12V to 24V.
3. Press the "Center Setting Button", the steering gear shaft may move to a certain position. When the steering gear shaft stops moving, this is the "180 degree" center position of the current steering gear. The servo indicator will flash 2 times in a row.
4. Adjust the "Center Adjustment Knob" to observe the movement of the steering gear shaft. When the relative position you want to set is reached, stop the rotation knob.
5. Press the "Center Setting Button" again to save the current position, and the servo indicator will resume flashing once. After that, the permanent memory setting will be used.